

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Toyota Auris / Auris estate car

Validity

Manufacturer	Model	Type	Model	Model year	EG-BE No. / ABE
Toyota	Auris	E15UT(A)	E18	Starting with 2013	e11 * 2001/116 * 0305 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
2.0 D	Diesel	6-speed SG	91	1998	1AD-FTV

SG = Manual transmission

From Model Year 2013

Left-hand drive vehicle

Verified equipment variants: 1 and 2 zone automatic air-conditioning
 Front fog light
 Headlight washer system
 Start / Stop

Not verified: Manual air-conditioning
 Passenger compartment monitoring

Total installation time: about 8.5 hours

Toyota Auris / Auris estate car

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Necessary Components

- Basic delivery scope *Thermo Top Evo* in accordance with price list
- Installation kit for Toyota Auris / Auris estate car 2013 2.0 Diesel: **1319177C**
- Heater control in accordance with price list and upon consultation with final customer
- In case of Telestart, indicator lamp in accordance with price list and upon consultation with final customer

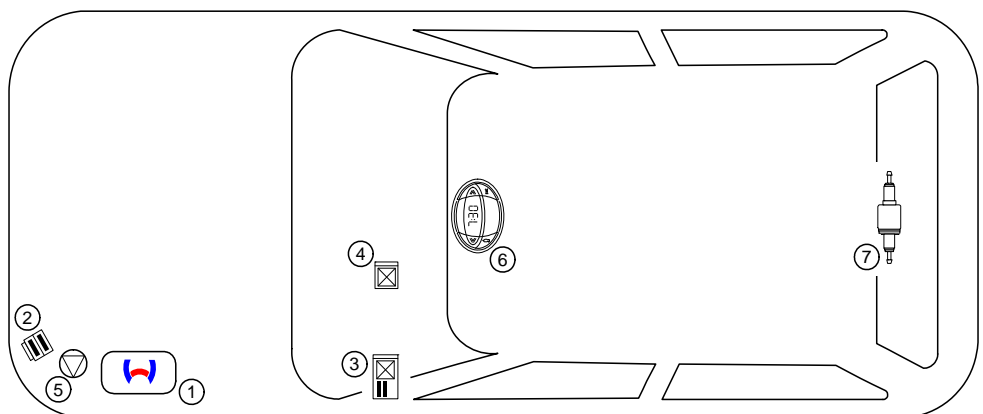
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about $\frac{1}{4}$ full.
- The installation location of the push button in the case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the available space and manufacturer's instructions, we recommend the use of a vehicle battery with more electrical capacity.

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Relay and fuse holder of passenger compartment
4. IPCU
5. Circulating pump
6. Digital timer
7. Metering pump



Notes 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 227).

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

1.3 Please note

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

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

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

Important

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

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

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

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

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

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

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

When installing an IPCU, the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

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

Note

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

Important

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

Note

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Toyota Auris / Auris estate car

Notes on Validity

This installation documentation applies to Toyota Auris / Auris estate car Diesel vehicles - for validity, see page 1 - from model year 2013 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 Instructions

Special Tools

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

Dimensions

- All dimensions are in mm

Tightening torque values

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

Explanatory Notes on Document

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

Special features are highlighted using the following symbols:

Mechanical system



Electrical system



Coolant circuit



Combustion air



Fuel



Exhaust gas



Software



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



Specific risk of fire and explosion



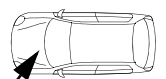
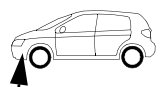
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature



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



Toyota Auris / Auris estate car

Preliminary Work

Vehicle

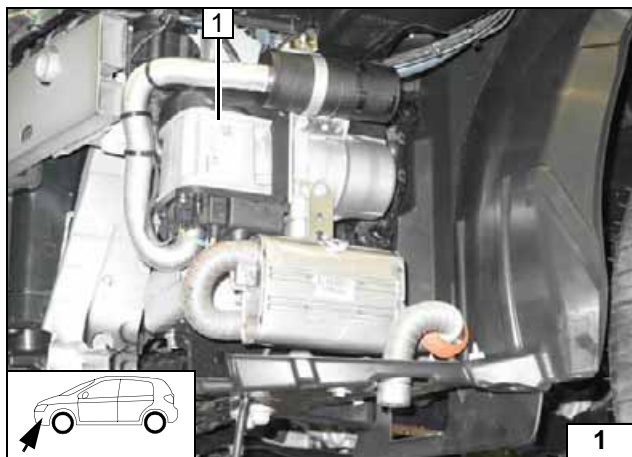
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the battery support.
- Remove the air filter box.
- Remove the engine cover.
- Remove the fuel filter.
- Remove the left-hand wheel well trim.
- Remove the bumper trim.
- Remove the left headlight.
- Remove the engine underride protection.
- Remove the left-hand underride protection.
- Remove the lower instrument panel trim on the driver's side.
- Remove the side trim on the right-hand side in the driver's footwell.
- Remove the centre A-pillar trim.

Heater

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

Note:

Please note that part of the pictures are images of a vehicle with a 1.4D engine!

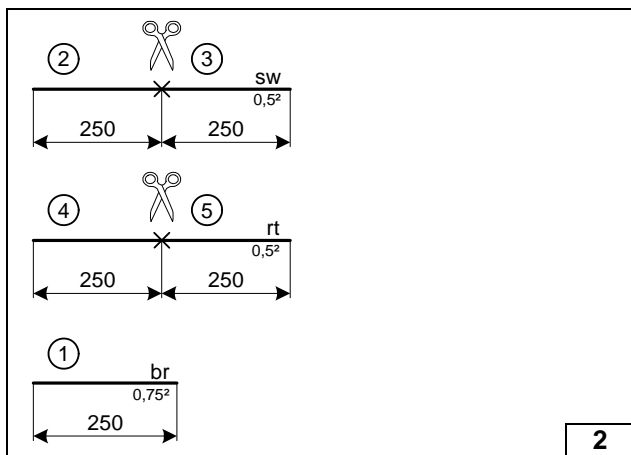


Heater Installation Location

1 Heater



Installation location

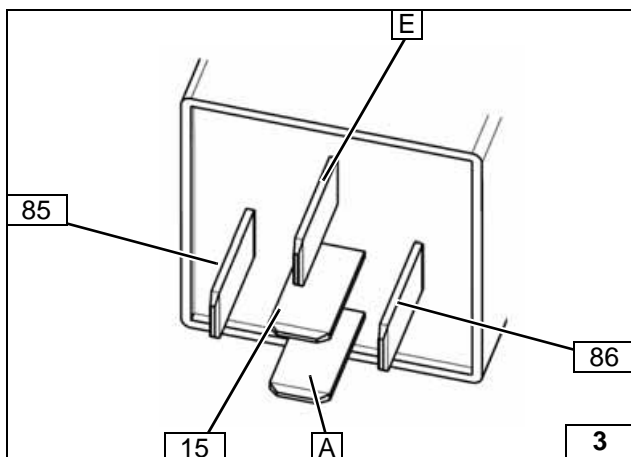


Preparing Electrical System

Wire sections retain their numbering in the entire document.



Cutting wires to length



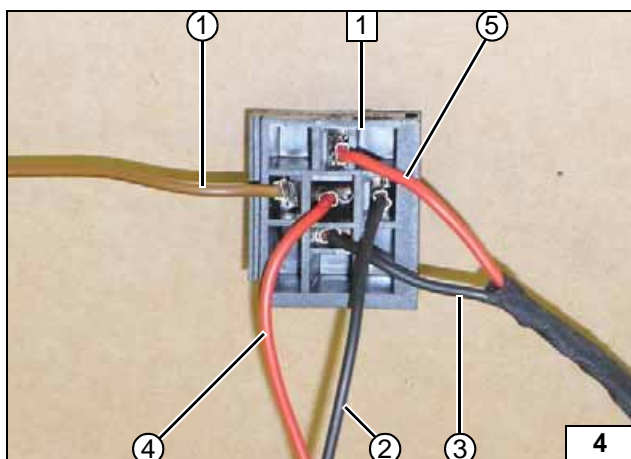
Check the IPCU settings during start-up of the heater and adjust if necessary.

Settings:

- Duty-Cycle: 60%
- Frequency: 400 Hz
- Voltage: 10 V
- Function: Low-side



Connection for IPCU

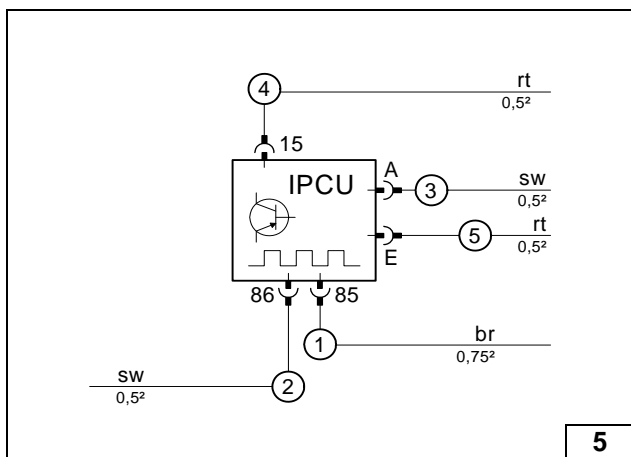


Connect wires according to wiring diagram to the IPCU 1 socket.

- ① Brown (br) wire of IPCU/85
- ② Black (sw) wire of IPCU/86
- ③ Black (sw) wire of IPCU/A
- ④ Red (rt) wire of IPCU/15
- ⑤ Red (rt) wire of IPCU/E



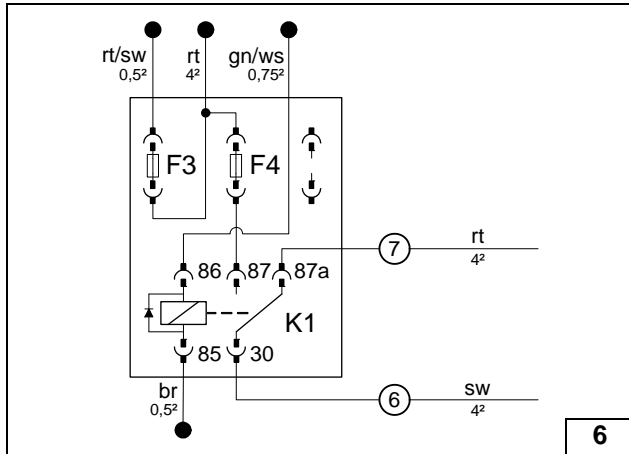
Premounting IPCU socket



Premount IPCU.



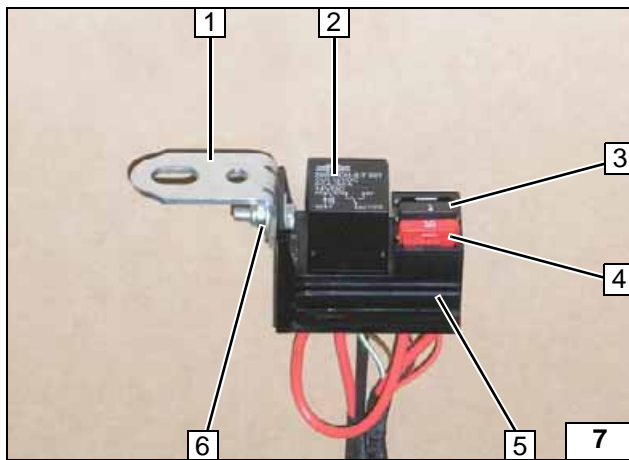
Connecting wires



Insert wires into socket of K1 relay.

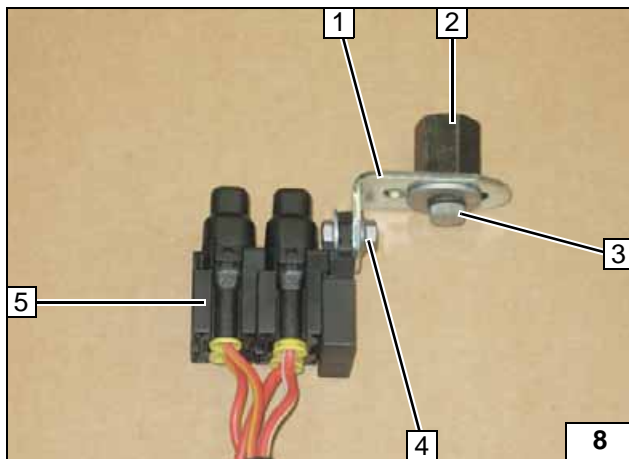


Preparing passenger compartment relay and fuse holder



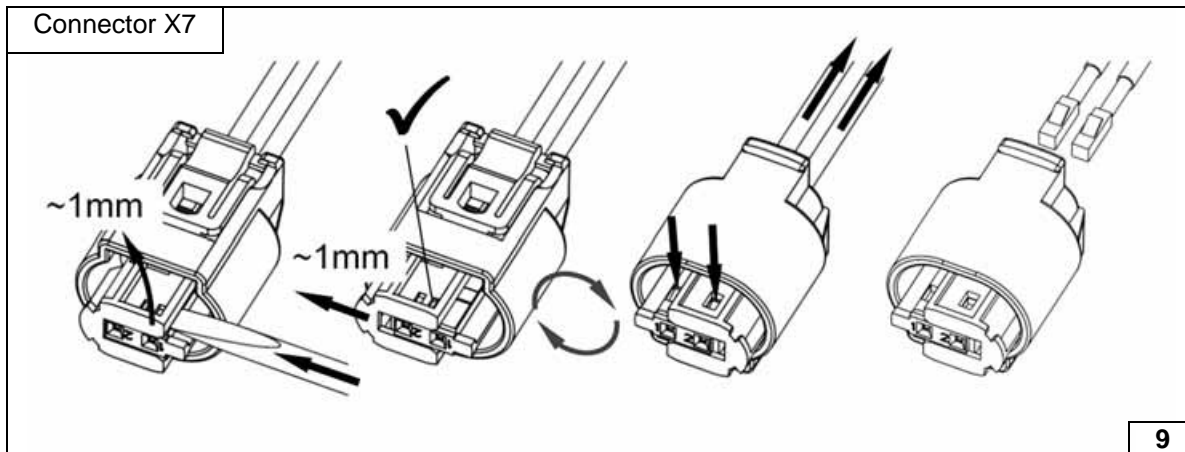
- 1 Angle bracket
- 2 K1 relay
- 3 1A fuse F3
- 4 10A fuse F4
- 5 Relay and fuse holder of passenger compartment
- 6 M5x16 bolt, large diameter washer [2x], nut

Premounting relay and fuse holder of passenger compartment



- 1 Angle bracket
- 2 20 mm spacer nut
- 3 M6x12 bolt, spring lockwasher, large diameter washer
- 4 M5x16 bolt, large diameter washer [2x], retaining plate for fuse holder, nut
- 5 Fuses F1-2 mounted

Premounting fuse holder of engine compartment



Removing connector of metering pump

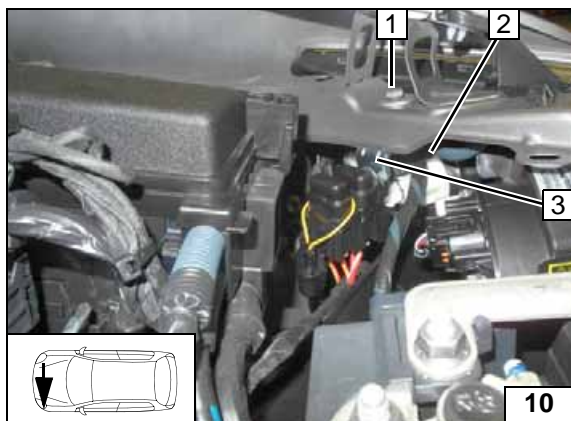


Electrical System

Fuse holder of engine compartment

Remove original vehicle clip at position **1**. Fasten original vehicle wiring harness **2** using a cable tie.

- 1 M6x12 bolt, spring lockwasher, large diameter washer, existing hole
- 3 Angle bracket



Wiring harness pass through

For wiring harness routing, see "Installing heater" section

- 1 Protective rubber plug
- 2 Heater wiring harnesses, heater control

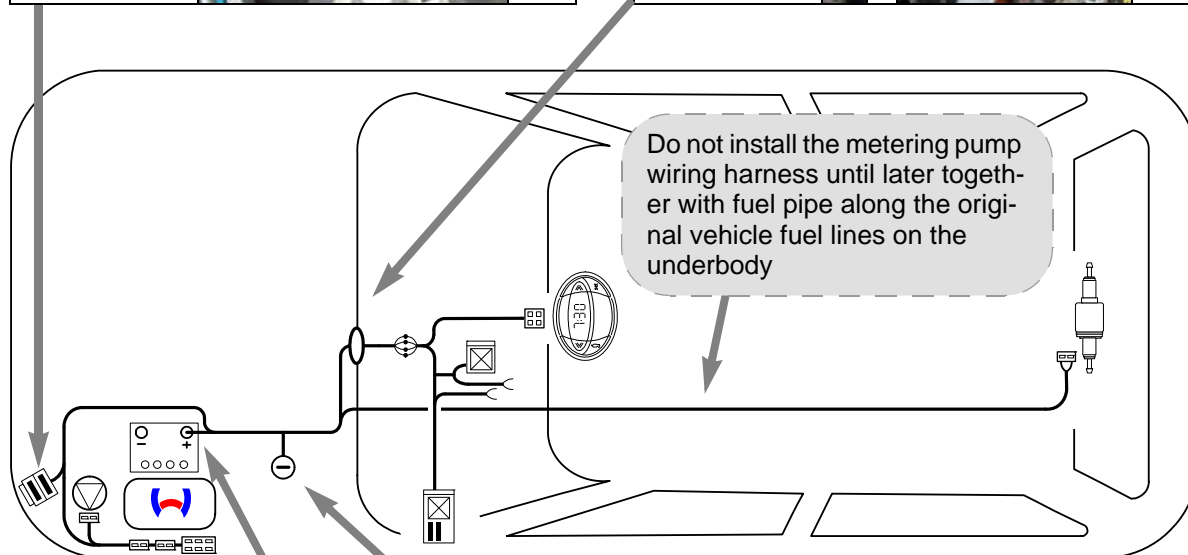
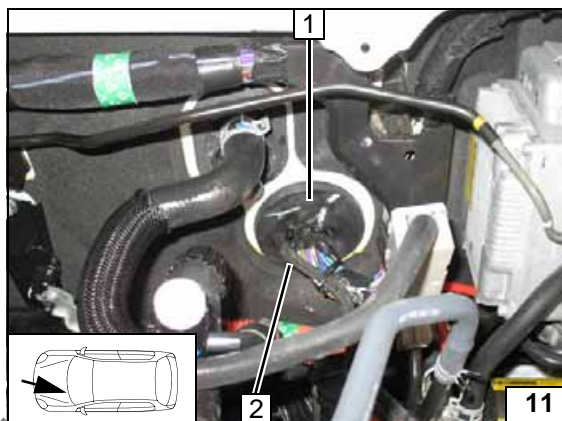
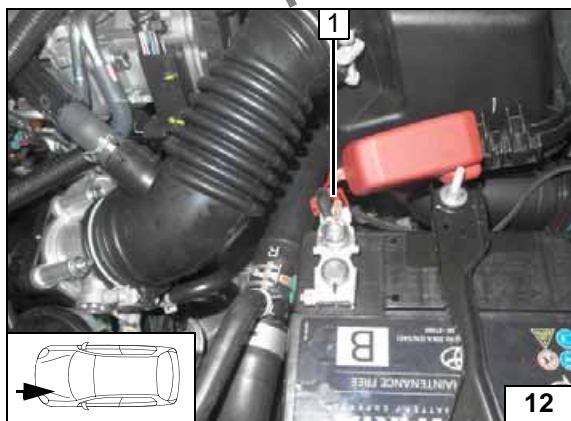
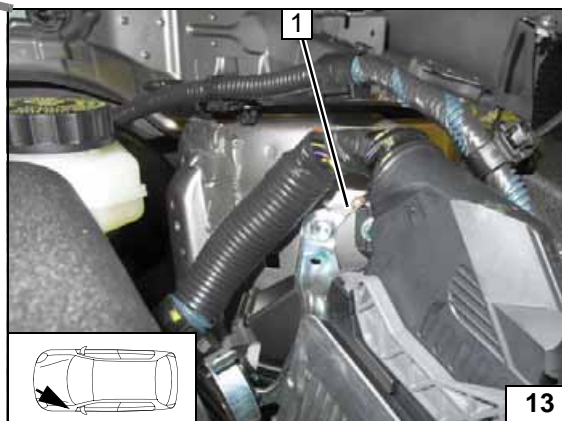


Diagram of wiring harness routing



Positive wire

- 1 Positive wire on positive battery terminal

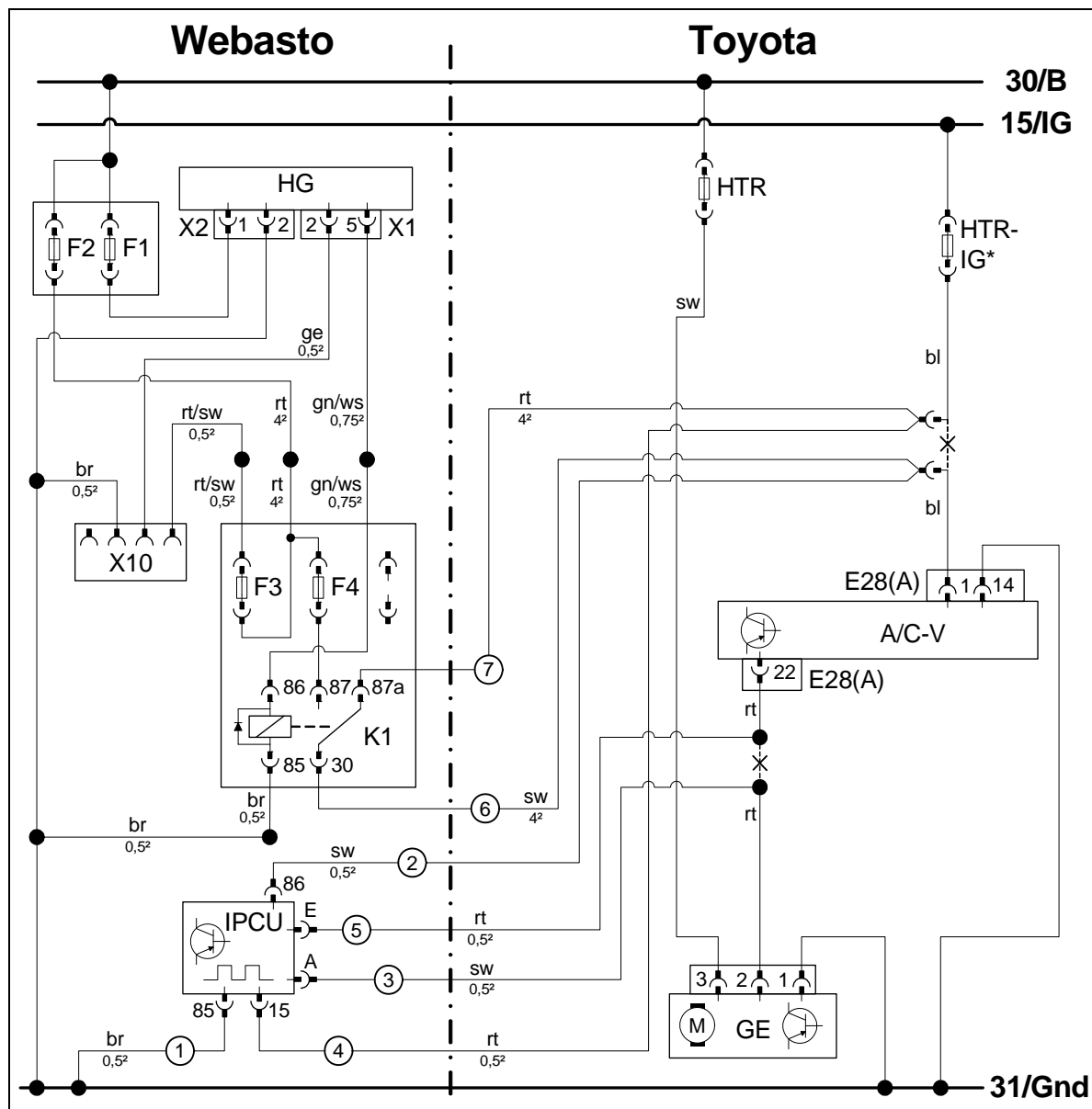


Earth wire

- 1 Earth wire on original vehicle earth support point



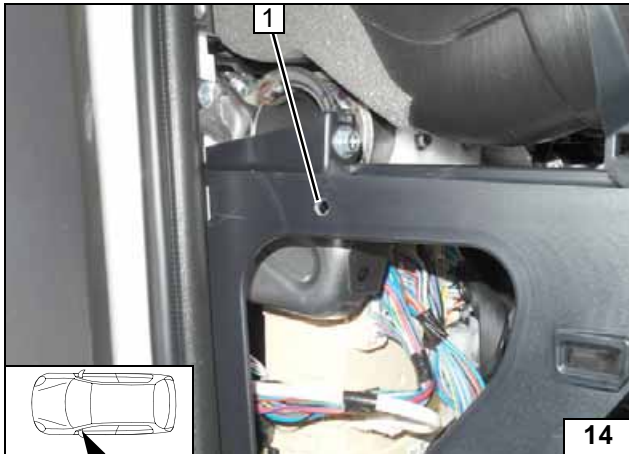
Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	HTR	50A fuse	rt	red
X1	6-pin heater connector	HTR-IG	7.5A fuse	sw	black
X2	2-pin heater connector	A/C-V	A/C booster	ge	yellow
X10	4-pin connector of heater control	E28(A)	40-pin connector A/C V	gn	green
K1	Fan relay	GE	Fan unit	bl	blue
F1	20A fuse			ws	white
F2	30A fuse			br	brown
F3	1A fuse				
F4	10A fuse				
IPCU	Pulse width modulator				
IPCU settings:					
Duty-Cycle: 60%					
Frequency: 400 Hz					
Voltage: 10 V					
Function: Low-side					
				X	Cutting point
Cable colours and pin designations may vary					

Legend

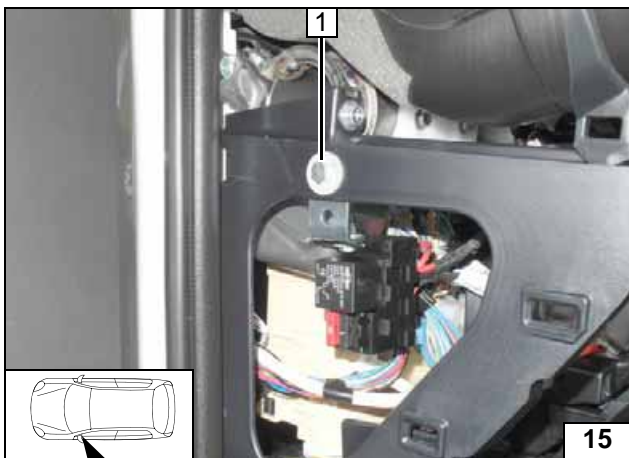


When drilling, be careful of components located behind.

- 1 6.5 mm dia. hole

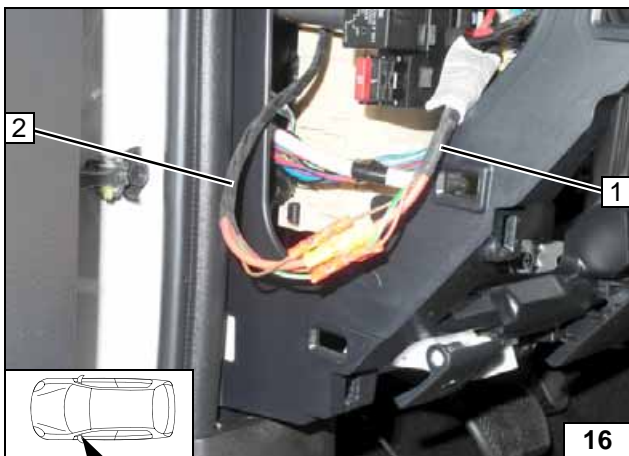


Hole for passenger compartment relay and fuse holder



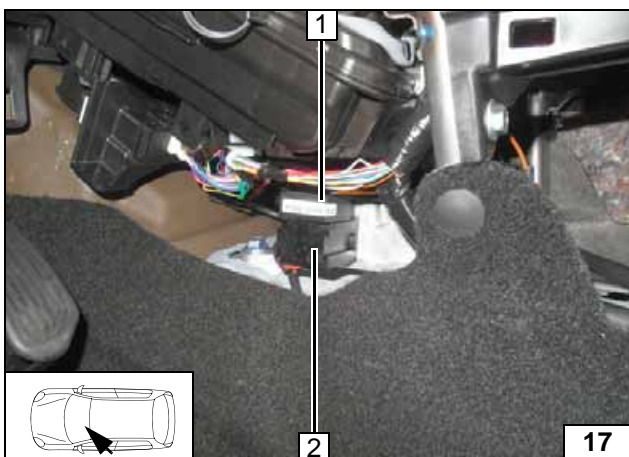
- 1 M6x20 bolt, large diameter washer, flanged nut

Installing relay and fuse holder of passenger compartment



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

Connecting wiring harnesses

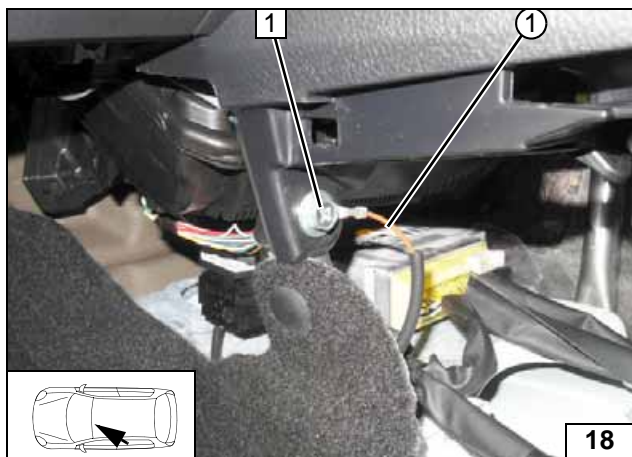


Fasten IPCU socket 2 on control unit with adhesive tape.

- 1 IPCU mounted

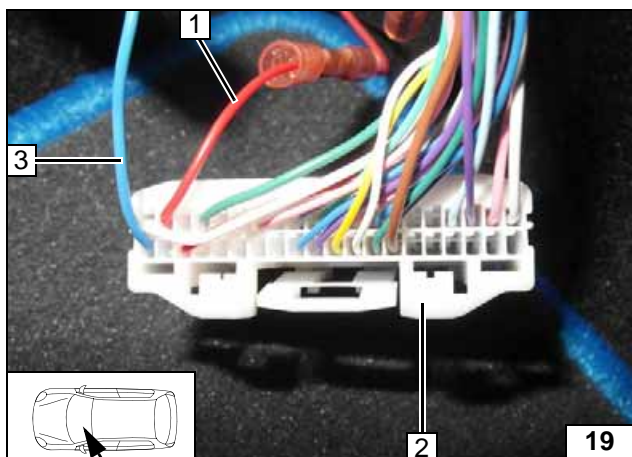


Mounting IPCU



- 1 Original vehicle bolt
- ① Brown (br) wire of IPCU/85

Earth connection for IPCU



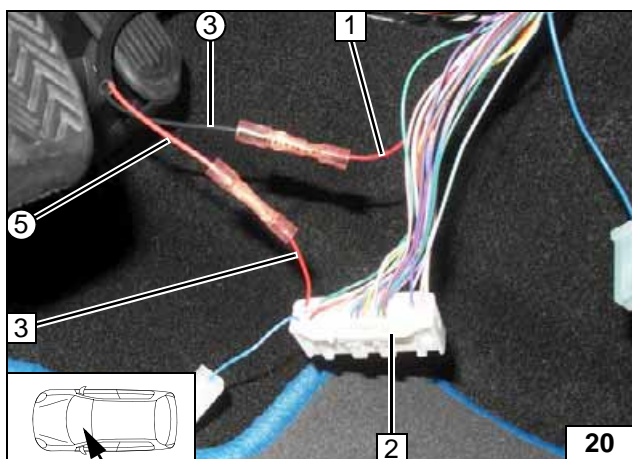
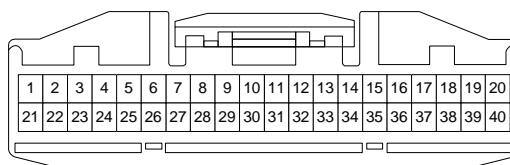
Connection to the 40-pin connector E28 (A) 2 of the A/C booster. Produce connections as shown in wiring diagram.



- 1 Red (rt) wire of Pin 22
- 3 Blue (bl) wire of Pin 1.

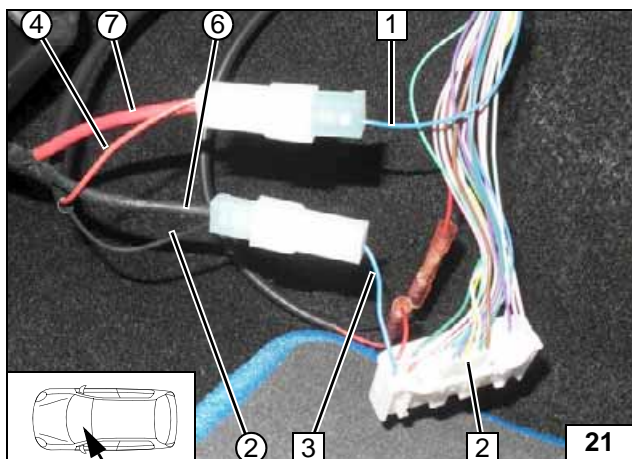
Connector E28(A)

Contact-side view [from the front]



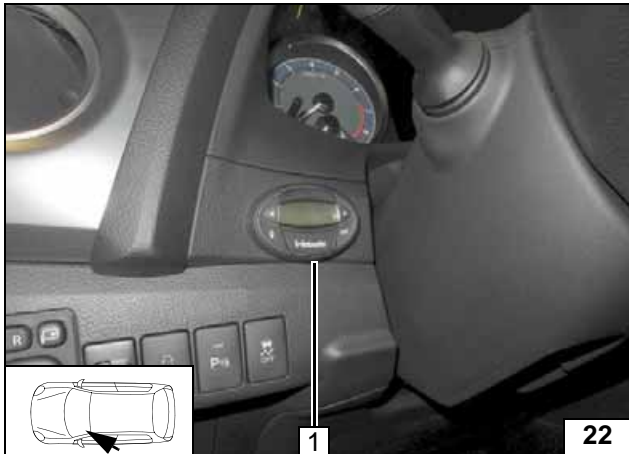
- 1 Red (rt) wire of fan controller
- 2 Connector E28(A)
- 3 Red (rt) wire of E28(A)/22 connector
- ③ Black (sw) wire of IPCU/A
- ⑤ Red (rt) wire of IPCU/E

Connecting A/C booster



- 1 Blue (bl) wire from fuse
- 2 Connector E28(A)
- 3 Blue (bl) wire of E28(A)/1 connector
- ② Black (sw) wire of IPCU/86
- ④ Red (rt) wire of IPCU/15
- ⑥ Black (sw) wire of K1/30
- ⑦ Red (rt) wire of K1/87a

Connecting A/C booster

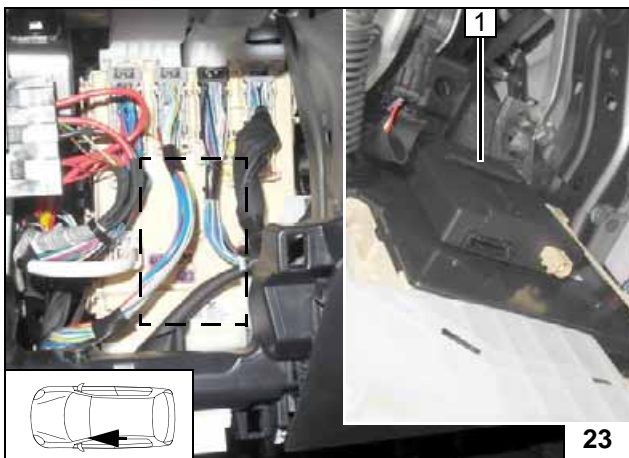


Digital Timer

1 Digital timer



Mounting digital timer

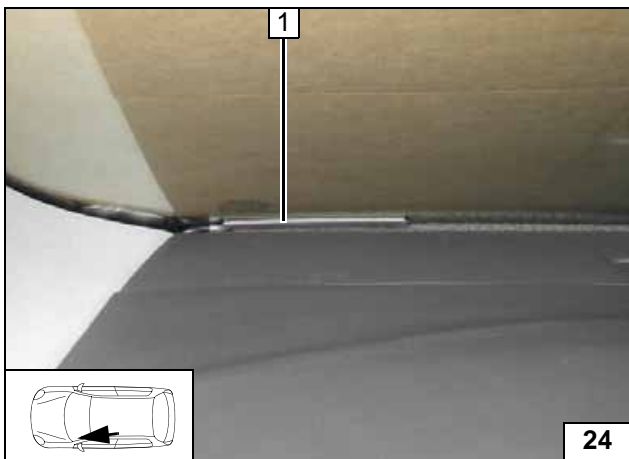


Remote Option (Telestart)

Fasten receiver 1 to the backside of the fuse box using adhesive tape.

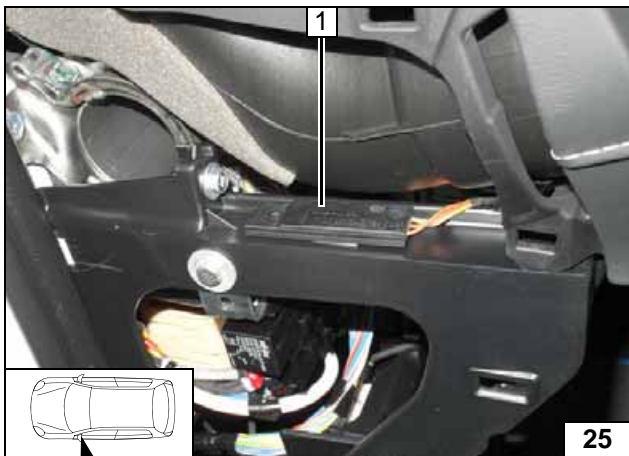


Installing receiver



1 Antenna

Installing antenna

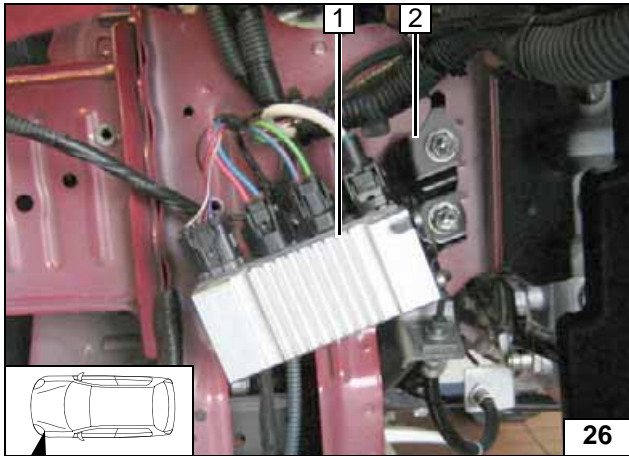


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



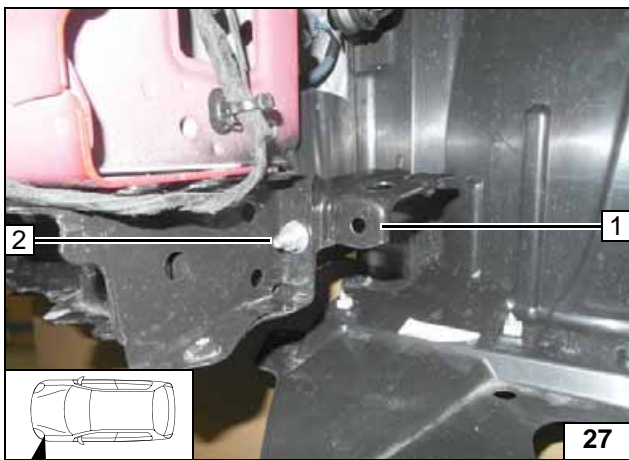
Installing temperature sensor



Preparing Installation Location

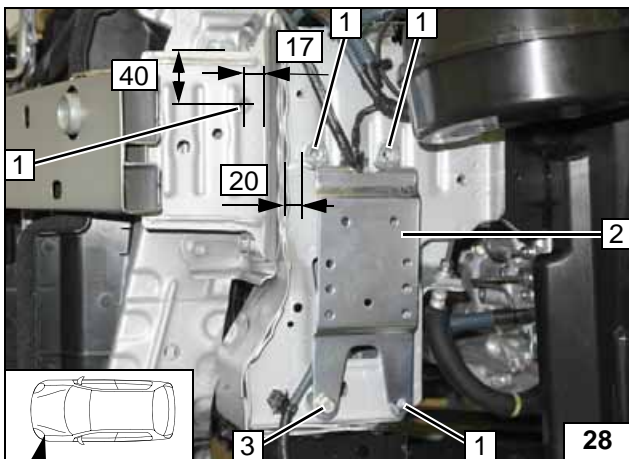
- 1 Remove glow-time control unit, screws will be needed again
- 2 Remove the bracket, 1 bolt will be needed again, discard the rest.

Removing glow-time control unit



- 1 Bracket of glow-time control unit
- 2 Original vehicle bolt, flanged nut

Mounting bracket

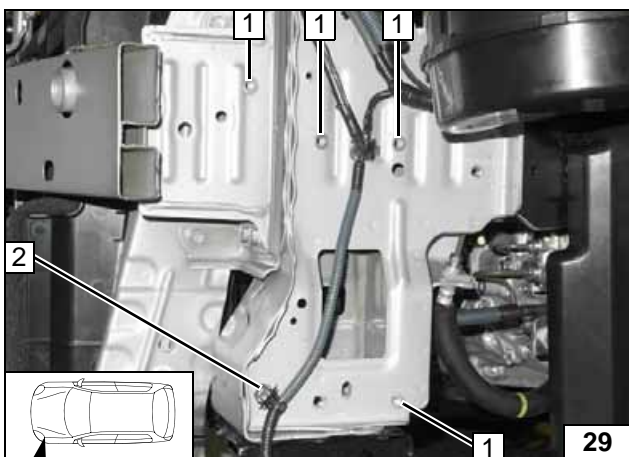


Bend bracket **2** in accordance with the template, install it loosely at position **3** and align it.



- 1 Copy hole pattern [4x]
- 3 M8x40 bolt, spring lockwasher, 20mm shim, existing threaded hole

Copying hole pattern

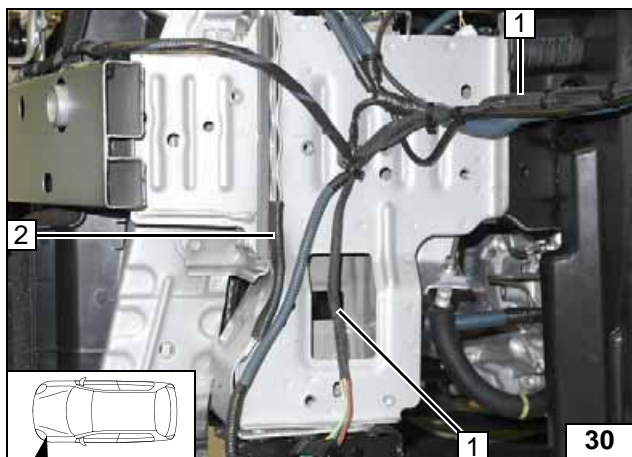


Remove the bracket.



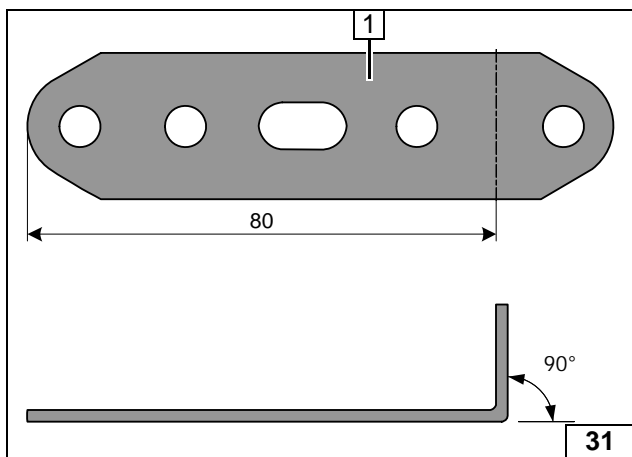
- 1 9.1 mm dia. hole; rivet nut [4x each]
- 2 Loosen wiring harness of front-fog light, remove the clip

Installing rivet nut



- 1 Wiring harness of heater
- 2 100mm edge protection

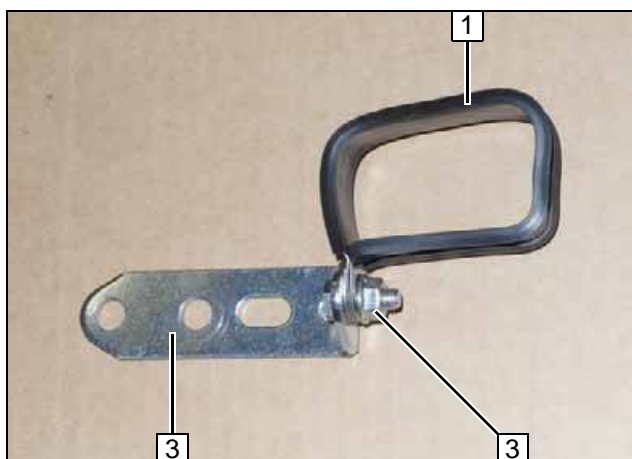
Inserting edge protection



- 1 Perforated bracket

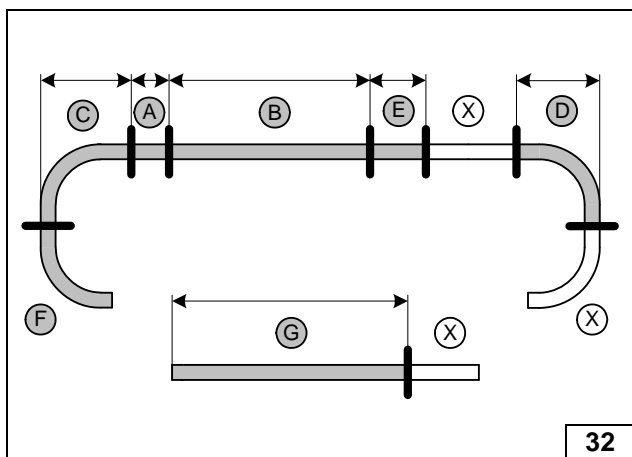


Preparing perforated bracket



- 1 48 mm dia. rubber-coated p-clamp
- 2 M6x20 bolt, flanged nut
- 3 Perforated bracket

Premounting perforated bracket

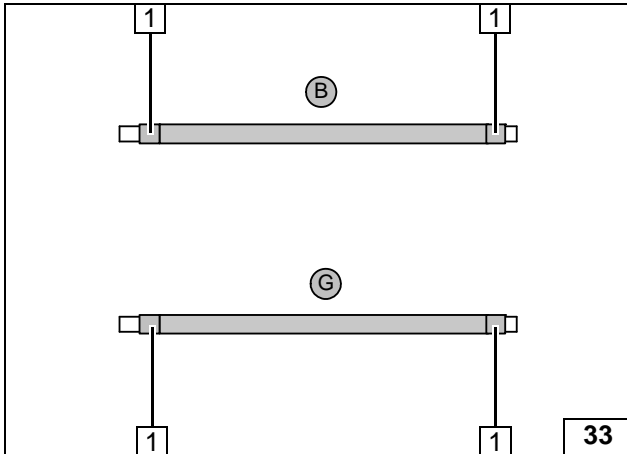


Discard section X.

- A = 130
- B = 1120
- C = 250
- D = 120
- E = 120
- G = 1060



Cutting hoses to length

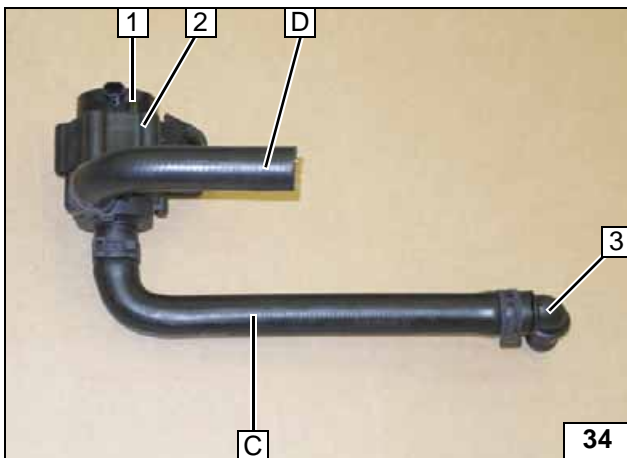


All vehicles

Slide on braided protection hose and cut to length. Cut heat shrink plastic tubing to length.

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

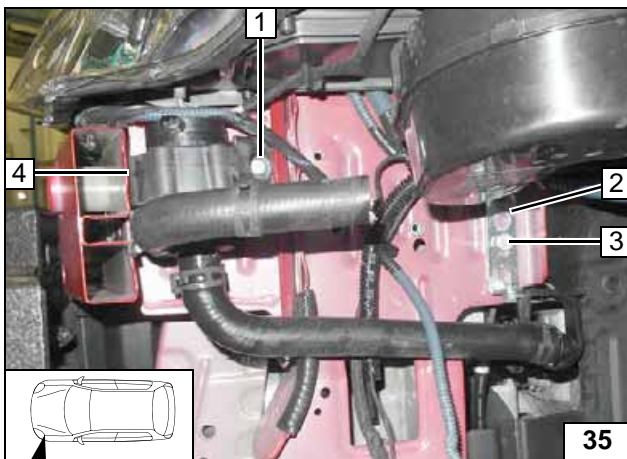
Installing braided protection



All spring clips = 25 mm dia.

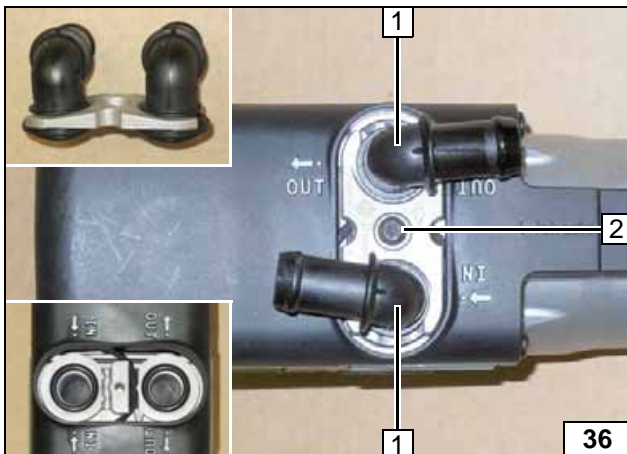
- 1 Circulating pump
- 2 Circulating pump mounting
- 3 90° connecting pipe

Premounting circulating pump



- 1 M6x25 bolt
- 2 Perforated bracket
- 3 M8x20 bolt, spring lockwasher, existing threaded hole
- 4 Circulating pump mounting

Installing perforated bracket and circulating pump

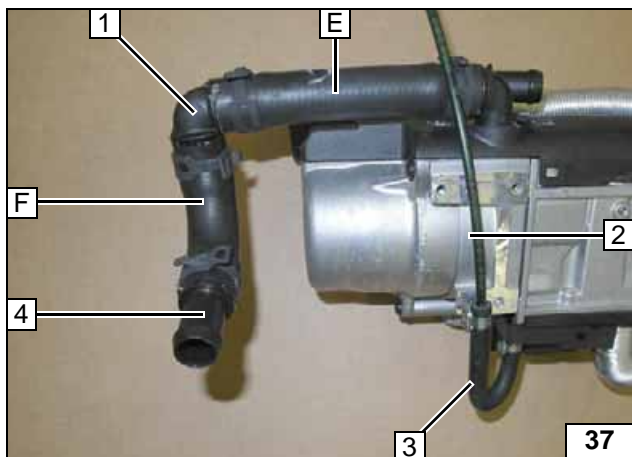


Preparing Heater

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

Installing water connection piece



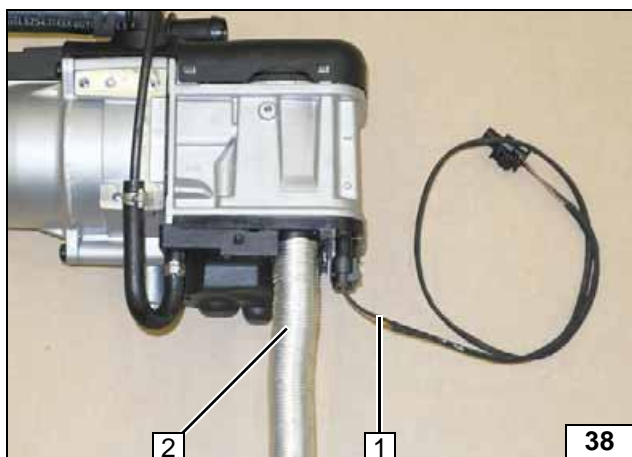


All spring clips = 25 mm dia.

- 1 90° connecting pipe
- 2 Fuel line
- 3 180° moulded hose, 10 mm dia. clamp [2x]
- 4 Connecting pipe



Premounting fuel line and hoses

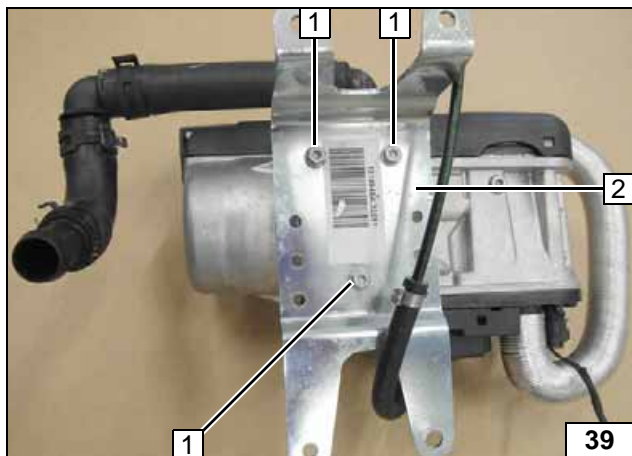


Install wiring harness of circulating pump 1

- 2 Combustion air pipe

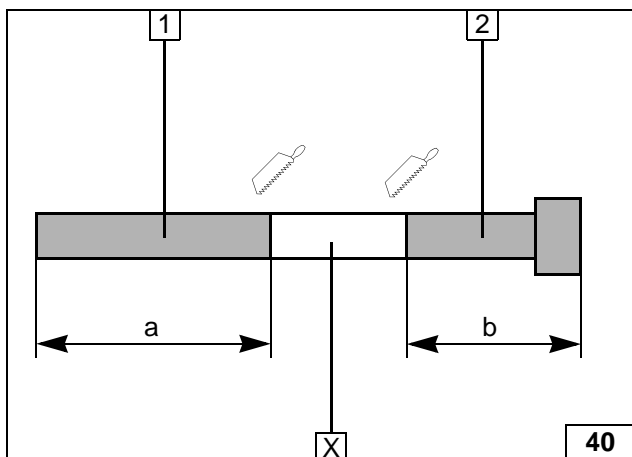


Premounting combustion air pipe



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

Mounting bracket

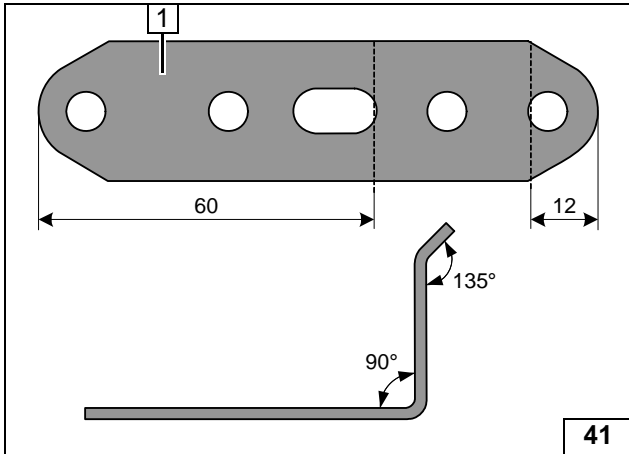


Discard section X.

- 1 Exhaust pipe
a = 290
- 2 Exhaust end section
b = 210

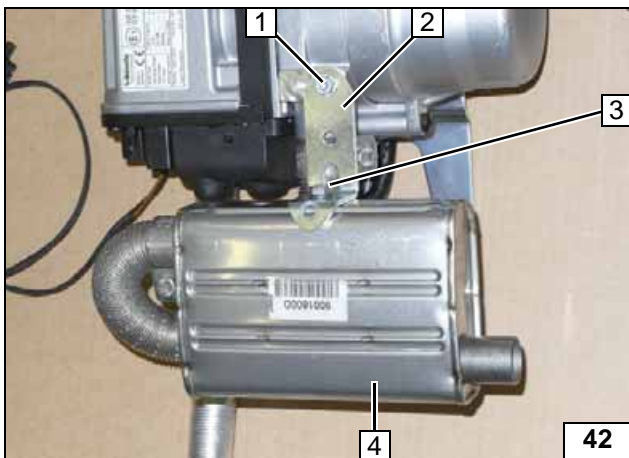


Preparing exhaust pipe



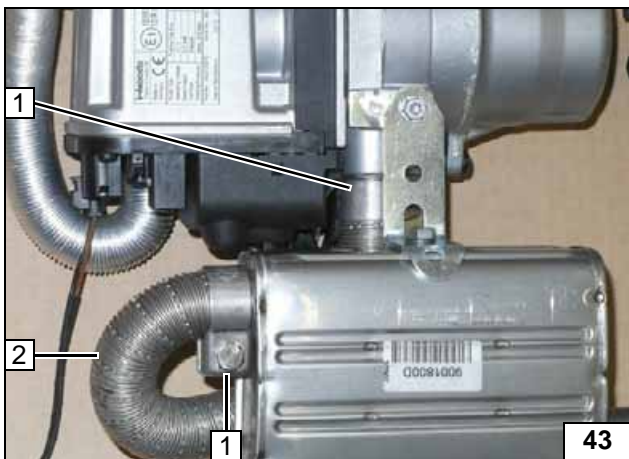
1 Perforated bracket

Preparing perforated bracket



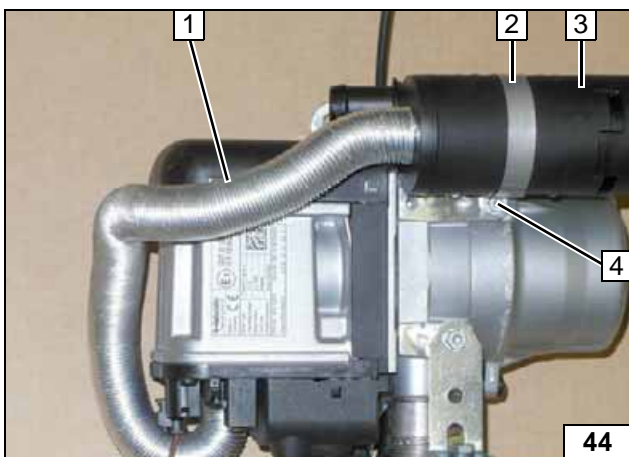
- 1 5x13 self-tapping bolt
- 2 Perforated bracket
- 3 M6x16 bolt, spring lockwasher
- 4 Silencer

Installing silencer



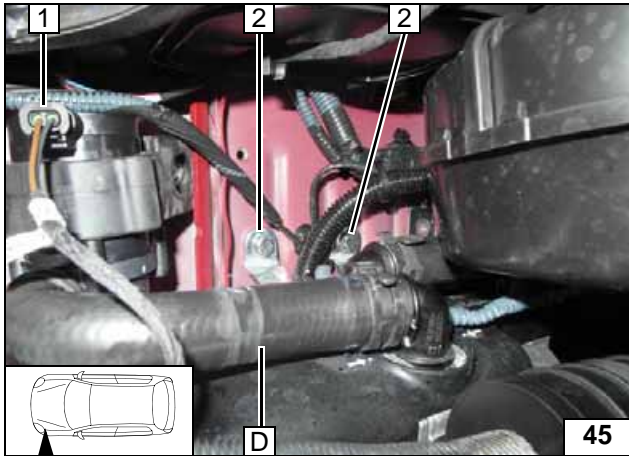
- 1 Hose clamp [2x]
- 2 Exhaust pipe

Installing exhaust pipe



- 1 Combustion air pipe
- 2 51 mm dia. p-clamp
- 3 Silencer
- 4 5x13 self-tapping bolt

Installing silencer

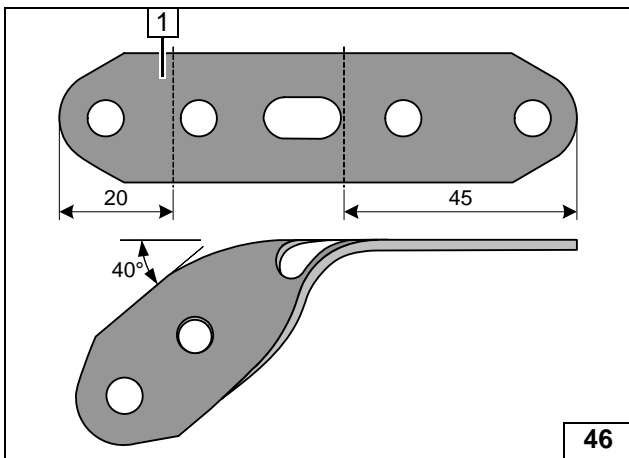


Installing Heater

- 1 Wiring harness of circulating pump
- 2 M6x20 bolt, spring lockwasher [2x each]



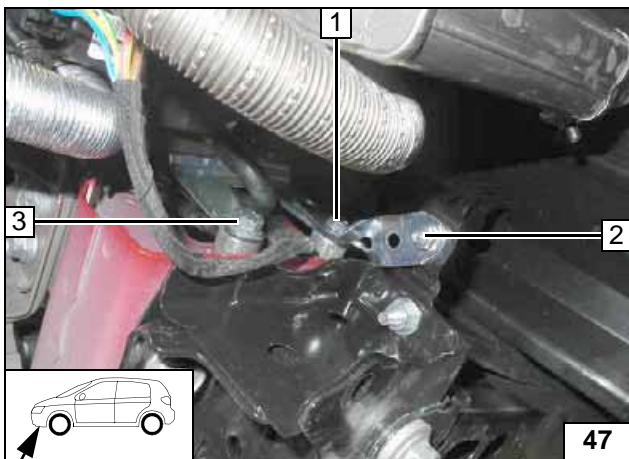
Installing heater



- 1 Perforated bracket, turned by 90° and angled down



Preparing perforated bracket

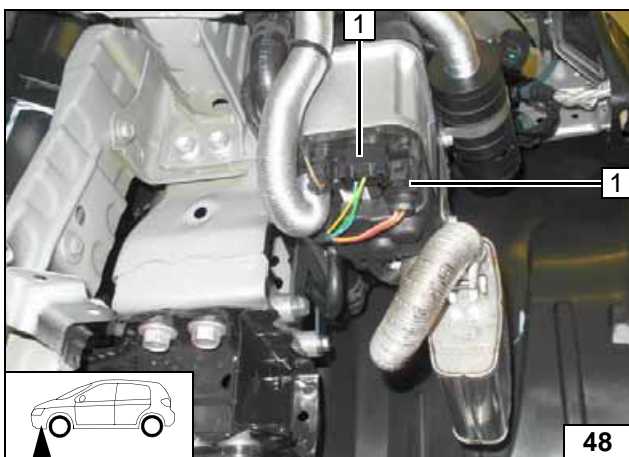


Insert one 20mm shim each between bracket and body.

- 1 M6x40 bolt, spring lockwasher, perforated bracket, 20 mm shim
- 2 M6x20 bolt, large diameter washer, bracket of glow-time control unit, perforated bracket, flanged nut
- 3 M8x40 bolt, spring lockwasher, 20 mm shim



Installing heater



- 1 Wiring harness of heater [2x]

Installing heater wiring harness



Fuel

CAUTION!

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

Catch any fuel running off with an appropriate container.

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

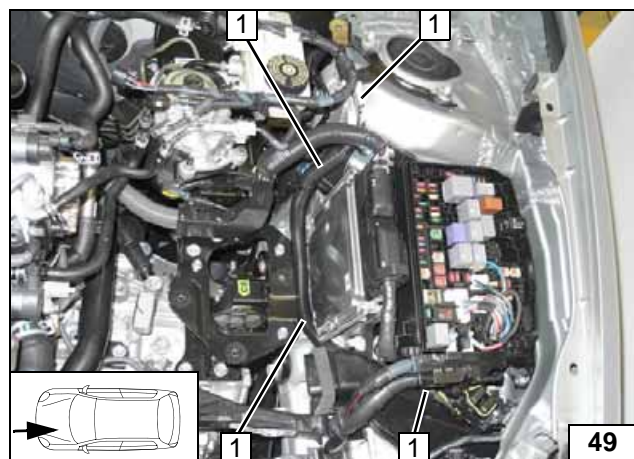
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

WARNING!

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



Routing lines



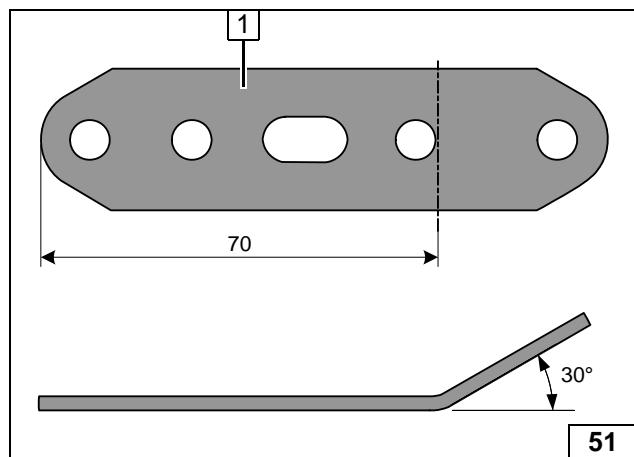
Route wiring harnesses of heater control, heater, metering pump and fuel line in 700mm long, 17mm dia. corrugated tube 1 (cut up lengthways) to the firewall.



Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube 1 (1130 and 2100) along original vehicle fuel lines to installation location of metering pump.



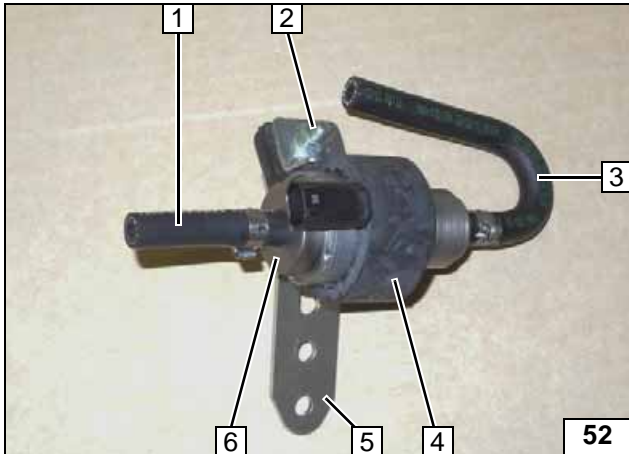
Routing lines



1 Perforated bracket

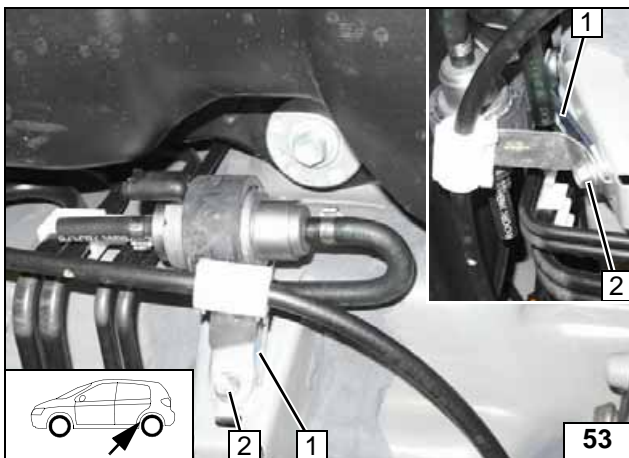


Angling down perforated bracket



- 1 Hose section, 10 mm dia. clamp
- 2 M6x25 bolt, support angle bracket, flanged nut
- 3 180° moulded hose, 10 mm dia. clamp
- 4 Metering pump mounting
- 5 Perforated bracket
- 6 Metering pump

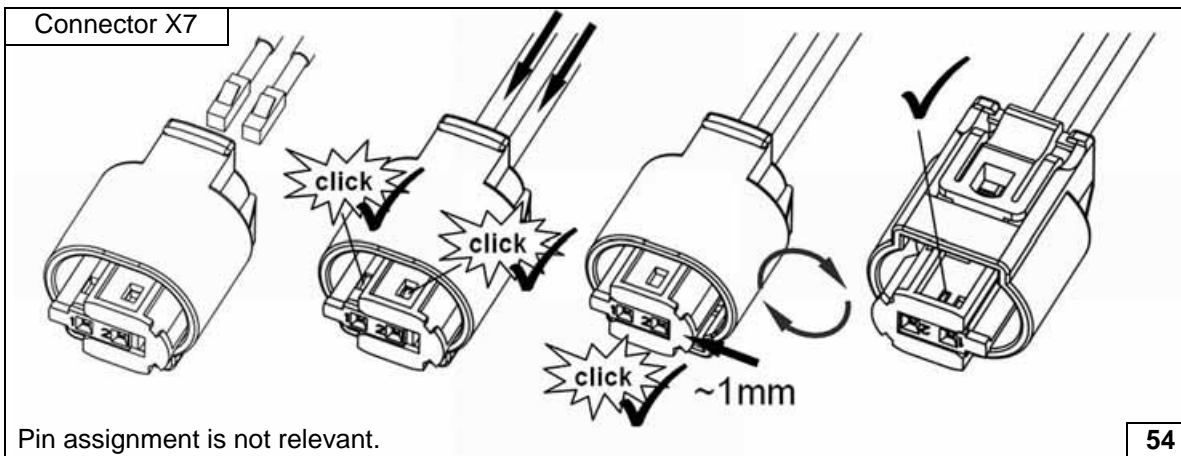
Premounting metering pump



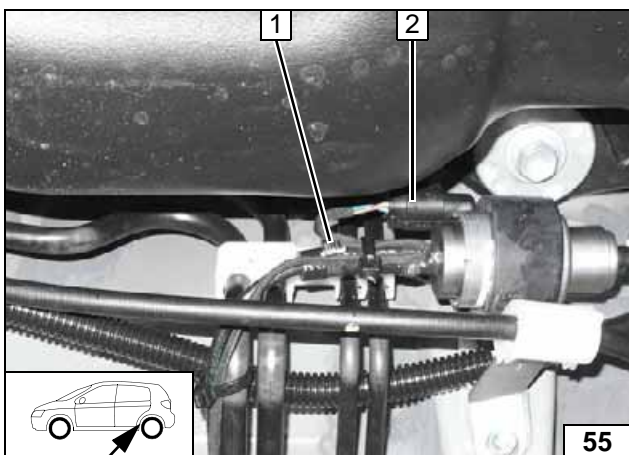
- 1 Perforated bracket
- 2 Original vehicle bolt



Installing metering pump



Completing connector of metering pump

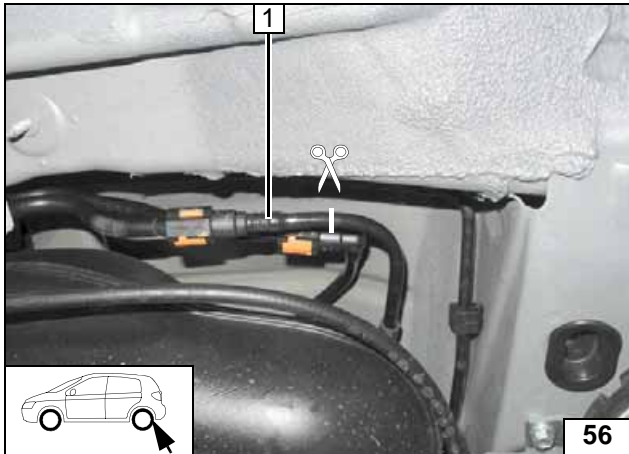


Check the position of the components; correct if necessary. Check that they have freedom of movement.

- 1 Fuel line of heater, hose section, 10 mm dia. clamp
- 2 Wiring harness of metering pump, connector mounted



Connection of metering pump

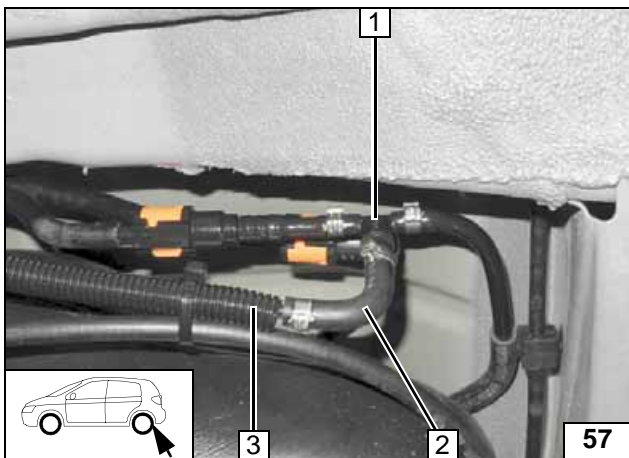


Cut out fuel return line 1 along the marking!

2 Cutting point



Fuel ex-
traction



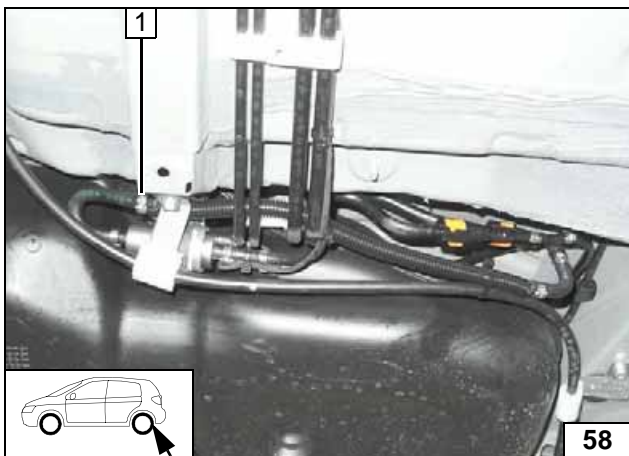
1 6x5x6 fuel standpipe, 8 mm dia. clamp [2x]

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

3 Fuel line in 10mm dia. corrugated tube



Mounting
fuel stand-
pipe



Check the position of the components; cor-
rect if necessary. Check that they have free-
dom of movement.

1 Hose section, 10 mm dia. clamp



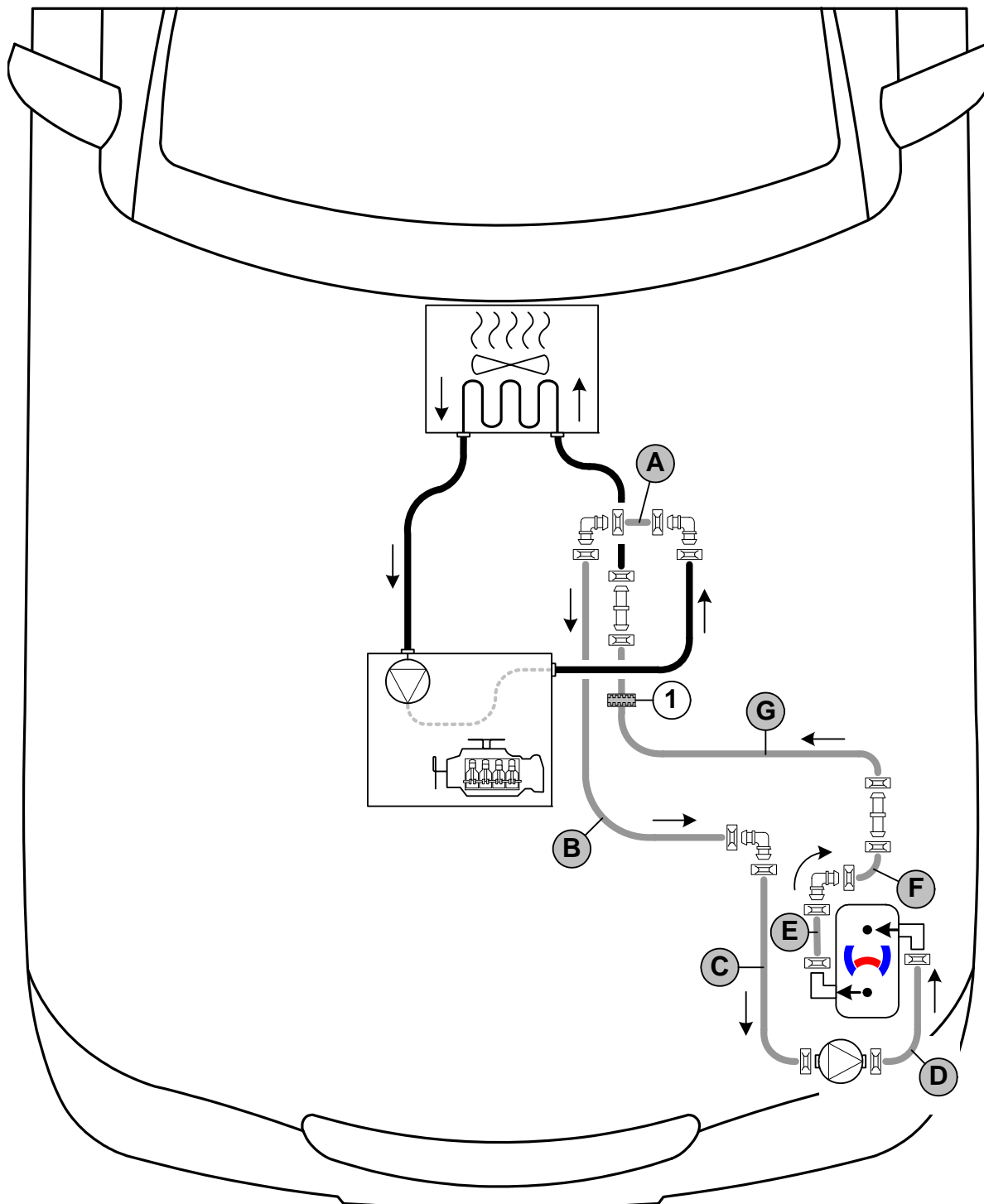
Connec-
tion of me-
tering
pump







Coolant Circuit

WARNING!

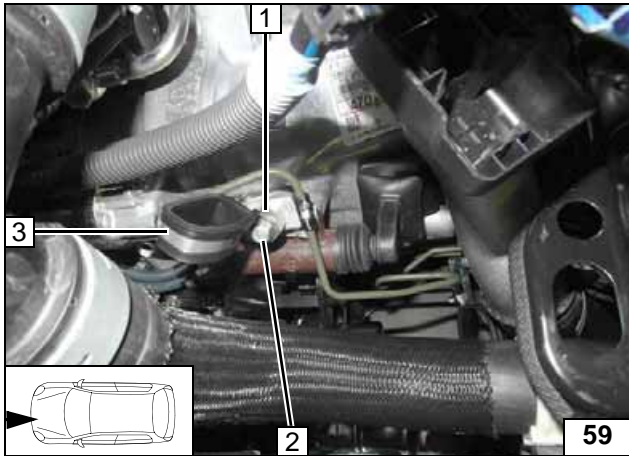
Any coolant running off should be collected in a suitable container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. When installing the hoses, the heater must be filled with coolant. The connection should be "inline" based on the following diagram:



Hose routing diagram

All spring clips without a specific designation  = 25 mm dia. 1 = Black (sw) rubber isolator . All connecting pipes  and  = 18x18mm dia.



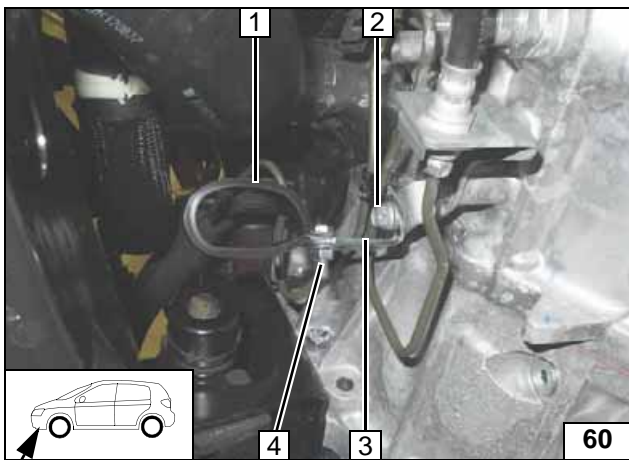


Discard original vehicle bolt at position 2.

- 1 M8x15 spacer nut
- 2 M6x30 bolt, spring lockwasher
- 3 38 mm dia. rubber-coated p-clamp

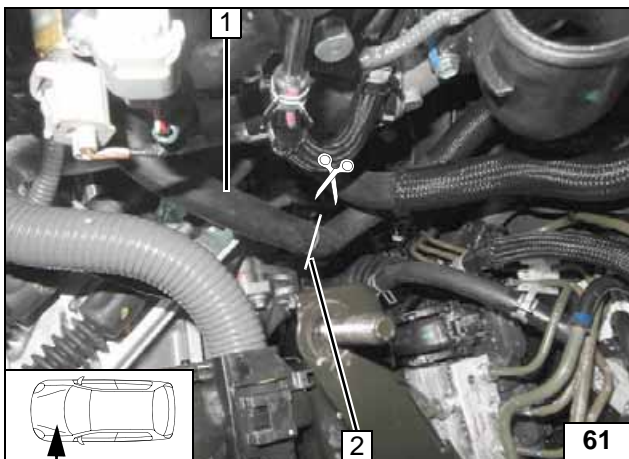


Mounting p-clamp



- 1 38 mm dia. rubber-coated p-clamp
- 2 Original vehicle bolt
- 3 Angle bracket
- 4 M6x20 bolt, flanged nut

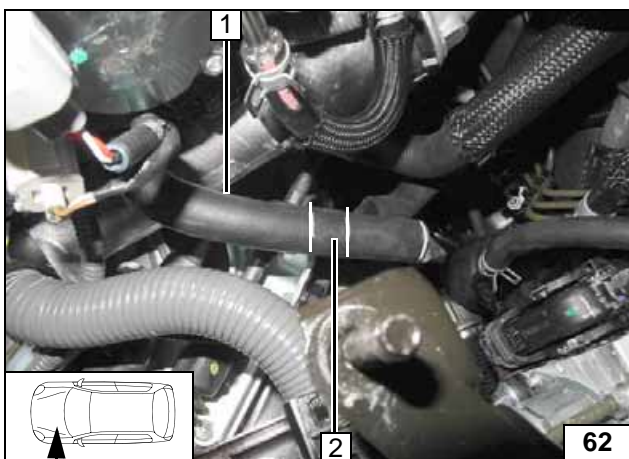
Mounting p-clamp



- 1 Hose on engine outlet/heat exchanger inlet
- 2 Cutting point



Cutting point

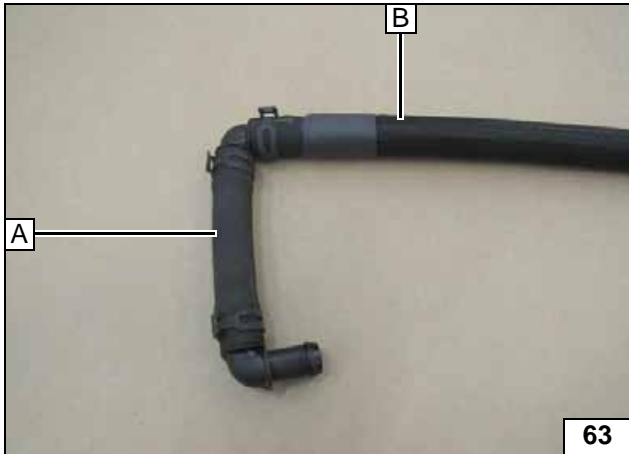


Loosen throttle at position 2 inside the hose and discard it.

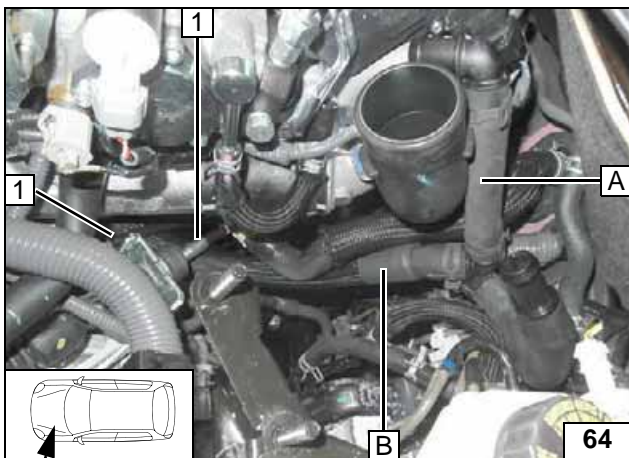
- 1 Engine outlet hose section



Cutting point



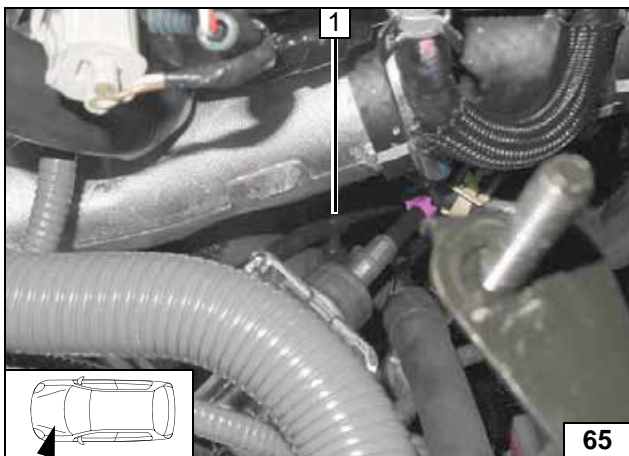
Preparing hoses A and B



Route hose B to the heater by passing below the shifter cable 1 [2x] and via the clutch bell.



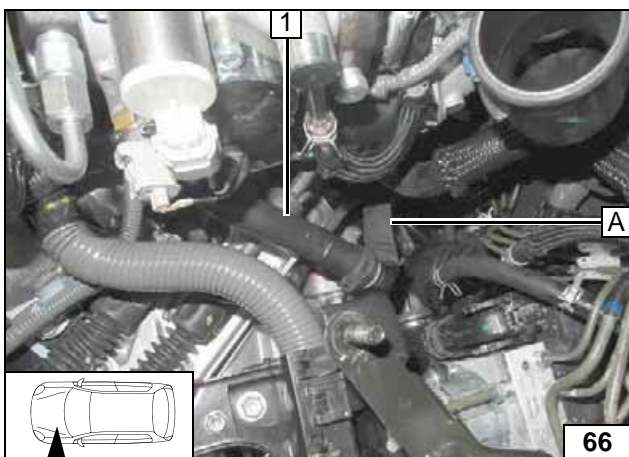
Routing hose B



Install hose bracket 1 on shifter cable and hose B.

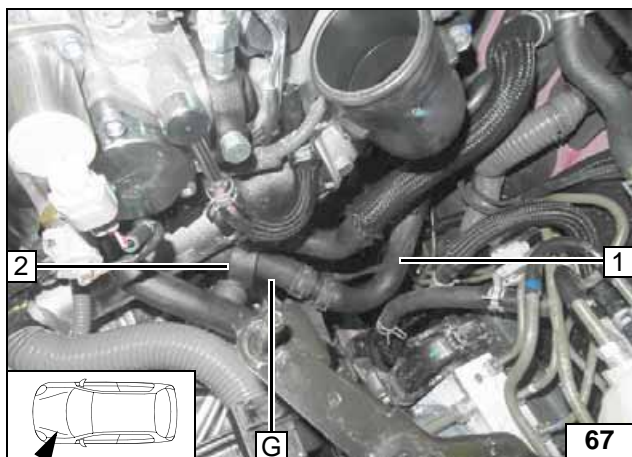


Routing hose B



1 Engine outlet hose section

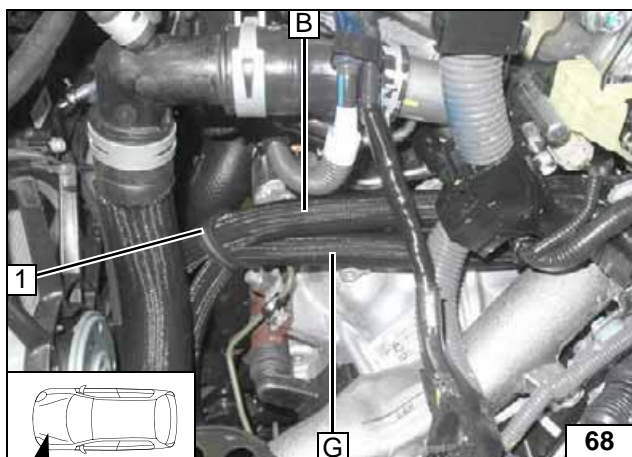
Connecting engine outlet



Route hose **G** to the heater via the coupling bell and below hose **B**.

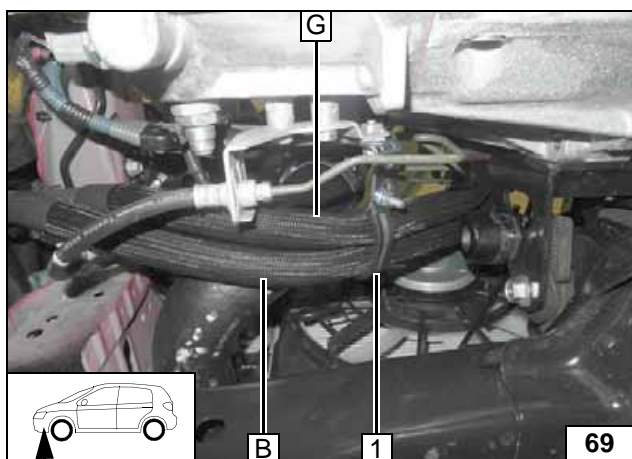
- 1 Hose section of heat exchanger inlet
- 2 Black (sw) rubber isolator

Connect-
ing heat ex-
changer
inlet



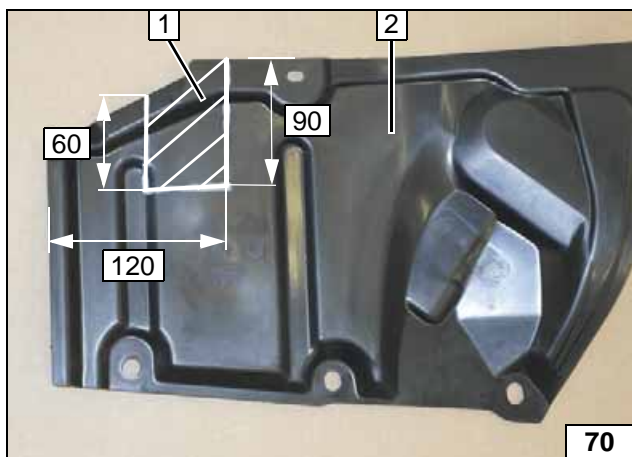
- 1 38 mm dia. rubber-coated p-clamp

Routing in
engine
compart-
ment



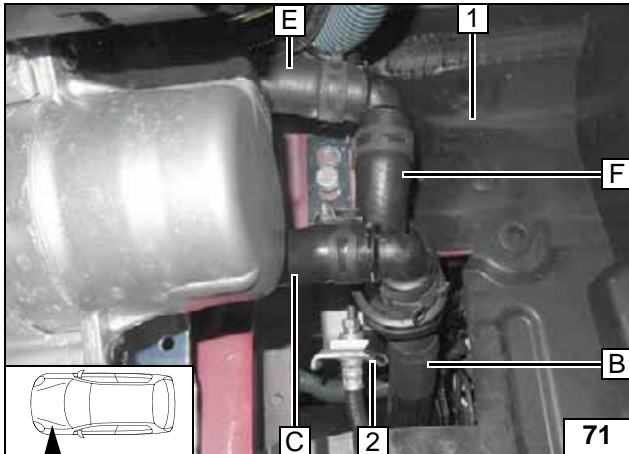
- 1 38 mm dia. rubber-coated p-clamp

Routing in
engine
compart-
ment



- 1 Discard section
- 2 Splash guard

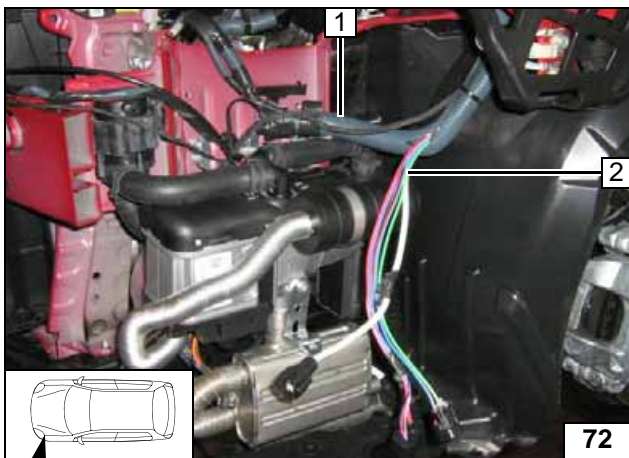
Cutting out
the splash
guard



Connect hoses. Position spring clips of hose **B** and **G** between rubber-coated p-clamp.

- 1 Splash guard mounted
- 2 80 mm long edge protection on bracket of hydraulic line

**Connect-
ing heater**



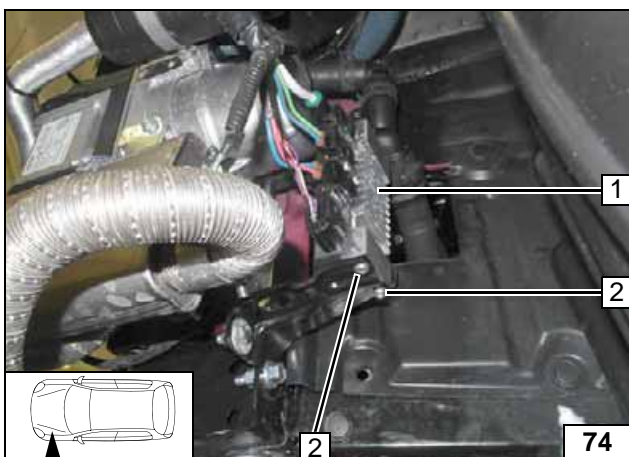
Detach wiring harness of glow-time control unit **2** from original vehicle wiring harness **1**.

**Detaching
wiring har-
ness of
glow-time
control unit**



- 1 17 mm dia. , 200 mm long corrugated tube

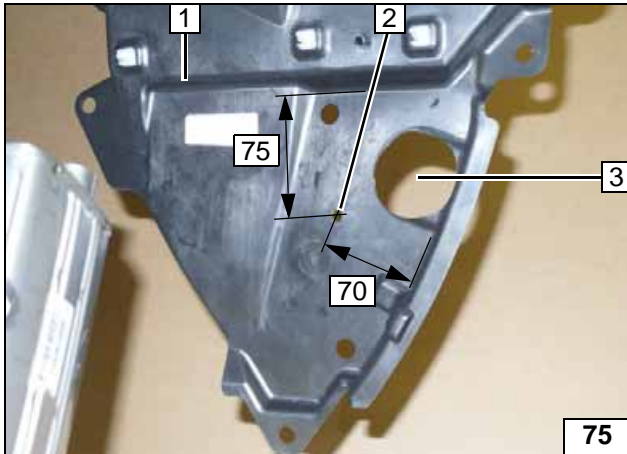
**Installing
corrugated
tube of
glow-time
control unit
wiring har-
ness**



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

- 1 Glow-time control unit
- 2 Original vehicle bolts [2x]

**Installing
glow-time
control unit**

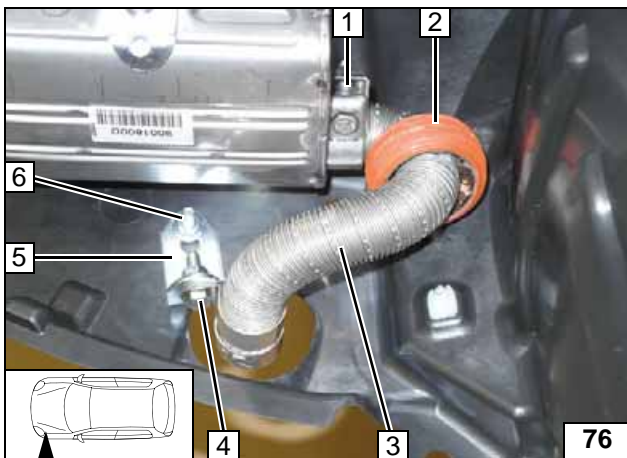


Exhaust Gas

- 1 Wheel well trim
- 2 6.5 mm dia. hole
- 3 Drill out 50 mm dia. hole



Cutting out wheel well trim

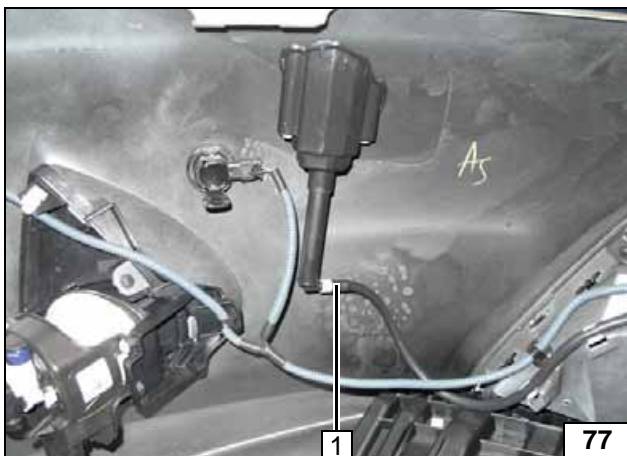


Align exhaust end section **3** at the centre in the hole.

- 1 Hose clamp
- 2 Spacer bracket
- 4 M6x20 bolt, p-clamp, flanged nut
- 5 Angle bracket
- 6 Loosely mount M6x20 bolt, large diameter washer, flanged nut



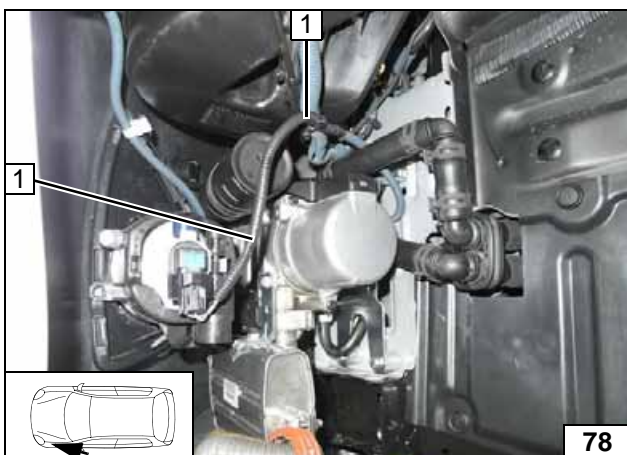
Mounting exhaust end section



Align headlight washer system **1** as shown. Ensure a distance to the heater of at least 20mm.



Aligning headlight washer system



Install bumper trim. Route and align wiring harness of front fog light **1** as shown. Ensure a distance to the heater of at least 20mm.



Aligning wiring harness of front fog light



Final Work

WARNING!

Reassemble the components in reverse order.

Check all hoses, clamps and all electrical connections for firm seating.

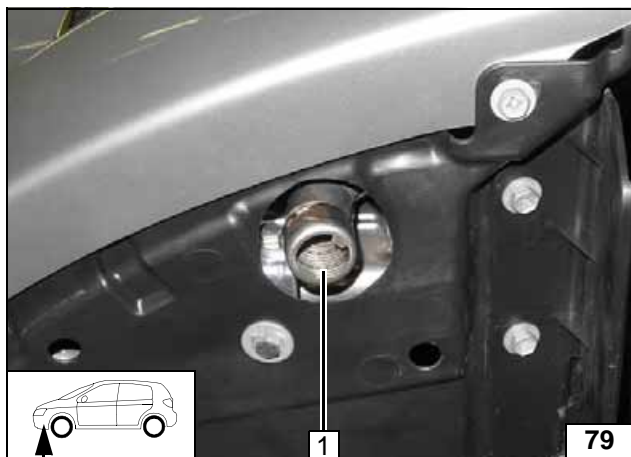
Secure all loose wires using cable ties.

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.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Checking the fan function (IPCU):**
Adjust fan output to maximum. Then switch off ignition and switch on parking heater. On reaching the activation temperature of 50°C the fan speed must correspond to the value of approx. 1/3 of the maximum speed specified by IPCU.
- **Check the proper function of the parking heater, see the operating instructions/installation instructions.**
- **Place caution label "Switch off parking heater before refuelling" in the area of the filler neck.**
- **During initial start up, proceed as follows with the Webasto Thermo Test Diagnosis:**
 - Control coolant pump under menu Component test, check coolant level
 - Pump fuel for the heater under the menu pipe filling
 - Check CO2 settings; take setting values from the general installation instructions
 - During the trial run, all water and fuel connections must be checked for leakage and firm seating
 - An error search is to be conducted in case of fault.

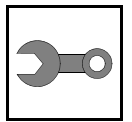


Ensure sufficient distance from neighbouring components, correct if necessary.

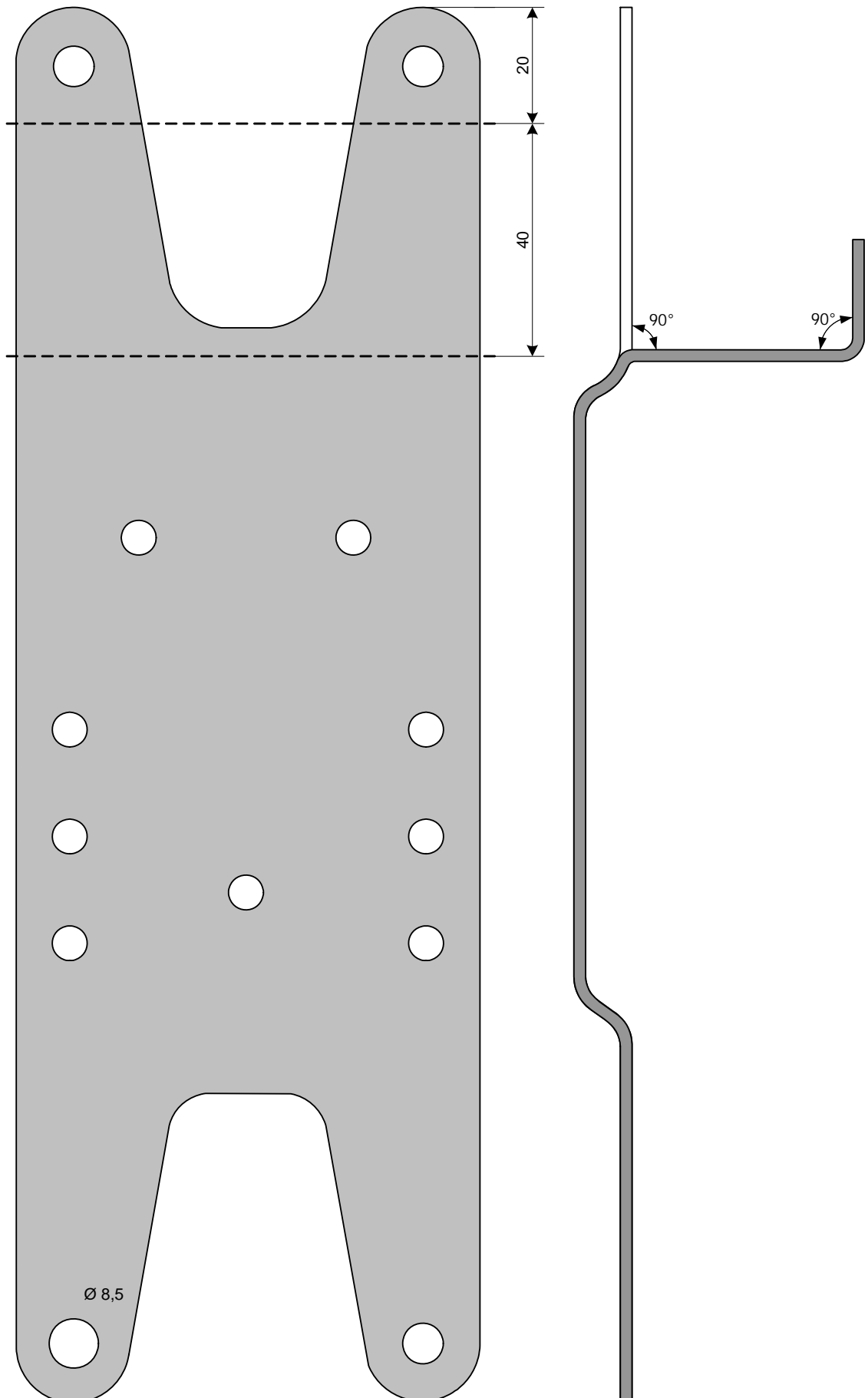


1 Exhaust end section

**Aligning
exhaust
end section**



Template of Bracket



Operating Instructions for 1 and 2 Zone Automatic Air-Conditioning

Please remove page and add to the vehicle operating instructions.

Note:

We recommend matching the heating time to the driving time.

Heating time = driving time

Example:

For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

If vehicles have passenger compartment monitoring, this must be deactivated in addition to the vehicle settings for the heating operation.

Deactivation instructions can be found in the operating instructions of the vehicle.

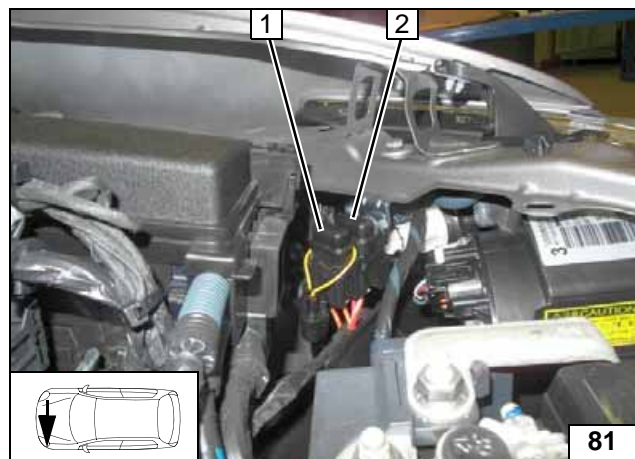
Before parking the vehicle, make the following settings:



The fan need not be configured.

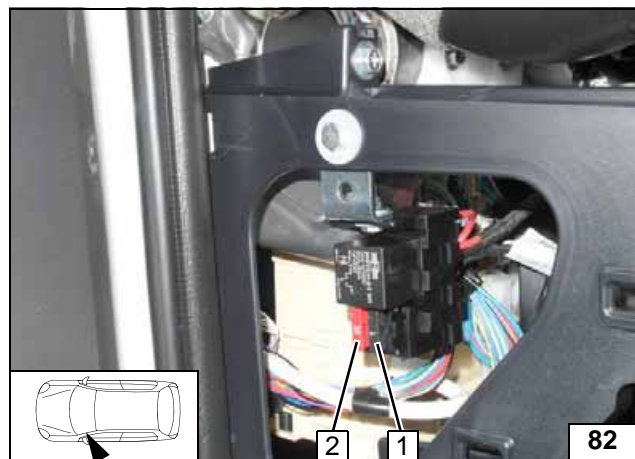
- 1 Set temperature to "HI" (2x in case of 2-zone automatic air-conditioning)
- 2 Air outlet to windscreen

A/C control panel



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

Fuses of engine compartment



- 1 1A fuse F3 of heater control
- 2 10A fan fuse F4

Fuses of passenger compartment

