Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

With FuelFix

Installation Documentation
Honda Civic

Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Honda	Civic	FK1	e11 * 2001 / 116 * 0255 *...
Honda	Civic	FK2	e11 * 2001 / 116 * 0256 *...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 P	Petrol	6-speed SG	73	1339	L13Z4
1.8 P	Petrol	6-speed SG	104	1798	R18Z4

SG = manual transmission

From Model Year 2012
Left-hand drive vehicle

Verified equipment variants: 1 and 2 zone automatic air-conditioning
Front fog lights
Automatic Start-Stop system
Xenon headlight

Total installation time: approx. 7 hours

Honda Civic

Table of Contents

Validity	1	Preparing Bracket	13
Necessary Components	2	Preparing Installation Location	13
Installation Overview	2	Preparing Heater	14
Information on Total Installation Time	2	Installing Heater	15
Information on Operating and Installation Instructions	3	Exhaust Gas	17
Information on Validity	4	Combustion Air	19
Technical Information	4	Coolant Circuit for 1.4 / 1.8 Without Residual Heat Pump	20
Explanatory Notes on Document	4	Coolant Circuit for 1.8 With Residual Heat Pump	24
Preliminary Work	5	Fuel	27
Heater Installation Location	5	Installing FuelFix	28
Preparing Electrical System	6	Final Work	33
Electrical System	8	Fuel Tank Sending Unit Template	34
Fan Controller	9	FuelFix Template	35
Digital Timer	11	Bracket Template	36
Remote Option (Telestart)	11	Operating Instructions for 1- Zone Automatic Air-Conditioning	37
Thermo Call Option	12	Operating Instructions for 2- Zone Automatic Air-Conditioning	38

Necessary Components

- Basic delivery scope Thermo Top Evo according to price list
- Installation kit with FuelFix Honda Civic 2012 Petrol: **1318426C**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

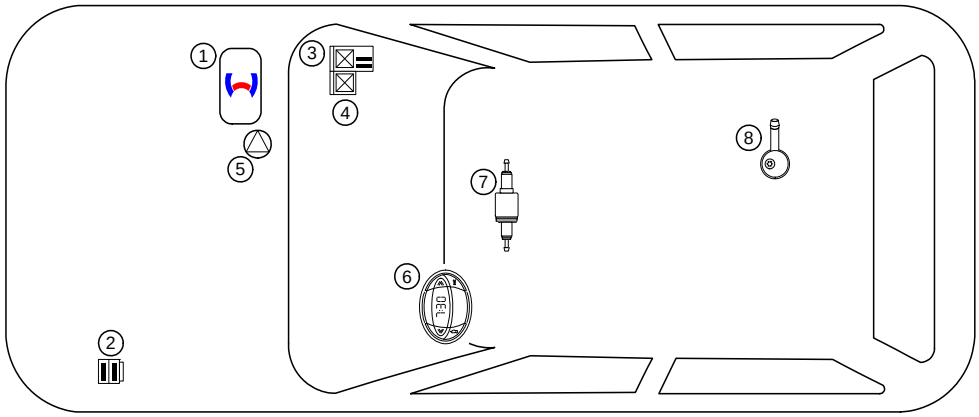
Installation instructions:

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

Installation Overview

Legend:

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



Information on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair

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

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

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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

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

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

1.3 Please note

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

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

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

Important

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

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

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

**Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on
electronic components must audibly 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 start-up is to be executed with the Webasto Thermo Test Diagnosis.

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

2 Statutory regulations governing installation

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

Note

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

Important

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

Note

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

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

Beginning of excerpt.

ANNEX VII

**REQUIREMENTS FOR COMBUSTION HEATERS
AND THEIR INSTALLATION**

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Information on Validity

This installation documentation applies to Honda Civic 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
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

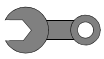
Dimensions
- All dimensions are in mm.

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

Explanatory Notes on Document

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

Mechanical System



Electrical System

Coolant Circuit

Combustion Air

Fuel

Exhaust Gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage.

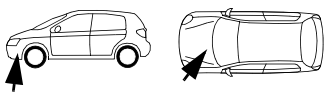
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

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

Reference to a special technical feature.

The arrow in the vehicle pictogram indicates the position on the vehicle and the viewing angle



Tightening torque according to the manufacturer's vehicle-specific documents

Preliminary Work

Vehicle

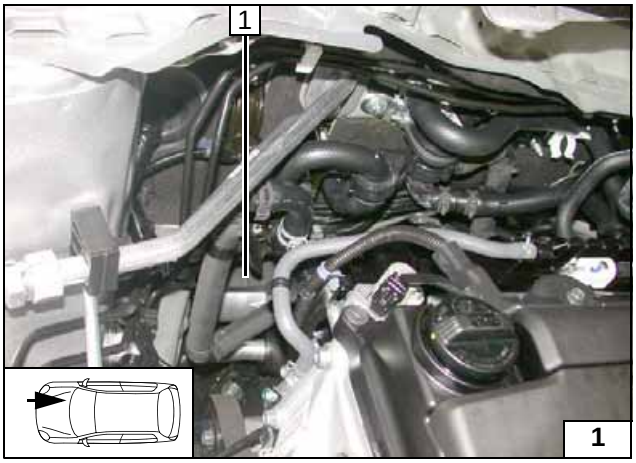
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove the windscreen wiper.
- Remove the coolant reservoir.
- Remove the air filter together with the intake hose.
- Remove the residual heat circulating pump (firewall on the right, if present 1.8 B only).
- Remove the front underride protection.
- Remove the rear underride protection.
- Remove the entrance trim and the lower A-pillar trim on the right-hand side.
- Fold back the floor covering in the footwell of the front passenger's side.
- Remove the lower instrument panel trim on the front passenger's side.
- Remove the glove compartment.

The following work should only be performed during the corresponding installation sequence:

- Remove the fuel tank in accordance with the manufacturer's instructions.

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.

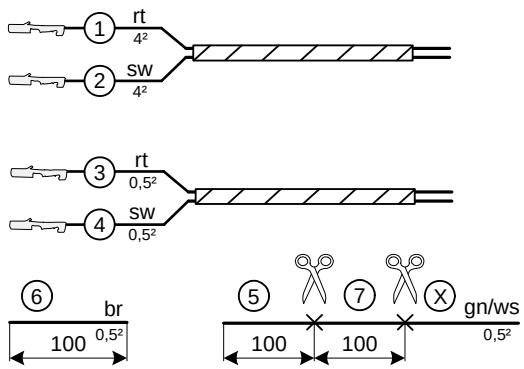


Heater Installation Location

Image shows 1.8

1 Heater

Installation location



2

Preparing Electrical System

Wire sections retain their numbering throughout the entire document.

Produce all following electrical connections as shown in wiring diagram.

Discard section **X**.

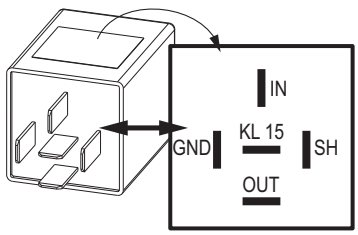
① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness
③ Red (rt) wire from wiring harness of PWM control
④ Black (sw) wire from wiring harness of PWM control

Cutting to length / assigning wires

Check the PWM gateway settings when starting up the heater and adjust if necessary.

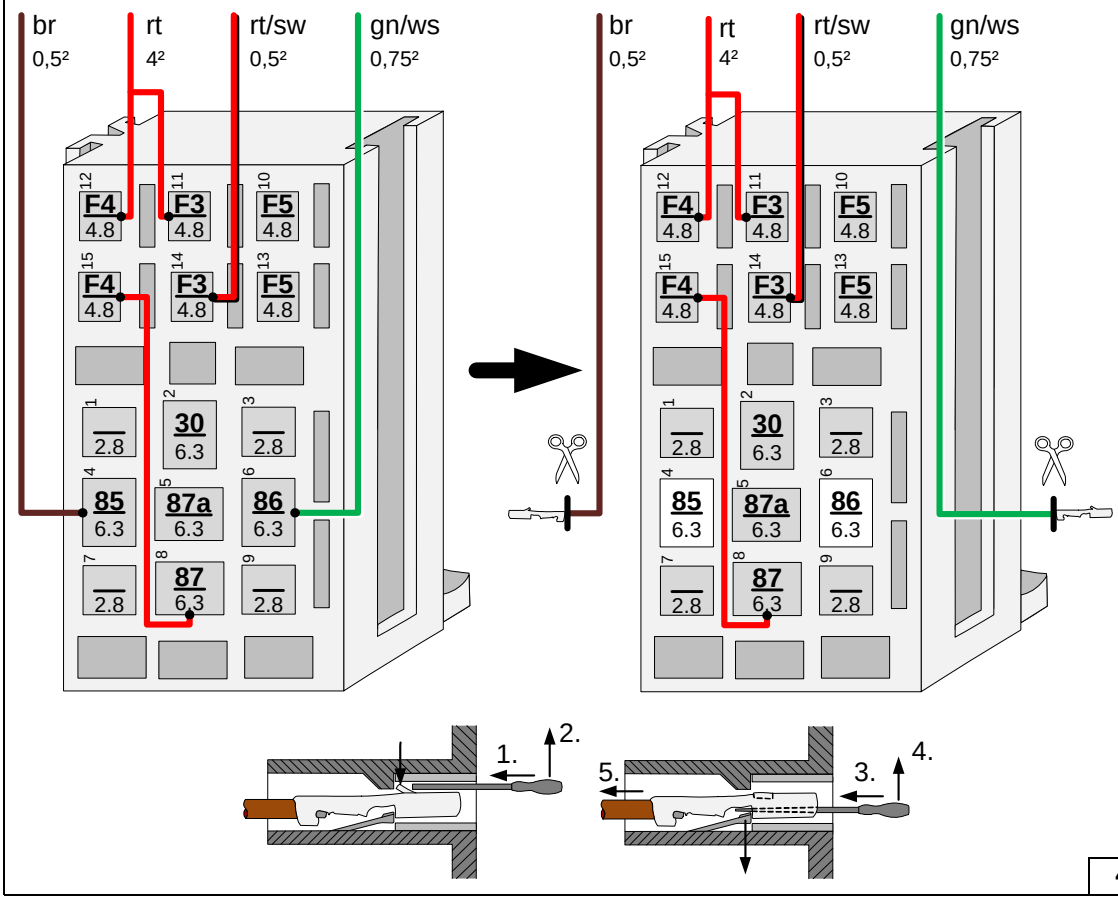
Settings:

Duty cycle: 100% (DC)
Frequency: not relevant
Voltage: 2.4V
Function: High side



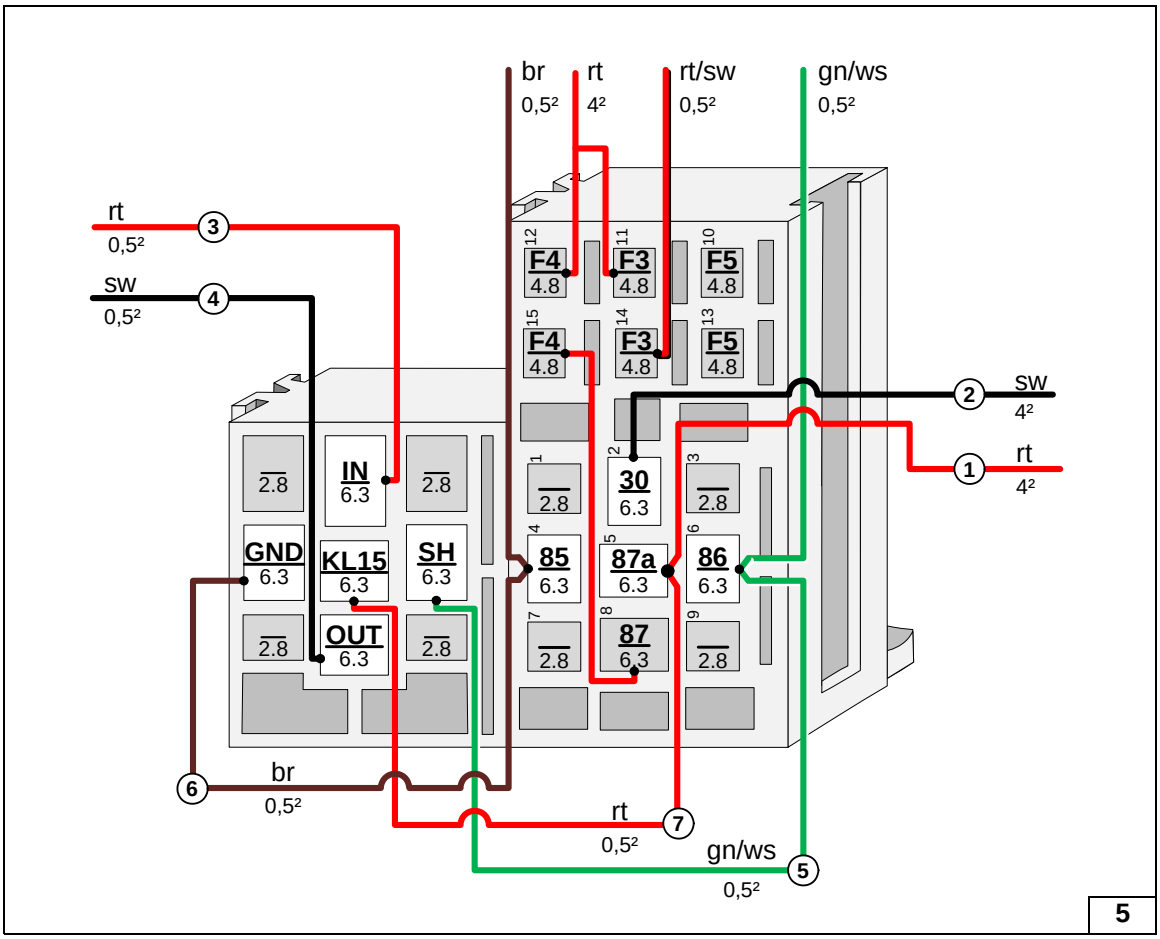
3

View of PWM GW



4

Preparing passenger compartment relay and fuse holder



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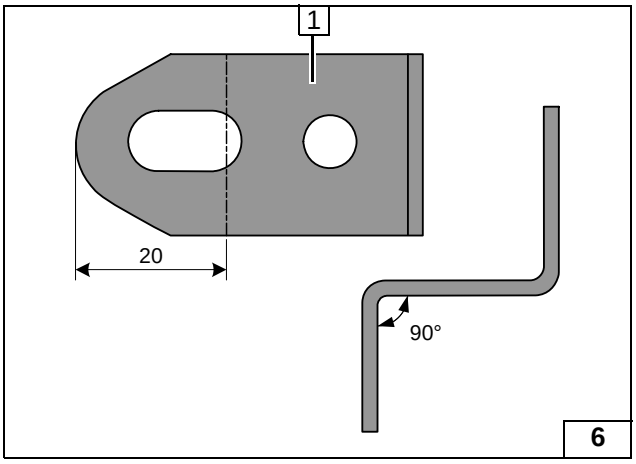
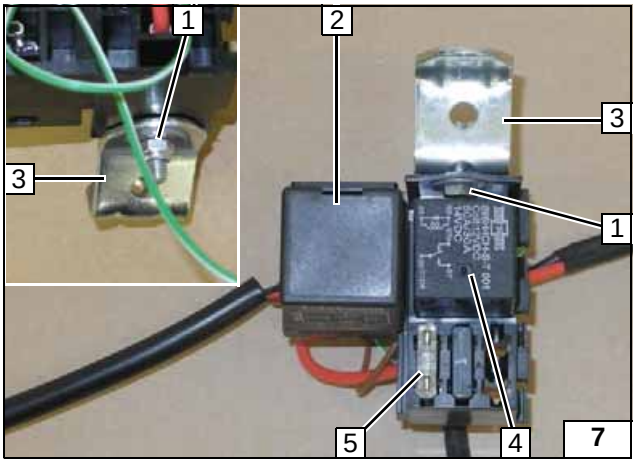
Interlocking PWM GW socket with passenger compartment relay and fuse holder, connecting wires



6

1 Angle bracket

Preparing angle bracket



7

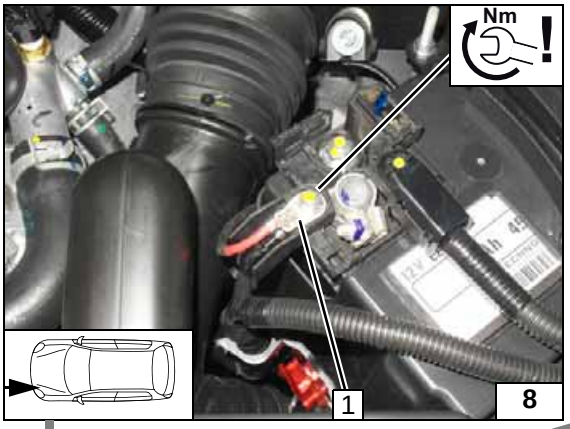
1 M5x16 bolt, large diameter washer [2x], nut
2 PWM GW
3 Angle bracket
4 K1 relay
5 25A fuse F4

Preparing passenger compartment relay and fuse holder

Electrical System

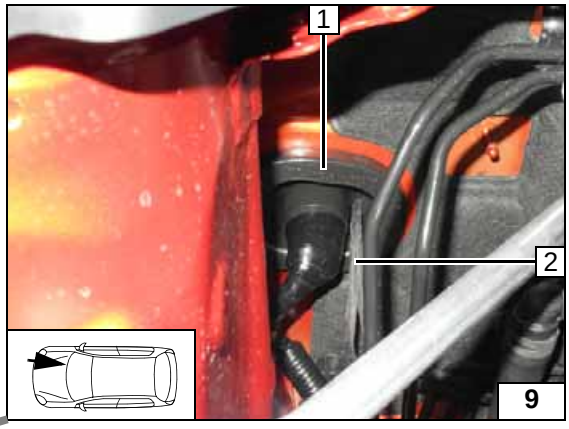
Positive wire

1 Positive wire on positive battery terminal

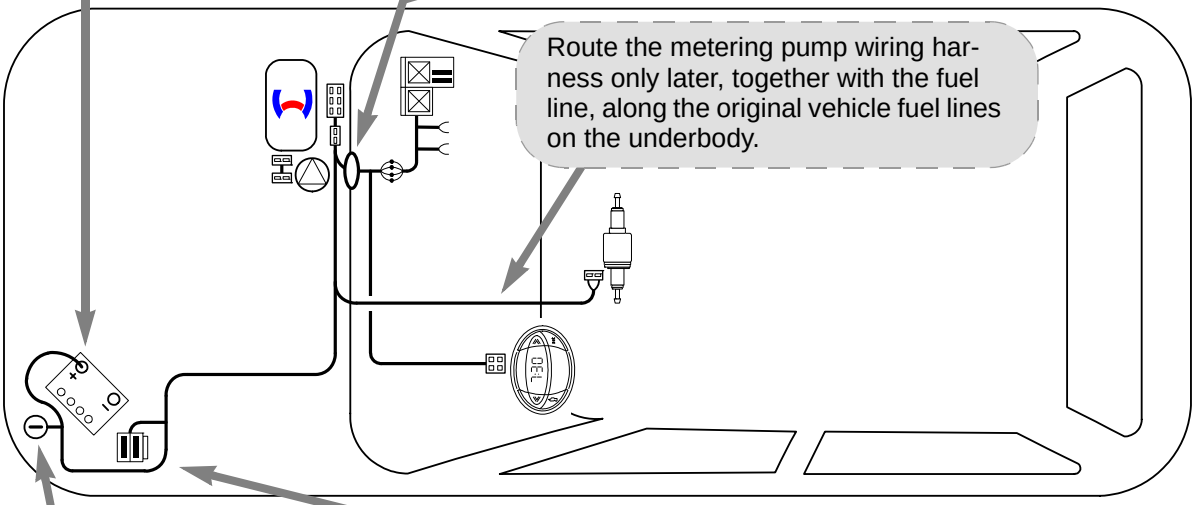


Wiring harness pass through

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

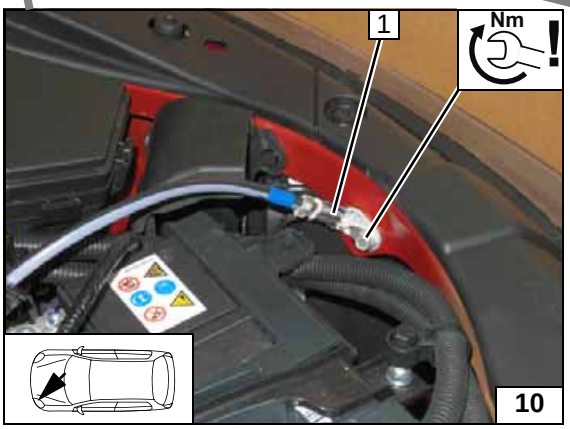


Wiring harness routing diagram



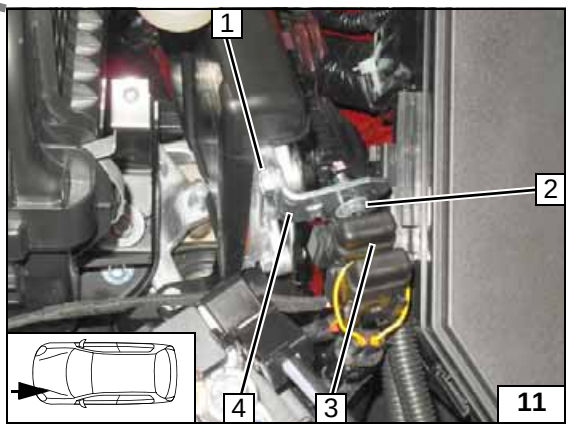
Earth wire

1 Earth wire on original vehicle earth support point



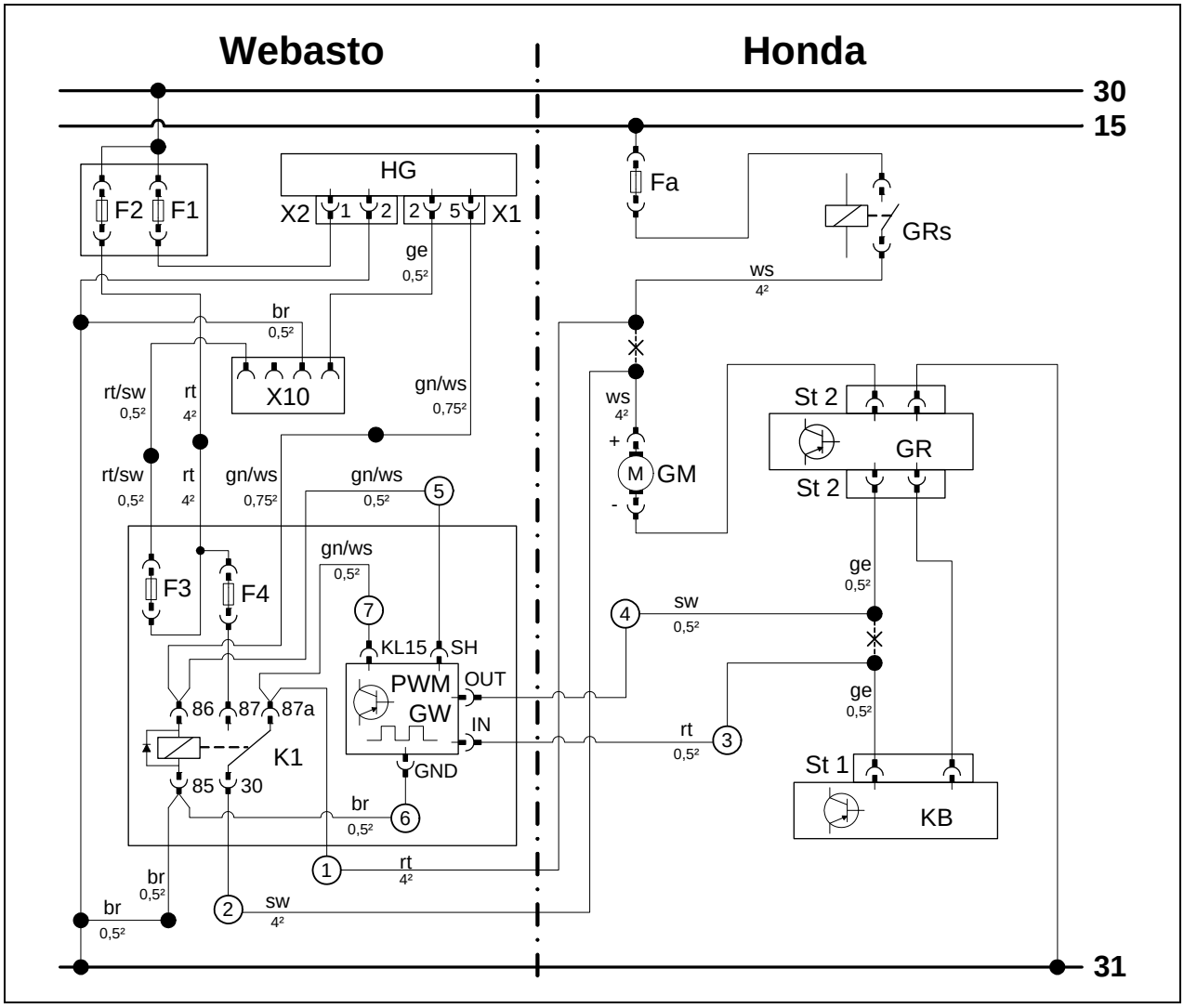
Engine compartment fuse holder

1 Original vehicle bolt
2 M5x16 bolt, washer [2x], retaining plate of fuse holder, nut
3 Fuses F1-2
4 Angle bracket



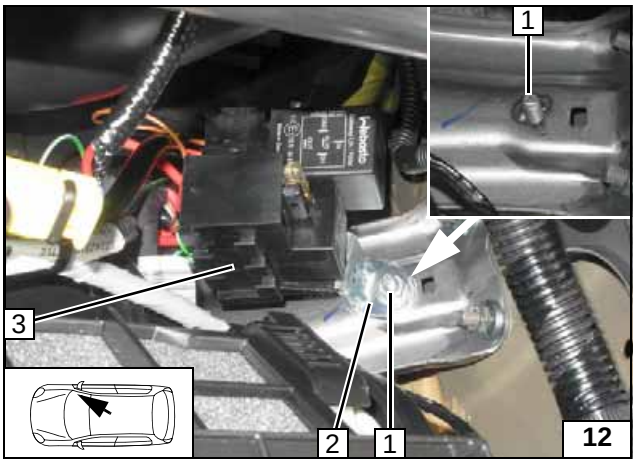
Fan Controller

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	Fa	Fuse	rt	red
X1	6-pin heater connector	GRs	Fan relay	sw	black
X2	2-pin heater connector	GR	Fan controller	ge	yellow
F1	20A fuse	ST 2	6-pin connector of GR	gn	green
F2	30A fuse	GM	Fan motor	br	brown
X10	4-pin connector of heater control	KB	A/C control panel	ws	white
		ST 1	Connector of KB		
F3	1A fuse				
F4	25A fuse				
PWM GW	Pulse width modulator				
K1	Fan relay				
PWM GW settings:					
Duty cycle:	100% (DC)				
Frequency:	not relevant				
Voltage:	2.4V			**X**	Cutting point
Function:	High side			Wiring colours may vary.	

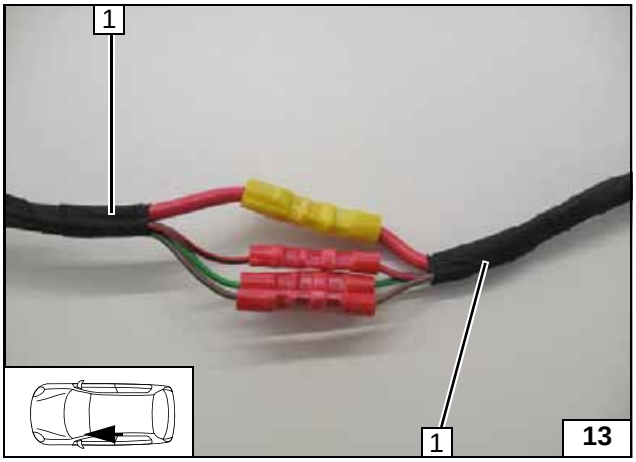
Legend



Install premounted angle bracket **2** on original vehicle stud bolt **1**.

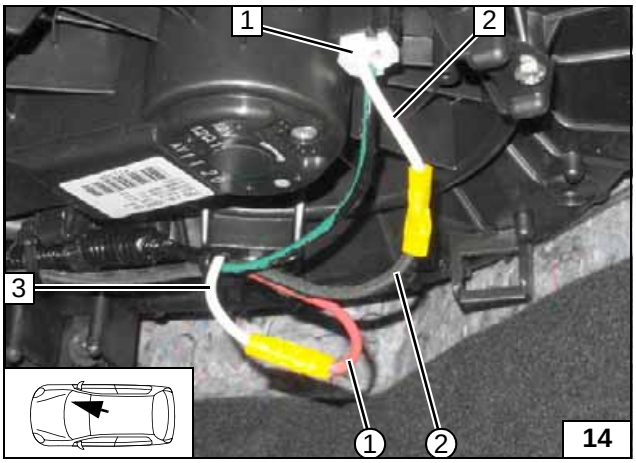
1 Flanged nut M6
3 Passenger compartment relay and fuse holder

Installing passenger compartment relay and fuse holder



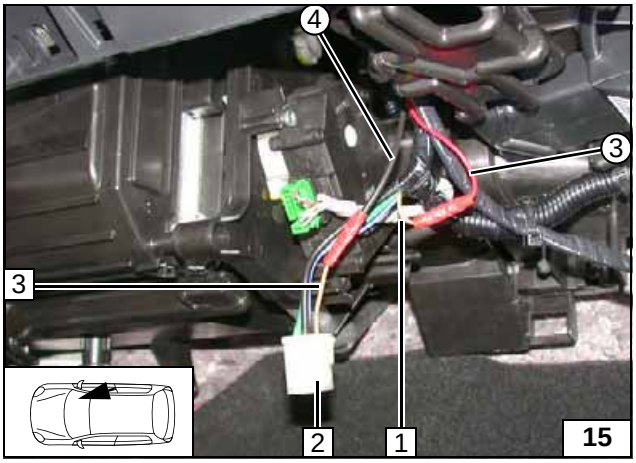
1 Wiring harness of passenger compartment relay and fuse holder
2 Wiring harness of heater

Connecting same colour wires of wiring harnesses



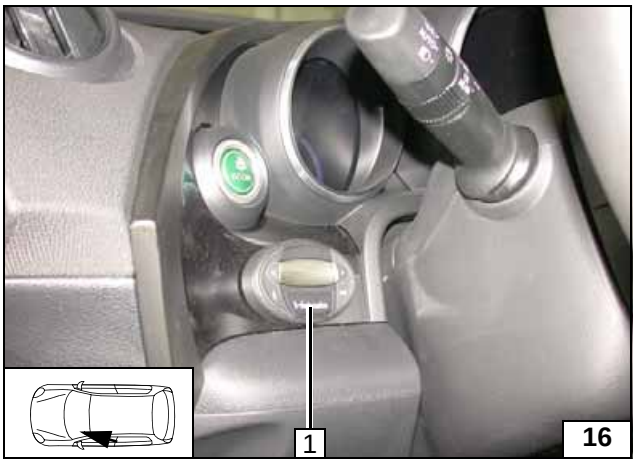
1 2-pin fan motor connector
2 White (ws) wire from 2-pin fan motor connector
3 White (ws) wire of fan relay
① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

Connecting fan motor



1 Yellow (ge) wire to wiring harness
2 6-pin fan relay connector
3 Yellow (ge) wire from 6-pin fan controller connector
③ Red (rt) wire of PWM GW/IN wiring harness of PWM controller
④ Black (sw) wire of PWM GW/OUT wiring harness of PWM controller

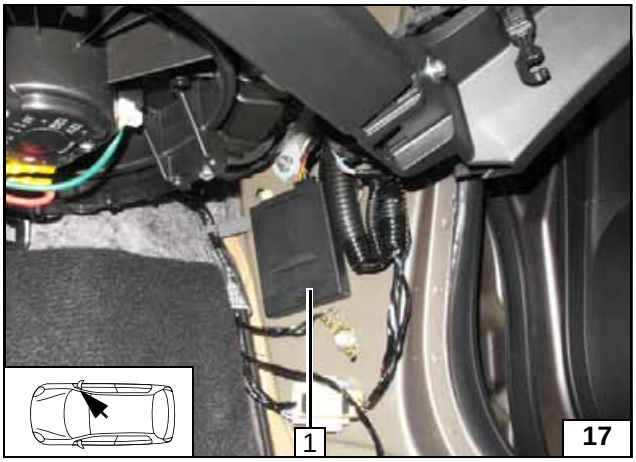
Connecting fan controller



Digital Timer

1 Digital timer

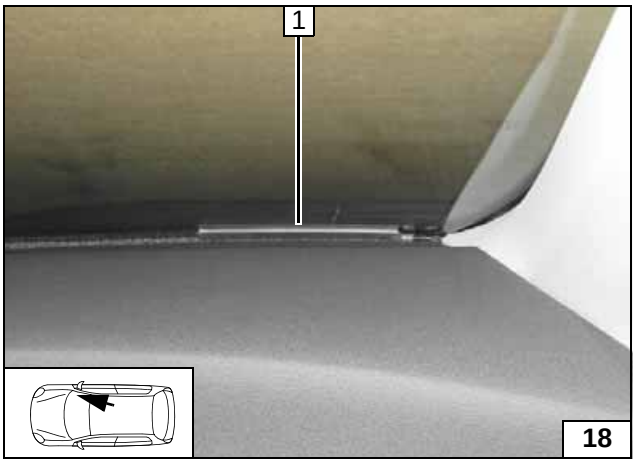
Installing digital timer



Remote Option (Telestart)

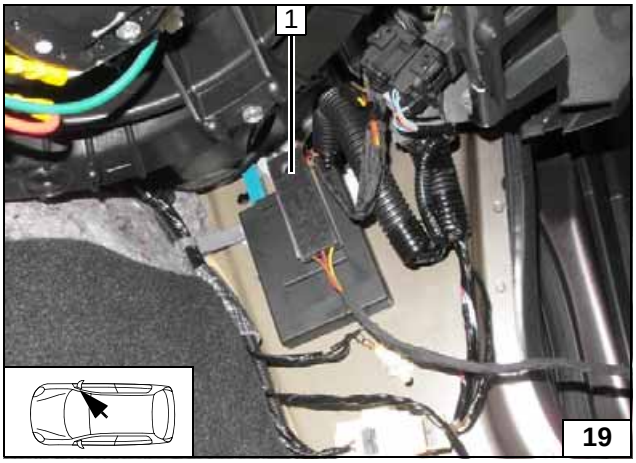
Fasten receiver **1** with adhesive tape.

Installing receiver



1 Antenna

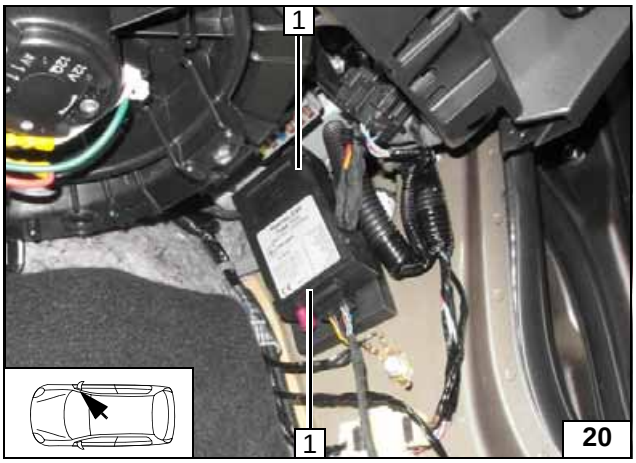
Installing antenna

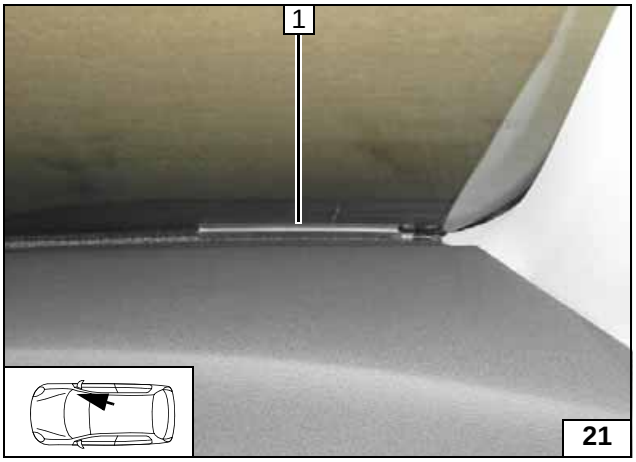


Temperature sensor T100 HTM

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

Installing temperature sensor





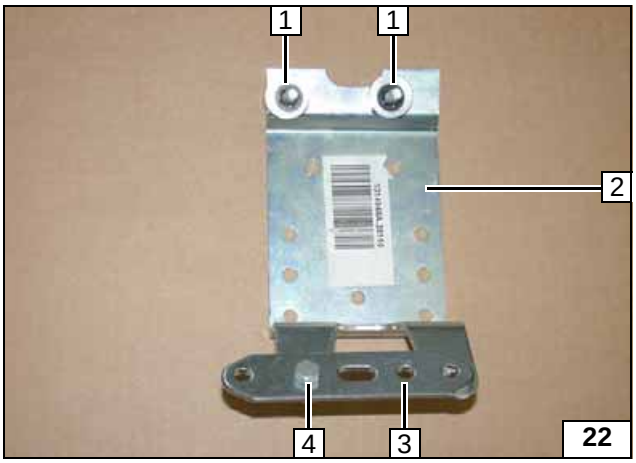
Thermo Call Option

Fasten receiver **1** with adhesive tape.

1 Antenna

Installing receiver

Installing antenna

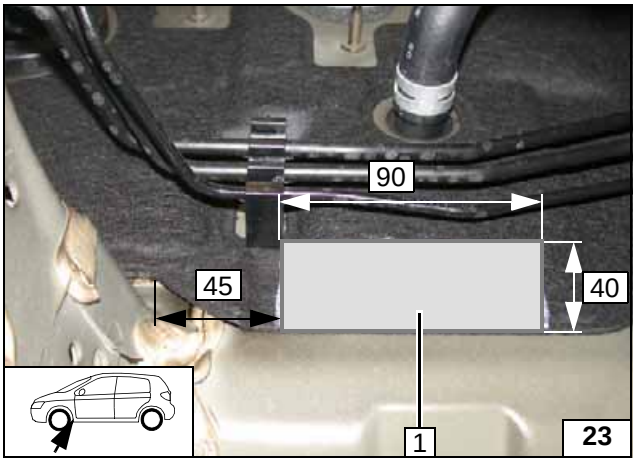


Preparing Bracket

Prepare bracket **2** according to the template.

1 M6x30 bolt, spring lockwasher, 10 mm shim, pin lock [2x]
3 Perforated bracket
4 M6x12 bolt, perforated bracket, flanged nut

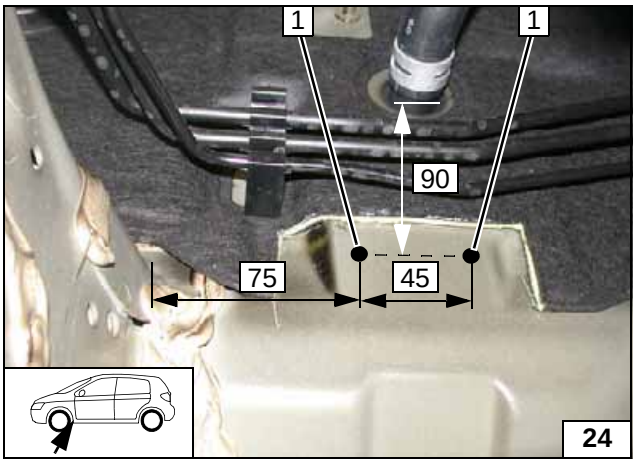
Preparing bracket



Preparing Installation Location

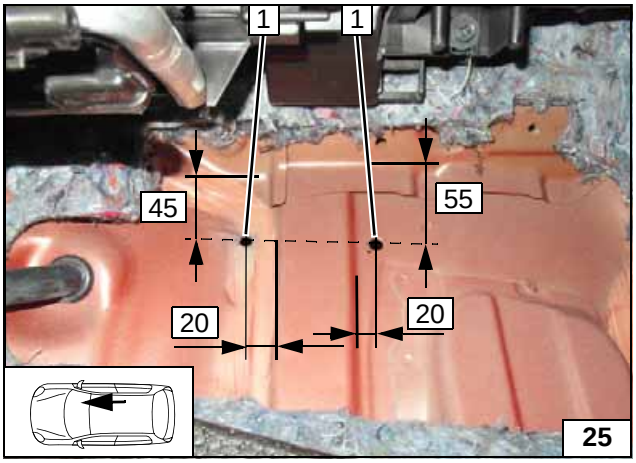
Cut out insulation mat at marking **1**

Cutting out insulation mat



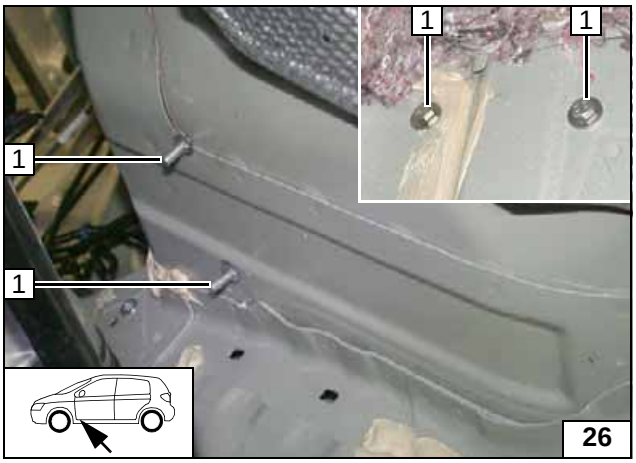
1 9.1mm dia. hole; rivet nut [2x]

Installing rivet nut



1 8.5 mm dia. hole [2x] of passenger compartment

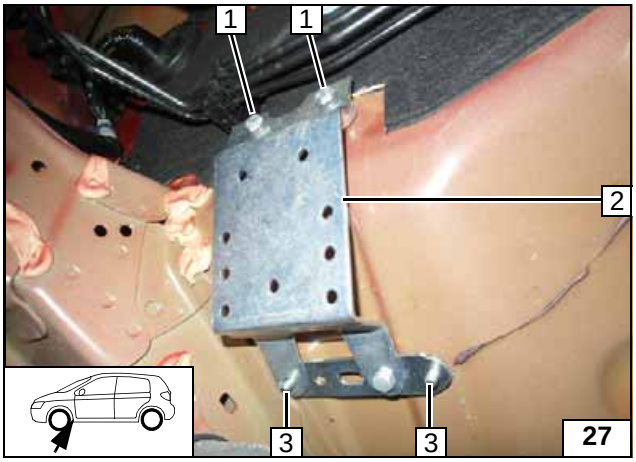
Hole



Insert bolts from the passenger compartment.

1 M6x20 bolt, large diameter washer, pin lock [2x]

Installing bolts

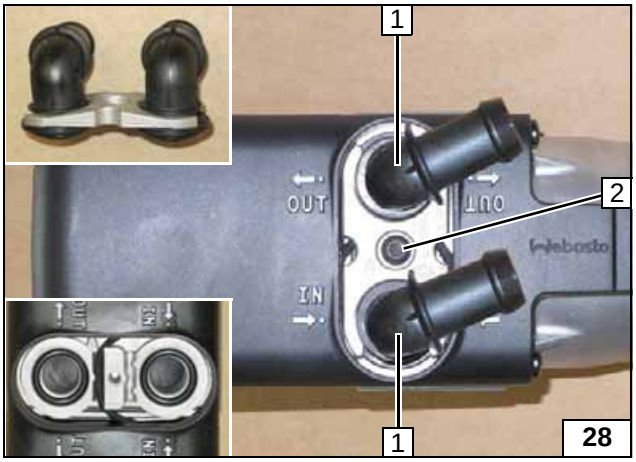


Attach bracket **2** in position **3** [2x] and mount loosely in position **1** [2x]. Align and remove bracket **2** if necessary.

Checking hole pattern

Preparing Heater

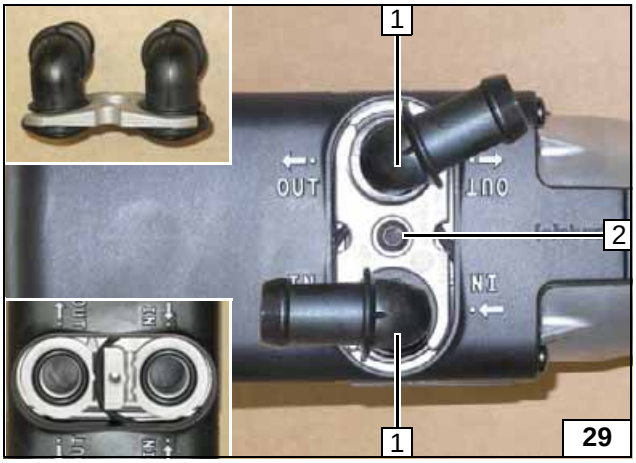
1.4



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

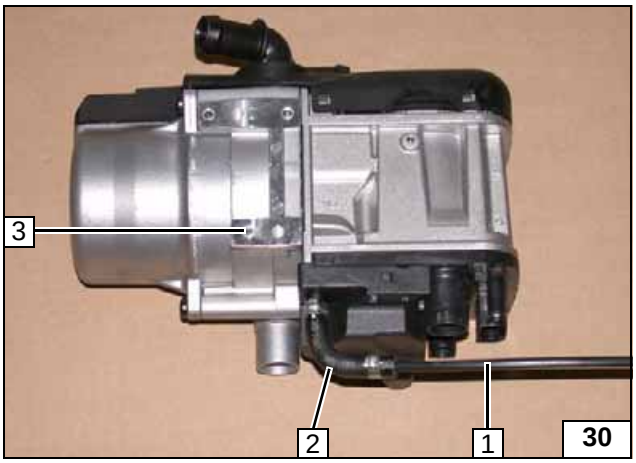
Installing water connection piece

1.8



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

Installing water connection piece

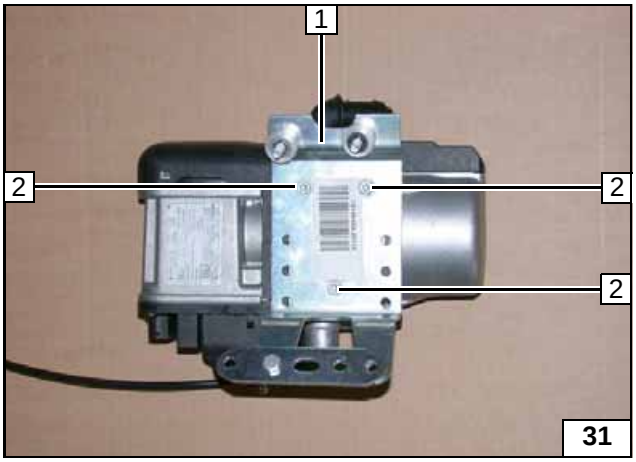


All vehicles

Pretap thread with 5x13 self-tapping bolt at position **3**

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

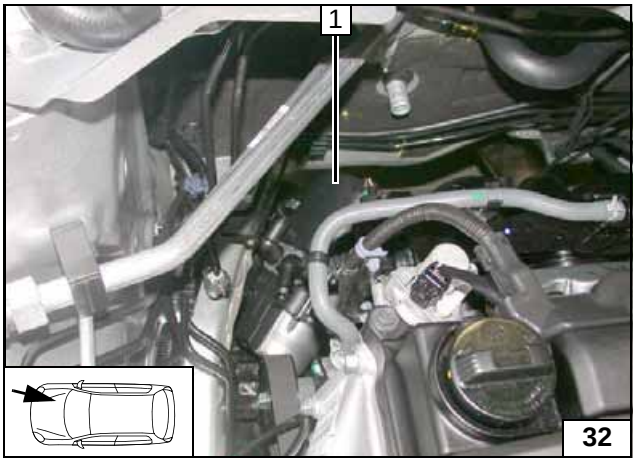
Preparing heater



1.4

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

Installing bracket

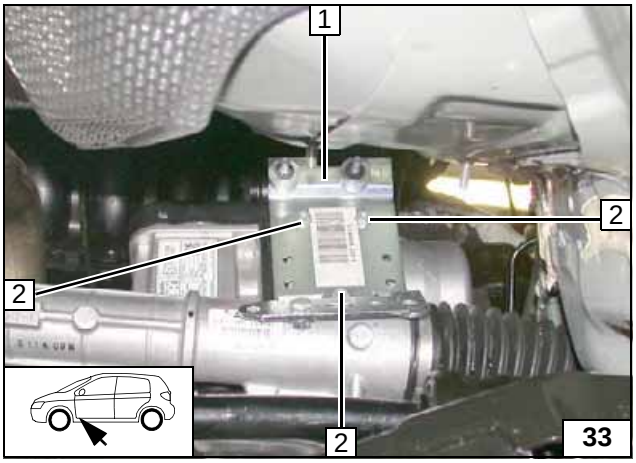


Installing Heater

1.8

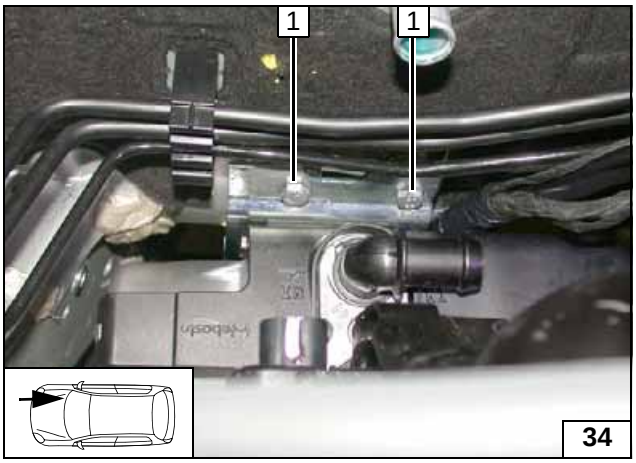
Move heater **1** (without bracket) to installation location

Inserting heater



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

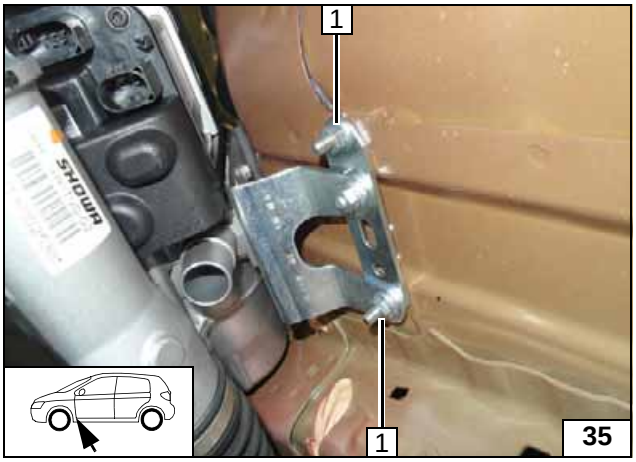
Installing bracket



All vehicles

Insert bolts **1** [2x] into holes and mount them loosely.

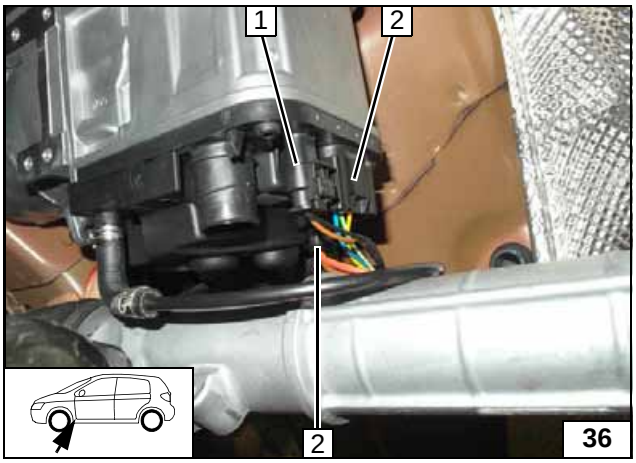
Mounting heater



Align heater, tighten bolts of bracket.

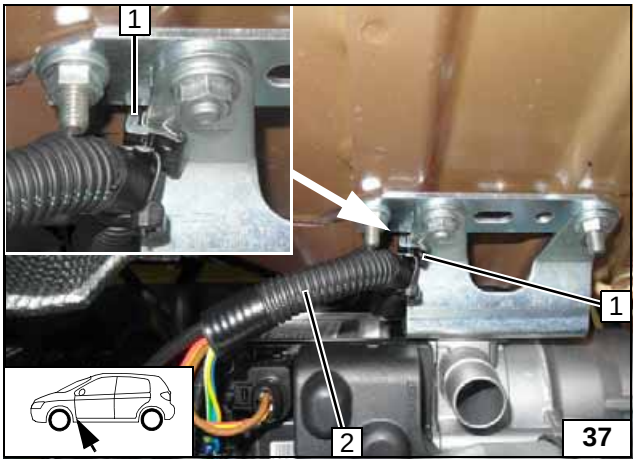
1 Flanged nut [2x]

Mounting heater



1 Connector of circulating pump wiring harness
2 Connector of heater wiring harness [2x]

Connecting heater



Cut 13mm dia., 250mm long corrugated tube **2** to length and slide over wiring harnesses of heater, circulating pump, metering pump and over fuel line.

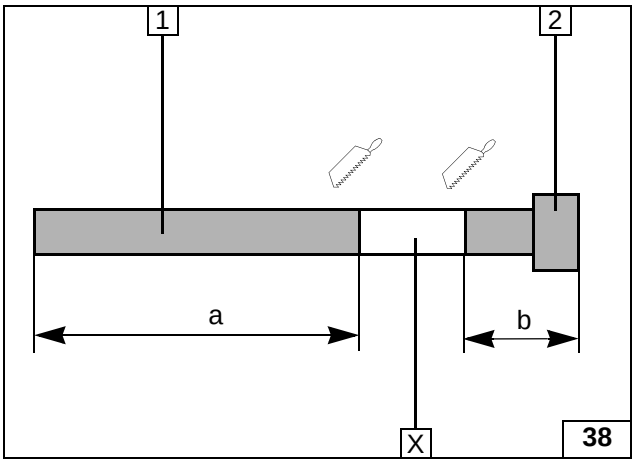
1 Retaining clip with cable tie

Routing wiring harnesses

Exhaust Gas

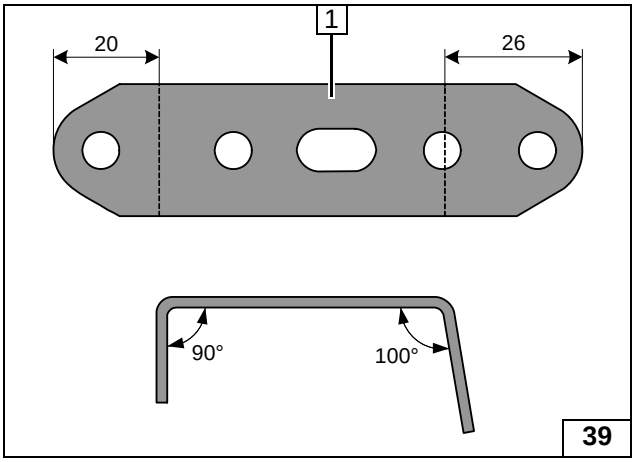
Discard section **X**.

1 Exhaust pipe
a = 340
2 Exhaust end section
b = 50



Preparing exhaust pipe

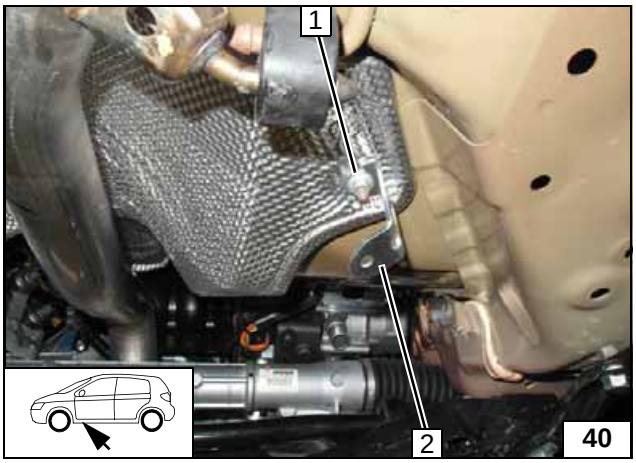
1 Perforated bracket



Preparing perforated bracket

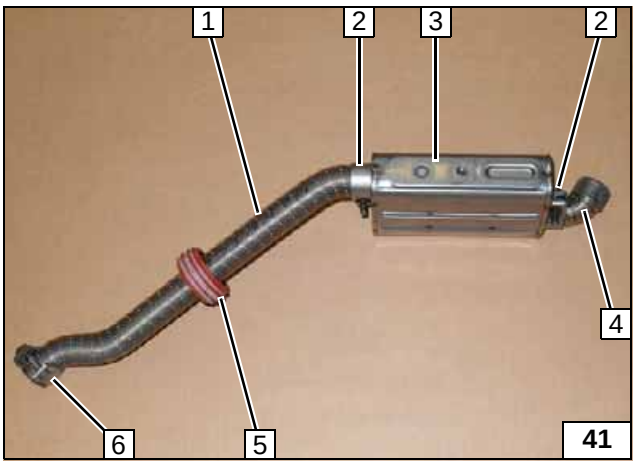
Connect perforated bracket**2** on original vehicle flanged nut in position **1**.

1 Flanged nut M6
2 Perforated bracket

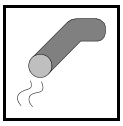


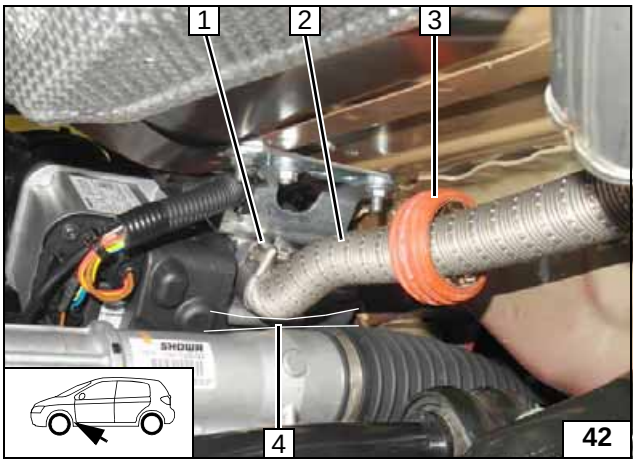
Installing perforated bracket

1 Exhaust pipe
2 Hose clamp [2x]
3 Silencer
4 Exhaust end section
5 Push on spacer bracket
6 Install hose clamp loosely



Premounting exhaust system

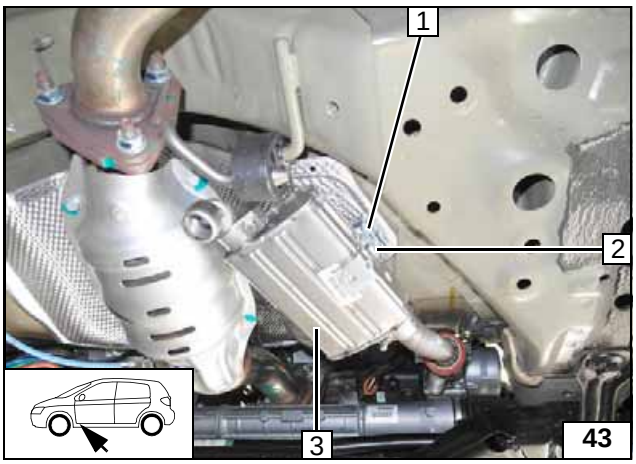




Ensure sufficient distance (at least 20 mm) between exhaust pipe **2** and steering gear at position **4**, correct if necessary.

1 Tighten hose clamp
3 Align spacer bracket

Connecting heater

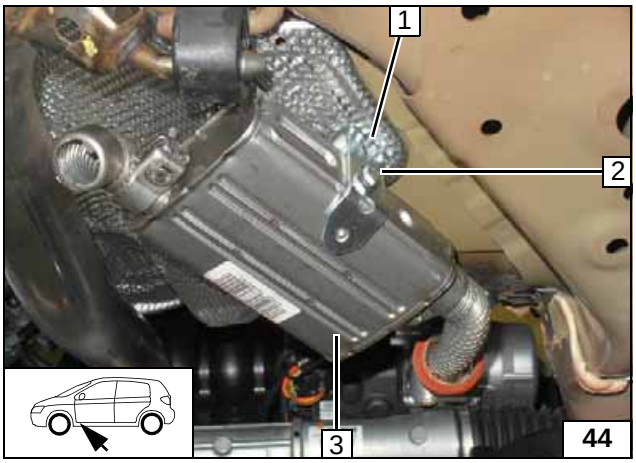


1.4

Ensure sufficient distance (at least 20 mm) from original vehicle exhaust system.

1 Perforated bracket
2 M6x16 bolt, spring lockwasher
3 Exhaust silencer

Installing silencer

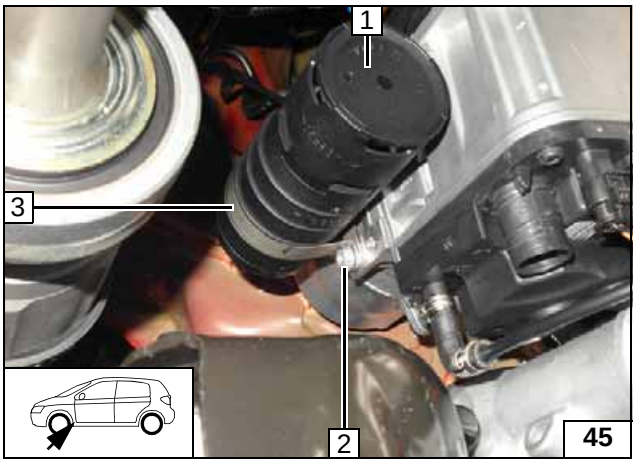


1.8

Ensure sufficient distance (at least 20 mm) from original vehicle exhaust system.

1 Perforated bracket
2 M6x16 bolt, spring lockwasher
3 Exhaust silencer

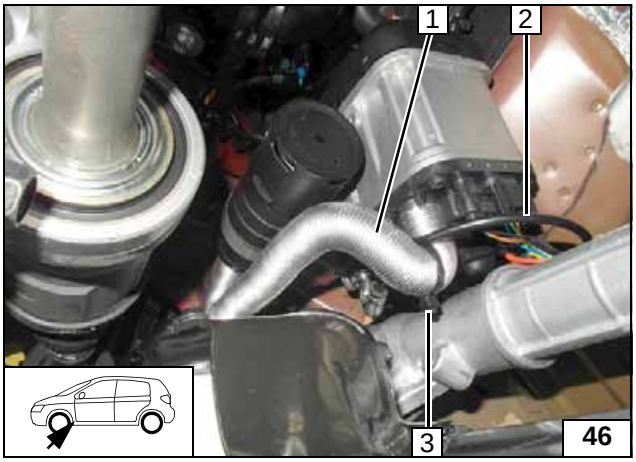
Installing silencer



Combustion Air

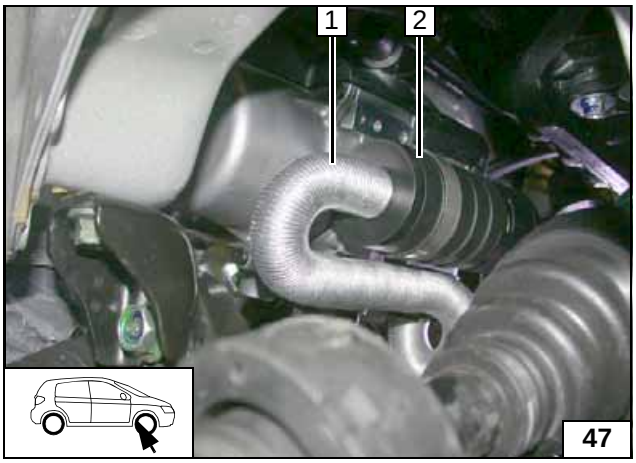
1 Silencer
2 5x13 self-tapping bolt
3 Loosely mount 51 mm dia. clamp

Installing silencer



Route fuel line **2** over combustion air pipe **1** and secure using cable tie **3**. Ensure sufficient distance from steering gear!

Installing combustion air pipe



Tighten 5x13 self-tapping bolt on heater (hidden).

1 Combustion air pipe
2 Silencer

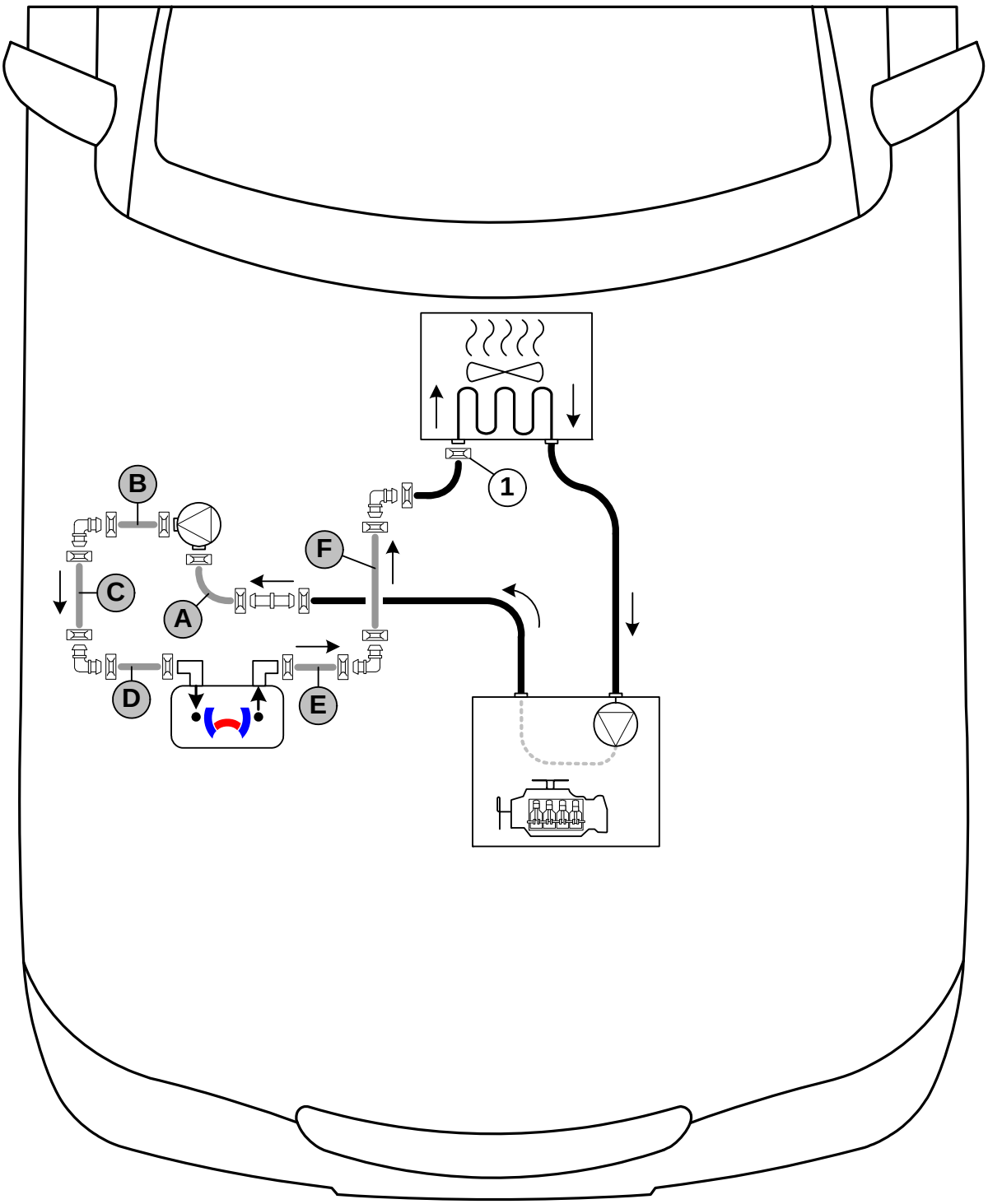
Installing combustion air pipe

Coolant Circuit for 1.4 / 1.8 Without Residual Heat Pump

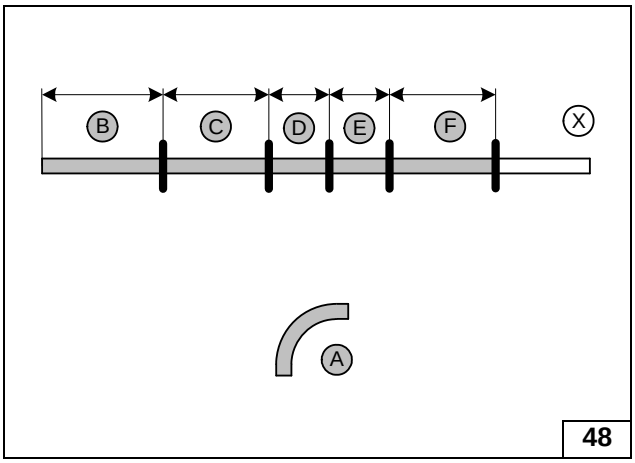
Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram



All spring clips without a specific designation = 25mm dia. All connecting pipes and = 18x18 mm dia.
1 = Original vehicle spring clip

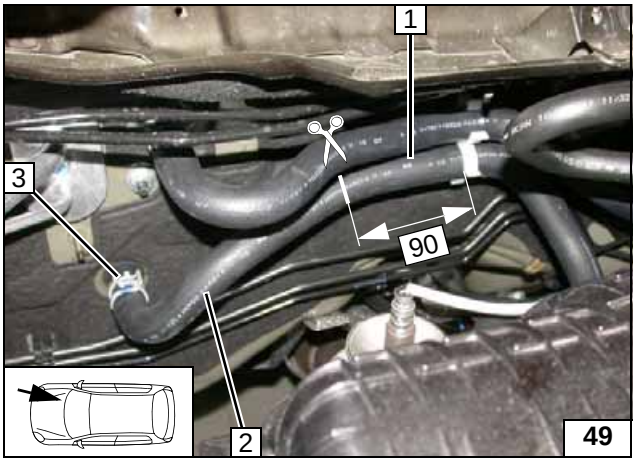


48

Discard section **X**.
Hose **A** = 18mm dia., 90° moulded hose

B = 130
C = 130
D = 60
E = 70
F = 110

Cutting hoses to length

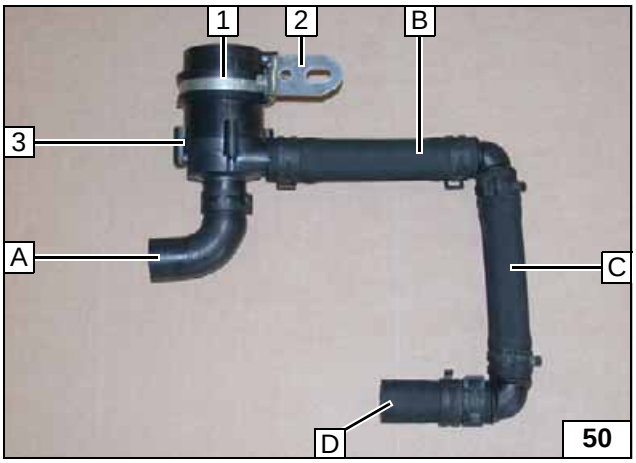


49

Cut hose of engine outlet / heat exchanger inlet at the marking. Original vehicle spring clip **3** will be reused.

1 Hose section on engine outlet
2 Remove hose section on heat exchanger inlet

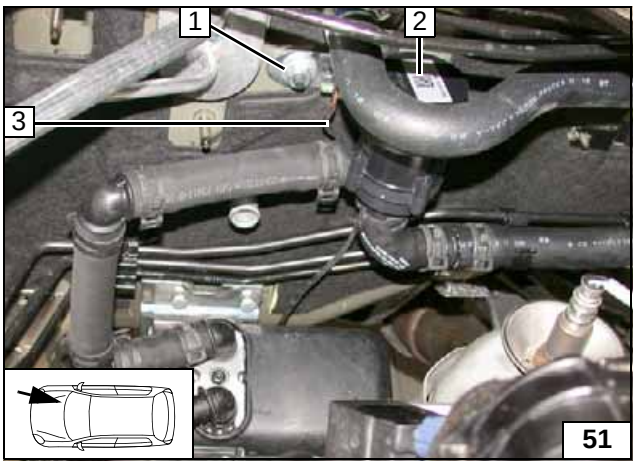
Cutting point



50

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

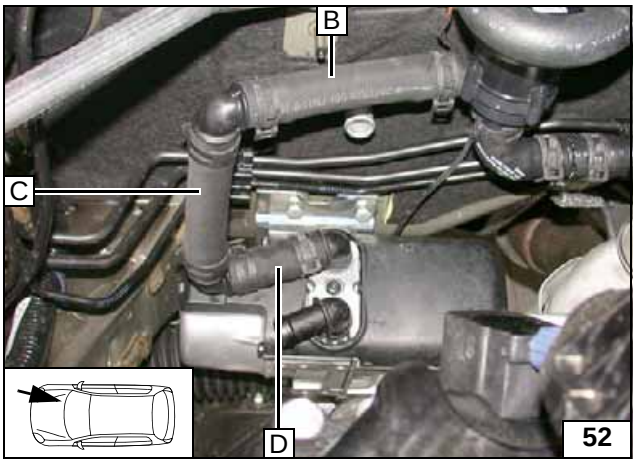
Premounting circulating pump



51

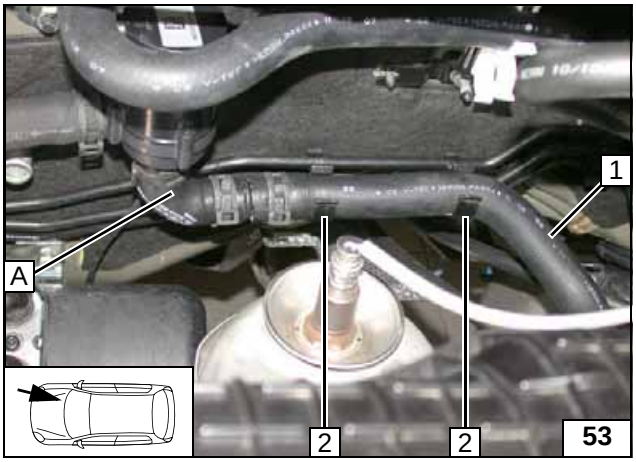
1 Angle bracket, original vehicle flanged nut
2 Circulating pump
3 Wiring harness of circulating pump

Installing circulating pump



Connecting heater inlet

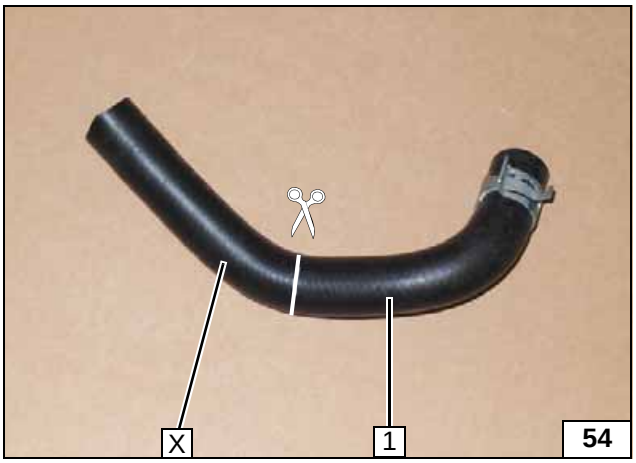
1 Hose on engine outlet
2 Hose bracket [2x]



Connecting engine outlet

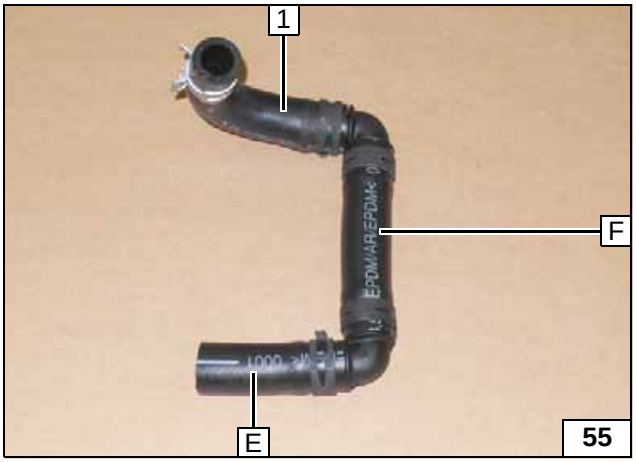
Discard section **X**

1 Hose section of heat exchanger inlet

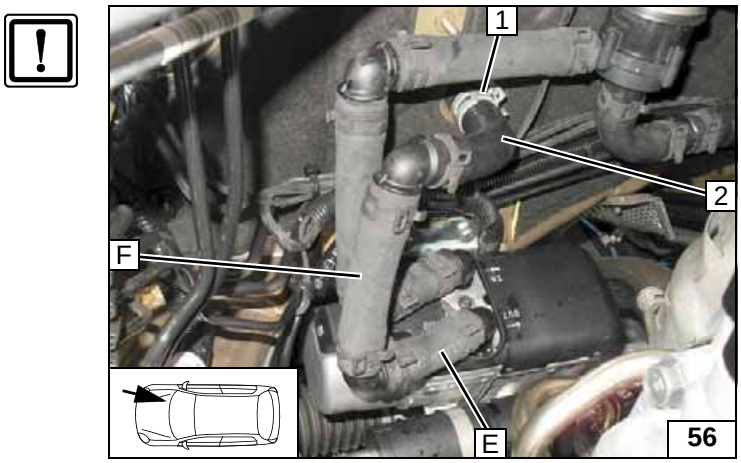


Preparing hose of heat exchanger inlet

1 Hose of heat exchanger inlet



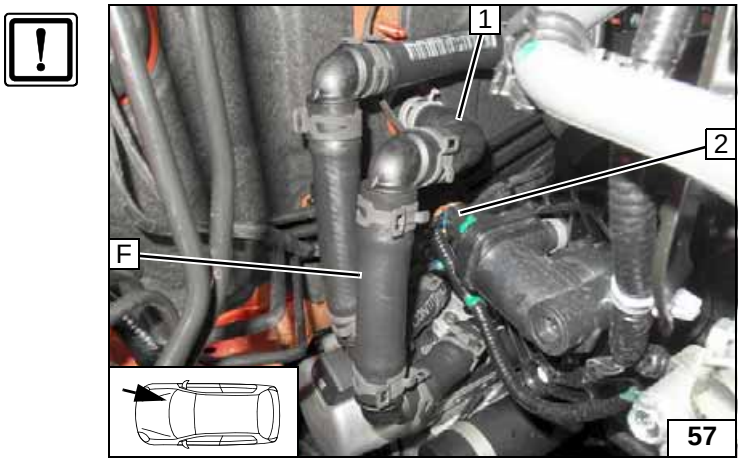
Premounting hoses



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

1 Original vehicle spring clip
2 Hose of heat exchanger inlet

Connecting heater outlet/heat exchanger inlet



Ensure sufficient distance in 1.8 P (at least 20mm) between original vehicle connector **2** and hoses, correct if necessary.

1 Hose of heat exchanger inlet

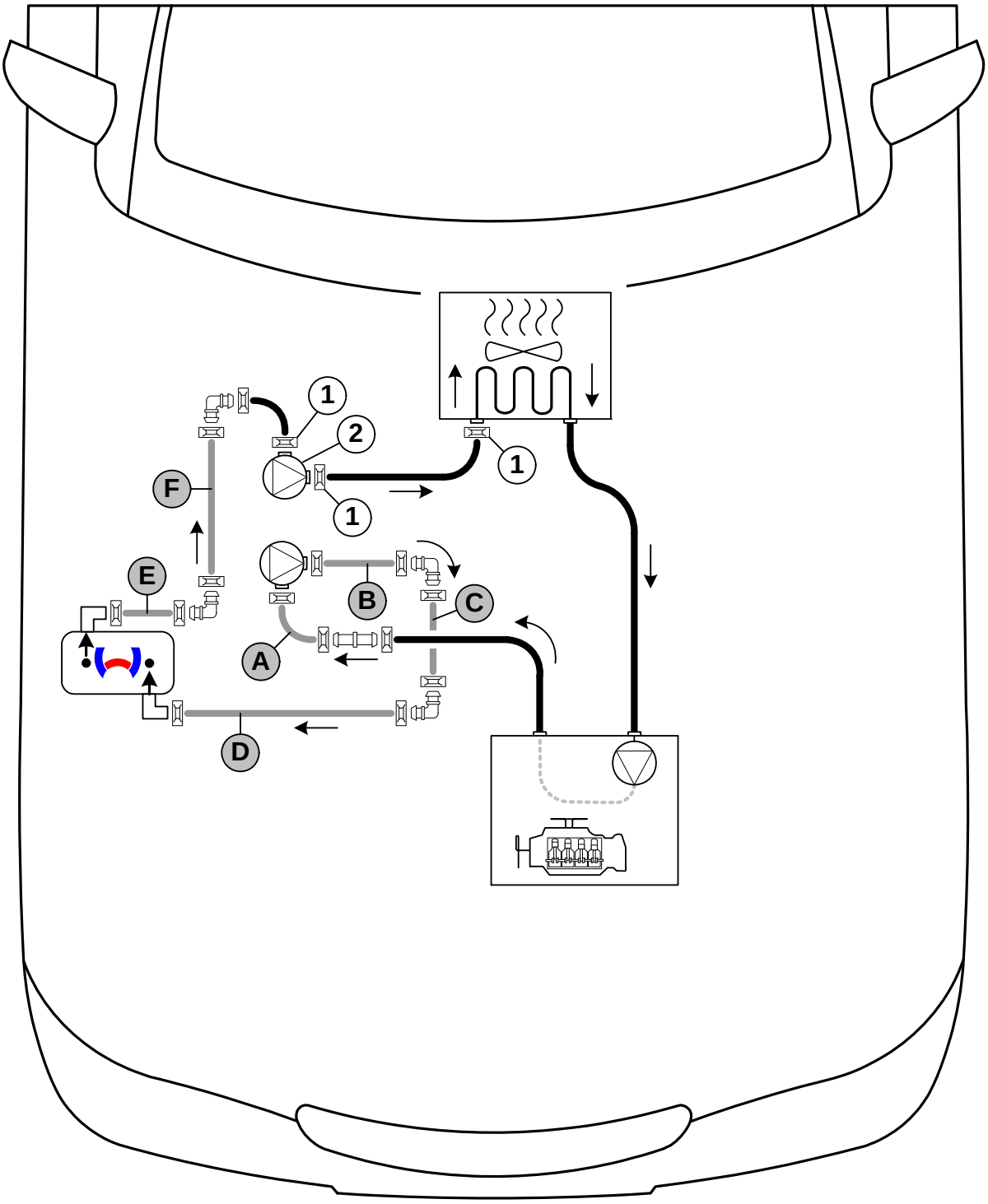
Distance check

Coolant Circuit for 1.8 With Residual Heat Pump

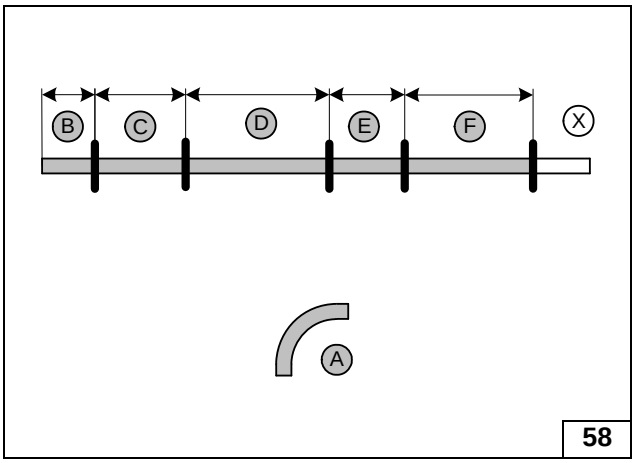
Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram



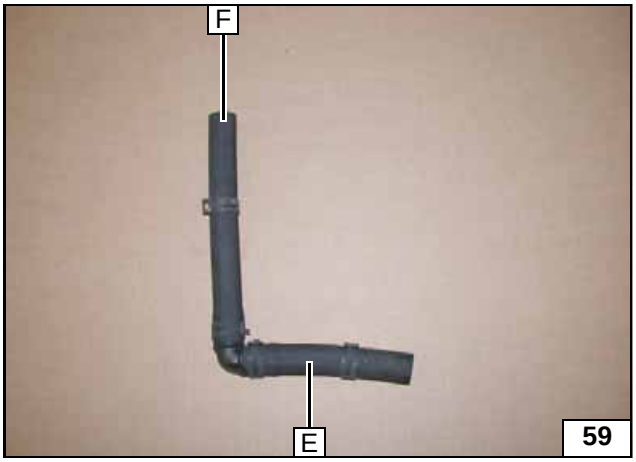
All spring clips = 25 mm dia. All connecting pipes and = 18x18 mm dia.
1 = Original vehicle spring clip
2 = Original vehicle circulating pump.



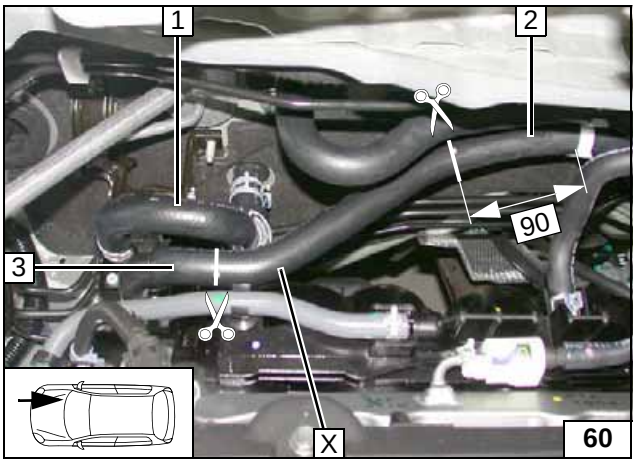
Discard section **X**.
Hose **A** = 18mm dia., 90° moulded hose

B = 60
C = 120
D = 190
E = 130
F = 200

Cutting hoses to length



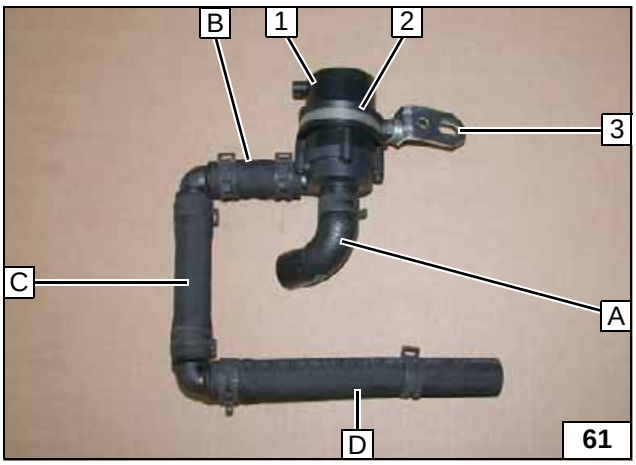
Preparing hoses E and F



Cut hose of engine outlet / original vehicle circulating pump at the markings. Discard section **X**.
Remove hose section of heat exchanger inlet **1** with original vehicle circulating pump and hose section of original vehicle circulating pump **3**.

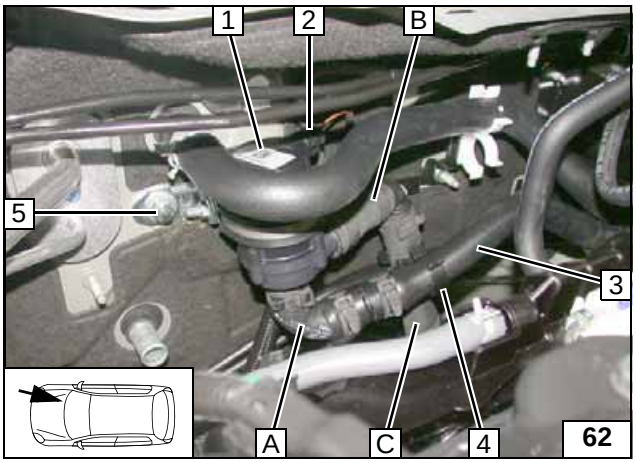
2 Hose section of engine outlet

Cutting point



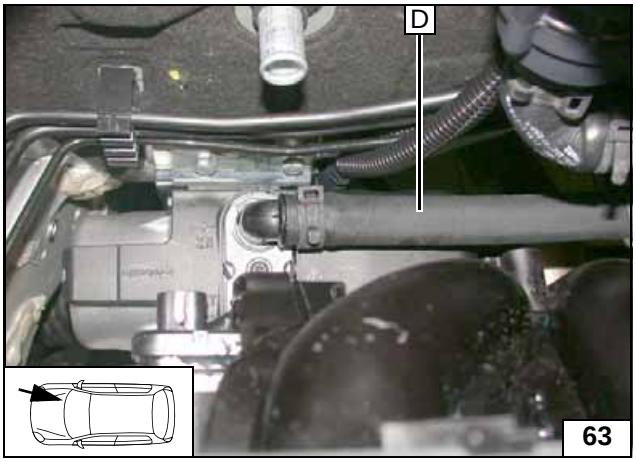
1 Circulating pump
2 48 mm dia. rubber-coated p-clamp
3 M6x20 bolt, angle bracket, flanged nut

Preparing circulating pump

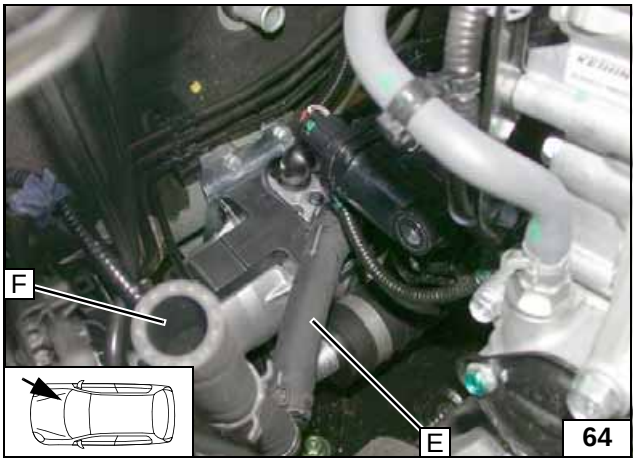


1 Circulating pump
2 Wiring harness of circulating pump
3 Hose of engine outlet
4 Hose bracket
5 Angle bracket, original vehicle flanged nut

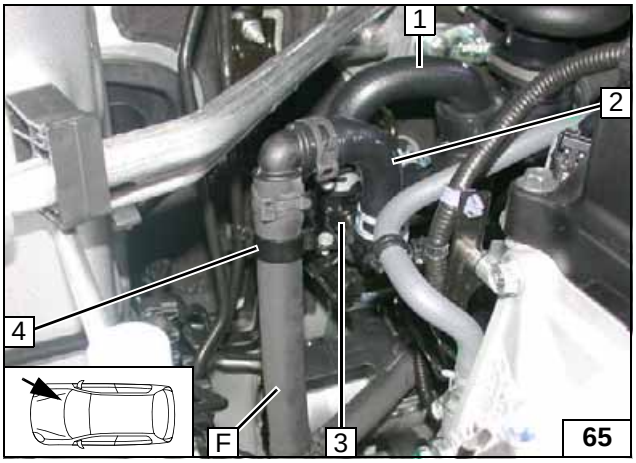
Installing circulating pump



Connecting heater inlet



Connecting heater outlet



Mount original vehicle circulating pump **3** and hose of heat exchanger inlet **1**. Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

2 Hose on original vehicle circulating pump, rotated
4 Hose bracket

Connecting heat exchanger inlet

Fuel

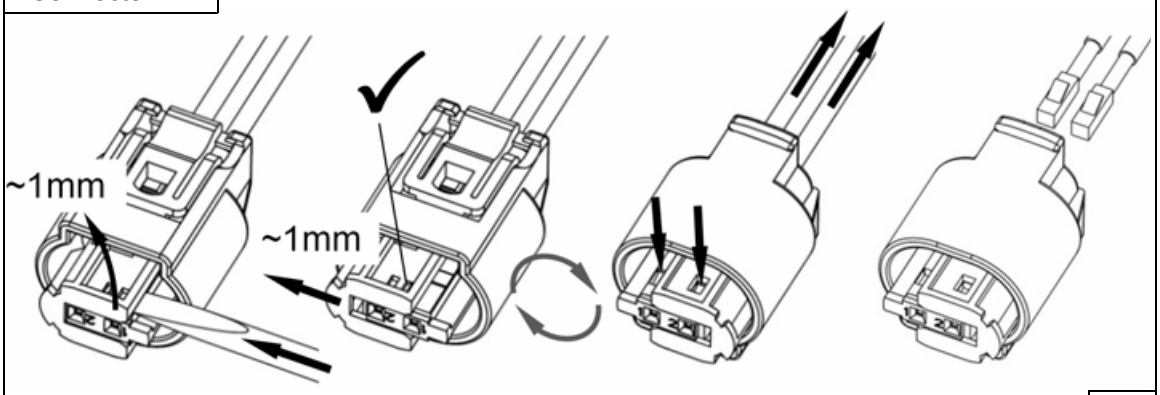
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

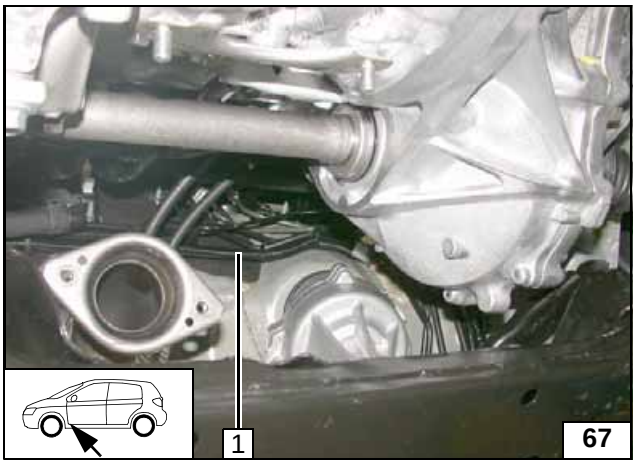
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

Connector X7



66

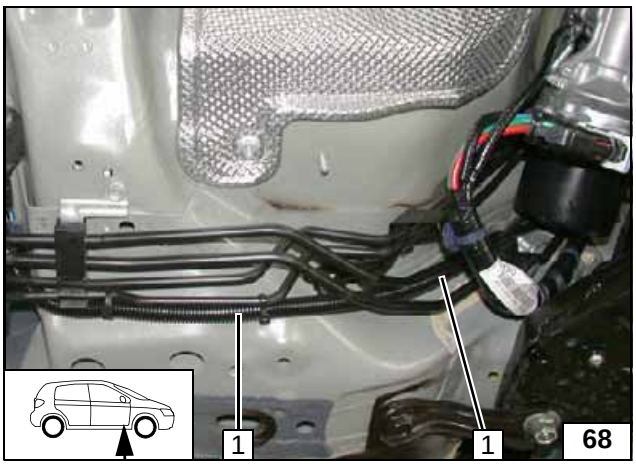
Dismantling metering pump connector



67

Slide 10mm dia. corrugated tube **1** over fuel line and wiring harness of metering pump and route to the underbody.

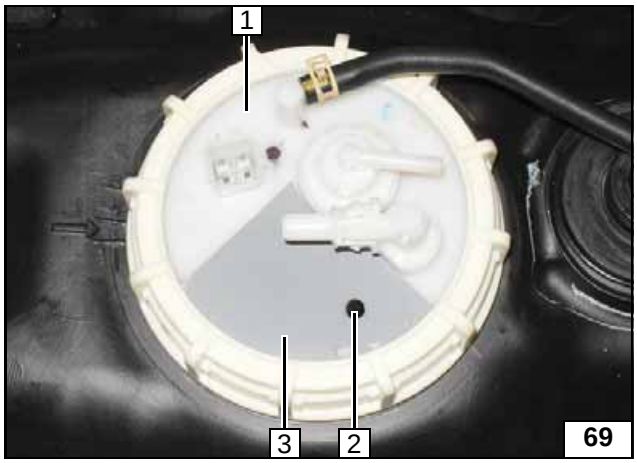
Routing lines



68

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

Routing lines



Installing FuelFix

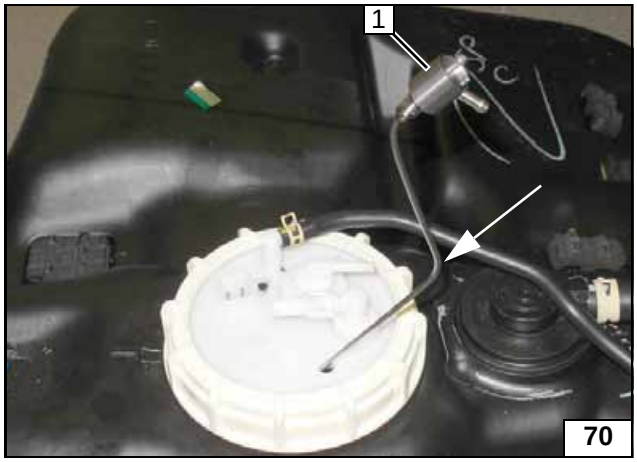
Remove the fuel tank in accordance with the manufacturer's instructions.

Work steps F1, F2 and F3.

Cut out template **3** and apply on fuel tank sending unit **1** as shown.

2 Copy hole pattern, drill hole with drill provided

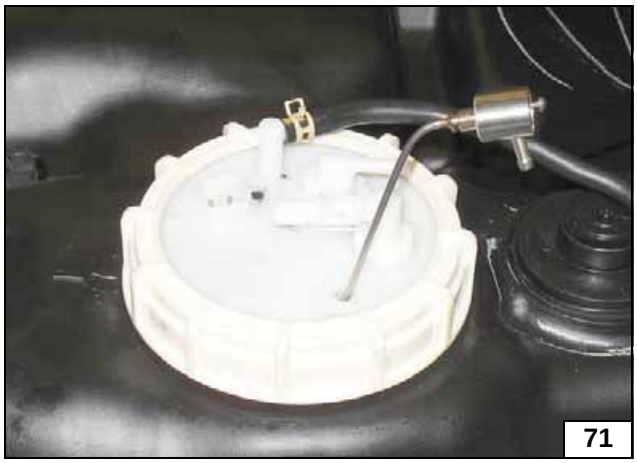
Hole for FuelFix



Work steps F4 and F5.

Bend FuelFix **1** according to template and cut it to length.

Inserting FuelFix

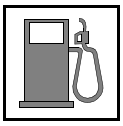


Work step F5.

Inserting FuelFix

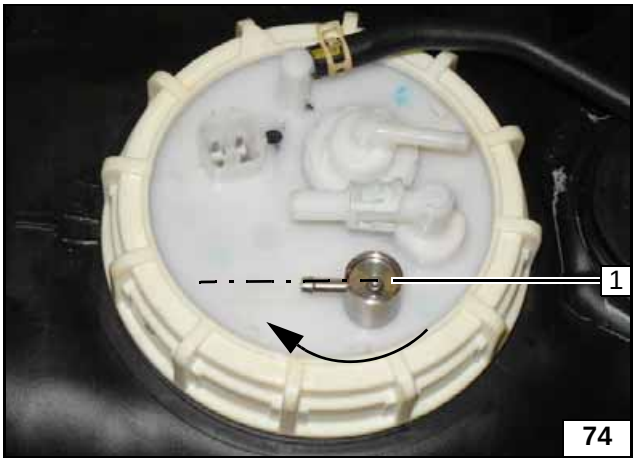
Work step F5.

Inserting FuelFix



Work step F5.

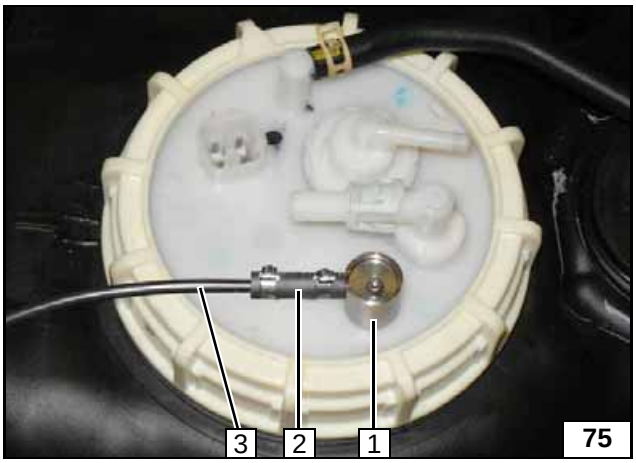
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** by turning as shown.

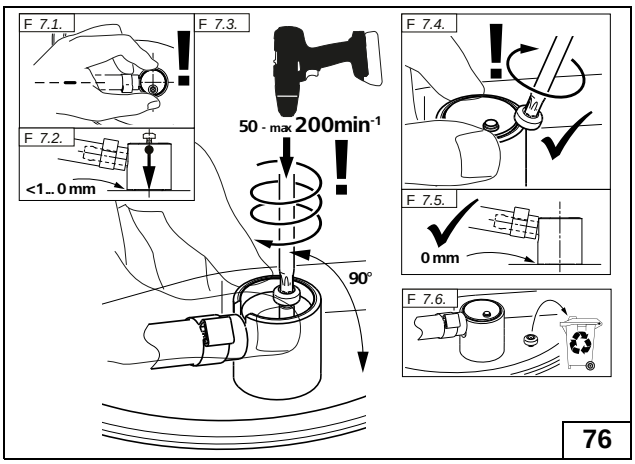
Aligning FuelFix



Work step F6.

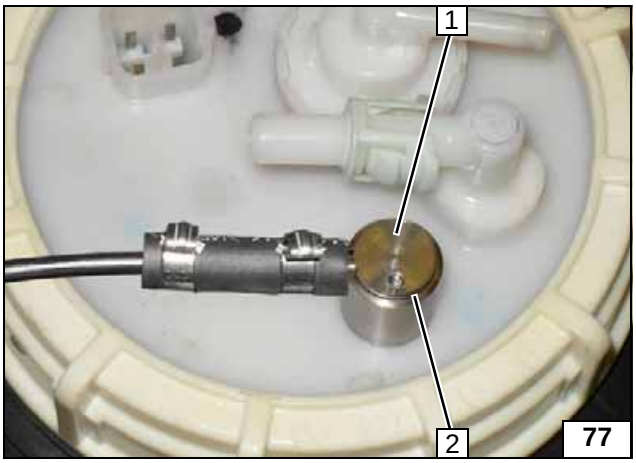
1 FuelFix
2 Hose section, 10 mm dia. clamp [2x]
3 Fuel line

Connecting fuel line



Work step F7.

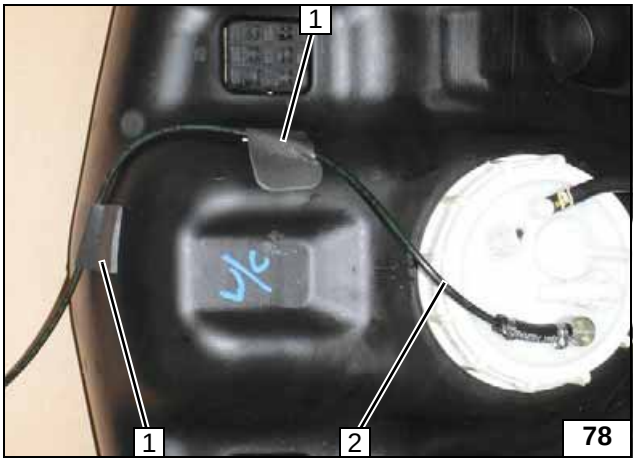
Installing FuelFix



Work step F8.

Ensure firm seating of the FuelFix and check the positioning of clamping piece **1** with respect to the top edge of housing **2**.

Checking final position

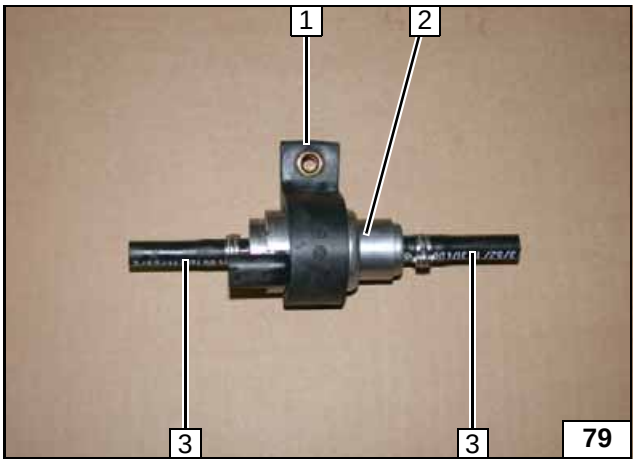


Work step F8.

1 Adhesive tape as strain relief [2x]
2 Fuel line of FuelFix

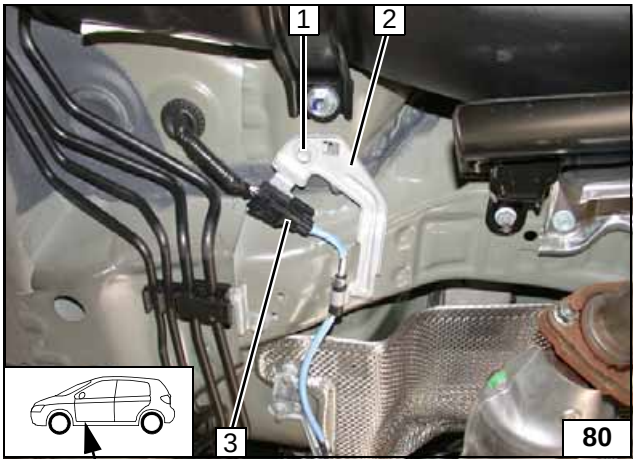
Install the fuel tank in accordance with the manufacturer's instructions.

Installing fuel line



1 Mounting of metering pump
2 Metering pump
3 Hose section, 10mm dia.clamp [2x]

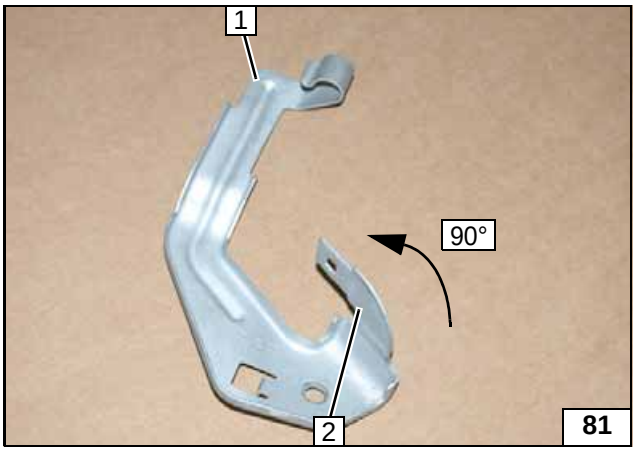
Premounting metering pump



1.4

1 Remove original vehicle bolt and discard it
2 Remove bracket of connector
3 Pull off connector

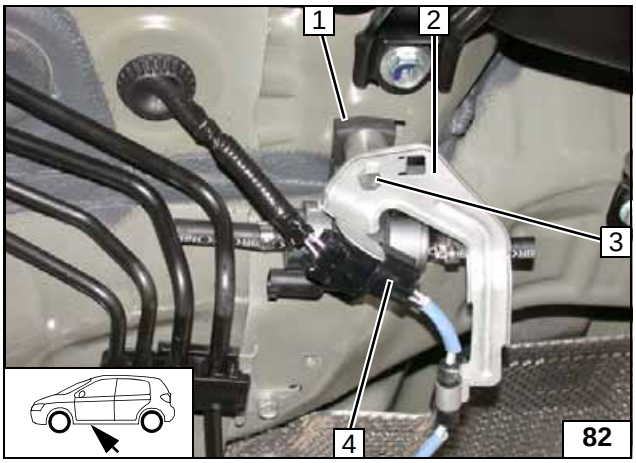
Removing bracket



Bend tab at position **2** upwards by 90°.

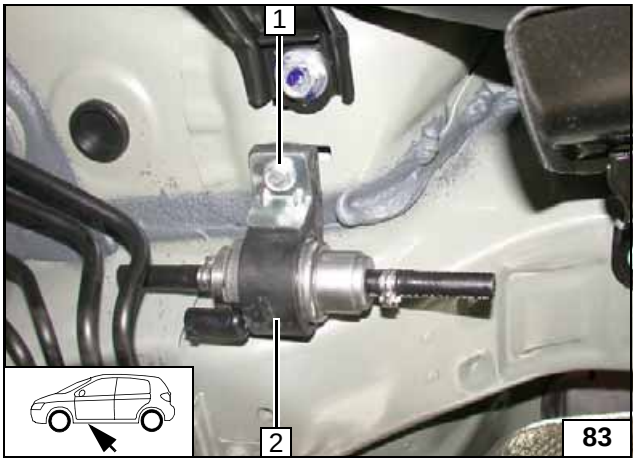
1 Bracket of connector

Bending bracket at an angle



1 Mounting of metering pump
2 Bracket
3 6x40 bolt, 20mm shim, original vehicle threaded hole
4 Attach connector

Installing metering pump

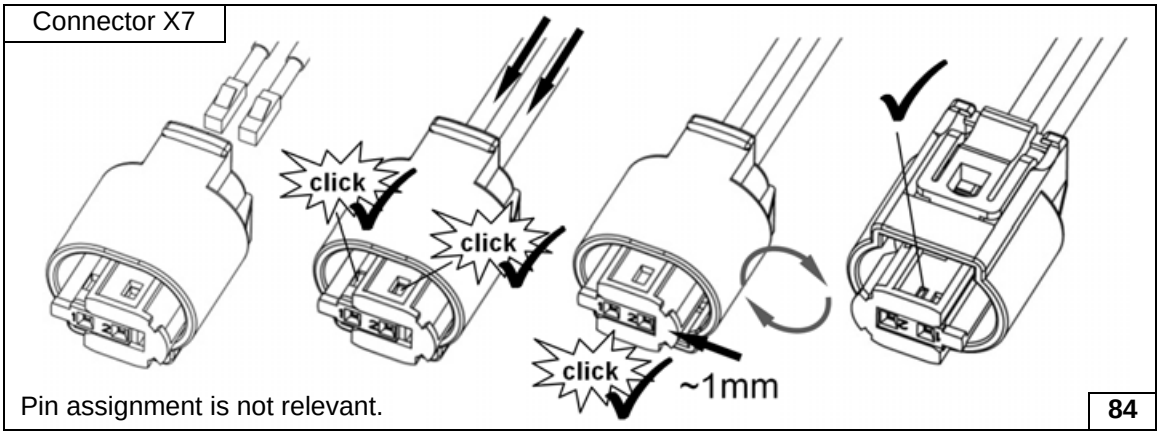


1.8

1 M6x25 bolt, support angle bracket, original vehicle threaded hole
2 Mounting of metering pump

Installing metering pump

All vehicles



Completing metering pump connector

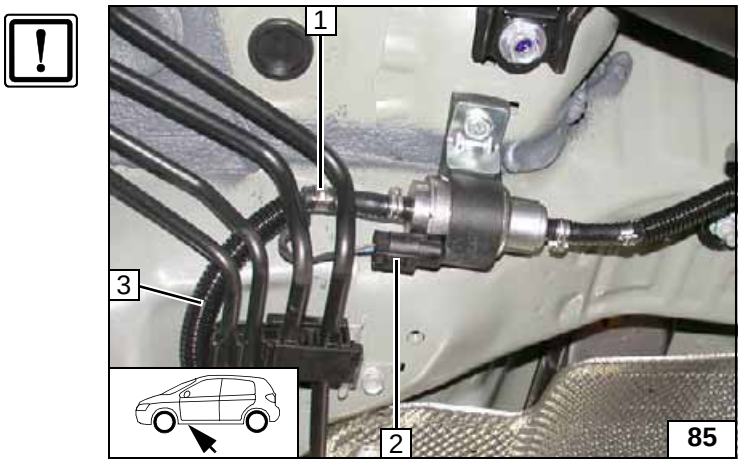


Image shows 1.8!

1 Fuel line of heater,10 mm dia. clamp
2 Wiring harness of metering pump, connector X7 mounted
3 Wiring harness of metering pump, fuel line of heater in 10 mm dia. corrugated tube

Connecting metering pump

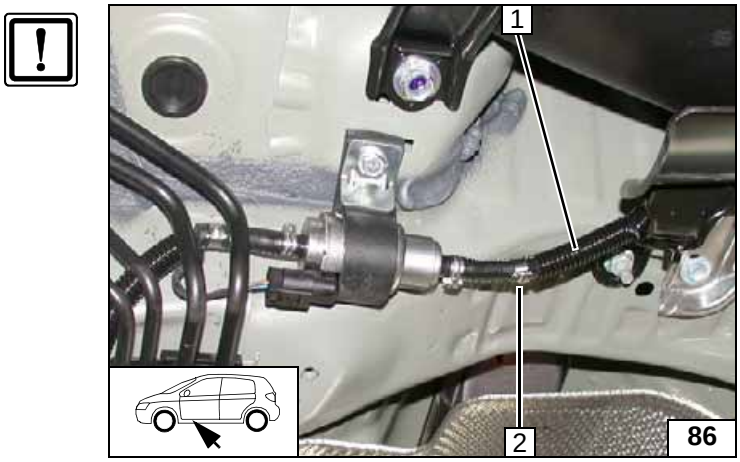


Image shows 1.8!
Ensure sufficient distance from neighbouring components, correct if necessary.

1 FuelFix fuel line in 10 mm dia. corrugated tube
2 10 mm dia.clamp

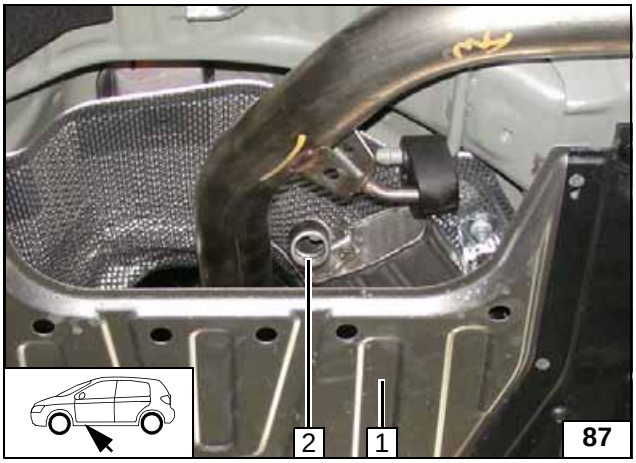
Connecting metering pump

Final Work

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
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".**
- **Place the "Switch off parking heater before refuelling" caution label near the filler neck**
- **See installation instructions for initial start-up and function check**

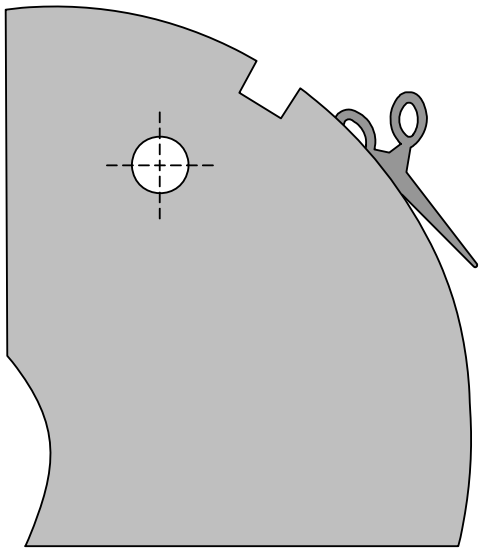
Aligning exhaust end section

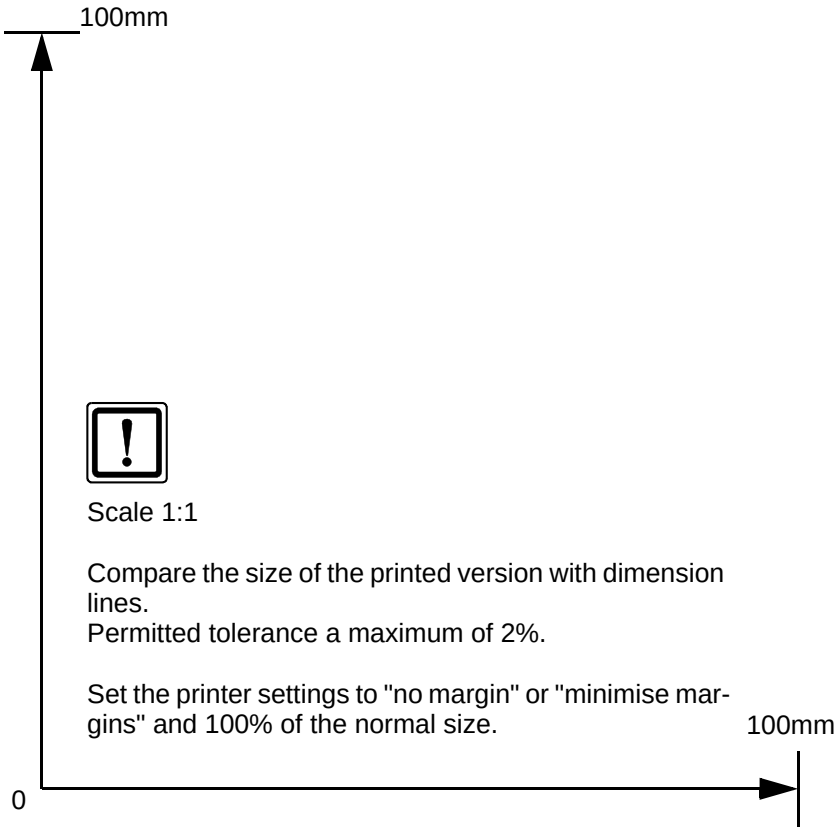


1 Underride protection mounted
2 Exhaust end section

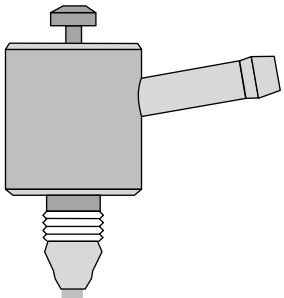
Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Fuel Tank Sending Unit Template

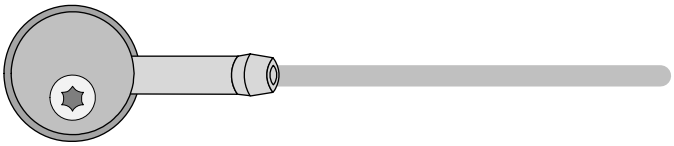




FuelFix Template



Top view



100mm

Scale 1:1

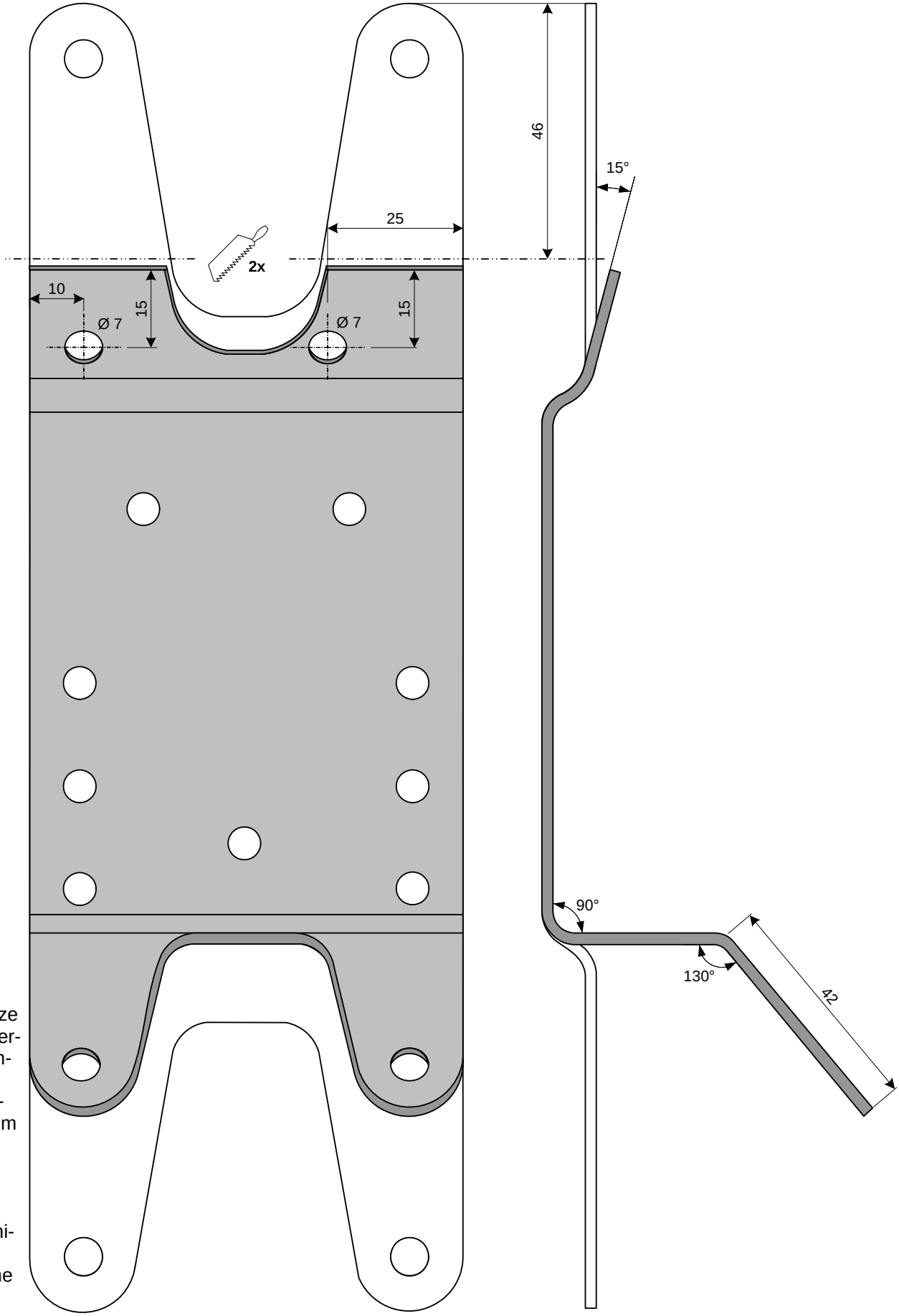
Compare the size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

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

100mm

0

Bracket Template



100mm

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.

0

100mm

Operating Instructions for 1- Zone Automatic Air-Conditioning

Please remove page and add to the vehicle operating instructions.

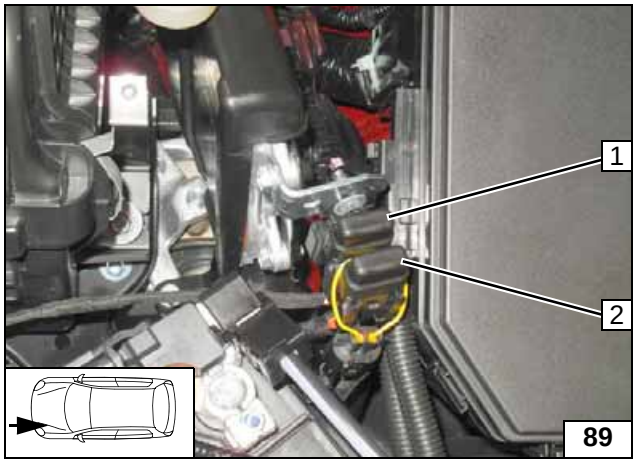
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

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

Before parking the vehicle, make the following settings:

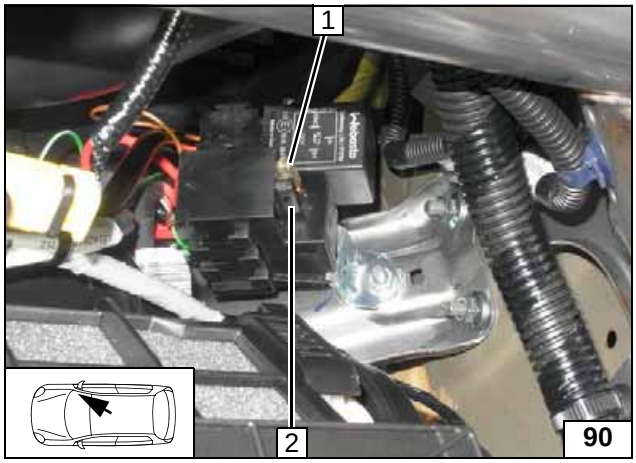
1 Set temperature to "HI"
2 Air outlet to windscreen

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses

Webasto
Feel the Drive

Operating Instructions for 2- Zone Automatic Air-Conditioning

Please remove page and add to the vehicle operating instructions.

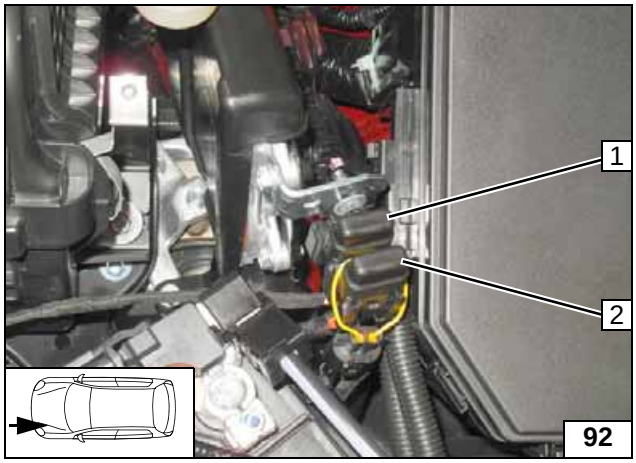
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

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

Before parking the vehicle, make the following settings:

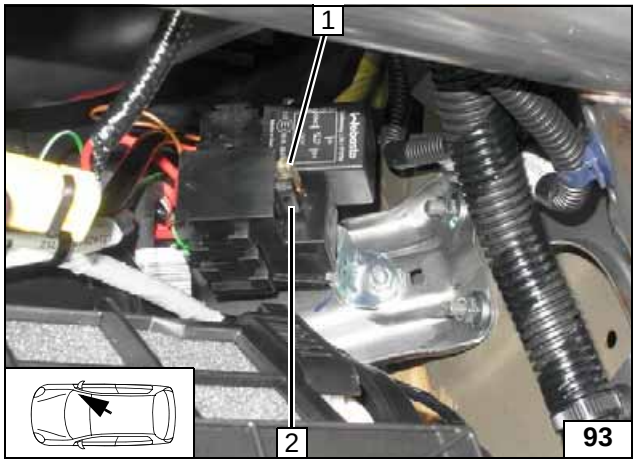
1 Set temperature on both sides to "HI"
2 Air outlet to windscreen

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses