



Water Heater

Thermo Top Evo Parking Heater



With FuelFix

Installation Documentation Kia Soul

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Kia	Soul	PS	e4 * 2001 / 46 * 0825 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.6 GDI	Petrol	SG	97	1591	G4FD

SG = manual transmission

From Model Year 2014
Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
Front fog lights

Not verified: Passenger compartment monitoring
Manual air-conditioning

Total installation time: approx. 5 hours

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Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit with FuelFix Kia Soul 2014 Petrol: **1323022B**
- Additionally required in case of automatic air-conditioning: ZSK AAC Kia Soul 2014 **1323024A**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

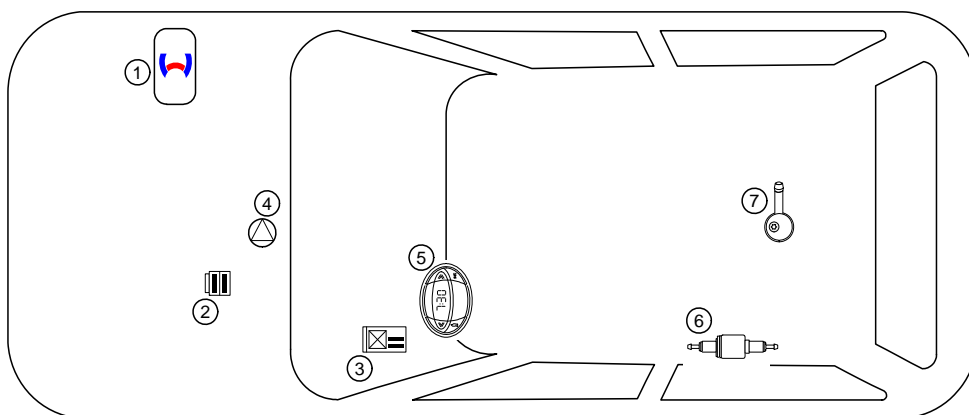
Installation instructions:

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

Installation Overview

Legend:

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



Information on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair



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



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



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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

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

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

1.3 Please note

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

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

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

Important

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

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

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

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

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

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

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

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

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

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

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2, combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Information on Validity

This installation documentation applies to Kia Soul Petrol vehicles - for validity, see page 1 - from model year 2014 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this "installation documentation".

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

Technical Information

Special Tools

- Hose clamp pliers for self-clamping hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- 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.

Special features are highlighted using the following symbols:

Mechanical System



Electrical System



Coolant Circuit



Combustion Air



Fuel



Exhaust Gas



Software



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

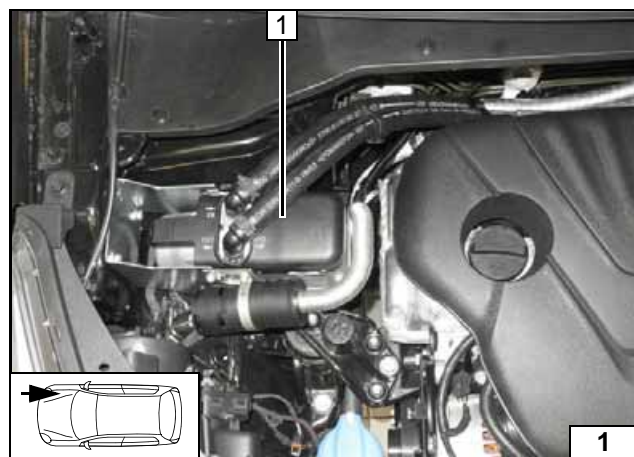


- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the engine cover.
- Remove the engine control unit with bracket.
- Remove the front underride protection.
- Remove the fuel lines from the underride protection.
- Remove the lower instrument panel trim on the driver's side.
- Remove the left instrument panel trim on the driver's side.
- Uncover and detach the passenger compartment central electrical box.
- Remove the rear bench seat.
- Open the tank-fitting service lid of the boot.



Heater

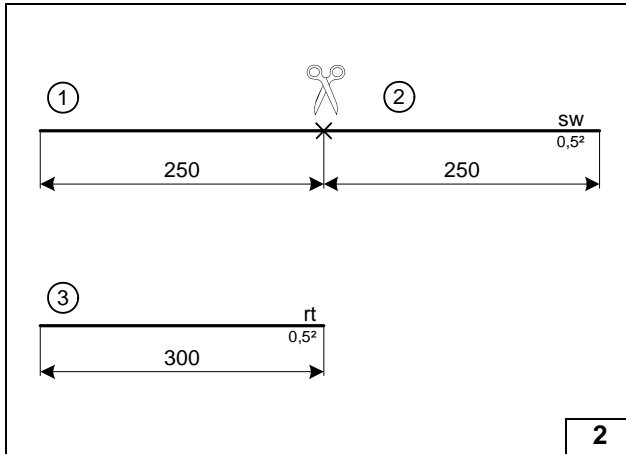
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place in the engine compartment.



Heater Installation Location

- 1 Heater

Installation
location



Preparing Electrical System

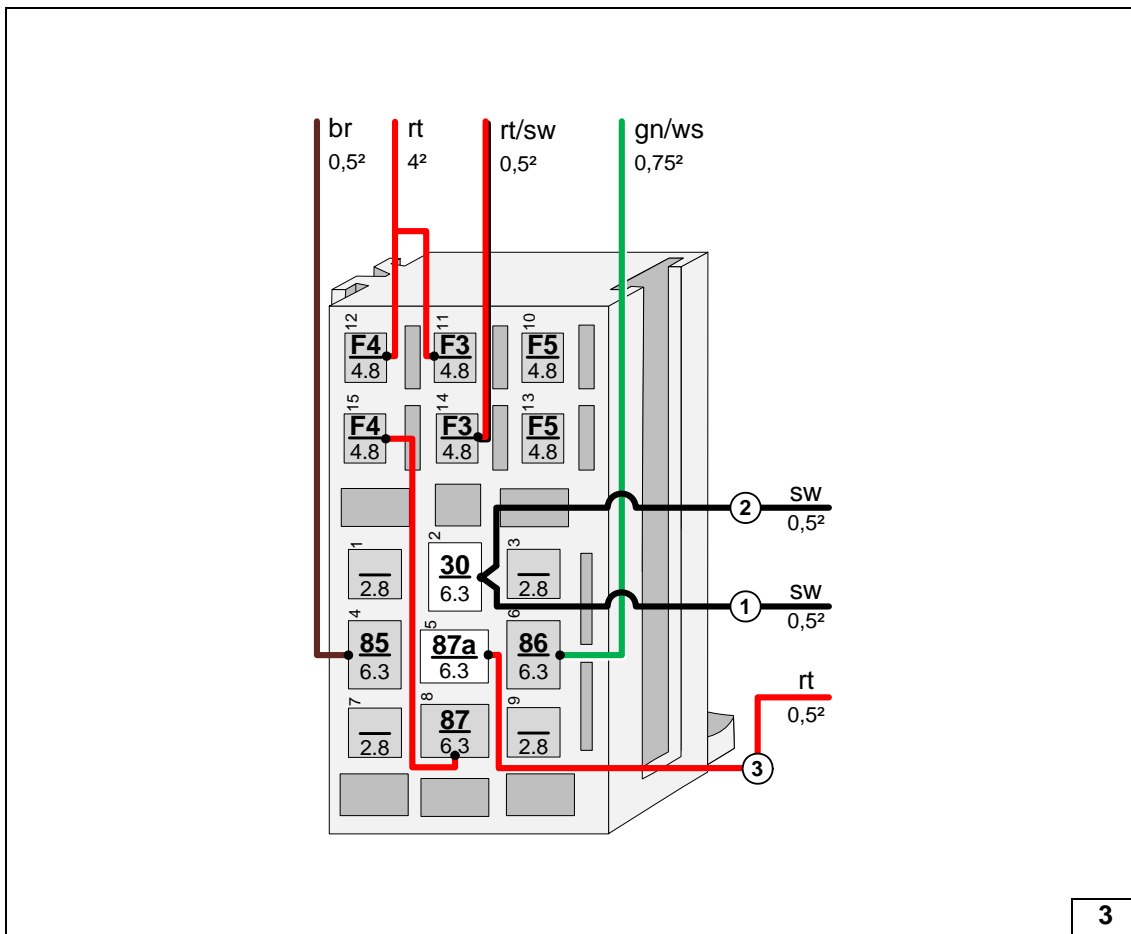
Wire sections retain their numbering throughout the entire document.

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

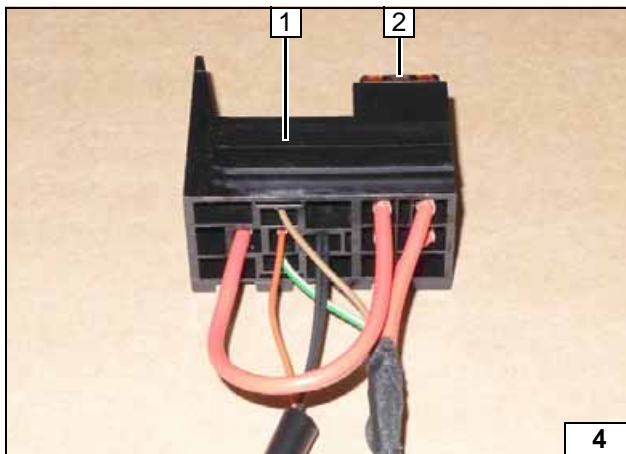
Pull wire sections ①, ② and ③ into supplied protective sleeving.



Cutting to length/ assigning wires

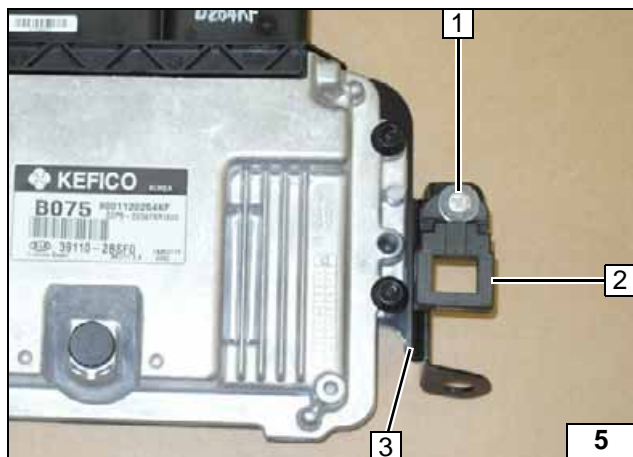


Connecting wires to passenger compartment relay and fuse holder



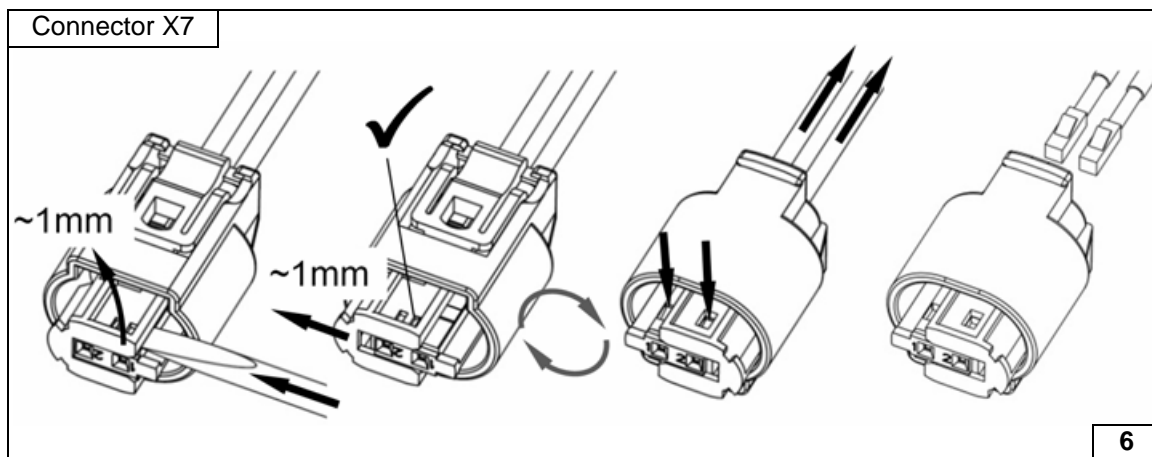
- 1 Passenger compartment relay and fuse holder
- 2 7.5A fuse F4

Inserting fuse F4



- 1 M5x16 bolt, large diameter washer [2x], nut
- 2 Retaining plate of fuse holder
- 3 Bracket of engine control unit

Preparing engine compartment fuse holder



Dismantling metering pump connector



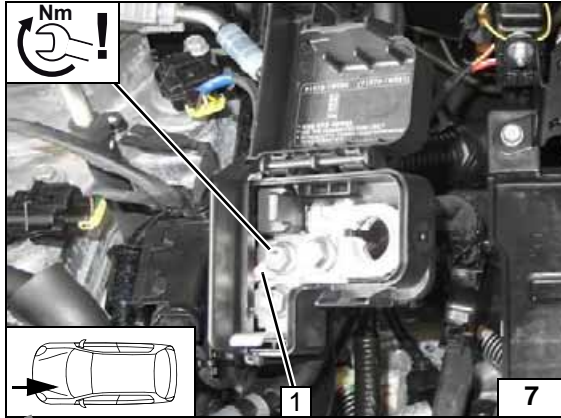
Electrical System



Positive wire

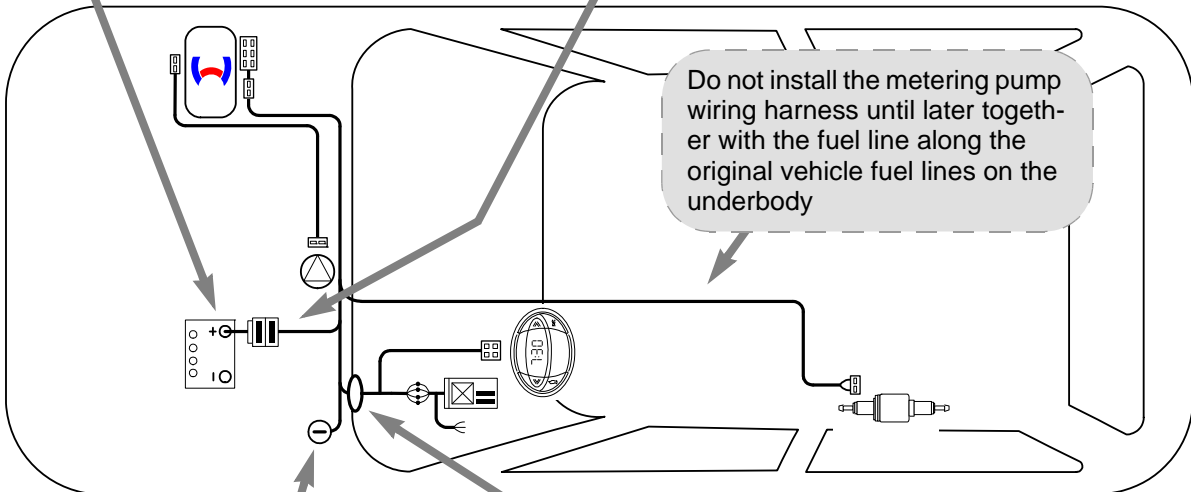
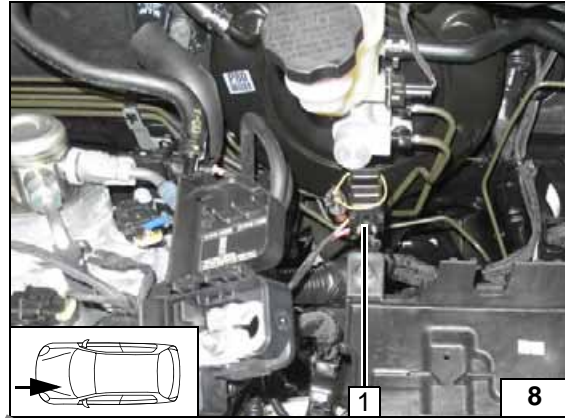
See next page for the heater wiring harness routing.

- 1 Positive wire on positive battery support point

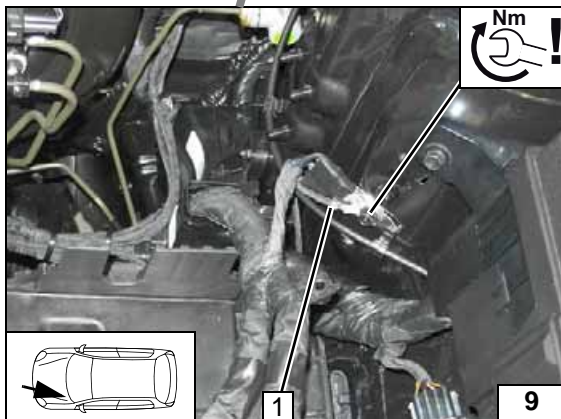


Engine compartment fuse holder

- 1 Position the engine compartment fuse holder before the brake booster, will only be mounted during the "Final Work" phase.

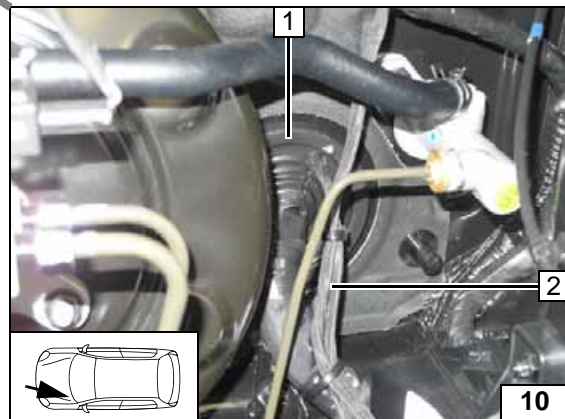


Wiring harness routing diagram



Earth wire

- 1 Earth wire on original vehicle earth support point



Wiring harness pass through

- 1 Protective rubber plug
- 2 Fan controller wiring harnesses, heater control, wires in protective sleeving



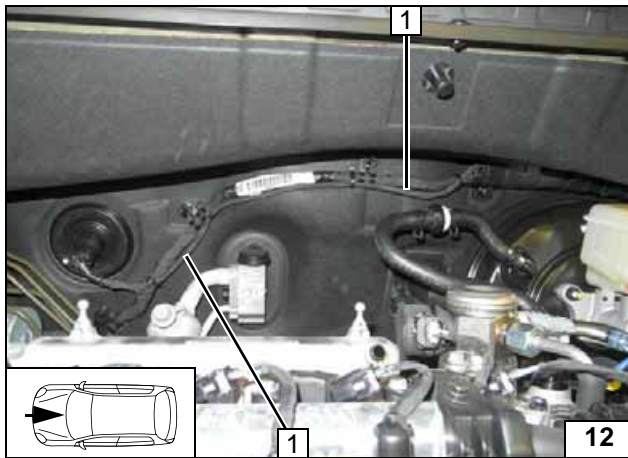


Wiring harness routing

Route heater wiring harness 1 behind the original vehicle wiring harness to the right side of the vehicle.



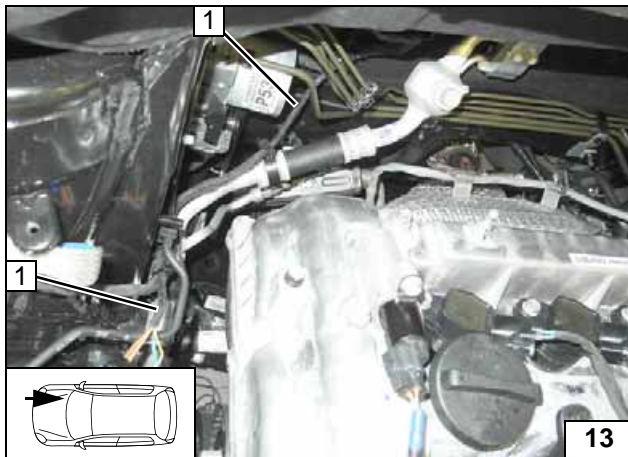
Routing heater wiring harness



Route wiring harness of heater 1 along the original vehicle wiring harness to the right side of the vehicle and secure with cable ties.



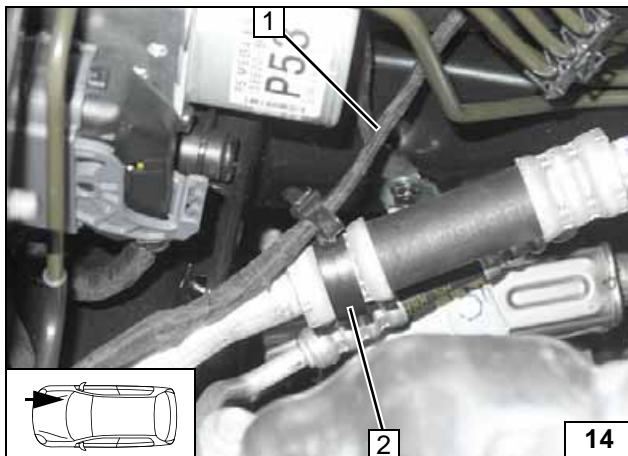
Routing heater wiring harness



Route heater wiring harness 1 as shown.



Routing heater wiring harness



- 1 Wiring harness of heater
- 2 Spacer bracket with cable tie on A/C line (close the cable tie only after routing the fuel line)

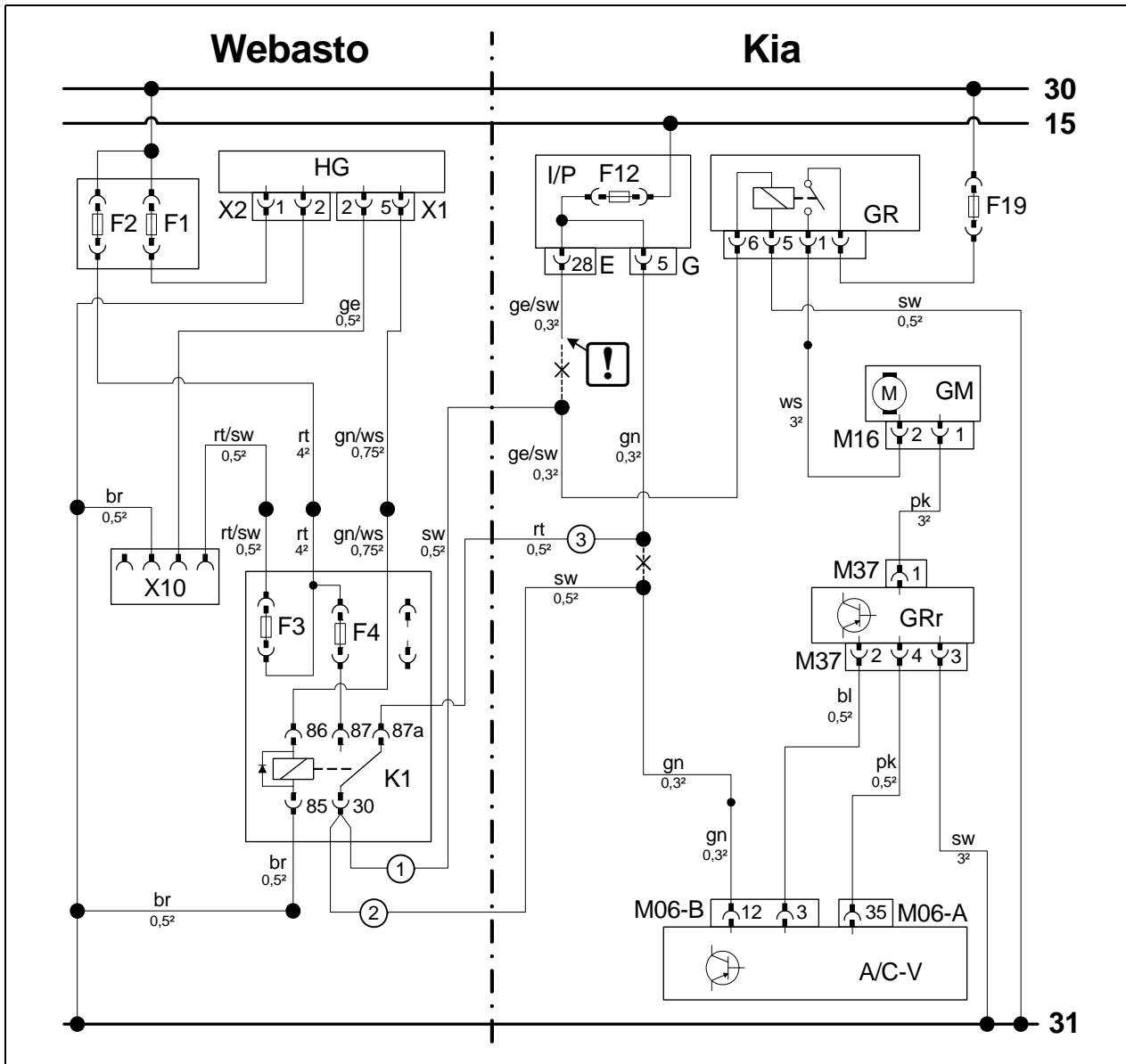
Installing spacer bracket



Fan Controller

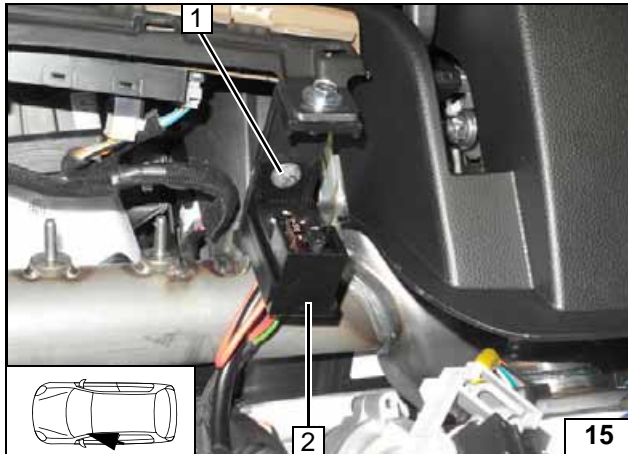
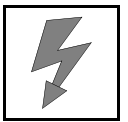


Wiring diagram



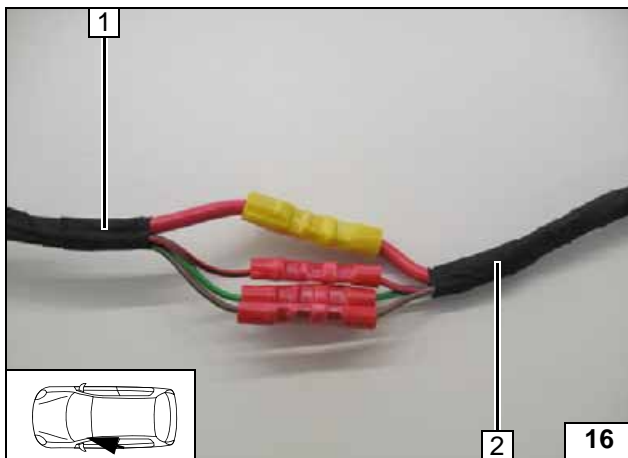
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	I/P	Passenger compartment central electrical box	rt	red
X1	6-pin heater connector	F12	7.5A fuse	sw	black
X2	2-pin heater connector	I/P-E	Connector of central electrical box	ge	yellow
F1	20A fuse	I/P-G	Connector of central electrical box	gn	green
F2	30A fuse	GR	Fan relay	ws	white
X10	4-pin connector of heater control	F19	40A fuse	br	brown
F3	1A fuse	GM	Fan motor	bl	blue
F4	7.5A fuse	GRr	Fan controller	pk	pink
K1	Fan relay	M37	Connector of GRr	!	Insulate wire end and tie back
		A/C-V	A/C booster		
		M06-A	A/C-V connector	X	Cutting point
		M06-B	A/C-V connector	Wiring colours may vary.	

Legend



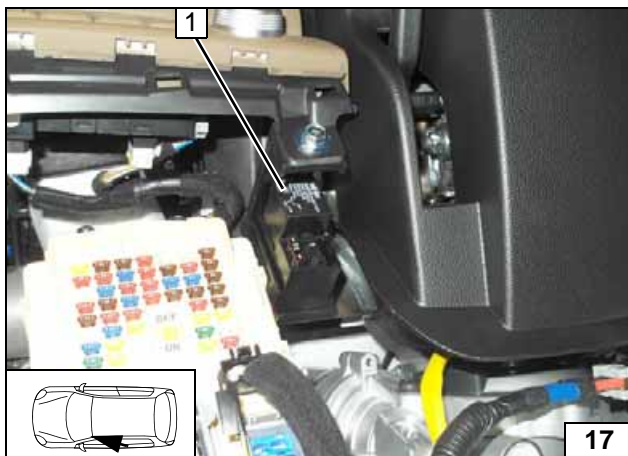
- 1 M5x16 bolt, large diameter washer [2x], nut, existing hole
- 2 Passenger compartment relay and fuse holder

Installing passenger compartment relay and fuse holder



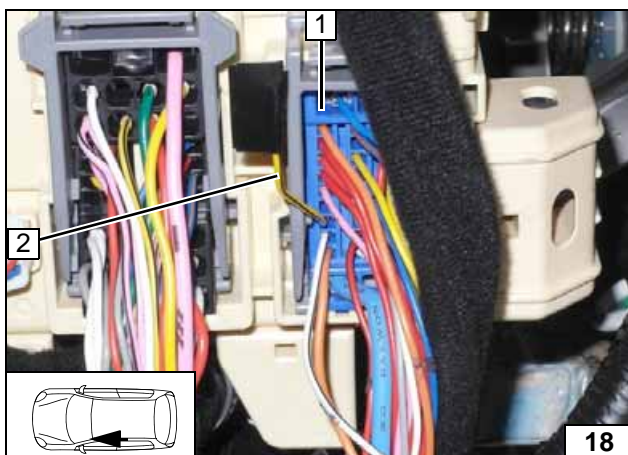
- 1 Wiring harness of passenger compartment relay and fuse holder
- 2 Wiring harness of heater

Connecting same colour wires of wiring harnesses



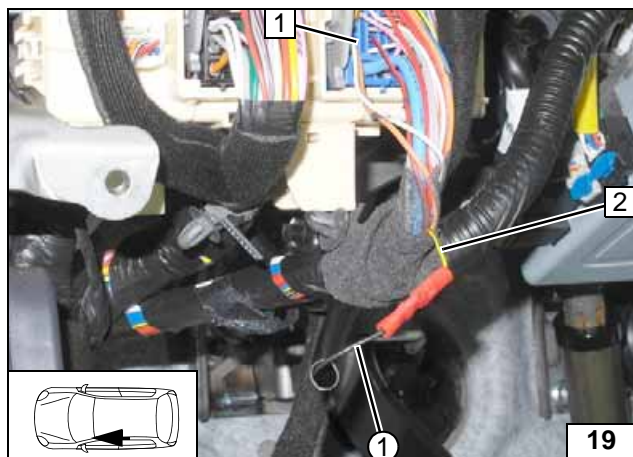
- 1 K1 relay

Mounting K1 relay



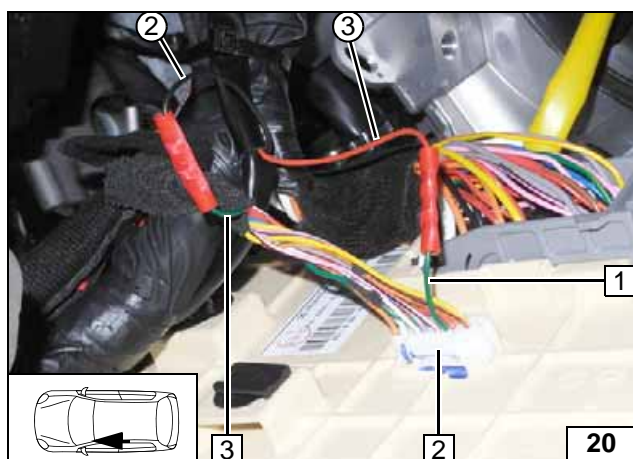
- 1 Connector I/P-E
- 2 Insulate and tie back yellow/black (ge/sw) wire of connector I/P-E, pin 28

Connecting connector I/P-E



- 1 Connector I/P-E
- 2 Yellow/black (ge/sw) wire of fan relay
- ① Black (sw) wire from K1/30

Connecting connector I/P-E



- 1 Green (gn) wire of connector I/P-G, pin 5
- 2 Connector I/P-G
- 3 Green (gn) wire of A/C booster
- ② Black (sw) wire from K1/30
- ③ Red (rt) wire from K1/87a

Connection of I/P-G connector

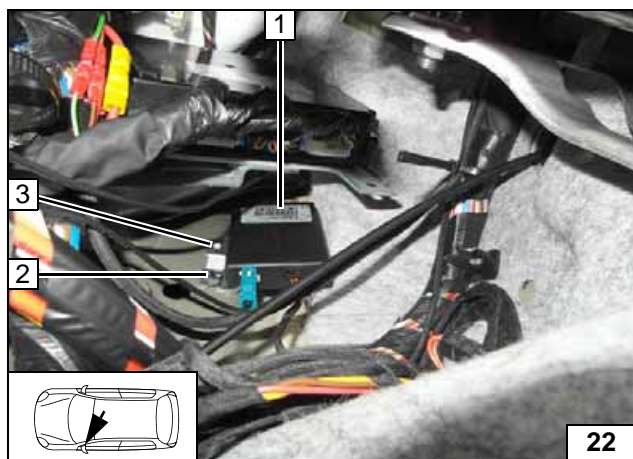


Digital Timer

- 1 Digital timer



Installing digital timer

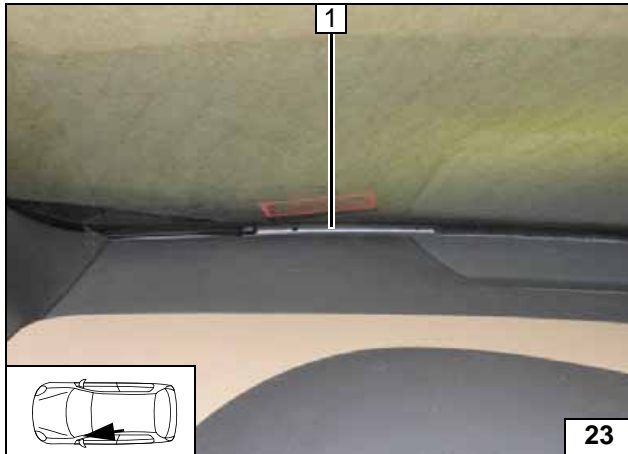
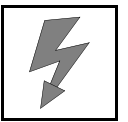


Remote Option (Telestart)

- 1 Receiver
- 2 M5x16 bolt, spring lockwasher, flanged nut, existing threaded hole
- 3 Align bracket

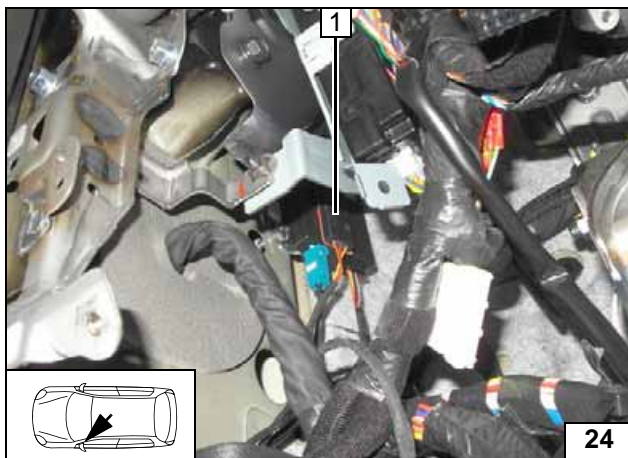


Installing receiver



1 Antenna

Installing antenna

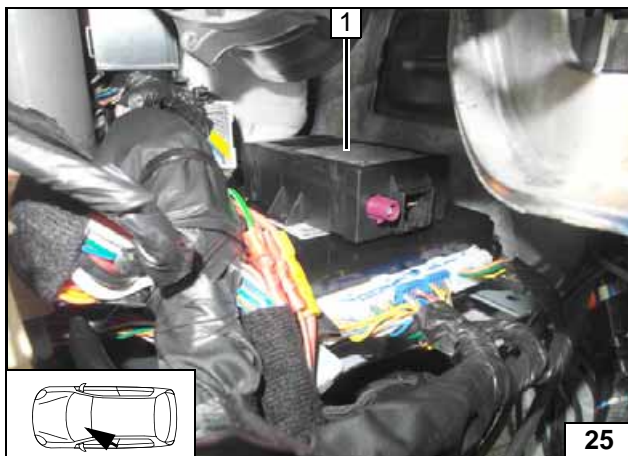


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



Installing temperature sensor

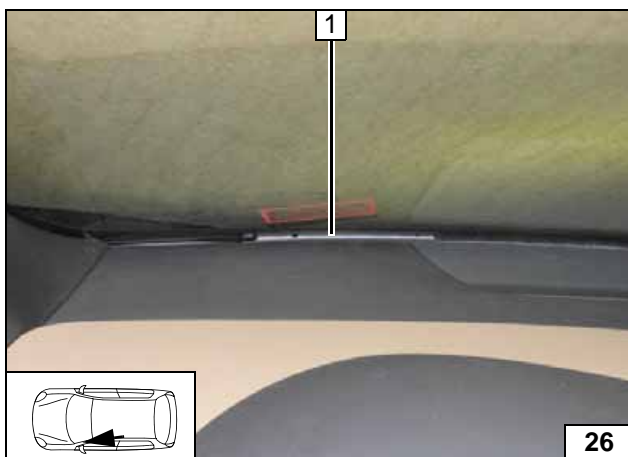


Thermo Call Option

Fasten receiver 1 with adhesive tape.

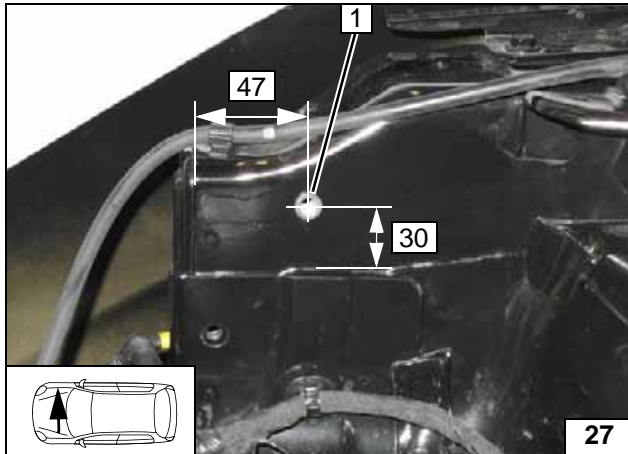
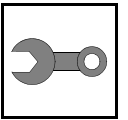


Installing receiver



1 Antenna

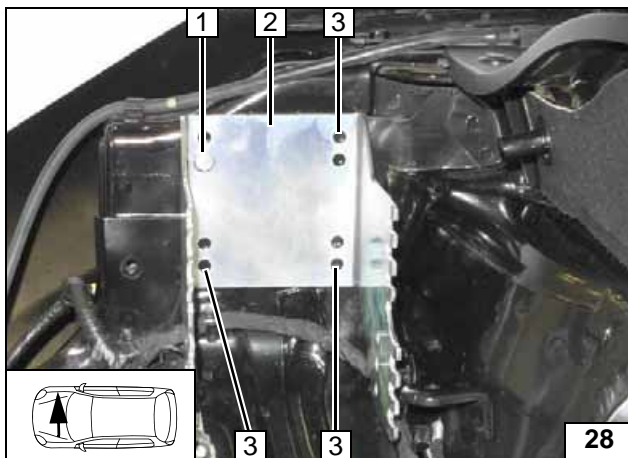
Installing antenna



Preparing Installation Location

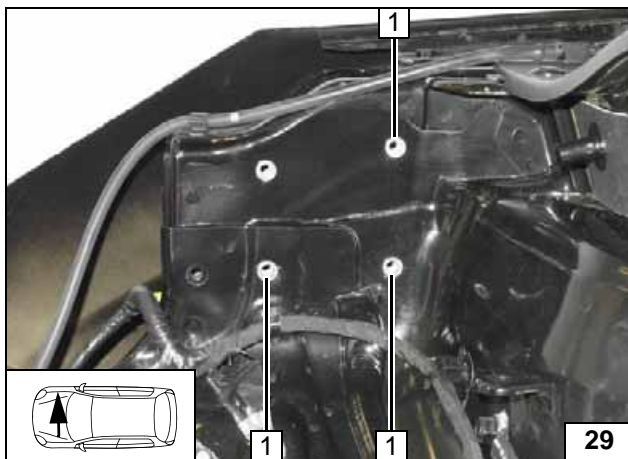
- 1 9.1 mm dia. hole; rivet nut

Installing rivet nut



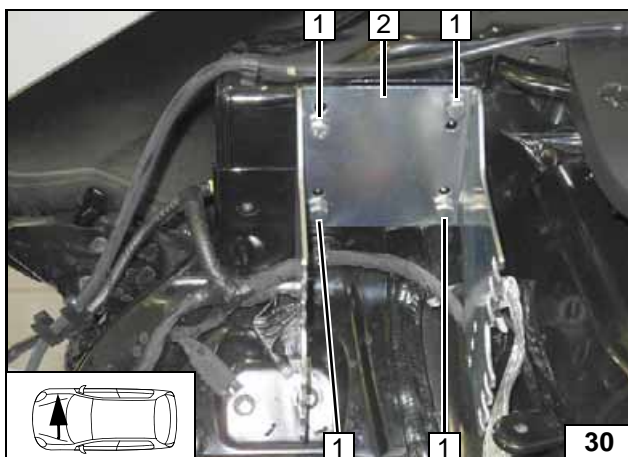
- 1 M6x20 bolt, spring lockwasher
- 2 Loosely mount bracket, align perpendicularly
- 3 Copy hole pattern [3x]

Copying hole pattern



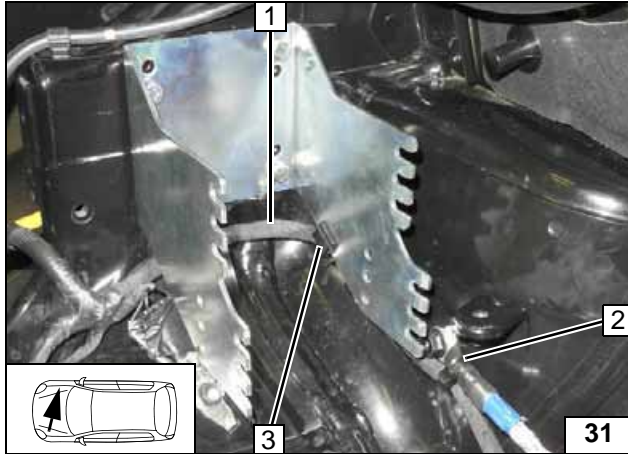
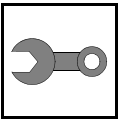
- 1 9.1 mm dia. hole; rivet nut [3x each]

Installing rivet nuts



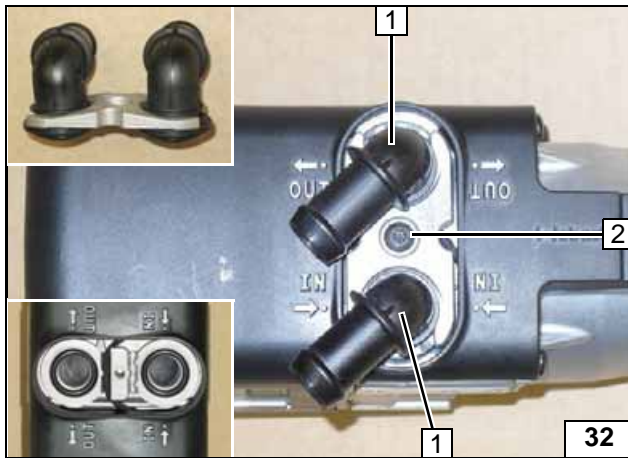
- 1 M6x20 bolt, spring lockwasher [4x each]
- 2 Bracket

Installing bracket



- 1 Original vehicle wiring harness
- 2 Cable tie
- 3 Retaining clip with cable tie on bracket, close cable tie

Attaching original vehicle wiring harness

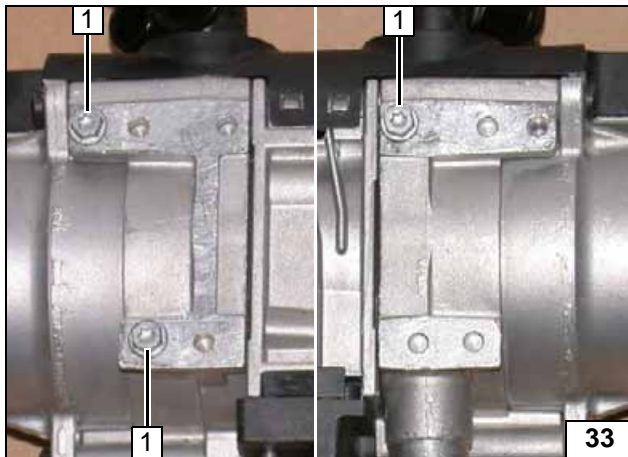


Preparing Heater

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



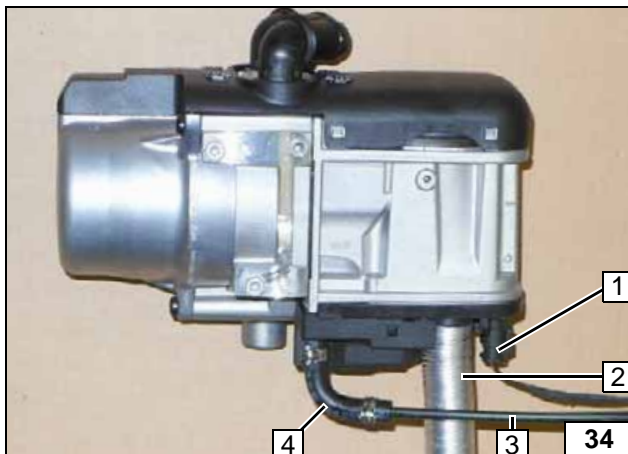
Installing water connection pieces



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



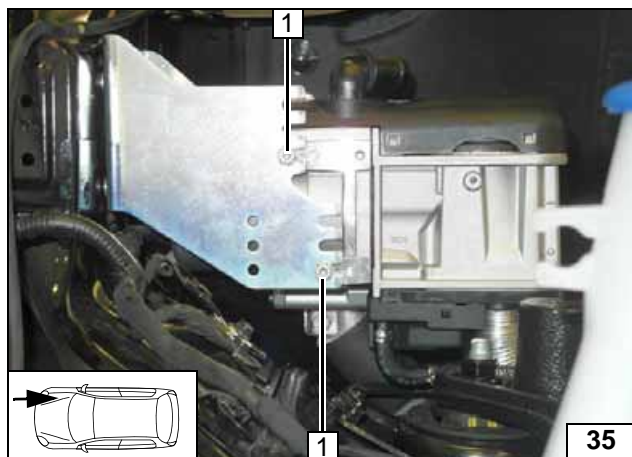
Premounting bolts loosely



- 1 Connector of circulating pump wiring harness
- 2 Combustion air pipe
- 3 Fuel line
- 4 90° moulded hose, 10mm dia. clamp [2x]



Premounting heater



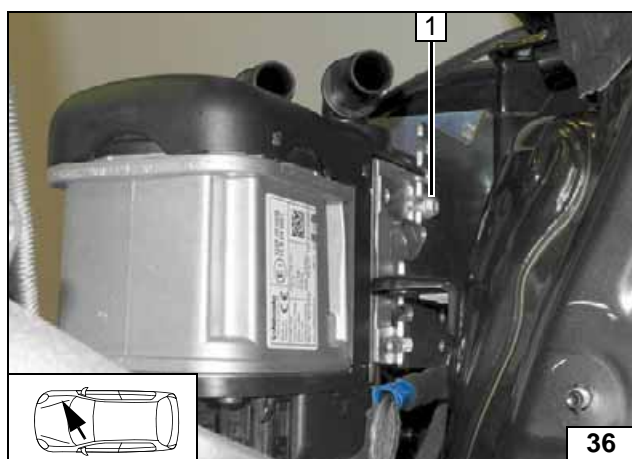
Installing Heater



Install connector of heater wiring harness [2x].

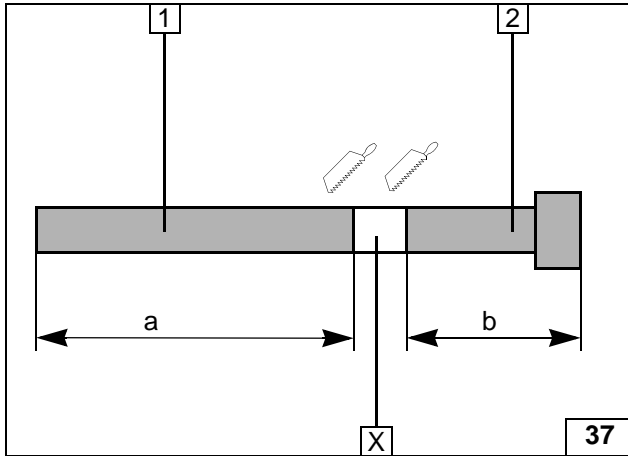
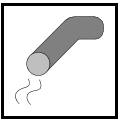
- 1 Tighten 5x13 self-tapping bolt [2x]

Mounting heater



- 1 Tighten 5x13 self-tapping bolt

Mounting heater



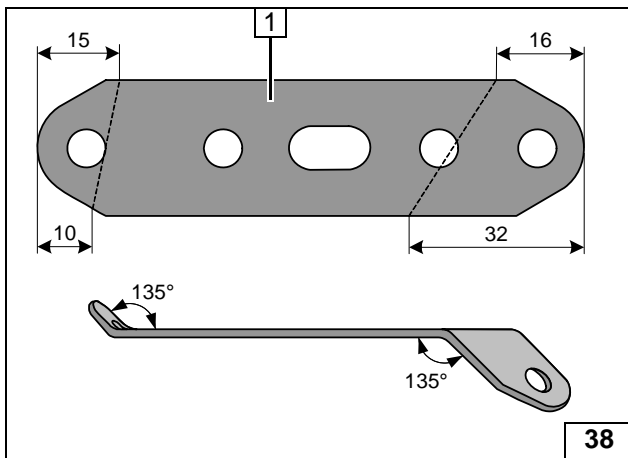
Exhaust Gas

Discard section X.

- 1 Exhaust pipe
a = 530
- 2 Exhaust end section
b = 310



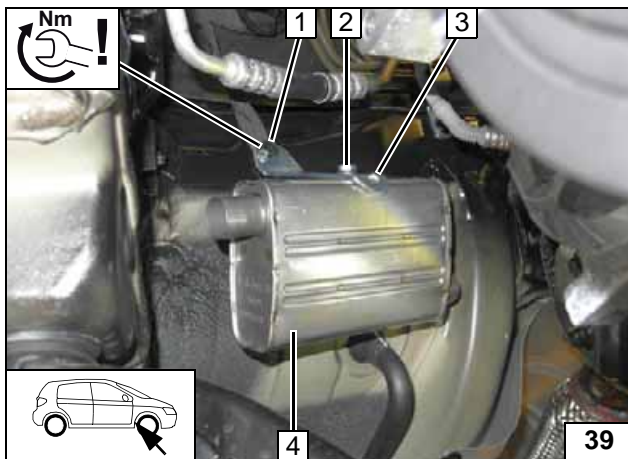
Preparing exhaust pipe



- 1 Perforated bracket



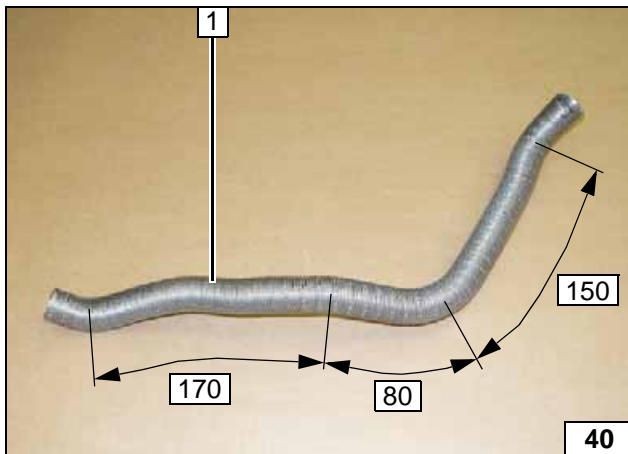
Preparing perforated bracket



- 1 Original vehicle bolt (ESP earth wire)
- 2 M6x16 bolt, spring lockwasher
- 3 Perforated bracket
- 4 Silencer

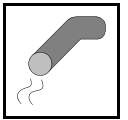


Installing silencer



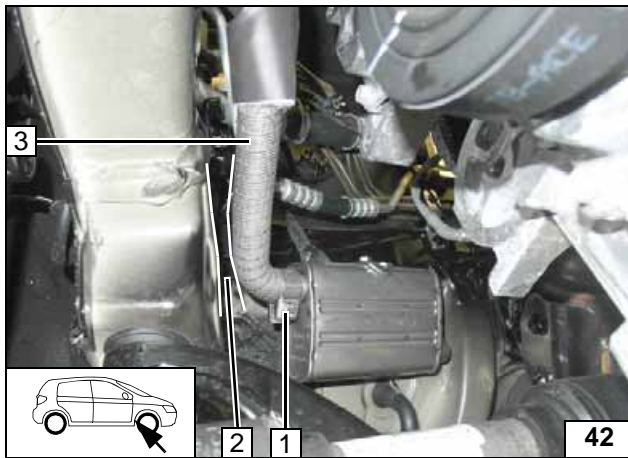
- 1 Shape exhaust pipe

Preparing exhaust pipe



- 1 Exhaust pipe
- 2 Slide on exhaust insulation
- 3 Loosely mount hose clamp

Preparing exhaust pipe



Ensure sufficient distance (at least 20 mm) between exhaust pipe 3 and frame side member at position 2, correct if necessary.



- 1 Tighten hose clamp

Installing exhaust pipe



Ensure sufficient distance from brake line, correct if necessary.



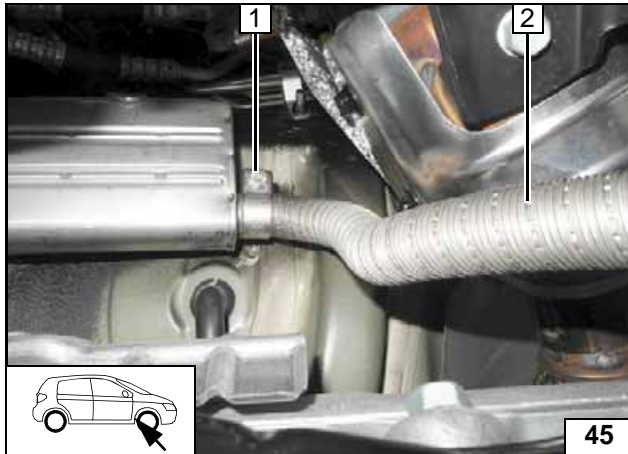
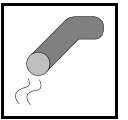
- 1 Exhaust pipe

Aligning exhaust pipe



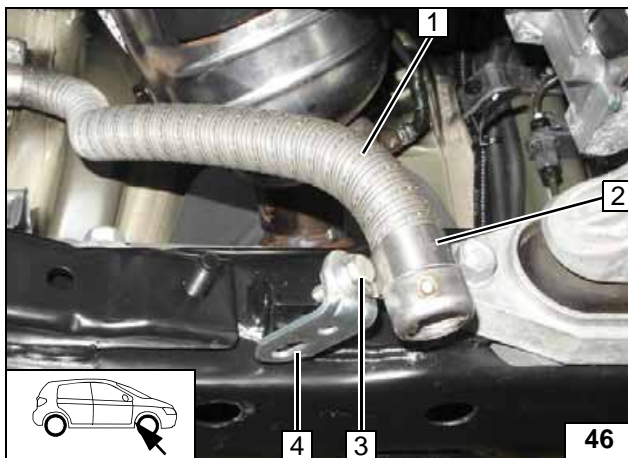
- 1 Tighten hose clamp

Installing exhaust pipe



- 1 Hose clamp
- 2 Exhaust end section

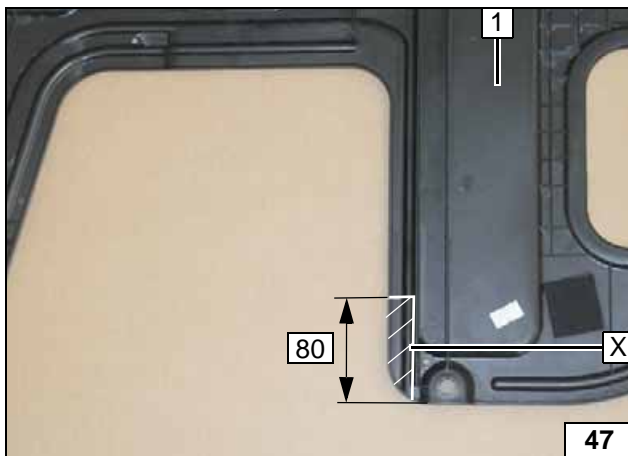
Installing exhaust end section



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



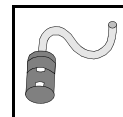
Installing exhaust end section



Discard section X.

- 1 Underride protection

Cutting out underride protection

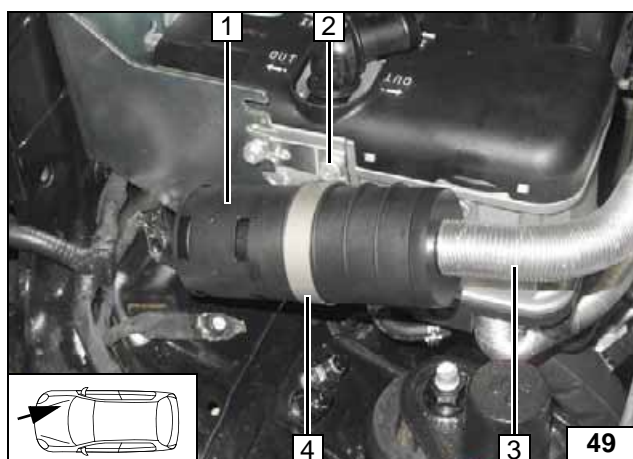


Combustion Air

- 1 Combustion air pipe



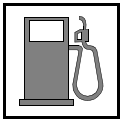
Installing combustion air pipe



- 1 Silencer
- 2 5x15 self-tapping bolt
- 3 Combustion air pipe
- 4 51mm dia. clamp



Installing silencer



Fuel



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

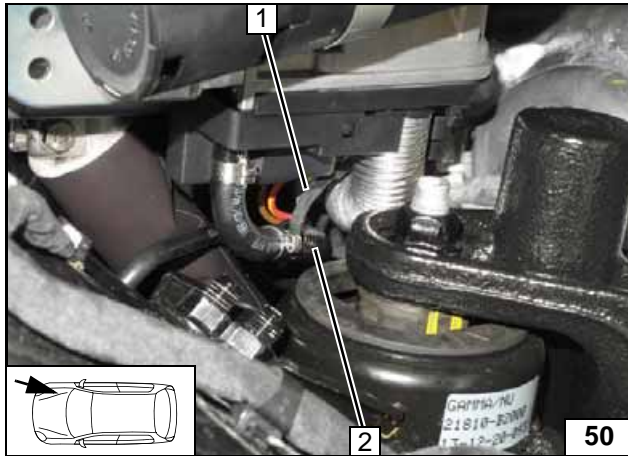
Catch any fuel running off in a suitable container.



Install 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.

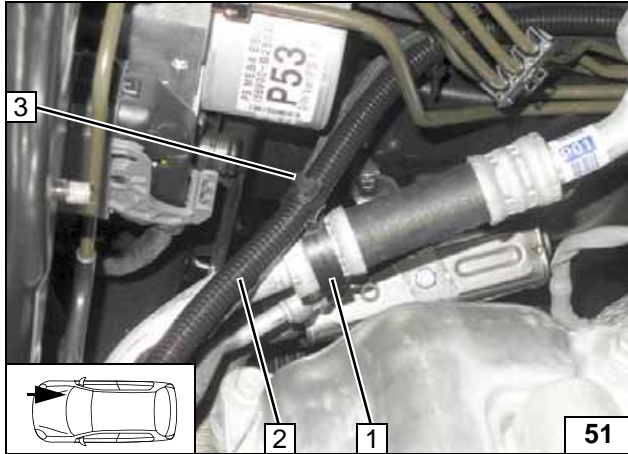
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Slit 10 mm dia., 1130 mm long corrugated tube **2** lengthwise. Route fuel line, metering pump wiring harness **1** and circulating pump wiring harness in 10mm dia. corrugated tube **2** to firewall.

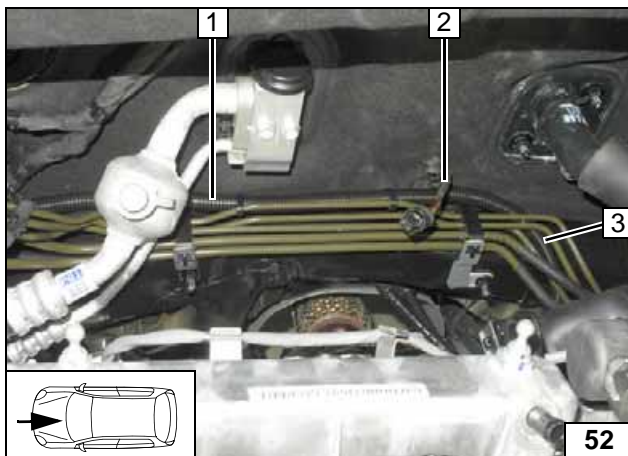


Routing lines



- 1 Premounted spacer bracket
- 2 Metering pump wiring harness, circulating pump wiring harness, fuel line in 10 mm dia. corrugated tube
- 3 Close cable tie

Routing lines

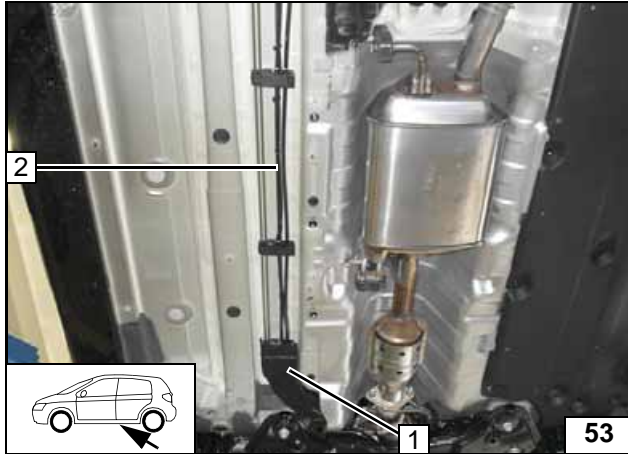
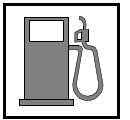


Lead circulating pump wiring harness in position **2** out of 10 mm dia. corrugated tube.



- 1 Metering pump wiring harness, circulating pump wiring harness, fuel line in 10 mm dia. corrugated tube
- 3 Route corrugated tube with metering pump wiring harness and fuel line in original vehicle line duct

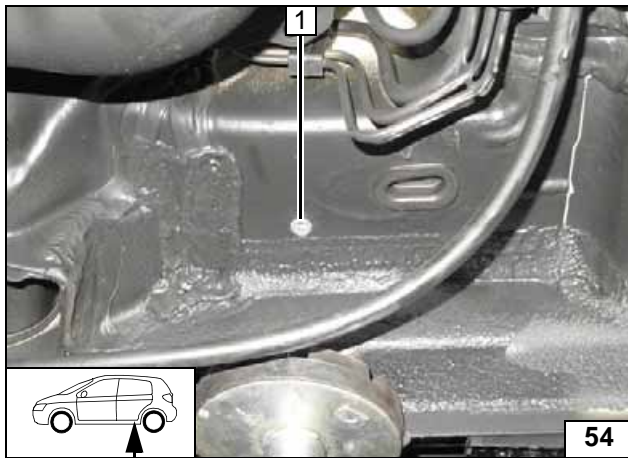
Routing along original vehicle brake lines



Lead fuel line and metering pump wiring harness **2** out of original vehicle line duct **1**.

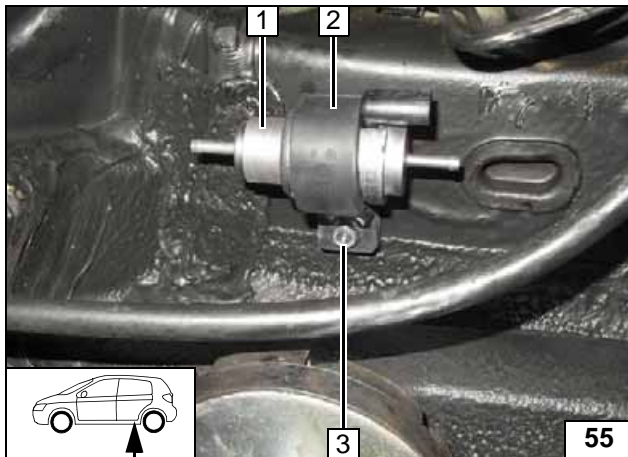


Routing along original vehicle fuel lines



1 Original vehicle hole, rivet nut

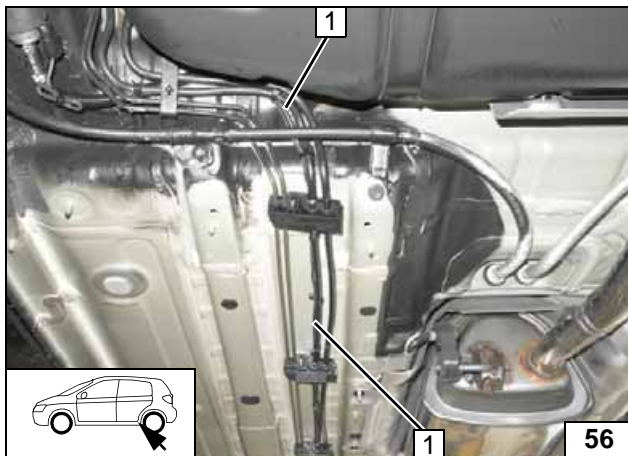
Installing rivet nut



- 1** Metering pump
- 2** Mounting of metering pump
- 3** M6x25 bolt, support angle bracket



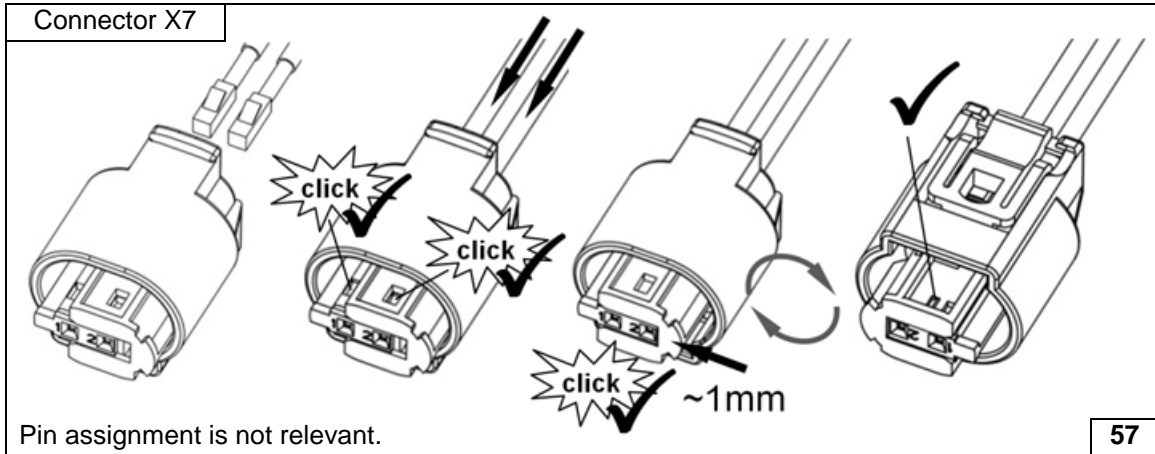
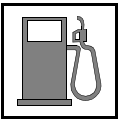
Mounting metering pump



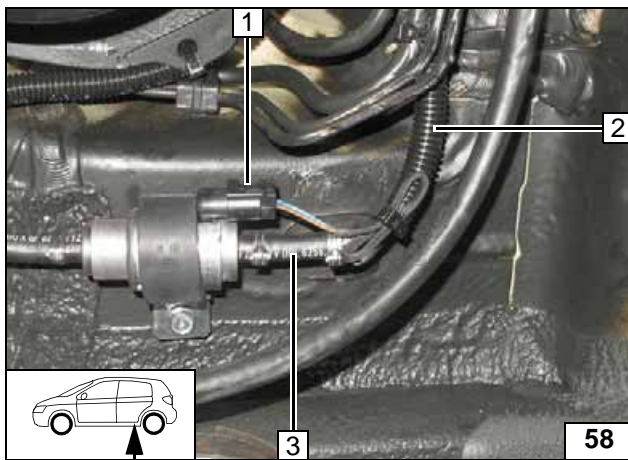
Route fuel line and metering pump wiring harness **1** to installation location of metering pump.



Routing along original vehicle fuel lines



Completing metering pump connector

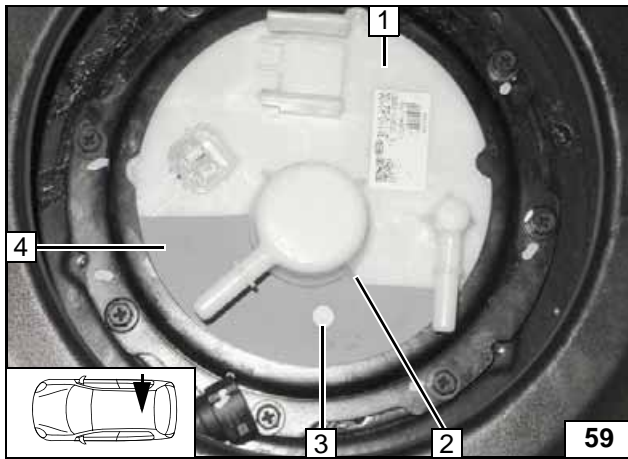


Cut about 300 mm from 10 mm dia. corrugated tube 2 and slide onto metering pump wiring harness and heater fuel line.

- 1 Wiring harness of metering pump, connector X7 mounted
- 3 Fuel line, hose section, 10mm dia. clamp [2x]



Connecting metering pump



Installing FuelFix

Work steps F1 and F2.

Cut out template 4 and place on fuel tank sending unit 1 as shown.

- 2 Contact point, rib of connection piece
- 3 Copy hole pattern



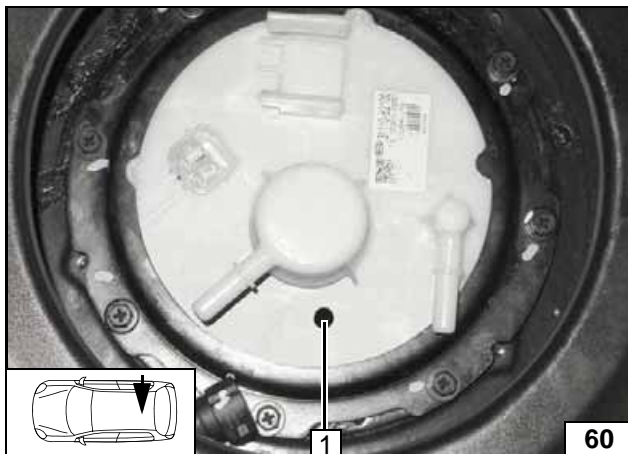
Copying hole pattern

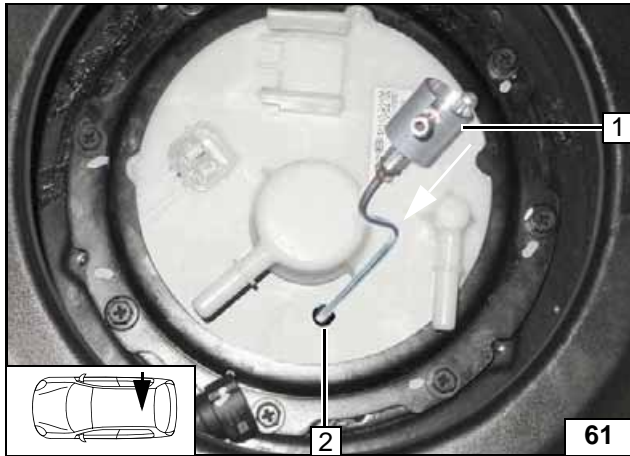
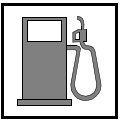
Work step F3.

- 1 Hole made with provided drill



Hole for FuelFix





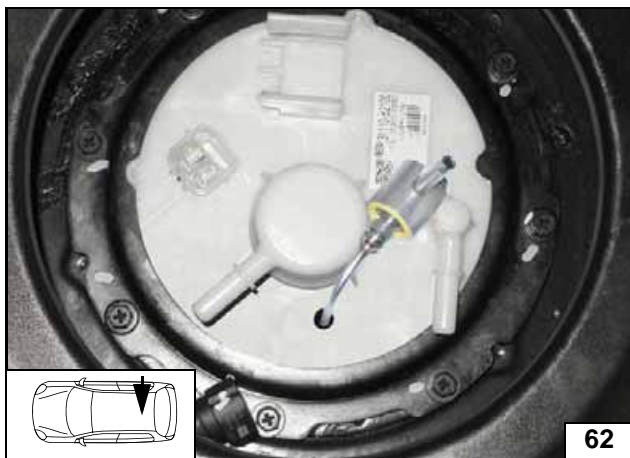
Work steps F4 and F5.

Bend FuelFix 1 according to template and cut to length.

2 Hole



Inserting FuelFix into hole



Work step F5.



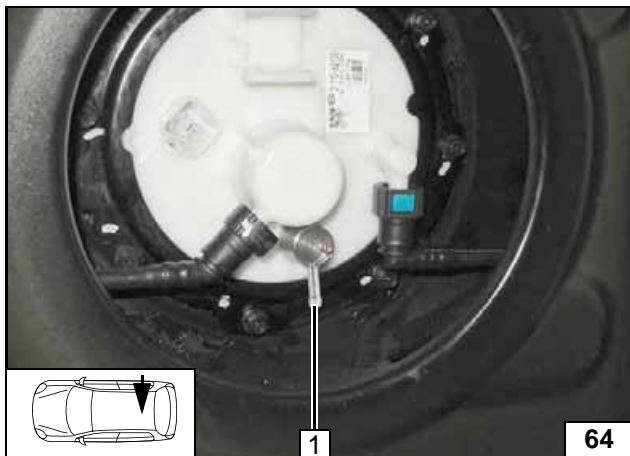
Inserting FuelFix



Work step F5.



Inserting FuelFix

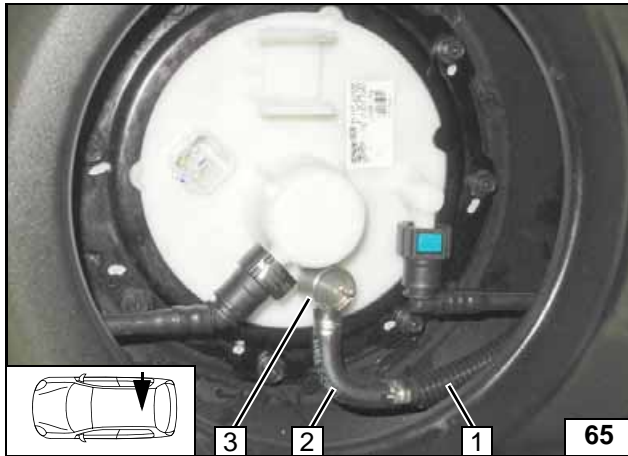


Work steps F5.3 and F5.4.

Align FuelFix 1 as shown by turning.



Inserting FuelFix

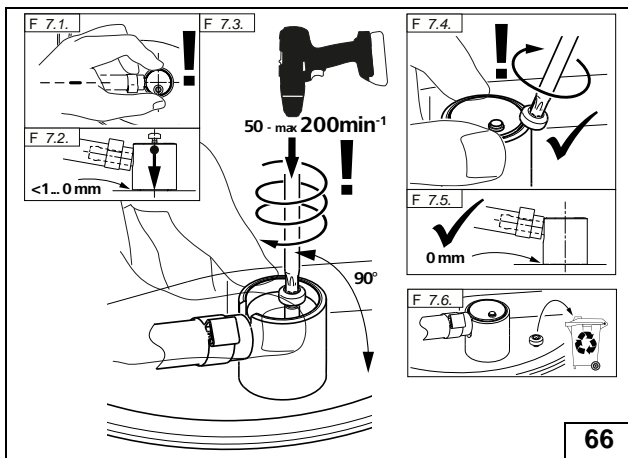


Work step F6.

- 1 Fuel line in 10 mm dia. corrugated tube
- 2 90° moulded hose, 10mm dia. clamp [2x]
- 3 FuelFix



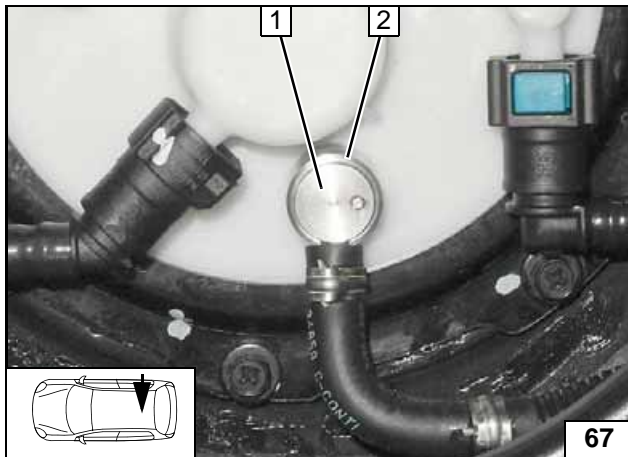
**Connect-
ing fuel line**



Work step F7.



**Mounting
FuelFix**

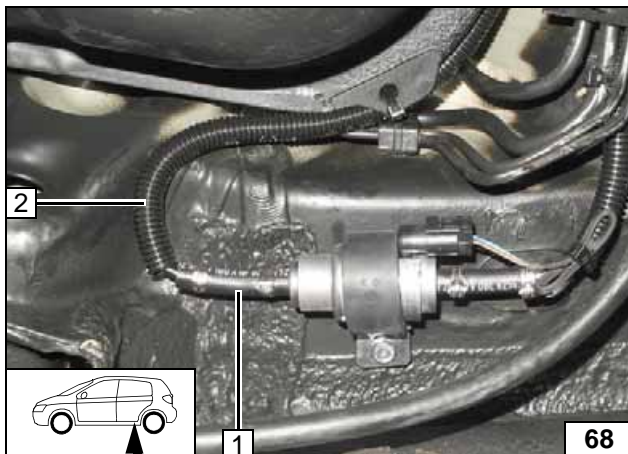


Work step F8.

Ensure firm seating of FuelFix and positioning of clamping piece 1 with respect to upper edge 2 of the housing. Fasten fuel line of FuelFix with cable tie as tension relief on original vehicle fuel line.



**Checking fi-
nal position**



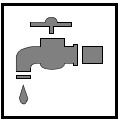
Cut about 300 mm from 10 mm dia. corrugated tube 2 and slide onto fuel line of FuelFix.

Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Fuel line of FuelFix, hose section, 10mm dia. clamp [2x]



**Connect-
ing meter-
ing pump**

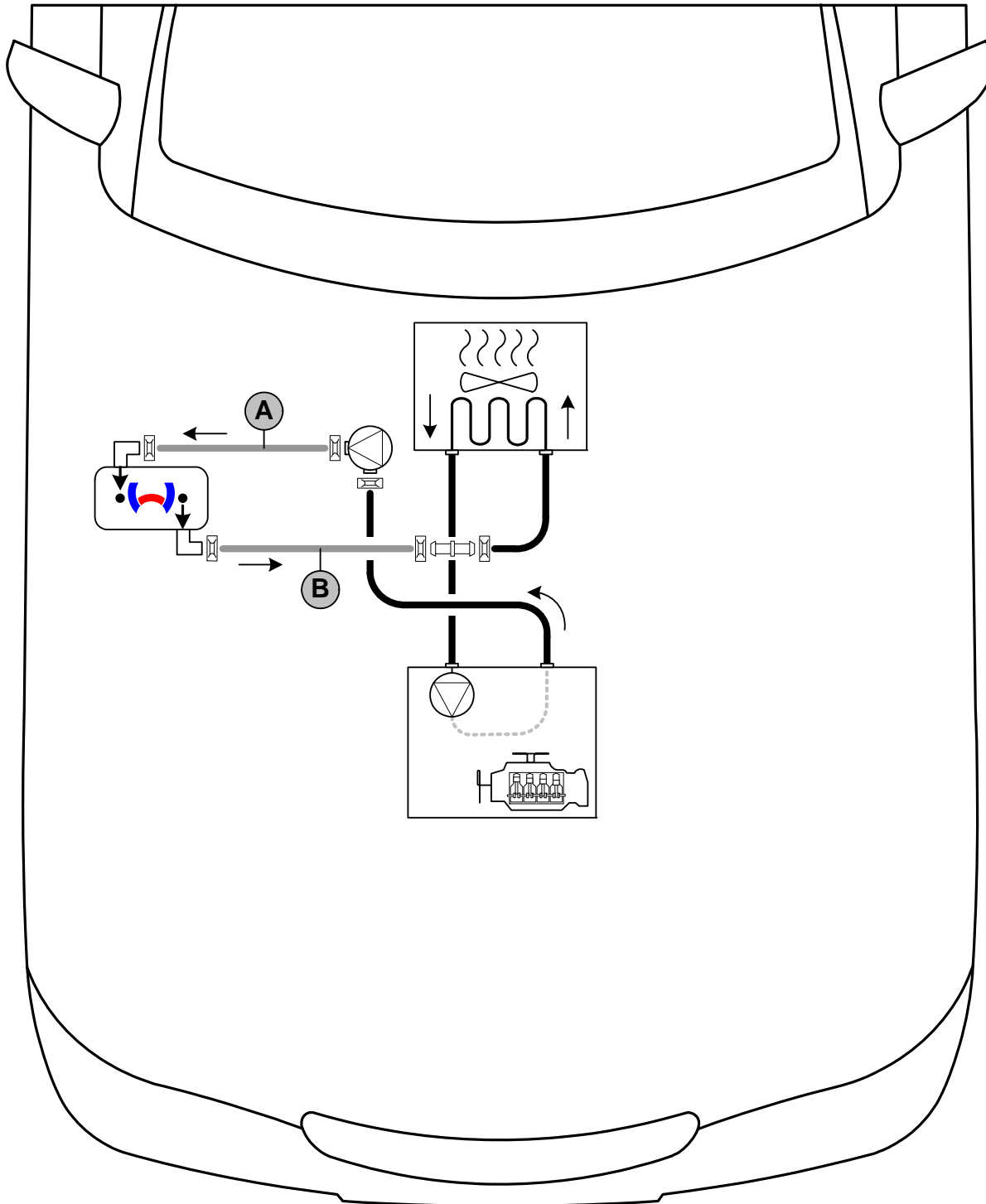


Coolant Circuit





Any coolant running off should be collected in a suitable container. Route hoses so that they are 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.

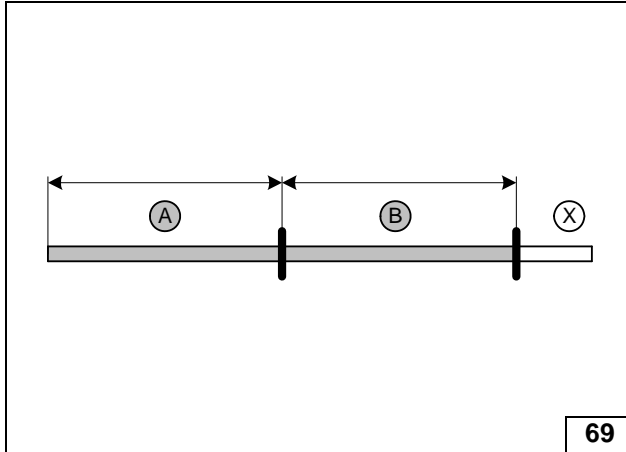
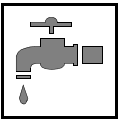
The connection should be modelled on an "inline" circuit and based on the following diagram:



Hose routing diagram

All spring clips  = 25 mm dia.
Connecting pipe  = 18x18mm dia.





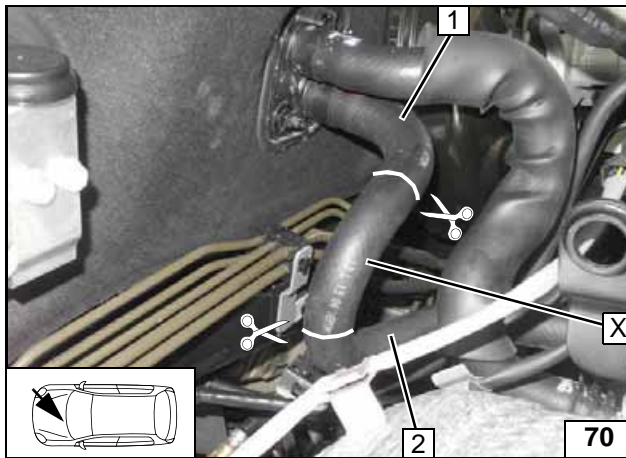
Discard section **X**.

A = 710

B = 750



Cutting hoses to length



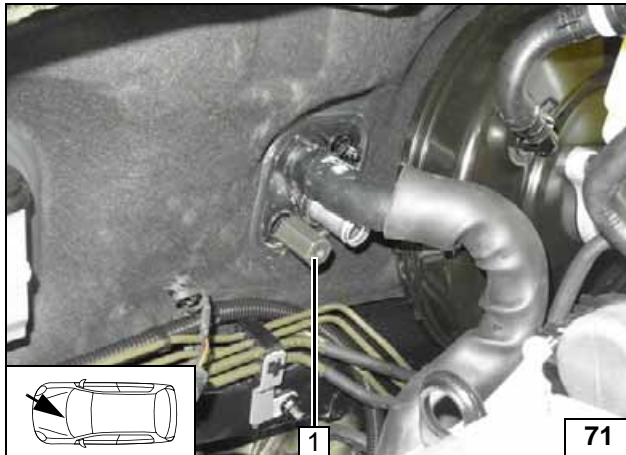
Cut hose on engine outlet / heat exchanger inlet at the marking.

Discard section **X**.

- 1 Hose section of heat exchanger inlet
- 2 Engine outlet hose section

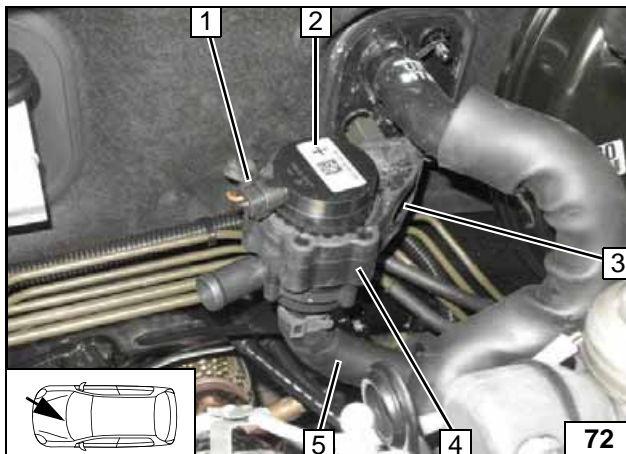


Cutting point



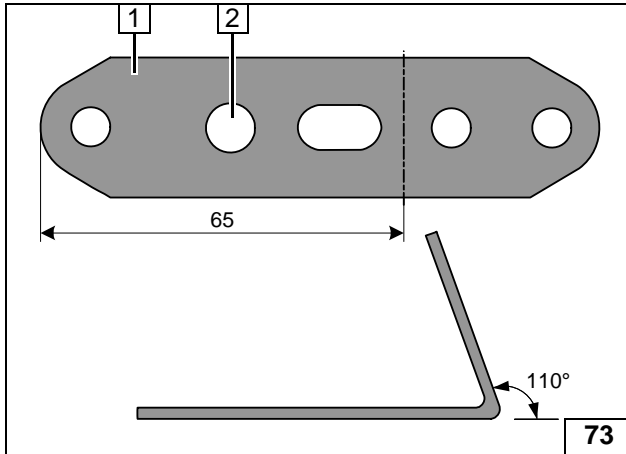
- 1 M6x30 spacer nut on original vehicle stud bolt

Installing spacer nut



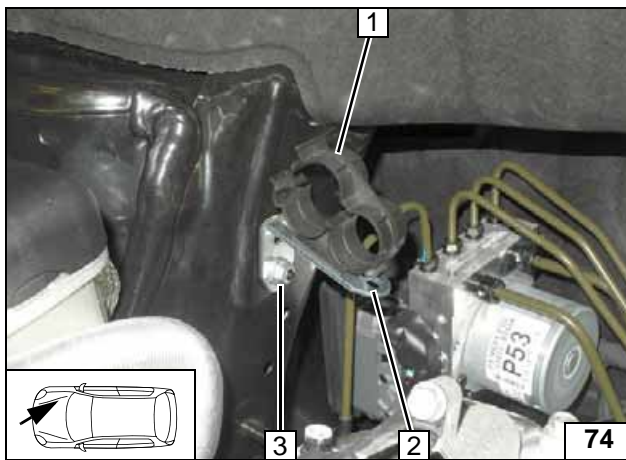
- 1 Connector of circulating pump wiring harness
- 2 Circulating pump
- 3 M6x25 bolt on spacer nut
- 4 Mounting of circulating pump
- 5 Hose on engine outlet

Installing circulating pump



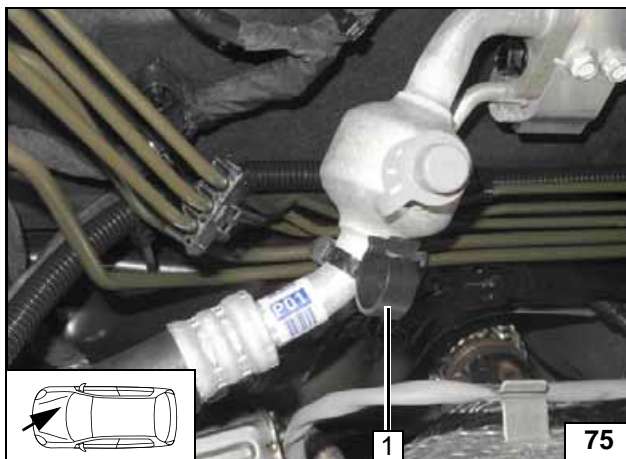
- 1 Perforated bracket
- 2 Drill out hole to 8 mm dia.

Preparing perforated bracket



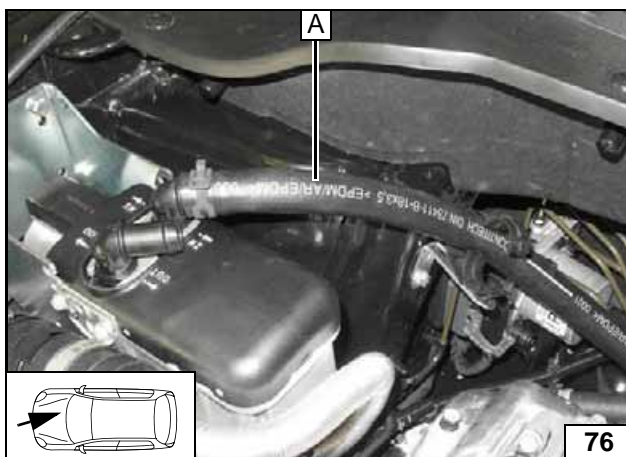
- 1 23x23 lockable spacer bracket
- 2 Perforated bracket
- 3 Flanged nut on original vehicle stud bolt

Installing spacer bracket

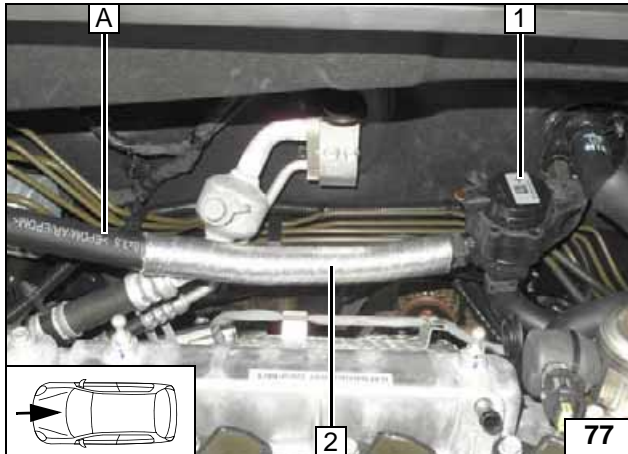


- 1 Hose bracket with cable tie on A/C line (close cable tie)

Mounting hose bracket



Connecting heater inlet

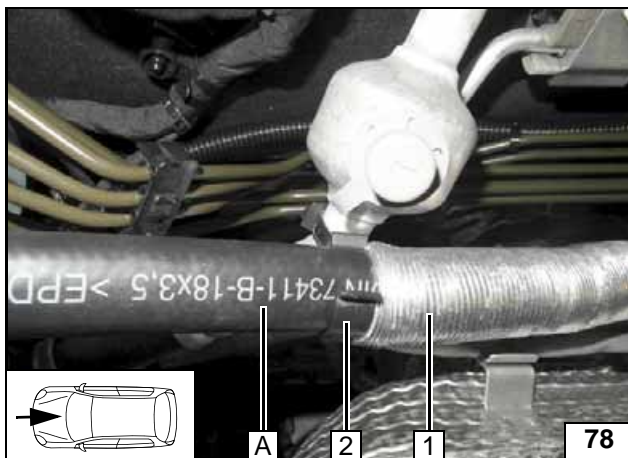


Cut heat protection hose 2 in the middle and slide onto hose A .

- 1 Circulating pump



Connect-
ing circulat-
ing pump

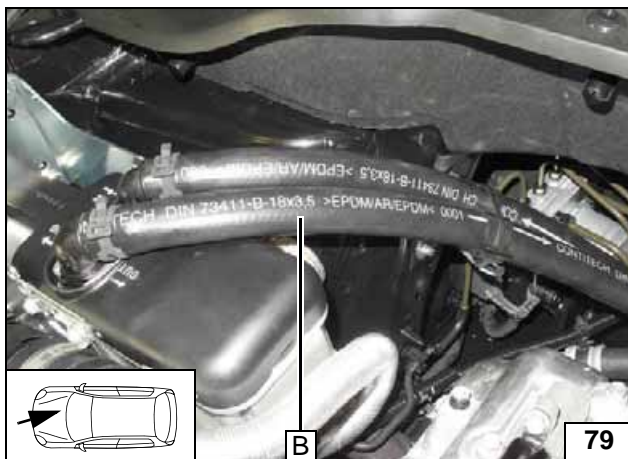


Insert hose A in hose bracket 2.

- 1 Align heat protection hose



Routing in
engine
compartment

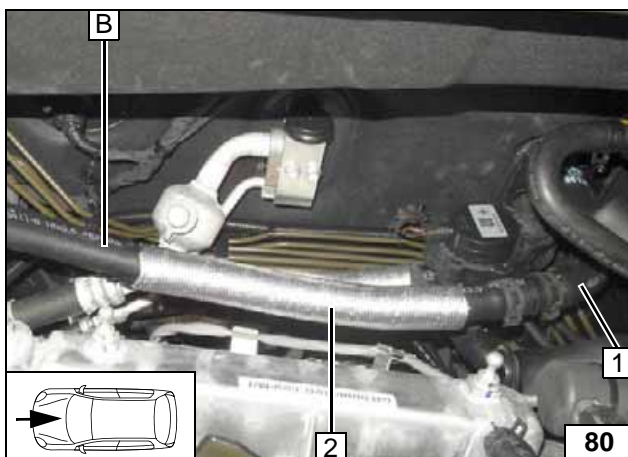


Slide heat protection hose 2 onto hose B .

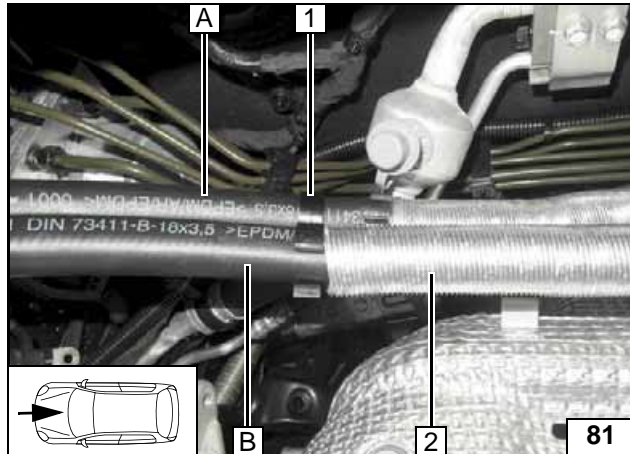
- 1 Hose of heat exchanger inlet



Connect-
ing heater
outlet

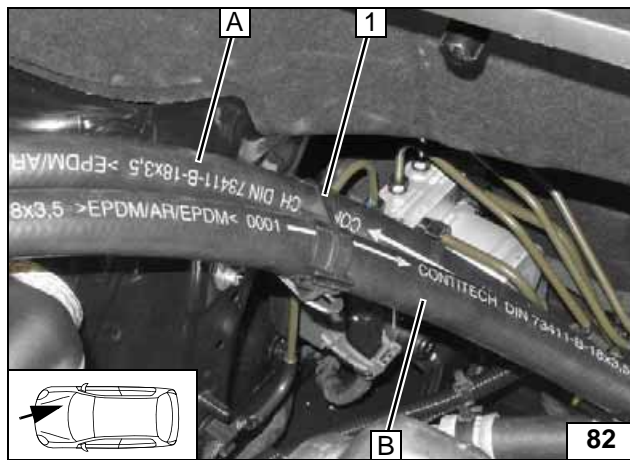


Connect-
ing heat ex-
changer
inlet



- 1 22x24 hose bracket between hose **A** and **B**
- 2 Align heat protection hose

**Mounting
hose bracket**

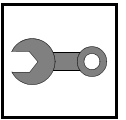


Ensure sufficient distance from neighbouring components, correct if necessary.



- 1 Lock hose bracket

**Aligning
hoses**

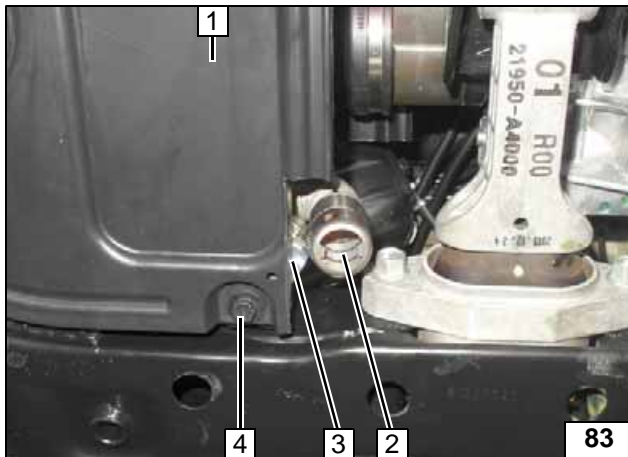


Final Work



Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose lines. Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Set the digital timer, teach telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" caution label near the filler neck**
- **See installation instructions for initial start-up and function check**

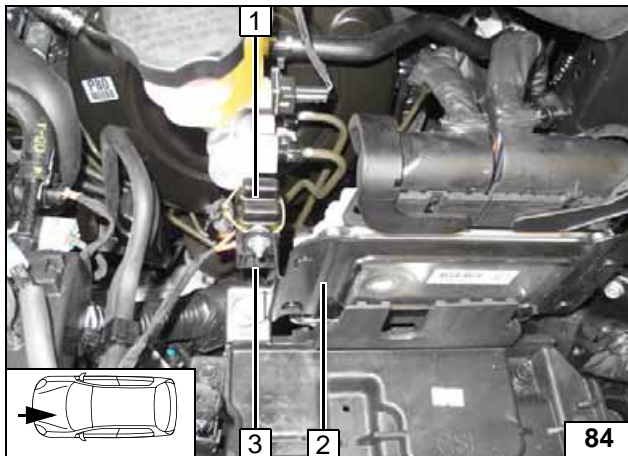


Install underride protection **1** together with angle bracket **3** at position **4**.

- 2** Align exhaust end section
- 4** Original vehicle bolt



Installing exhaust end section



Install and complete engine control unit with bracket **2**. Mount engine compartment fuse holder **1** onto retaining plate **3**.

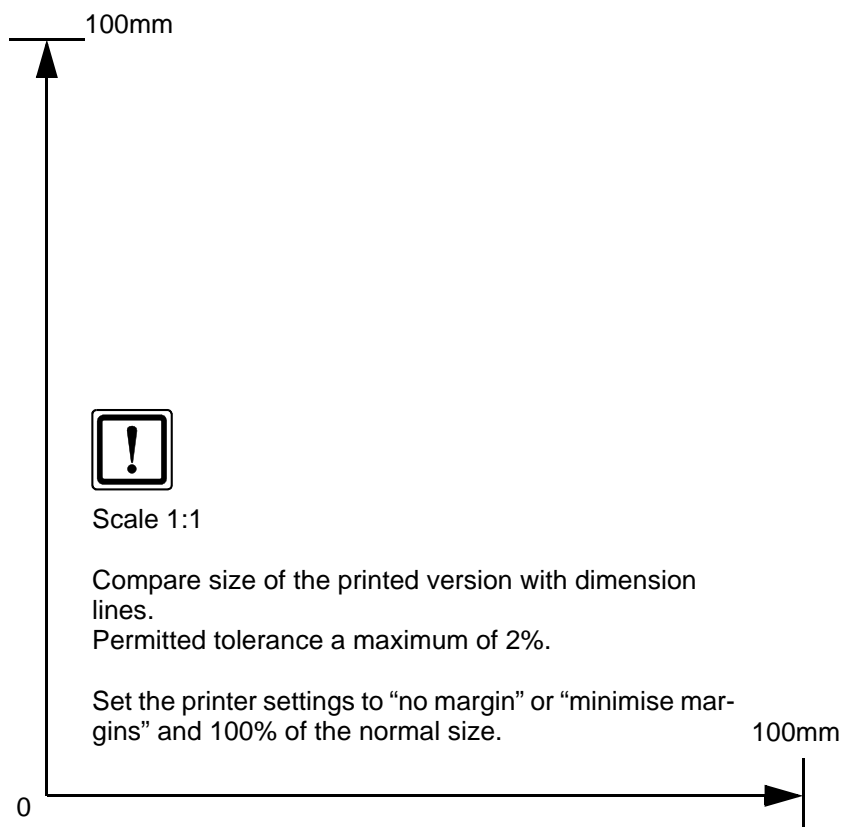
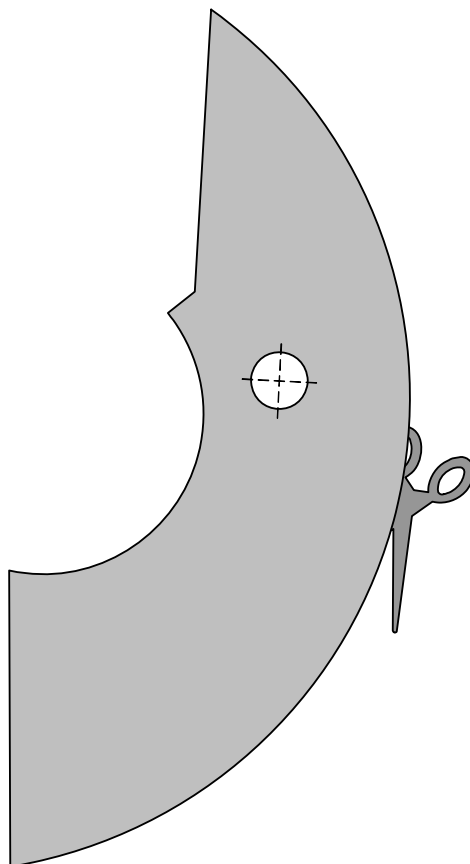


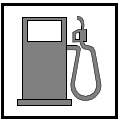
Mounting engine compartment fuse holder

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



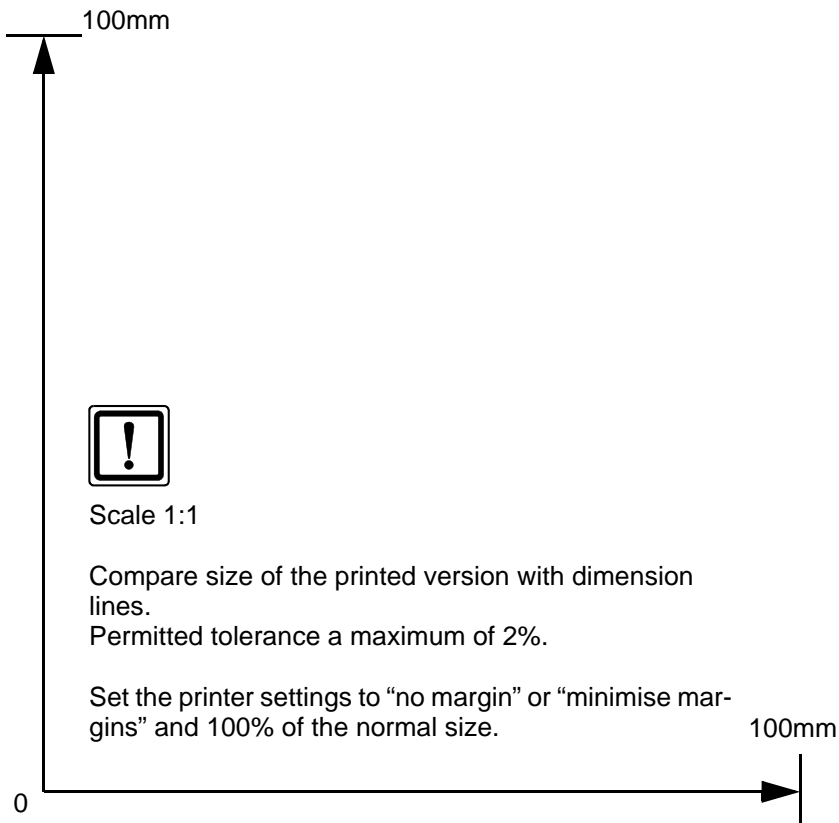
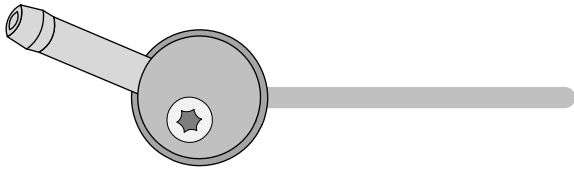
Fuel Tank Sending Unit Template





FuelFix Template

Top view



Operating Instructions for End Customer

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.

Instructions for deactivation can be taken from the operating instructions manual of the vehicle.

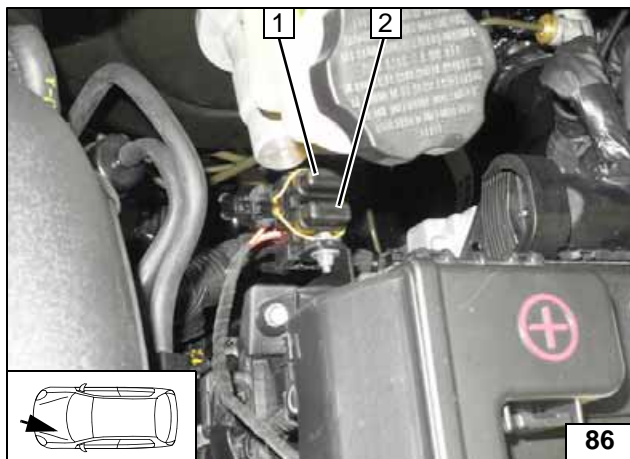
Before parking the vehicle, make the following settings:



- 1 Set fan to level "2", max. "3"
- 2 Set air outlet via "MODE" to windscreen / foot-well
- 3 Set temperature to "HI"

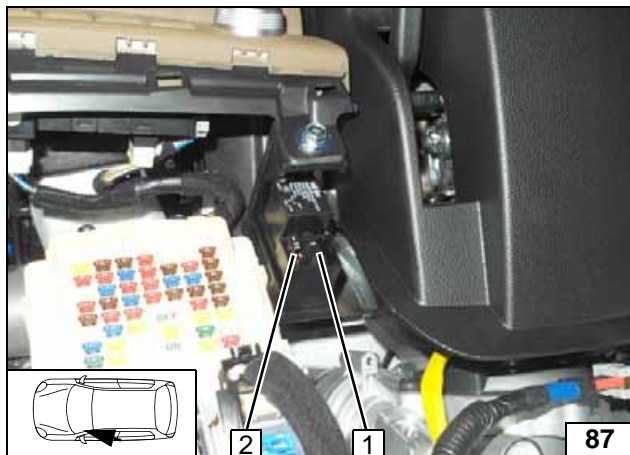


A/C control panel



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

Engine compartment fuses



- 1 1A heater control fuse F3
- 2 7.5A fan fuse F4

Passenger compartment fuses

