Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Mazda 5

Validity

Manufacturer	Model	Type	EG-BE-Nr. / ABE
Mazda	5	CW	e1 * 2007 / 46 * 0433 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.8	Petrol	6-speed SG	85	1798	L8
2.0	Petrol	6-speed SG	110	1999	LF-G
2.0	Petrol	5-speed AG	106	1999	LF-F

SG = Manual transmission
AG = Automatic transmission

From Model Year 2011
Left-hand drive vehicle

Verified equipment variants:	Manual / automatic air-conditioning system
	Front fog light Xenon I-Stop Euro 4 and Euro 5 exhaust emission standards
Not verified:	Passenger compartment monitoring
Total installation time:	about 7.5 hours

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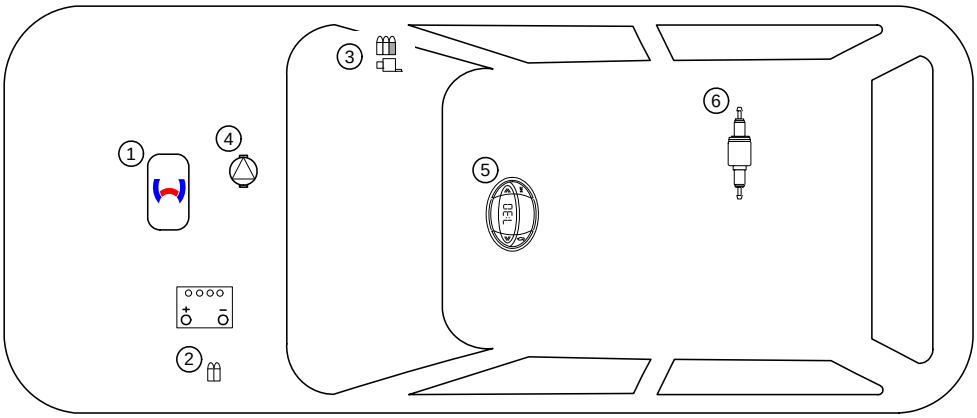
Necessary Components

- Basic delivery scope *Thermo Top Evo* based on price list
- Installation kit for Mazda 5 2011 Petrol: **1316586A**
  Mazda Order No.: **4100-78-778**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Fuse holder of passenger compartment
4. Circulating pump
5. Digital timer
6. Metering pump



Notes on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important Information (not complete)

1.1 Installation and Repair

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

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

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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel Diesel (DIN EN 590) or petrol (DIN EN 227).

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

1.3 Please note

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

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

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

Important

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

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

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

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components must audibly snap into place during assembly.

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

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

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

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

2 Statutory regulations governing installation

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

Note

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

Important

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

Note

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

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

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Notes on Validity

This installation document applies to the Mazda 5 Petrol vehicles - for validity, see page 1 - from model year 2011 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

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

Technical Instructions

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

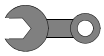
Dimensions
- All dimensions are in mm.

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

Explanatory Notes on Document

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

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents

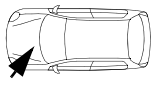
Specific risk of damage to components

Specific risk of fire and explosion

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

Reference to a special technical feature

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



Mazda 5

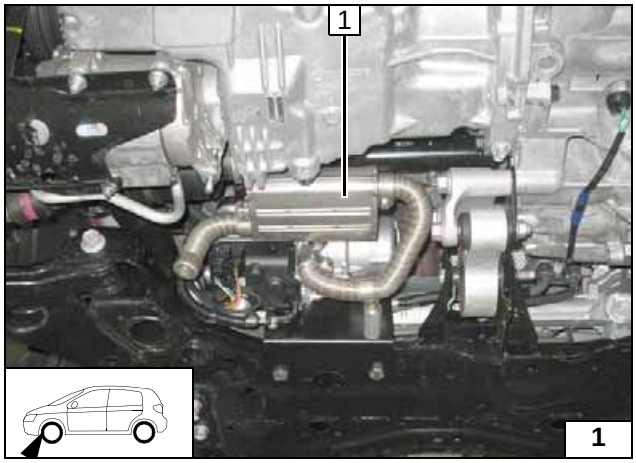
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Disconnect the battery.
- In vehicles with I-Stop, always separate the earth cable from the two batteries.
  Main and auxiliary battery.
- Depressurise the cooling system.
- Remove the underride protection of the engine.
- Remove the underbody trim on the right.
- Detach the activated charcoal filter.
- Remove the A-pillar trim in the front passenger's side footwell.
- Remove the glove compartment.
- Remove the fuse box of the passenger compartment.

Heater

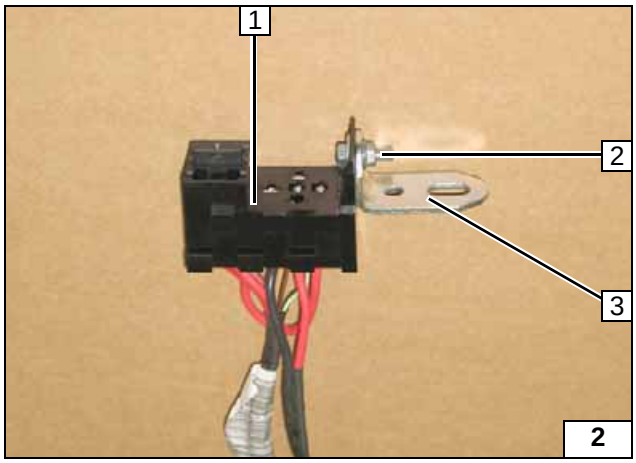
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

1 Heater

Installation location

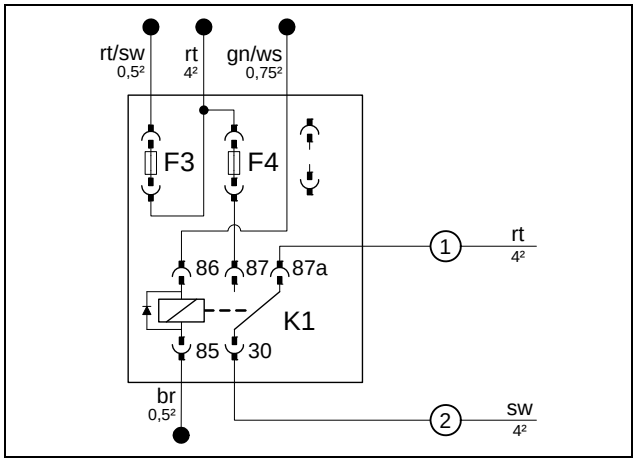


Preparing Electrical System

Wire sections retain their numbering through the entire document.

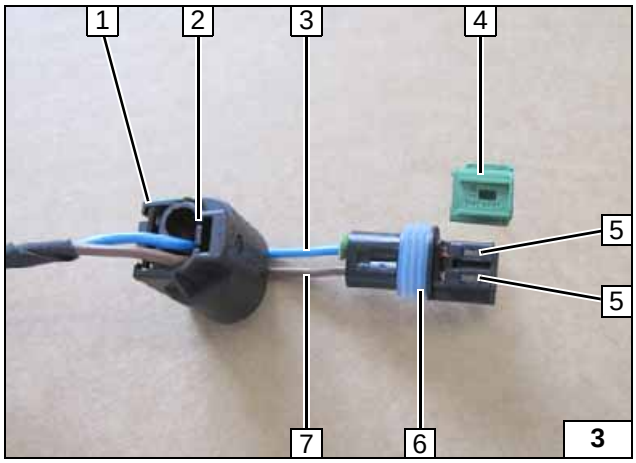
1 Fuse holder
2 M5x16 bolt, washer [2x], nut
3 Angle bracket

Preparing fuse holder



Insert red (rt) wire **1** in K1/87a and black (sw) wire **2** in K1/30 socket.

Preparing fuse holder



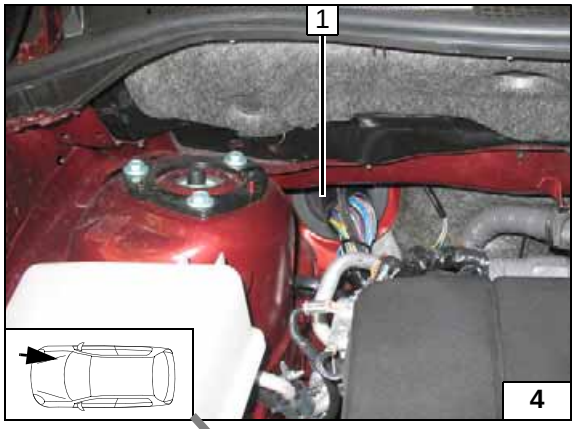
Pull out external connector housing **1** by opening the lock **2** from the connector of the metering pump **6**. Remove coding **4**. Pull out the blue (bl) wire **3** and brown (br) wire **7** from the metering pump connector **6** by opening lock **5** [2x]. Will be reused later. Pin assignment is not relevant.

Detaching wires

Electrical System

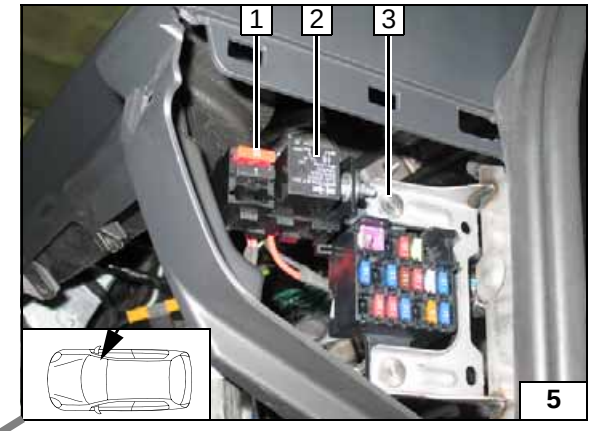
Wiring harness pass through

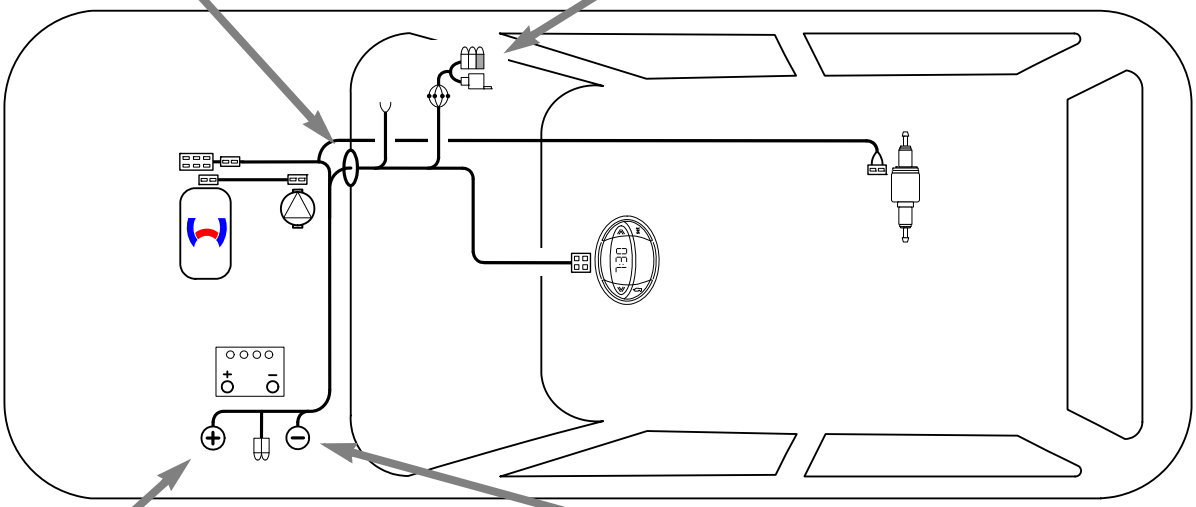
1 Protective rubber plug



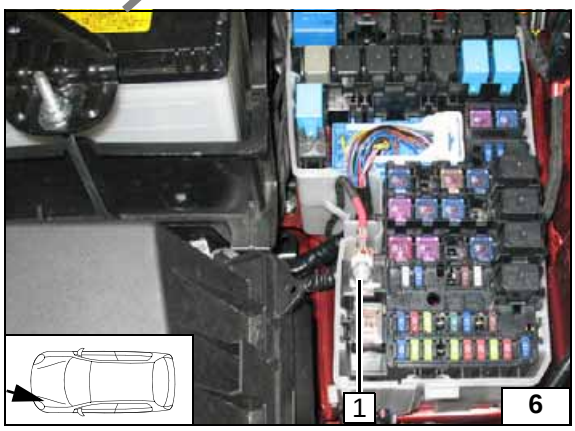
Fuse holder of passenger compartment

1 F4 10A fuse
2 K1 relay
3 Original vehicle stud bolt of fuse holder



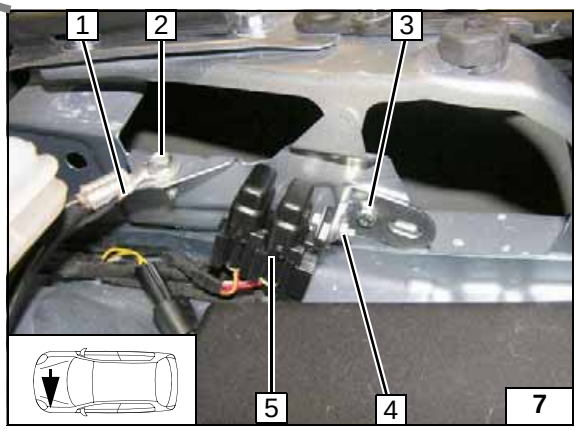


Wiring harness routing diagram



Positive wire

Positive wire on original vehicle bolt **1**
Tightening torque 8-12 Nm.



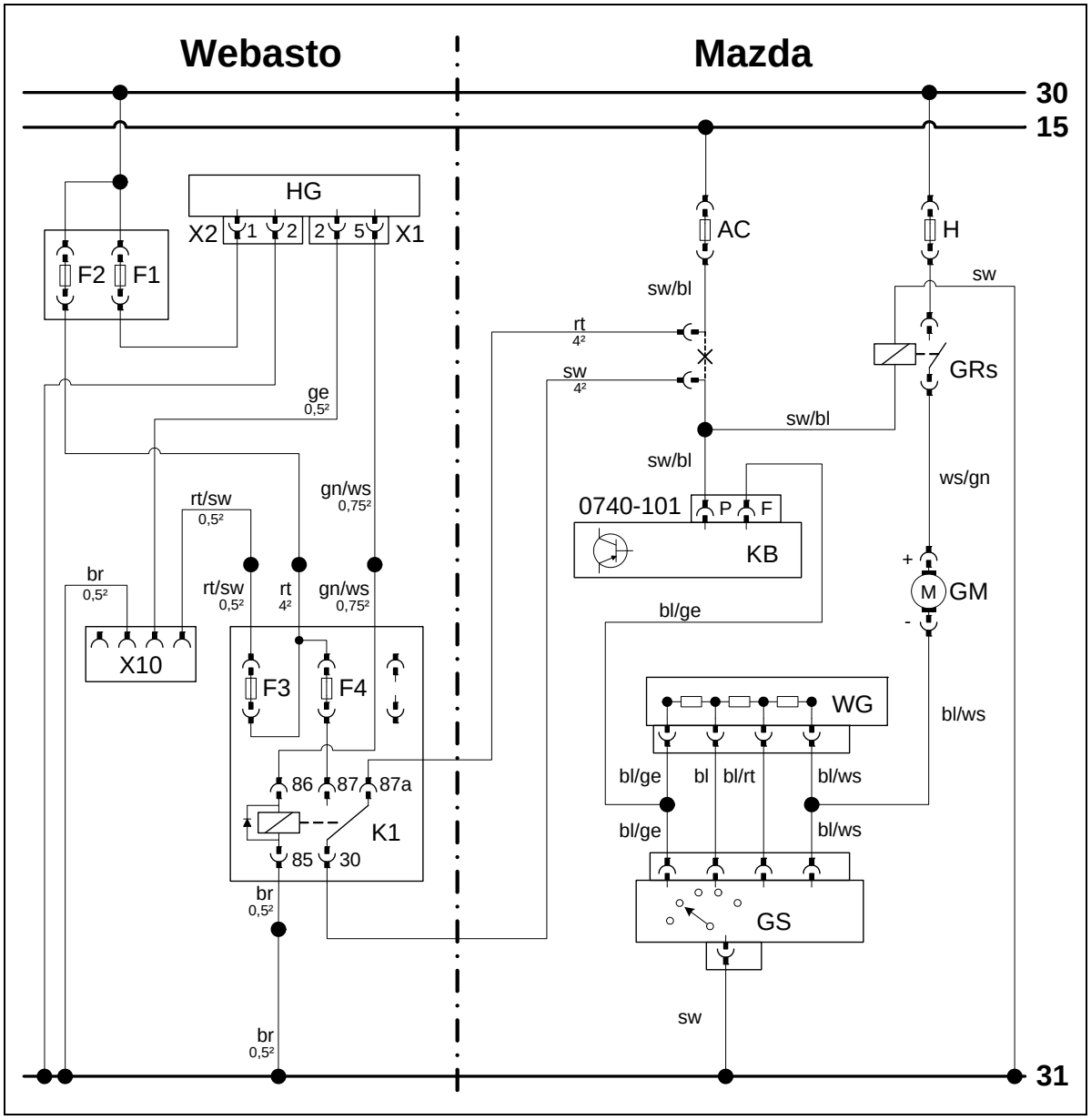
Fuse holder in engine compartment

Earth wire **1** on original vehicle bolt **2**.
Tightening torque 8-12 Nm.

3 M6x20 bolt, angle bracket, large diameter washer, flanged nut, existing hole
4 M5x16 bolt, washer [2x], retaining plate Fuse holder, nut
5 F1-2 fuses

Manual Air-Conditioning Fan Controller

Wiring diagram

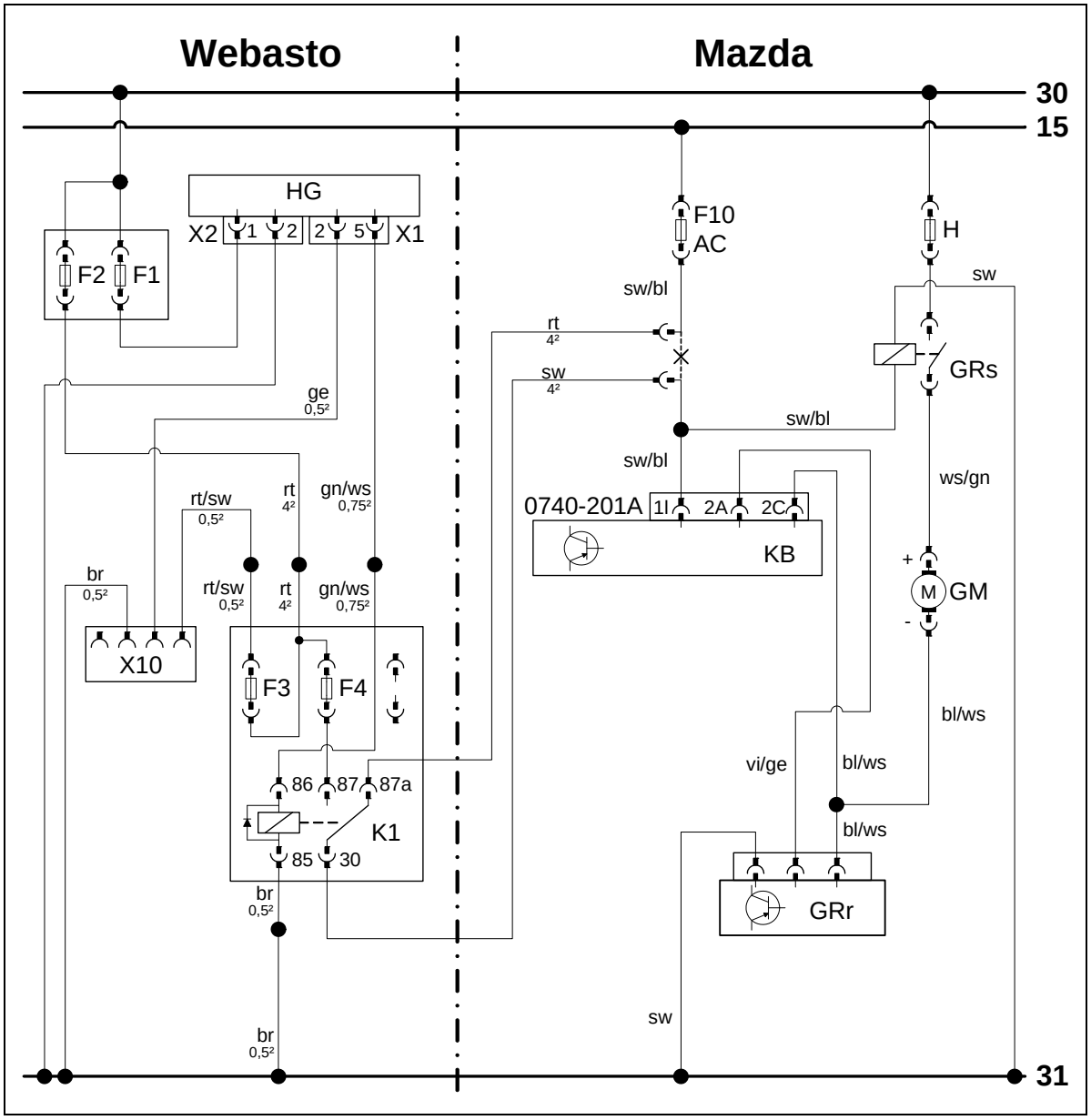


Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	AC	"AC" 10 A fuse	rt	red
X1	6-pin heater connector	H	"Heater1" 40A fuse	sw	black
X2	2-pin heater connector			ge	yellow
X10	4-pin connector of Heater control	GRs	Fan relay	gn	green
		0740-101	Connector KB	ws	white
K1	Fan relay			br	brown
F1	20A fuse	KB	A/C control panel	bl	blue
F2	30A fuse	GM	Fan motor	bl	blue
F3	1A fuse	WG	Resistor group		
F4	10A fuse	GS	Fan switch		
				X	Cutting point
				Wiring colours may vary.	

Legend

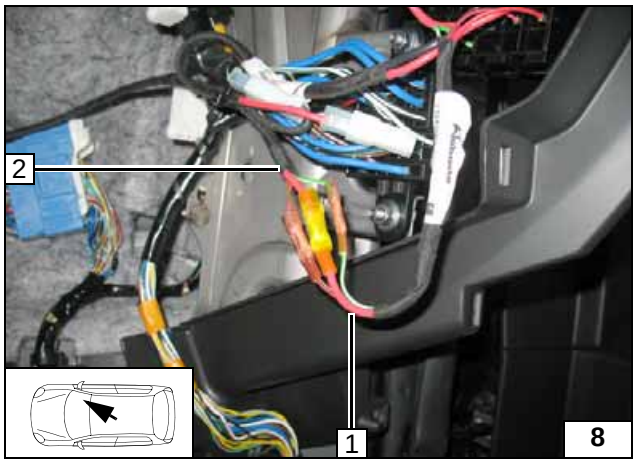
Automatic Air-Conditioning Fan Controller

Wiring diagram



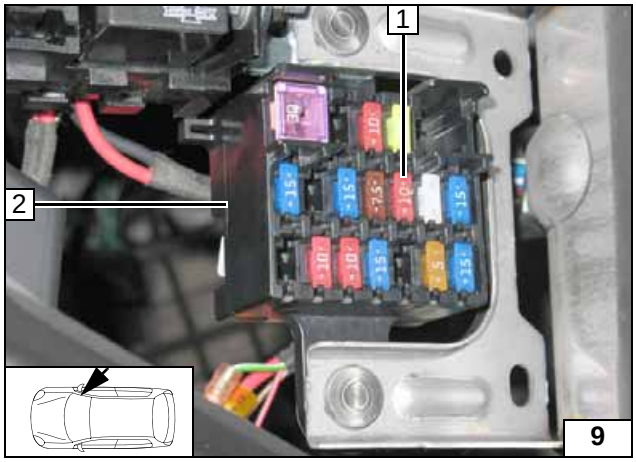
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	F10 AC	"AC" 10 A fuse	rt	red
X1	6-pin heater connector	H	"Heater1" 40A fuse	sw	black
X2	2-pin heater connector			ge	yellow
X10	4-pin connector of Heater control	GRs	Fan relay	gn	green
		0740-201A	Connector KB	vi	violet
K1	Fan relay			ws	white
F1	20A fuse	KB	A/C control panel	br	brown
F2	30A fuse	GM	Fan motor	bl	blue
F3	1A fuse	GRr	Fan controller		
F4	10A fuse				
				X	Cutting point
				Wiring colours may vary.	

Legend



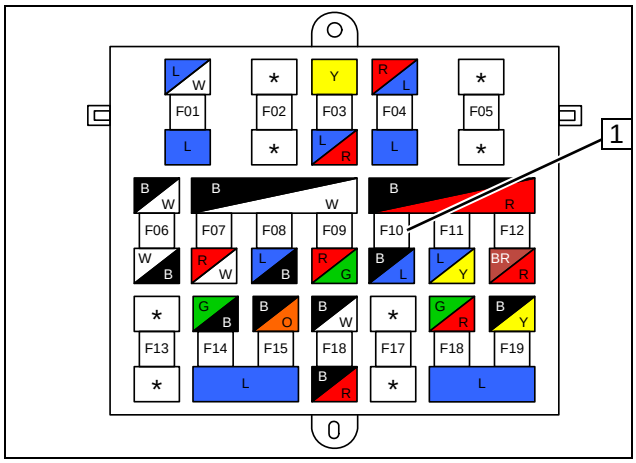
Connect same colour wires of wiring harness of passenger compartment fuse holder **1** to wiring harness of engine compartment fuse holder **2** according to wiring diagram.

Connecting wiring harnesses



Connection takes place at output of original vehicle AC fuse **1**!
Detach fuse box **2**.

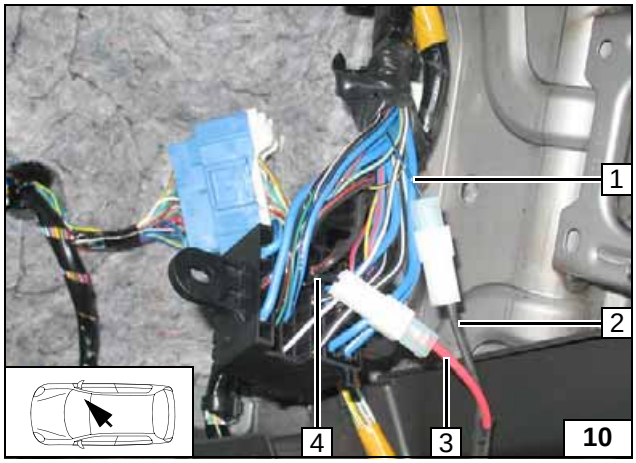
Fan controller



Fuse-side view.

1 AC fuse, 10A

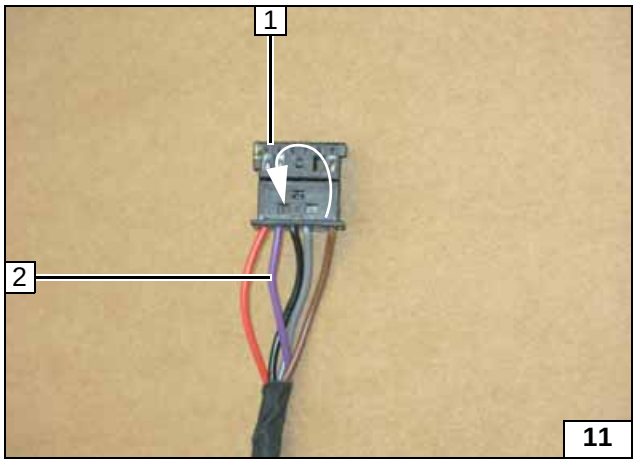
Fuse box view



Produce connections as shown in wiring diagram.

1 Black/blue (sw/bl) wire from A/C control unit
2 Black (sw) wire from K1/30
3 Red (rt) wire from K1/87a
4 Black/blue (sw/bl) wire from A/C fuse

Fan controller



Combination of Heater Controls

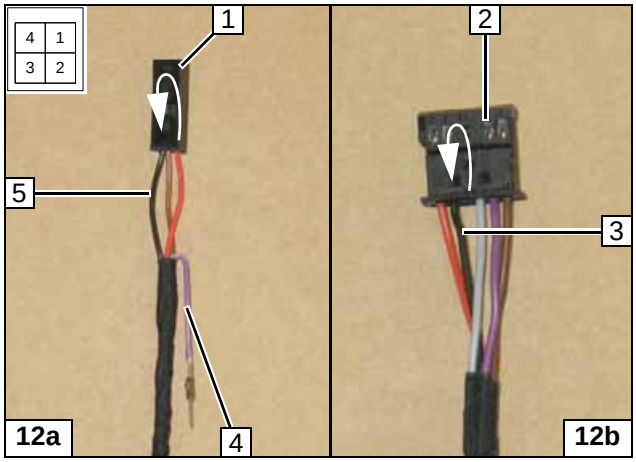
Only for "silver" Telestart
Observe attached installation instructions for "black" Telestart.

Preparing connector

Telestart T91 with and without push button.

Figure 11 (Y-adapter connector)

Detach violet (vi) wire **2** from 6-pin connector **1** Pin 5 and insert it into Pin 2.



Digital timer and Telestart T91.

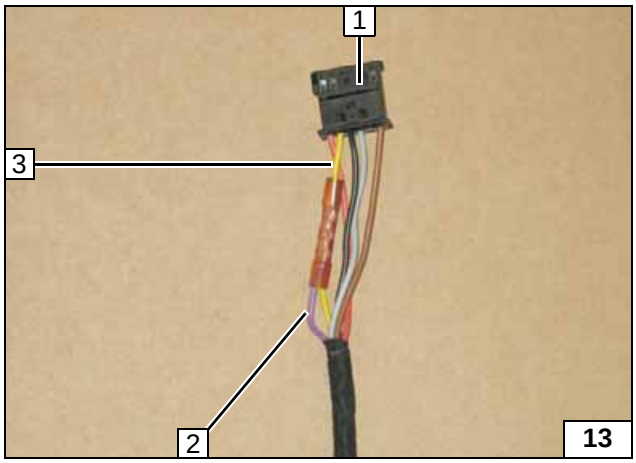
Figure 12a (Coupling of Y-adapter, wire-side view)

Detach violet (vi) wire **4** from 4-pin coupling **1** Pin 1, insulate and tie back.
Detach black (sw) wire **5** from 4-pin coupling **1** Pin 2, and insert into Pin 1.

Preparing connector

Figure 12b (Y-adapter connector)

Detach black (sw) wire **3** from 6-pin connector **2** Pin 3 and insert it into Pin 2.

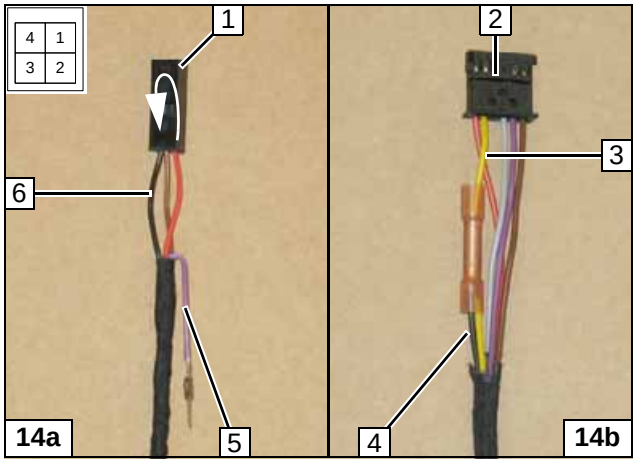


Telestart HTM100 with and without push button.

Figure 13 (Y-adapter connector)

Detach violet (vi) wire **2** from 6-pin connector **1** Pin 5. Cut yellow (gb) wire **3** approx. 50mm before the connector **1**. Connect violet (vi) wire **2** and yellow (gb) wire **3** to connector.

Preparing connector



Digital timer and Telestart T100 HTM!

Figure 14a (Coupling of Y-adapter, wire-side view)

Detach violet (vi) wire **5** from 4-pin coupling **1** Pin 1, insulate and tie back.
Detach black (sw) wire **6** from 4-pin coupling **1** Pin 2, and insert into Pin 1.

Preparing connector

Figure 14b (Y-adapter connector)

Detach black (sw) wire **4** from 6-pin connector **2** Pin 3. Cut yellow (gb) wire **3** approx. 50mm before the connector **2**. Connect black (sw) wire **4** and yellow (gb) wire **3** to connector.

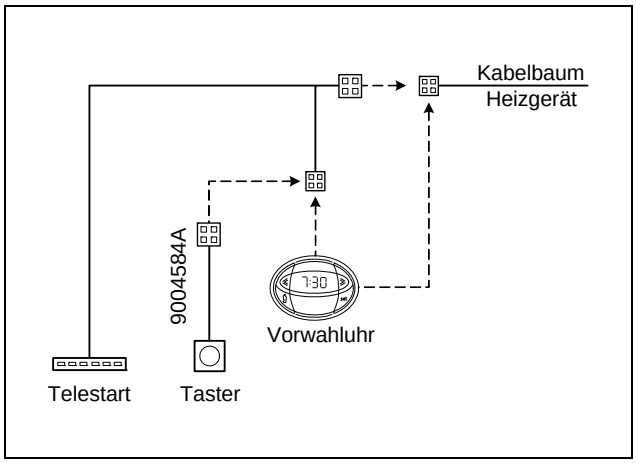


Diagram of heater controls

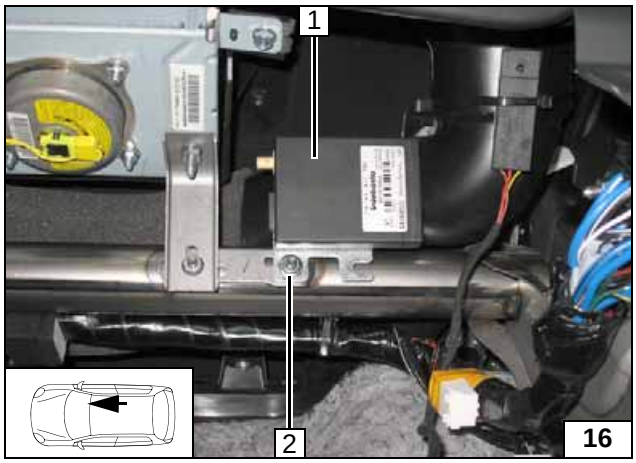
Digital Timer

1 Digital timer

Mounting digital timer

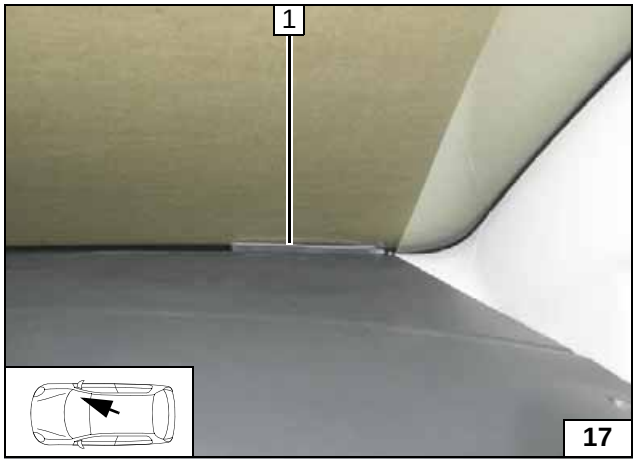
Remote Option (Telestart)

Drill out hole at position **2** of bracket to 6.5mm dia.



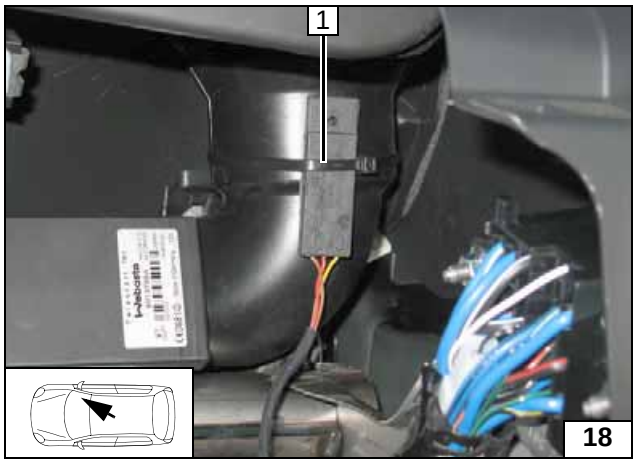
1 Receiver
2 Original vehicle stud bolt, flanged nut

Mounting receiver



1 Antenna

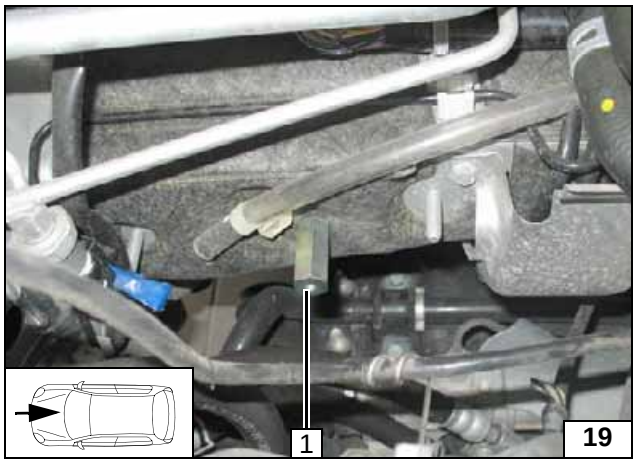
Mounting antenna



Temperature sensor T100 HTM

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

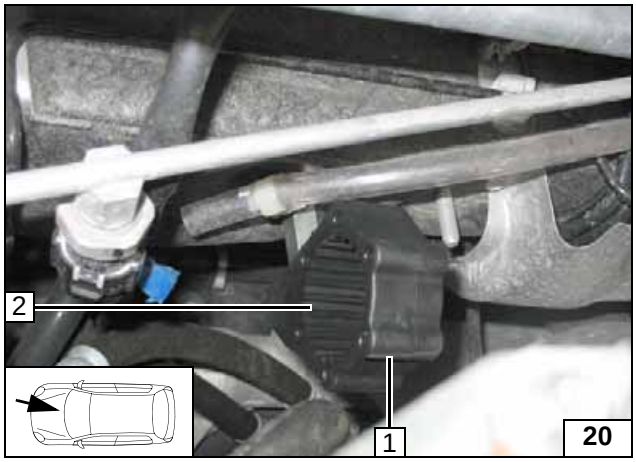
Installing temperature sensor



Preparing Installation Location

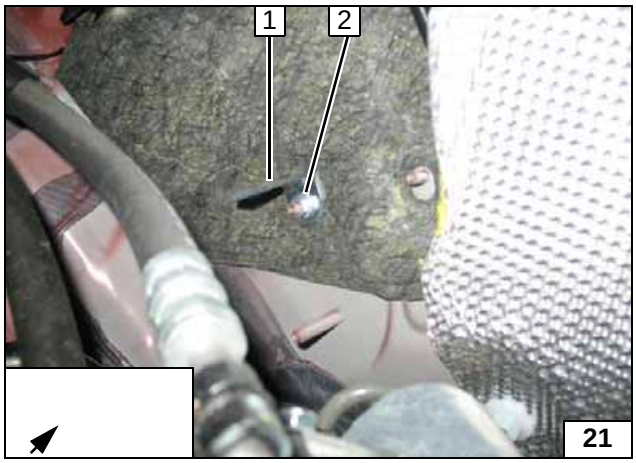
Mount M6x40 spacer nut **1** on original vehicle stud bolt (remove flanged nut if available).

Mounting spacer nut



1 Intake of circulating pump
2 M6x25 bolt (hidden) on spacer nut

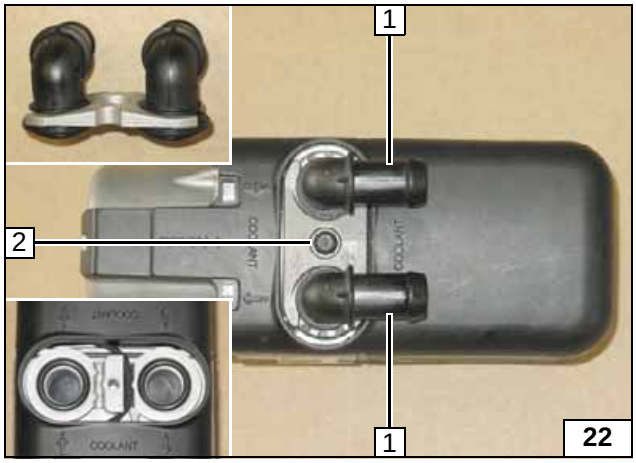
Mounting bracket of circulating pump



Remove original vehicle plastic nut at position **2** and discard.

1 Angle bracket
2 Original vehicle stud bolt, flanged nut

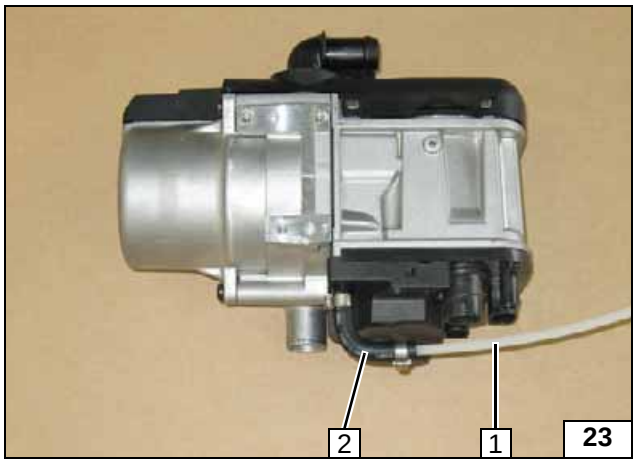
Preparing combustion air



Preparing Heater

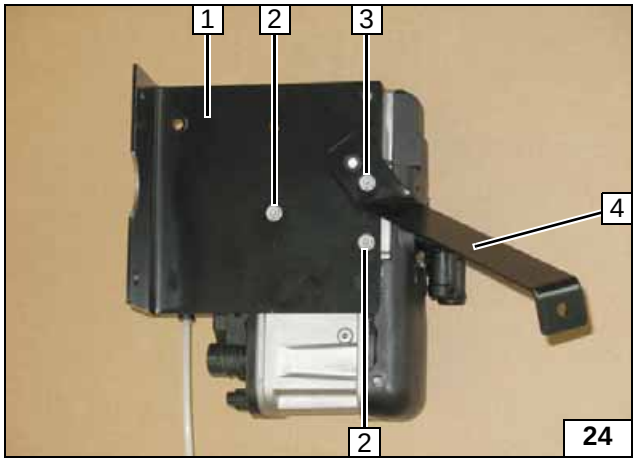
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Mounting water connection piece



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

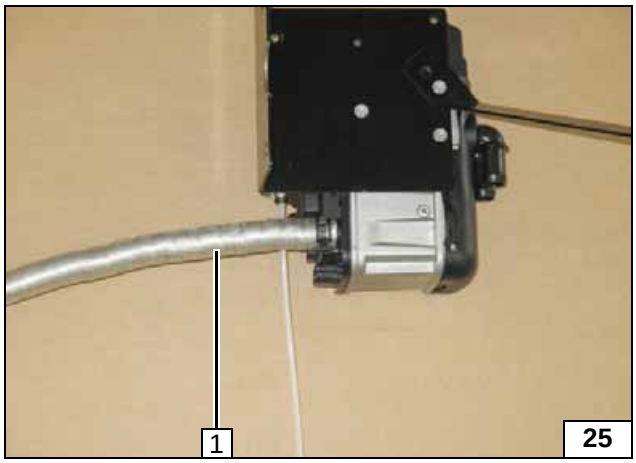
Premounting fuel line



Use hole pattern as shown.

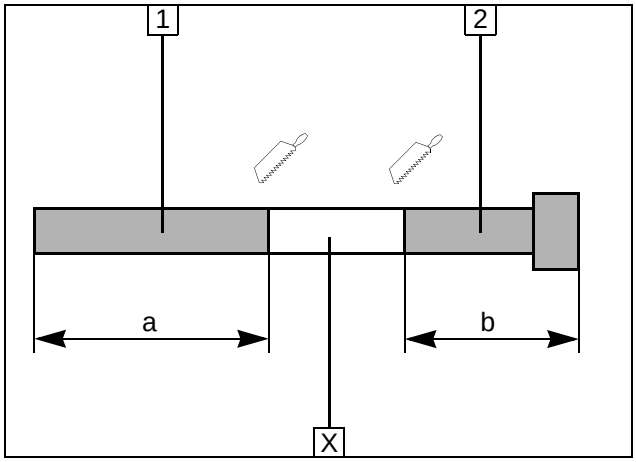
1 Bracket
2 5x13 self-tapping bolt [2x]
3 Loosely mount 5x13 self-tapping bolt
4 Strut

Mounting bracket and strut



1 Combustion air pipe

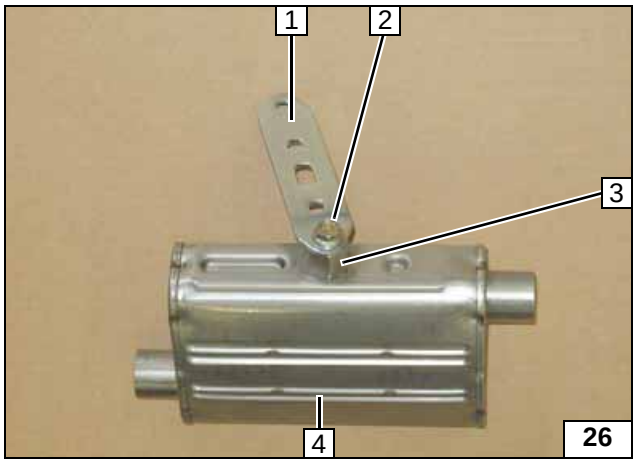
Premounting combustion air pipe



Discard section **X**.

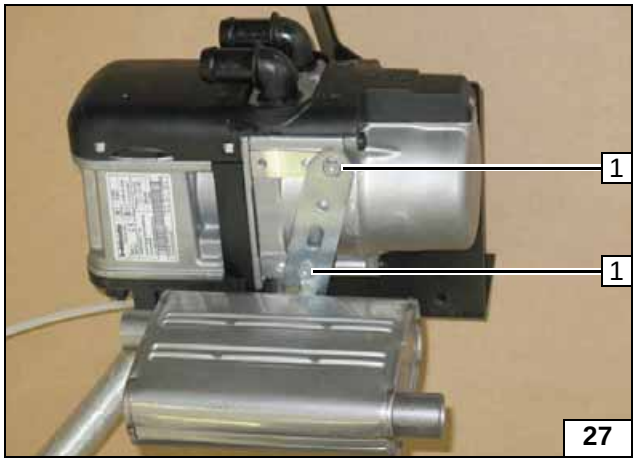
1 Exhaust pipe
a =280
2 Exhaust end section
b =130

Preparing exhaust pipe



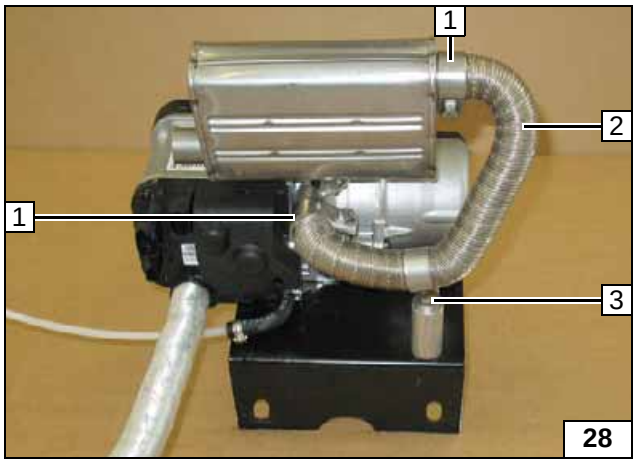
1 Perforated bracket
2 M6x25 bolt
3 15 mm dia. spacer nut
4 Silencer

Premounting silencer



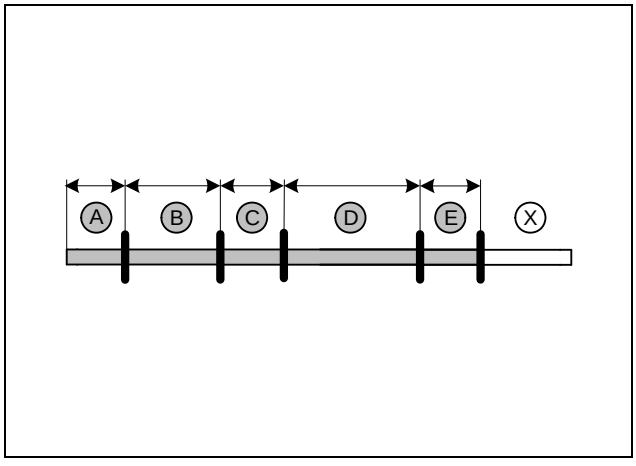
1 5x13 self-tapping bolt [2x]

Mounting silencer



1 Hose clamp [2x]
2 Exhaust pipe
3 M6x60 bolt, p-clamp, 40 mm shim, flanged nut

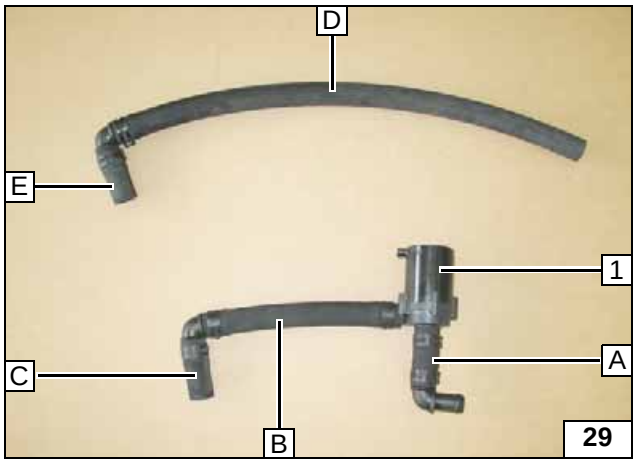
Mounting exhaust pipe



Discard section **X**.

A = 60
B = 200
C = 60
D = 500
E = 60

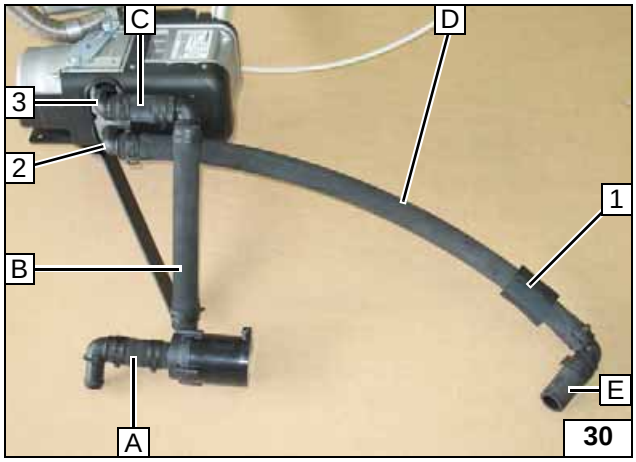
Cutting water hose to length



All spring clips = 25 mm dia.
All connecting pipes 90°; 18mm dia.

1 Circulating pump

Premounting water hoses

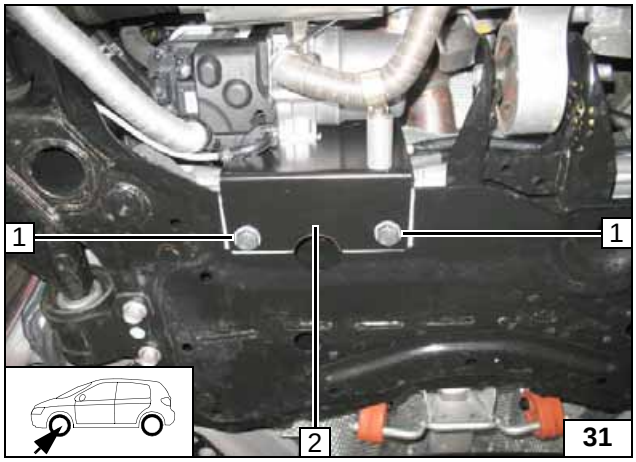


Before installation, slide 50 mm heat shrink plastic tubing **1** on hose **D** (will be shrunk later). All spring clips = 25 mm dia.

2 Heater outlet
3 Heater inlet

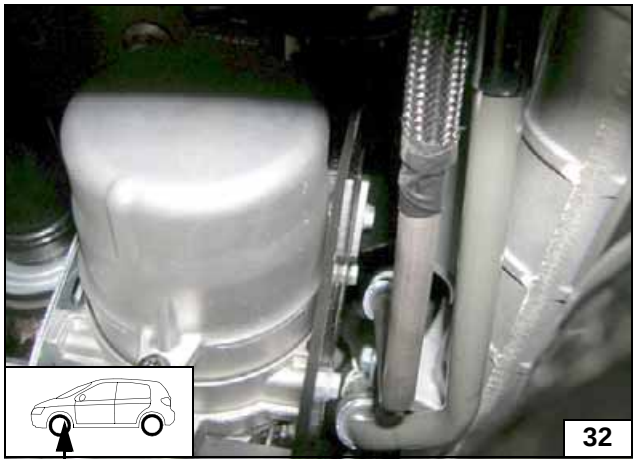
Mounting water hoses

Installing Heater



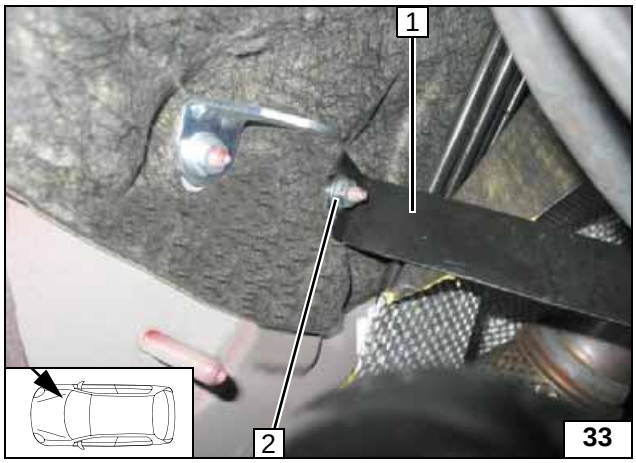
1 M10x25 bolt, spring lockwasher, washer, existing threaded hole [2x each]
2 Bracket

Loosely mounting heater



Align heater. Ensure sufficient distance from neighbouring components. Adhere to a minimum distance of 5 mm > from steering components and > 15mm from transmission, cardan shaft and engine components. Tighten M10x25 bolts.

Aligning heater



Insert 5mm shim between firewall and strut **1**. Tighten all loosely mounted hardware.

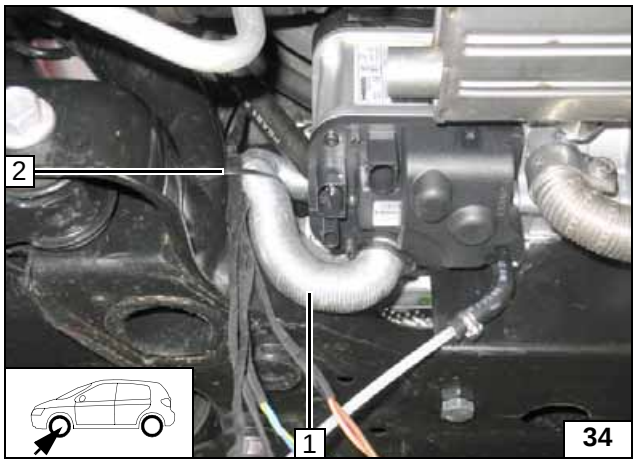
2 Original vehicle stud bolt, 5mm shim, M6 flanged nut

Mounting strut

Combustion Air

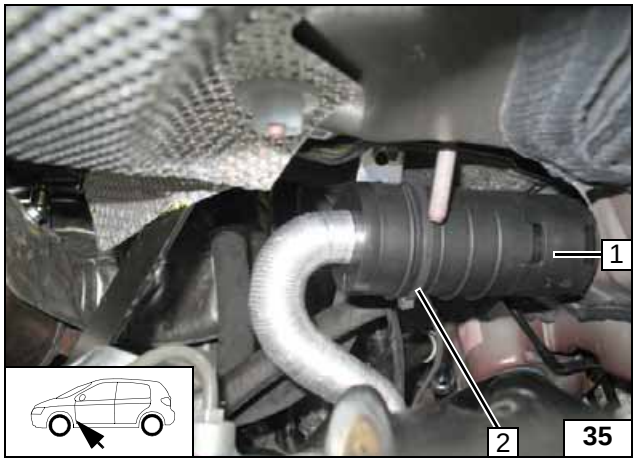
1 Combustion air pipe
2 Cable tie

Routing combustion air pipe



Fasten silencer **1** with cable tie **2** to pre-mounted angle bracket.

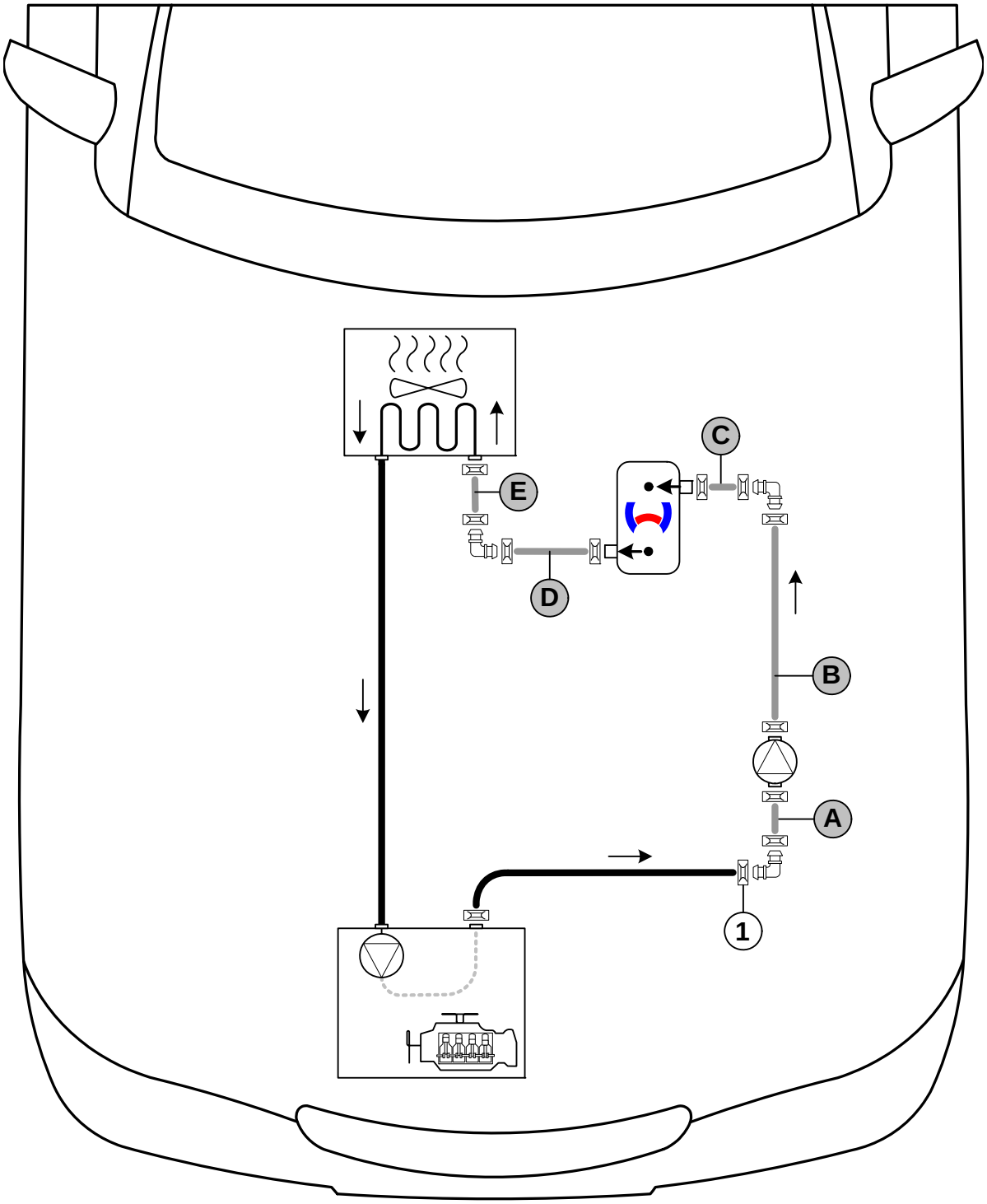
Mounting silencer



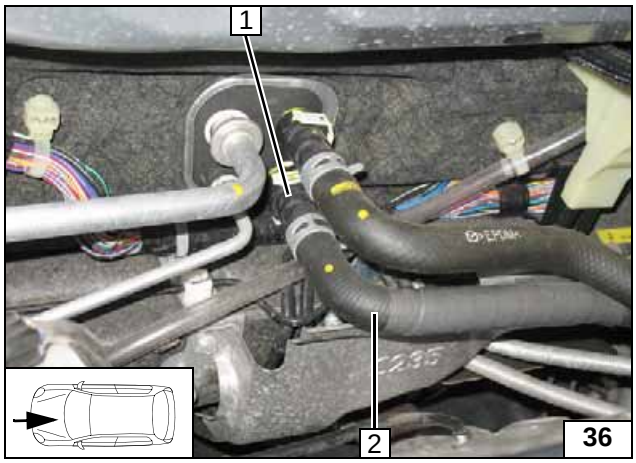
Coolant Circuit

WARNING!
Any coolant running off should be collected using an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.
The connection should be "inline" based on the following diagram:
The displayed coolant circuit serves the purpose of primary heating of the passenger compartment.

Hose routing diagram

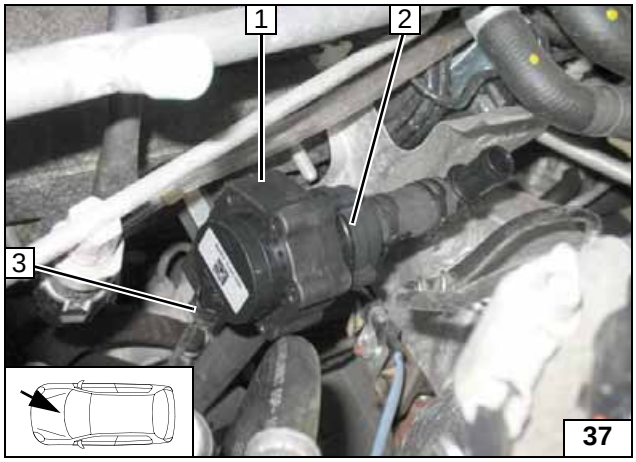


All spring clips without a specific designation = 25 mm dia.
1 = Original vehicle spring clip .
All connecting pipes = 18x18mm dia.



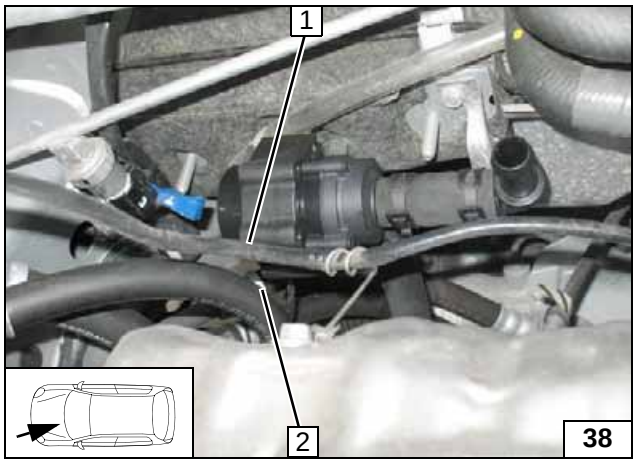
Pull hose of engine outlet / heat exchanger inlet **2** off coupling **1**. Original vehicle spring clip will be reused.

Cutting point



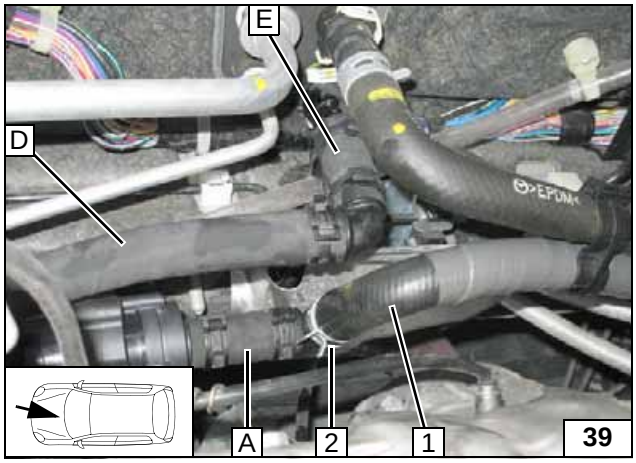
1 Intake of circulating pump
2 Circulating pump
3 Install wiring harness of circulating pump

Mounting circulating pump



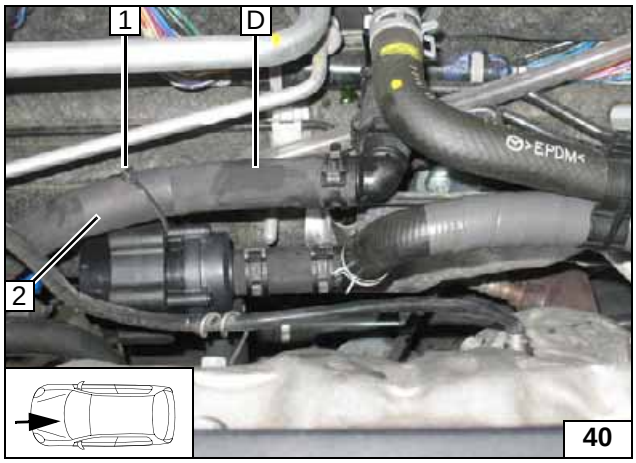
Align circulating pump. Ensure sufficient distance from adjacent components; align wires accordingly if necessary. Adhere to a minimum distance of > 10mm to A/C line at position **2** and > 10mm to the Lambda probe wire at position **1**.

Aligning circulating pump



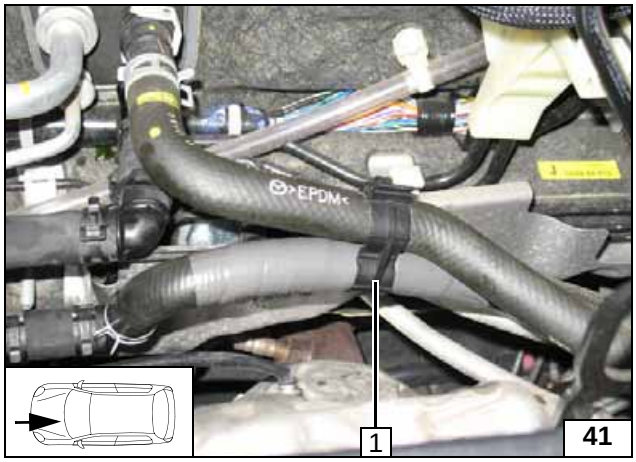
1 Engine outlet hose section
2 Original vehicle spring clip

Connection of water hoses



Align heat shrink plastic tubing **2** to hose **D** and shrink. Fasten hose **D** and circulating pump mount with cable tie **1**.

Fastening hose D



Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

1 Hose bracket

Routing in engine compartment

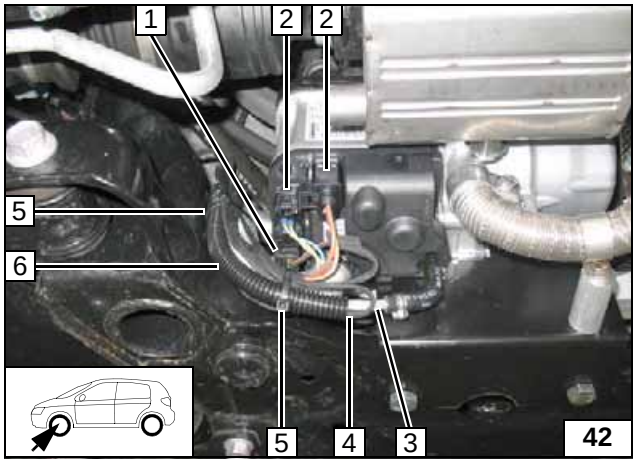
Fuel

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

Catch any fuel running off with an appropriate container.

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.

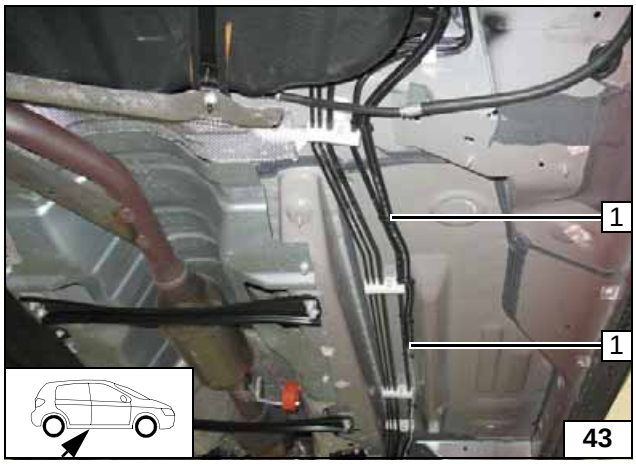
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Split corrugated tube in the middle.
Insert wiring harness of metering pump **4** and fuel line **3** into corrugated tube section 1 **6** and route to installation location of metering pump.

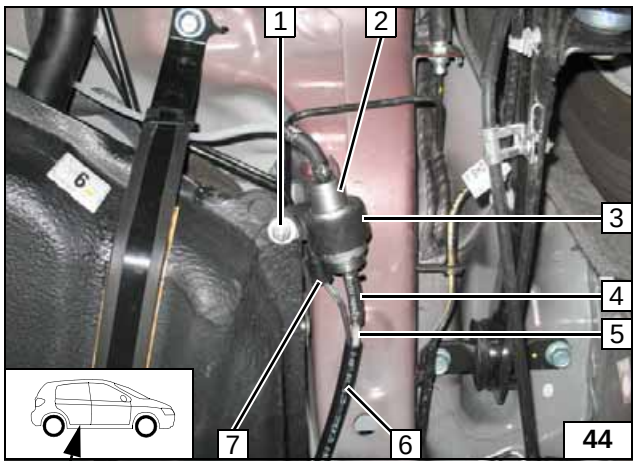
Installing wiring harnesses

1 Install wiring harness of circulating pump
2 Install wiring harness of heater [2x]
5 Cable tie [2x]



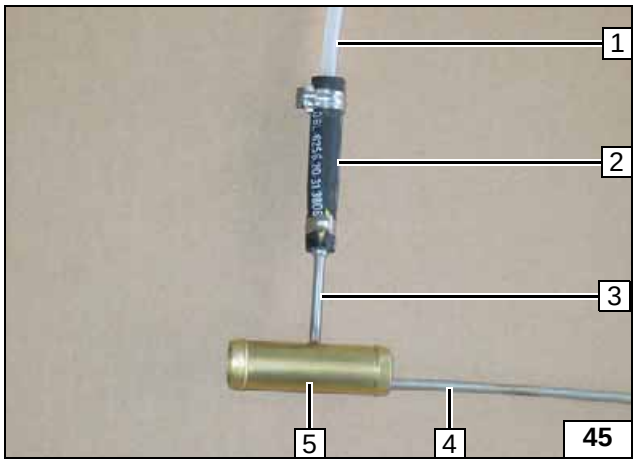
Fasten fuel line of heater and wiring harness of metering pump to the original vehicle fuel lines **1** with cable tie.

Routing lines



1 M6x25 bolt, large diameter washer [2x], flanged nut
2 Metering pump
3 Intake of metering pump
4 Hose section, 10 mm dia. clamp [2x]
5 Fuel line
6 Corrugated tube section 2
7 Wiring harness of metering pump, connector mounted

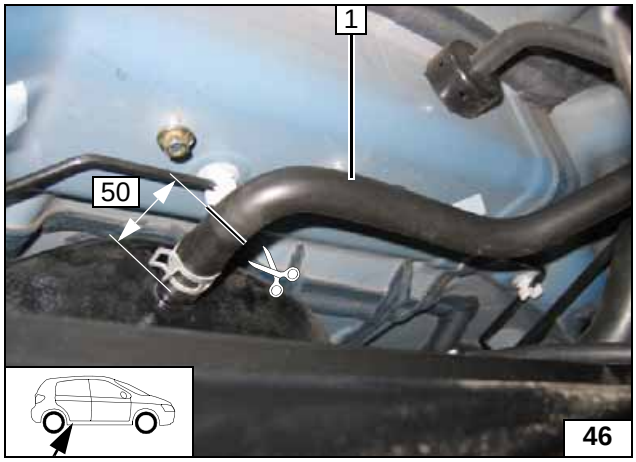
Mounting metering pump



Straighten extracting pipe **4** of fuel standpipe **5** if it is bent.

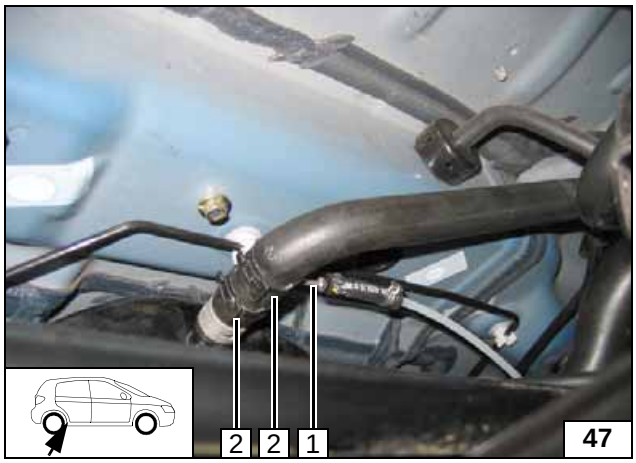
1 Fuel line
2 Hose section, 10 mm dia. clamp [2x]
3 Standpipe connection pieces

Preparing fuel standpipe



Detach activated charcoal filter fully with bracket and put it aside. Cut off fuel-tank vent line **1** by approx. 50 mm before fuel tank connection piece.

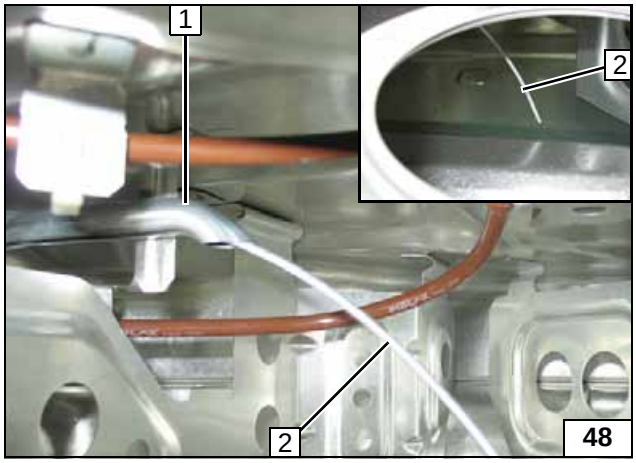
Detaching fuel-tank vent line



Standpipe is aligned to the tank floor in the guide automatically.

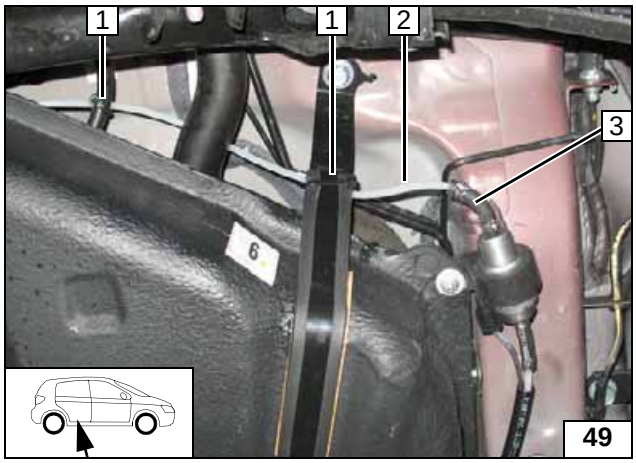
1 Fuel standpipe (premounted)
2 22mm dia. spring clip [2x]

Installing fuel standpipe



When inserting the fuel tank standpipe, the extracting pipe **2** is aligned by the guide of the fuel-tank vent line **1** to the tank floor automatically.

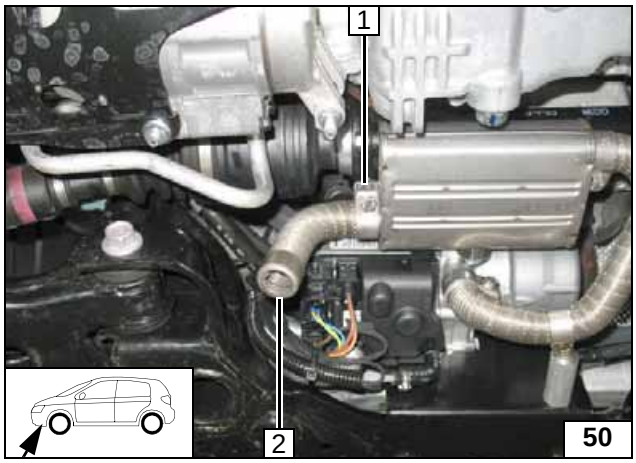
Aligning the standpipe



Check the position of the components; adjust if necessary. Check that they have freedom of movement.
Reinstall activated charcoal filter.

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

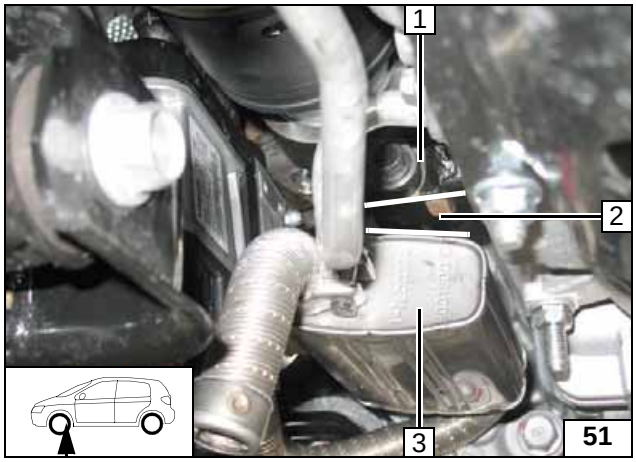
Connecting metering pump



Exhaust Gas

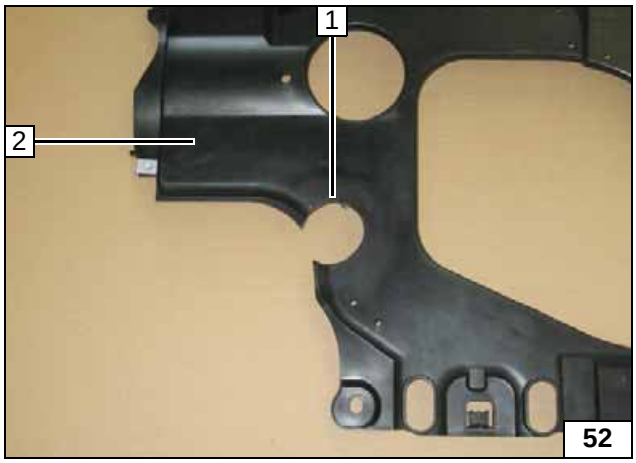
1 Hose clamp
2 Exhaust end section

Installing exhaust end section



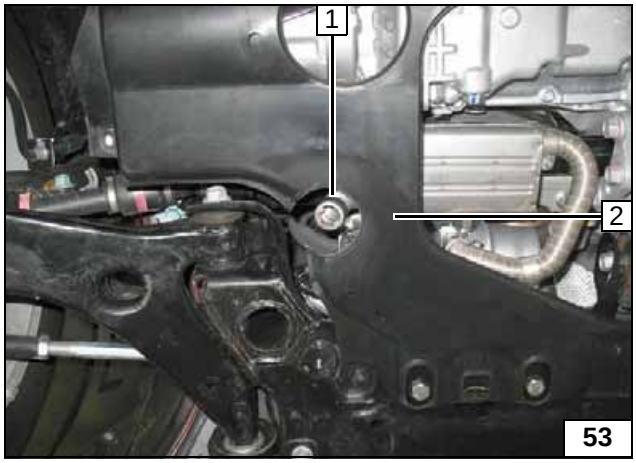
Ensure sufficient distance from neighbouring components. Align silencer **3**. The distance at position **2** between bracket of drive **1** and silencer **3** is at least 20mm.

Aligning silencer



1 60 mm dia. hole
2 Underride protection

Cutting out underride protection



Align exhaust end section **1** to underride protection **2**.

Cutting out underride protection

Final Work

WARNING!
Mount removed parts 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 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 remote option**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the signboard "Switch off parking heater before re-fuelling" in the area of the filler neck**
- **For initial startup and function test, see installation instructions**

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

Webasto
Feel the Drive

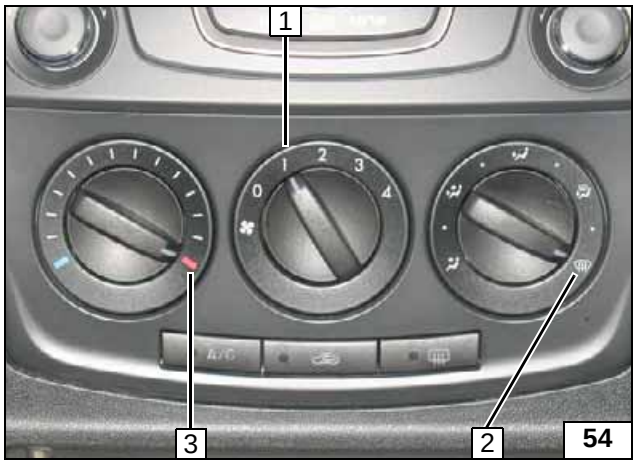
Operating Instructions for Manual Air-Conditioning

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

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

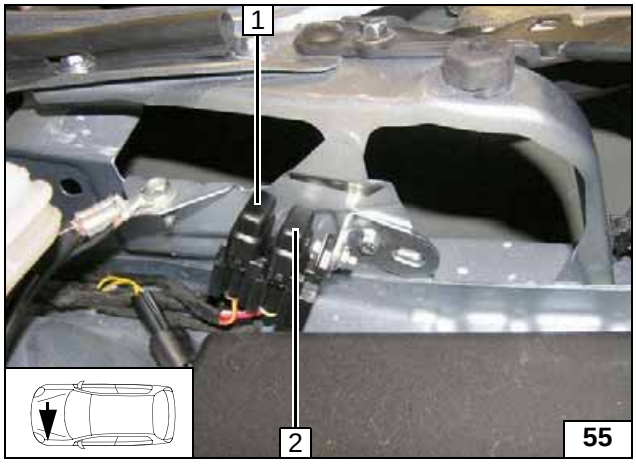
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For information on deactivation, please see the vehicle owner's manual.

Before parking the vehicle, make the following settings:



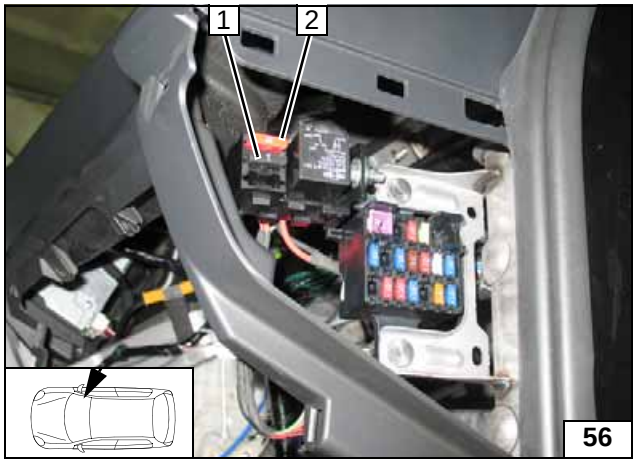
1 Set fan to level "1" or max. "2"
2 Air outlet to windscreen
3 Set temperature to "Hi"

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment

Operating Instructions for Automatic Air-Conditioning

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

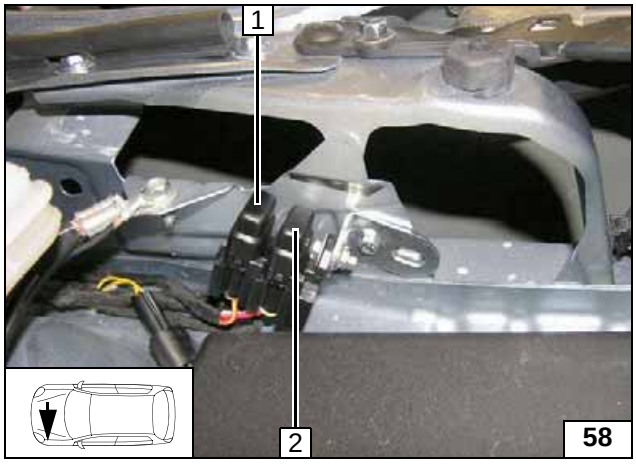
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For information on deactivation, please see the vehicle owner's manual.

Before parking the vehicle, make the following settings:

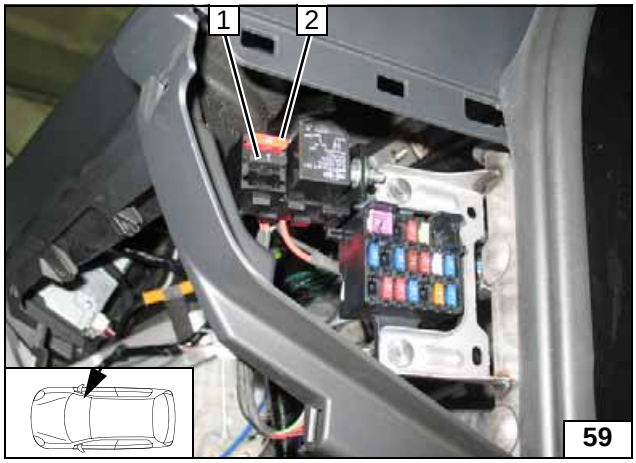
1 Set fan to level "1" or max. "2"
2 Air outlet to windscreen
3 Set temperature to "29°C"

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment