Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Nissan Juke

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Nissan	Juke	F15	e11 * 2007 / 46 * 0132 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6 B	Petrol	CVT	86	1598	HR16

CVT = Automatic transmission

From Model Year 2011
Left-hand drive vehicle

Verified equipment variants:
Automatic air-conditioning
Front fog light
2 WD

Not verified:
Passenger compartment monitoring
Manual air-conditioning
Headlight washer system
4 WD

Total installation time: about 9 hours

Nissan Juke

Table of Contents

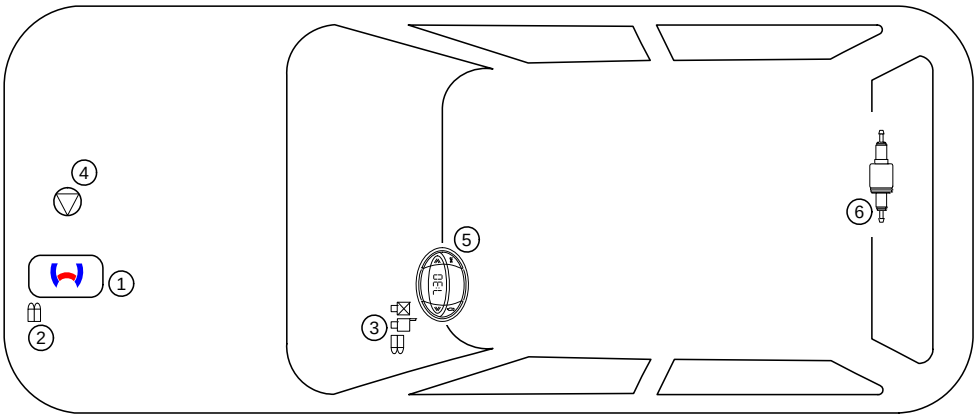
Necessary Components

- Basic delivery scope *Thermo Top Evo*based on price list
- Installation kit for Nissan Juke 2011 1.6 Petrol automatic transmission: **1316966A**
- 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 Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. 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 Juke

Notes on Validity

This installation documentation applies to the Nissan Juke 1.6 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

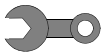
Dimensions
- All dimensions are in mm

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.

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents

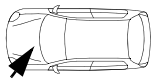
Specific risk of damage to components

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 Juke

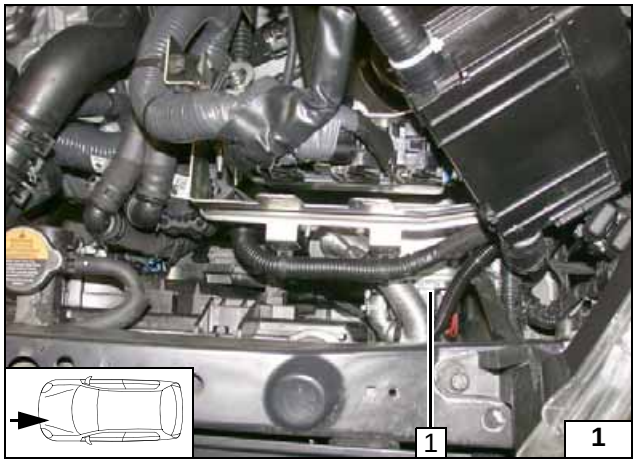
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the battery completely.
- Remove the engine control unit with the bracket.
- Remove the air filter together with the intake hose.
- Detach the wheel well trim on the left.
- Remove the rear bench seat.
- Open the right-hand tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the left footwell trim.
- Remove the instrument panel trim on the driver's side.
- Remove the A/C control panel.
- Detach the A/C booster.

Heater

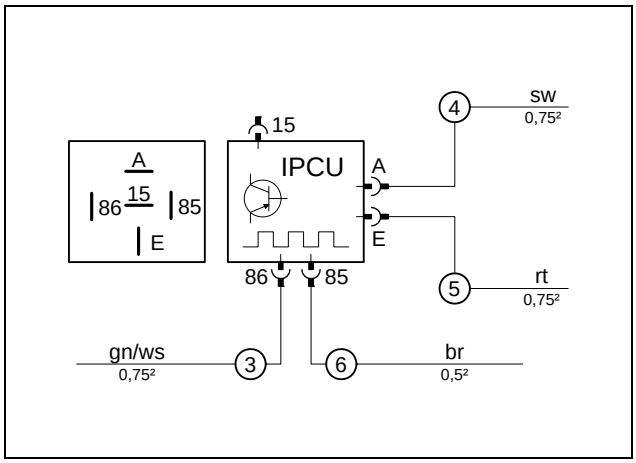
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

1 Heater

Installation location

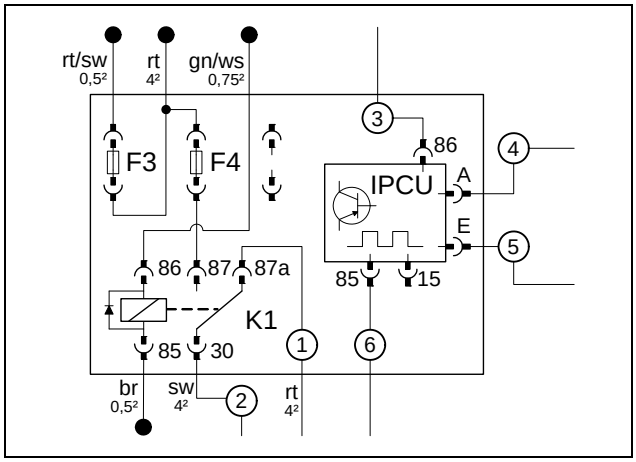


Preparing Electrical System

Wire sections retain their numbering in the entire document.
View of IPCU from below.
The pre-programmed settings of the IPCU are to be checked on the vehicle during function control and adjusted if necessary. Connect wires to the IPCU socket according to the wiring diagram, see figure.

Duty cycle: 100%
Frequency: 14 kHz
Voltage: 2.7V
Function: High-side

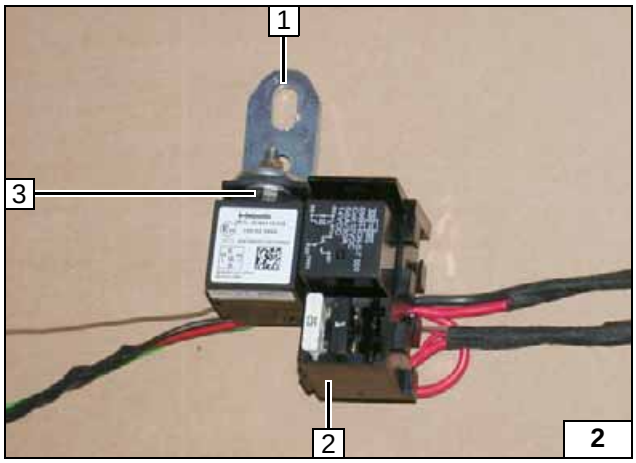
Preparing IPCU



Connect wires according to wiring diagram to the K1 relay socket.

① Red (rt) wire from K1/87a socket
② Black (sw) wire from K1/30 socket
③ Green/white (gn/ws) wire from IPCU/86 socket
④ Black (sw) wire of IPCU/A socket
⑤ Red (rt) wire from IPCU/E socket
⑥ Brown (br) wire from IPCU/85 socket

Preparing K1 relay of IPCU and F4



2

Lock IPCU socket and fuse holder into position. Mount F4 25A fuse, K1 relay and IPCU.

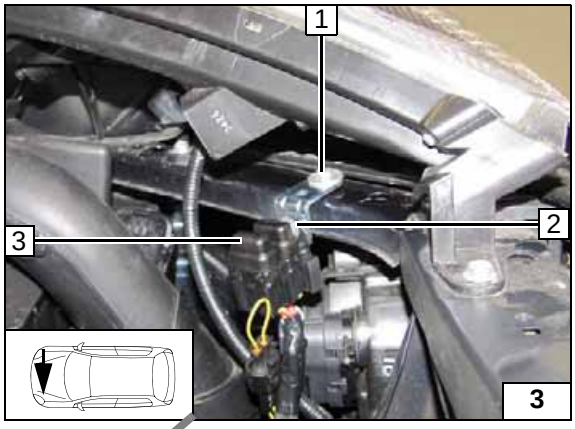
1 Angle bracket
2 Fuse holder
3 M5x16 bolt, large diameter washer [2x], nut

Preparing fuse holder of passenger compartment

Electrical System

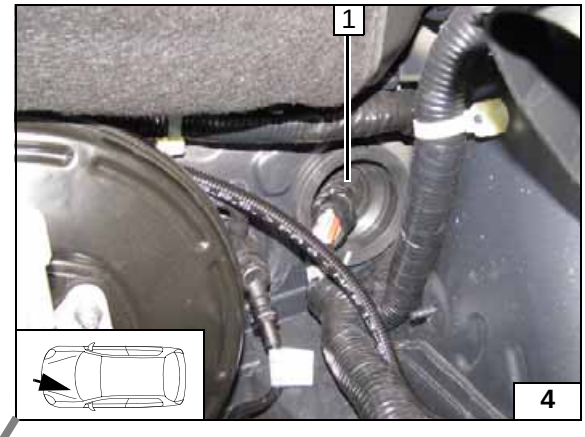
Fuse holder of engine compartment

1 M6x20 bolt, large diameter washer, angle bracket, original vehicle hole, flanged nut
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
3 F1-2 fuses mounted



Wiring harness pass through

1 Protective rubber plug



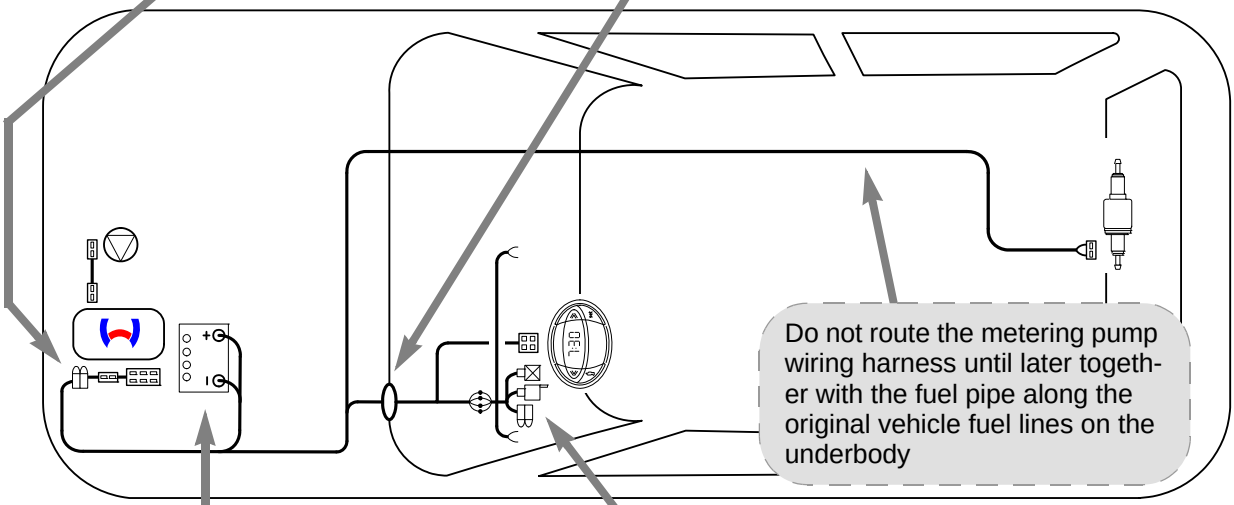
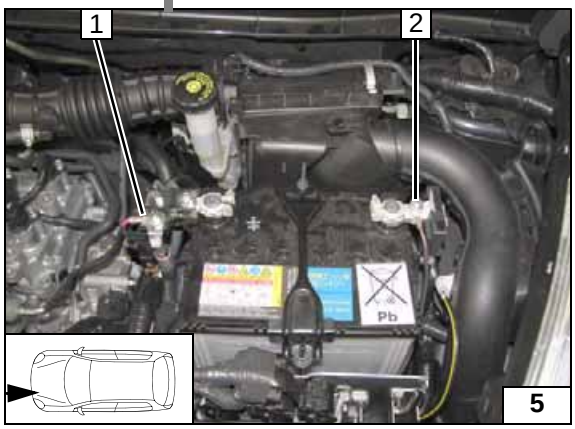
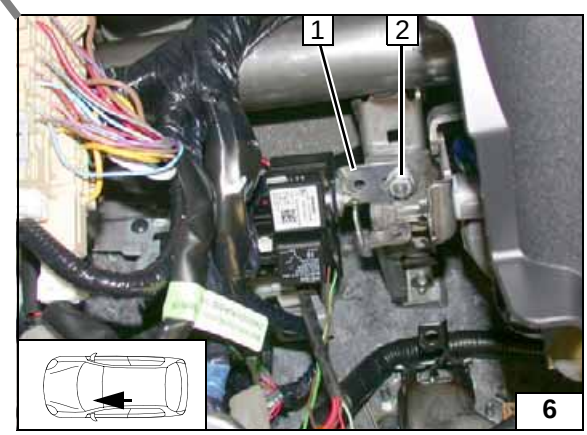


Diagram of wiring harness routing



Positive and earth wire

1 Positive wire to positive battery terminal
2 Earth wire on negative battery terminal

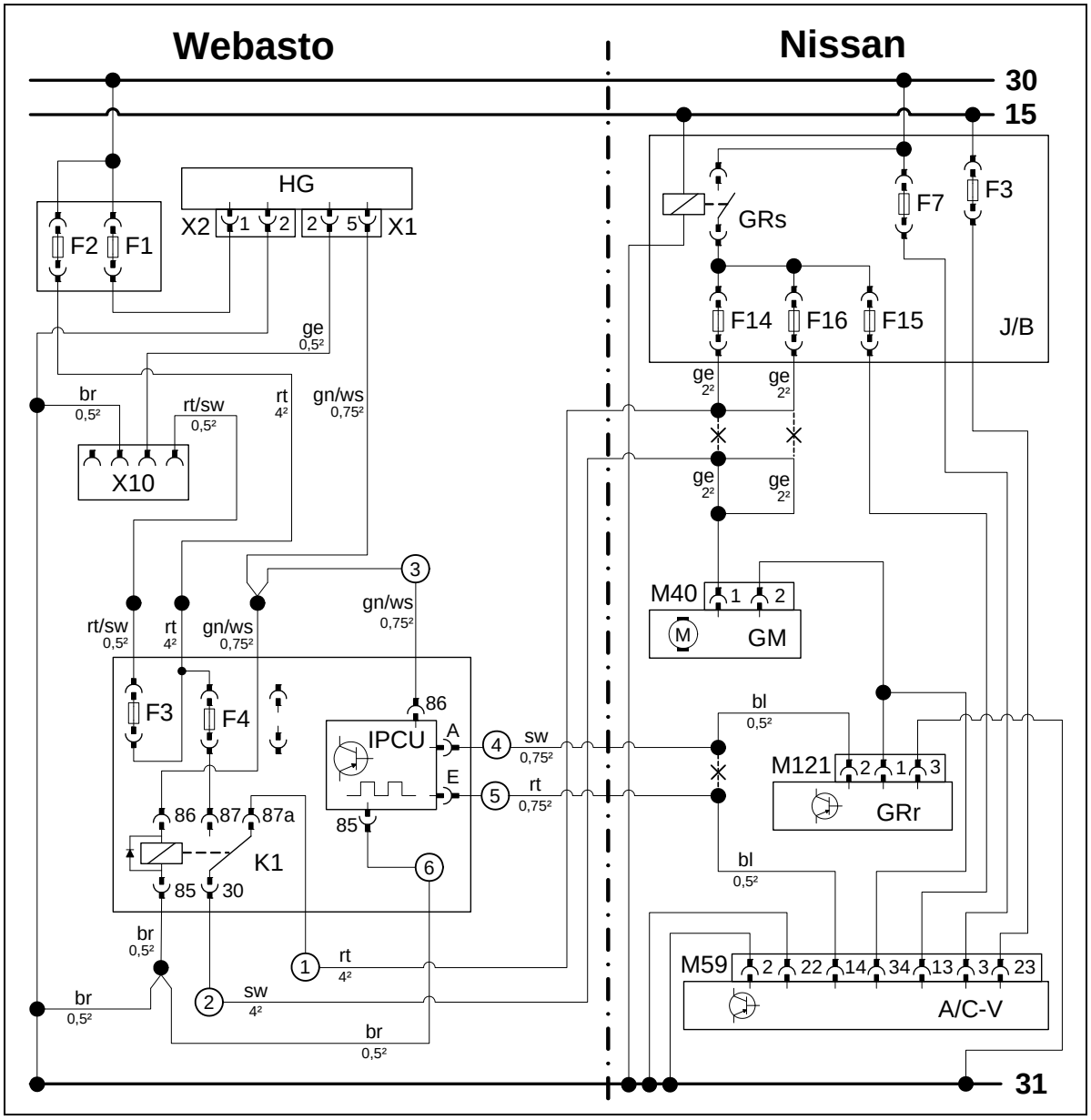


Fuse holder of passenger compartment

1 Angle bracket
2 Original vehicle stud bolt, M8 flanged nut

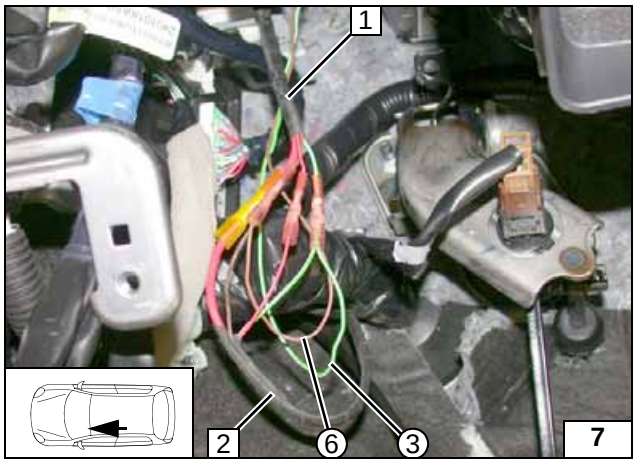
Fan Controller

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	GRs	Fan relay	rt	red
X1	6-pin heater connector	F7	10A fuse	sw	black
X2	2-pin heater connector	F3	10A fuse	ge	yellow
X10	4-pin connector of Heater control	F14	15A fuse	gn	green
		F16	15A fuse	bl	blue
K1	Fan relay	F15	10A fuse	ws	white
F1	20A fuse	J/B	Fuse and relay box	br	brown
F2	30A fuse				
F3	1A fuse	M40	Connector GM		
F4	25 A fuse	GM	Fan motor		
IPCU	Pulse width modulator	M121	Connector GRr		
IPCU adjustment values:		GRr	Fan controller		
Duty cycle:	100%	M59	40-pin AC-V connector		
Frequency:	14 kHz	A/C-V	A/C booster		
Voltage:	2.7V			**X**	Cutting point
Function:	High-side			Wiring colours may vary.	

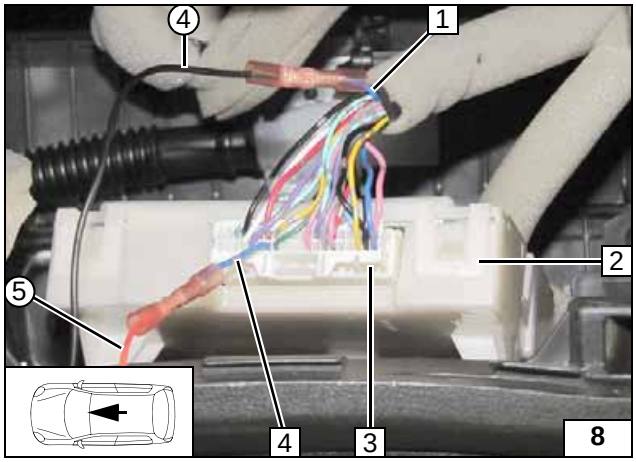
Legend



Connect fuse holder of passenger compartment **1** to wiring harness of heater **2** according to wiring diagram, with same colour wires connected to each other.

③ Green/white (gn/ws) wire to IPCU/86
⑥ Brown (br) wire to IPCU/85

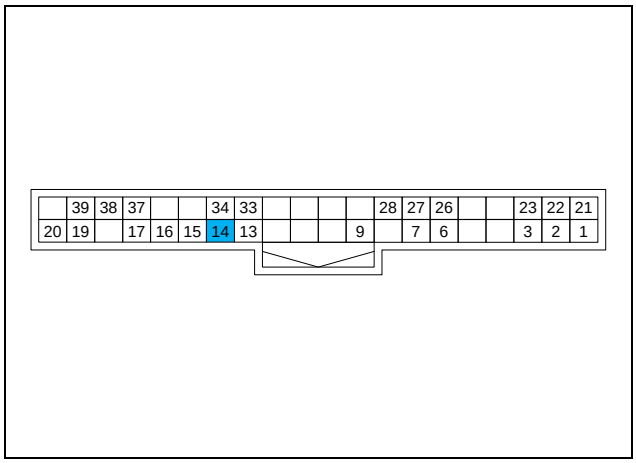
Connecting wiring harnesses



Connection on 40-pin M59 connector **3** from A/C booster **2**.
Produce connections as shown in wiring diagram.

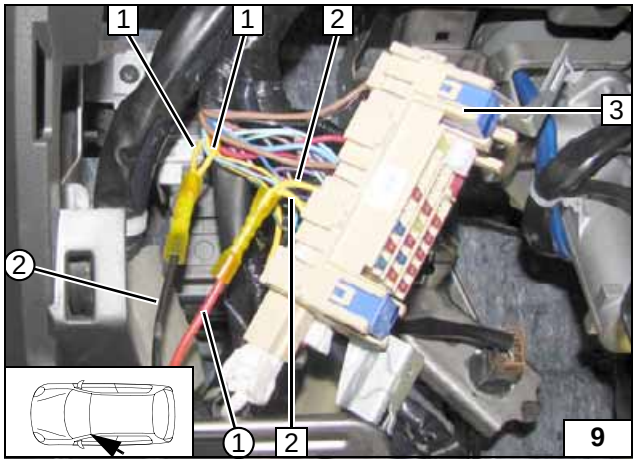
1 Blue (bl) wire to fan unit
4 Blue (bl) wire of 40-pin M59 connector, Pin 14
④ Black (sw) wire to IPCU/A
⑤ Red (rt) wire to IPCU/E

Connecting A/C booster



View of M59 connector on wire side.

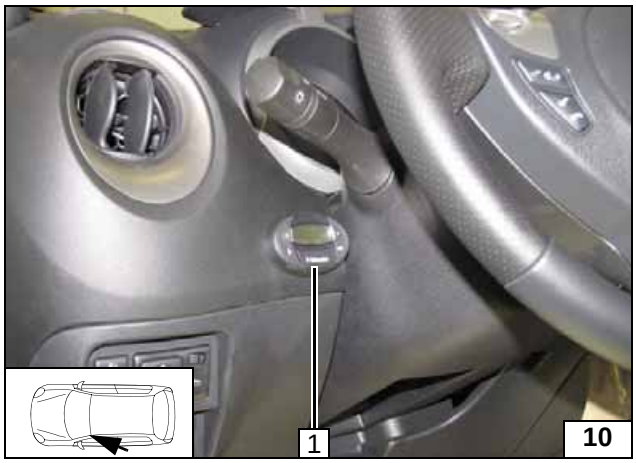
M59 connector



Connection of fan motor to fuse and relay box **3**.
Produce connections as shown in wiring diagram.

1 Yellow (ge) wire [2x] of fan motor
2 Yellow (ge) wire [2x] for fuse F14 and F16
① Red (rt) wire from K1/87a
② Black (sw) wire from K1/30

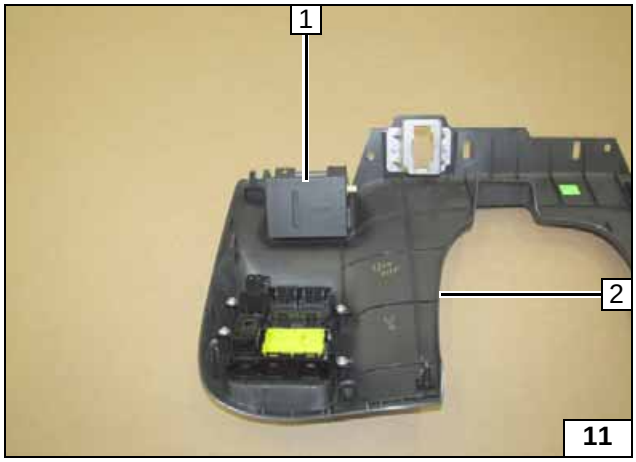
Connecting fan-motor



Digital Timer Option

1 Digital timer

Installing digital timer

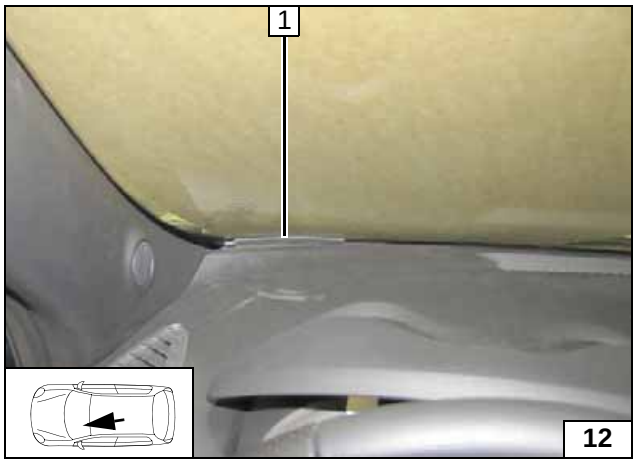


Remote Option (Telestart)

Fasten receiver **1** with adhesive tape.

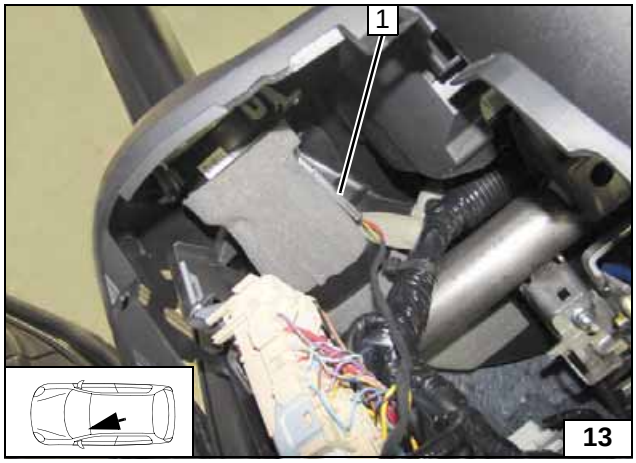
2 Instrument panel trim

Mounting receiver



1 Antenna

Mounting antenna



Temperature sensor T100 HTM

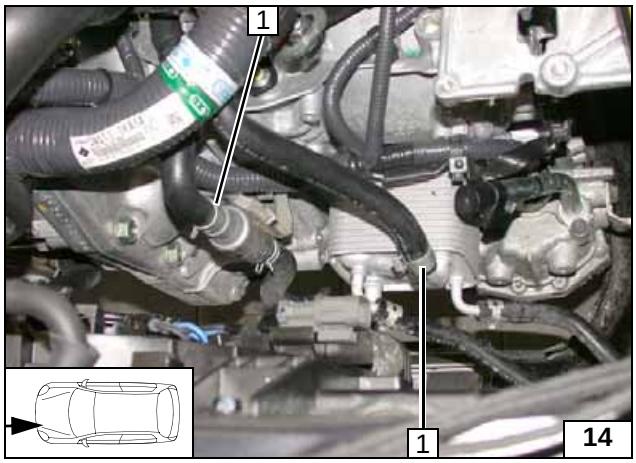
Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor

Preparing Installation Location

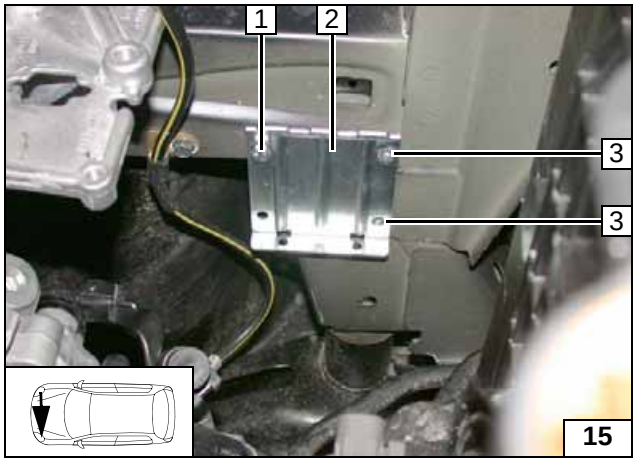
Turn original vehicle spring clips **1** [2x] as shown.

Turning clips



1 M6x20 bolt, spring lockwasher, existing threaded hole
2 Install bracket part **A** loosely
3 Copy hole pattern [2x]

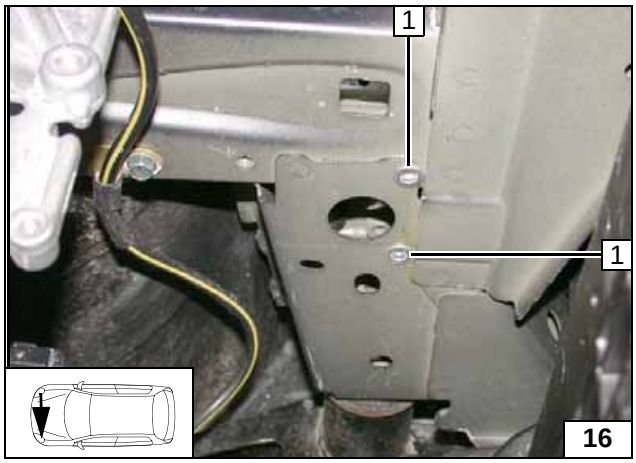
Copying hole pattern



Remove bracket section **A**

1 9.1 mm dia. hole; rivet nut [2x each]

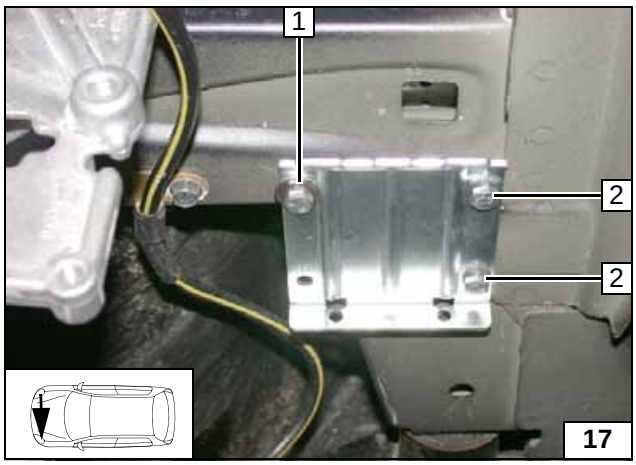
Installing rivet nut

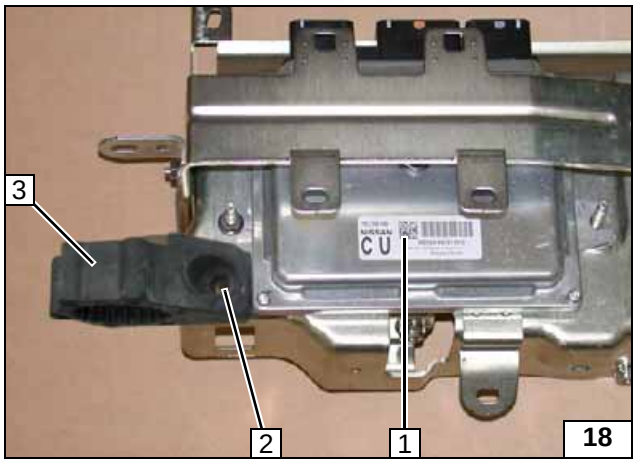


Insert two plain washers at position **1** between bracket section **A** and body

1 M6x20 bolt, spring lockwasher, plain washer [3x]
2 M6x20 bolt, spring lockwasher [2x each]

Installing bracket section A loosely

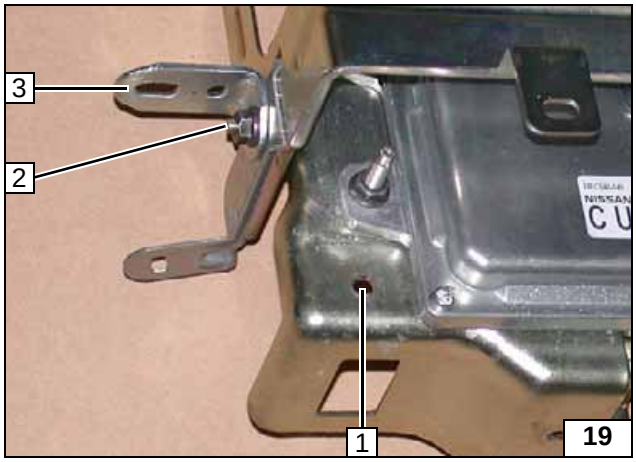




Place mounting of circulating pump **3** as shown and copy hole pattern **2**.

1 Engine control unit with bracket

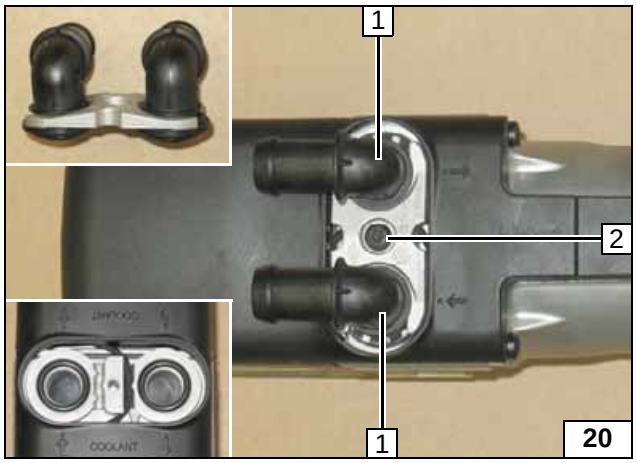
Copying hole pattern



1 7 mm dia. hole
2 Original vehicle stud bolt with flanged nut
3 Angle bracket

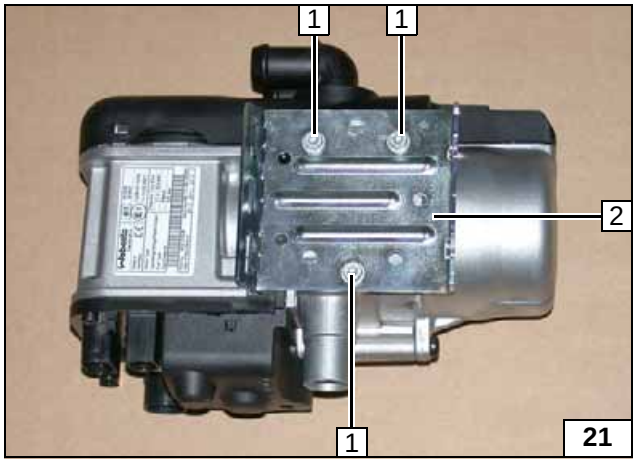
Preparing bracket of engine control unit

Preparing Heater



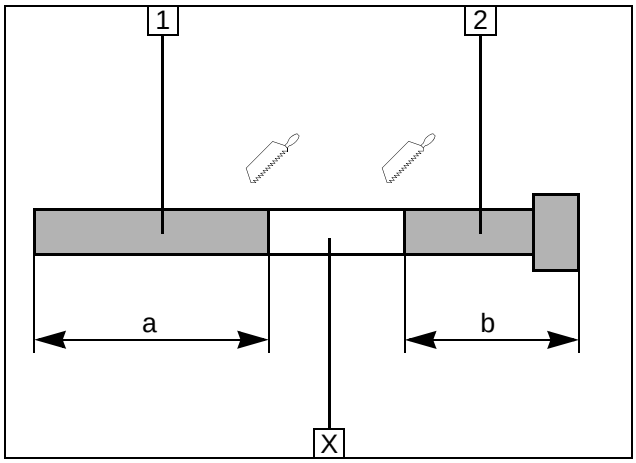
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



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

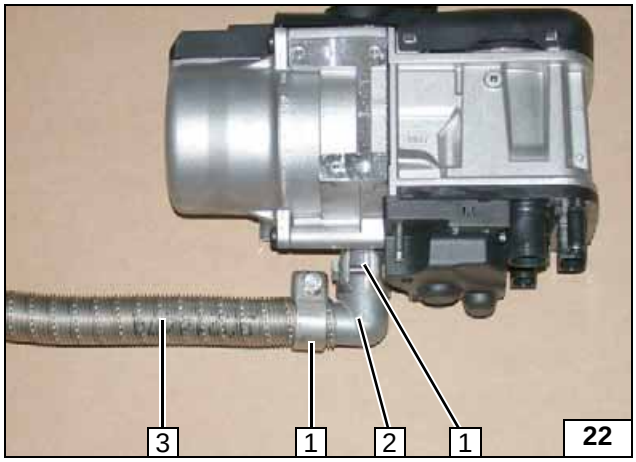
Installing bracket



Discard section **X**

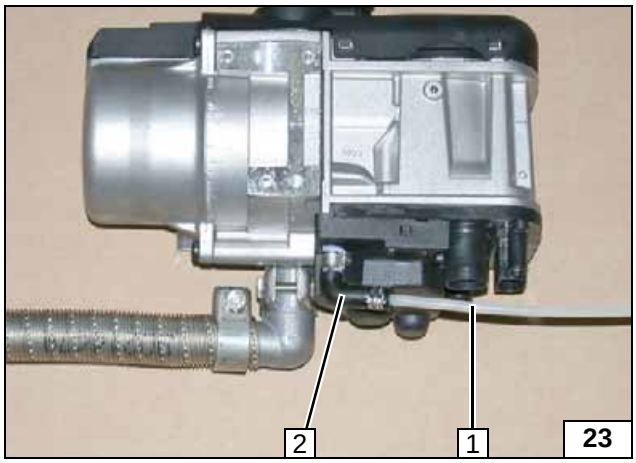
1 Exhaust pipe
a = 380
2 Exhaust end section
b = 130

Preparing exhaust pipe



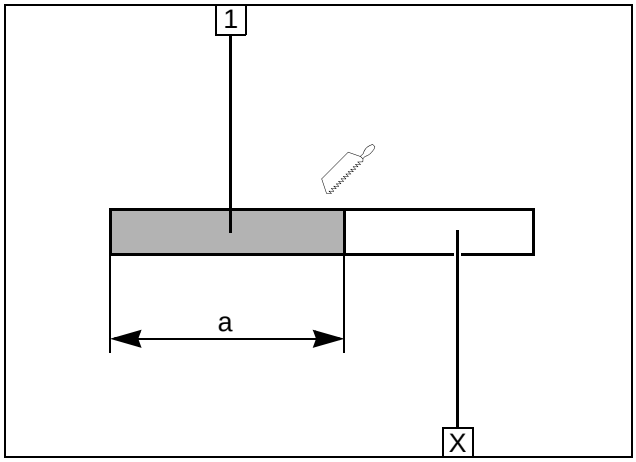
1 Hose clamp [2x]
2 Exhaust manifold
3 Exhaust pipe

Mounting exhaust pipe



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

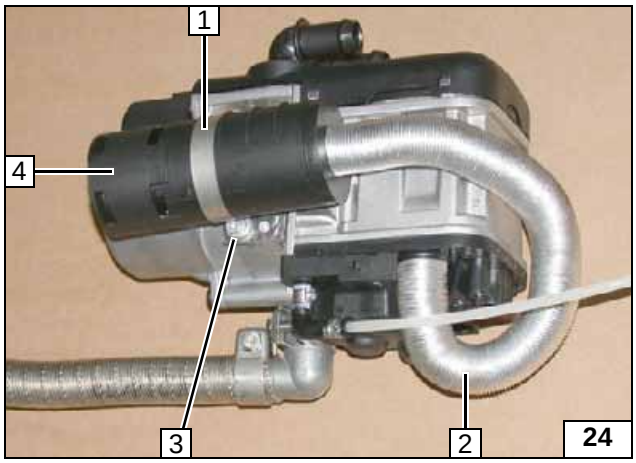
Premounting fuel line



Discard section **X**

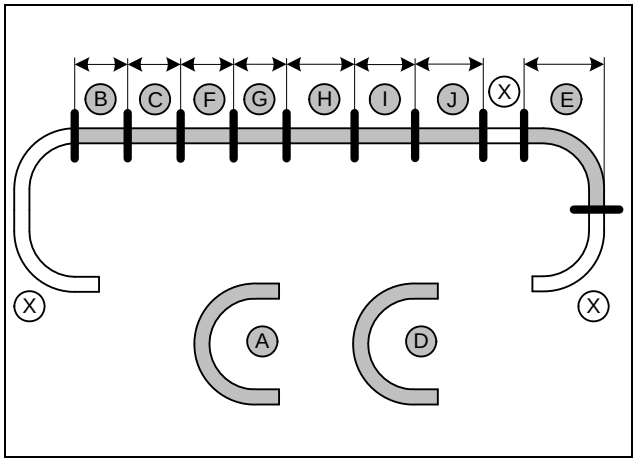
1 Combustion air pipe
a = 340

Cutting combustion air pipe to length



1 48 mm dia. clamp
2 Combustion air pipe
3 5x13 self-tapping bolt
4 Combustion air silencer

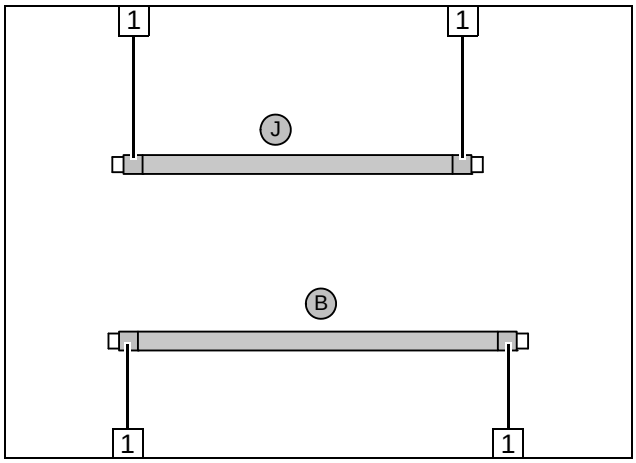
Premounting silencer



Discard section **X**
Hose **A** = 180°, 18mm moulded hose
Hose **D** = 180°, 18mm moulded hose

B	=	355
C	=	105
E	=	185
F	=	85
G	=	55
H	=	205
I	=	100
J	=	325

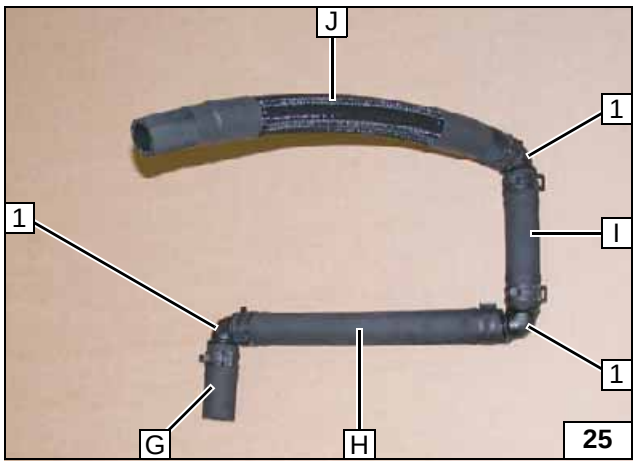
Cutting hoses to length



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

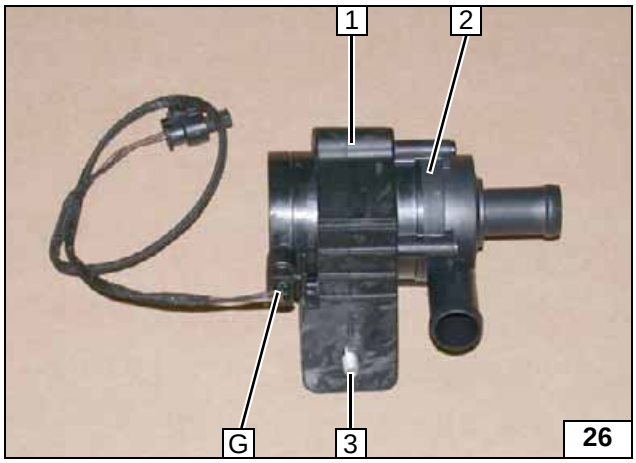
1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses



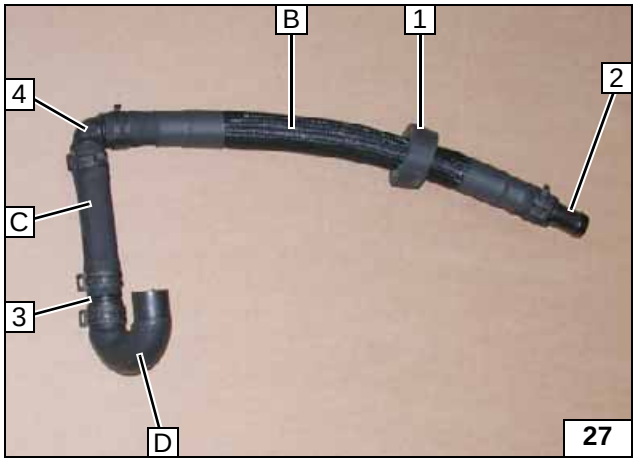
1 90° connecting pipe [3x], 25mm dia. spring clip [6x]

Premounting hoses G, H, I, J



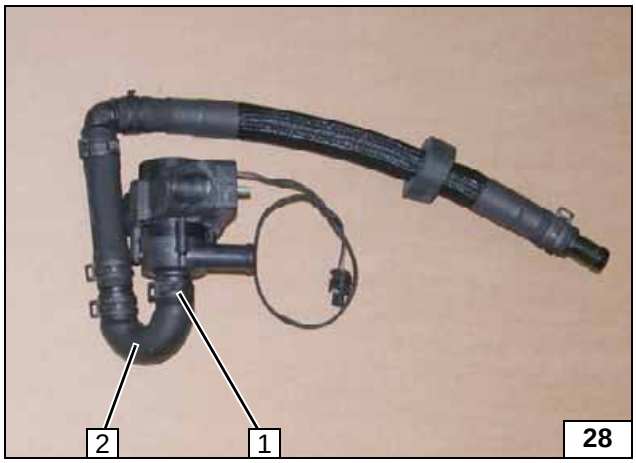
1 Circulating pump intake
2 Circulating pump
3 M6x25 detent edged bolt, pin lock
4 Install wiring harness of circulating pump

Premounting circulating pump



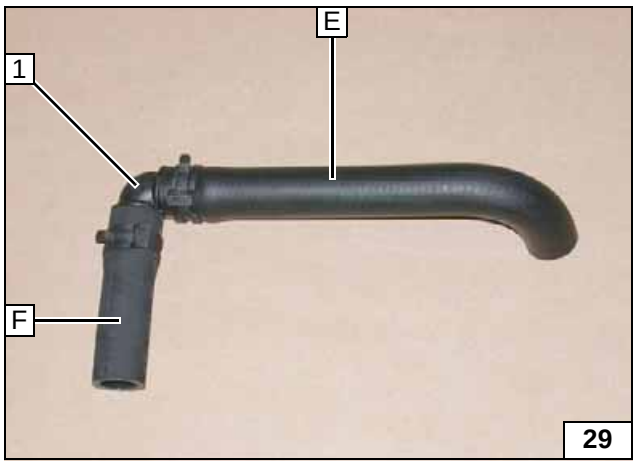
1 Slide on black (sw) rubber isolator
2 18x18mm dia. connecting pipe, 25mm dia. spring clip
3 18x18mm dia. connecting pipe, 25mm dia. spring clip [2x]
4 90° connecting pipe, spring clip 25mm dia. [2x]

Premounting hoses B, C, D



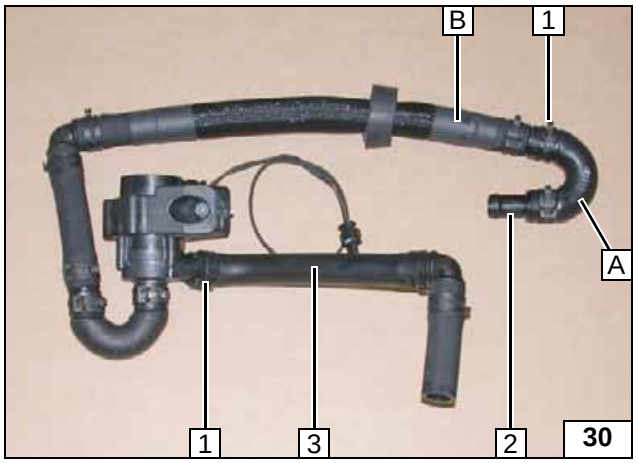
1 25 mm dia. spring clip
2 Preinstalled hose group (**B**, **C**, **D**)

Premounting circulating pump



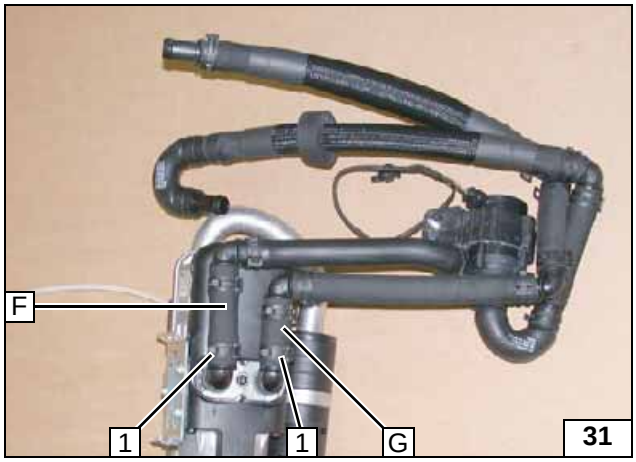
1 90° connecting pipe, spring clip 25mm dia. [2x]

Premounting hoses E, F



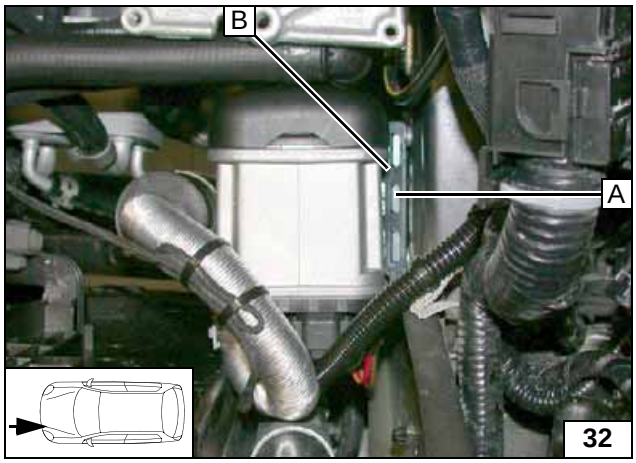
1 25 mm dia. spring clip [2x]
2 18x18mm dia. connecting pipe, 25mm dia. spring clip
3 Preinstalled hose group (**E**, **F**)

Installing hoses



1 25 mm dia. spring clip [2x]

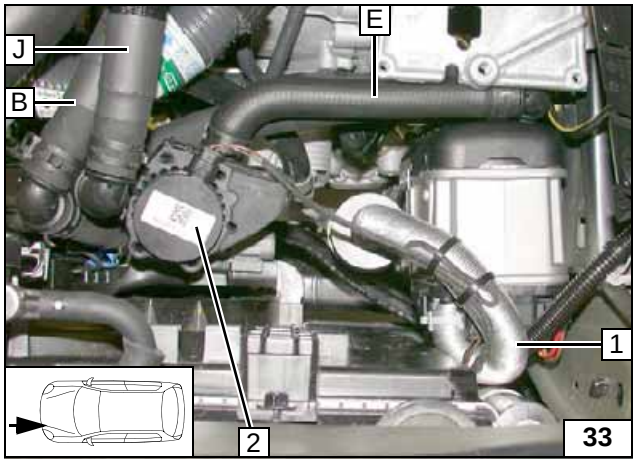
Installing hoses on heater



Installing Heater

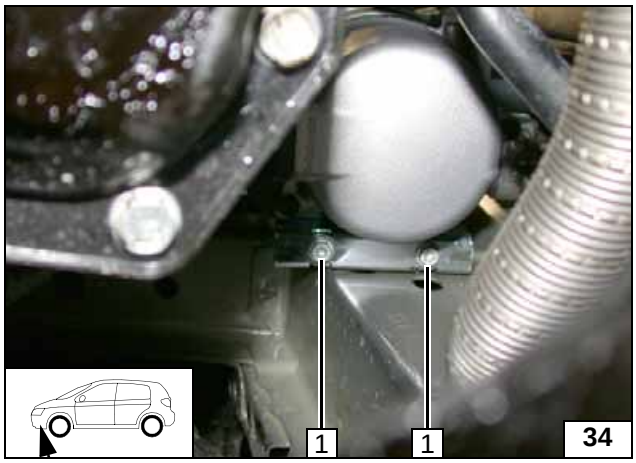
Suspend bracket section **B** on heater in pre-installed bracket section **A**.

Mounting heater



1 Combustion air pipe
2 Circulating pump

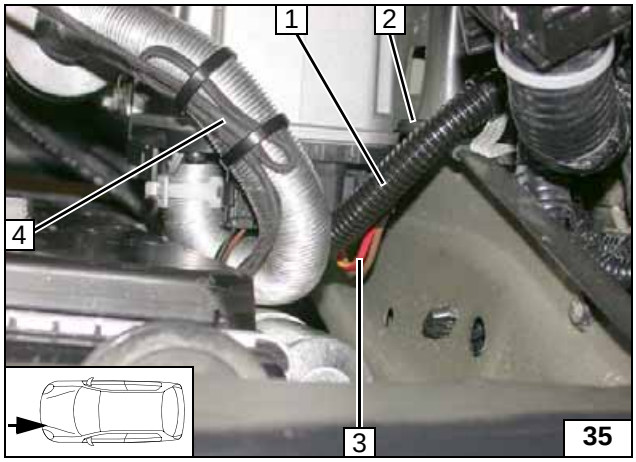
Aligning compo-nents



Connect bracket section **A** and **B** to each other

1 5x13 self-tapping bolt [2x]

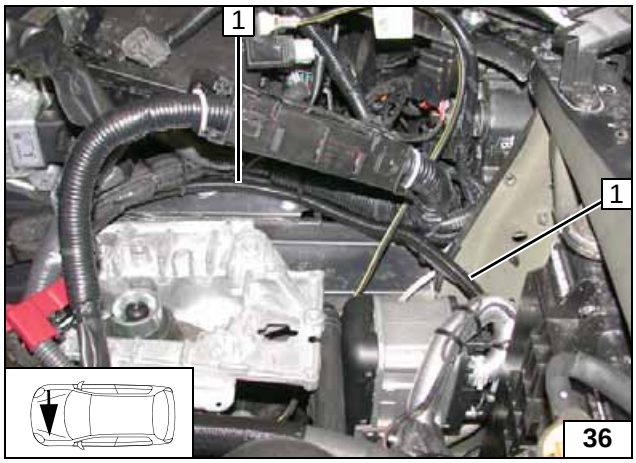
Mounting heater



Fasten wiring harness of circulating pump **4** with cable tie to combustion air pipe. Slide 2100mm corrugated tube **1** onto fuel line and wiring harness of metering pump.

2 50mm edge protection
3 Wiring harness of heater [2x]

Installing wiring harnesses



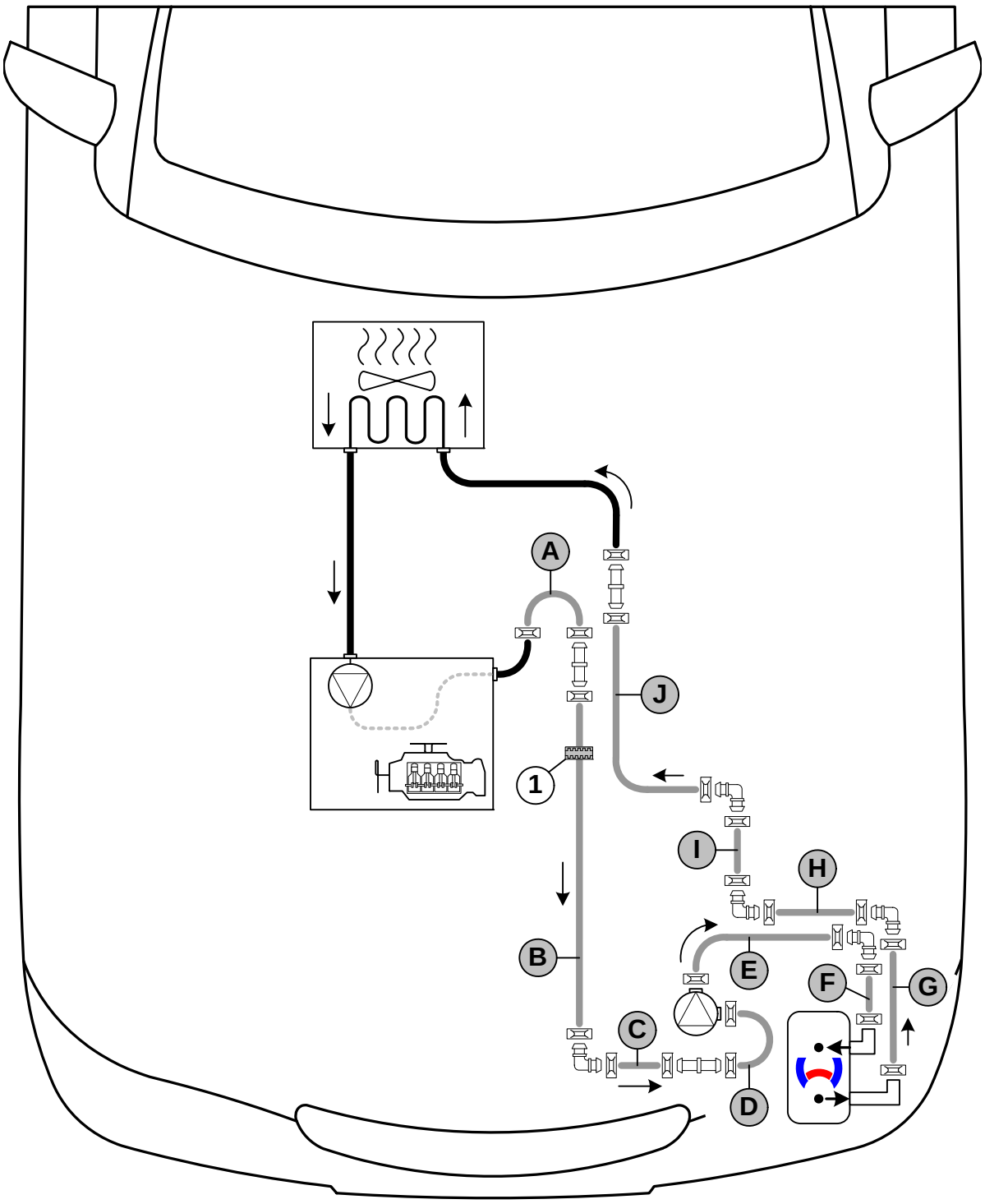
1 Corrugated tube with fuel line and wiring harness for metering pump

Routing lines

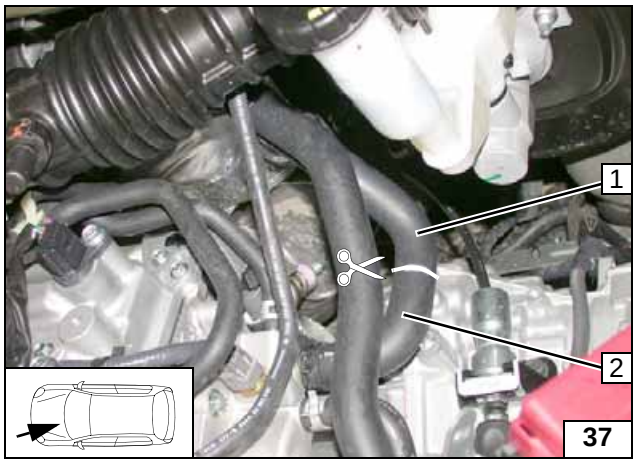
Coolant Circuit

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 spring clips = 25mm dia. **1** = Black (sw) rubber isolator
All connecting pipes and = 18x18mm dia.



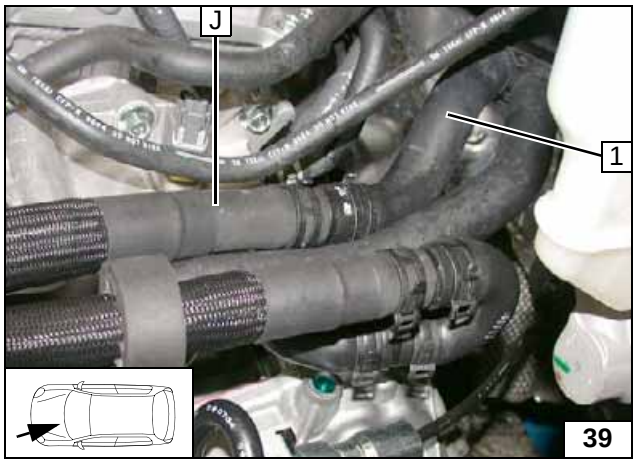
Cut engine outlet / heat exchanger inlet hose at the marking1

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

Cutting point

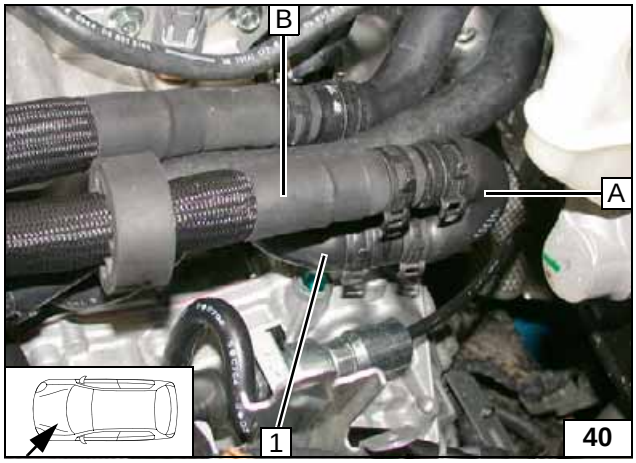
Route hose **B** and **J** to cutting point.

Routing in engine compart-ment



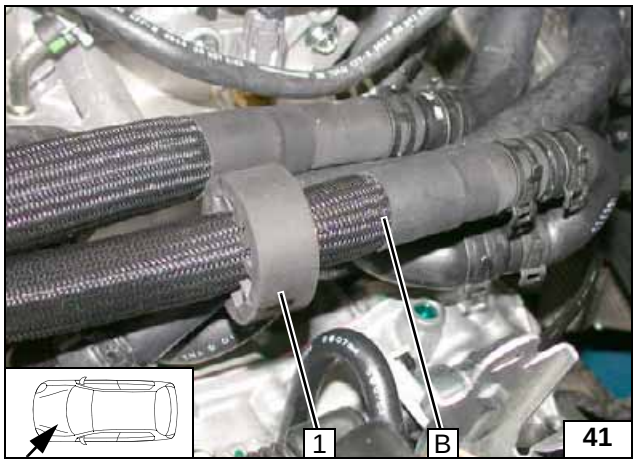
1 Hose on heat exchanger inlet

Connect-ing heat ex-changer inlet



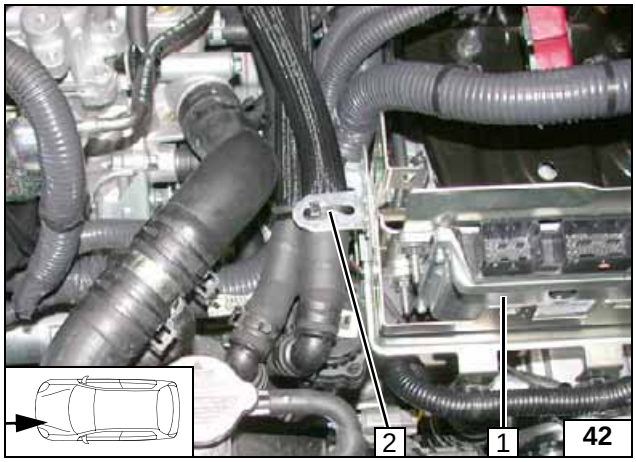
1 Hose of engine outlet

Connect-ing engine outlet



1 Black (sw) rubber isolator

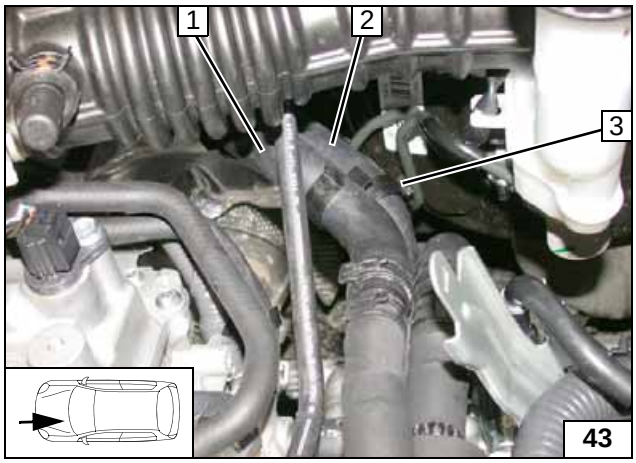
Positioning rubber isolator



Install engine control unit with bracket **1**

2 Cable tie

Fastening hoses



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

1 Hose on heat exchanger inlet
2 Hose on heat exchanger outlet
3 Hose bracket

Inserting hose bracket

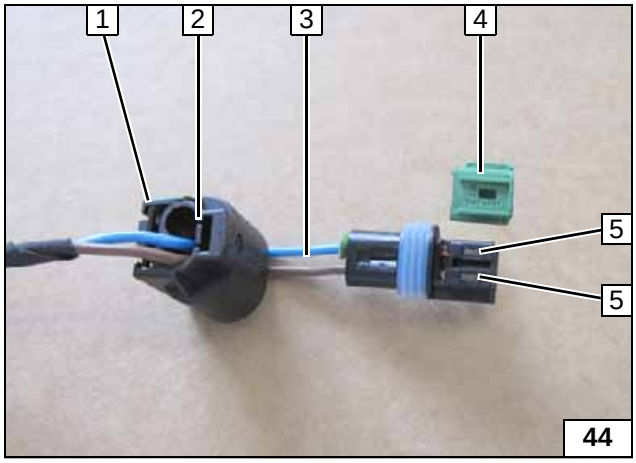
Fuel

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.

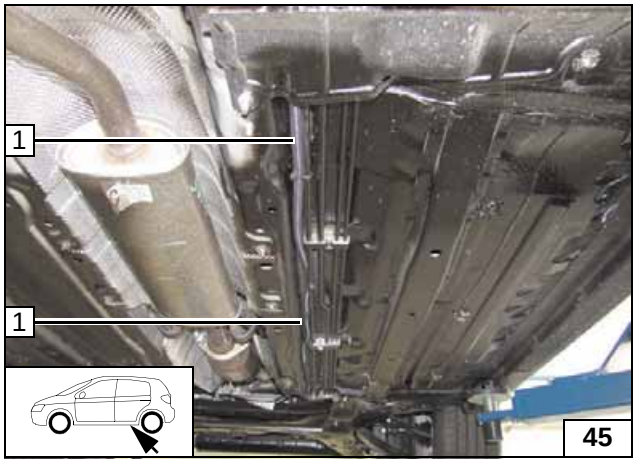
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



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

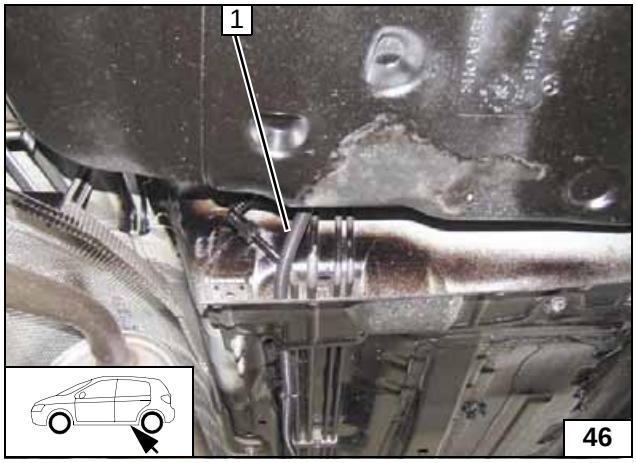
Dismantling connector

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



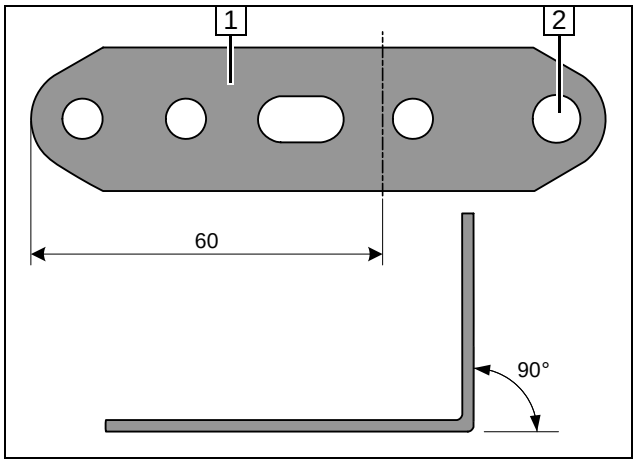
Routing lines

1 2100mm corrugated tube with fuel line and wiring harness of metering pump



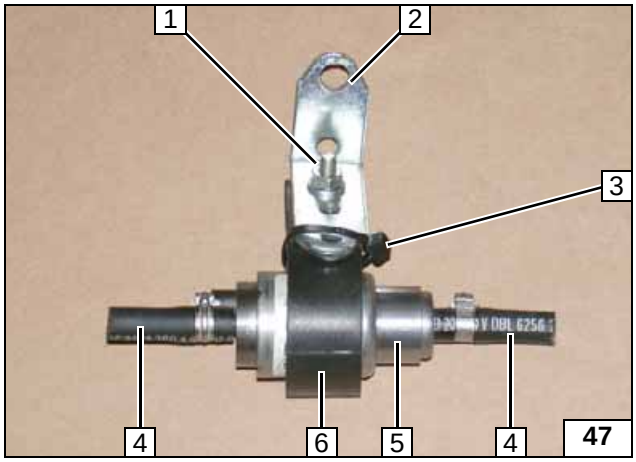
Routing lines

1 1130mm corrugated tube with fuel line and wiring harness of metering pump



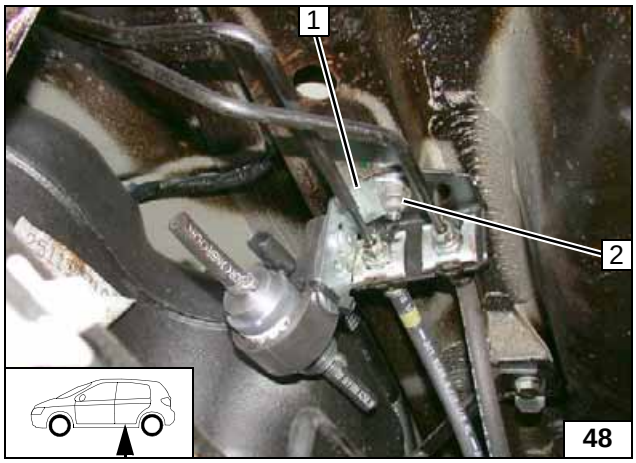
1 Perforated bracket
2 Drill out hole to 8.5mm dia.

Preparing perforated bracket



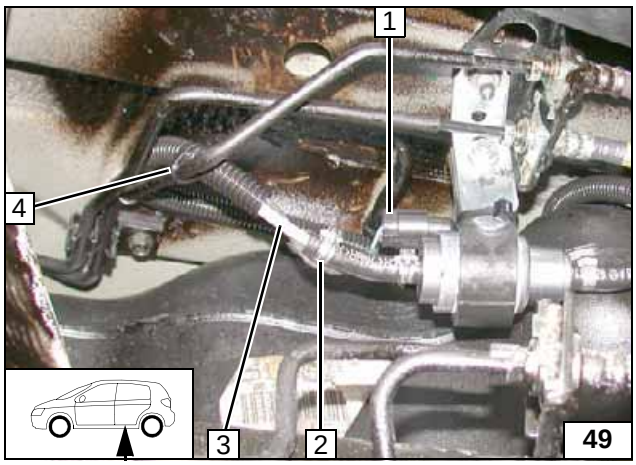
1 M6x25 bolt, support angle, flanged nut
2 Perforated bracket
3 Cable tie
4 Hose section, 10 mm dia. clamp [2x each]
5 Metering pump
6 Metering pump intake

Premounting metering pump



1 Perforated bracket
2 Original vehicle nut

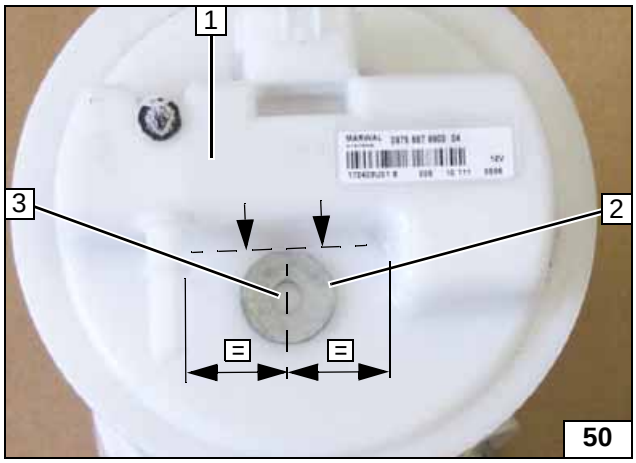
Installing metering pump



Check the position of the components; adjust if necessary. Check that they have freedom of movement. Cut corrugated tube to length, section will be reused.

1 Wiring harness of metering pump, connector mounted
2 10 mm dia. clamp
3 Fuel line of heater
4 Cable tie

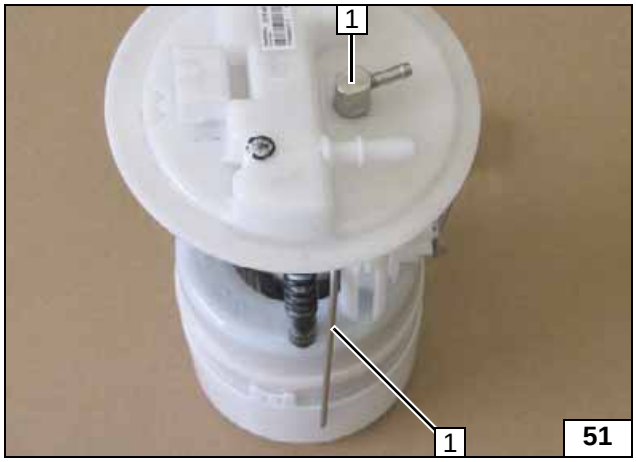
Connecting metering pump



Remove fuel-tank sending unit **1** according to manufacturer's instructions. Place large diameter washer **2** on rounding and position at the centre.

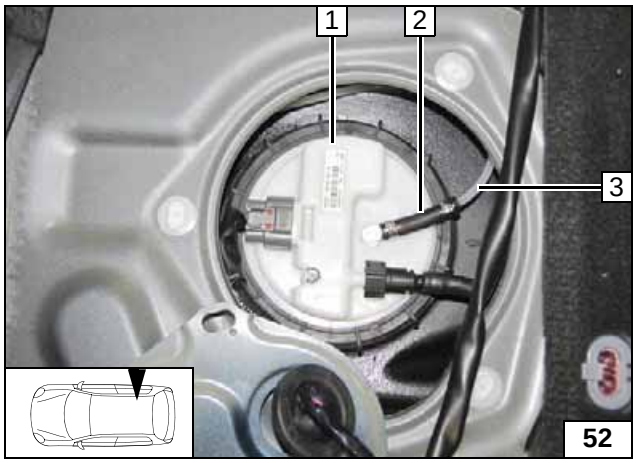
3 Copy hole pattern, 6 mm dia. hole

Fuel extraction



Shape fuel standpipe **1** according to template and cut to length.

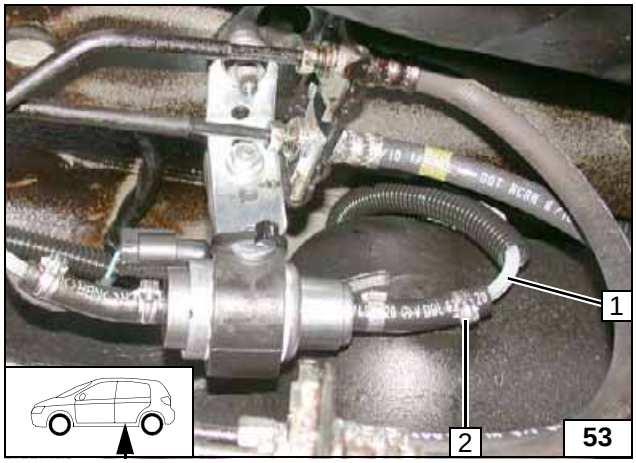
Installing fuel standpipe



Install fuel-tank sending unit **1** in accordance with manufacturer's instructions.

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

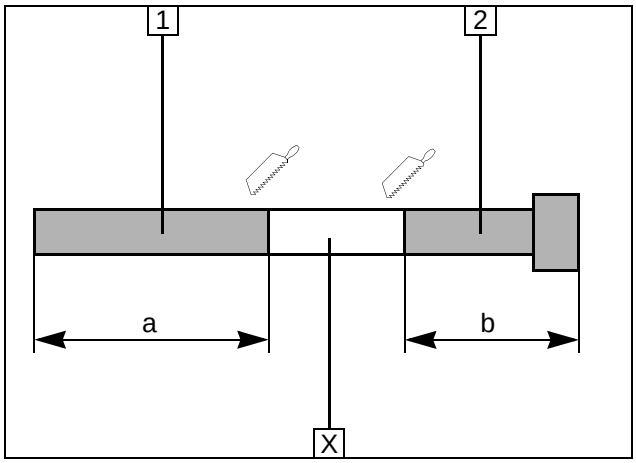
Connecting fuel line



Check the position of the components; adjust if necessary. Check that they have freedom of movement. Slide corrugated tube section on to fuel line **1**.

2 10 mm dia. clamp

Connecting metering pump

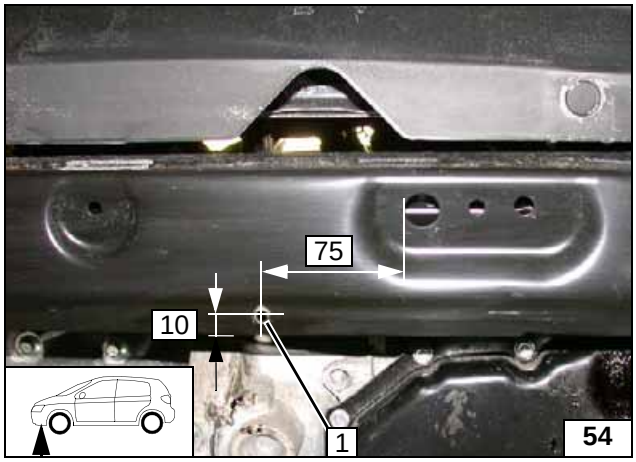


Exhaust Gas

Discard section **X**

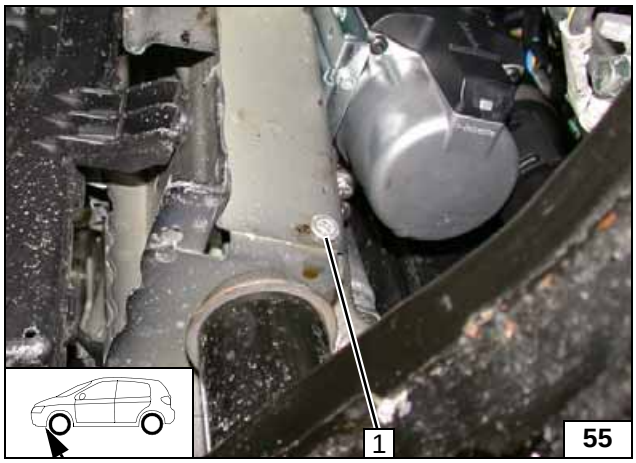
1 Exhaust pipe
a = 260
2 Exhaust end section
b = 30

Preparing exhaust pipe



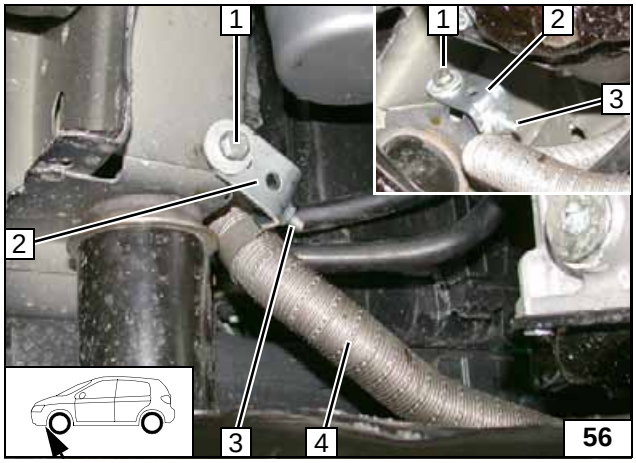
1 7 mm dia. hole

Hole in cross member



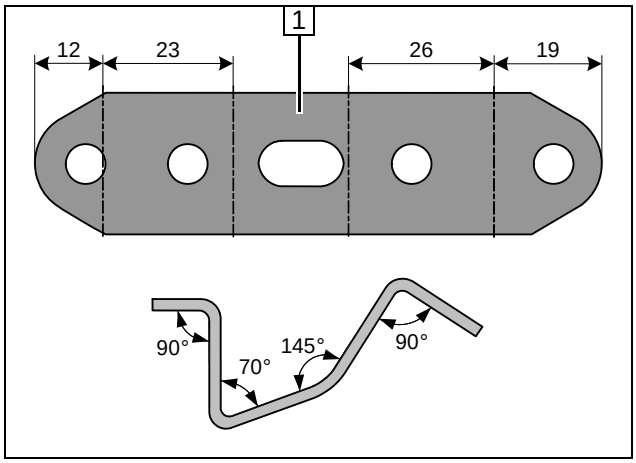
1 Drill out 9.1mm dia. hole, rivet nut

Installing rivet nut



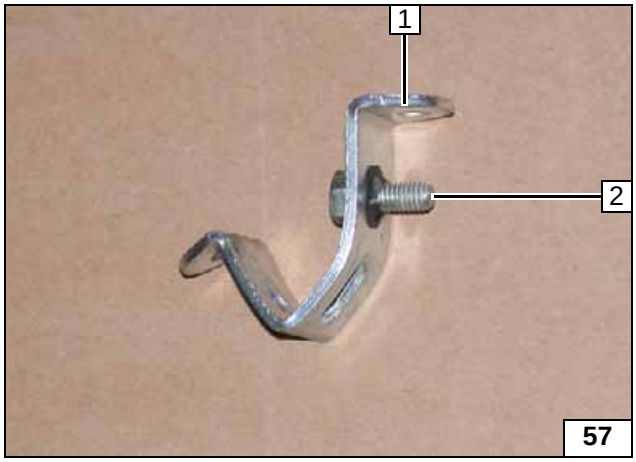
1 M6x20 bolt, spring lockwasher, large diameter washer
2 Angle bracket
3 M6x20 bolt, pipe clamp, flanged nut
4 Exhaust pipe

Mounting exhaust pipe



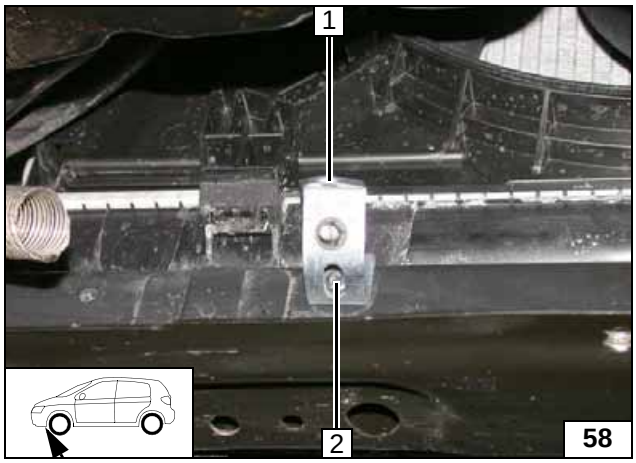
1 Perforated bracket

Bending perforated bracket



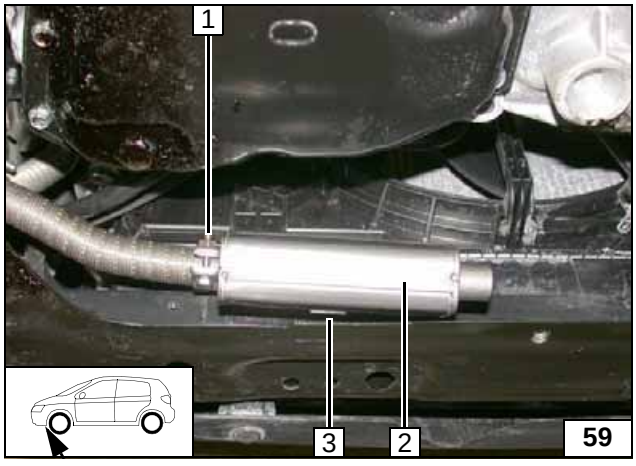
1 Perforated bracket
2 M6x16 bolt, pin lock

Premounting perforated bracket



1 Perforated bracket
2 M6x20 bolt, spring lockwasher, existing threaded hole

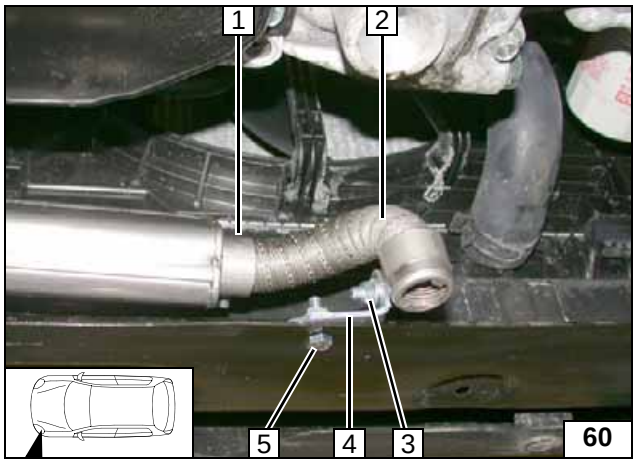
Installing perforated bracket



Fasten silencer **2** with pre-installed M6x16 bolt on perforated bracket **3**. Align silencer **2** rebend, if necessary.

1 Hose clamp

Mounting silencer



1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, pipe clamp, flanged nut
4 Angle bracket
5 M6x20 bolt, large diameter washer, flanged nut

Installing exhaust end section

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 signboard "Switch off parking heater before refilling" in the area of the filler neck**
- **See installation instructions for initial start-up and function check**

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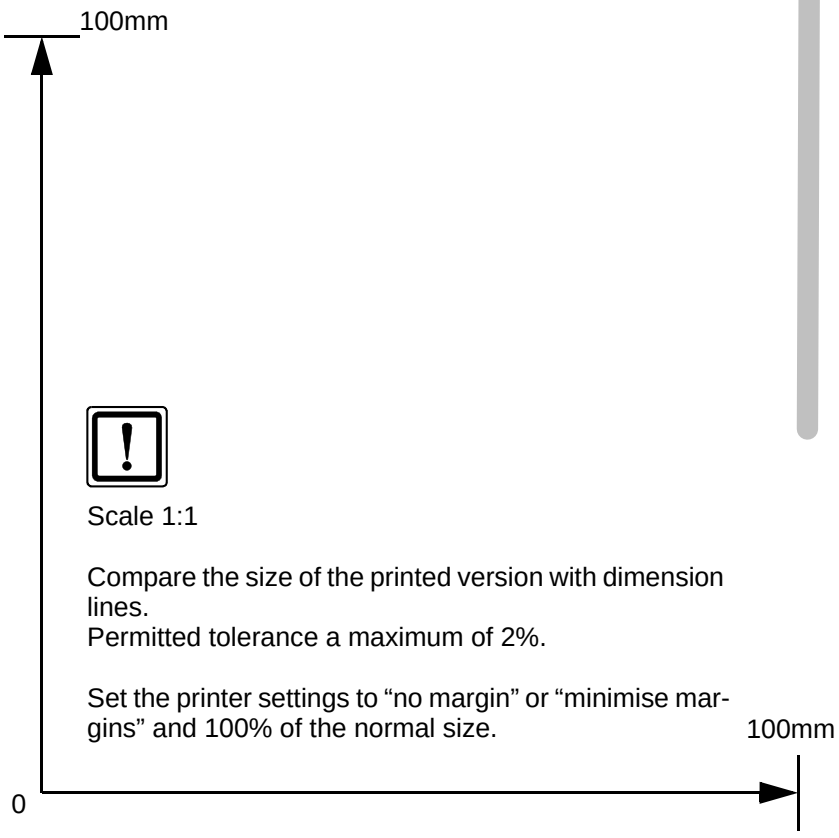
Technical Extranet:
http://dealers.webasto.com

Template for Fuel Standpipe



Operating Instructions for End Customer

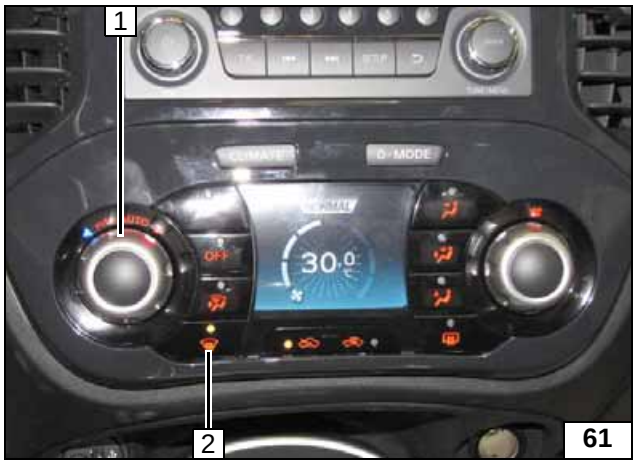
Please remove page in case of automatic air-conditioning and add it to the vehicle operating instructions.

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.

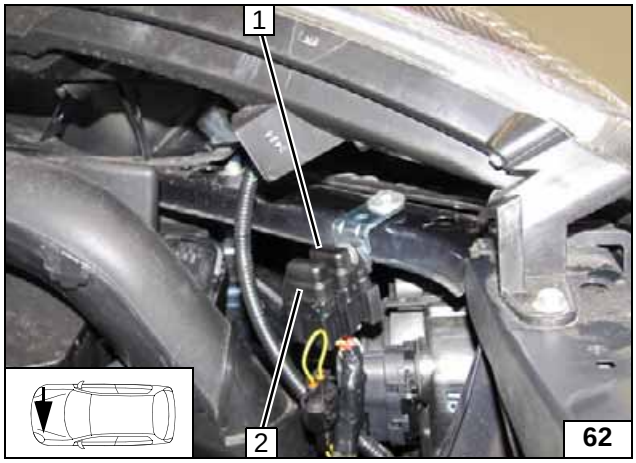
Before parking the vehicle, make the following settings:

A/C control panel



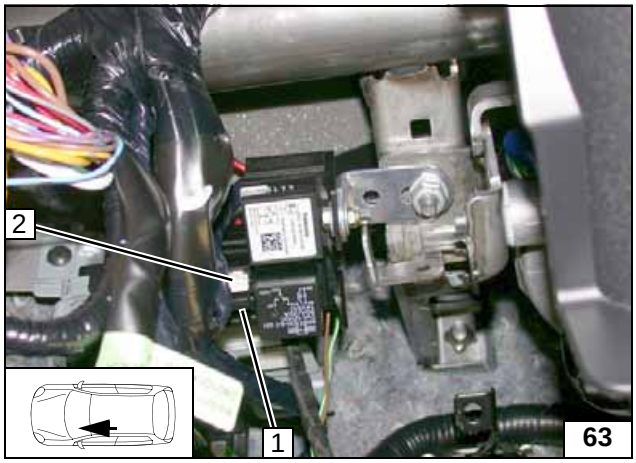
1 Set temperature to "30.0 °C"
2 Air outlet to windscreen

Fuses of engine compartment



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

Fuses of passenger compartment



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