Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Toyota Yaris hybrid

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Toyota	Yaris hybrid	XP13M (A)	e11 * 2007 / 46 * 0152 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.5 hybrid	Petrol	AT continuously variable	55	1497	1NZ-FXE

AT = automatic transmission

From Model Year 2012
Left-hand drive vehicle

Verified equipment variants:	Automatic air-conditioning
	Front fog light
	Daytime running lights LED
Not verified:	Passenger compartment monitoring
	Headlight washer system
Total installation time:	approx. 8 hours

Note:

Only allow an electrically instructed person to work on hybrid vehicles.
Mind the vehicle manufacturer's instructions.

Toyota Yaris hybrid

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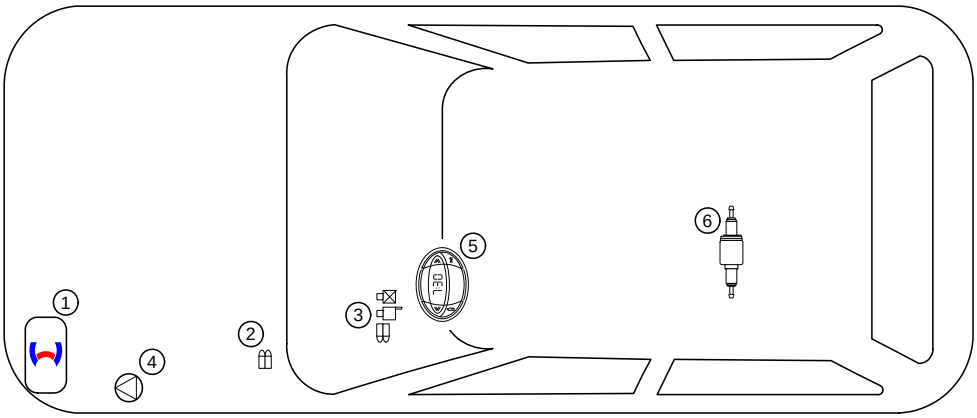
Necessary Components

- Basic delivery scope *Thermo Top Evo* in accordance with price list
- Installation kit for Toyota Yaris hybrid 2012 Petrol: **1318768A**
- 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. Engine compartment fuse holder
3. Passenger compartment fuse holder
4. Circulating pump
5. Digital timer
6. Metering pump



Information on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important Information (not complete)

1.1 Installation and Repair

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

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

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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

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

Sharp edges should be fitted with rub protection (split-open fuel hose)! 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.

Toyota Yaris hybrid

Information on Validity

This installation documentation applies to Toyota Yaris hybrid Petrol vehicles - for validity, see page 1 - from model year 2012 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

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

Technical Information

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

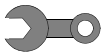
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of 5x13 heater bolts = 8Nm
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 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

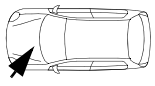
Specific risk of damage to components

Specific risk of fire or 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 Yaris hybrid

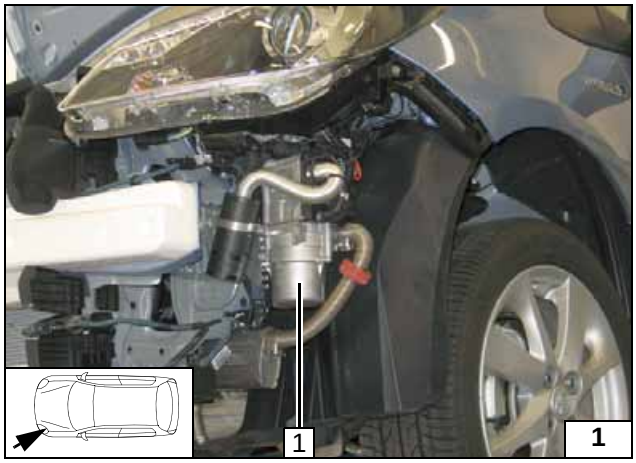
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove the rear bench seat.
- Remove the connector of the hybrid battery according to the manufacturer's instructions.
- Remove the windscreen wipers.
- Remove the coolant reservoir cap.
- Remove the windscreen wiper motor.
- Remove the entire coolant reservoir.
- Remove the left headlight.
- Loosen the wheel well trim on the left.
- Remove the bumper.
- Remove the front left-hand underride protection.
- Open the tank-fitting service lid.
- Remove the lower instrument panel trim on the driver's side.
- Remove the footwell trim on the driver's side.

Heater

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

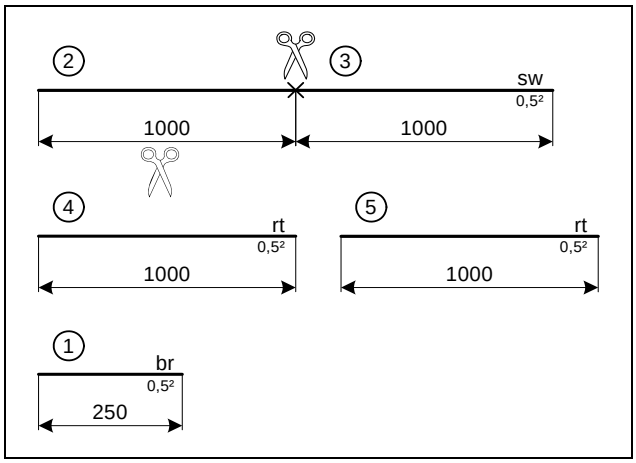


Heater Installation Location

1 Heater

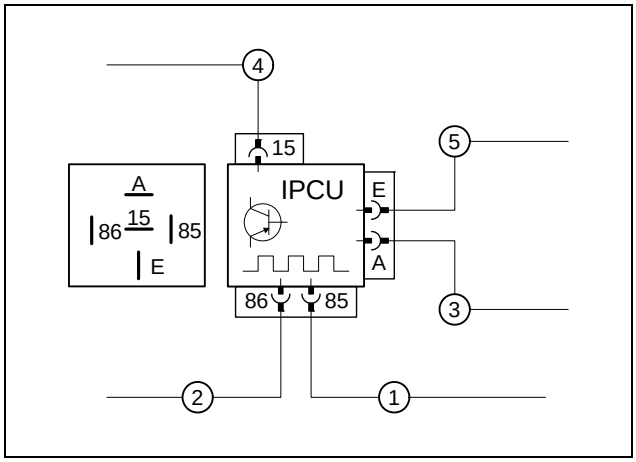
Installation location

Preparing Electrical System



Wire sections retain their numbering in the whole document.

Cutting wires to length and assigning them

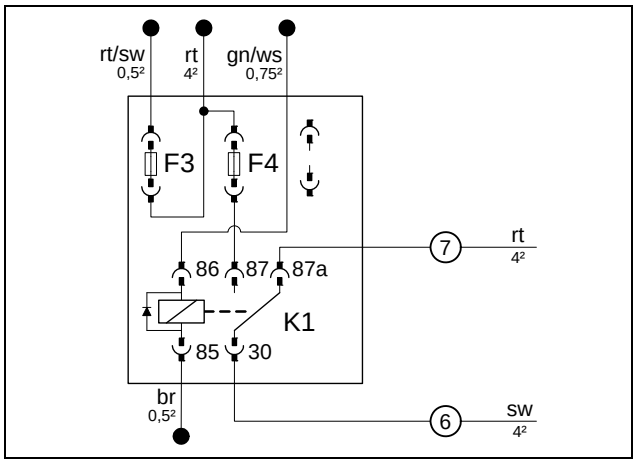


Connect wires to IPCU socket.
IPCU view on the contact side.
The IPCU included in the kit is pre-programmed with the following adjustment values:

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

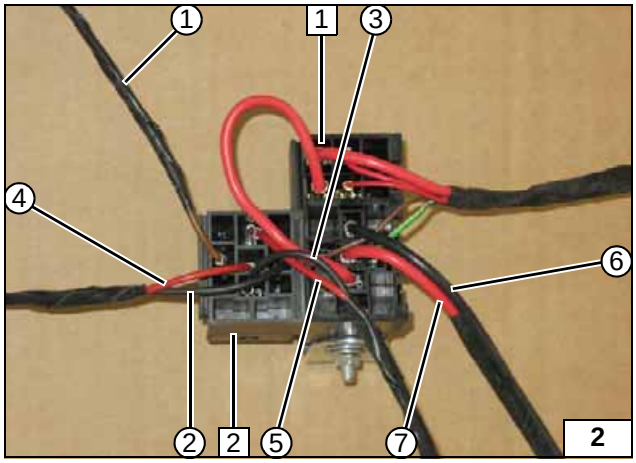
The adjustment value must be checked during startup of heater and adjusted if necessary.

Premounting IPCU



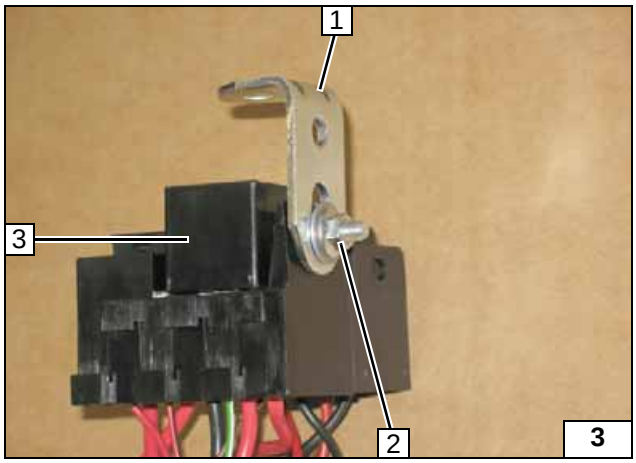
Produce connections as shown in wiring diagram. Insert 10A fuse F4.

Inserting F4, preparing K1 relay



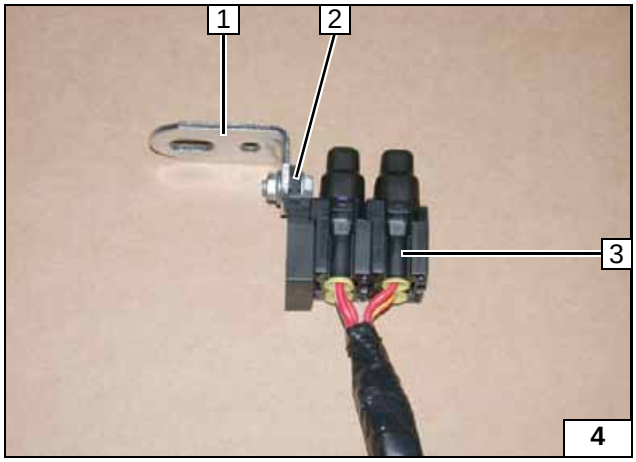
Lock fuse holder of passenger compartment **1** and IPCU socket **2** in place. Pull wires ③ and ⑤ as well as wires ② and ④ into one 1000mm long protective sleeving each.

Premounting fuse holder of passenger compartment



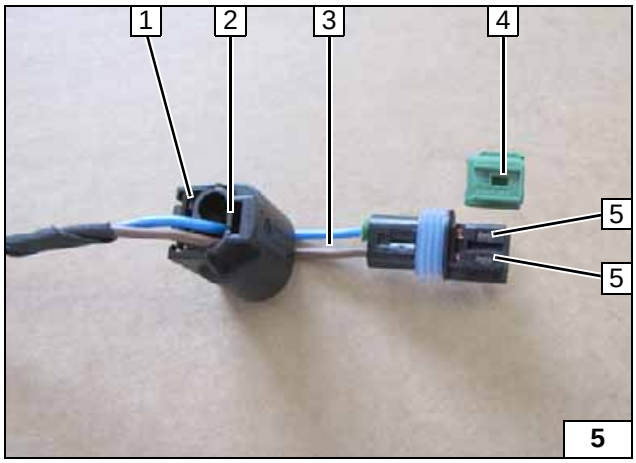
1 Angle bracket
2 M5x16 bolt, washer [2x], nut
3 K1 relay plugged in

Premounting fuse holder of passenger compartment



1 Angle bracket
2 M5x16 bolt, washer [2x], retaining plate for fuse holder, nut
3 Fuses F1 and F2

Premounting fuse holder of engine compartment



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

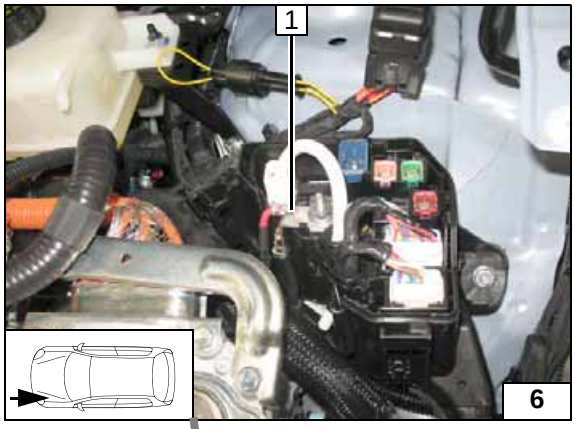
1 Connector housing
2 Lock
3 Blue (bl) / brown (br) wires
4 Coding
5 Timer lock

Dismantling connector

Electrical System

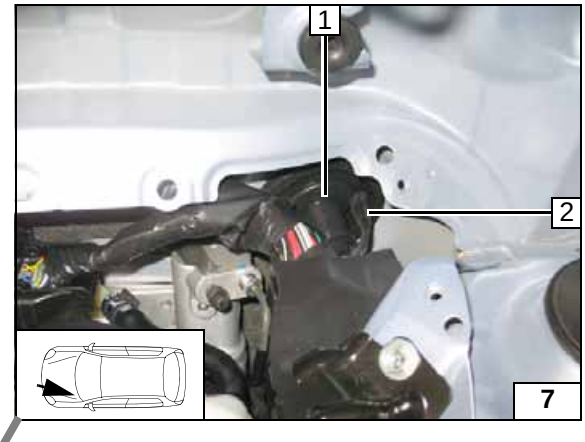
Positive wire

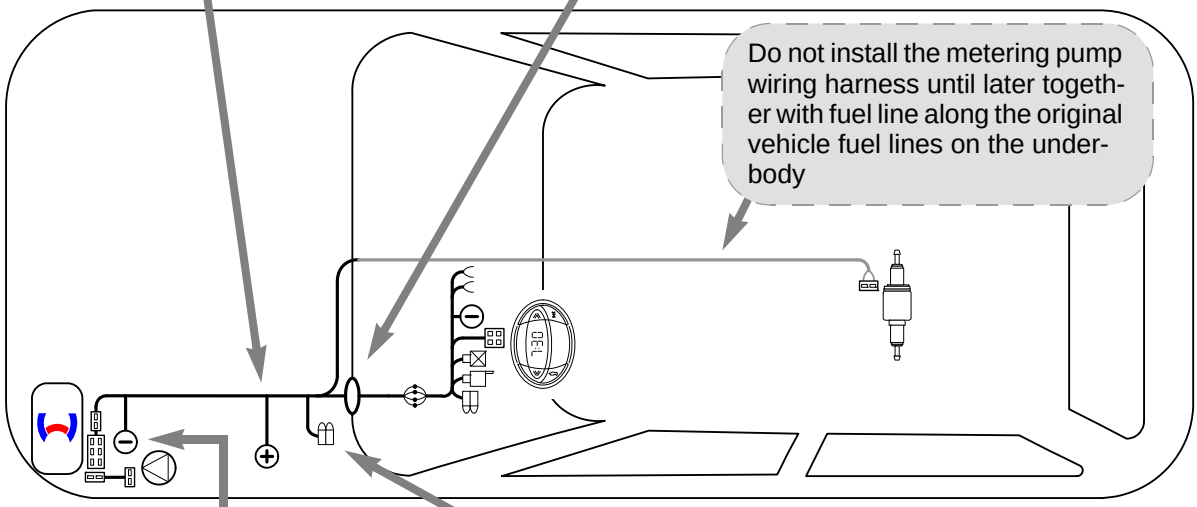
1 Positive wire on positive distributor



Wiring harness pass through

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





Wiring harness routing diagram

Earth wire

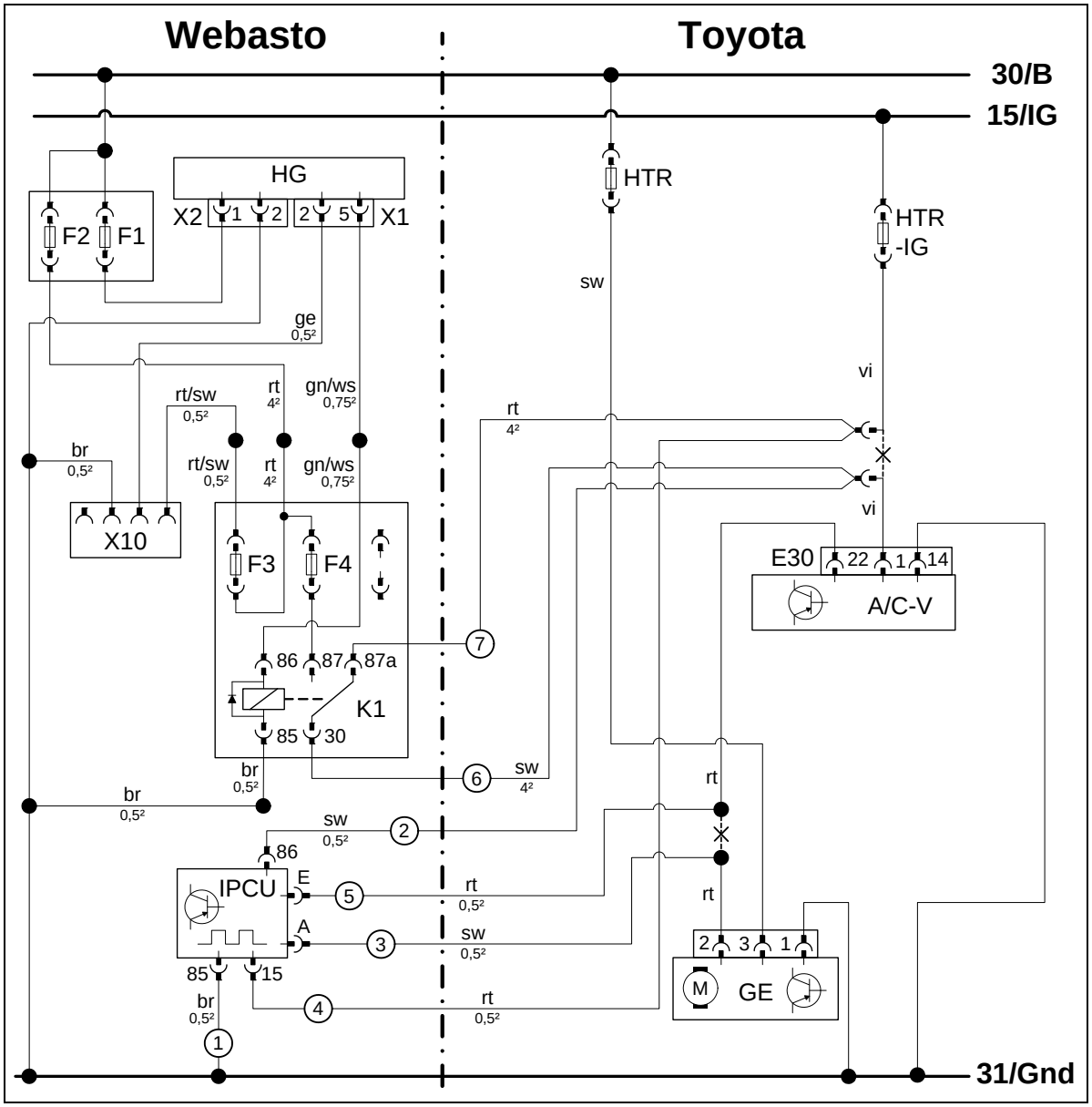
1 Earth wire on original vehicle earth support point

Fuse holder of engine compartment

Position fuse holder of engine compartment **1**, will be fastened to the coolant reservoir cap later.

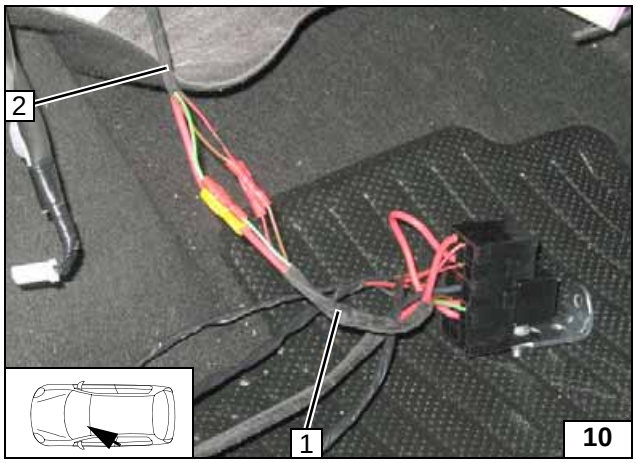
Fan Controller

Wiring diagram



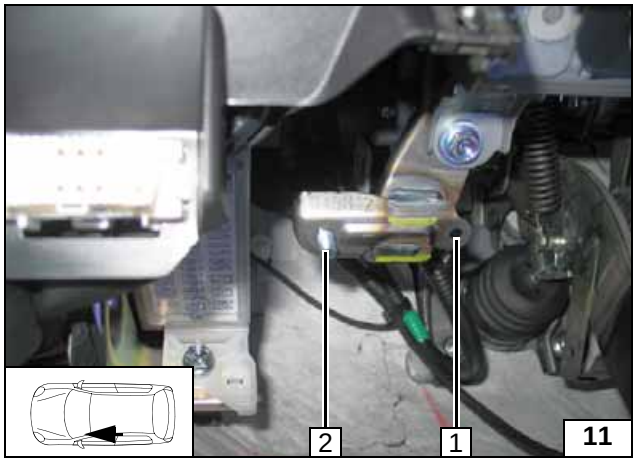
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	HTR	50A fuse	rt	red
X1	6-pin heater connector	HTR-IG	10 A fuse	sw	black
X2	2-pin heater connector	A/C-V	A/C booster	ge	yellow
X10	4-pin connector Heater control	E30	40-pin connector A/C V	gn	green
		GE	Fan unit	bl	blue
K1	Fan relay			ws	white
F1	20A fuse			br	brown
F2	30A fuse			vi	violet
F3	1A fuse				
F4	10 A fuse				
IPCU	Pulse width modulator				
IPCU adjustment values:					
Duty cycle: 60%					
Frequency: 400 Hz				**X**	Cutting point
Voltage: 10 V				Cable colours and pin designations may vary	
Function: Low-side					

Legend



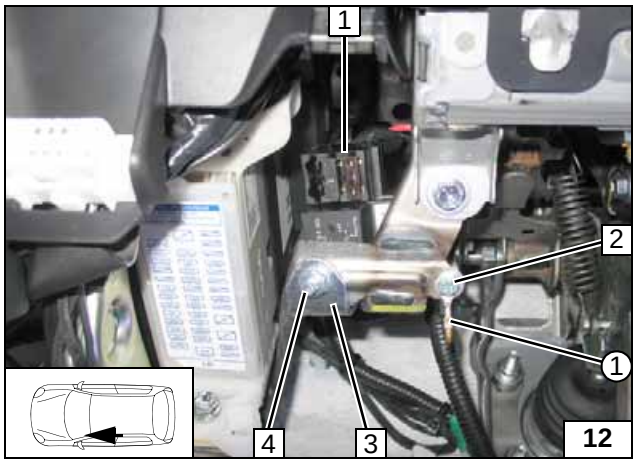
Connect same colour wires of wiring harness of passenger compartment fuse holder **1** and wiring harness of heater **2** as shown on wiring diagram.

Connecting wiring harnesses



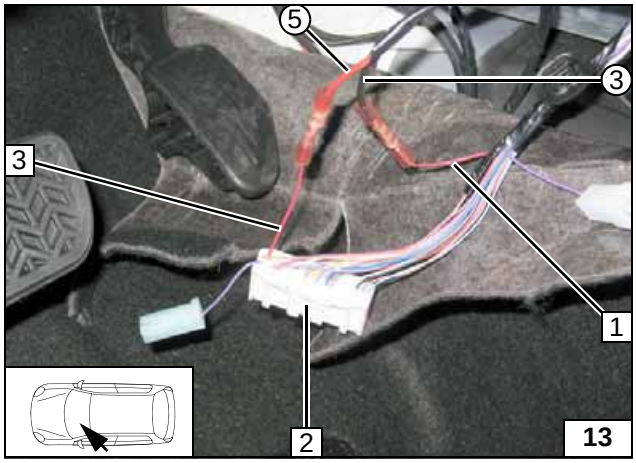
1 Drill out 7mm dia. hole
2 Drill out 7mm dia. hole, M6x16 bolt, pin lock

Installing bolt



1 Fuse holder of passenger compartment
2 M6x20 bolt, flanged nut, existing hole
3 Angle bracket
4 M6 flanged nut
① Brown (br) wire of IPCU/85, 6mm dia. cable lug

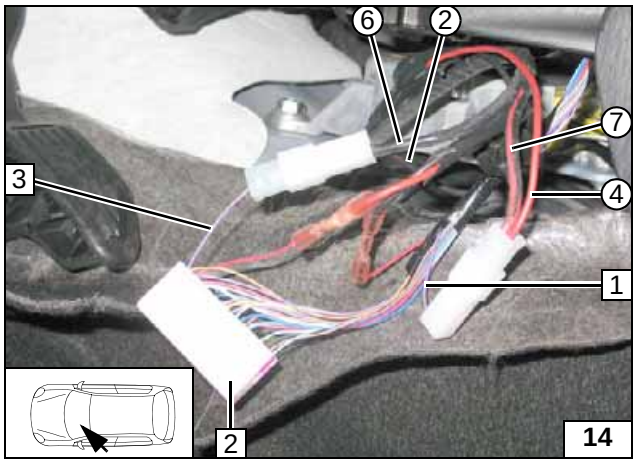
Mounting fuse holder of passenger compartment



Connection to the 40-pin connector E30 (A) **2** of the A/C booster. Produce connections as shown in wiring diagram.

1 Red (rt) wire of fan unit
3 Red (rt) wire to 40-pin connector E30 (A) Pin 22
③ Black (sw) wire of IPCU/A
⑤ Red (rt) wire of IPCU/E

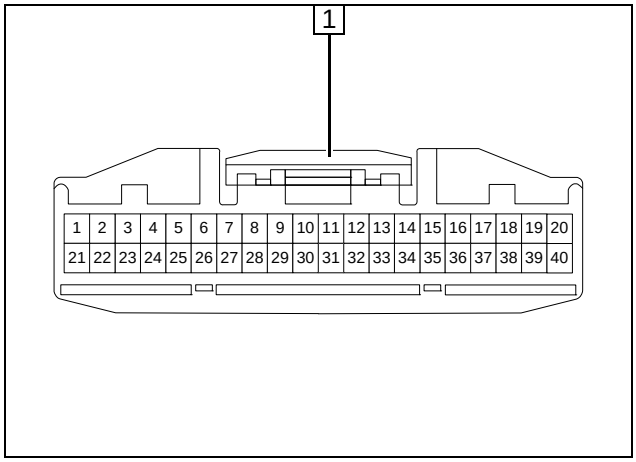
Connecting A/C booster



Connection to the 40-pin connector E30 (A) **2** of the A/C booster. Produce connections as shown in wiring diagram.

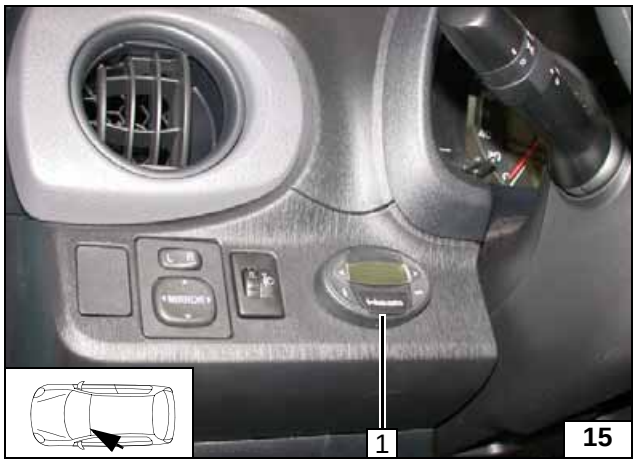
Connecting A/C booster

1 Violet (vi) wire of Fuse HTR IG
3 Violet (vi) wire to 40-pin connector E30 Pin 1
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



Connector E30 (A)

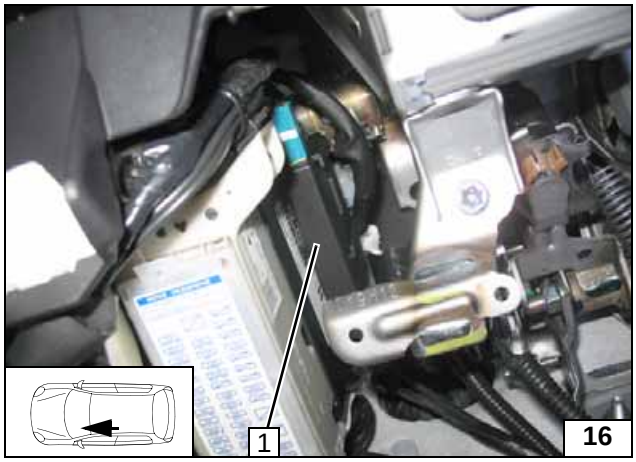
1 Connector E30 (A) on contact side



Digital Timer

1 Digital timer

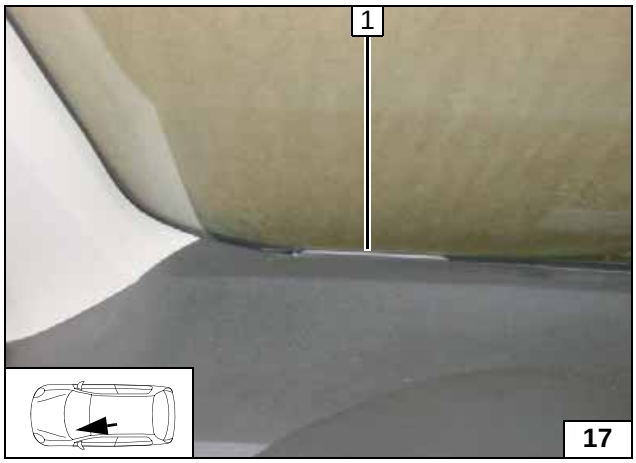
Mounting digital timer



Remote Option (Telestart)

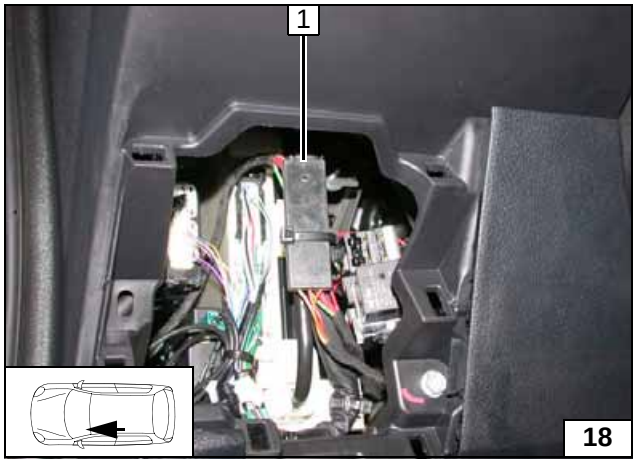
Fasten receiver **1** with adhesive tape.

Mounting receiver



1 Antenna

Mounting antenna

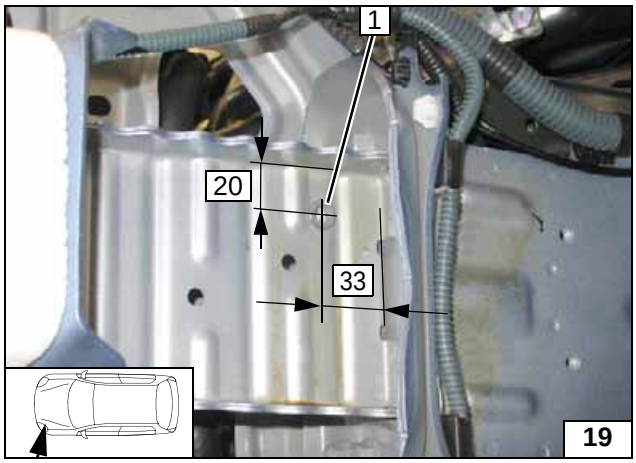


Temperature sensor T100 HTM

Fasten temperature sensor **1** with cable tie.

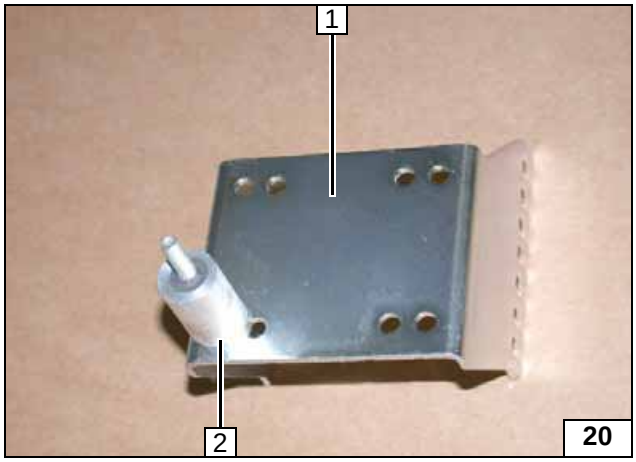
Mounting temperature sensor

Preparing Installation Location



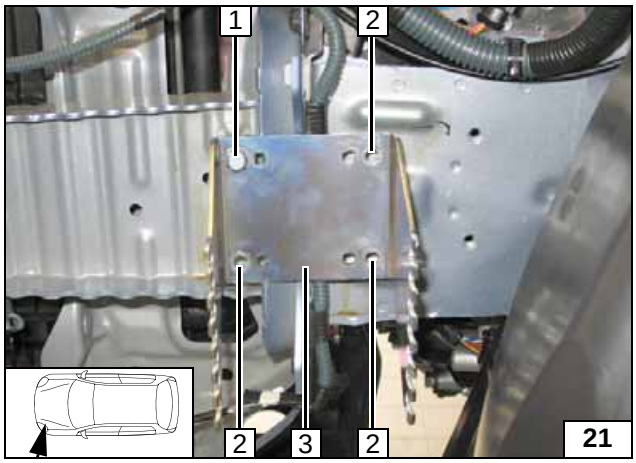
1 9.1 mm dia. hole; rivet nut

Installing rivet nut



1 Bracket
2 M6x60 bolt, spring lockwasher, 5 mm shim, 30 mm shim, washer, pin lock

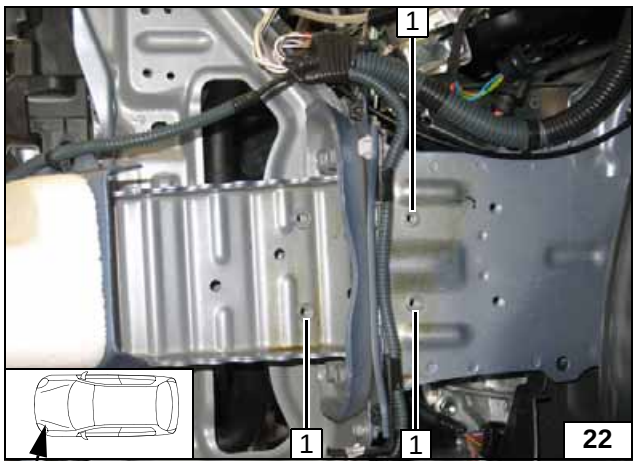
Preparing bracket



Align bracket **3** and mount loosely.

1 M6x60 bolt
2 Copy hole pattern [3x]

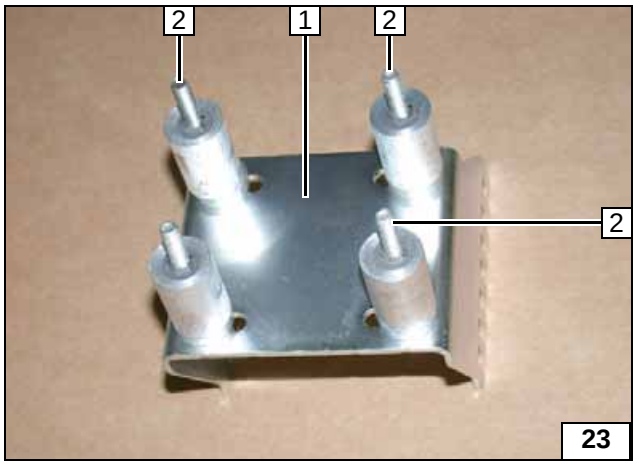
Copying hole pattern



Remove the bracket.

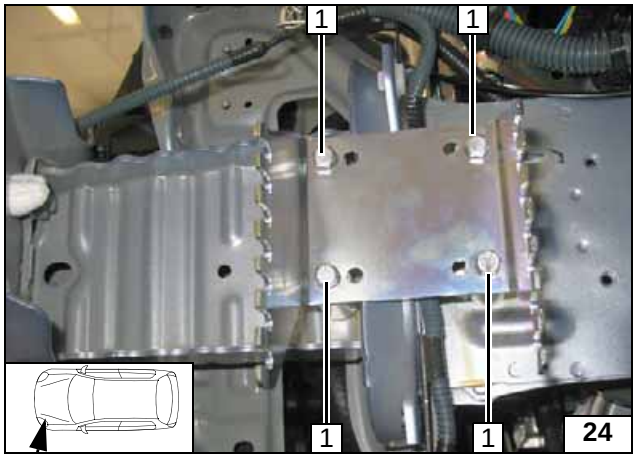
1 9.1 mm dia. hole; rivet nut [3x each]

Installing rivet nut



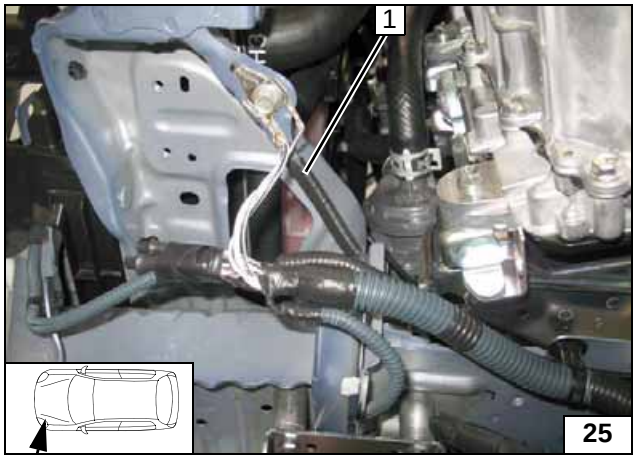
1 Bracket
2 M6x60 bolt, spring lockwasher, 5 mm shim, 30 mm shim, washer, pin lock [3x each]

Preparing bracket



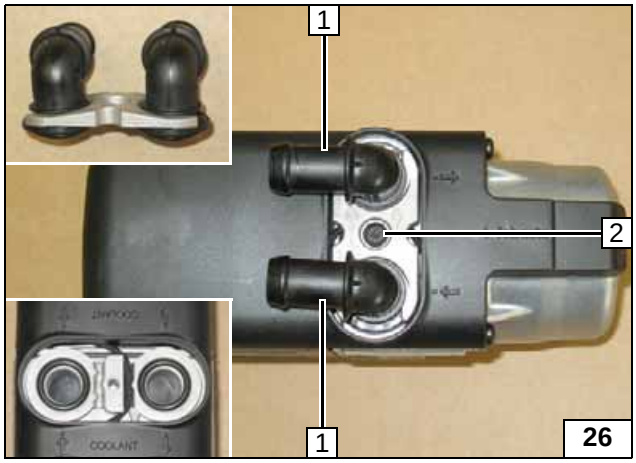
1 Tighten M6x60 bolt [4x]

Mounting bracket



1 70mm edge protection

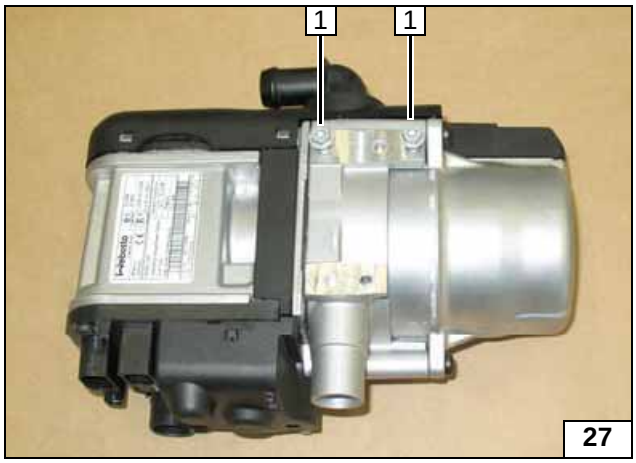
Inserting edge protection



Preparing Heater

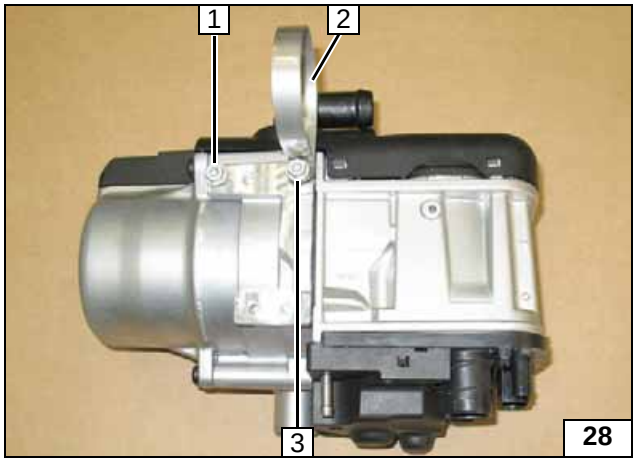
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Mounting water connection piece



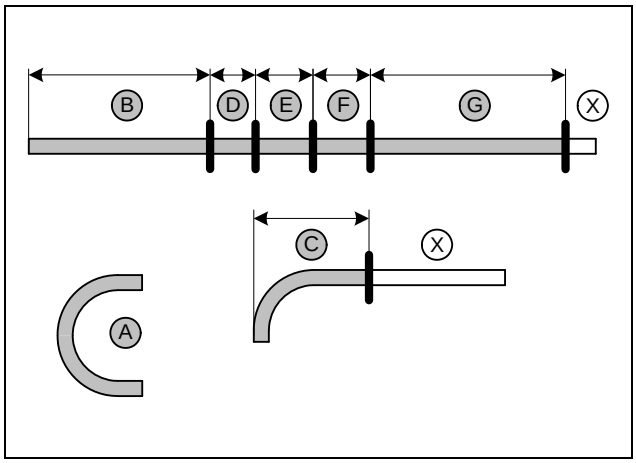
Tap threads with 5x13 self-tapping screw **1** [2x] and mount loosely (turn max. 3 threads).

Premounting bolt loosely



Tap threads with 5x13 self-tapping screw **1** [2x] at positions **1** and **3** and install loosely (turn max. 3 threads). Loosely mount 51 mm dia. clamp **2** at position **3**.

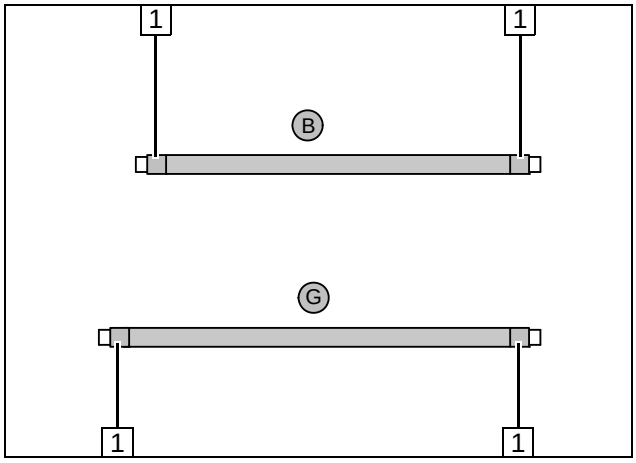
Premounting bolt loosely



Discard section **X**.
Hose **A** = 180°, 18x18mm dia. moulded hose
Hose **C** = 18x18mm dia., 90° moulded hose

B = 865
C = 135
D = 70
E = 130
F = 125
G = 900

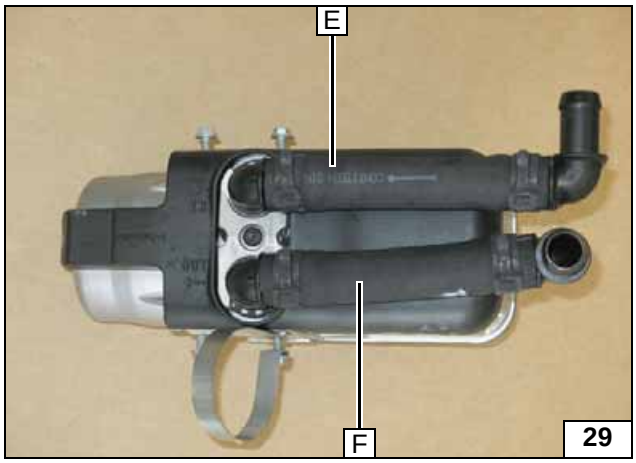
Cutting hoses to length



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

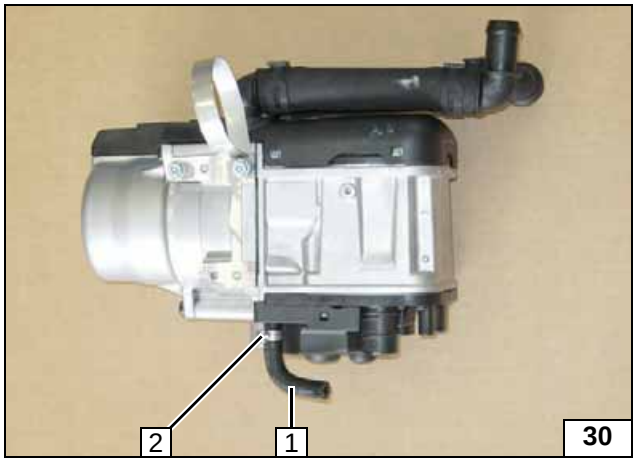
1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses



All spring clips 25 mm dia.. All connecting pipes 90°, 18x18 mm dia.

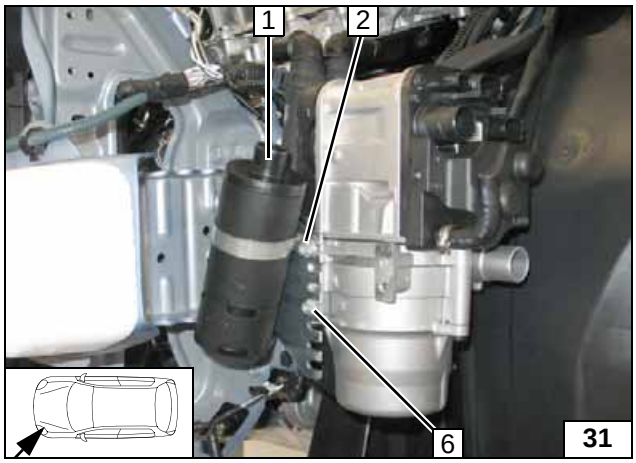
Premounting hoses



1 90° moulded hose
2 10 mm dia. clamp

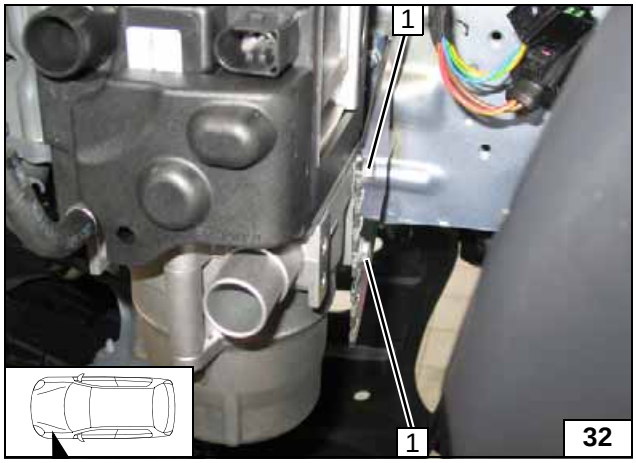
Installing moulded hose

Installing Heater



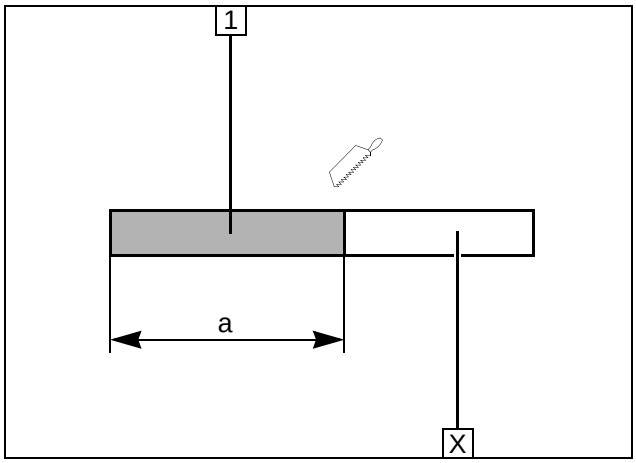
1 Combustion air silencer
2 Tighten 5x13 self-tapping bolt [2x]

Mounting heater



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

Mounting heater

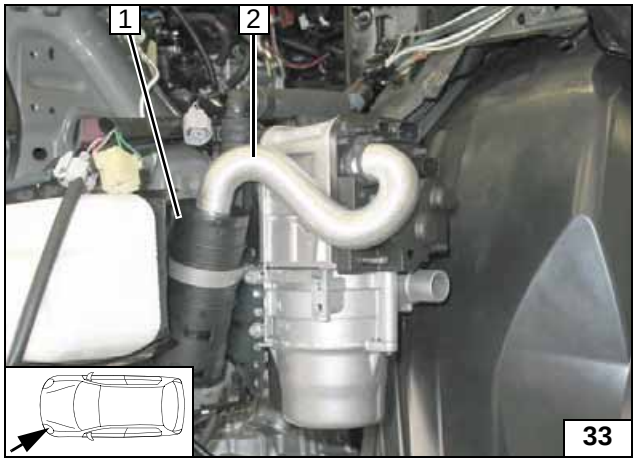


Combustion Air

Discard section **X**.

1 Combustion air pipe
a = 270

Cutting combustion air pipe to length



1 Silencer
2 Combustion air pipe

Mounting combustion air pipe

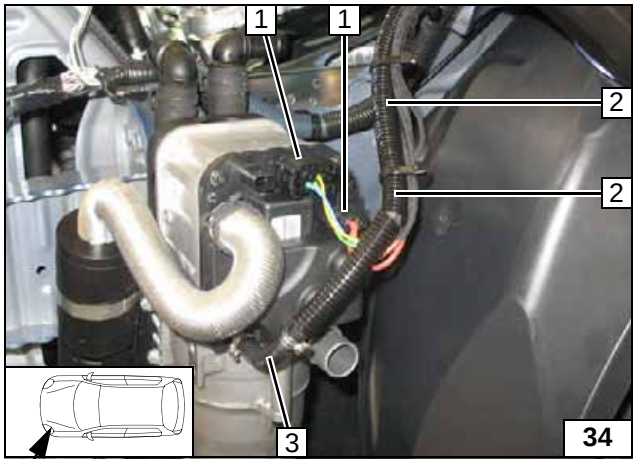
Fuel

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

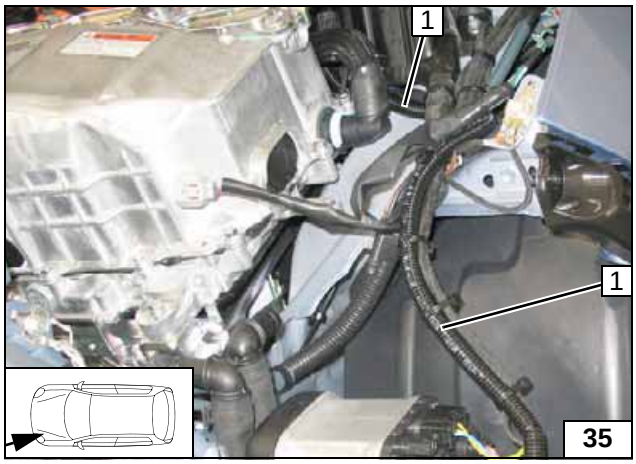
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Pull fuel line and wiring harness of metering pump into 2100mm long, 10mm dia. corrugated tube **2**.

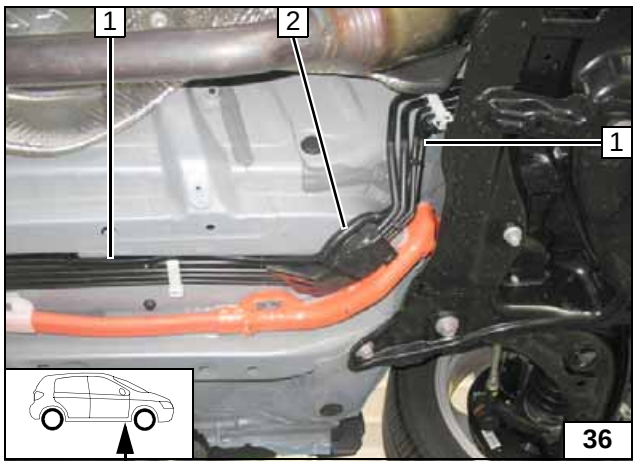
1 Mount wiring harness of heater [2x]
3 10 mm dia. clamp

Connecting heater



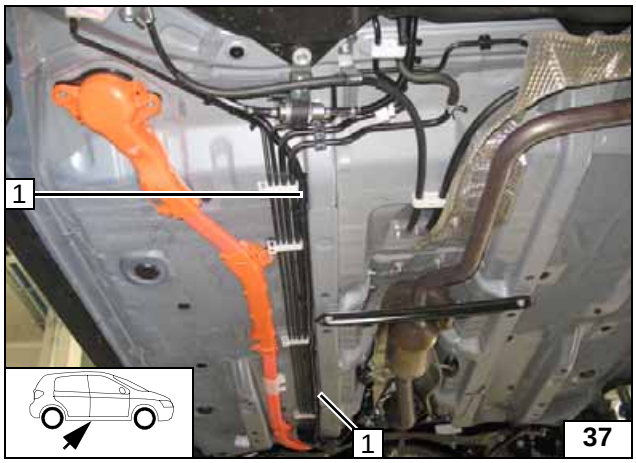
Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** inside the engine compartment in the direction of the firewall to the vehicle underbody.

Routing lines



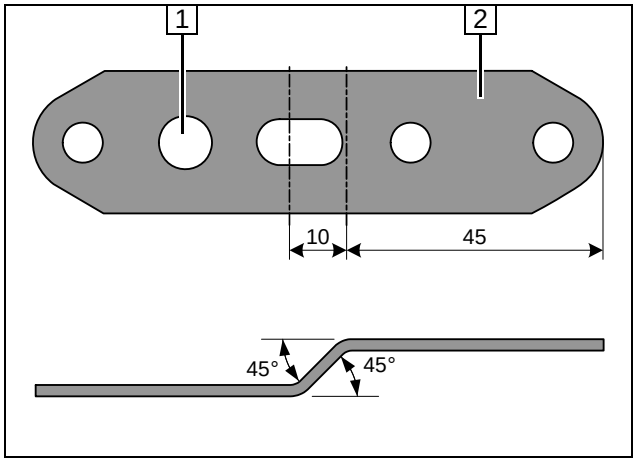
Route fuel line and wiring harness of metering pump in second 10mm dia. corrugated tube **1** to the rear along original vehicle fuel lines. Wrap insulating tape around corrugated tube ends at position **2**.

Routing lines



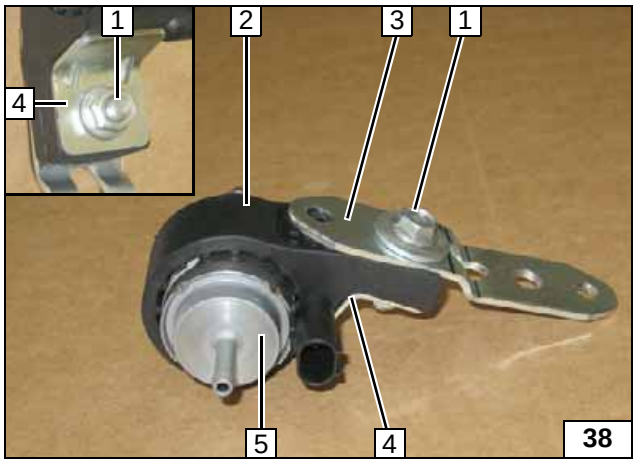
1 Fuel line and wiring harness of metering pump in corrugated tube

Routing lines



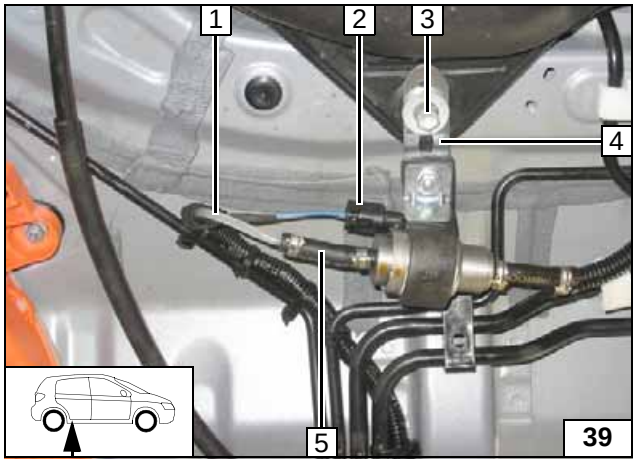
1 Drill out 9mm dia. hole
2 Perforated bracket

Preparing perforated bracket



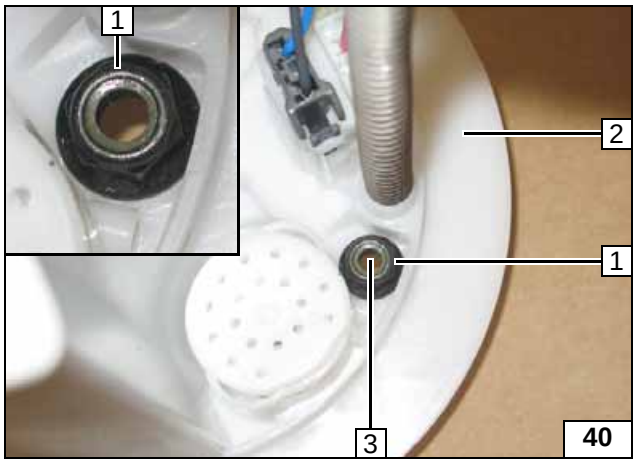
1 M6x25 bolt, flanged nut
2 Metering pump mounting
3 Perforated bracket
4 Support angle
5 Metering pump

Premounting metering pump



1 Fuel line of heater
2 Wiring harness of metering pump, connector mounted
3 Original vehicle bolt, large diameter washer
4 Perforated bracket
5 Hose section, 10 mm dia. clamp [2x]

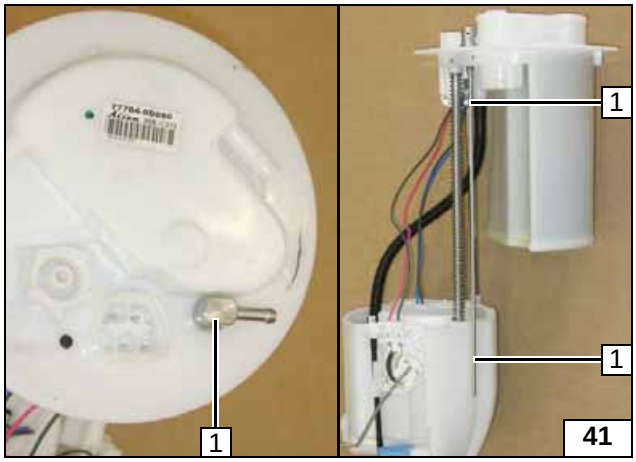
Mounting metering pump



Remove the fuel-tank sending unit **2** with the special tool in accordance with the manufacturer's instructions. Position flanged nut of fuel standpipe **1** as shown.

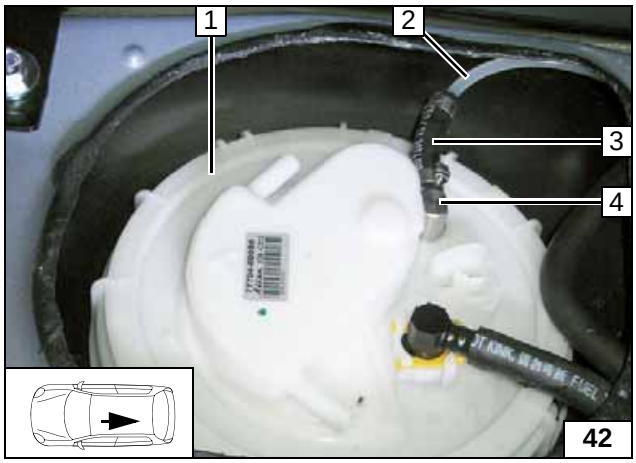
3 Copy hole pattern, 6 mm dia. hole

Fuel extraction



Cut fuel standpipe **1** to length according to template and insert it.

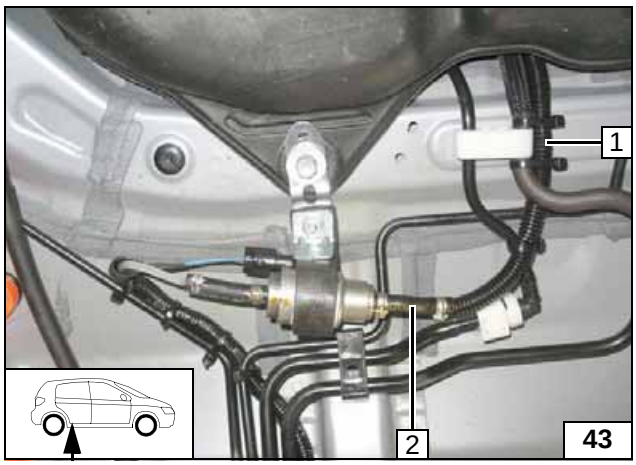
Installing fuel standpipe



Install fuel tank sending unit **3** using specified spare parts and tools according to manufacturer's instructions.

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

Connecting fuel line



Slide 10mm dia. corrugated tube **1** onto fuel line of fuel standpipe. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

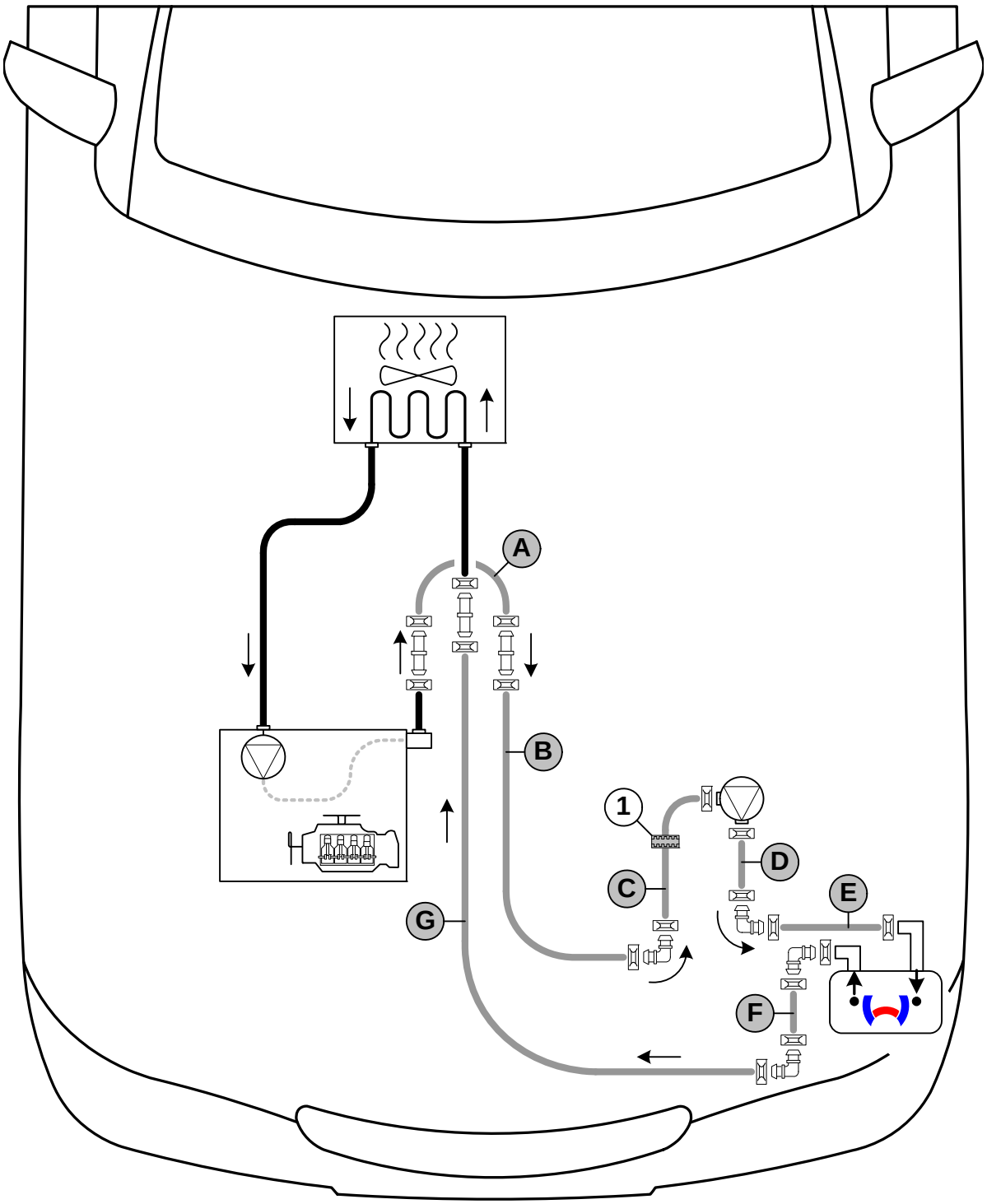
2 Fuel line of fuel standpipe, hose section, 10mm dia. clamp [2x]

Connecting metering pump

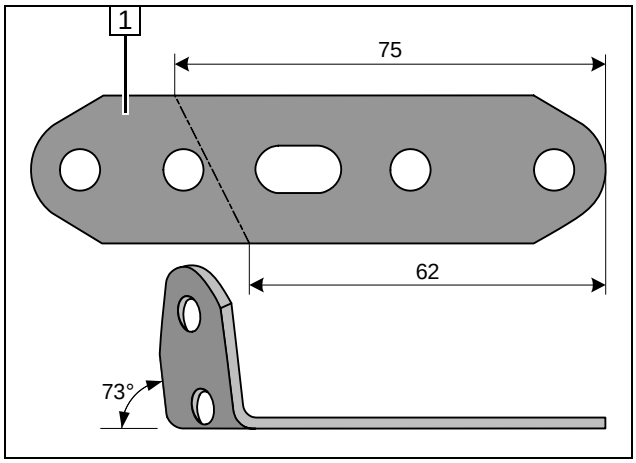
Coolant Circuit

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

Hose routing diagram

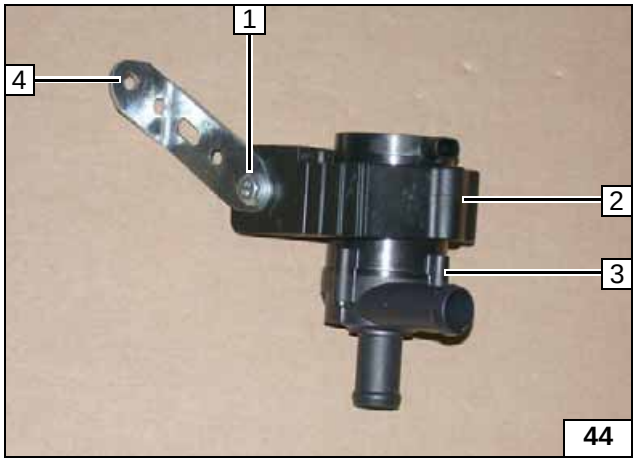


All spring clips = 25 mm dia.
1 = Black (sw) rubber isolator .
All connecting pipes and = 18x18 mm dia.



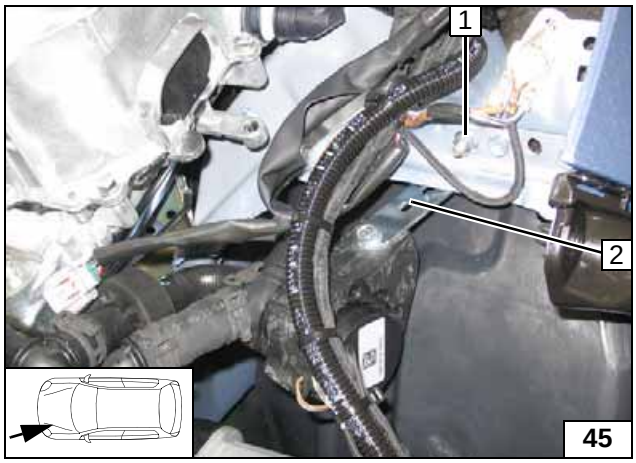
1 Perforated bracket

Preparing perforated bracket



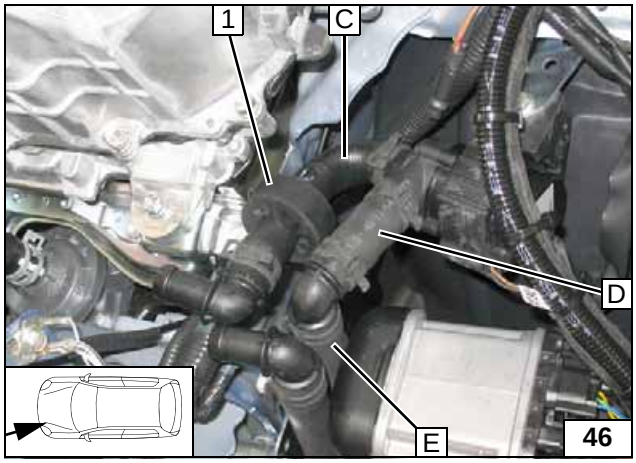
1 M6x25 bolt, flanged nut
2 Circulating pump mounting
3 Circulating pump
4 Perforated bracket

Preparing circulating pump



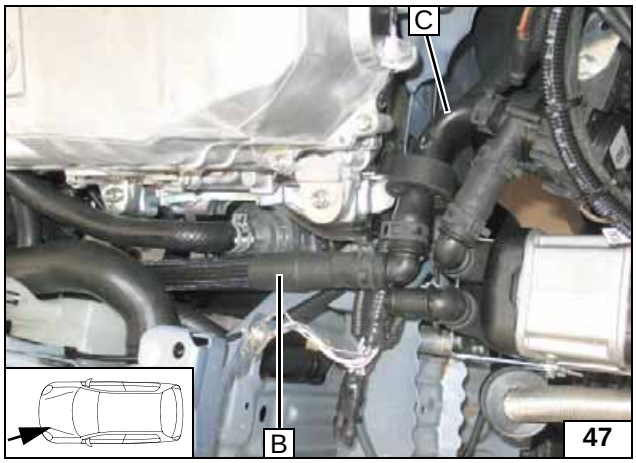
1 M6x20 bolt, flanged nut, existing hole
2 Perforated bracket

Mounting circulating pump

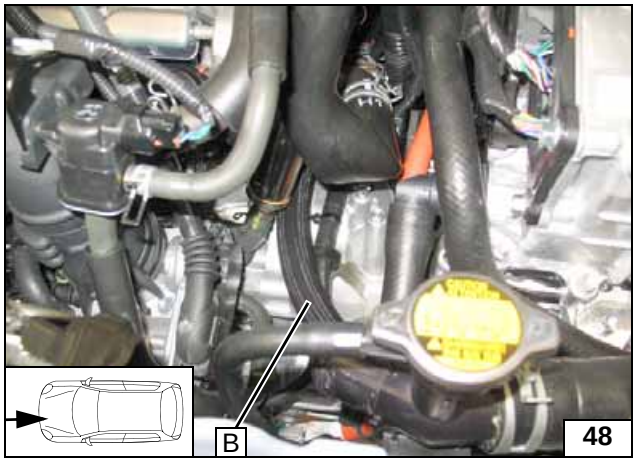


Slide black (sw) rubber isolator **1** onto hose **C**.

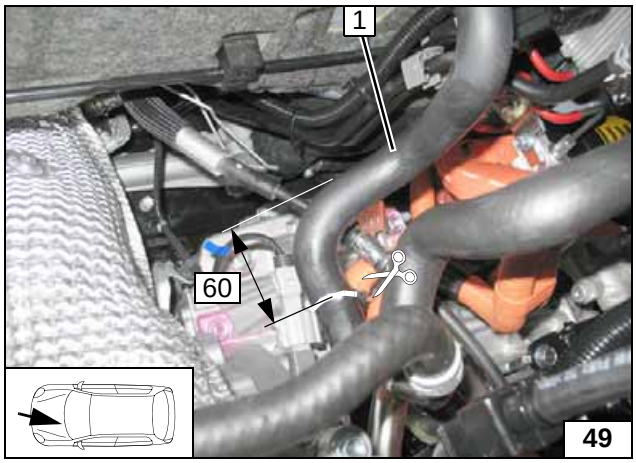
Connecting circulating pump



Routing in engine compartment

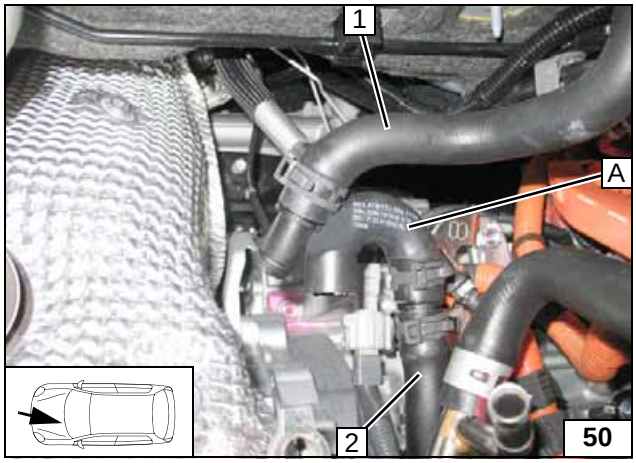


Routing in engine compartment



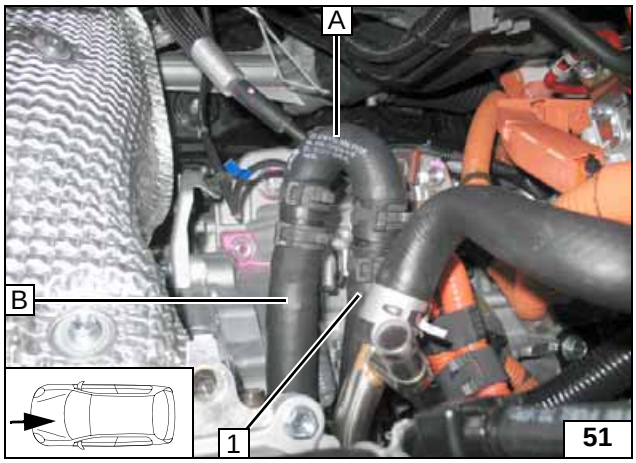
Cut the hose of engine outlet / heat exchanger inlet **1** at the marking.

Cutting point



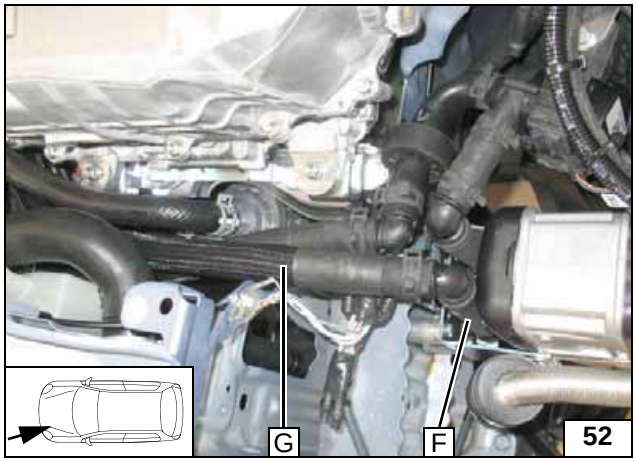
1 Hose on heat exchanger inlet
2 Hose of engine outlet

Routing in engine compartment

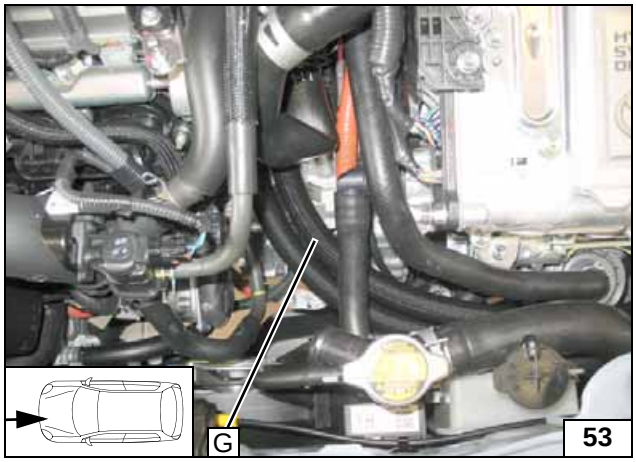


1 Hose of engine outlet

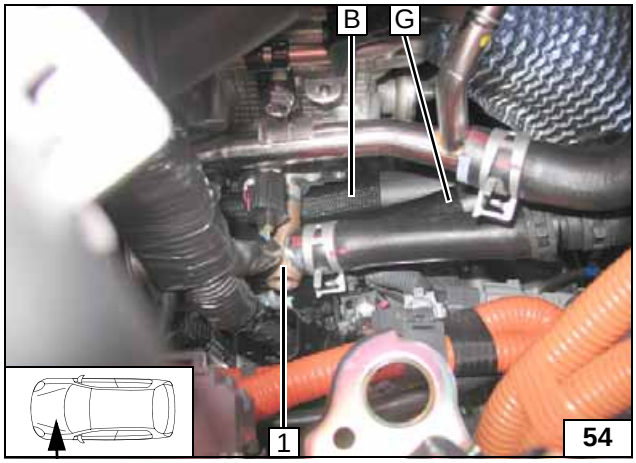
Connecting engine outlet



Routing in engine compartment

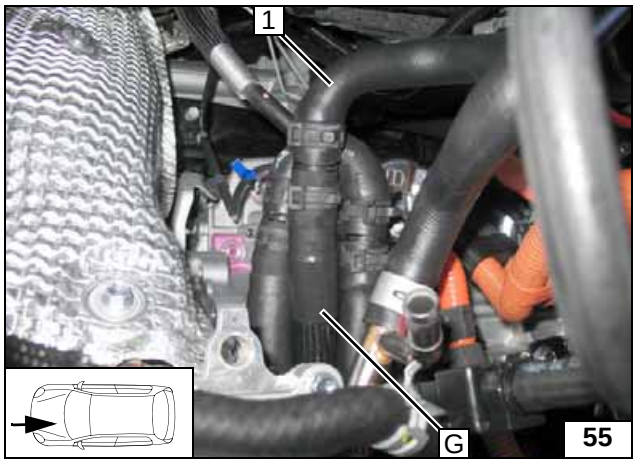


Routing in engine compartment



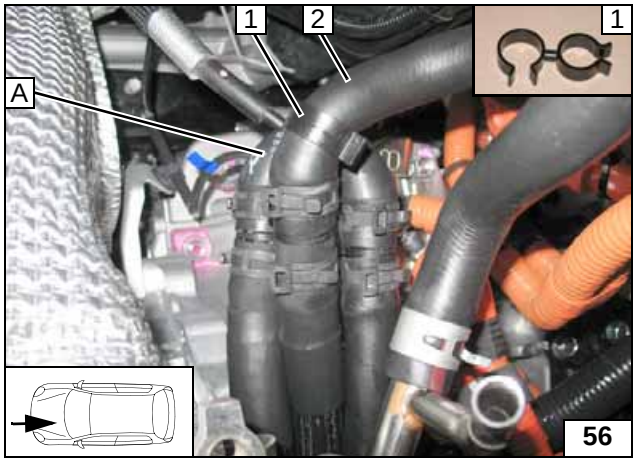
1 Connection piece for engine outlet

Routing in engine compartment



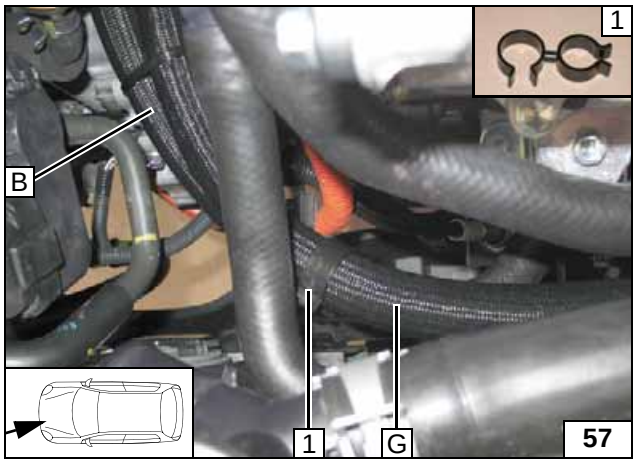
1 Hose on heat exchanger inlet

Connecting heat exchanger inlet



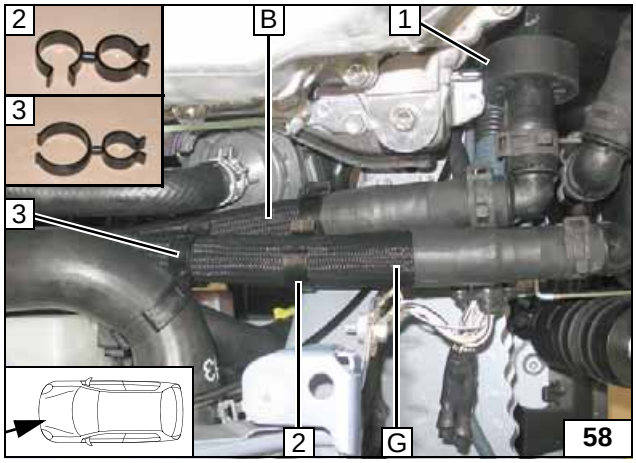
1 Hose bracket
2 Hose on heat exchanger inlet

Mounting hose bracket



1 Hose bracket
2 Hose on heat exchanger inlet

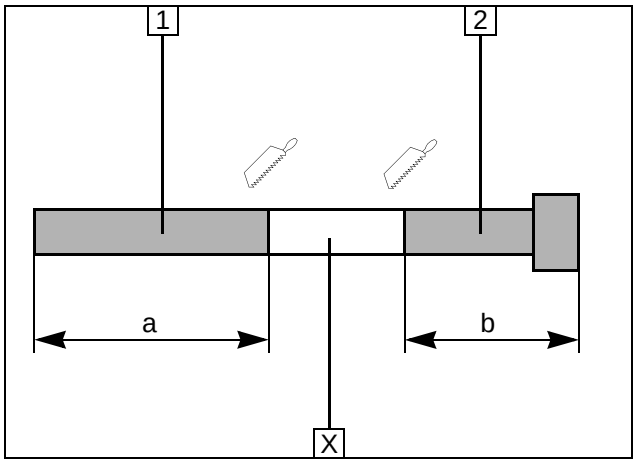
Mounting hose bracket



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

1 Align black (sw) rubber isolator
2 Hose bracket
3 Hose bracket

Mounting hose bracket

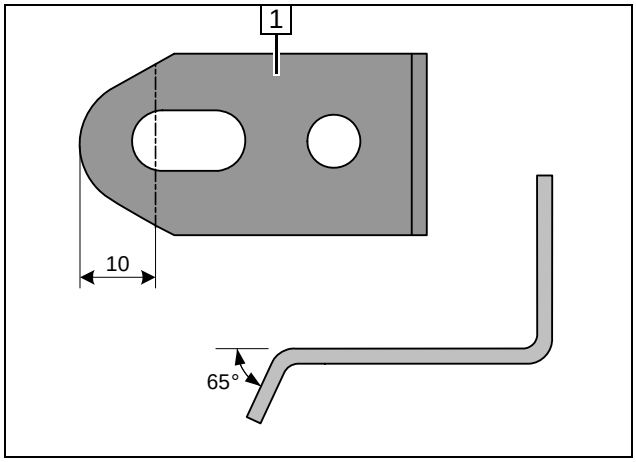


Exhaust Gas

Discard section **X**.

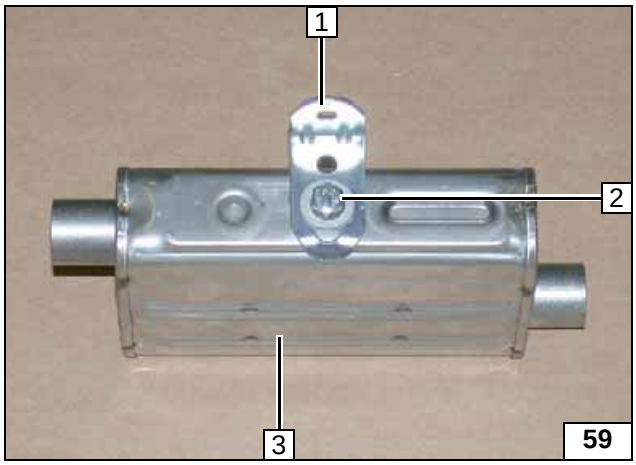
1 Exhaust pipe
a = 300
2 Exhaust end section
b = 200

Preparing exhaust pipe



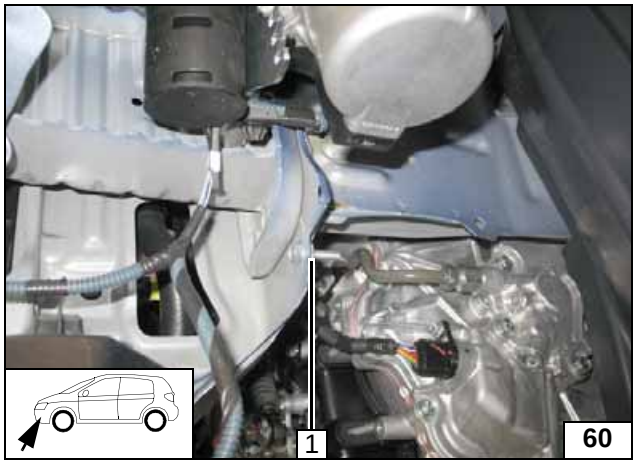
1 Angle bracket

Preparing angle bracket



1 Angle bracket
2 M6x16 bolt, spring lockwasher, large diameter washer
3 Silencer

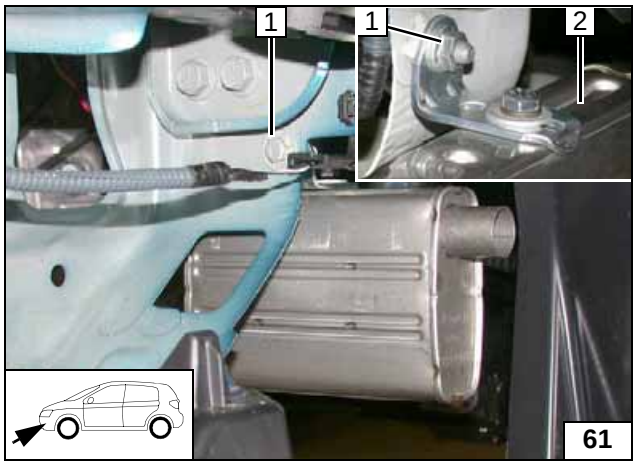
Premounting silencer



Remove original vehicle bolt at position **1** and discard.

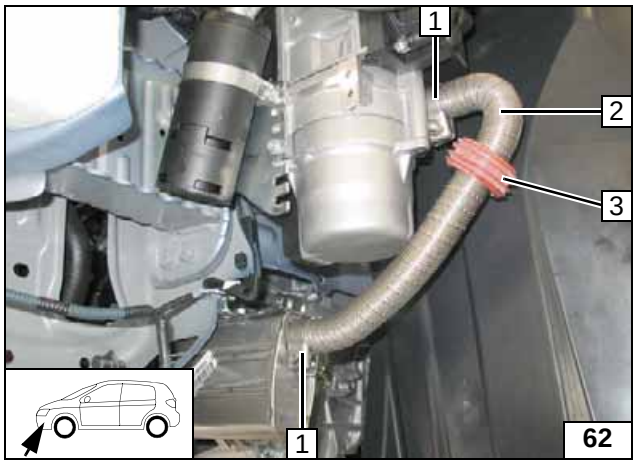
1 M6x25 bolt

Replacing bolt



1 M6x25 bolt, large diameter washer, flanged nut
2 Exhaust silencer

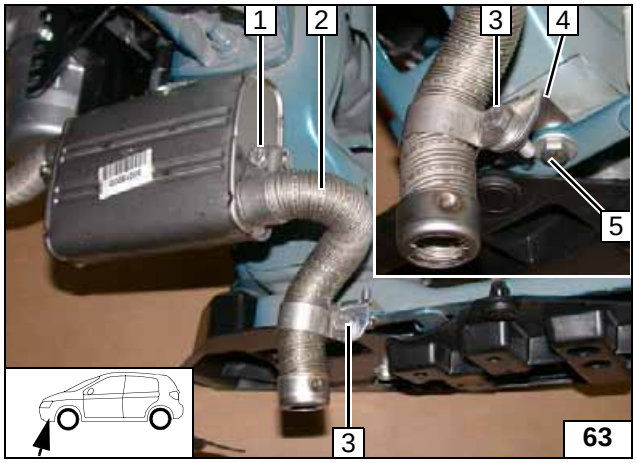
Installing silencer



Push spacer bracket **3** onto exhaust pipe **2** and align with wheel well trim.

1 Hose clamp [2x]

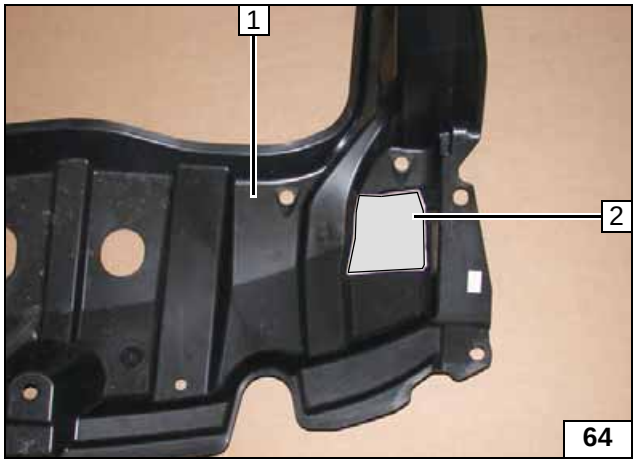
Mounting exhaust pipe



Ensure sufficient distance from neighbouring components, correct if necessary.

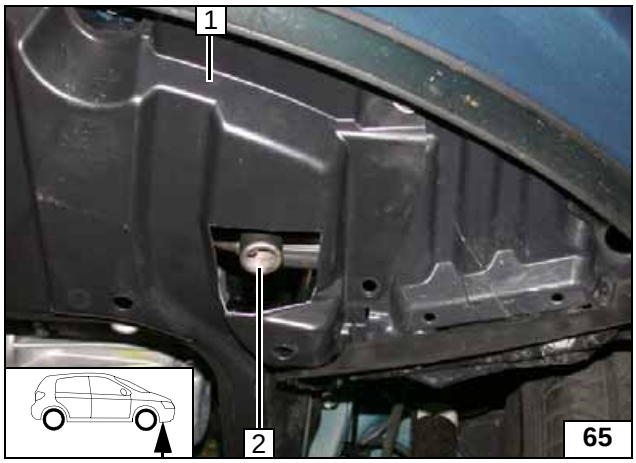
1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, p-clamp, flanged nut
4 Angle bracket
5 M6x20 bolt, large diameter washer, flanged nut, existing hole

Mounting exhaust end section



1 Underride protection
2 Discard section

Cutting out underride protection



Mount underride protection **1**. Align exhaust end section **2** with the centre of the recess. Ensure sufficient distance from neighbouring components, correct if necessary.

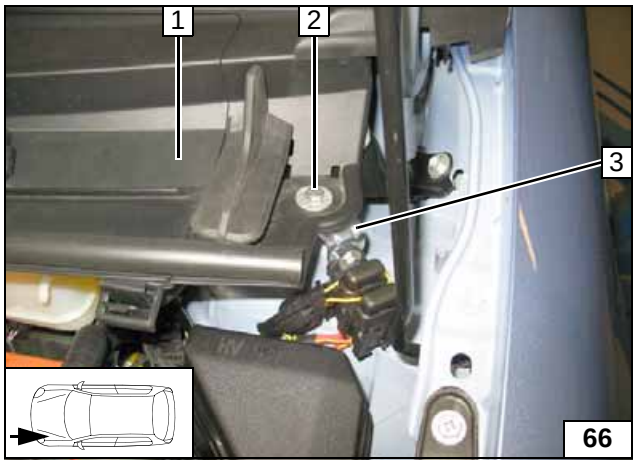
Aligning exhaust end section

Final Work

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

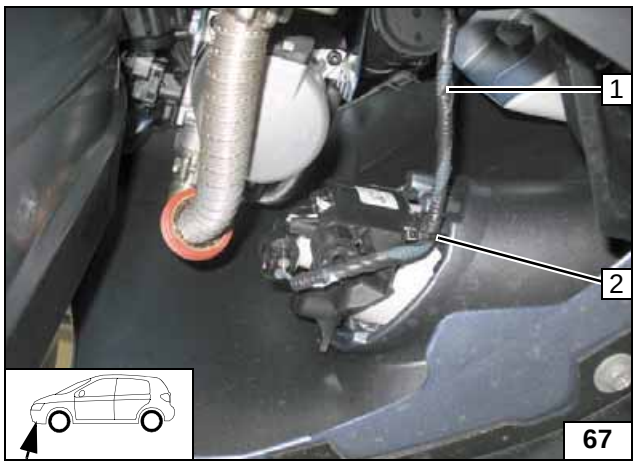
- Install connector of hybrid battery according to manufacturer's instructions
- **Connect the battery**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Set digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Check the fan function (IPCU):**
  Adjust fan output to maximum. Then switch off ignition and switch on parking heater. On reaching the activation temperatur of 50°C the fan speed must correspond to the value of approx. 1/3 of the maximum speed specified by IPCU.
- **Mount "Switch off parking heater before refueling" signboard in area of 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.
  - CO_2- Check 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.
  - A error search is to be conducted in case of fault

Mounting fuse holder of engine compartment



1 Mount coolant reservoir cap
2 M6x20 bolt, large diameter washer, flanged nut, existing hole
3 Angle bracket

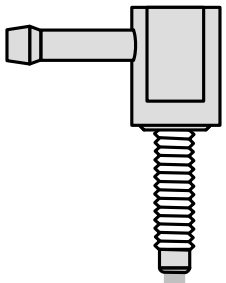
Fastening wiring harness of front fog light

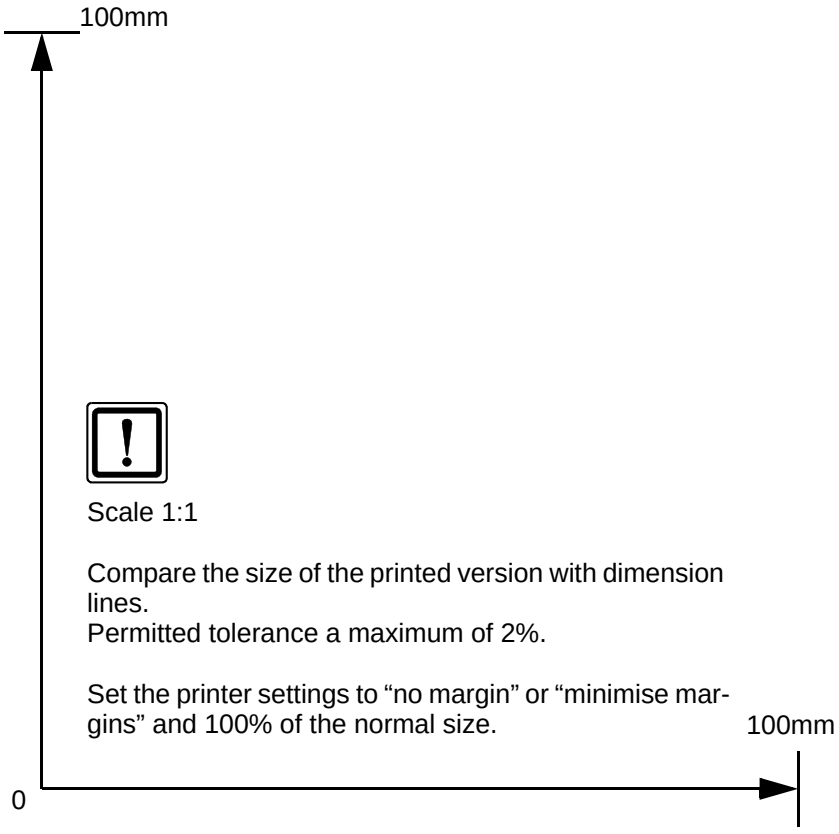


1 Wiring harness of front fog light
2 Cable tie

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

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.

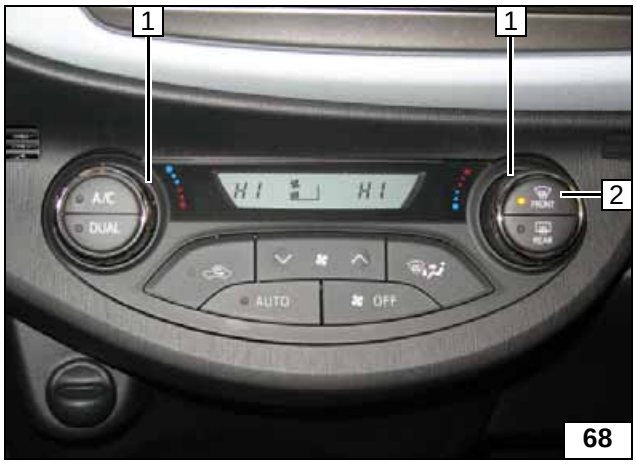
Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to vehicle settings for the heating operation.
Please refer to the operating manual of the vehicle for instructions regarding deactivation.

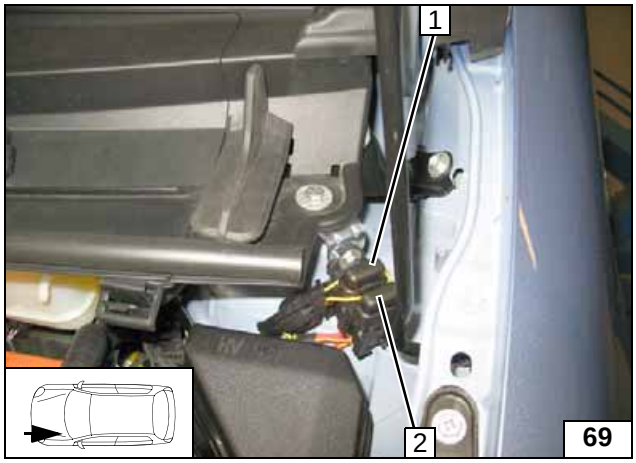
Before parking the vehicle, make the following settings:



Presetting the fan speed is not necessary!

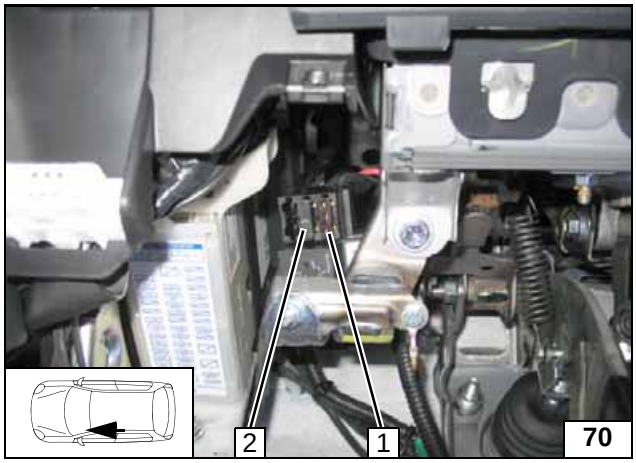
1 Set temperature on both sides to "HI".
2 Air outlet to windscreen

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment