

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Nissan Micra

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Nissan	Micra	K13	e13 * 2007 / 46 * 1111 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.2	Petrol	SG	59	1198	HR12

SG = Manual transmission

From Model Year 2011

Left-hand drive vehicle

Verified equipment variants: Manual / automatic air-conditioning system

Front fog light

Not verified: Passenger compartment monitoring
Headlight washer system

Total installation time: about 9 hours

Nissan Micra

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Necessary Components

- Basic delivery scope *Thermo Top Evo* based on price list
- Installation kit for Nissan Micra 2011 Petrol: **1316626C**
- 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

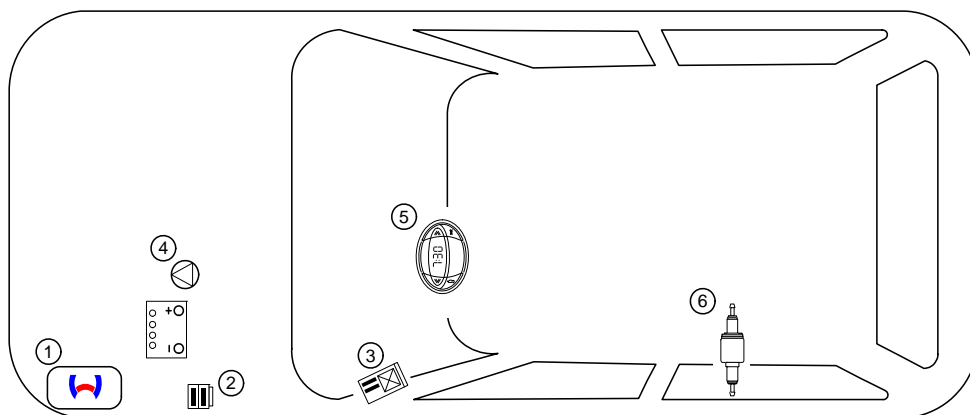
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about 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.
- When installing a parking heater, we recommend the use of a larger vehicle battery.

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Relay and fuse holder of passenger compartment
4. Circulating pump
5. Digital timer
6. 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 before the installation.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 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.

Nissan Micra

Notes on Validity

This installation documentation applies to the Nissan Micra Petrol vehicles - for validity, see page 1 - from model year 2011 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 of the bolt of 5x15 water connection piece retaining plate = 7Nm.
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory Notes on Document

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

Special features are highlighted using the following symbols:

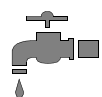
Mechanical system



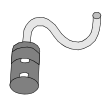
Electrical system



Coolant circuit



Combustion air



Fuel



Exhaust gas



Software



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



Specific risk of fire and explosion



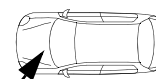
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature



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



Nissan Micra

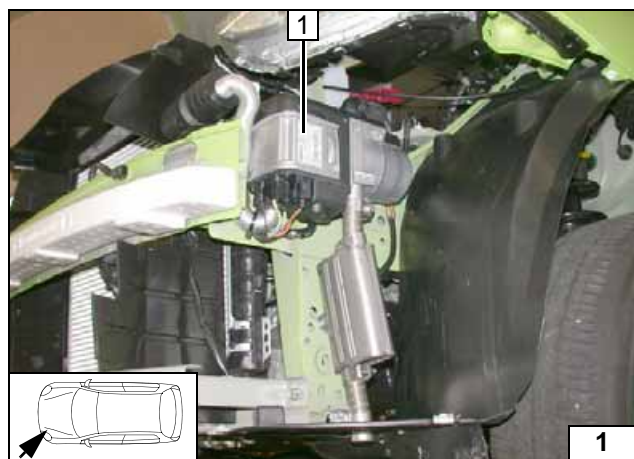
Preliminary Work

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 air filter fully.
- Detach the central electrical box of the engine compartment and put it aside.
- Remove the left-hand headlight.
- Remove the left-hand wheel well trim.
- Remove the bumper.
- Fold up the rear bench seat.
- Fold back the carpet.
- Open the right-hand tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the instrument panel trim on the driver's side.
- Detach the central electrical box of the passenger compartment and put it aside.
- Remove the A/C control panel.

Heater

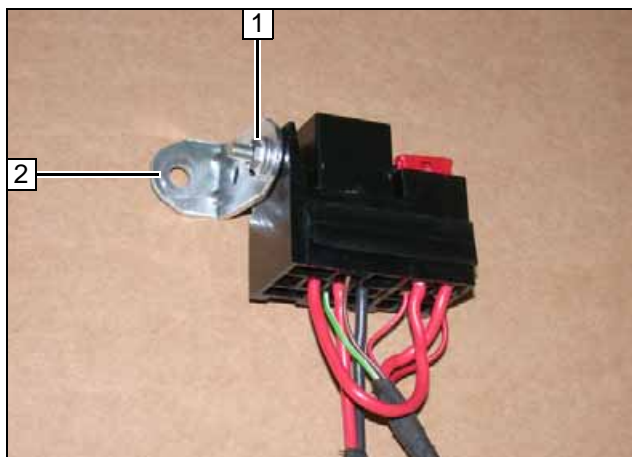
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

- 1 Heater

Installation
location

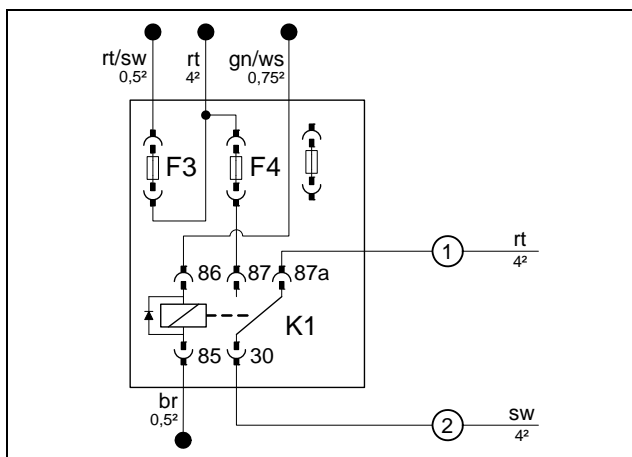


Preparing Electrical System

The wire sections retain their numbering in the entire document.

- 1 M5x16 bolt, washer [2x], nut
- 2 Angle bracket

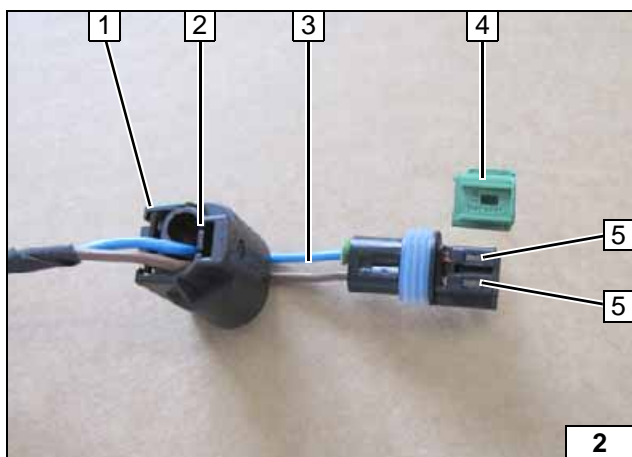
Preparing wiring harness of passenger compartment



Insert red (rt) wire 4² 1 in socket K1/87a and black (sw) wire 4² 2 in socket K1/30. Insert K1 relay and F4 10A fuse. Produce connections as shown in wiring diagram.



Preparing wiring harness of passenger compartment



Complete connector of metering pump again after routing. Pin assignment is not relevant.

- 1 Connector housing
- 2 Lock
- 3 Blue/brown (bl / br) wires
- 4 Coding
- 5 Timer lock



Dismantling connector



Electrical System

Positive wire

- 1 Positive wire to positive battery terminal



Wiring harness pass through

- 1 Protective rubber plug

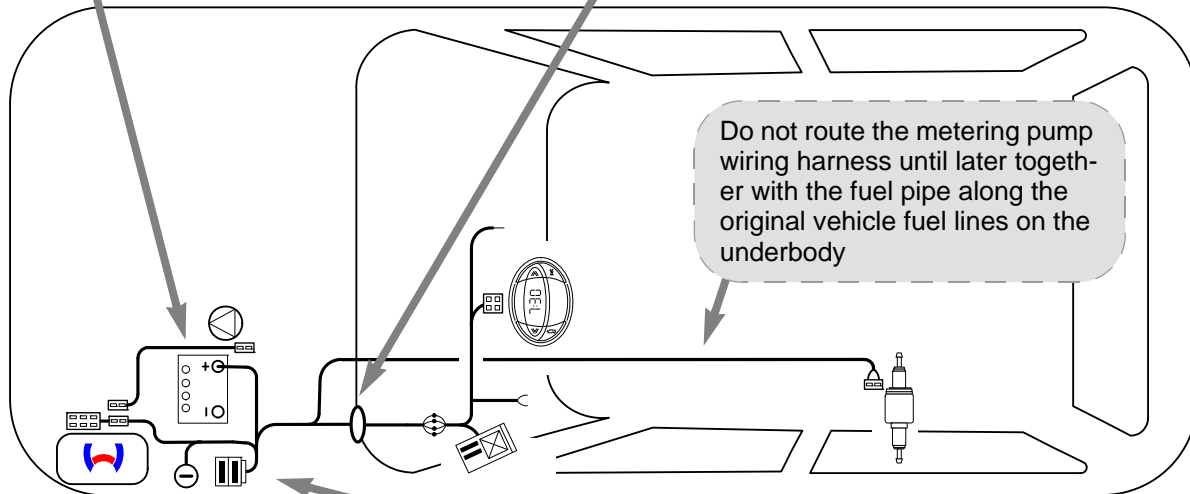
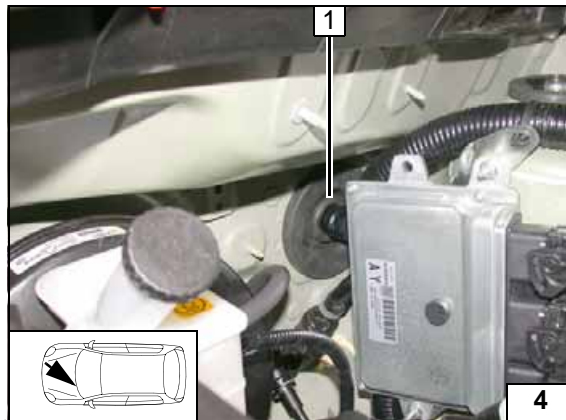
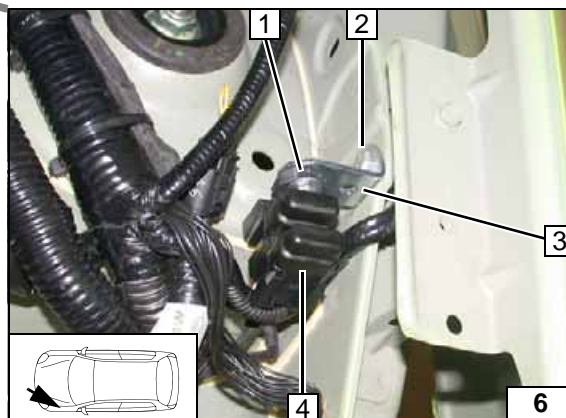


Diagram of wiring harness routing



Earth wire

- 1 Original vehicle earth support point
- 2 Earth wire

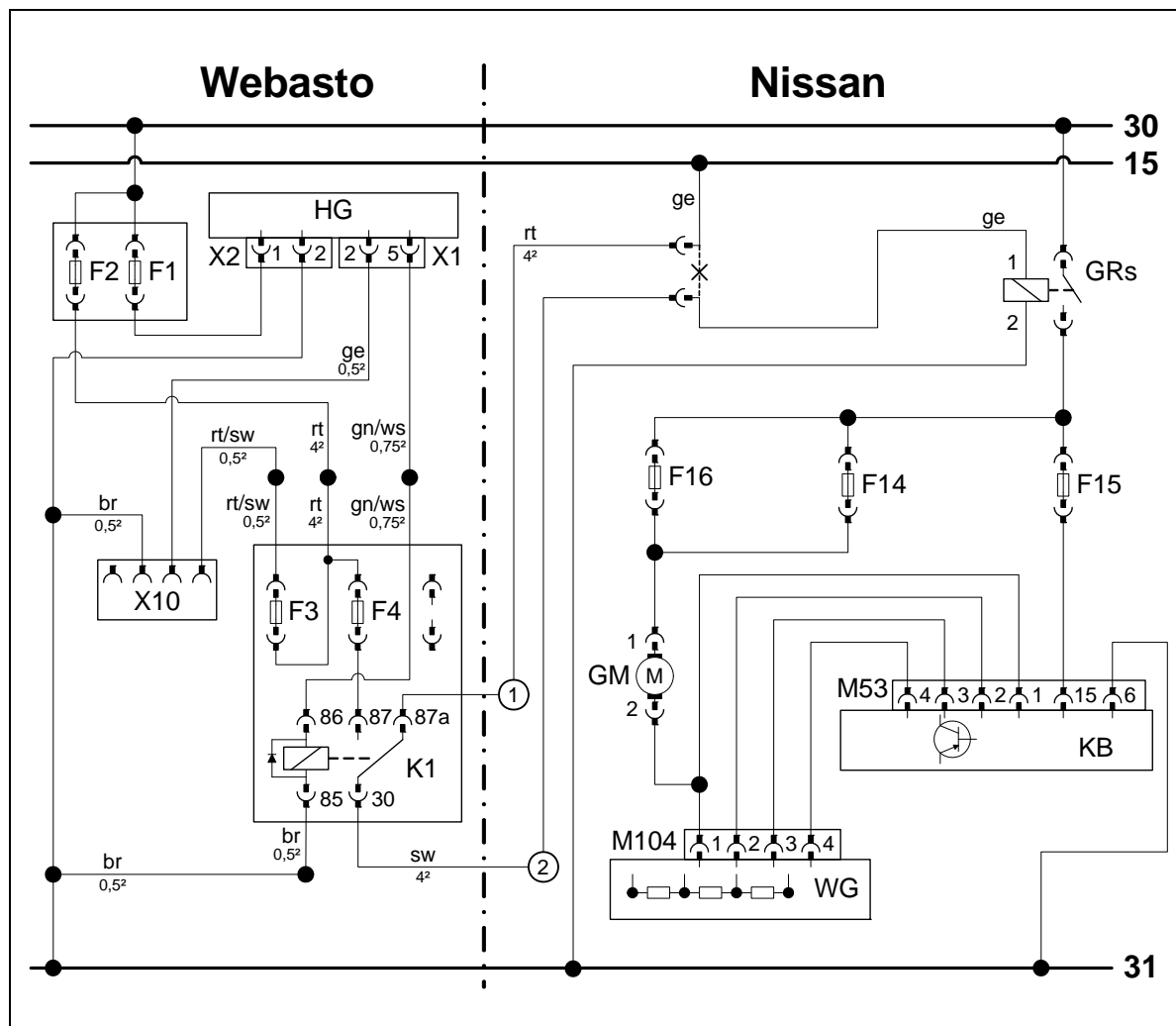


Fuse holder of engine compartment

- 1 M5x16 bolt, washer [2x], retaining plate of fuse holder, nut
- 2 M6x20 bolt, large diameter washer, flanged nut, existing hole
- 3 Angle bracket
- 4 F1-2 fuse mounted



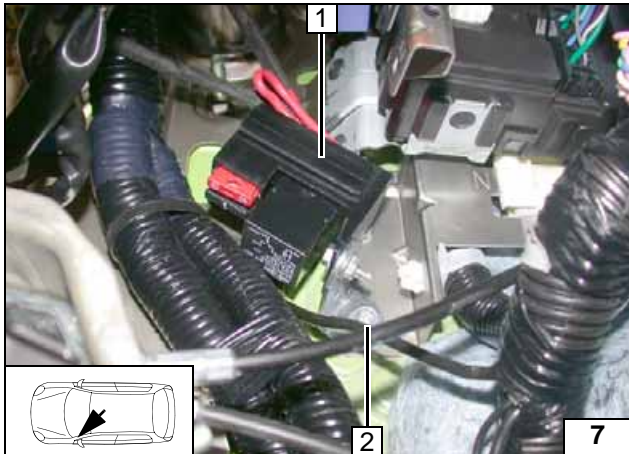
Manual Air-Conditioning Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	GRs	Fan relay	rt	red
X1	6-pin heater connector	F16	15A fuse	sw	black
X2	2-pin heater connector	F14	15A fuse	ge	yellow
X10	4-pin connector heater control	F15	10A fuse	gn	green
K1	Fan relay	GM	Fan motor	br	brown
F1	20A fuse	M53	15-pin connector KB	ws	white
F2	30A fuse	KB	A/C control panel	bl	blue
F3	1A fuse	M104	WG connector	gr	grey
F4	10A fuse	WG	Resistor group		
				X	Cutting point
				Wiring colours may vary.	

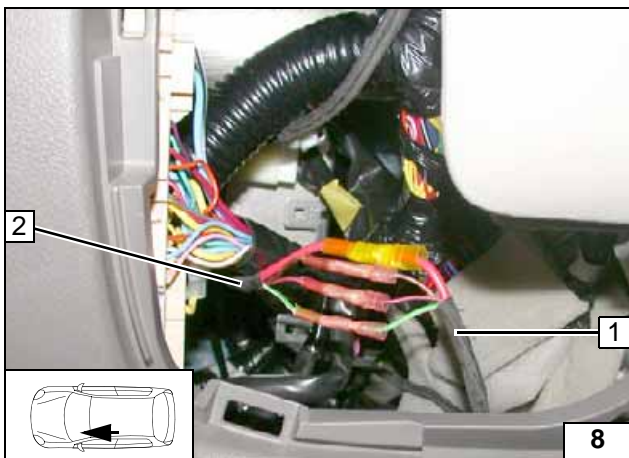
Legend



- 1 Fuse holder of passenger compartment
- 2 Original vehicle bolt

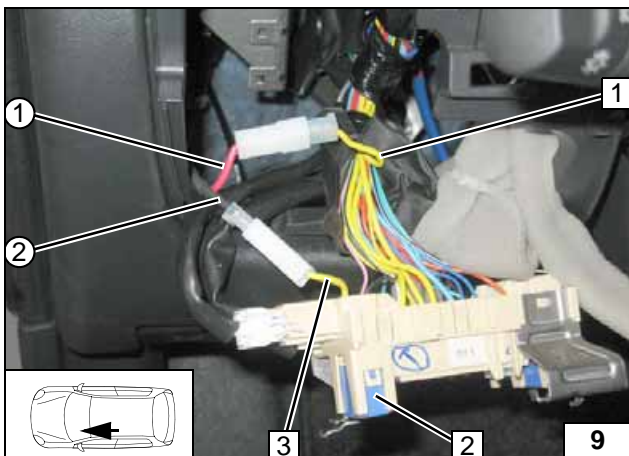


Installing relay and fuse holder passenger compartment



- 1 Wiring harness of heater
- 2 Fuse holder of passenger compartment

Connecting same colour wires of wiring harness



Connection to original vehicle fan relay 2 Pin 1. Establish connections according to wiring diagram.

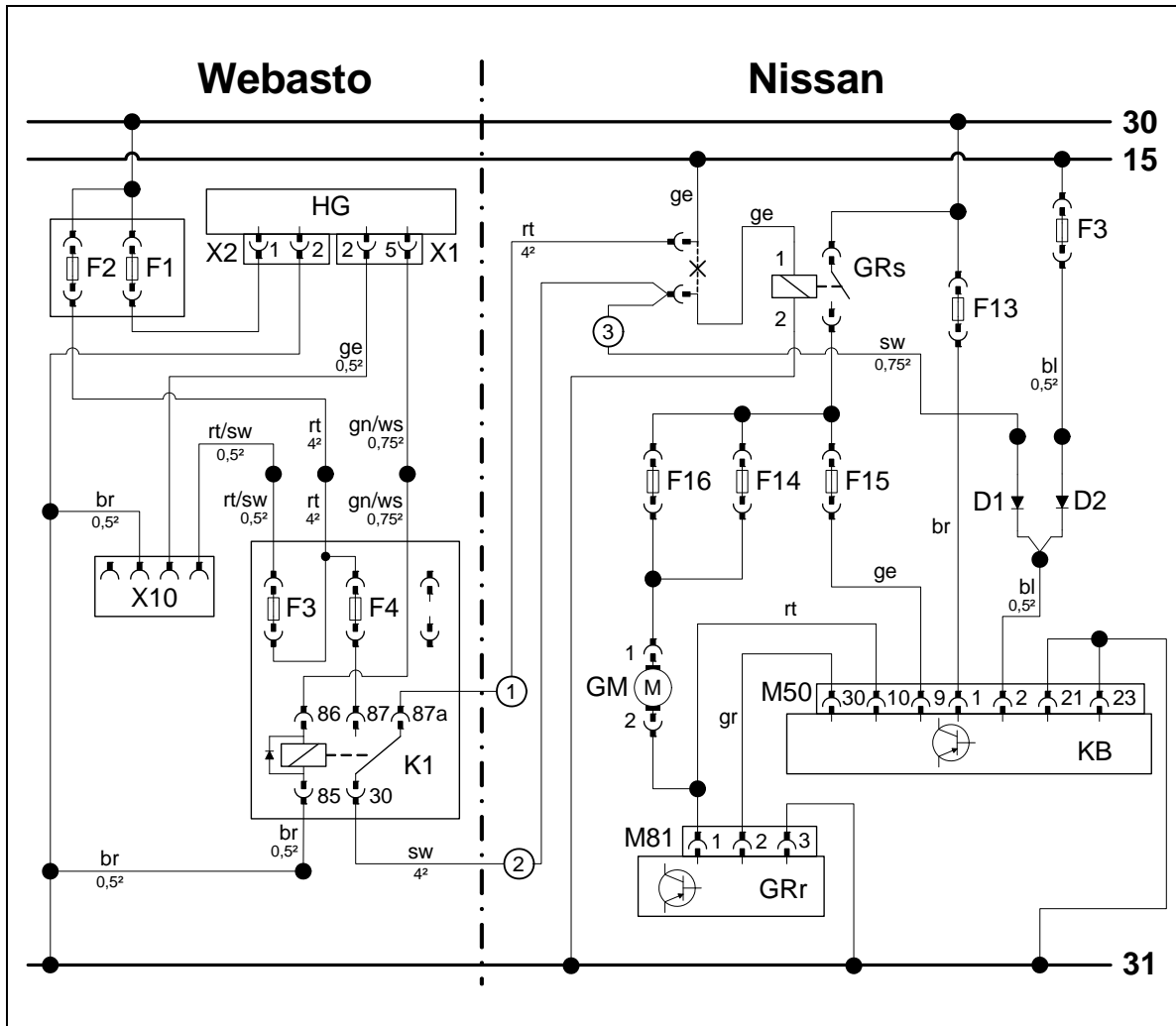
- 1 Yellow (ge) wire of Terminal 15
- 3 Yellow (ge) wire to fan relay GRs/1
- ① Red (rt) wire from K1/87a
- ② Black (sw) wire from K1/30



Connecting fan relay



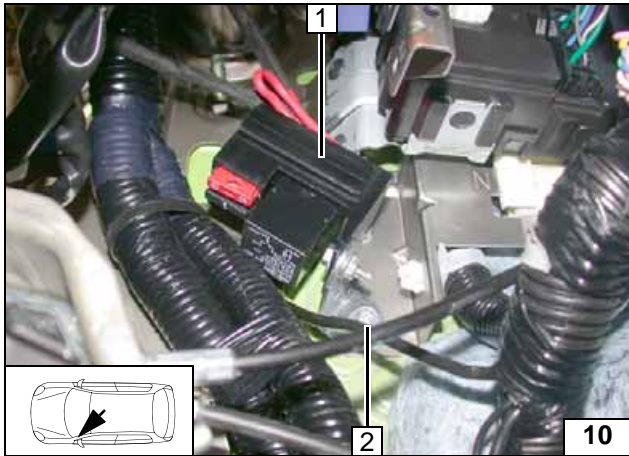
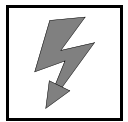
Automatic Air-Conditioning Fan Controller



Wiring diagram

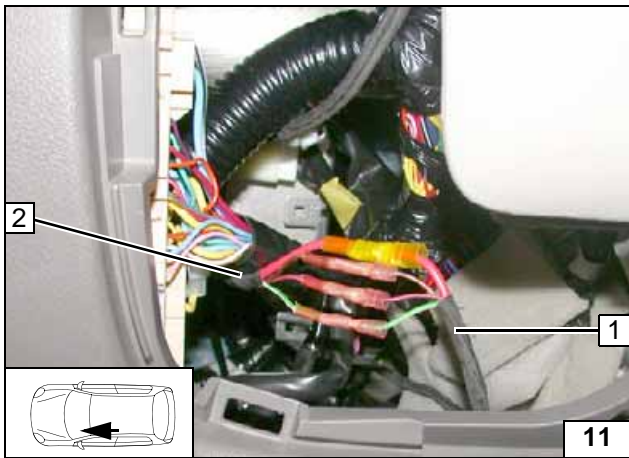
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F3	10A fuse	rt	red
X1	6-pin heater connector	GRs	Fan relay	sw	black
X2	2-pin heater connector	F13	10A fuse	ge	yellow
F1	20A fuse	F16	15A fuse	gn	green
F2	30A fuse	F14	15A fuse	br	brown
X10	4-pin connector heater control	F15	10A fuse	ws	white
F3	1A fuse	GM	Fan motor	bl	blue
F4	25 A fuse	M50	40-pin connector KB	gr	grey
HG	TT-Evo heater	KB	A/C control panel		
K1	Fan relay	M81	Connector GRr		
D1	3A diode	GRr	Fan controller		
D2	3A diode			X	Cutting point
Wiring colours may vary.					

Legend



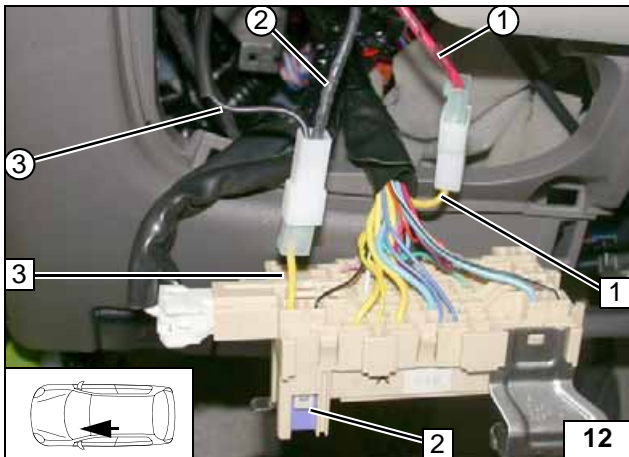
- 1 Relay and fuse holder of passenger compartment
- 2 Original vehicle bolt

Installing relay and fuse holder passenger compartment



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

Connecting same colour wires of wiring harness

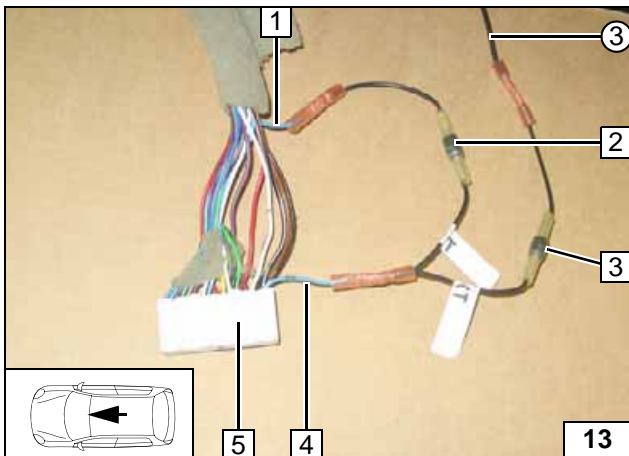


Connect to original vehicle fan relay 2 Pin 1. Route additional black (sw) wire ③ to the A/C control panel. Produce connections as shown in wiring diagram.



- 1 Yellow (ge) wire of Terminal 15
- 3 Yellow (ge) wire to fan relay GRs/1
- ① Red (rt) wire from K1/87a
- ② Black (sw) wire from K1/30

Connecting fan relay



Connection to 40-pin connector M50 5 from A/C control panel. Produce connections as shown in wiring diagram. Mind diode direction of flow.



- 1 Blue (bl) wire from fuse F3
- 2 Diode D2
- 3 Diode D1
- 4 Blue (bl) wire, Pin 2
- ③ Additional black (sw) wire

Connecting A/C control panel

Wire-side view

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

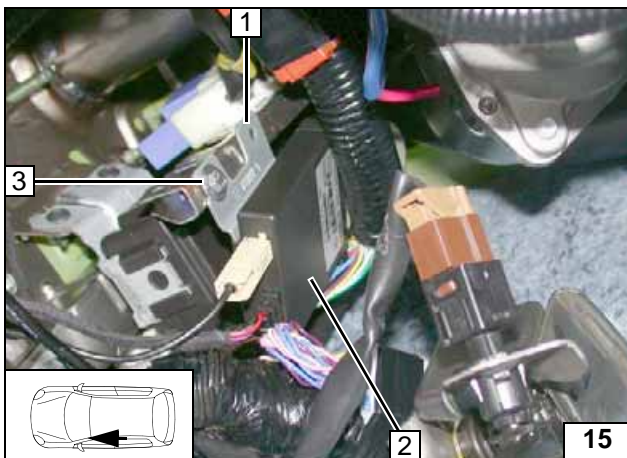


Digital Timer

- 1 Digital timer



Installing digital timer

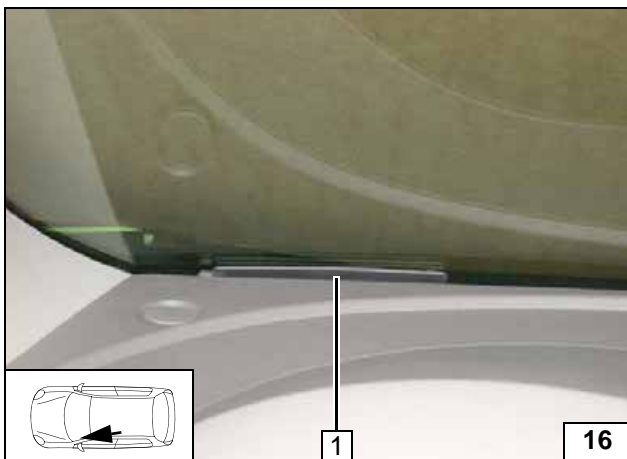


Remote Option (Telestart)

- 1 Bracket
- 2 Receiver
- 3 M5x16 bolt, large diameter washer, flanged nut, existing hole

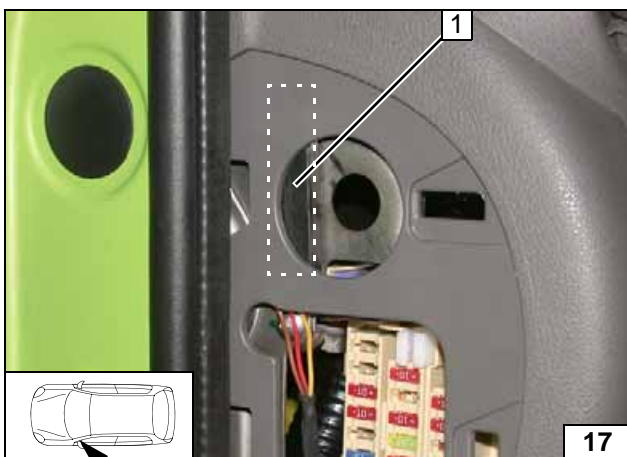


Mounting receiver



- 1 Antenna

Mounting antenna

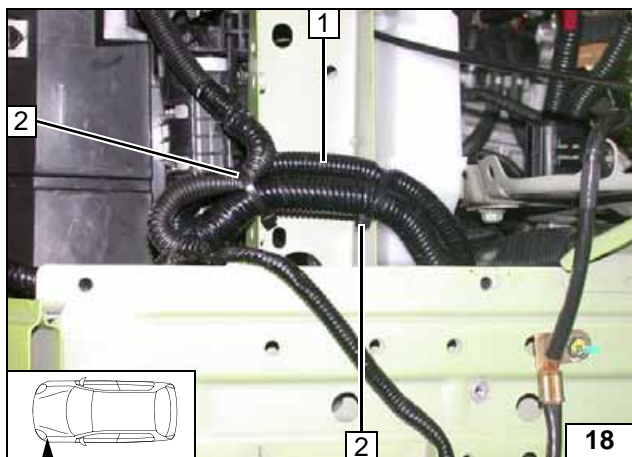


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



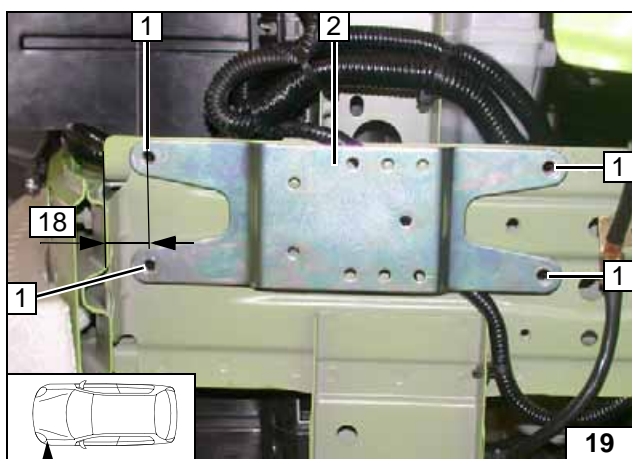
Installing temperature sensor



Preparing Installation Location

- 1 Original vehicle wiring harness
- 2 Cable tie [2x]

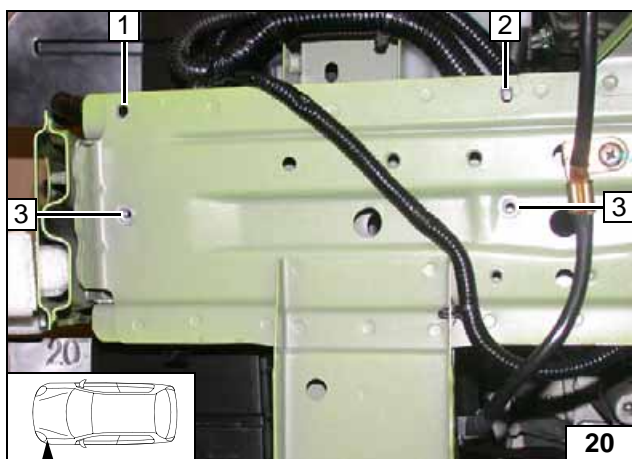
Tying back wiring harness



Place bracket 2 justified to upper edge of cross member

- 1 Copy hole pattern [4x]

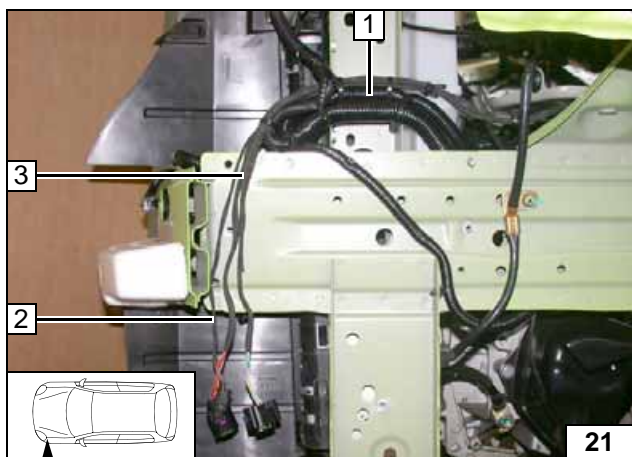
Copying hole pattern



Remove bracket.

- 1 7 mm dia. hole
- 2 7 mm dia. hole, insert M6x20 bolt
- 3 9.1 mm dia. hole; rivet nut [2x each]

Installing rivet nut



Fasten wiring harness of metering pump 2 and wiring harness of heater 3 to original vehicle wiring harness 1 with cable tie.

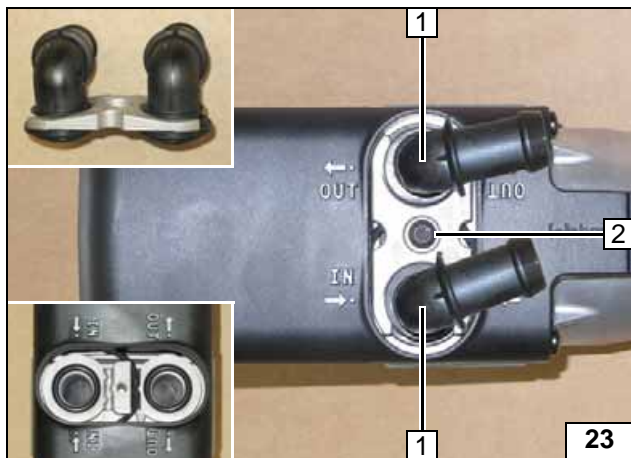
Routing wiring harness



Preparing Heater

- 1 Bracket
- 2 M6x20 bolt, spring lockwasher, angle bracket, pin lock
- 3 M6x20 bolt, spring lockwasher, pin lock
- 4 M6x25 bolt, spring lockwasher, 5 mm shim, pin lock

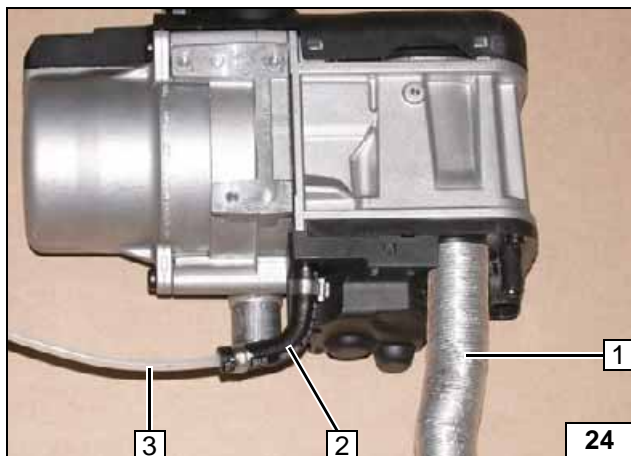
Preparing bracket



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

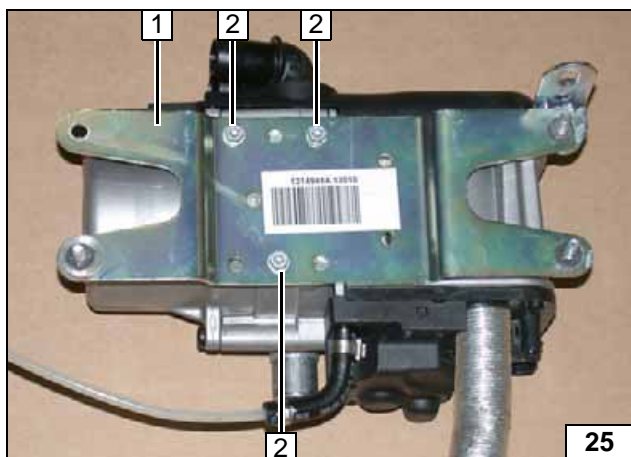


Installing water connection piece



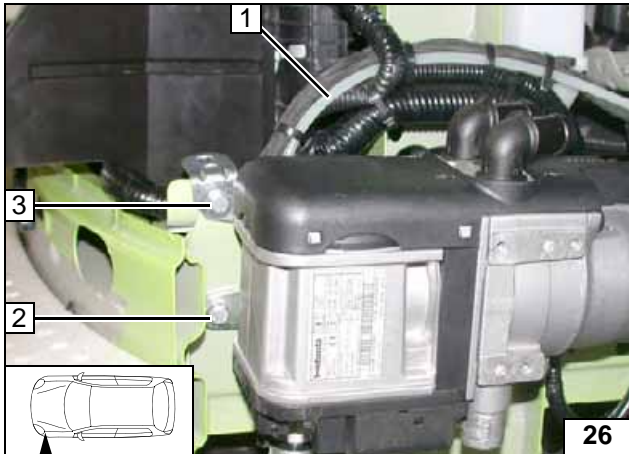
- 1 Combustion air pipe
- 2 90° moulded hose, 10mm dia. clamp [2x]
- 3 Fuel line

Premounting heater



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

Installing bracket



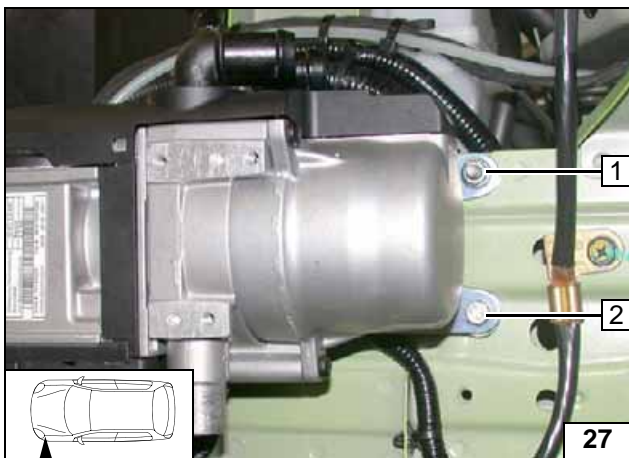
Installing Heater

Fasten flanged nut **1** from behind at position **3**. Fasten fuel line **1** to wiring harness of heater / metering pump.

- 2** Tighten bolt
- 3** Tighten bolt

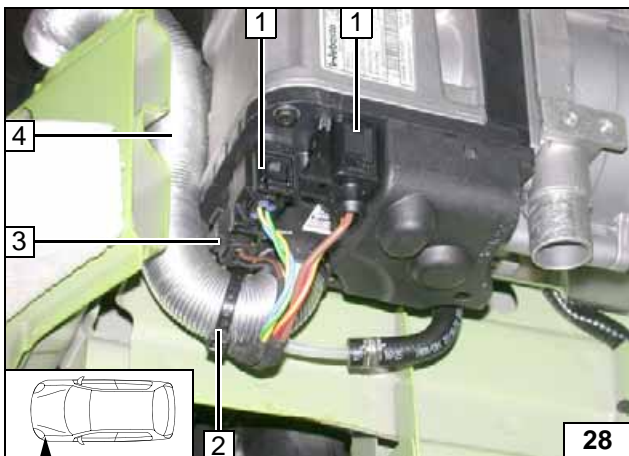


Mounting heater



- 1** Flanged nut
- 2** Tighten bolt

Mounting heater



Route combustion air pipe **4** as shown. Fasten wiring harness to combustion air pipe **4** with cable tie **2**.

- 1** Wiring harness of heater [2x]
- 3** Wiring harness of circulating pump



Installing wiring harnesses



Fuel

CAUTION!

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

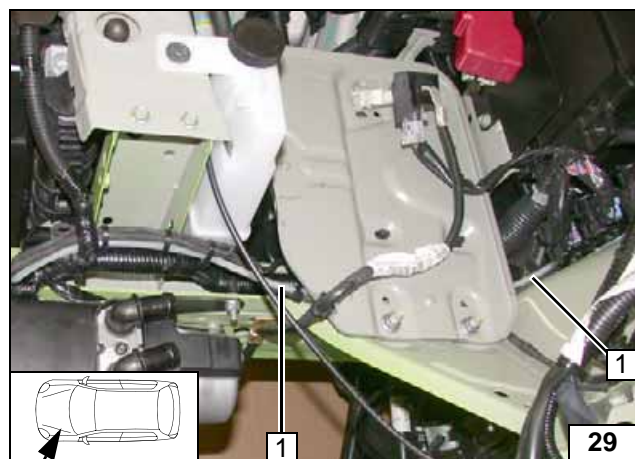
Catch any fuel running off in an appropriate container.

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

Mount the fuel line and wiring harness with rub protection on sharp edges.

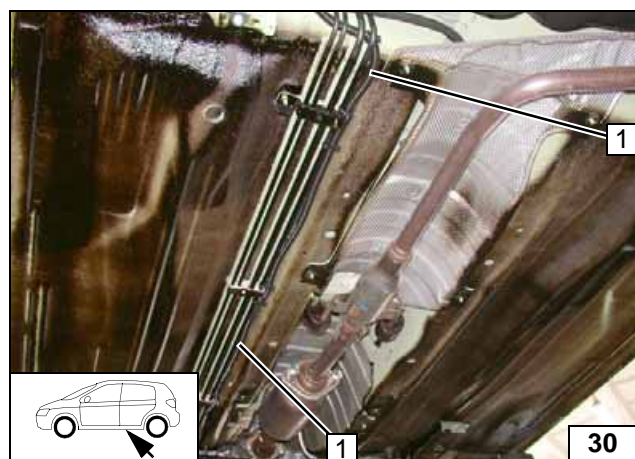
WARNING!

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



Route wiring harness of metering pump and fuel line 1 on the frame side member to the firewall and further to the underbody.

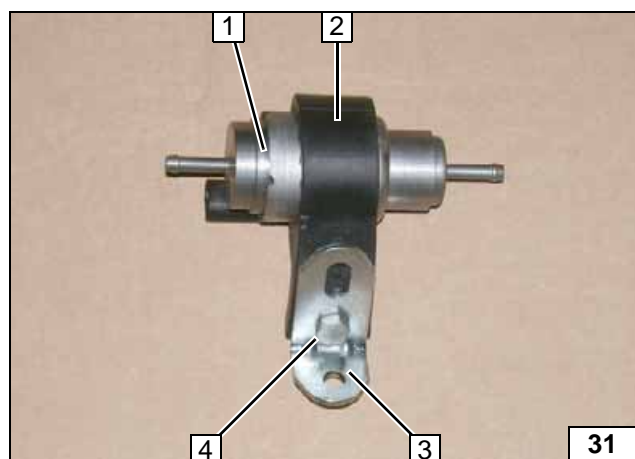
Routing lines



Route wiring harness of metering pump and fuel line 1 in corrugated tube to installation location of metering pump.



Routing lines



- 1 Metering pump
- 2 Metering pump intake
- 3 Angle bracket
- 4 M6x25 bolt, support angle, flanged nut

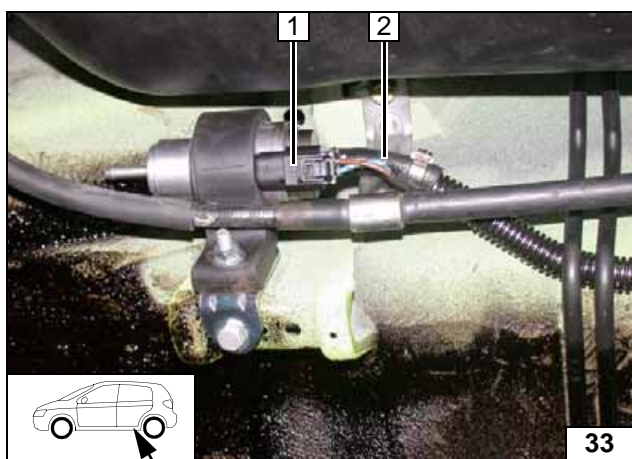
Premounting metering pump



- 1 Mount M6x20 bolt, flanged nut, existing hole
- 2 Angle bracket

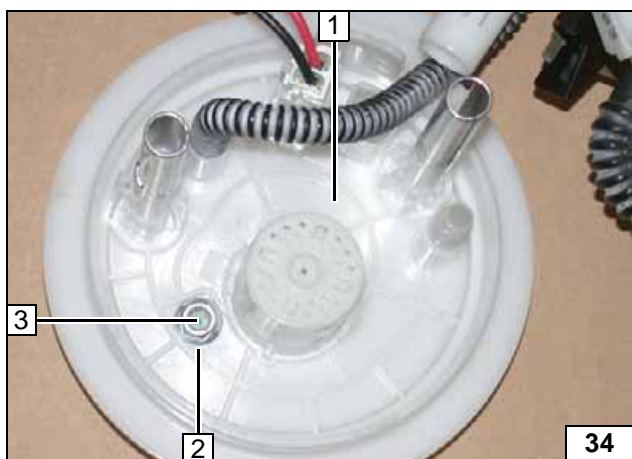


Installing metering pump



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

Connecting metering pump

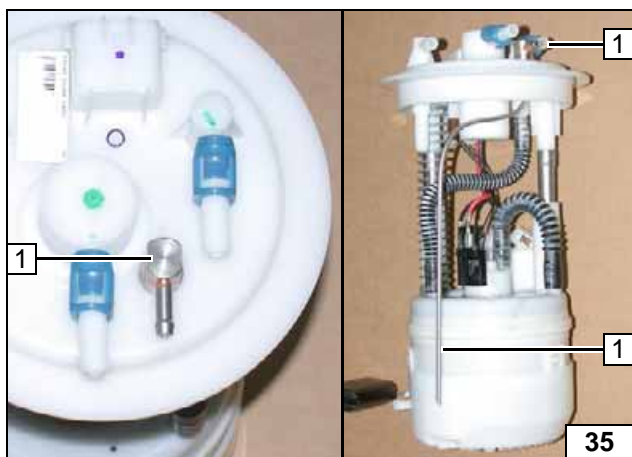


Remove and dismantle fuel-tank sending unit 1 according to manufacturer's instructions.

- 2 Mount M6 flanged nut
- 3 Copy hole pattern, 6 mm dia. hole



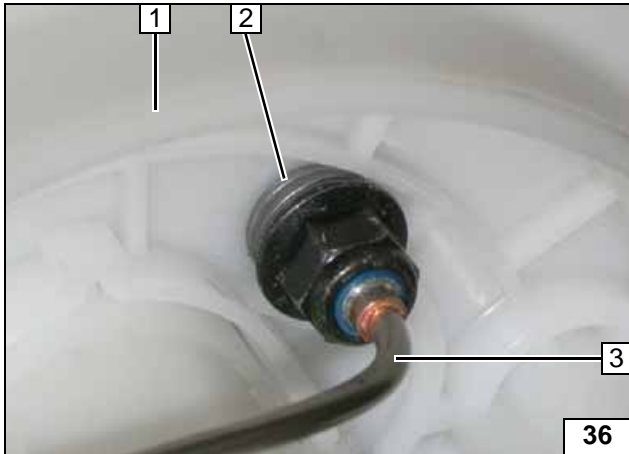
Fuel extraction



Shape fuel standpipe 1 according to template and cut to length. During installation, insert three washers according to the following figure as height compensation.



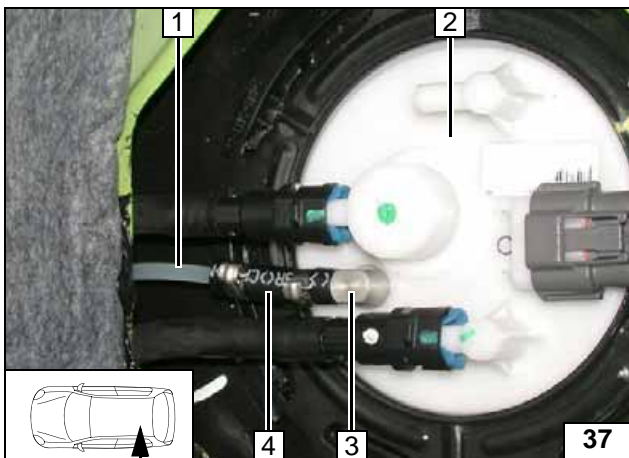
Installing fuel standpipe



- 1 Fuel-tank sending unit
- 2 Washer outer dia. $d_a = 11.8\text{mm}$ [3x]
- 3 Fuel standpipe



Installing fuel stand-pipe

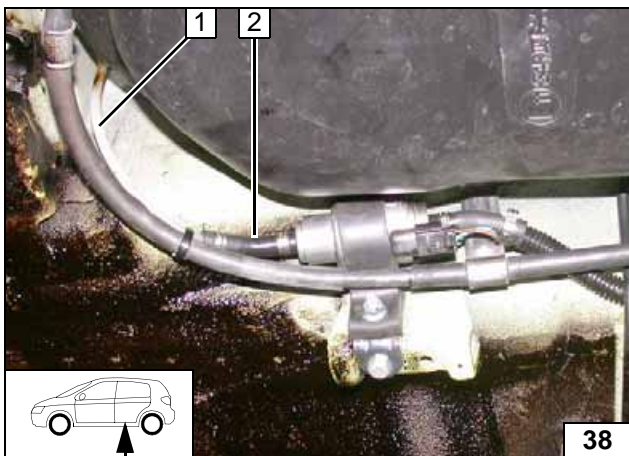


Install fuel-tank sending unit **2** in accordance with manufacturer's instructions.

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



Connect-ing fuel line



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

- 1 Fuel line of fuel standpipe
- 2 Hose section, 10 mm dia. clamp [2x]



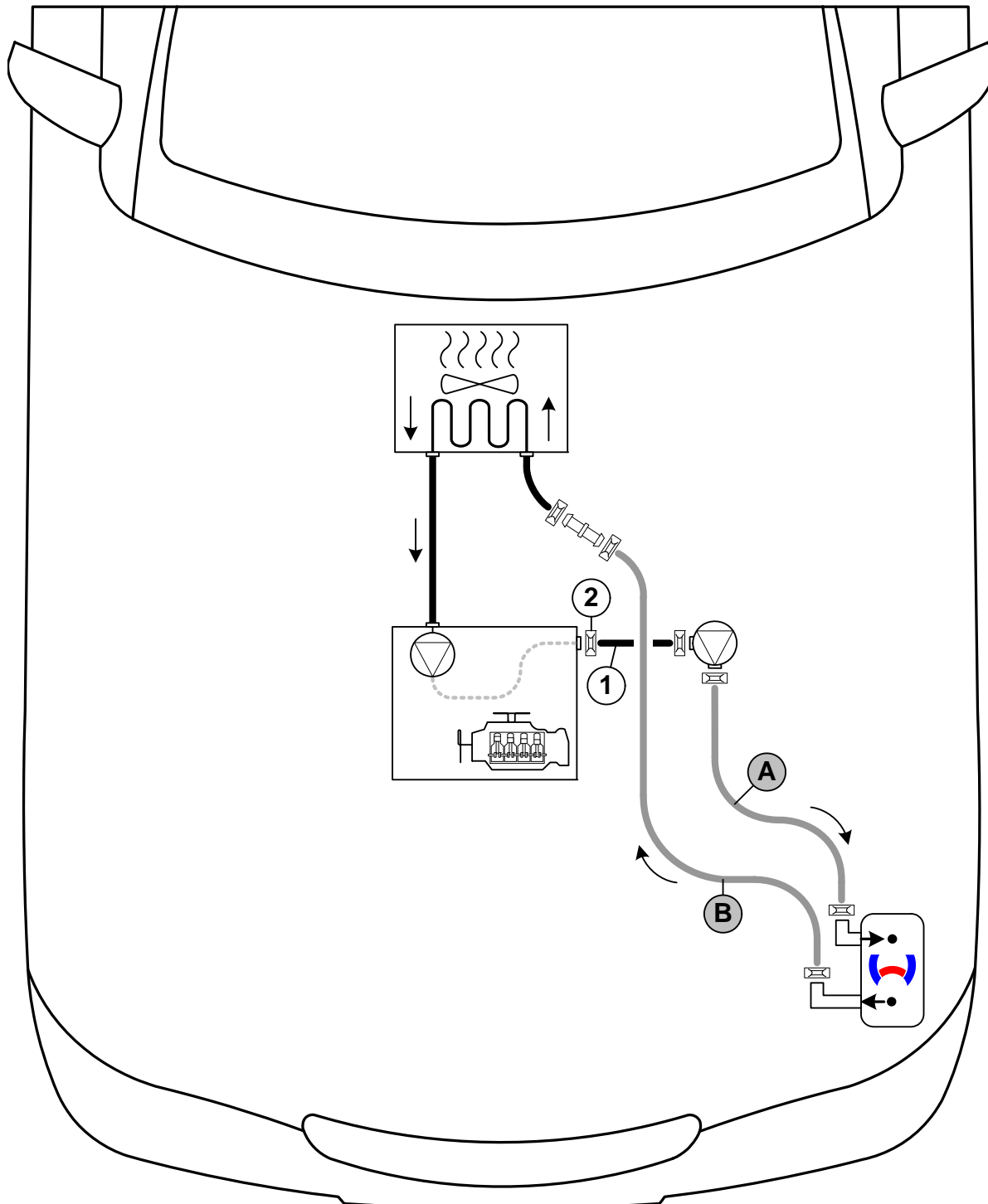
Connect-ing meter-ing pump






Coolant Circuit

WARNING!

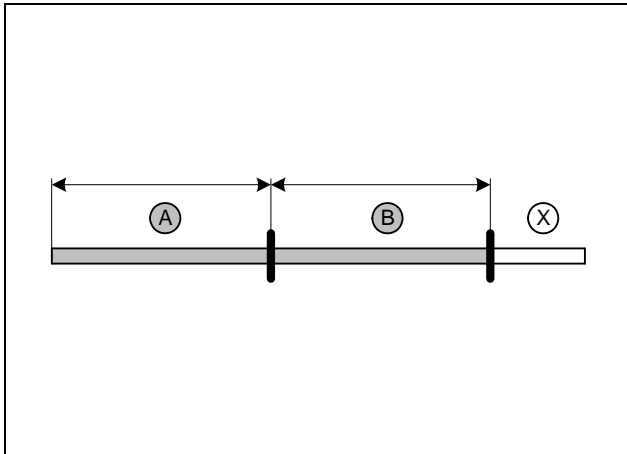
Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the coolant hose. The connection should be "inline" based on the following diagram:



Hose routing diagram

All connecting pipes without a specific designation  = 25 mm dia. **2** = Original vehicle spring clip .
1 = Original vehicle hose Connecting pipe  = 18x18mm dia.





Discard section X

A = 615

B = 770

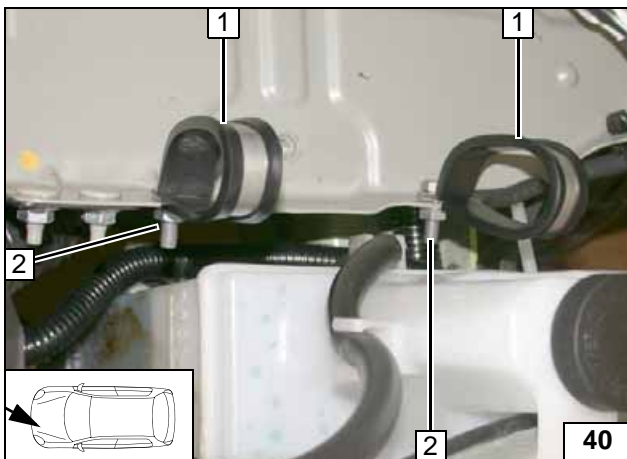


Cutting hoses to length



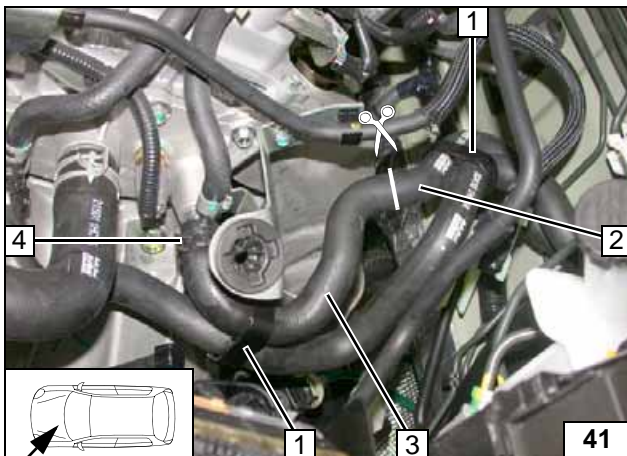
1 50mm edge protection [2x]

Installing edge protection



1 38 mm dia. rubber-coated p-clamp [2x]
2 Mount M6x20 bolt, flanged nut [2x each] loosely

Installing rubber-coated pipe clamp

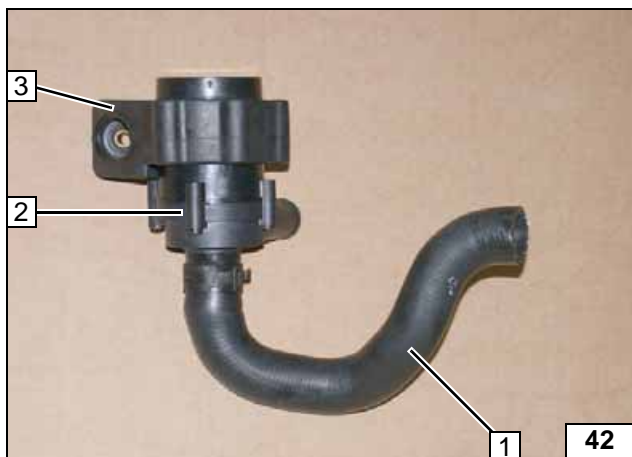


Remove hose section of engine outlet 3, spring clip 4 will be reused.
Remove spacer bracket 1 [2x] and discard.

2 Hose section of heat exchanger inlet

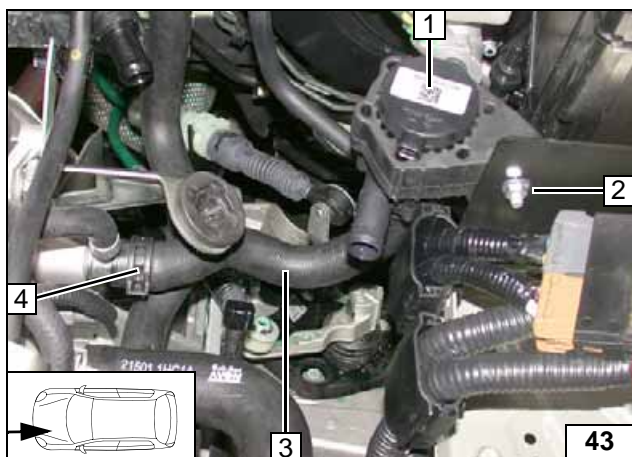


Cutting point



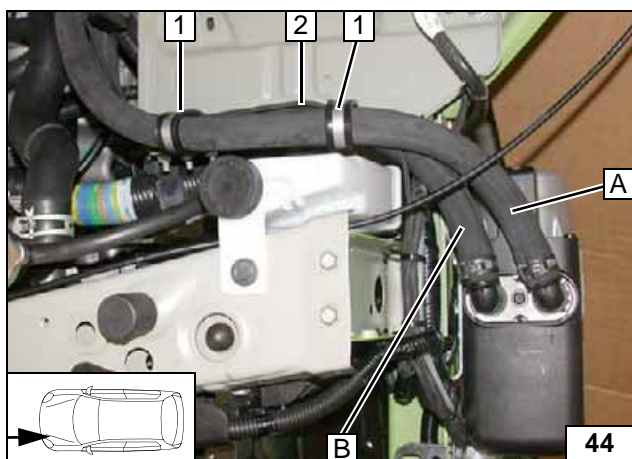
- 1 Engine outlet hose section
- 2 Circulating pump
- 3 Circulating pump intake

Premounting circulating pump



- 1 Premounted circulating pump
- 2 M6x25 bolt, flanged nut, existing hole
- 3 Engine outlet hose section
- 4 Original vehicle spring clip

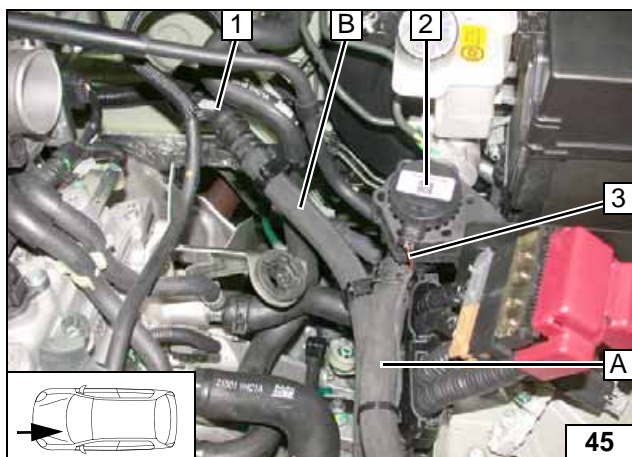
Installing circulating pump and connecting engine outlet



Route hose **A** and **B** as well as wiring harness of circulating pump **2** through rubber-coated pipe clamp **1** [2x].



Connecting heater



- 1 Hose on heat exchanger inlet
- 2 Circulating pump
- 3 Install wiring harness of circulating pump

Connection of heat exchanger inlet and circulating pump

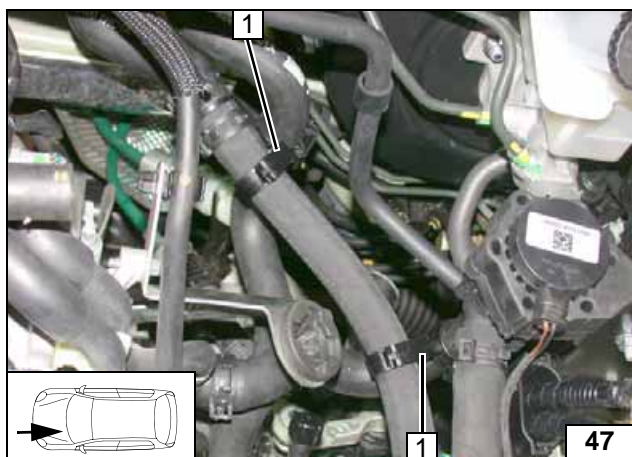


Tighten bolts at position 1 [2x].

2 Cable tie

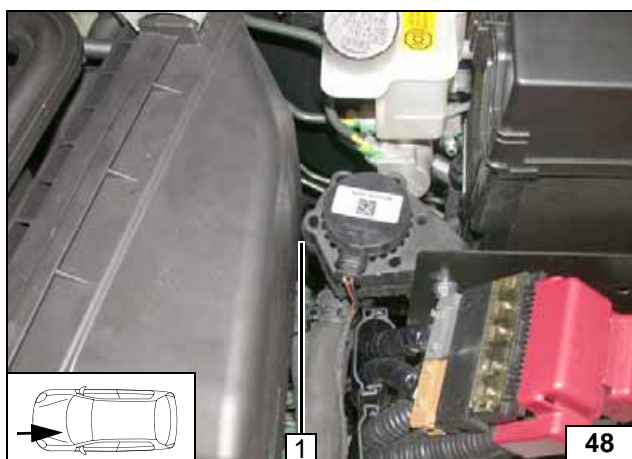


Aligning hoses



1 Hose bracket, can be turned and locked [2x]

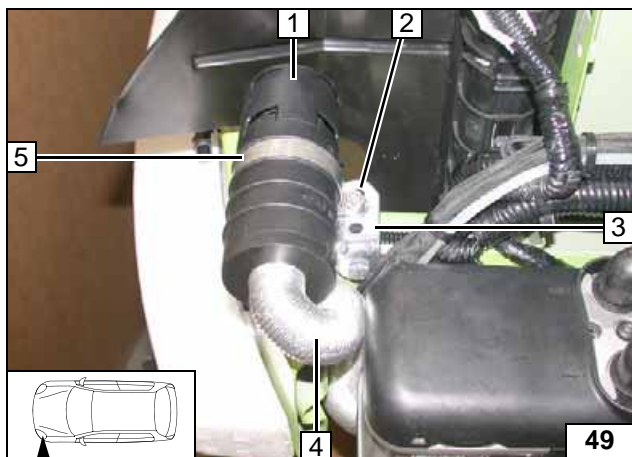
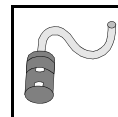
Inserting hose bracket



Install air filter box. Ensure adequate distance from neighbouring components, especially from intake of circulating pump to air filter box at position 1. Correct if necessary.



Checking distance

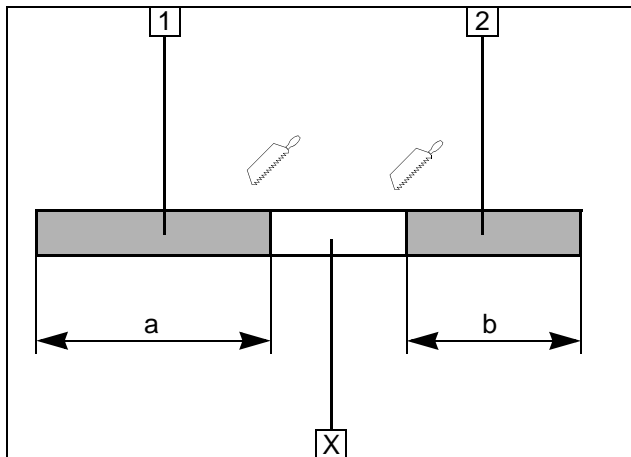


Combustion Air

- 1 Silencer
- 2 M5x16 bolt, flanged nut
- 3 Angle bracket
- 4 Combustion air pipe
- 5 51 mm dia. clamp



Mounting silencer



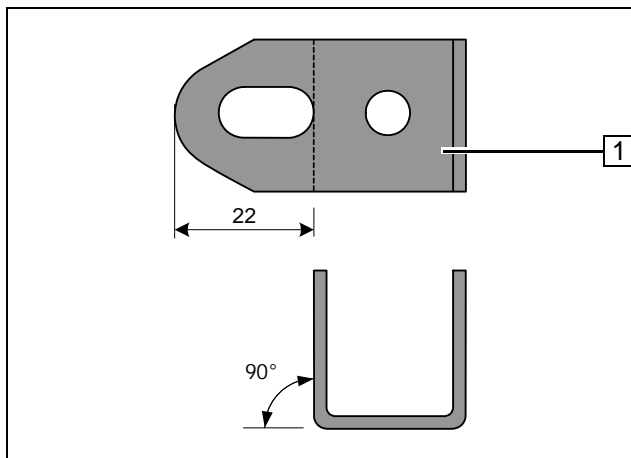
Exhaust Gas

Discard section X

- 1 Exhaust pipe
a = 90
- 2 Exhaust end section
b = 90

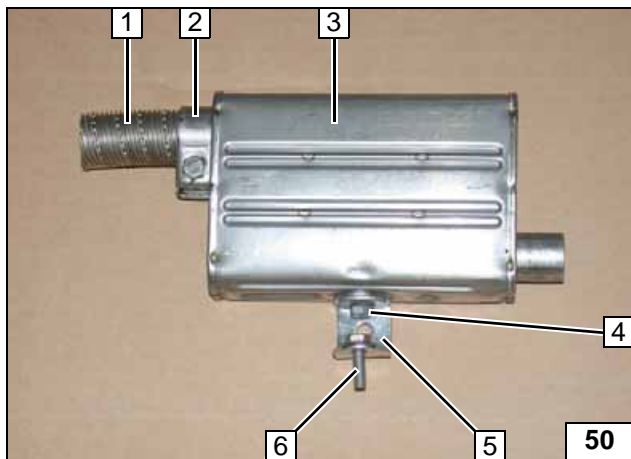


Preparing exhaust pipe



- 1 Angle bracket

Preparing angle bracket

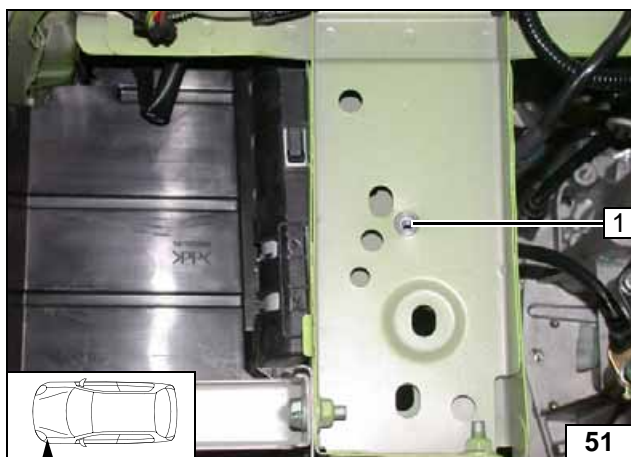


Insert M6x20 bolt, spring lock washer and large diameter washer 6 in oblong hole of angle bracket 5.

- 1 Exhaust pipe
- 2 Hose clamp
- 3 Silencer
- 4 M6x16 bolt, spring lockwasher

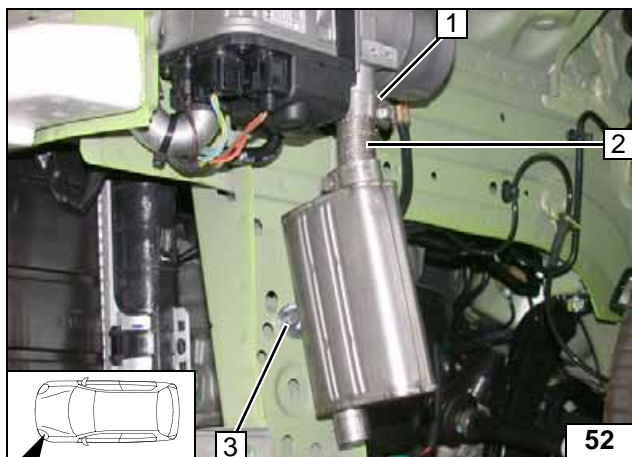
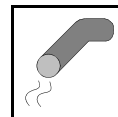


Premounting silencer



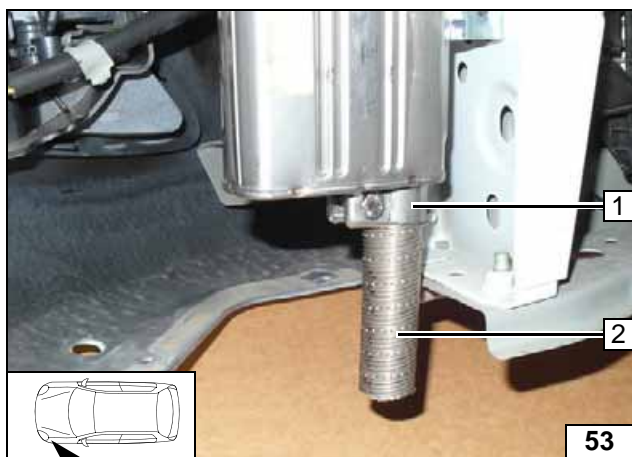
- 1 Rivet nut, existing hole

Installing rivet nut



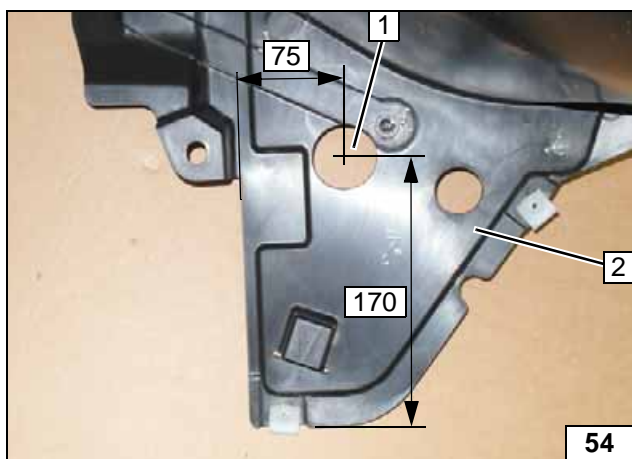
- 1 Hose clamp
- 2 Exhaust pipe
- 3 Tighten M6x20 bolt

Mounting silencer



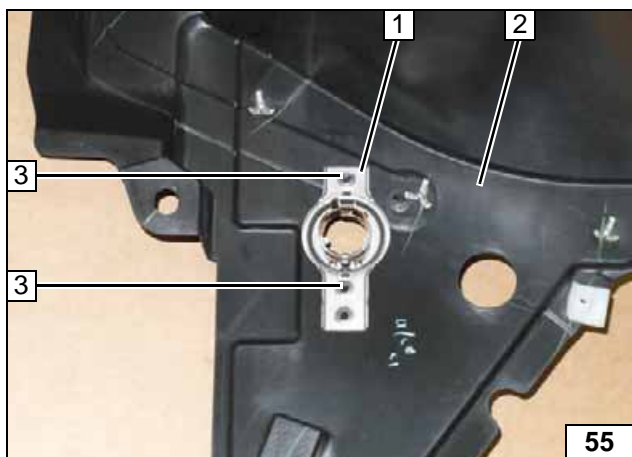
- 1 Hose clamp
- 2 Exhaust end section

Installing exhaust end section



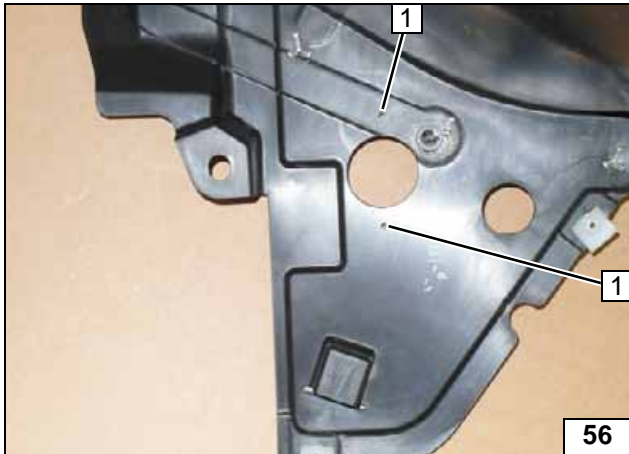
- 1 43 mm dia. hole
- 2 Wheel well trim left

Cutting out wheel well trim



- 1 Place exhaust end fastening in 43mm dia. hole as shown
- 2 Wheel well trim left
- 3 Copy hole pattern [2x]

Copying hole pattern

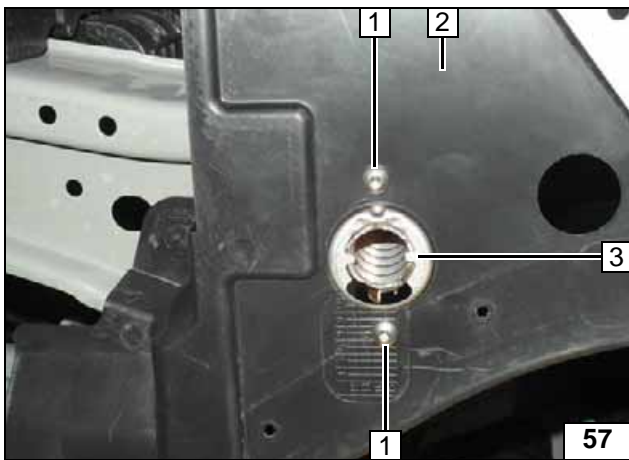


Remove exhaust end fastening.

- 1 Drill 5 mm dia. hole [2x]



Hole in wheel well trim



- 1 5x13 self-tapping bolt [2x]
- 2 Wheel well trim left
- 3 exhaust end fastening



Mounting exhaust end fastening



Final Work

WARNING!

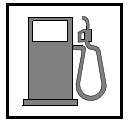
Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose lines and tie back.

Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

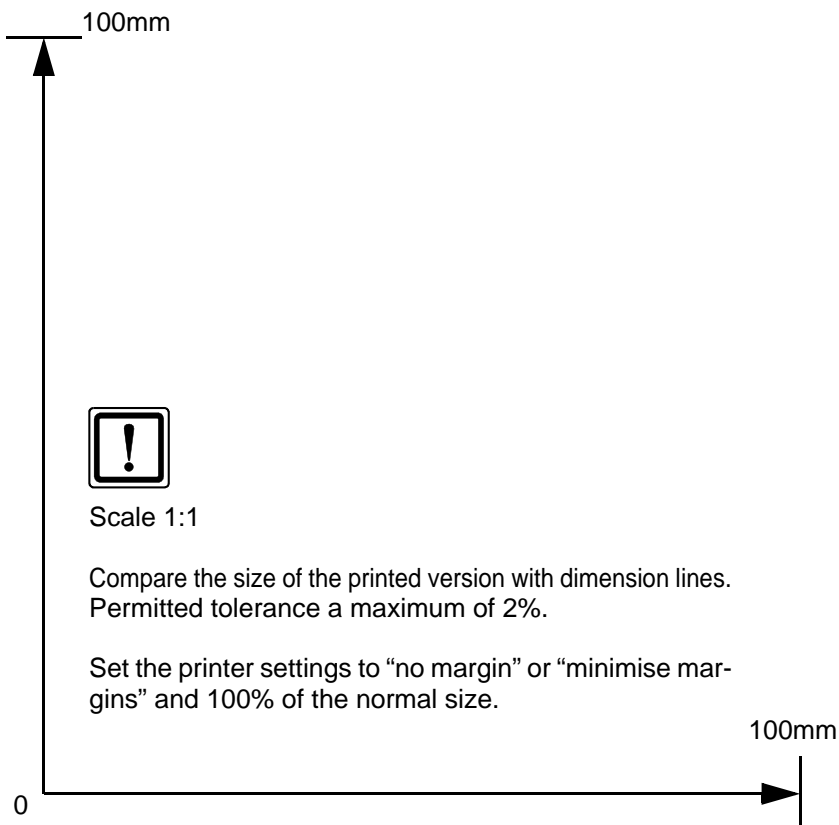


- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Apply the caution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





Template for Fuel Standpipe



Scale 1:1

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

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

Operating Instructions for Manual Air-Conditioning

Please remove page in case of manual air-conditioning and add it 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 cycle.

Deactivation instructions can be taken from the operating instructions of the vehicle.

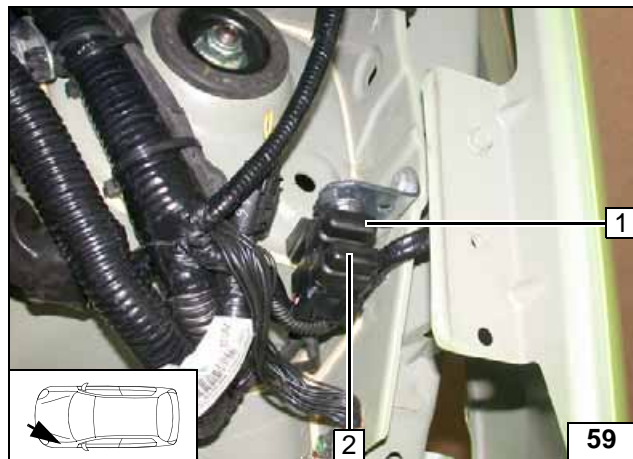
Before parking the vehicle, make the following settings:



- 1 Set fan to level "1" or max. "2"
- 2 Set temperature to "max."
- 3 Air outlet to windscreen

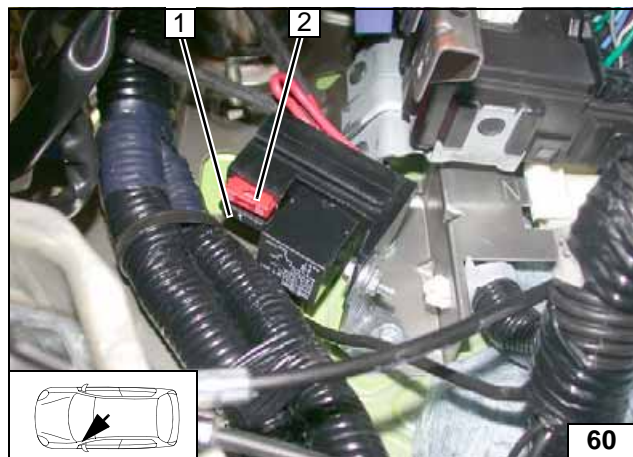


A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment

Operating Instructions for Automatic Air-Conditioning

Please remove page in case of automatic air-conditioning and add it 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 cycle.

Deactivation instructions can be taken from the operating instructions of the vehicle.

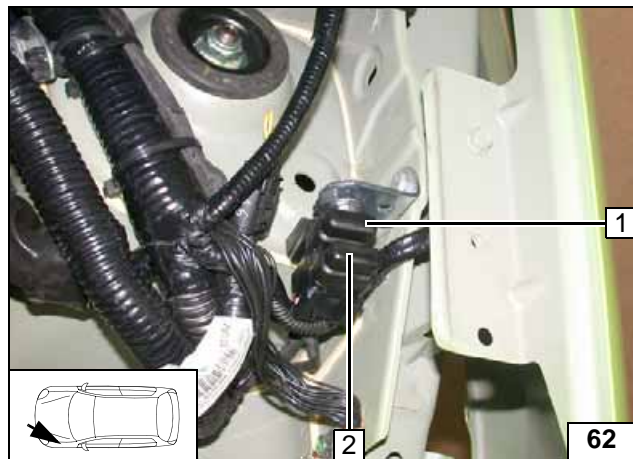
Before parking the vehicle, make the following settings:



- 1 Air outlet to windscreen
- 2 Set temperature to "HI"
- 3 Set fan to level "2" or max. "3"

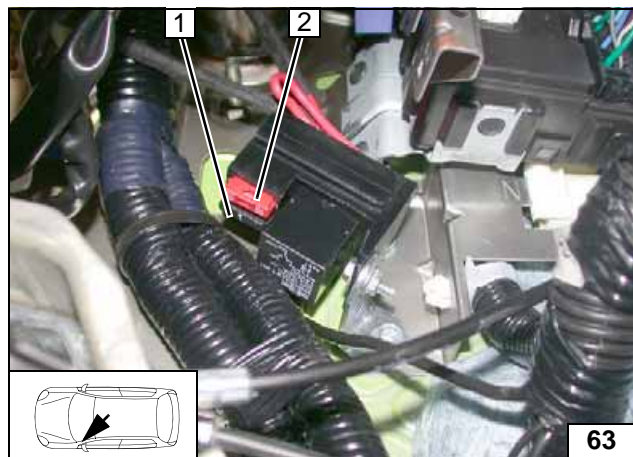


A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment