Water Heater

***Thermo Top Evo* Parking Heater** E1 00 0258

Installation Documentation
Fiat Punto / Punto Evo

Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Fiat Punto /	Punto Evo	199	e3 * 2001 / 116 * 0217 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 8V	Petrol	SG	48	1242	199A4000
1.2 8V	Petrol	SG	51	1242	169A4000
1.4 8V	Petrol	SG	57	1368	350A1000
1.4 16V / Multi Air	Petrol	SG	77	1368	955A6000

SG = manual transmission

From Model Year 2010
Left-hand drive vehicle

Verified equipment variants:	Manual / automatic air-conditioning system
	Front fog light
Not verified:	Passenger compartment monitoring Headlight washer system
Total installation time:	approx. 5.5 hours

Fiat Punto / Punto Evo

Table of Contents

Necessary Components

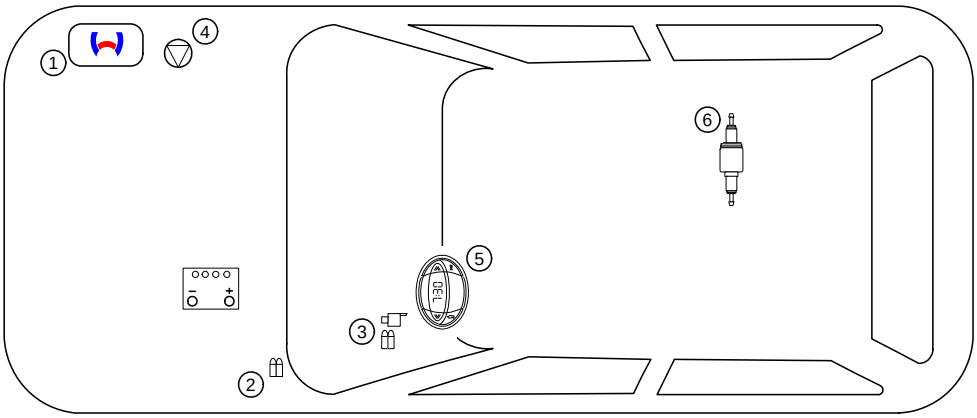
- Basic delivery scope of *Thermo Top Evo* in accordance with price list
- Installation kit for Fiat Punto / Punto Evo 2010 Petrol: **1316249B**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

Optional in case of Multi Air Turbo:
- Additional kit for Fiat Punto Multi Air Turbo Ident.-Nr.: **1318198A**

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. Connectors on electronic components must audibly snap into place during assembly.

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

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

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

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

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 5627

Note

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

Important

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

Note

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

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

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Fiat Punto / Punto Evo

Information on Validity

This installation documentation applies to Fiat Punto / Punto Evo Petrol vehicles - for validity, see page 2 - from model year 2010 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

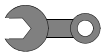
Dimensions
- All dimensions are in mm

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-

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

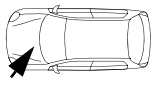
Specific risk of damage to components

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



Fiat Punto / Punto Evo

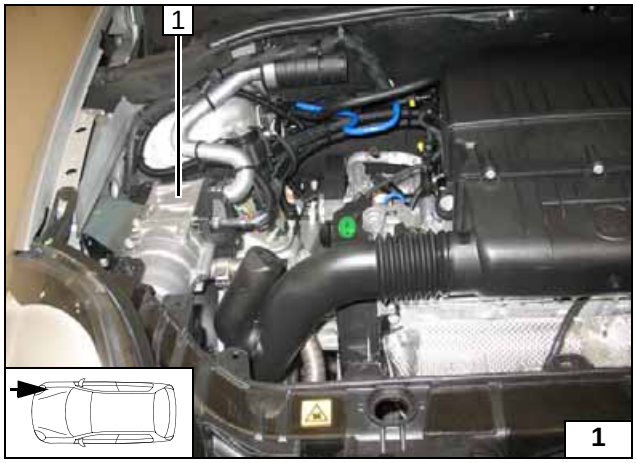
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove engine cover (only for Multi Air).
- Drain off the coolant.
- Remove the air filter intake connection piece.
- Remove the windscreen wiper.
- Remove the coolant reservoir cap.
- Fold the rear seat surface.
- Open the tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove cover (shelf) of the driver's side instrument panel.

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

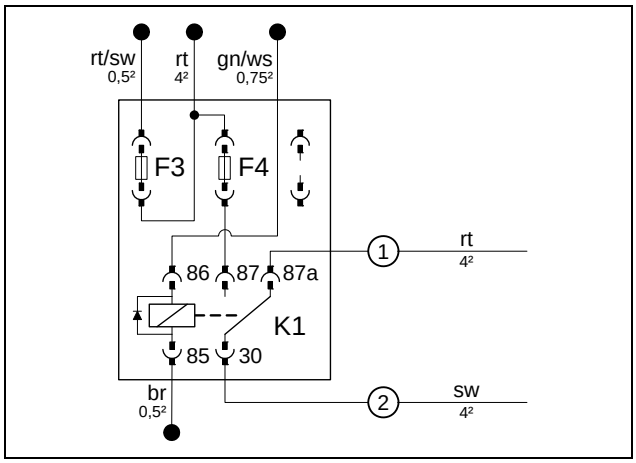
Installation location

Preparing Electrical System

Wire sections retain their numbering throughout the whole document.

Preparing fuse carrier of passenger compartment

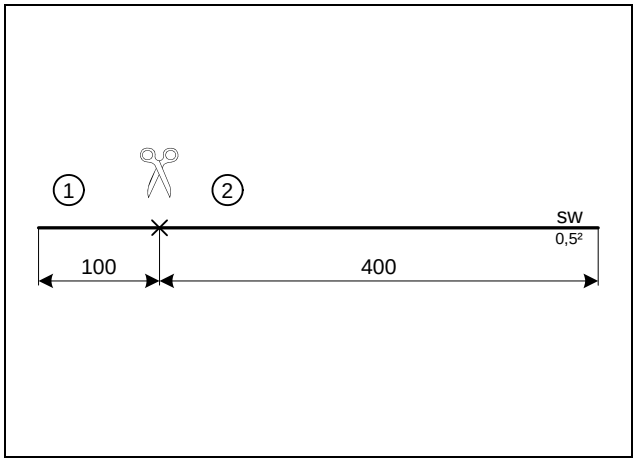
Manual air-conditioning



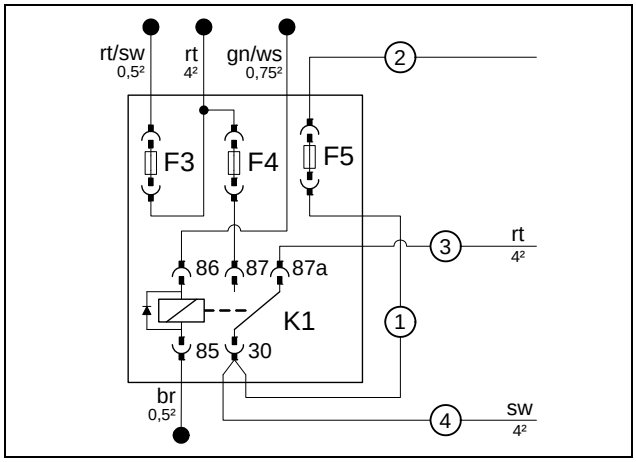
F4 25A and K1 relay are mounted after installing the fuse carrier. Insert red (rt) wire ① in relay socket K1/87a and black (sw) wire ② in relay socket K1/30.

Cutting wire to length

Automatic air-conditioning



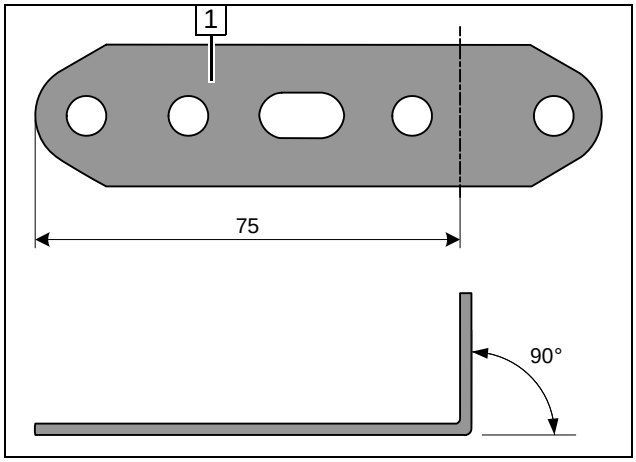
Preparing fuse carrier of passenger compartment



Angling down perforated bracket

All vehicles

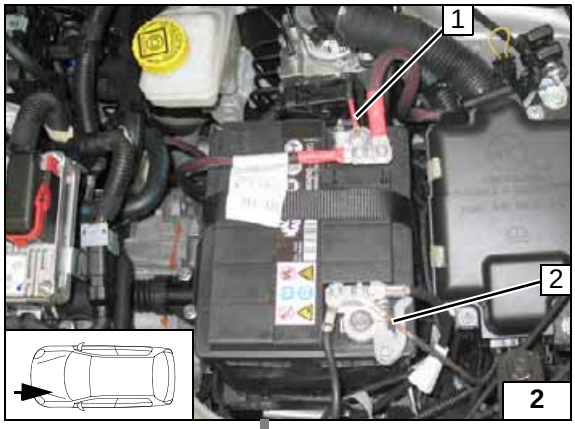
1 Perforated bracket



Electrical System

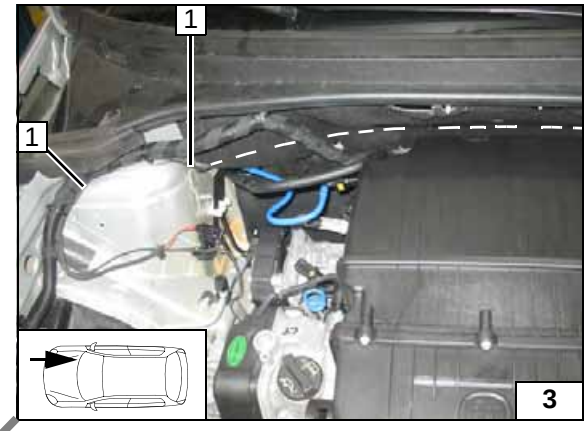
Positive and earth wire

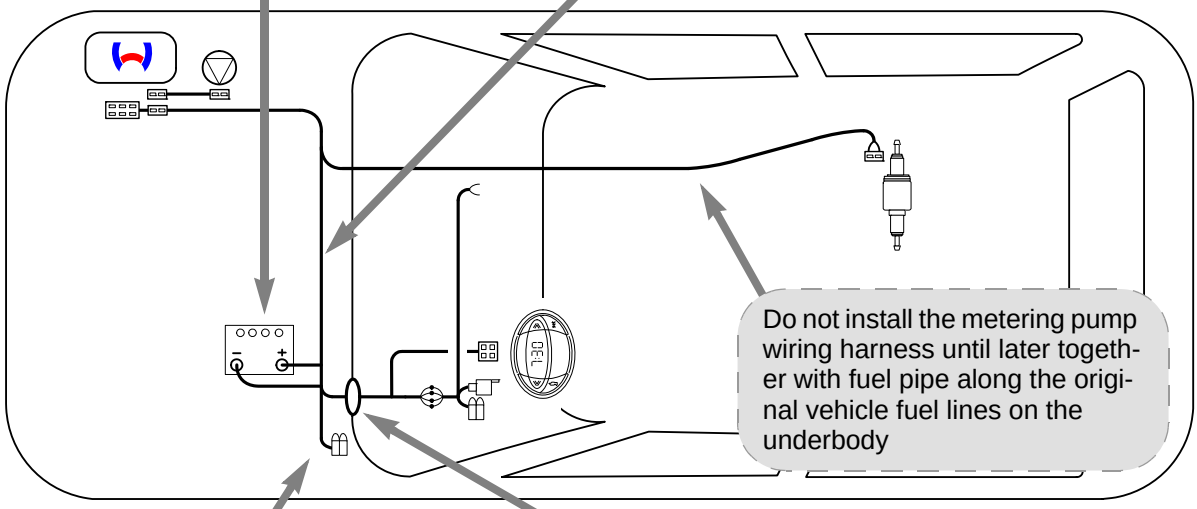
1 Positive wire, flanged nut on positive terminal of battery
2 Earth wire, flanged nut on negative terminal of battery



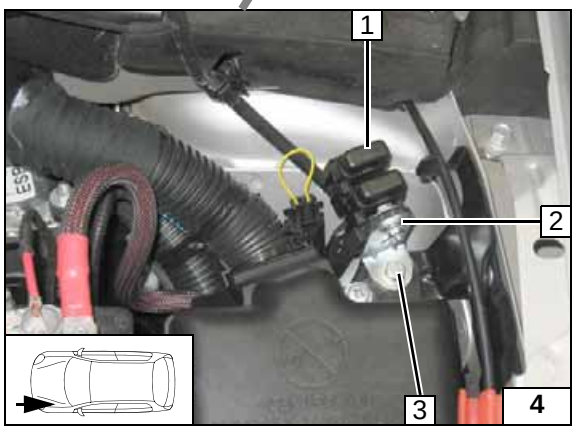
Installing wiring harness

Install wiring harness of heater **1** behind the insulation mat at the installation location of the heater.



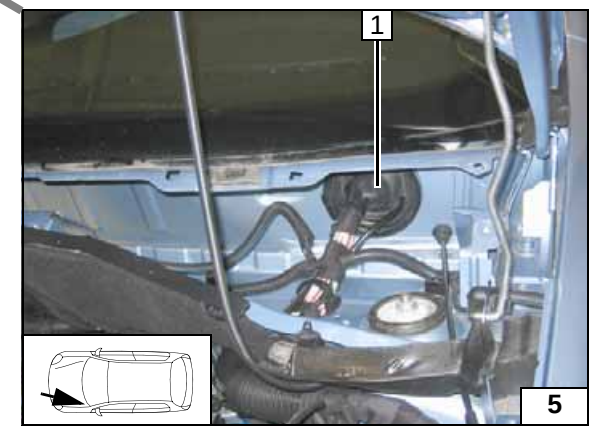


Wiring harness routing diagram



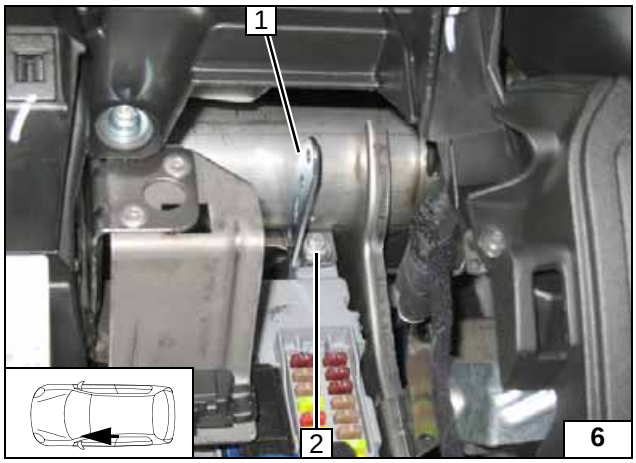
Fuse holder of engine compartment

1 F1-2 fuses inserted
2 M5x16 bolt, large diameter washer [2x], fuse holder retaining plate, flanged nut
3 Angle bracket, original vehicle nut



Wiring harness pass through

1 Protective rubber plug



1 Perforated bracket
2 Original vehicle bolt

Installing perforated bracket

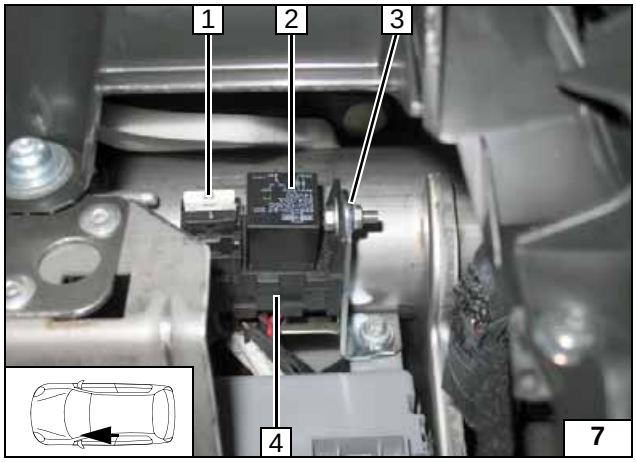


Photo shows vehicle with manual air-conditioning.

1 25A F4 fuse inserted
2 K1 relay inserted
3 M5x16 bolt, large diameter washer, flanged nut
4 Passenger compartment fuse holder

Installing fuse holder of passenger compartment

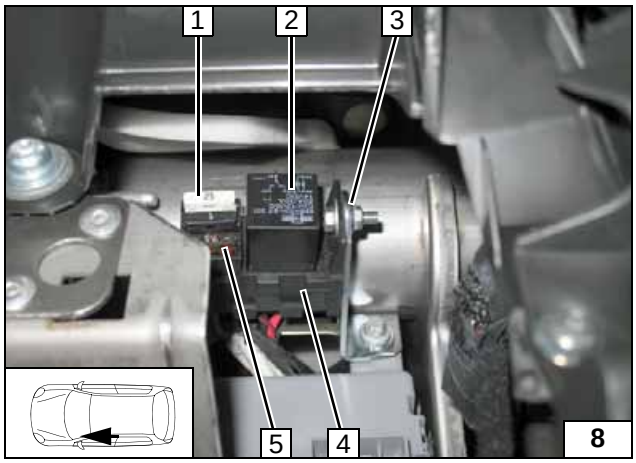
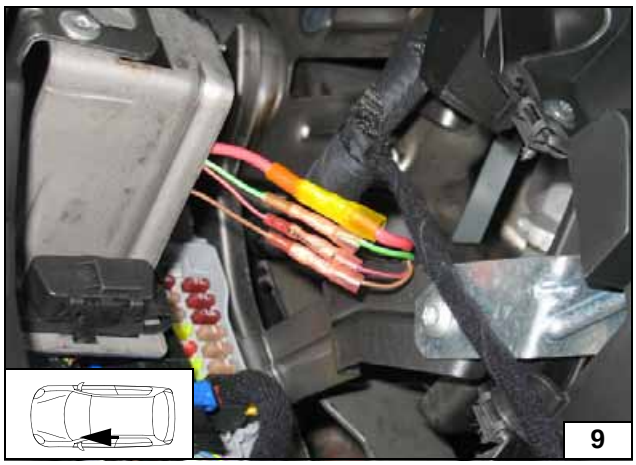


Photo shows vehicle with automatic air-conditioning.

1 25A F4 fuse inserted
2 K1 relay inserted
3 M5x16 bolt, large diameter washer, flanged nut
4 Passenger compartment fuse holder
5 7.5A additional fuse F5 inserted

Fuses of passenger compartment

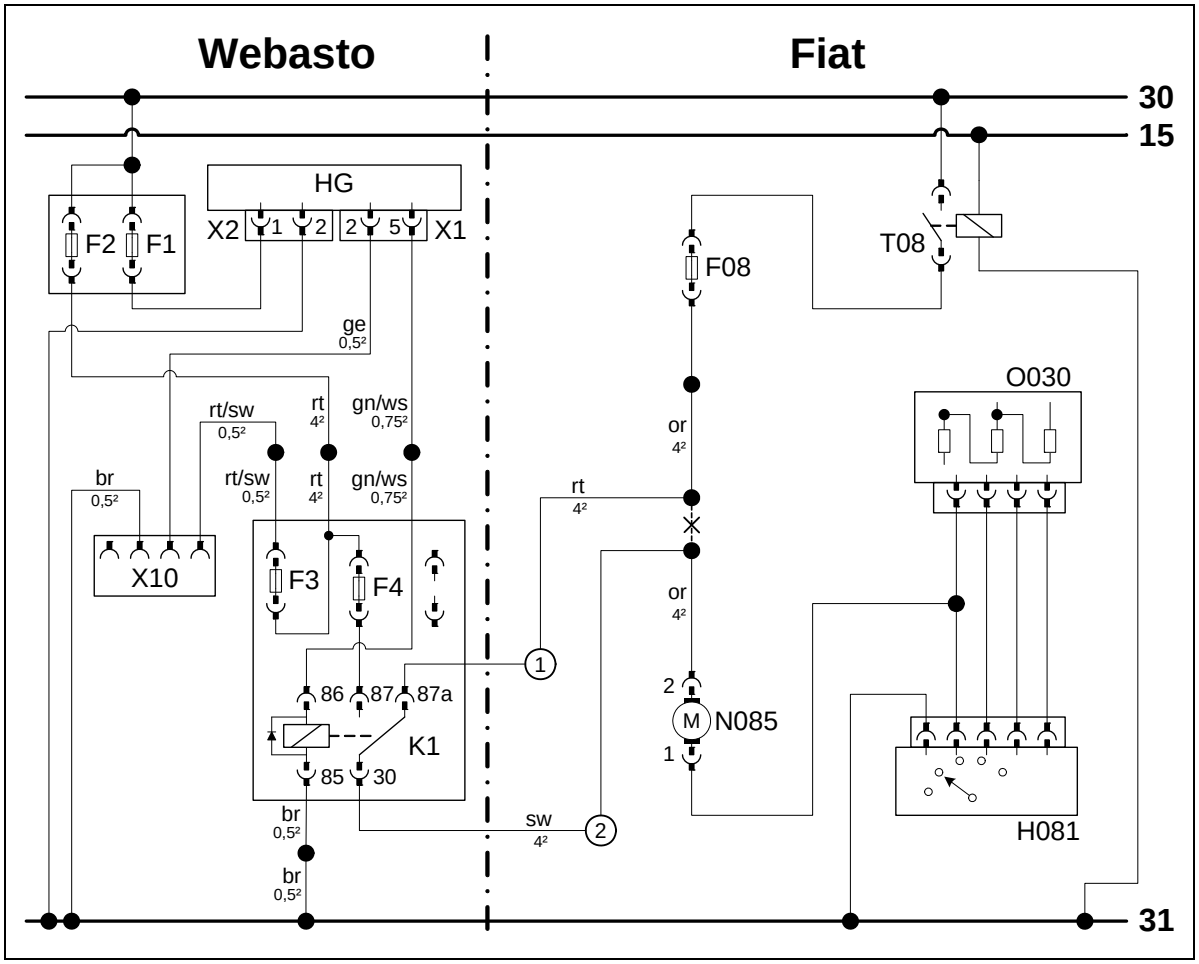


Connect the wiring harness of passenger compartment fuse holder to the wiring harness of the heater according to the wiring diagram, in such a way that the wires of the same colour are connected to each other.

Connecting wiring harnesses

Fan Controller for Manual Air-Conditioning

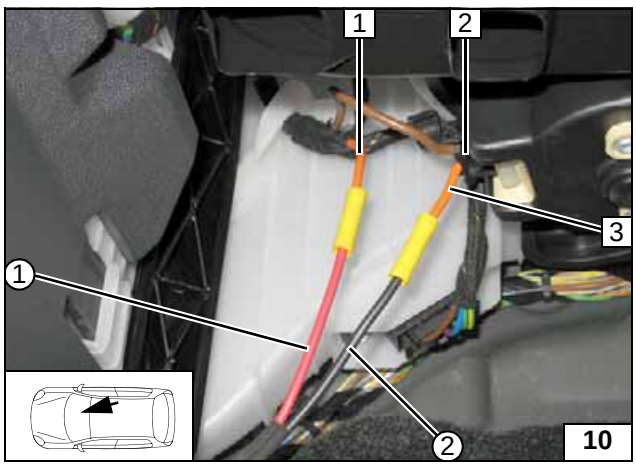
Wiring diagram



Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	T08	Fan relay	rt	red
X1	6-pin heater connector	F08	30A fuse	ws	white
X2	2-pin heater connector	O030	Resistor group	sw	black
X10	4-pin connector Heater control	N085	Fan motor	br	brown
		H081	Fan switch	gn	green
K1	Fan relay			ge	yellow
F1	20A fuse			or	orange
F2	30A fuse				
F3	1A fuse			**X**	Cutting point
F4	25A fuse			Wiring colours may vary.	

Connecting fan motor

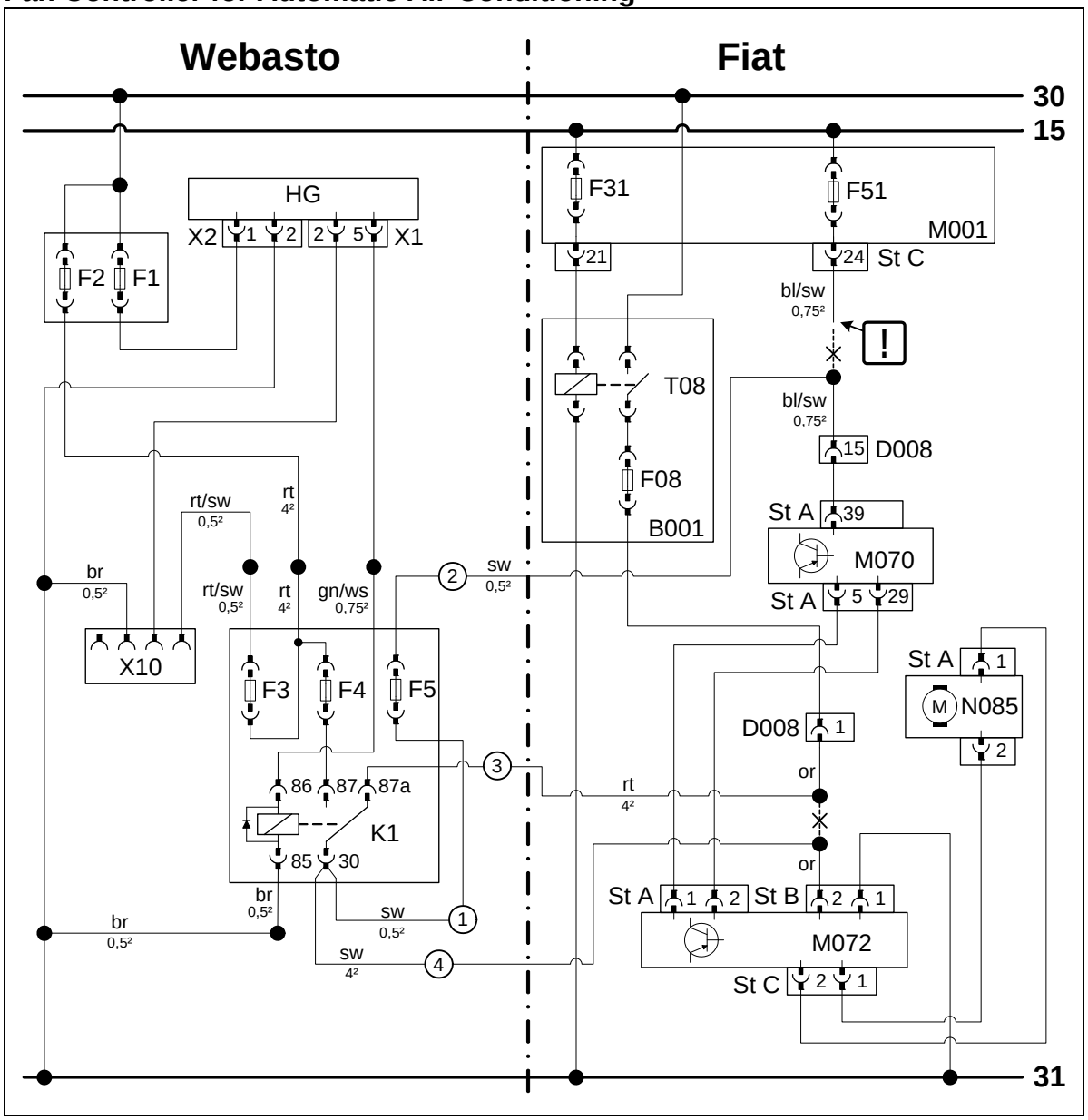


Connection to 2-pin connector **2** from the fan motor.
Produce connections as shown in wiring diagram.

1 Orange (or) wire of fuse F08
3 Orange (or) wire of 2-pin N085 connector
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

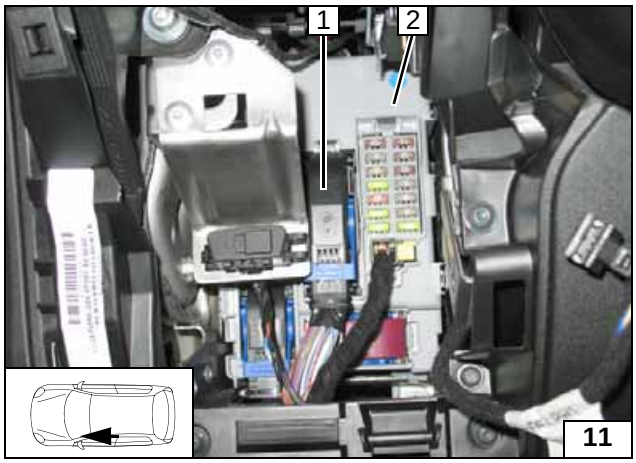
Fan Controller for Automatic Air-Conditioning

Wiring diagram



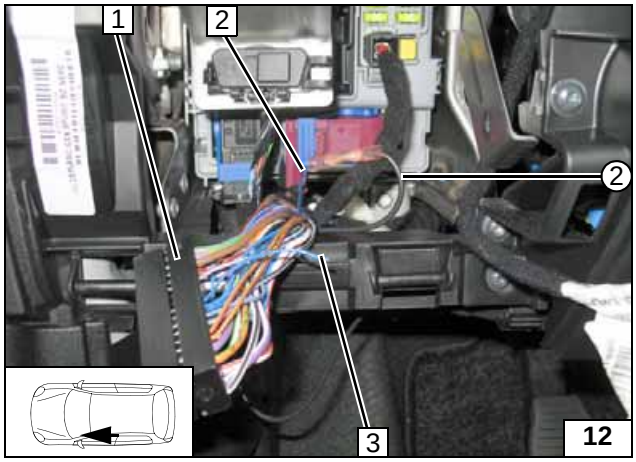
Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F31	7.5A fuse	rt	red
X1	6-pin heater connector	F51	5A fuse	sw	black
X2	2-pin heater connector	M001	Body computer	ge	yellow
X10	4-pin connector Heater control	St...	Connector	gn	green
		T08	Fan relay	or	orange
K1	Fan relay	D008	Connector	ws	white
F1	20A fuse	F08	30A fuse	br	brown
F2	30A fuse	B001	Distributor of engine compartment	bl	blue
F3	1A fuse	M070	A/C control unit		
F4	25A fuse	N085	Fan motor		
F5	7.5A fuse	M072	Fan controller		
				!	Insulate wire end and tie back
				X	Cutting point
				Wiring colours may vary.	



1 Connector C
2 Body Computer M001

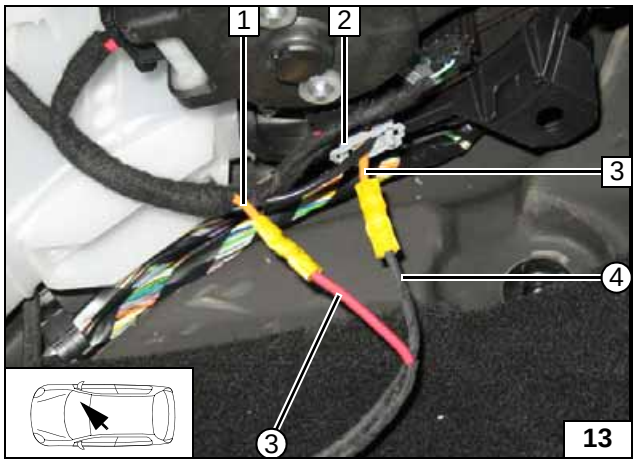
Socket of connector C



Produce connections as shown in wiring diagram.

1 Connector C, Pin 24
2 Blue/black (bl/sw) wire to A/C control unit M070
3 Insulate blue/black (bl/sw) wire of Pin 24 and tie back
② Black (sw) wire from fuse F5

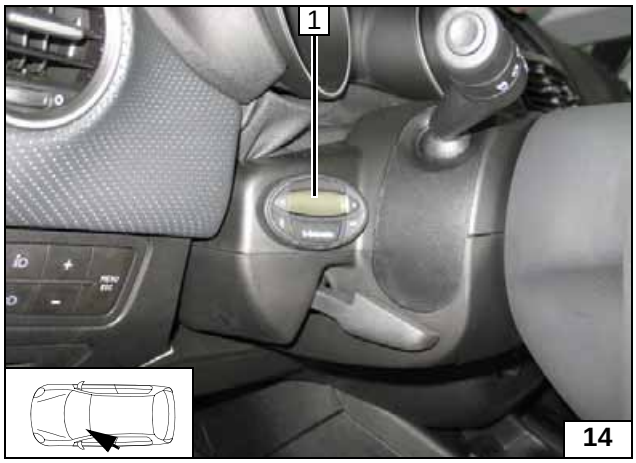
Connecting fan controller



Produce connections as shown in wiring diagram.

1 Connector D008, Pin 1
2 Connector B of fan controller M072
3 Orange (or) wire from connector B of fan controller M072
③ Red (rt) wire of K1/87a
④ Black (sw) wire of K1/30

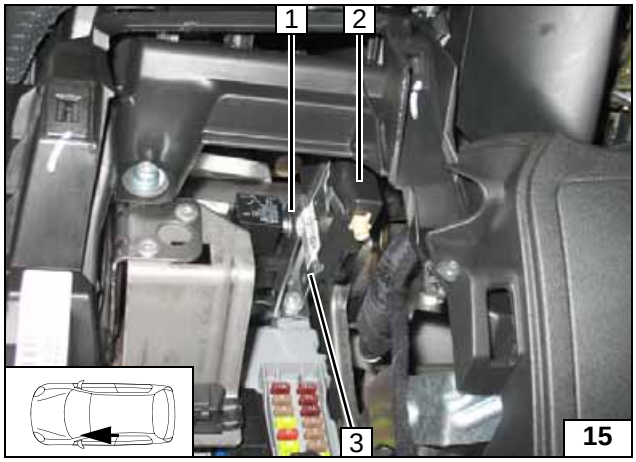
Connecting fan controller



Digital Timer

1 Digital timer

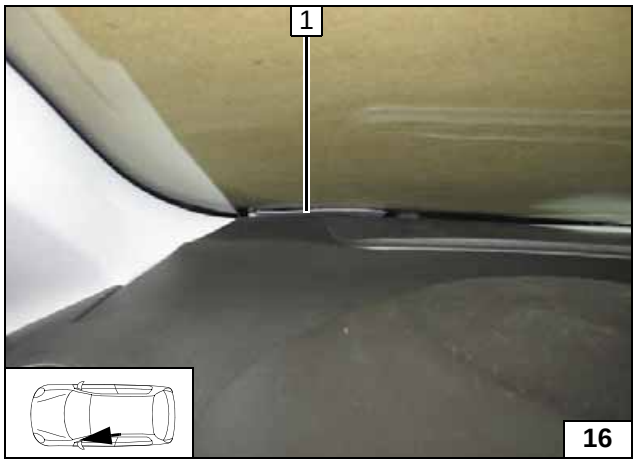
Installing digital timer



Remote Option (Telestart)

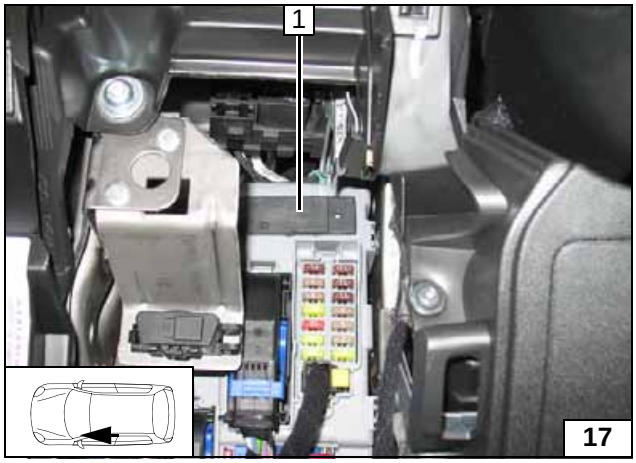
Fasten bracket **3** of receiver **2** with bolt of passenger compartment fuse holder **1**.

Installing receiver



1 Antenna

Installing antenna



Temperature sensor T100 HTM

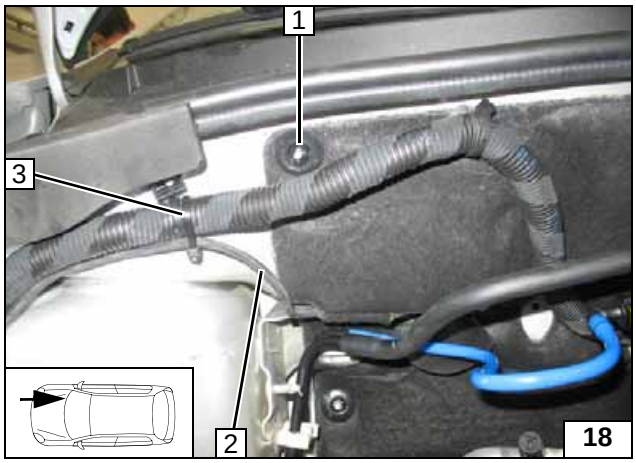
Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor

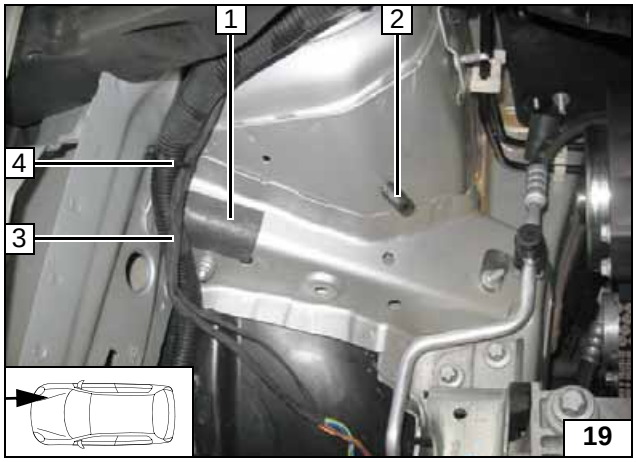
Preparing Installation Location

Remove washer **1**. The original vehicle stud bolt is used later to fasten the combustion air silencer.

Removing washer

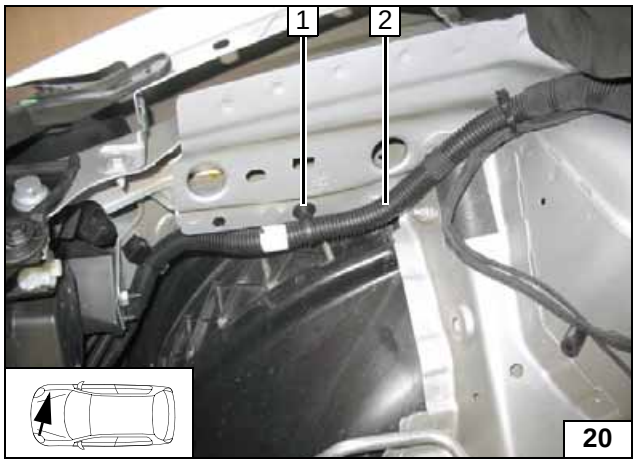


2 Wiring harness of heater
3 Cable tie



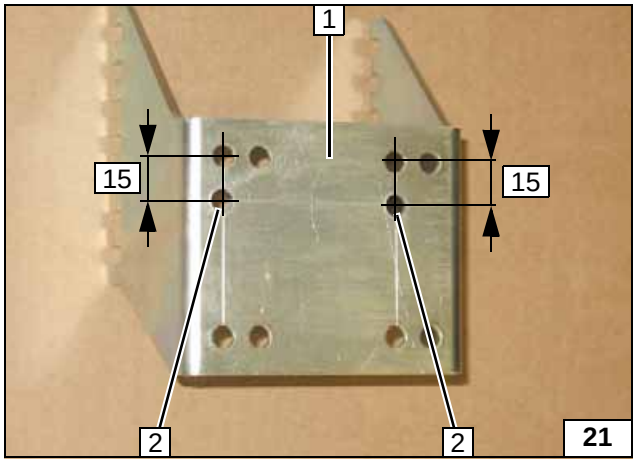
1 Paste the damping strips
2 Mount 4.5 (halved) fuel hose on stud bolt
3 Wiring harness of heater
4 Cable tie

Preparing installation location



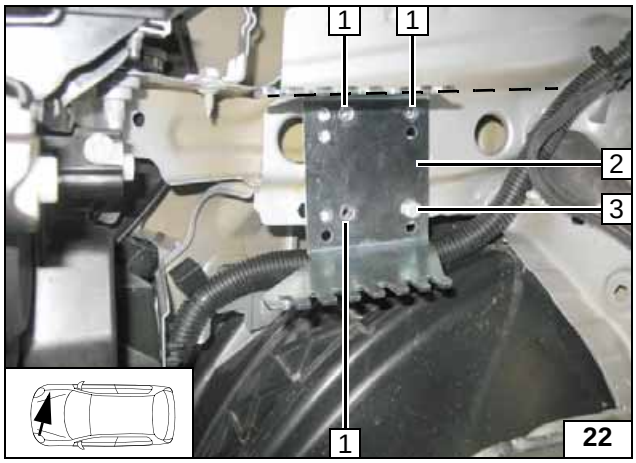
1 Take out holder clip
2 Original vehicle wiring harness

Preparing installation location



1 Bracket
2 7mm dia. hole [2x]

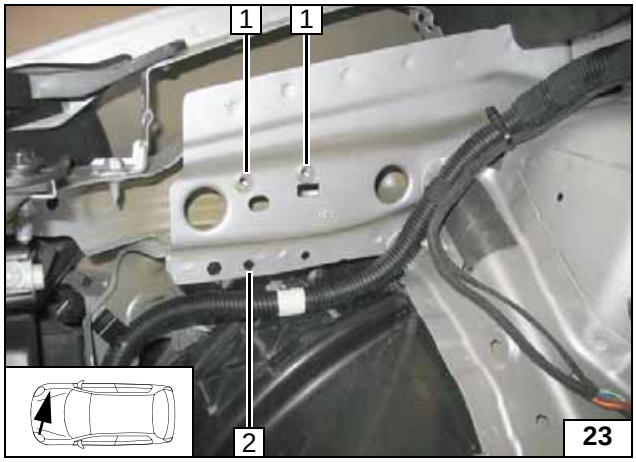
Preparing bracket



Install bracket **2** loosely and align to edge. Insert 10 mm shim at Position **3** between bracket **2** and body.

1 Copy hole pattern [3x]
2 Rubber-coated pipe clamp
3 M6x30 bolt, 10 mm shim, flanged nut, existing hole

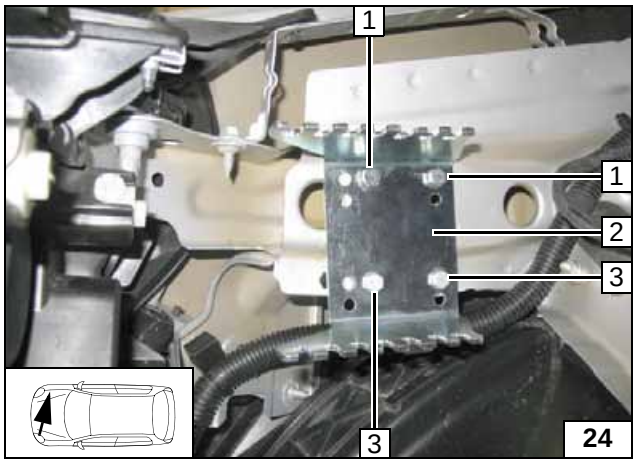
Copying hole pattern



Removing bracket.

1 9.1mm dia. hole; rivet nut [2x each]
2 7 mm dia. hole

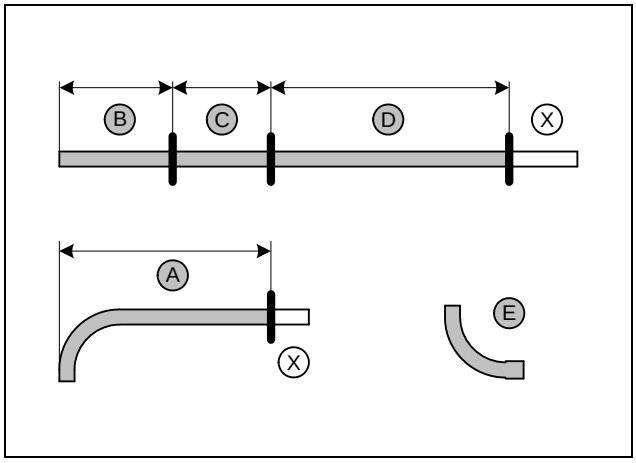
Installing rivet nuts



Insert one 10 mm shim at Position **3** between bracket **2** and body.

1 M6x20 bolt, spring lockwasher [2x each]
3 M6x30 bolt, 10 mm shim, flanged nut [2x each]

Installing bracket

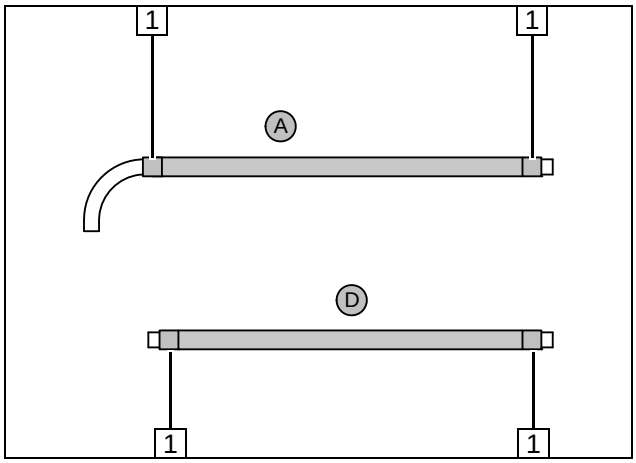


Preparing Heater

Discard section **X**.
Hose **A** =18 mm dia. 90° moulded hose
Hose **B/C/D** = 18mm dia. moulded hose
Hose **E** = 18x20mm dia. 180° moulded hose

A = 770
B = 120
C = 120
D = 920

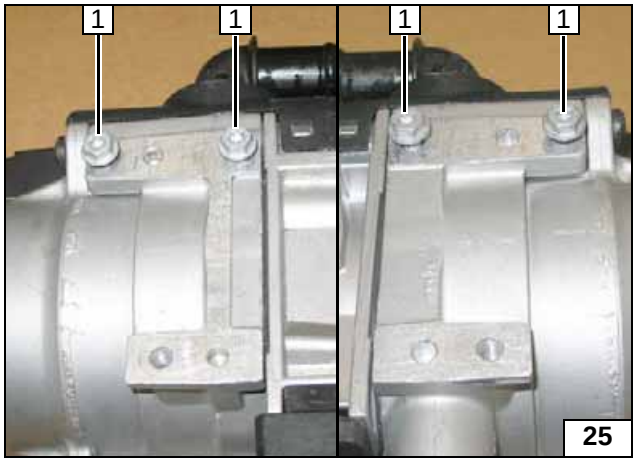
Cutting hoses to length



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

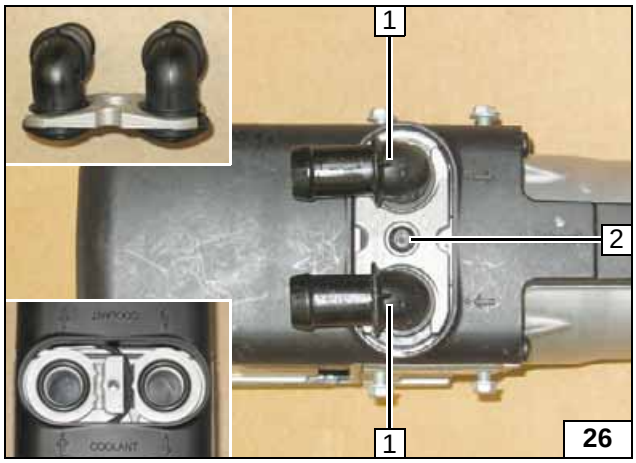
1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses



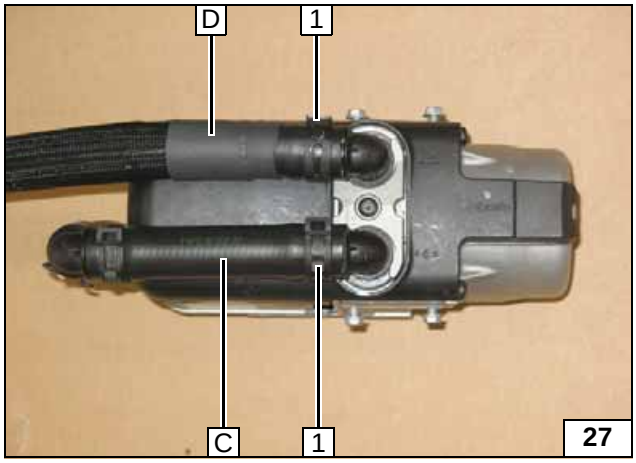
Tap threads with 5x13 self-tapping bolts **1** [4x] and install loosely (turn max. 3 threads).

Premounting bolts loosely



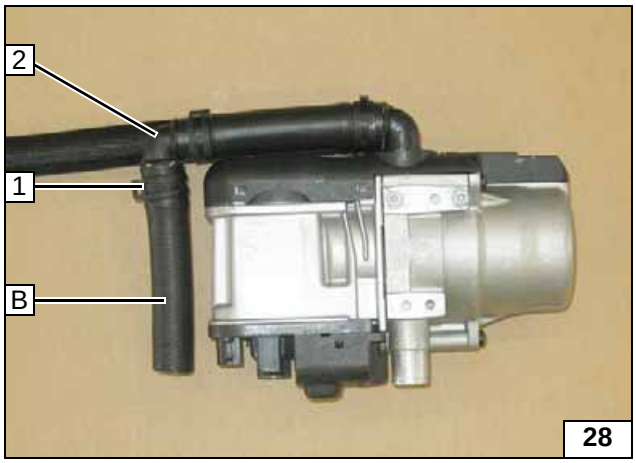
1 Water connection pieces, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection pieces

Installing water connection pieces



1 25 mm dia. spring clip [2x]

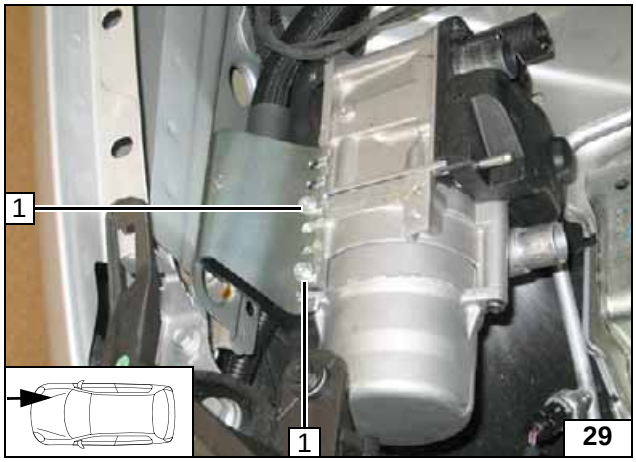
Premounting hoses



1 25 mm dia. spring clip [2x]
2 90°, 18x18mm dia. connecting pipe

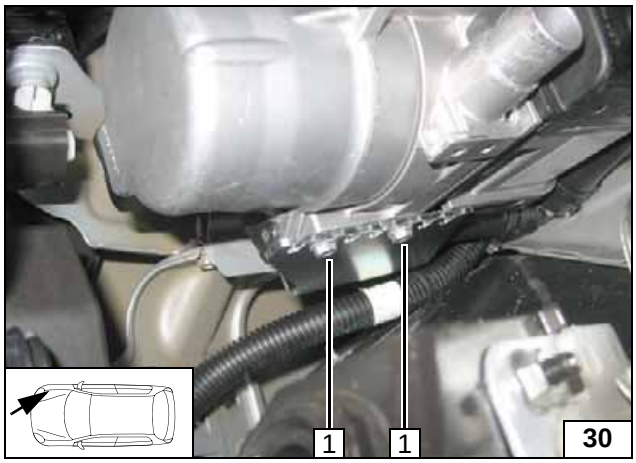
Premounting hose B

Installing Heater



1 Tighten bolts [2x]

Installing heater



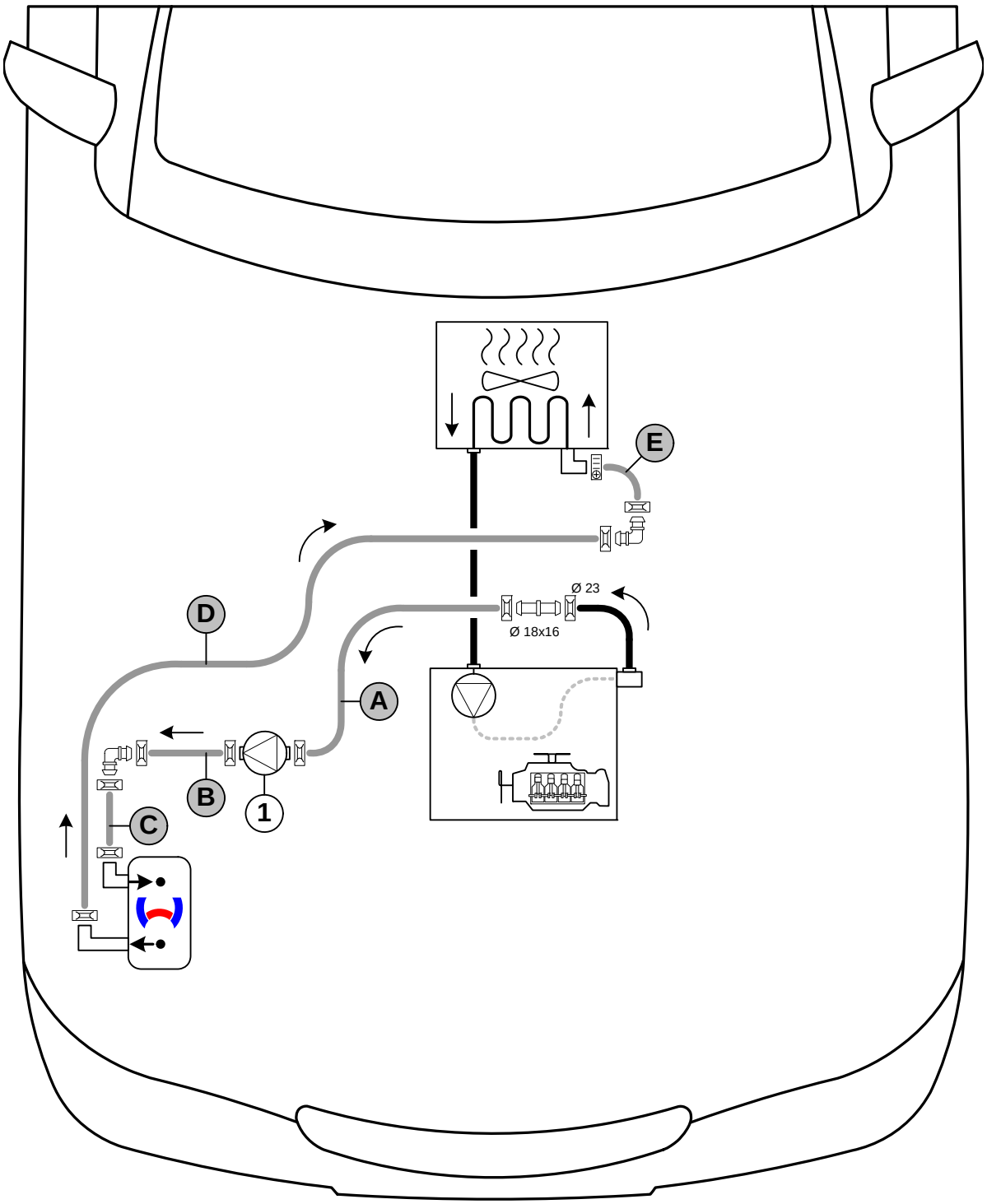
1 Tighten bolts [2x]

Installing heater

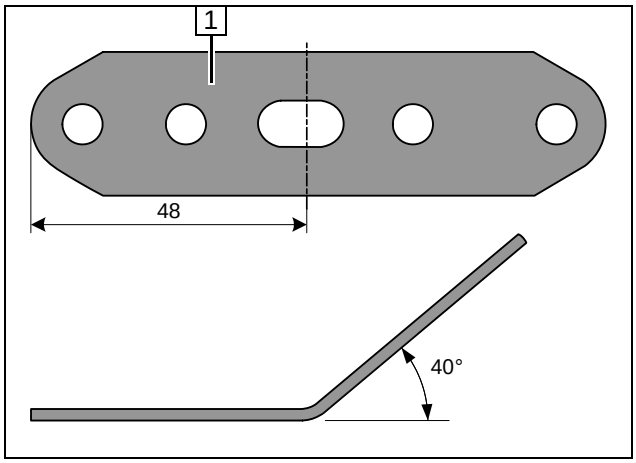
Coolant Circuit

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

Hose routing diagram

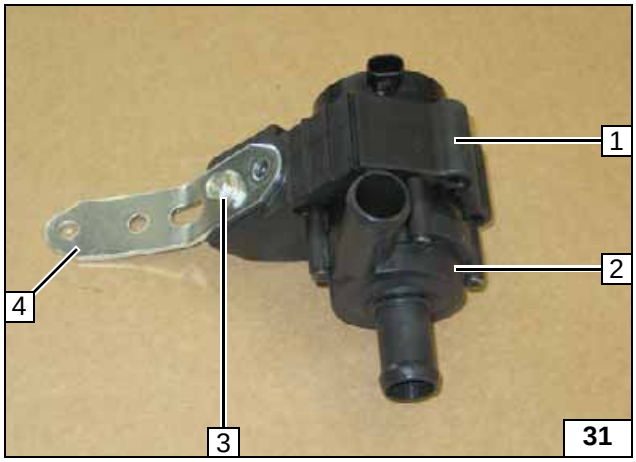


All spring clips without specific designation = 25mm dia.. Hose clamp = 16-24 mm dia..
All connecting pipes without specific designation = 18x18 mm dia. **1** = Circulating pump.



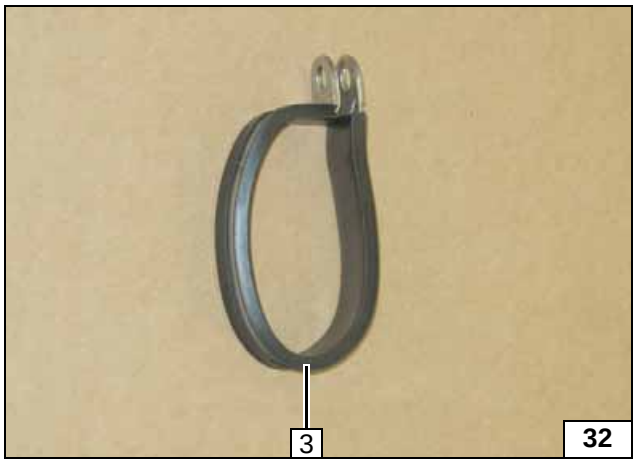
1 Perforated bracket

Bending perforated bracket of circulating pump



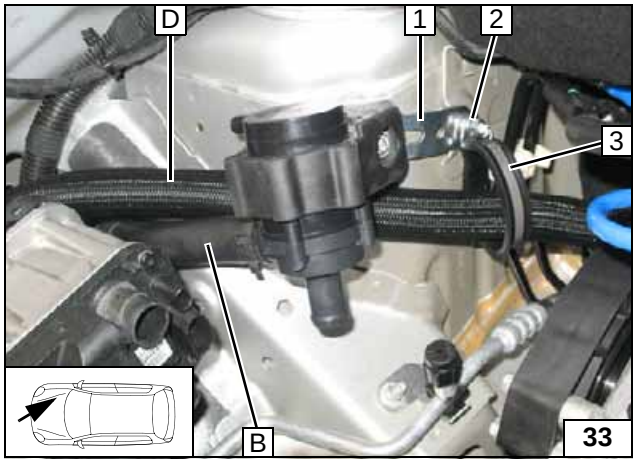
1 Circulating pump mounting
2 Circulating pump
3 M6x25 bolt, flanged nut
4 Perforated bracket

Premounting circulating pump



Shape rubber-coated pipe clamp **1** as shown.

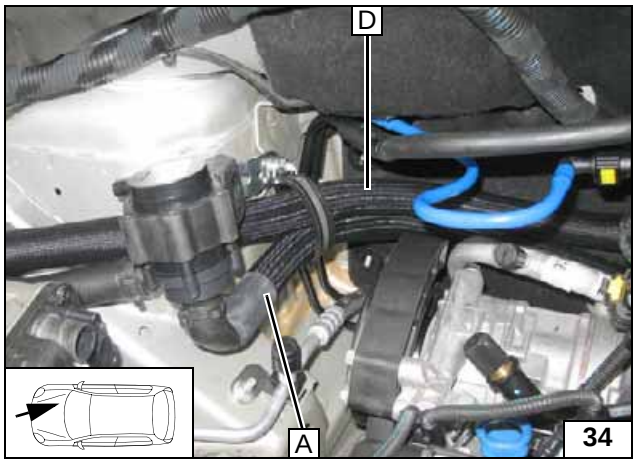
Shaping pipe clamp



Install hose **D** through rubber-coated pipe clamp. Connect hose **B.**

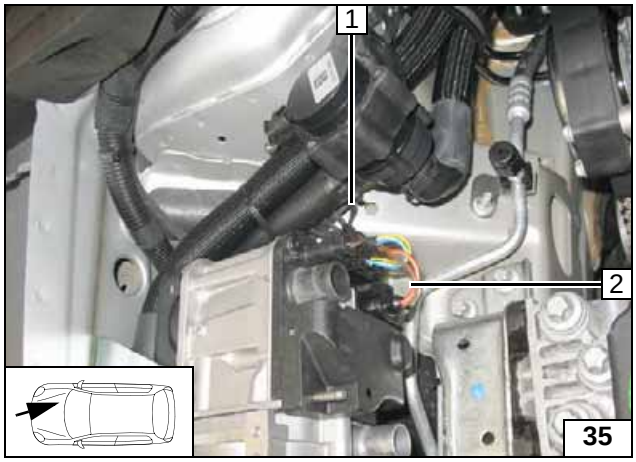
1 Perforated bracket
2 Original vehicle stud bolts, rubber-coated 48 mm dia. pipe clamp, flanged nut

Premounting circulating pump



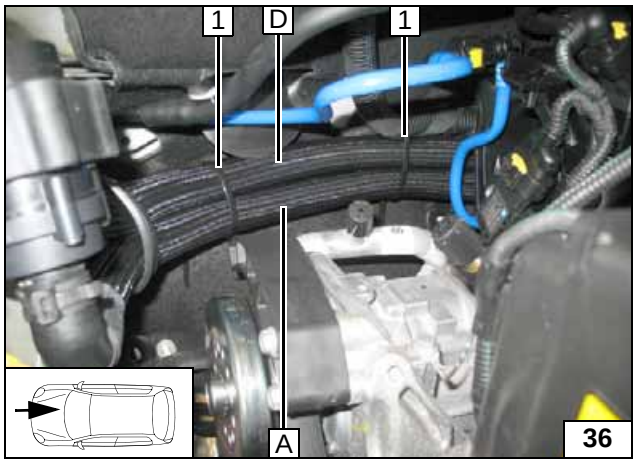
Install Hose **A** and **D** behind the engine at left vehicle side.

Routing in engine compartment



Push wiring harness on circulating pump **1** and wiring harness on heater **2**.

Mounting wiring harness



All vehicles except Multi Air

1 Cable tie

Routing in engine compartment

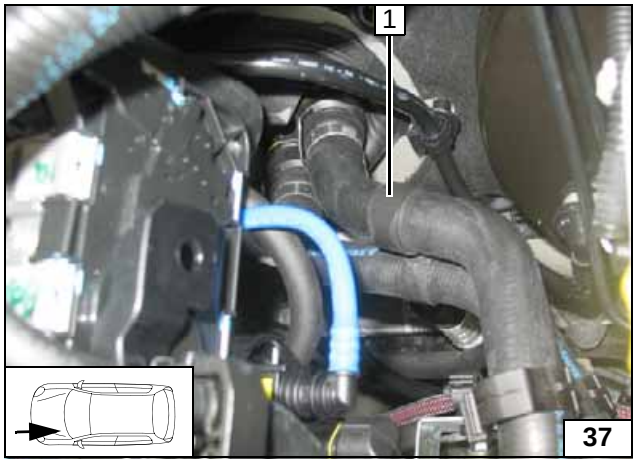
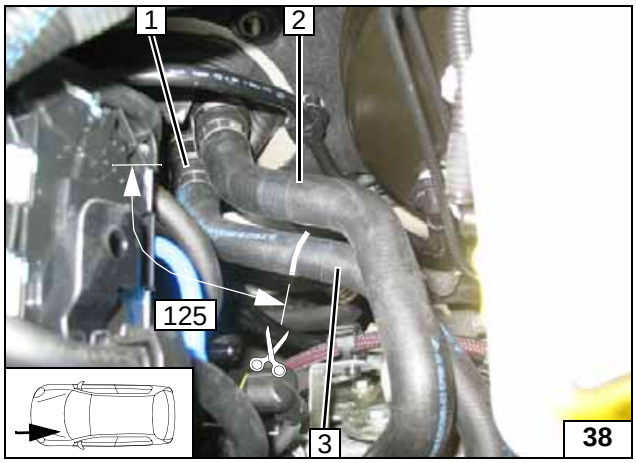


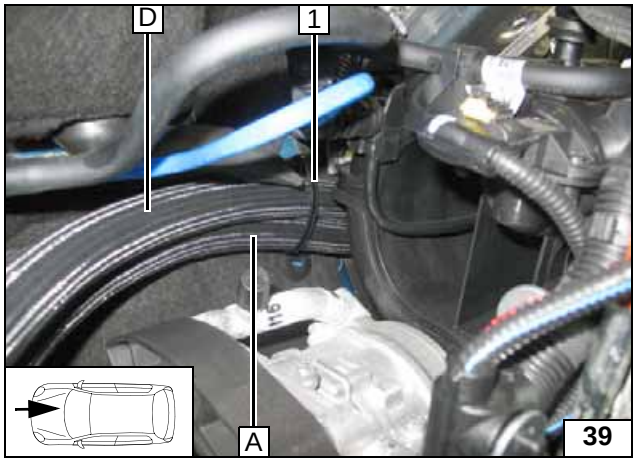
Figure shows vehicle without Multi Air. Remove and discard original vehicle spacer bracket **1** (vulcanised-on).

Preparing cutting point



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

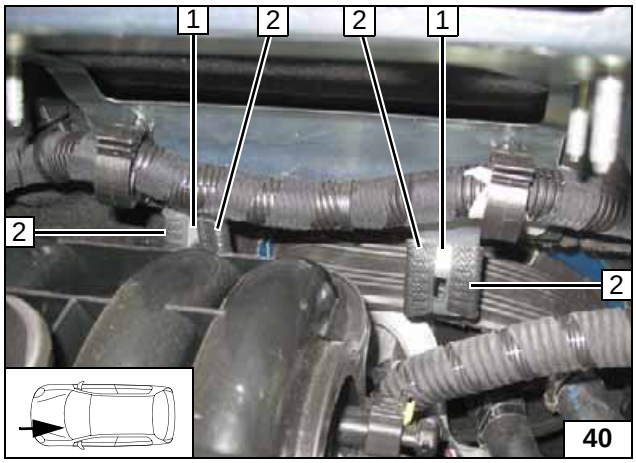
Cutting point



Multi Air only

Install clip-type cable tie **1** in existing hole.

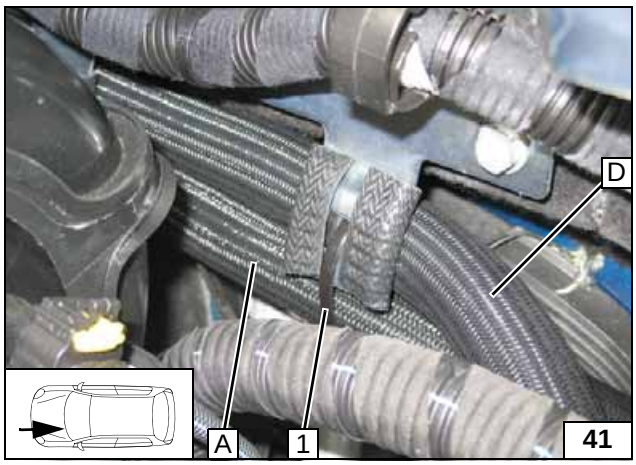
Routing in engine compartment



Engine control unit removed for better display.
Bend tab **1** [2x] in driving direction approx. 10mm forward.

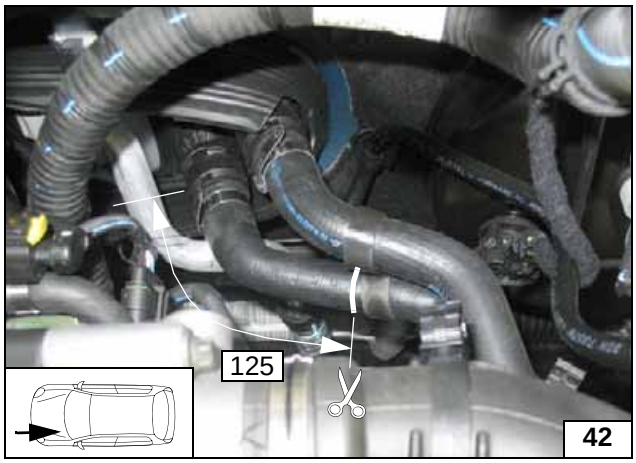
2 Insert 50 mm edge protection [4x]

Installing edge protection



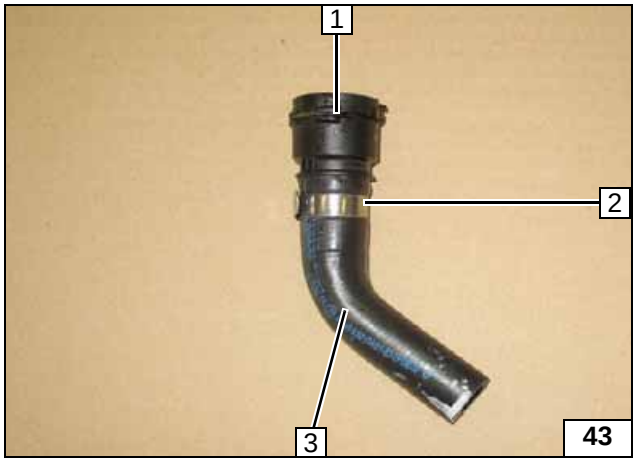
1 Cable tie

Routing in engine compartment



The individual worksteps such as removing and discarding original vehicle spacer bracket, separating hose of engine outlet/heat exchanger inlet, as well as removing hose section of heat exchanger inlet are identical to vehicle without Multi Air.

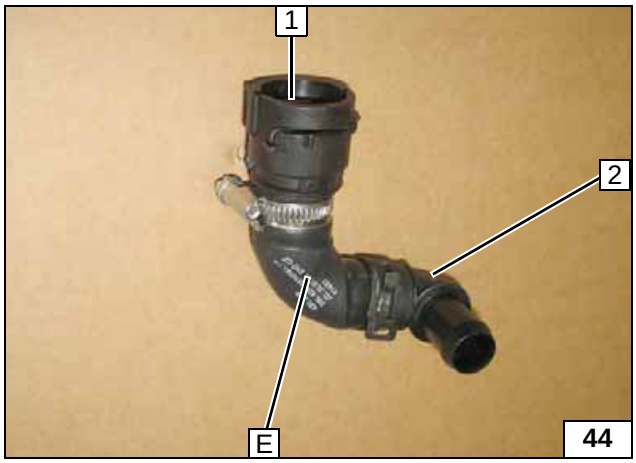
Preparing cutting point



All vehicles

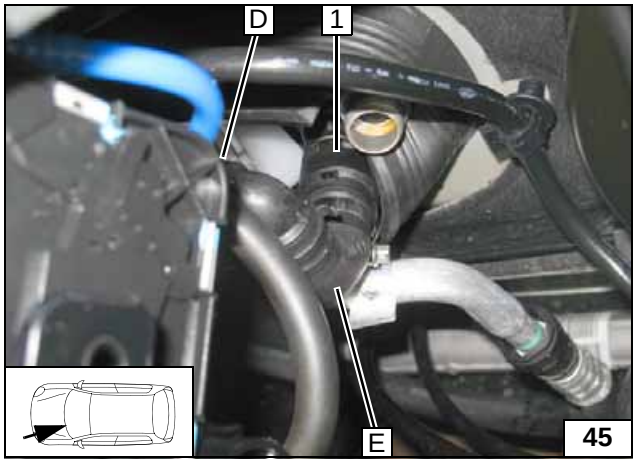
Remove and discard clamp **2** and hose section **3**. Do not damage coupling piece of heat exchanger inlet **1**.

Preparing connection of heat exchanger inlet



1 Coupling piece of heat exchanger inlet
2 90°, 18x18mm dia. connecting pipe

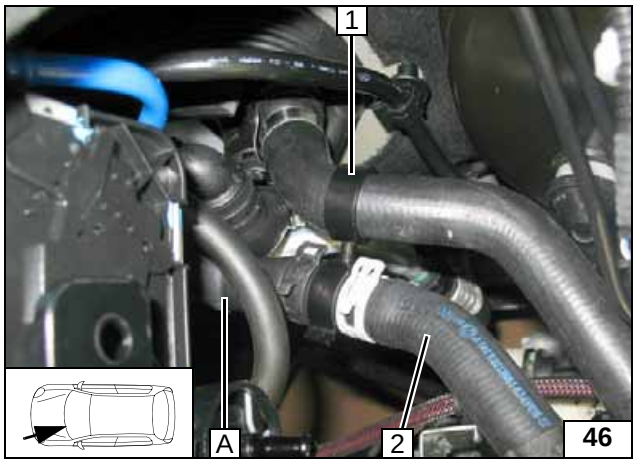
Preparing connection of heat exchanger inlet



Hose of heat exchanger outlet removed only for better display. Connect Hose **D** with **E**.

1 Coupling piece of heat exchanger inlet

Connecting heat exchanger inlet



Ensure sufficient distance from neighbouring components.

1 Insert spacer bracket
2 Hose of engine outlet

Connecting engine outlet

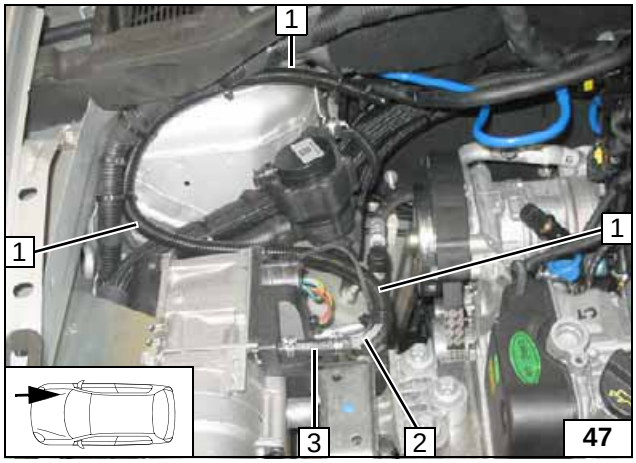
Fuel

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

Catch any fuel running off in an appropriate container.

Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

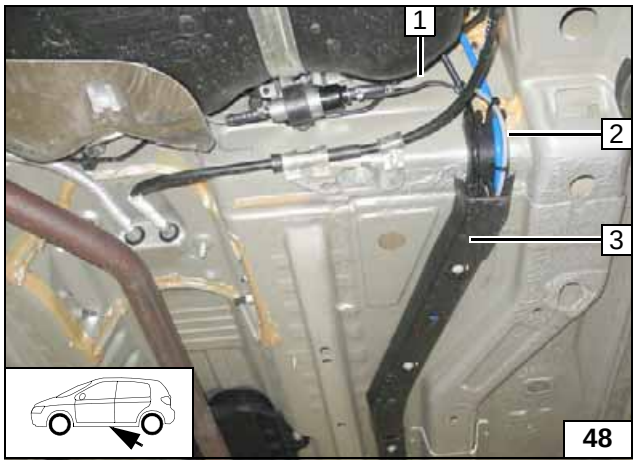
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Pull wiring harness of metering pump and fuel line into 10mm dia. corrugated tube **1** and route along the original vehicle fuel lines to the underbody.

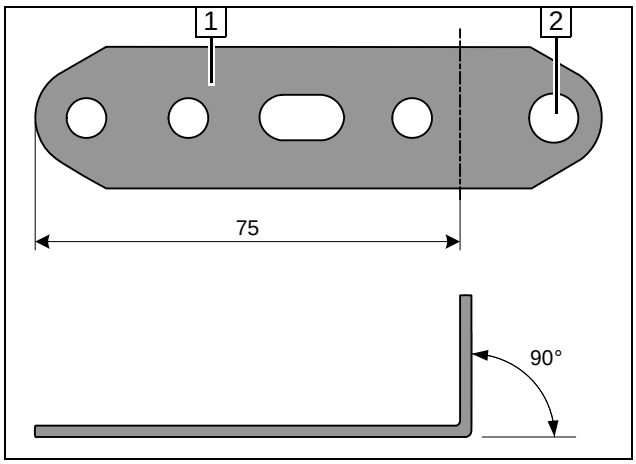
2 Fuel line
3 Hose section, 10 mm dia. clamp [2x]

Connecting heater



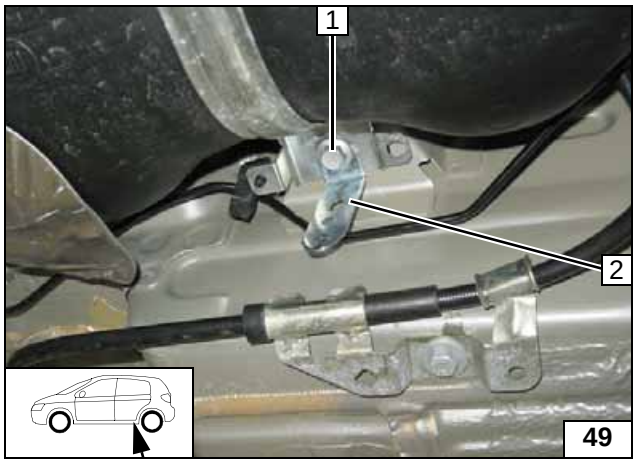
Install fuel line **2** and wiring harness of metering pump **1** in the original vehicle wiring duct **3** at the installation location of the metering pump.

Installing lines



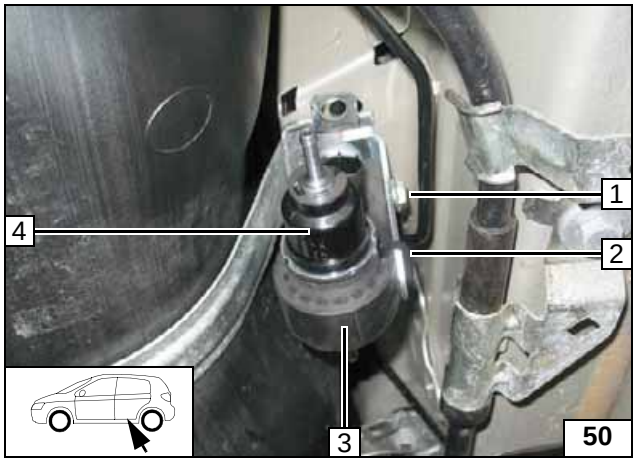
1 Angle down perforated bracket
2 Drill 8.5 mm dia. hole

Preparing perforated bracket



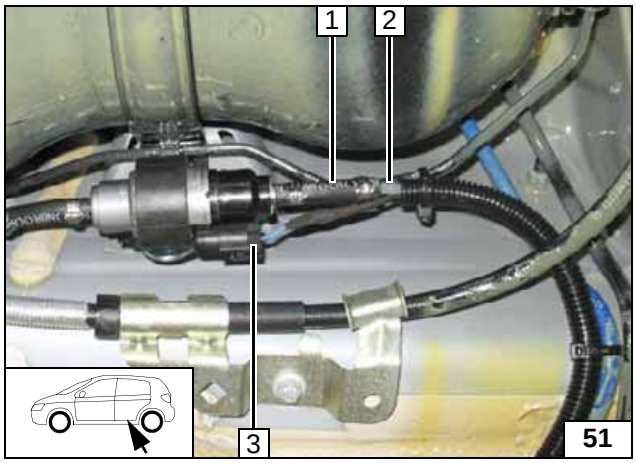
1 Original vehicle bolt of fuel tank mounting
2 Perforated bracket

Installing perforated bracket



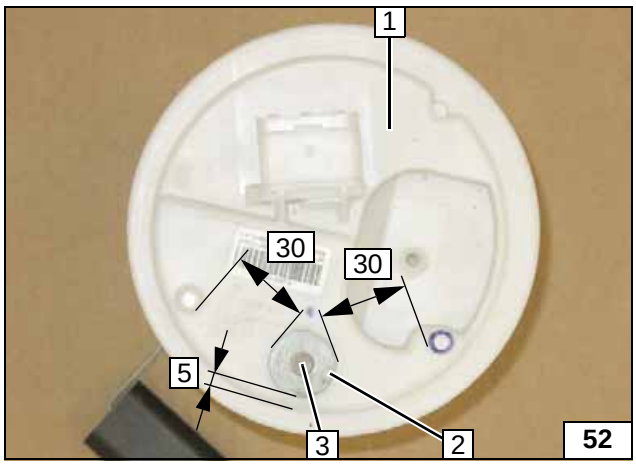
1 M6x25 bolt, flanged nut
2 Cable tie
3 Mounting of metering pump
4 Metering pump

Mounting metering pump



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

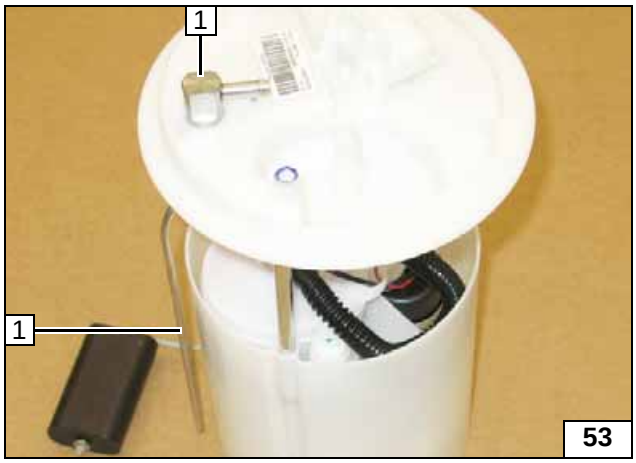
Connecting metering pump



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

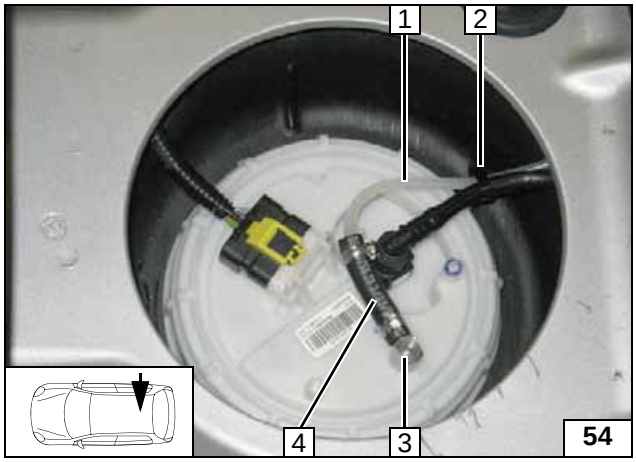
2 Large diameter washer outer diameter d_a = 21.6mm
3 Copy hole pattern, 6 mm dia. hole

Fuel extraction



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

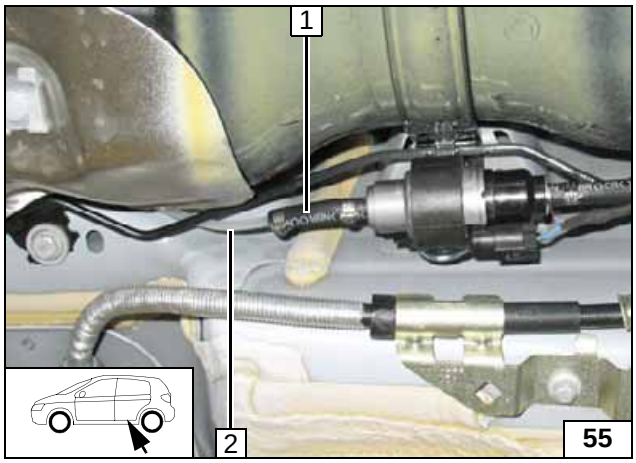
Installing fuel standpipe



Install fuel-tank sending unit according to manufacturer's instructions.

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

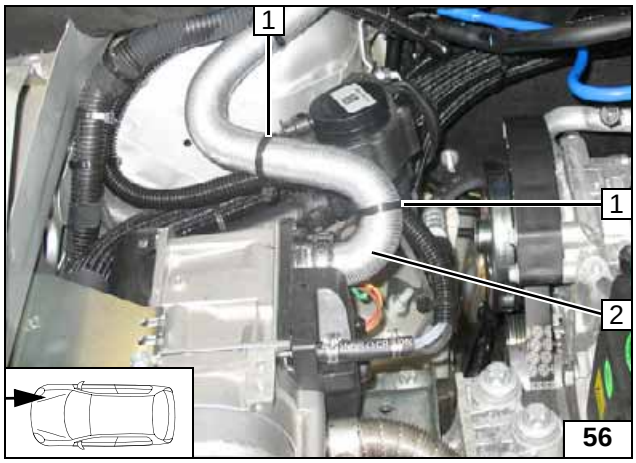
Connecting fuel line



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

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

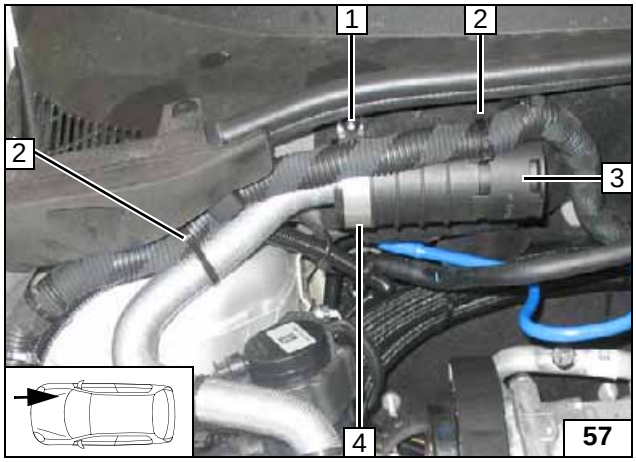
Connecting metering pump



Combustion Air

1 Cable tie [2x]
2 Combustion air pipe

Installing combustion air pipe

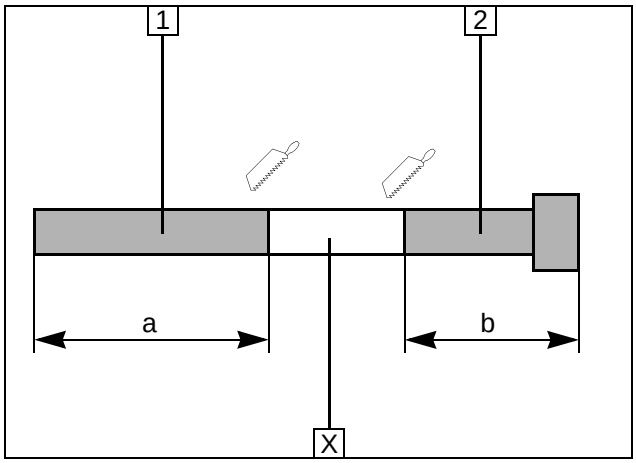


1 Plastic nut, original vehicle stud bolt
2 Cable tie [2x]
3 Silencer
4 48mm dia. pipe clamp, rubber coating removed

Installing silencer

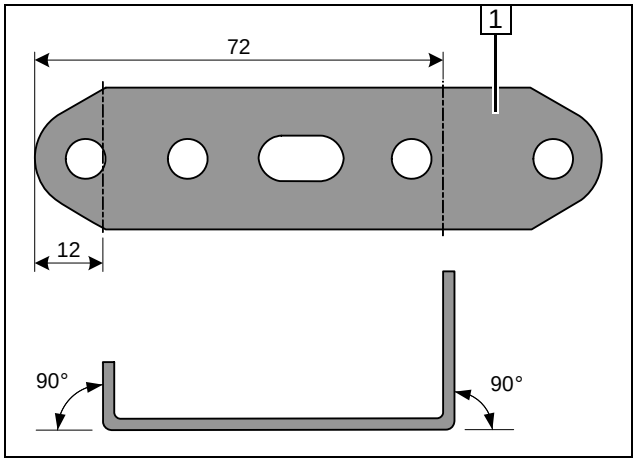
Exhaust Gas

Discard section **X**.



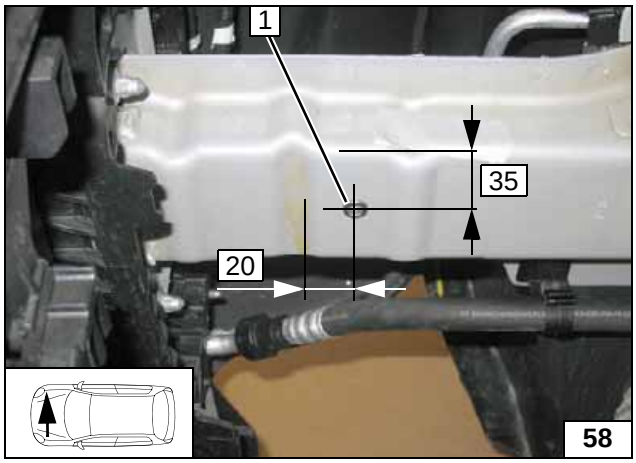
1 Exhaust pipe
a = 380
2 Exhaust end section
b = 300

Preparing exhaust pipe



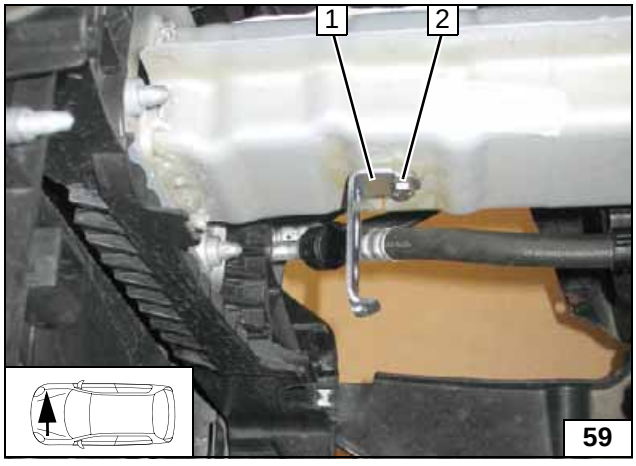
1 Angle down perforated bracket

Preparing perforated bracket



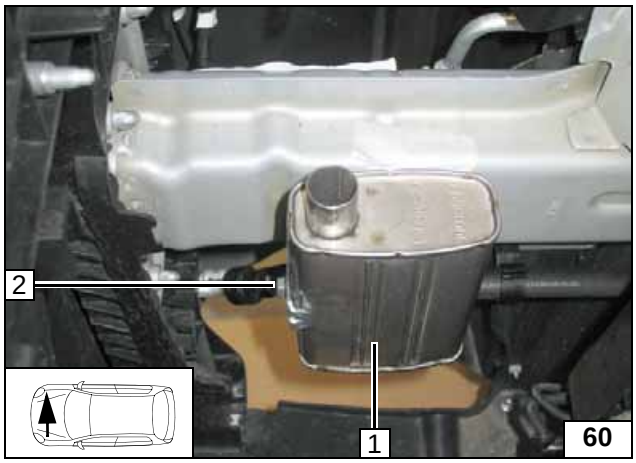
1 9.1 mm dia. hole; rivet nut

Installing rivet nut



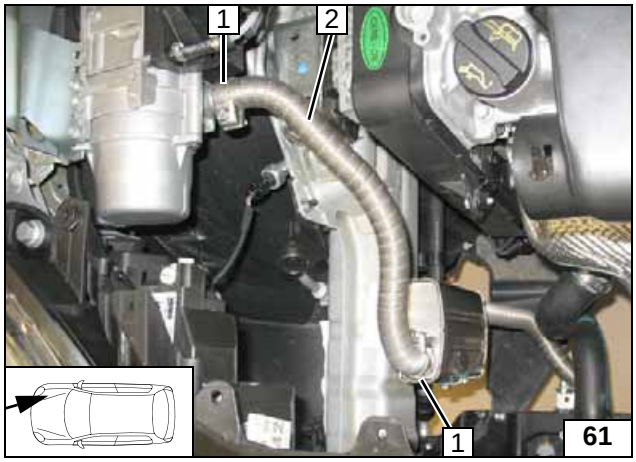
1 Perforated bracket
2 M6x20 bolt, spring lockwasher

Installing perforated bracket



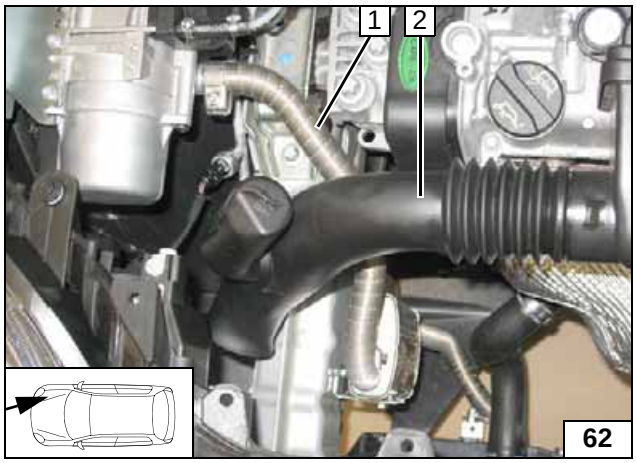
1 Silencer
2 M6x12 bolt, spring lockwasher

Installing silencer



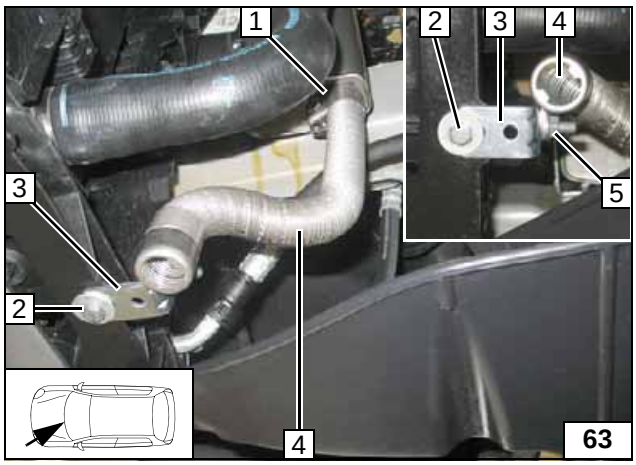
1 Hose clamp [2x]
2 Exhaust pipe

Installing exhaust pipe



Mount intake manifold **2**. Ensure adequate distance between exhaust pipe **1** and intake manifold **2**.

Installing exhaust pipe



Ensure sufficient distance from neighbouring components.

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

Mounting end section

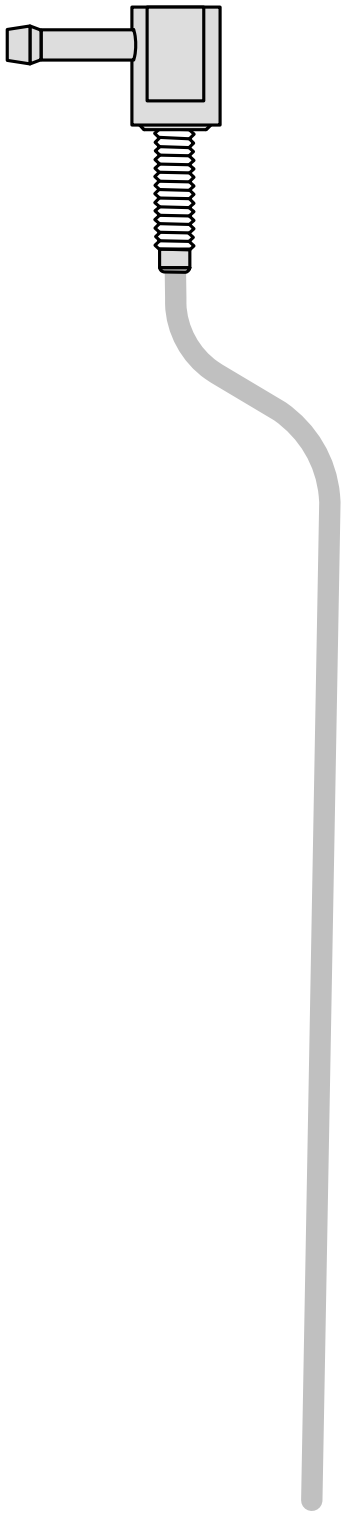
Final Work

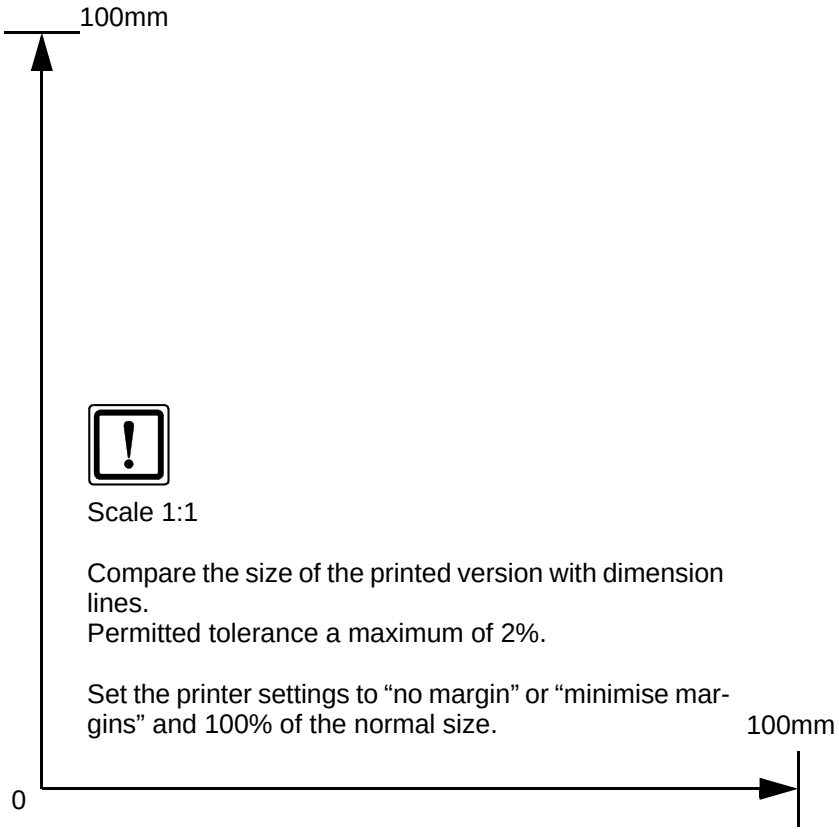
WARNING!
Mount removed parts in reverse order.
Check all hoses, clamps and all electrical connections for firm seating.
Secure all loose wires using cable ties.
Only use manufacturer-approved coolant.
Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for the End Customer".**
- **Place the "Switch the parking heater off before refueling" signboard in the area of the filler neck.**
- **For initial startup and function check, please see installation instructions**

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.

Webasto
Feel the Drive

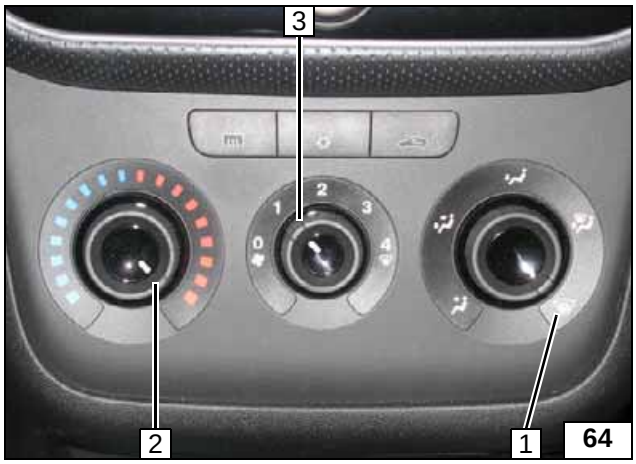
Operating Instructions for Manual Air-Conditioning

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

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

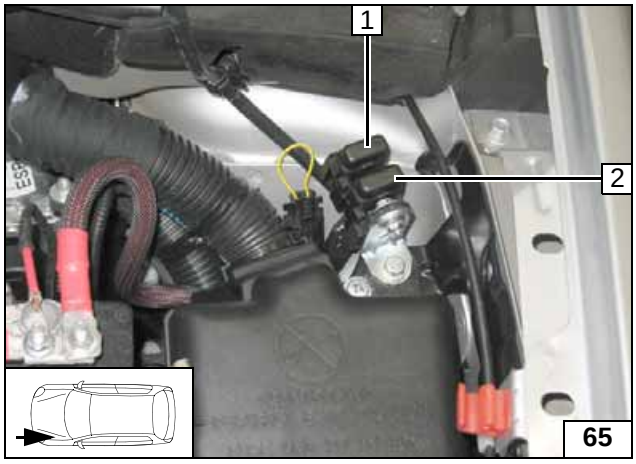
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



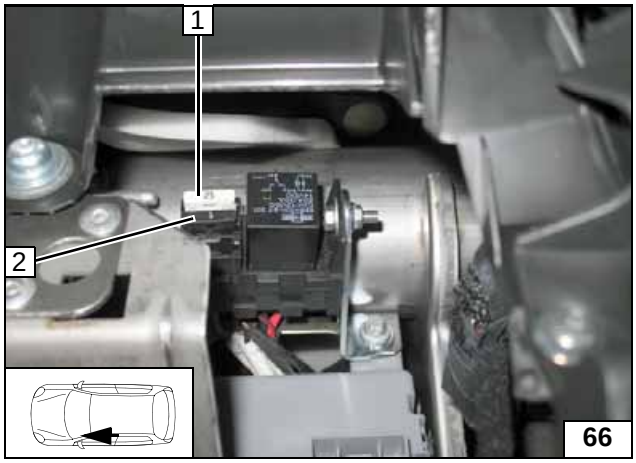
1 Air outlet to windscreen
2 Set temperature to "max."
3 Set fan to level "1", or max. "2"

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment

Webasto
Feel the Drive

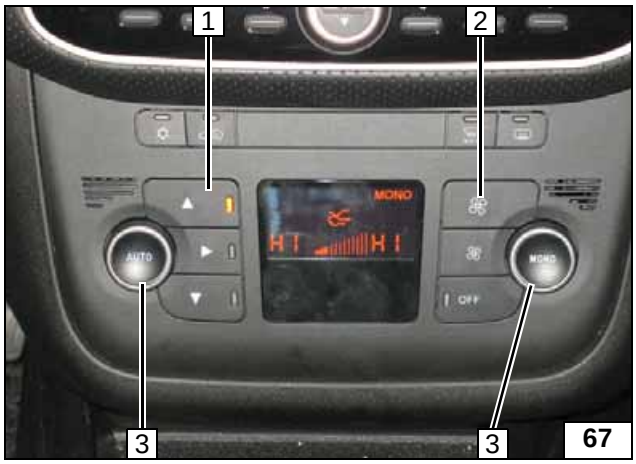
Operating Instructions for Automatic Air-Conditioning

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

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

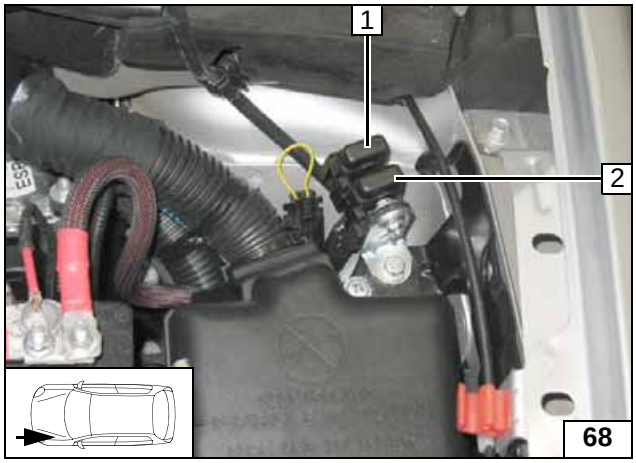
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



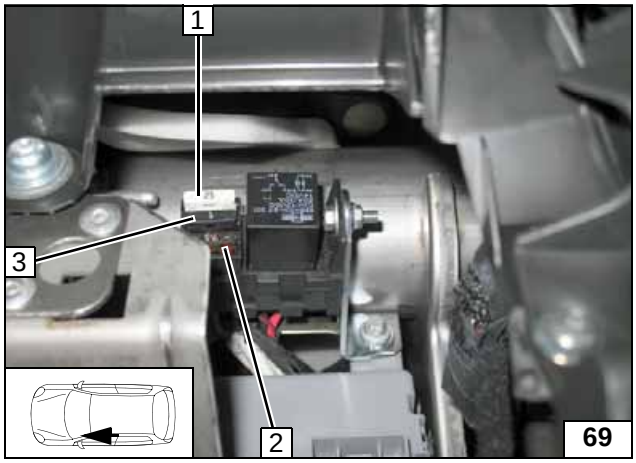
1 Air outlet to windscreen
2 Set fan to level "2", or max. "3"
3 Set temperature to "HI" on both sides

A/C control panel



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

Fuses of engine compartment



1 25A fan fuse F4
2 7.5A additional fuse F5
3 1A fuse F3 of heater control

Fuses of passenger compartment