Water Heater

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Citroen / Peugeot / Toyota Aygo

Validity

Citroen

Manufacturer	Model	Type	EG-BE No./ ABE
Citroen	C1	P	e11 * 2001 / 116 * 0238 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.0 eVTI	Petrol	SG	51	998	1KR

Peugeot

Manufacturer	Model	Type	EG-BE No./ ABE
Peugeot	108	P	e11 * 2001 / 116 * 0237 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.0 eVTI	Petrol	SG	51	998	1KR

Toyota

Manufacturer	Model	Type	EG-BE No./ ABE
Toyota	Aygo	AB1	e11 * 2001 / 116 * 0236 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.0	Petrol	5-speed SG	51	998	1KR
1.0	Petrol	5-speed AG	51	998	1KR

SG = Manual transmission
AG = Automatic transmission (x-shift)

From Model Year 2014
Left-hand drive vehicle

Verified equipment variants: Manual / automatic air-conditioning system
Front fog lights
Start - Stop
LED daytime running lights

Total installation time: approx. 8 hours in case of vehicle with manual air-conditioning
approx. 9 hours in case of vehicle with automatic air-conditioning

Citroen / Peugeot / Toyota Aygo

Table of Contents

Necessary Components

- Basic delivery scope of *Thermo Top Evo* based on price list
- Installation kit for Citroen / Peugeot / Toyota Aygo 2014 1.0 Petrol: **1323406B**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

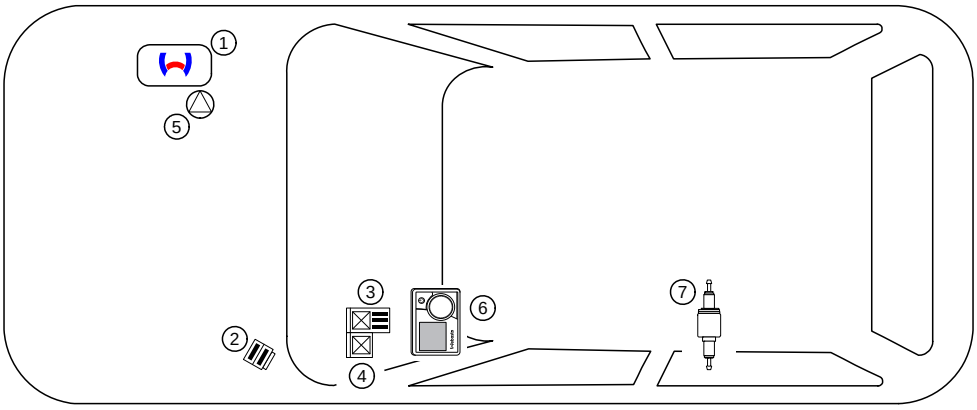
Installation instructions:

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

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Passenger compartment relay and fuse holder
4. PWM Gateway
5. Circulating pump
6. MultiControl CAR
7. 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 notes (not complete)

1.1 Installation and Repair

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

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

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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

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

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

1.3 Please note

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

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

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

Important

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

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

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

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

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

2 Statutory regulations governing installation

Guidelines	TT-Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

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

Important

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

Note

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

2.1 Excerpt from the directive 122 (heater) section 5 for the installation of the heater.

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible indicator 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 neck must be clearly labelled

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

2.4. Exhaust system

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

Citroen / Peugeot / Toyota Aygo

Information on Validity

This installation documentation applies to Citroen / Peugeot / Toyota Aygo 1.0 Petrol vehicles - for validity, see page 1 - from model year 2014 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 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

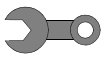
Dimensions
- All dimensions in mm.

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

Explanatory Notes on Document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual work 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 due to electrical voltage

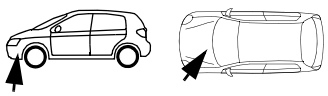
Specific risk of damage to components

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



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

Citroen / Peugeot / Toyota Aygo

Preliminary Work

Vehicle

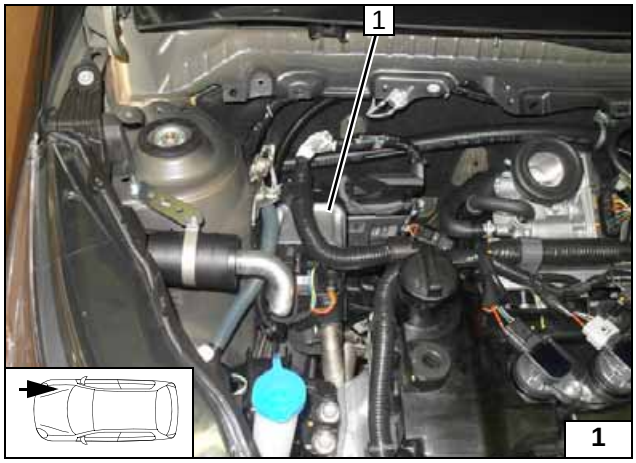
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the air filter box (for easier installation).
- Remove the windscreen wiper.
- Remove the coolant reservoir cap with lateral covers.
- Remove the windscreen wiper motor completely including the linkage.
- Remove the rear bench seat.
- Remove the instrument panel and the instrument cluster (see the dismantling instructions).
- Remove the A/C control panel (only with automatic air-conditioning).

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

- Open the tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.

Heater

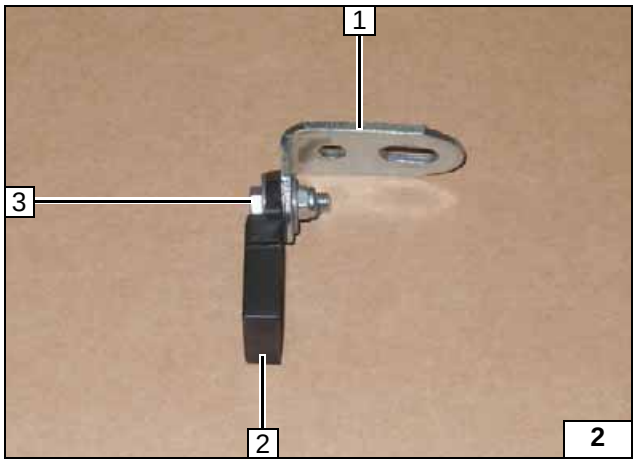
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place in the engine compartment.



Heater Installation Location

1 Heater

Installation location



2

Preparing Electrical System

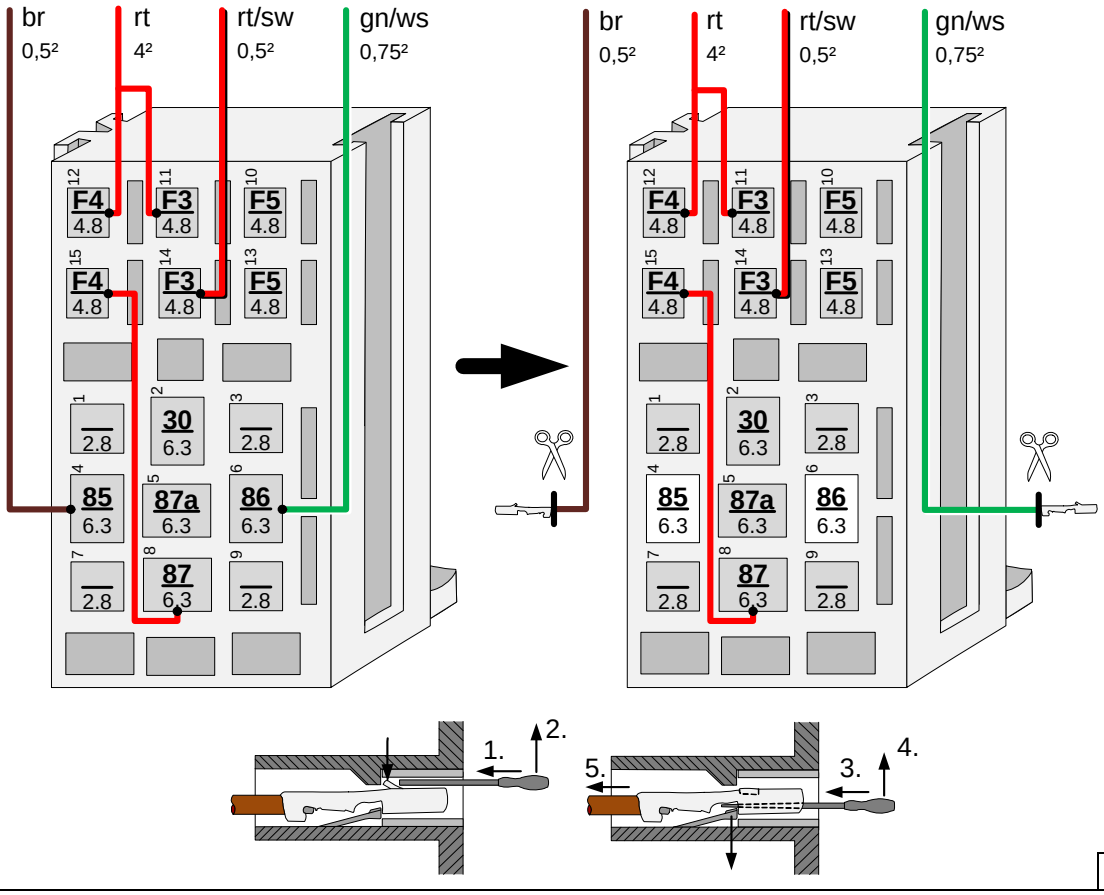
All vehicles

Wire sections retain their numbering throughout the entire document.

Produce all following electrical connections as shown in the wiring diagram.

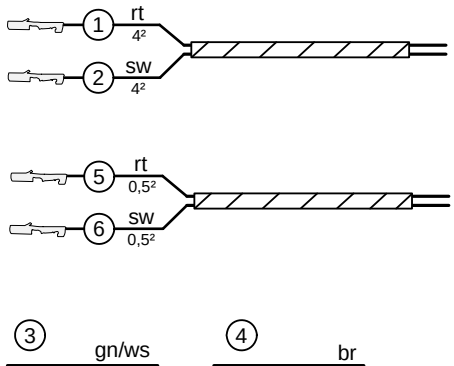
Premounting retaining plate

1 Angle bracket
2 Retaining plate of engine compartment fuse holder
3 M5x16 bolt, large diameter washer [2x], nut



3

Preparing passenger compartment relay and fuse holder

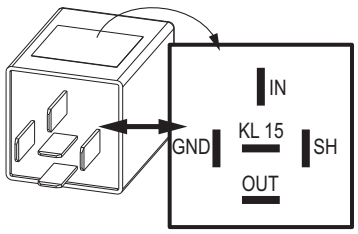


4

Manual air-conditioning system

① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness
⑤ Red (rt) wire from wiring harness of PWM control
⑥ Black (sw) wire from wiring harness of PWM control

Assigning wires



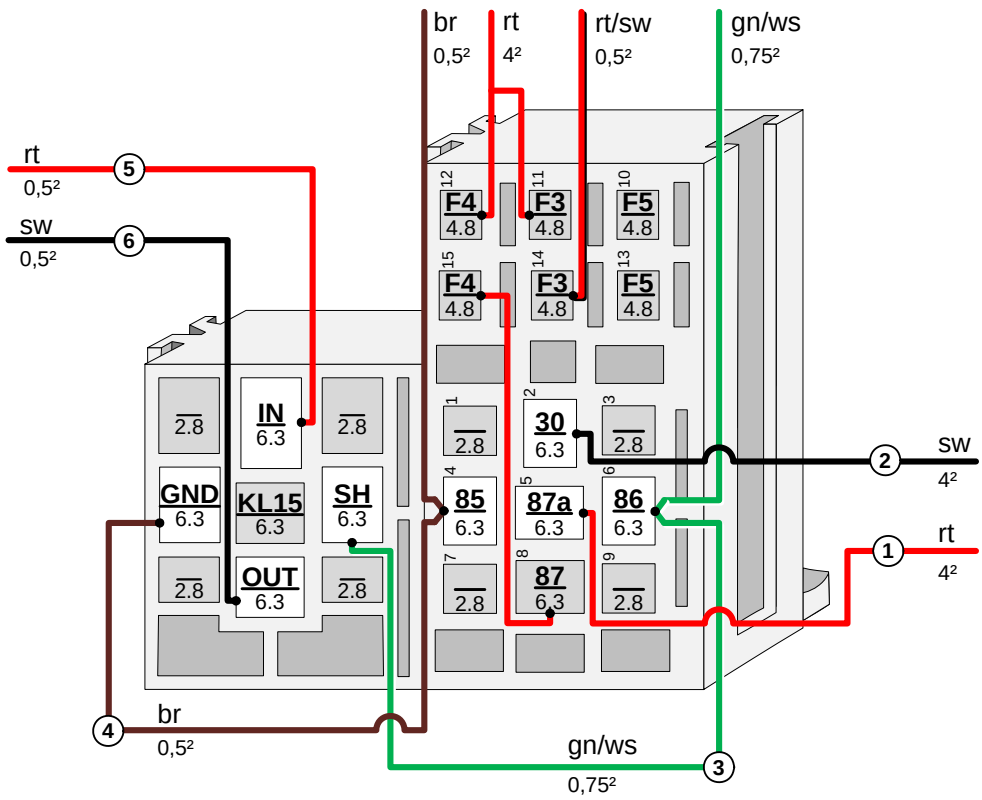
5

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

Settings (preprogrammed):

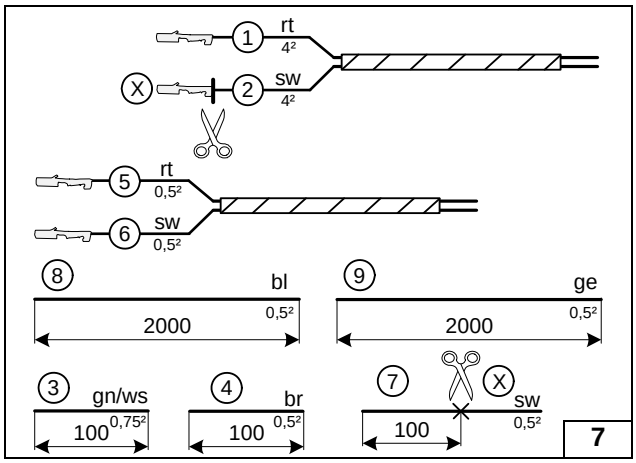
Duty cycle: 100% (DC)
Frequency: not relevant
Voltage: 3.6V
Function: High side

View of PWM GW



6

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



7

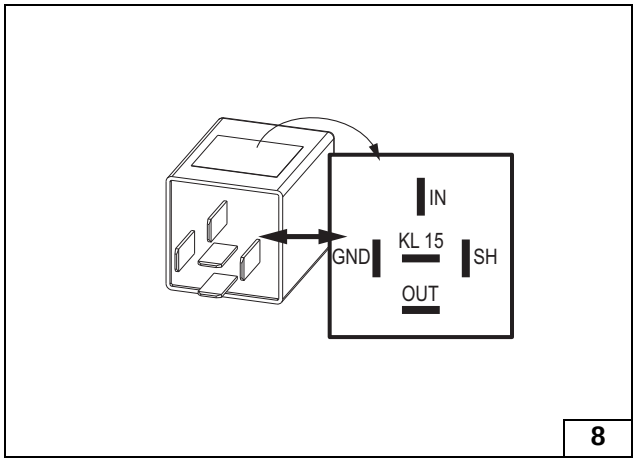
Automatic air-conditioning system

Discard sections **X**.

Pull wires ⑧ and ⑨ into provided protective sleeving.

① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness
⑤ Red (rt) wire from wiring harness of PWM control
⑥ Black (sw) wire from wiring harness of PWM control

Assigning/preparing wires

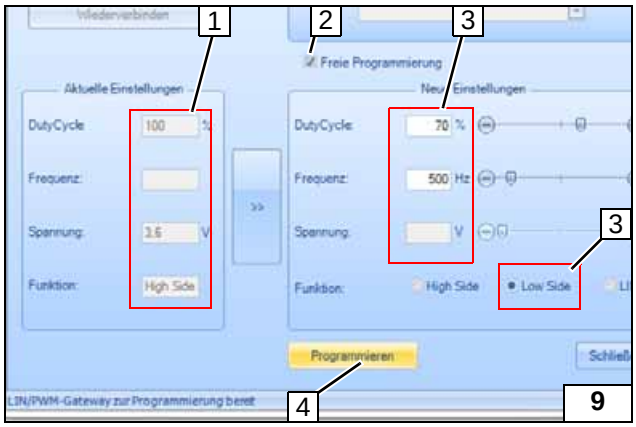


8

The pre-programmed settings of the PWM Gateway should be modified with the Webasto Thermo Test Diagnosis (WTT) using the following values (see also the next figure):

Duty cycle: 70%
Frequency: 500 Hz
Voltage: not relevant
Function: Low-side

Reprogramming PWM GW



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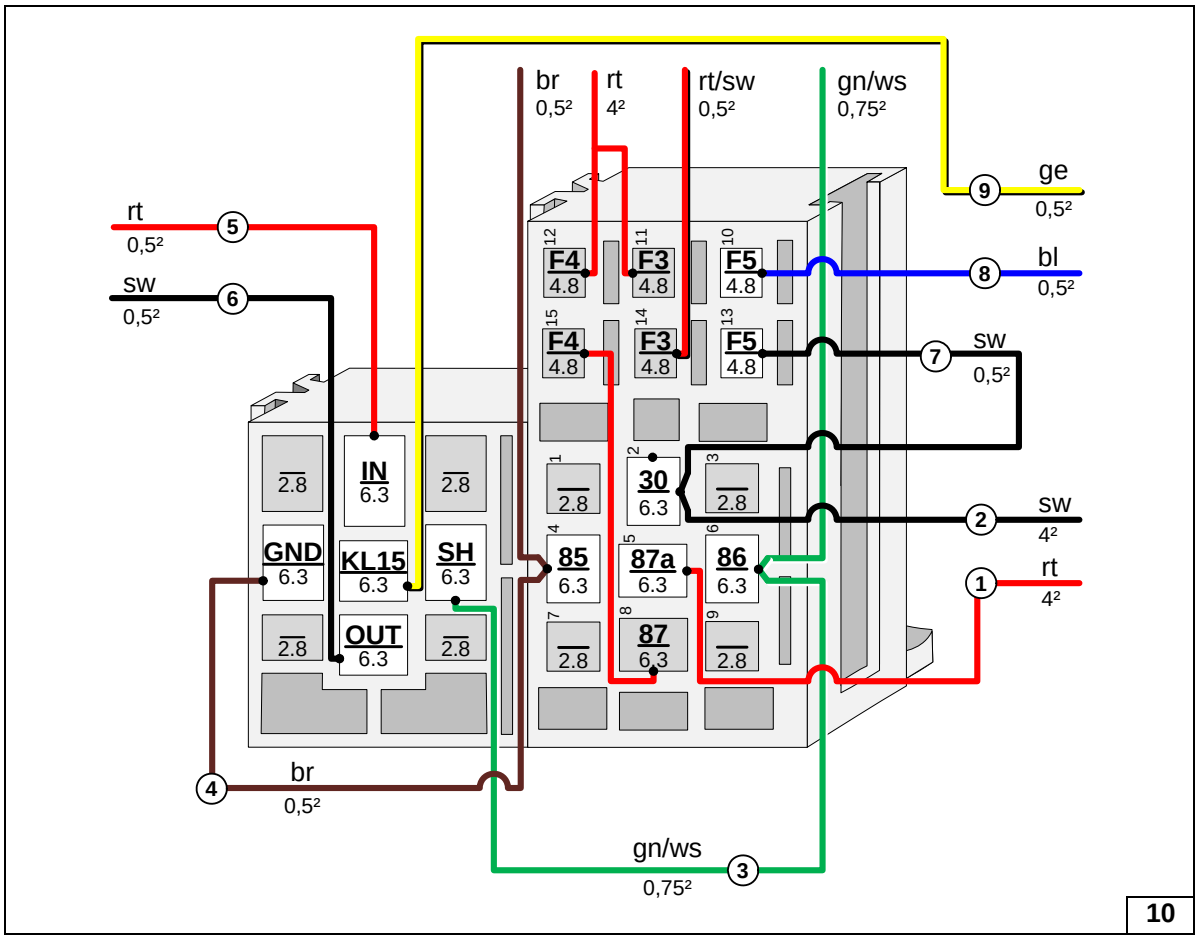
Valid for WTT, software version V2.16 and higher! Free Update via: www.dealers.webasto.com
Support via:
technikcenter@webasto.com

1 Current settings
2 Check the box for "Free programming" (Freie Programmierung)
3 Enter new settings
4 After entry of the settings, click on the button "Program" (Programmieren)

Reprogramming PWM-GW with WTT

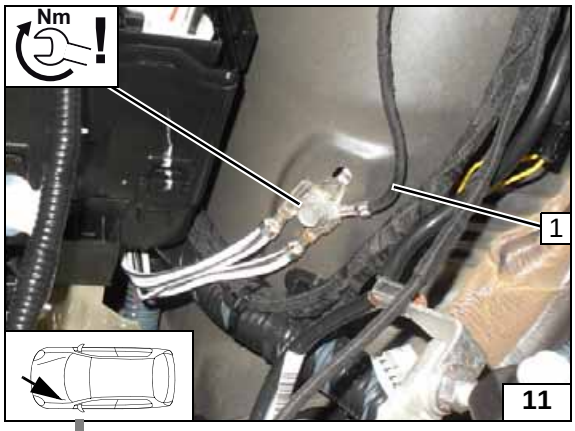


Interlocking PWM GW socket and passenger compartment relay and fuse holder and connecting wires

Electrical System

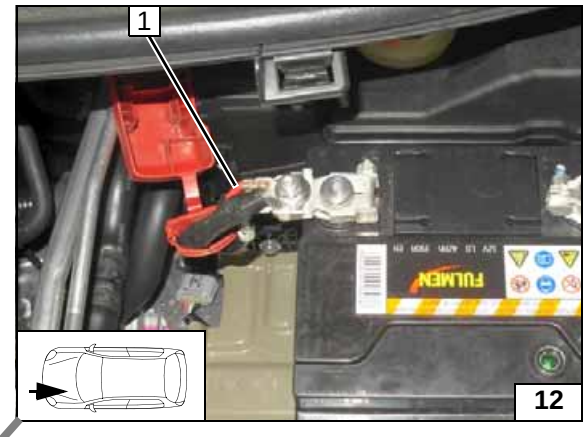
Earth wire

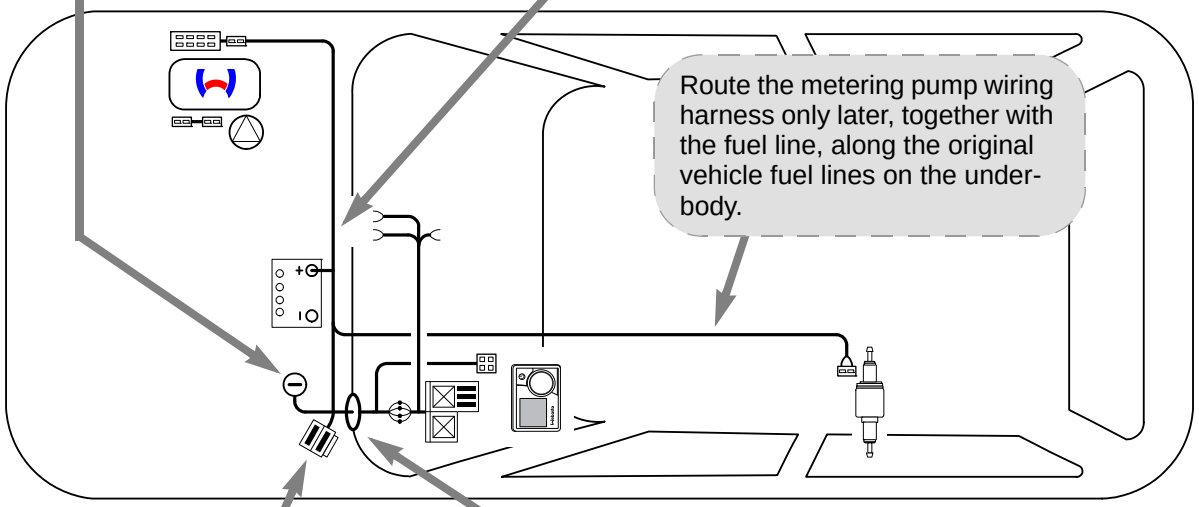
1 Earth wire on original vehicle earth support point



Positive wire

1 Positive wire on positive battery terminal

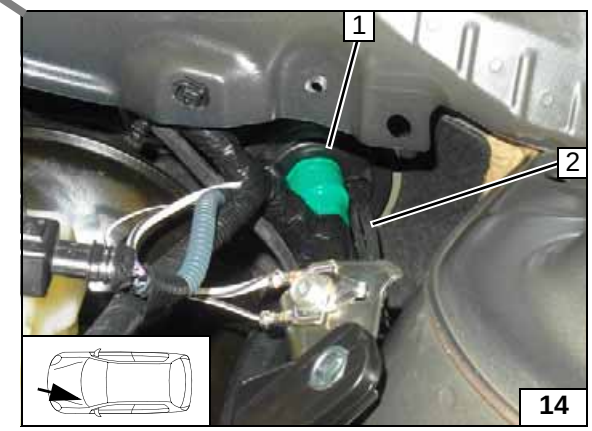




Wiring harness routing diagram

Fuse holder of engine compartment

Position engine compartment fuse holder **1** on the left strut tower, it will be installed later during the "Final Work" phase!



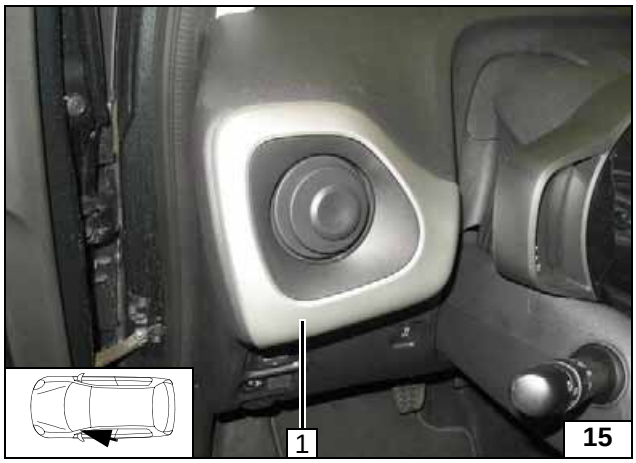
Wiring harness pass through

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

Dismantling Instructions

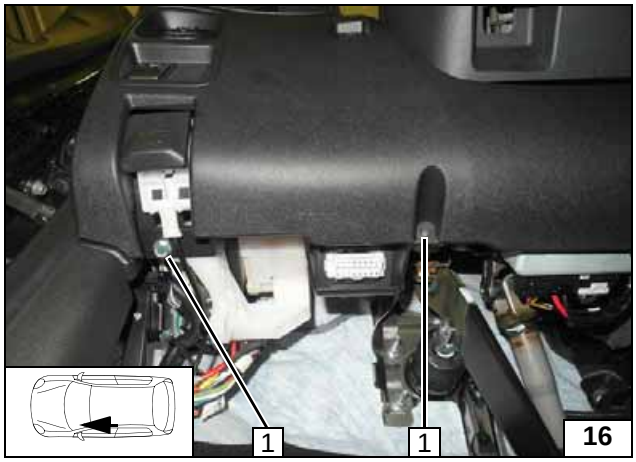
1 Trim

Pulling off trim



1 Original vehicle bolt [2x]

Removing bolts



Unclip fuel tank cap unlocking device **2**, pull off trim **1** and detach connector from switches!

Removing trim

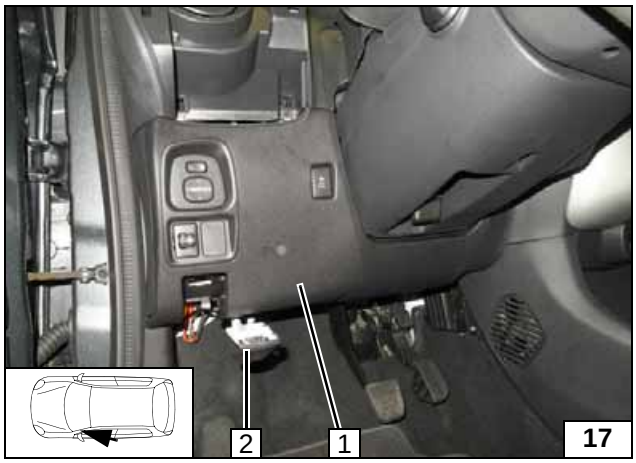
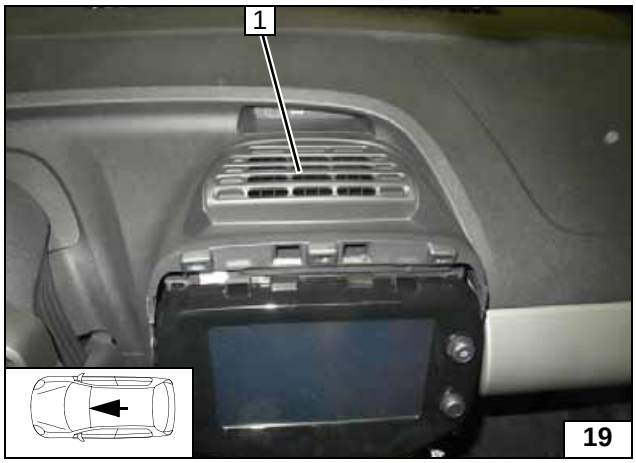


Figure shows manual air-conditioning system.

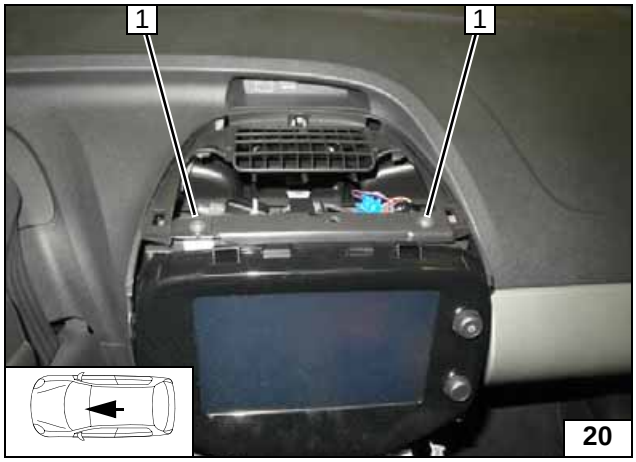
1 Trim piece
○ Retaining clip [8x]

Removing trim piece



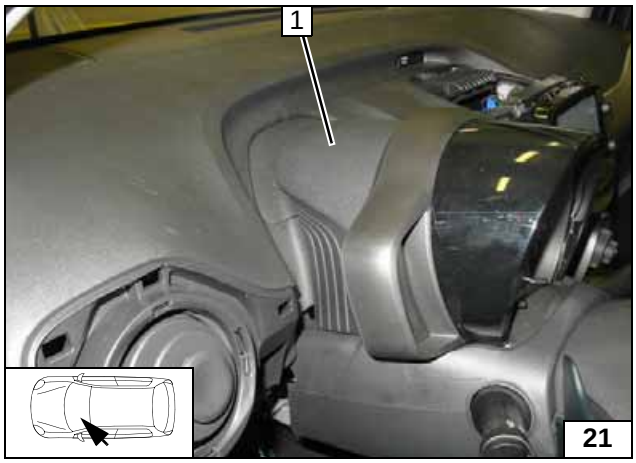
Pull off ventilation grille **1**.

Removing ventilation grille



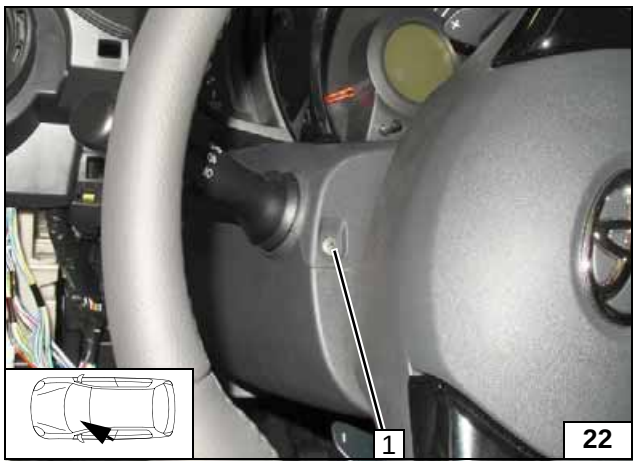
1 Bolt [2x]

Removing bolts



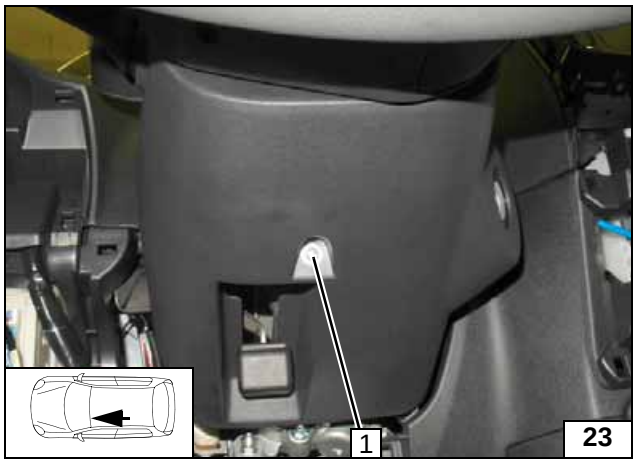
Pull off trim **1**.

Removing trim of instrument cluster



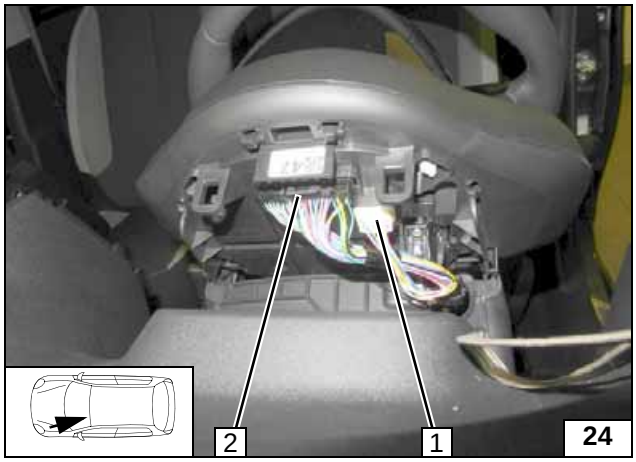
Remove bolts **1** [2x] on the left and the right of the steering wheel.

Removing steering column trim



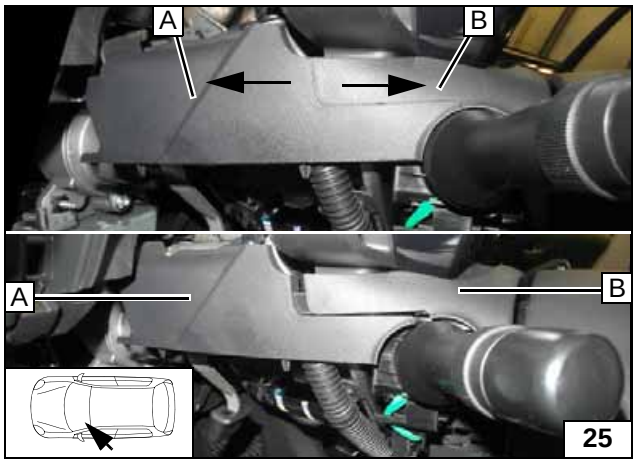
Remove bolt **1**, take off steering column trim.

Removing steering column trim



Unlock connector **1** and **2** of instrument cluster and pull off.

Removing connector of instrument cluster



Pull apart part **A** and part **B** of the steering column trim to detach the components.

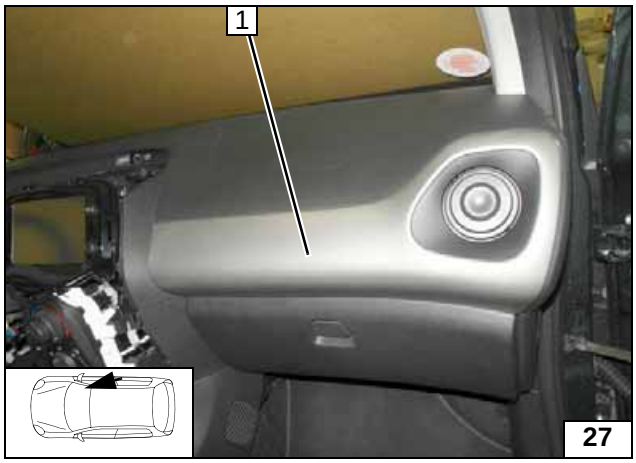
← before

← after

Separating steering column trim

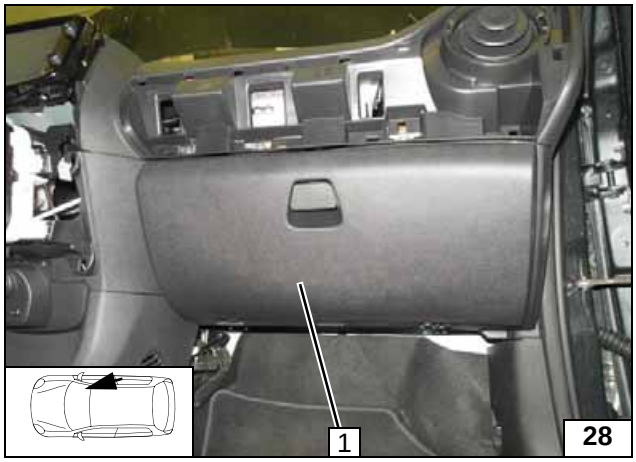
Remove bolts **1** [2x] on the left and the right of the steering wheel.

Removing instrument cluster



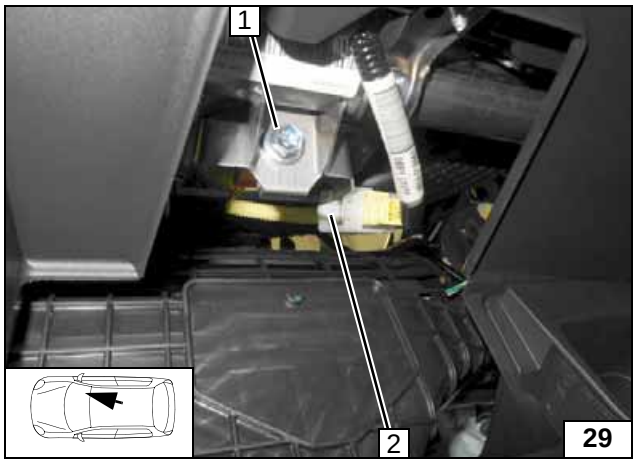
Pull off trim **1**.

Removing trim



Open glove compartment **1** and unclip.

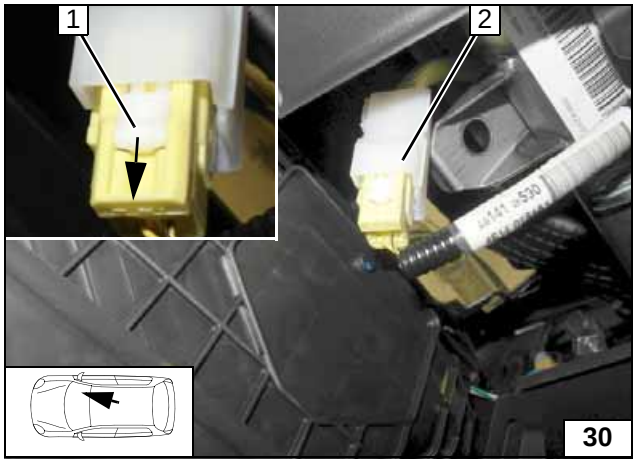
Removing glove compartment



Detach connector holder **2** from bracket.

1 Bolt

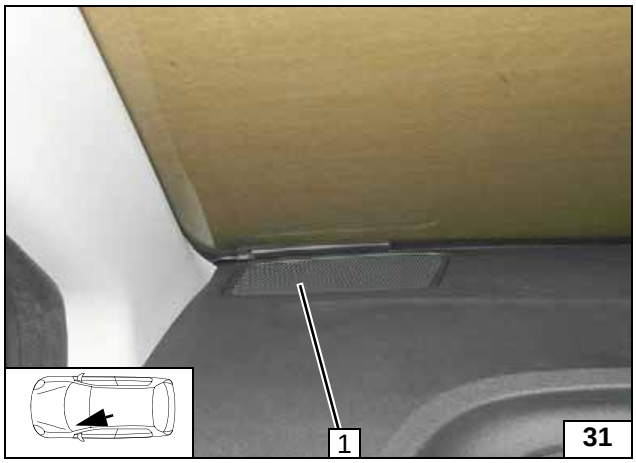
Removing bolt



Pull connector lock **1** in the direction of the arrow and separate the connector.

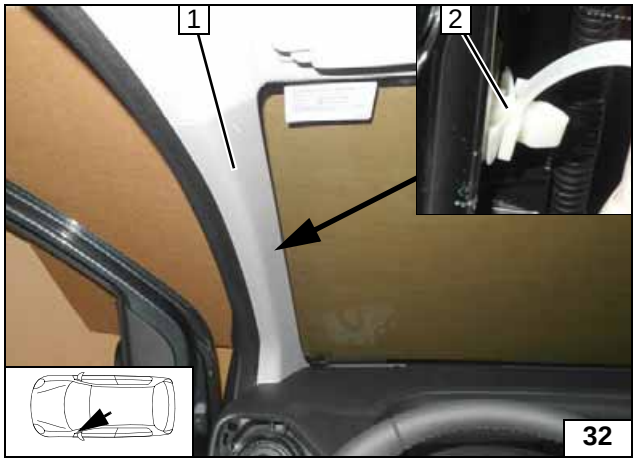
2 Airbag connector

Separating connector



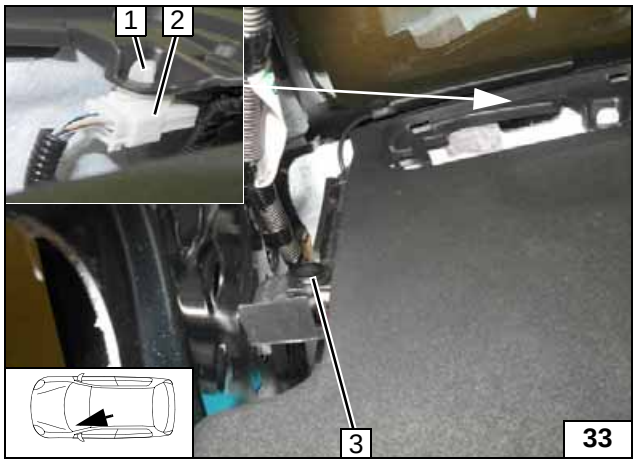
1 Speaker

Removing speaker



Pull off A-pillar trim **1** on the driver's and front passenger's side, detach retaining clip **2** carefully!

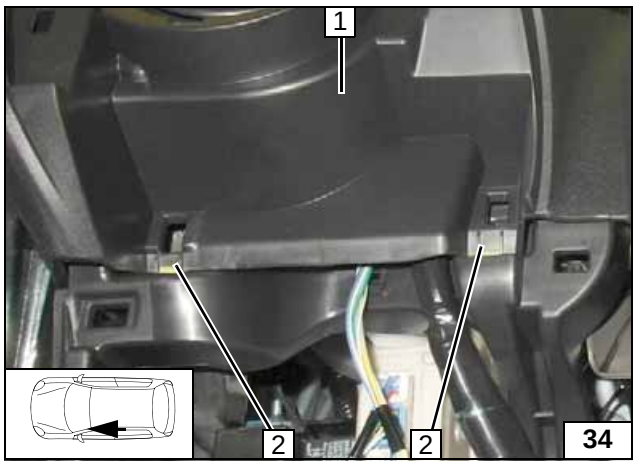
Removing A-pillar trim



Remove retaining clip **2** on the driver's and front passenger's side.

1 Detach connector holder
2 Connector

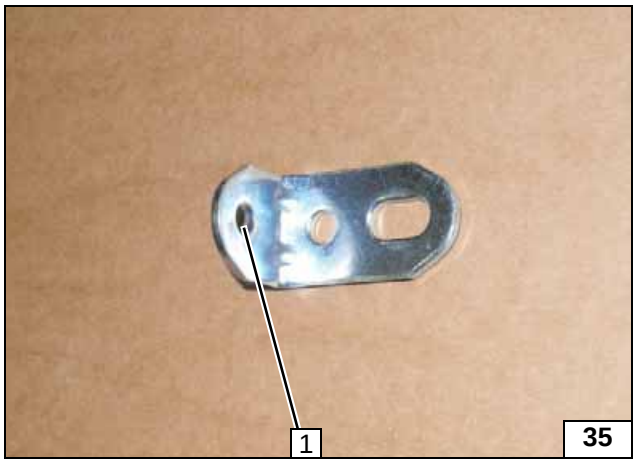
Removing retaining clip, separating connector



Release instrument panel **1** on the driver's and front passenger's side from the fasteners **2** [2x] and remove by pulling it upwards.

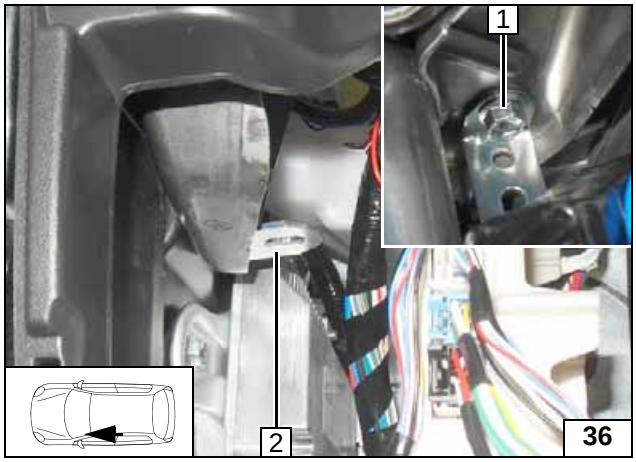
Removing instrument panel

Fan Controller



1 Drill out hole to 8.5 mm dia.

Preparing angle bracket



1 Original vehicle M8 bolt of instrument carrier
2 Angle bracket

Installing angle bracket

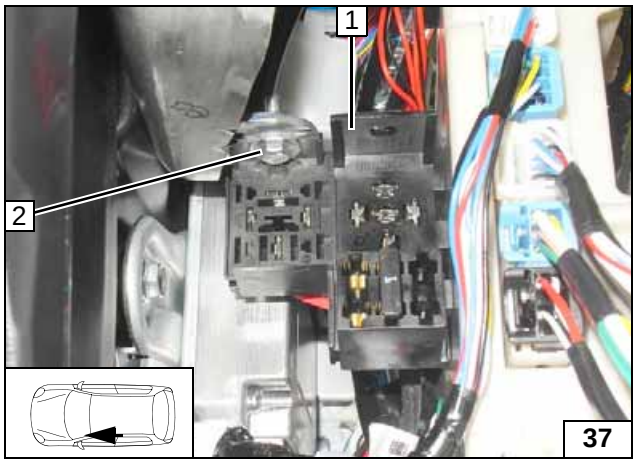
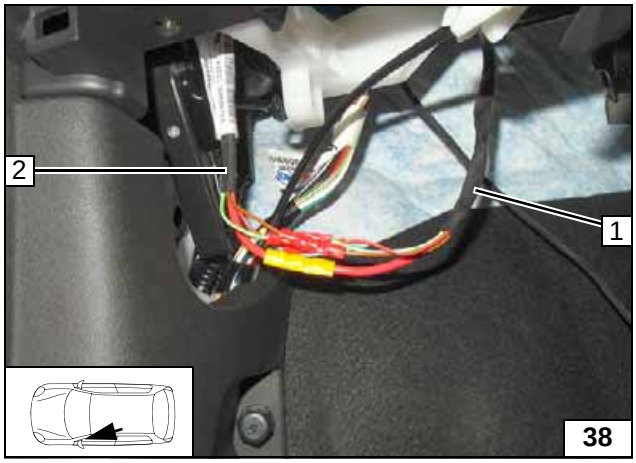


Figure shows manual air-conditioning system.

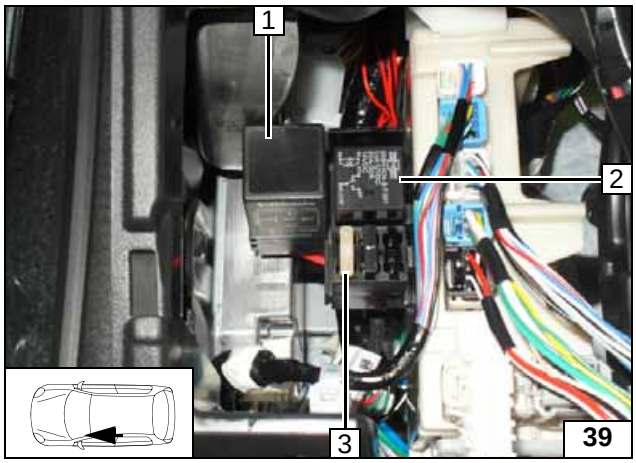
1 Relay and fuse holder of passenger compartment
2 M5x16 bolt, large diameter washer [2x], nut

Mounting passenger compartment relay and fuse holder



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

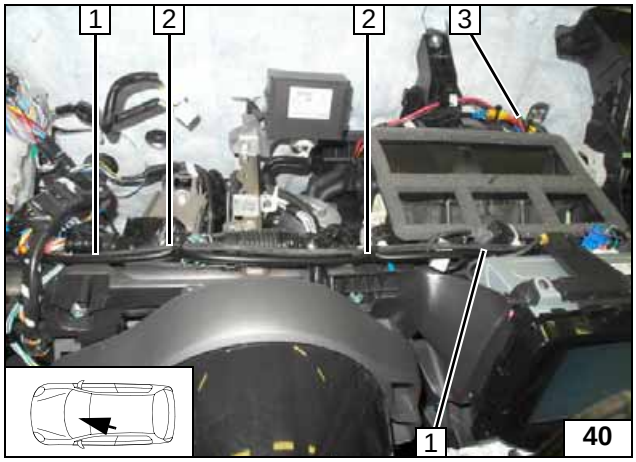
Connecting same colour wires of wiring harnesses



Manual air-conditioning system

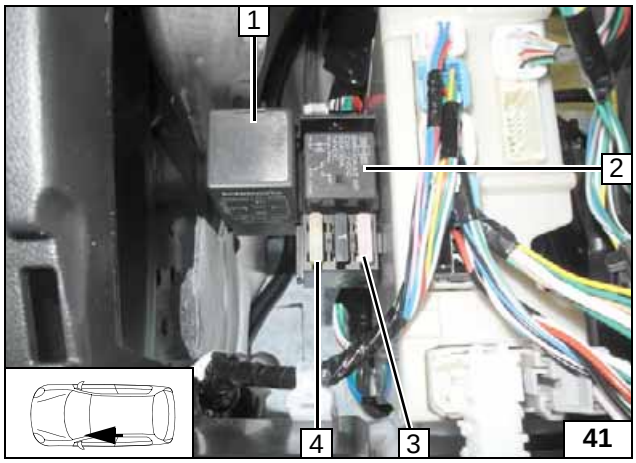
1 PWM Gateway
2 K1 relay
3 25A fuse F4

Mounting PWM GW, K1 relay and fuse F4



1 Wires ⑤ and ⑥ of wiring harness of PWM control
2 Cable tie [2x]
3 Installation location of fan controller

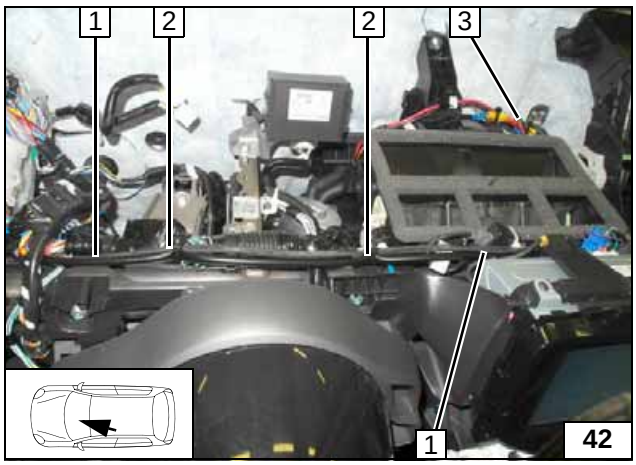
Routing lines



Automatic air-conditioning system

1 PWM Gateway
2 K1 relay
3 3A fuse F5
4 25A fuse F4

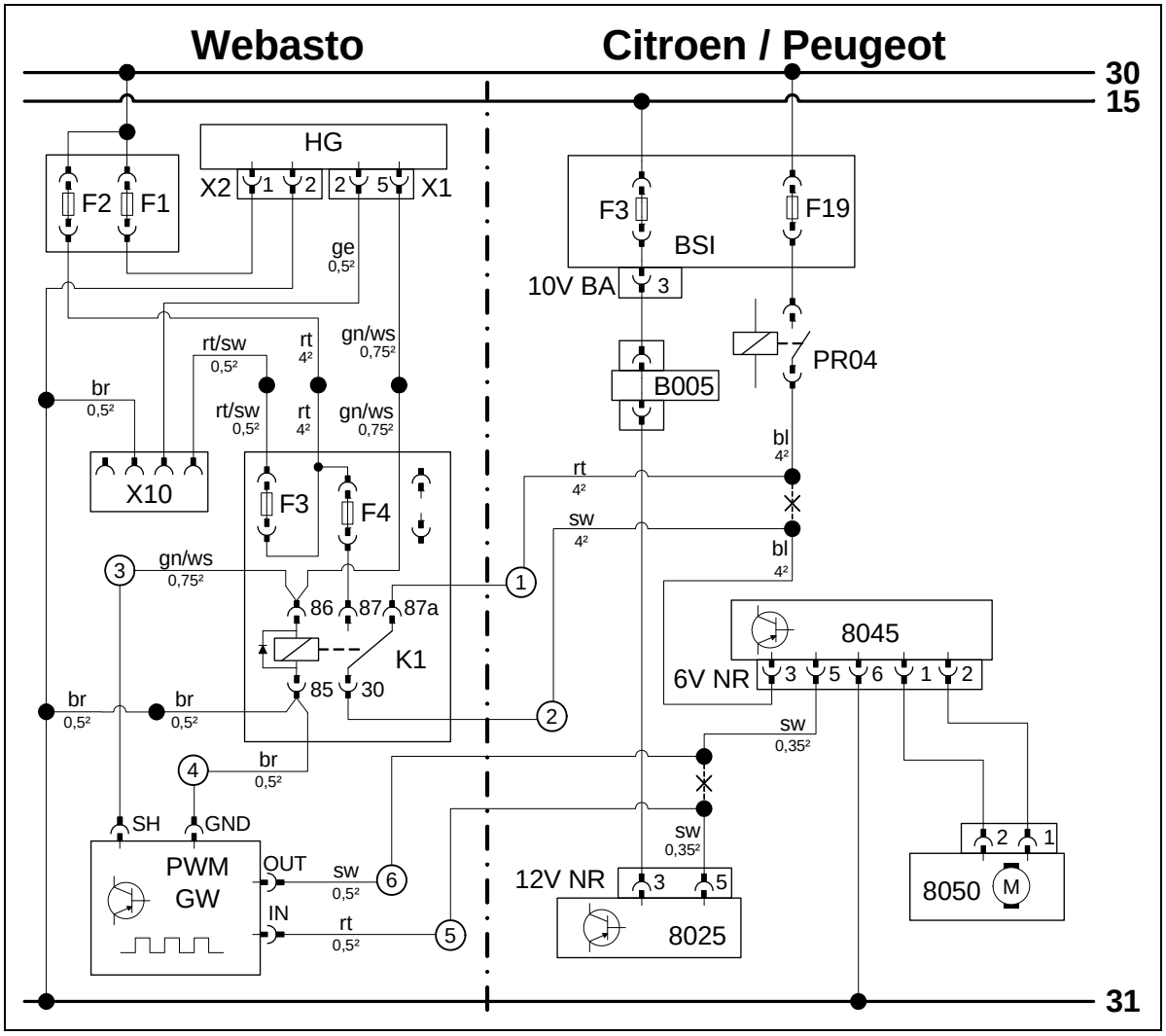
Mounting PWM GW, K1 relay, fuses F4 and F5



1 Wires ⑤ and ⑥ from wiring harness of PWM control as well as ⑧ and ⑨ in protective sleeving
2 Cable tie [2x]
3 Installation location of fan controller

Routing lines

Citroen C1/Peugeot 108 Manual Air-Conditioning Wiring Diagram



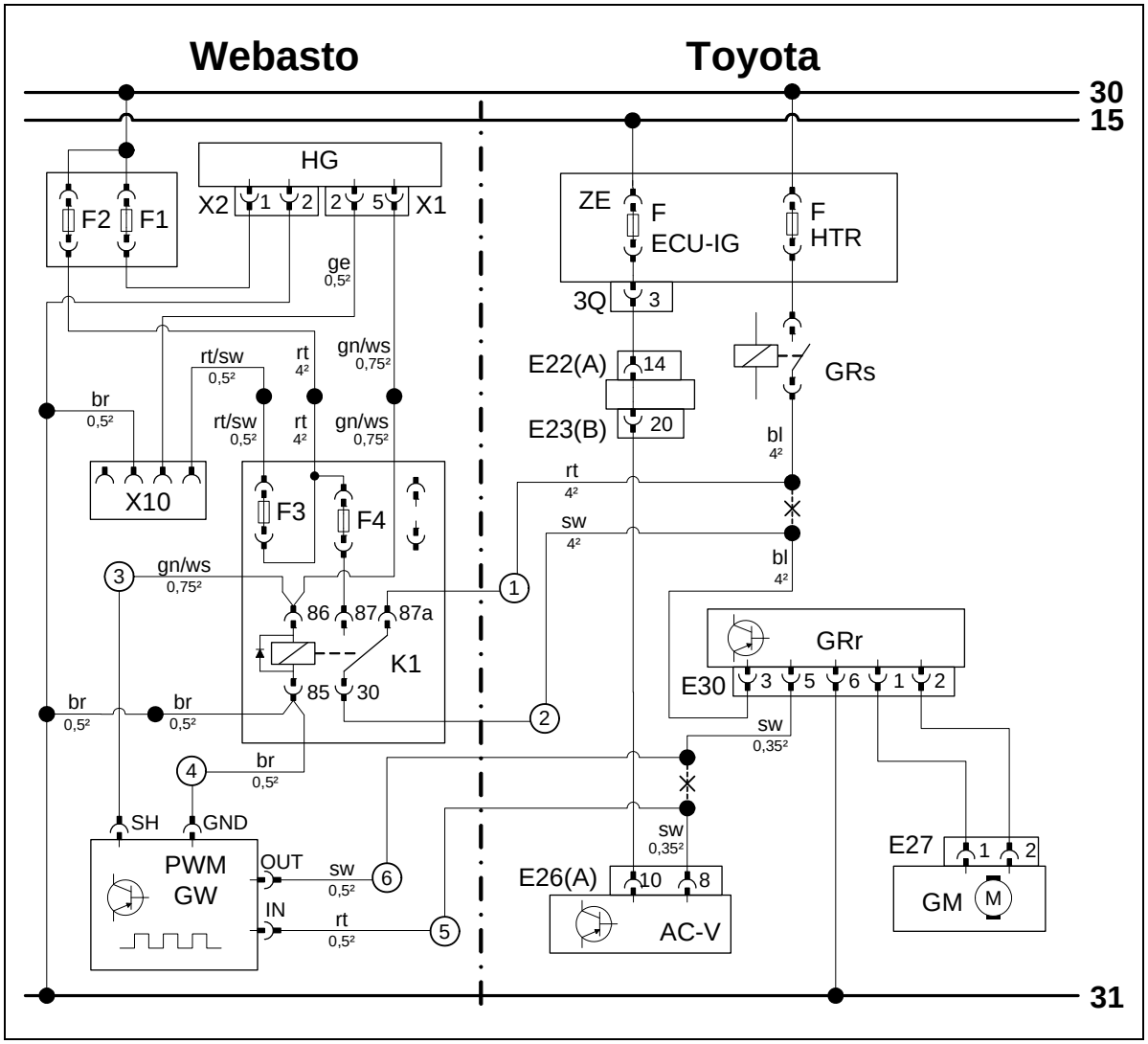
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	BSI	Central switching unit	rt	red
X1	6-pin heater connector	F3	Fuse	sw	black
X2	2-pin heater connector	F19	Fuse	ge	yellow
F1	20A fuse	10V BA	10-pin white (ws) connector BSI	gn	green
F2	30A fuse	PR04	Fan relay	ws	white
X10	4-pin connector of heater control	B005	Connector	br	brown
		8045	Fan controller	bl	blue
F3	1A fuse	6V NR	6-pin black (sw) connector 8045		
F4	25A fuse	8050	Fan motor		
K1	Fan relay	8025	A/C control panel / A/C control unit		
PWM GW	Pulse width modulator				
		12V NR	12-pin black (sw) connector 8025		
Settings of PWM GW:					
Duty cycle:	100% (DC)				
Frequency:	not relevant				
Voltage:	3.6V			**X**	Cutting point
Function:	High side			Wiring colours may vary.	

Wiring diagram

Legend

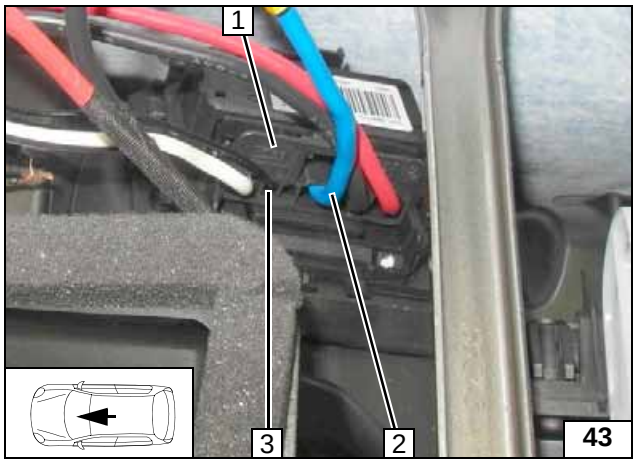
Toyota Aygo Manual Air-Conditioning Wiring Diagram

Wiring diagram



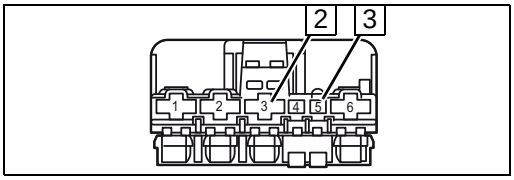
Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	ZE	Central electrical box	rt	red
X1	6-pin heater connector	F ECU-IG	5A fuse	sw	black
X2	2-pin heater connector	F HTR	40A fuse	ge	yellow
F1	20A fuse	3Q	10-pin white (ws) connector ZE	gn	green
F2	30A fuse	GRs	Fan relay	ws	white
X10	4-pin connector of heater control	E22(A)	22-pin connector	br	brown
				bl	blue
F3	1A fuse	E23(B)	22-pin connector		
F4	25A fuse				
K1	Fan relay	GRr	Fan controller		
PWM GW	Pulse width modulator	E30	6-pin connector GRr		
		GM	Fan motor		
Settings of PWM GW:		E27	2-pin connector GM		
Duty cycle:	100% (DC)	AC-V	AC booster		
Frequency:	not relevant	E26(A)	12-pin connector AC-V		
Voltage:	3.6V			**X**	Cutting point
Function:	High side			Wiring colours may vary.	

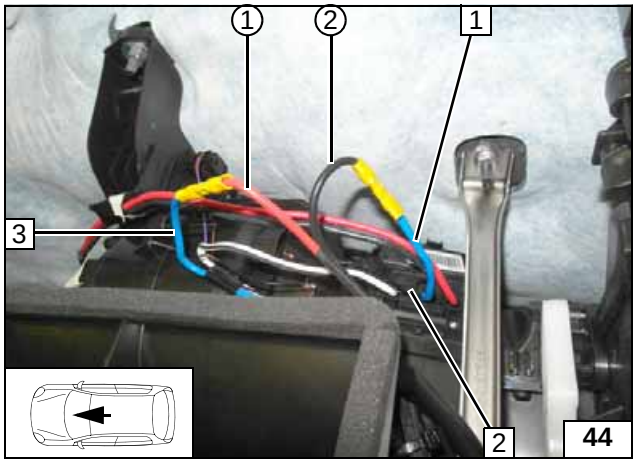


	Citroen C1 / Peugeot 108	Toyota Aygo
1	Connector 6V NR of 8045	Connector E30 GRr
2	Blue (bl) wire, pin 3	Blue (bl) wire, pin 3
3	Black (sw) wire from pin 5	Black (sw) wire from pin 5

View on contact side:



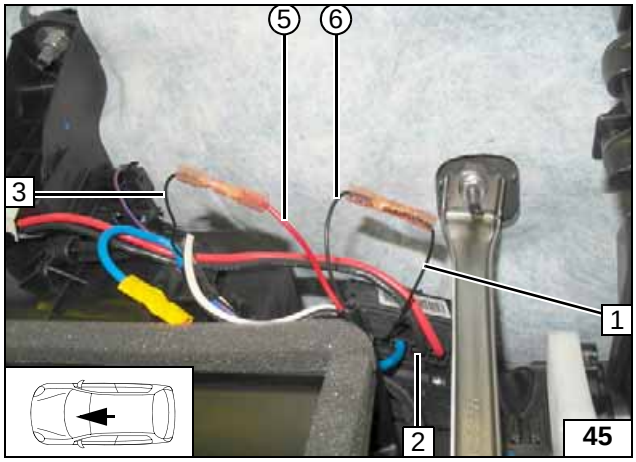
View of fan controller connector



	Citroen C1 / Peugeot 108	Toyota Aygo
1	Blue (bl) wire of connector 6V NR, pin 3	Blue (bl) wire of connector E30, pin 3
2	Connector 6V NR of 8045	Connector E30 GRr
3	Blue (bl) wire of PR04	Blue (bl) wire of GRs

① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

Connecting fan controller



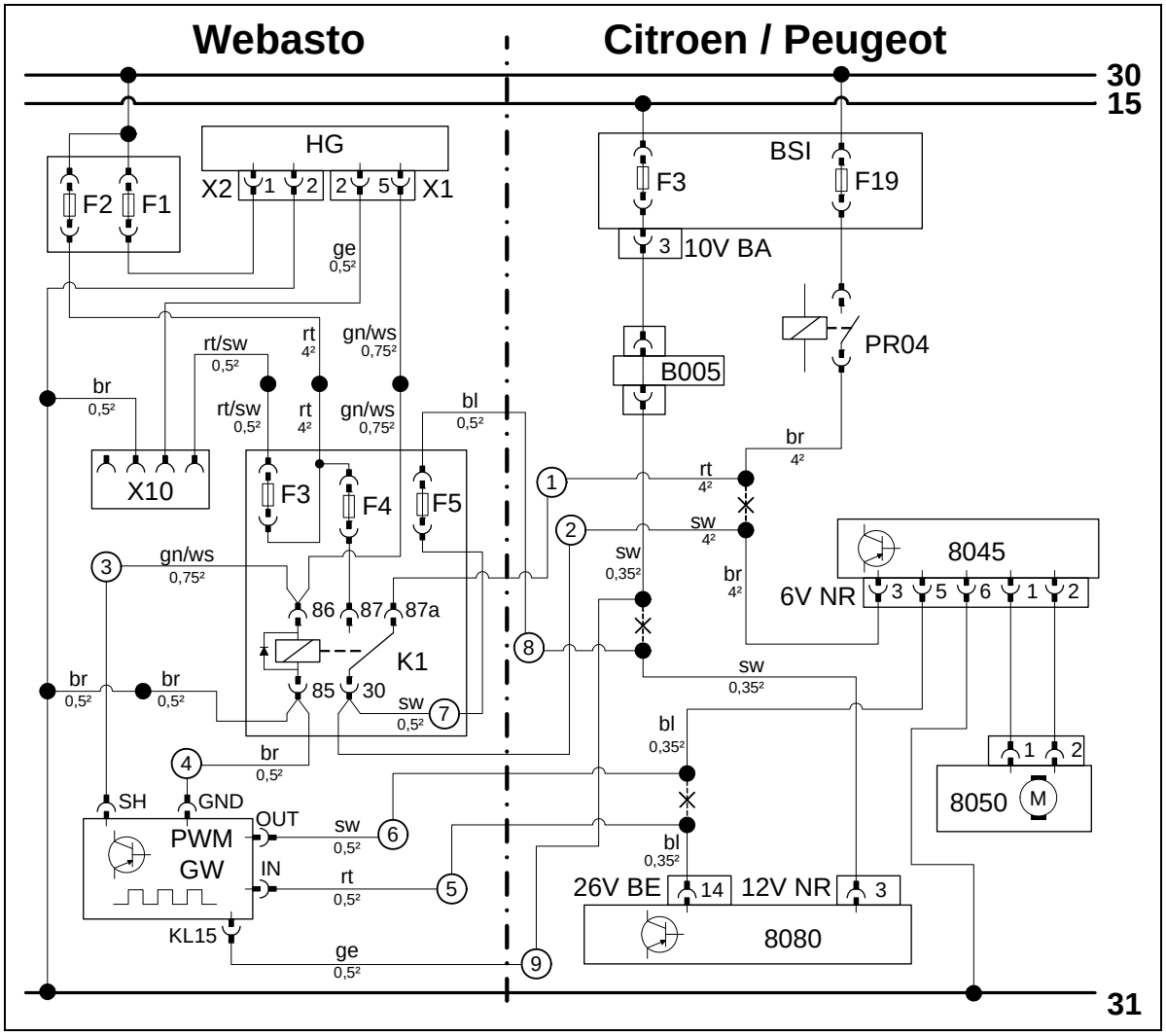
	Citroen C1 / Peugeot 108	Toyota Aygo
1	Black (sw) wire of connector 6V NR, pin 5	Black (sw) wire of connector E30, pin 5
2	Connector 6V NR of 8045	Connector E30 GRr
3	Black (sw) wire of connector 12V NR, pin 5 for 8025	Black (sw) wire of connector E26(A), pin 8 for AC-V

⑤ Red (rt) wire from PWM GW / IN of wiring harness of PWM control
⑥ Black (sw) wire from PWM GW / OUT of wiring harness of PWM control

Connecting fan controller

Citroen C1/Peugeot 108 Automatic Air-Conditioning Wiring Diagram

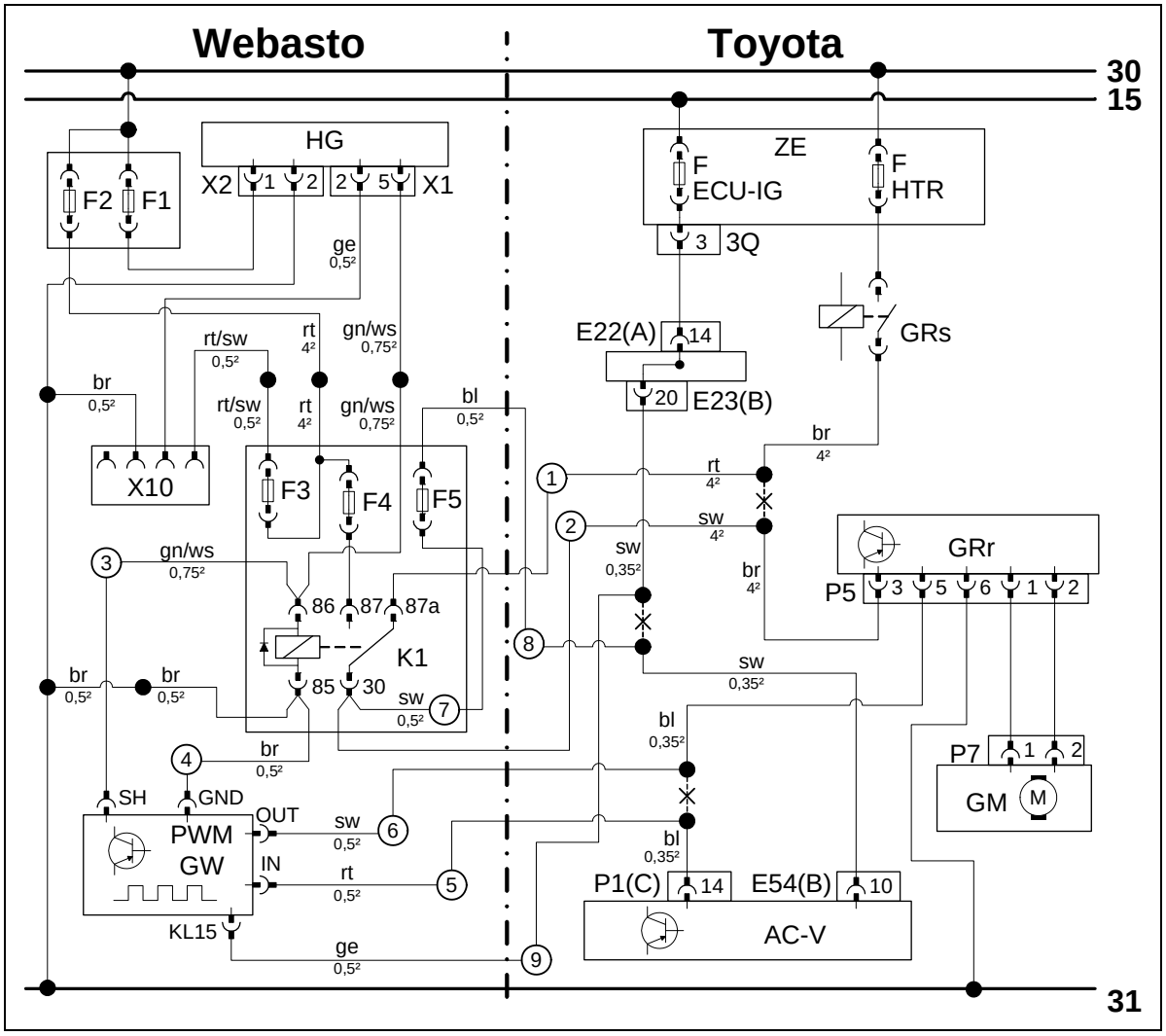
Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	BSI	Central electrical box	rt	red
X1	6-pin heater connector	F3	Fuse	sw	black
X2	2-pin heater connector	F19	Fuse	ge	yellow
F1	20A fuse	10V BA	10-pin white (ws) connector BSI	gn	green
F2	30A fuse	PR04	Fan relay	ws	white
X10	4-pin connector of heater control	B005	Connector	br	brown
		8045	Fan controller	bl	blue
F3	1A fuse	6V NR	6-pin black (sw) connector 8045		
F4	25A fuse	8050	Fan motor		
F5	3A fuse	8080	A/C control panel / A/C control unit		
K1	Fan relay				
PWM GW	Pulse width modulator	26V BE	26-pin blue (bl) connector 8080		
Settings of PWM GW:		12V NR	12-pin black (sw) connector 8080		
Duty cycle:	70%				
Frequency:	500Hz				
Voltage:	not relevant			**X**	Cutting point
Function:	Low-side			Wiring colours may vary.	

Legend

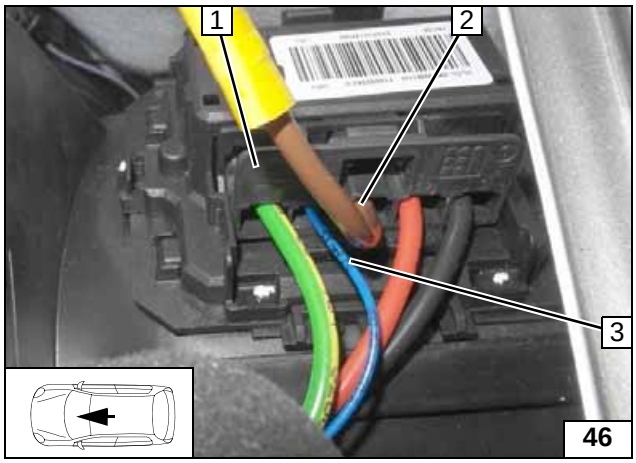
Toyota Aygo Automatic Air-Conditioning Wiring Diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	ZE	Central electrical box	rt	red
X1	6-pin heater connector	F ECU-IG	5A fuse	sw	black
X2	2-pin heater connector	F HTR	40A fuse	ge	yellow
F1	20A fuse	3Q	10-pin white (ws) connector ZE	gn	green
F2	30A fuse	GRs	Fan relay	ws	white
X10	4-pin connector of heater control	E22(A)	22-pin connector	br	brown
				bl	blue
F3	1A fuse	E23(B)	22-pin connector		
F4	25A fuse				
F5	3A fuse	GRr	Fan controller		
K1	Fan relay	P5	6-pin connector GRr		
PWM GW	Pulse width modulator	GM	Fan motor		
		P7	2-pin connector GM		
Settings of PWM GW:		AC-V	A/C control panel / A/C control unit		
Duty cycle:	70%				
Frequency:	500Hz	P1(C)	26-pin connector AC-V		
Voltage:	not relevant	E54(B)	12-pin connector AC-V	**X**	Cutting point
Function:	Low-side			Wiring colours may vary.	

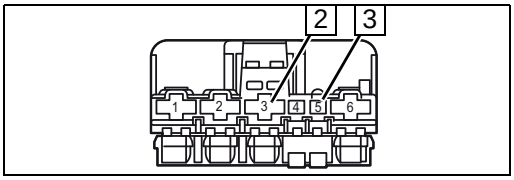
Wiring diagram

Legend

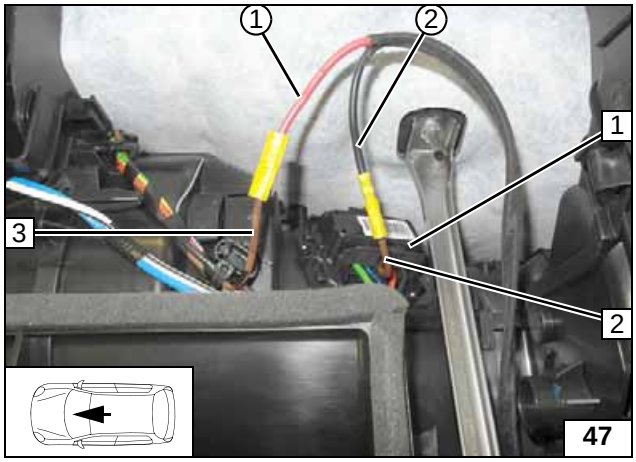


	Citroen C1 / Peugeot 108	Toyota Aygo
1	Connector 6V NR of 8045	Connector P5 GRr
2	Brown (br) wire, pin 3	Brown (br) wire, pin 3
3	Blue (bl) wire, pin 5	Blue (bl) wire, pin 5

View on contact side:



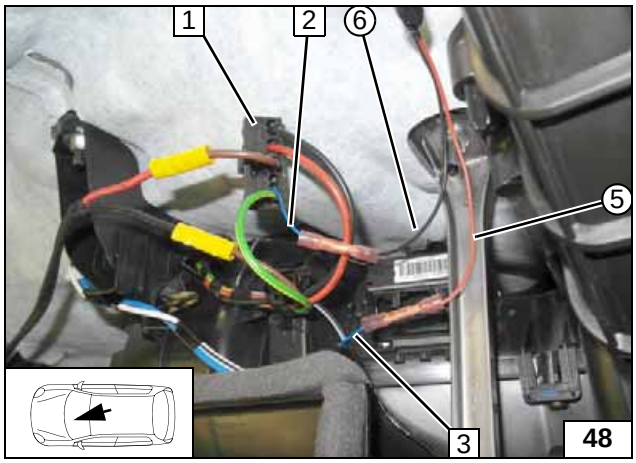
View of fan controller connector



	Citroen C1 / Peugeot 108	Toyota Aygo
1	Connector 6V NR of 8045	Connector P5 GRr
2	Brown (br) wire of connector 6V NR, pin 3	Brown (br) wire of connector P5, pin 3
3	Brown (br) wire of PR04	Brown (br) wire of GRs

① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

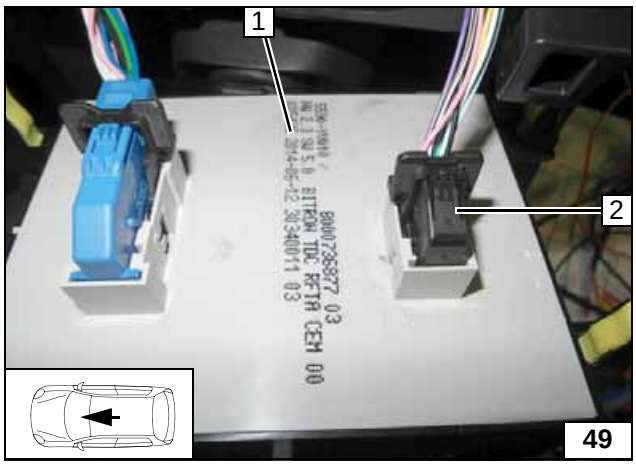
Connecting fan controller



	Citroen C1 / Peugeot 108	Toyota Aygo
1	Connector 6V NR of 8045	Connector P5 GRr
2	Blue (bl) wire of connector 6V NR, pin 5	Blue (bl) wire of connector P5, pin 5
3	Blue (bl) wire of connector 26V BE, pin 14 for 8080	Blue (bl) wire of connector P1(C), pin 14 for AC-V

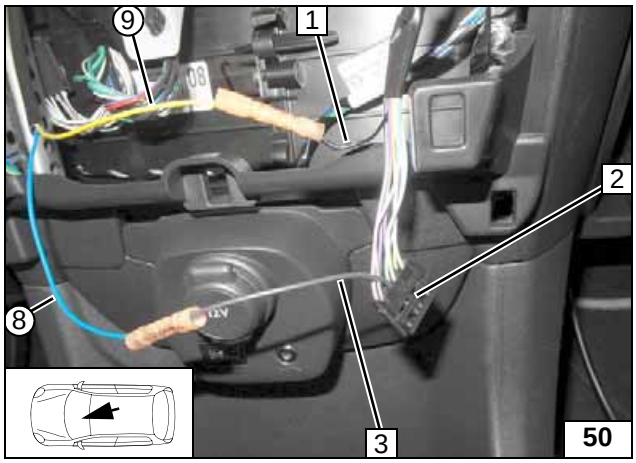
⑤ Red (rt) wire from PWM GW / IN of wiring harness of PWM control
⑥ Black (sw) wire from PWM GW / OUT of wiring harness of PWM control

Connecting fan controller



	Citroen C1 / Peugeot 108	Toyota Aygo
1	A/C control panel 8080	A/C control panel AC-V
2	12V connector NR	Connector E54(B)

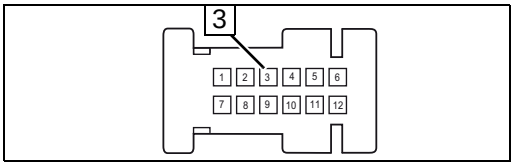
View of A/C control panel connector



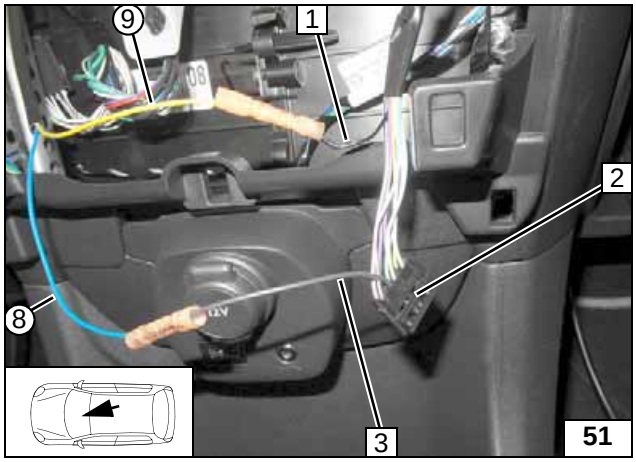
Citroen C1 / Peugeot 108	
1	Black (sw) wire of B005
2	12V connector NR
3	Black (sw) wire of connector 12V NR, pin 3 for 8080

⑧ Blue (bl) wire of fuse F5
⑨ Yellow (ge) wire of PWM GW / KL 15

View on contact side:



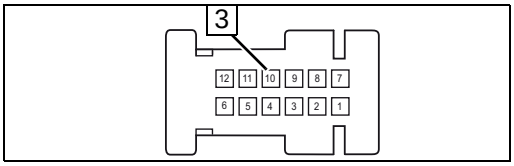
Connecting A/C control panel



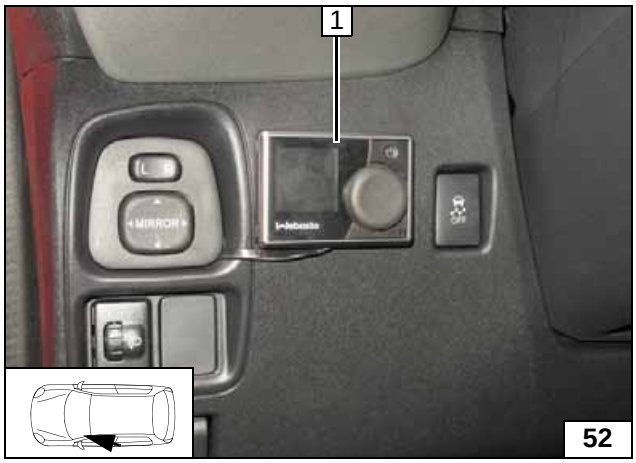
Toyota Aygo	
1	Black (sw) wire of E23(B), pin 20
2	Connector E54(B)
3	Black (sw) wire of connector E54(B), pin 10 for AC-V

⑧ Blue (bl) wire of fuse F5
⑨ Yellow (ge) wire of PWM GW / KL 15

View on contact side:



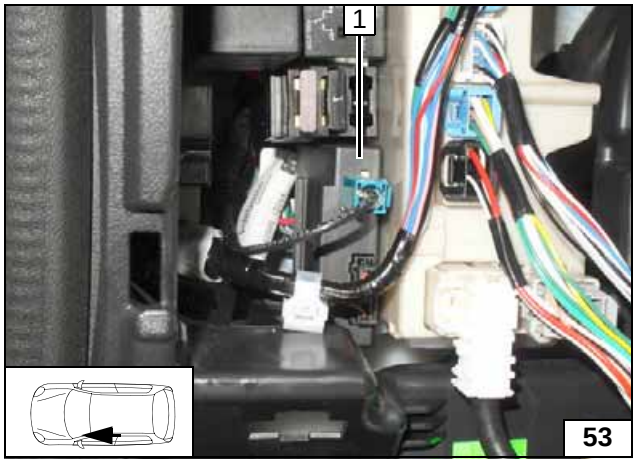
Connecting A/C control panel



MultiControl CAR Option

1 MultiControl CAR

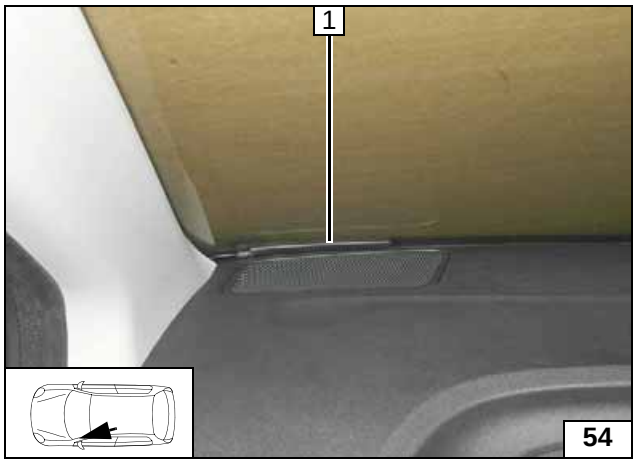
Installing MultiControl CAR



Remote Option (Telestart)

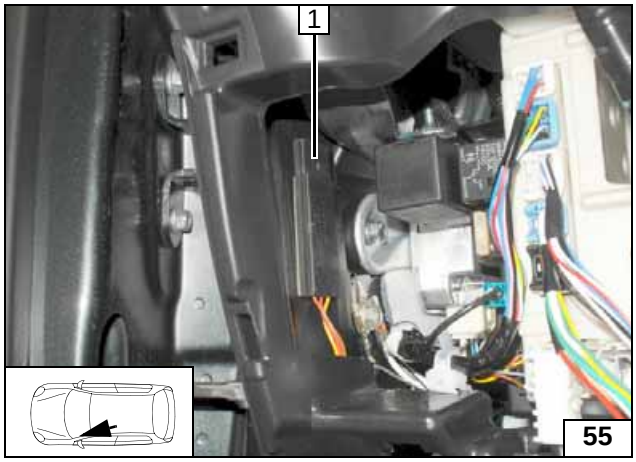
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Antenna

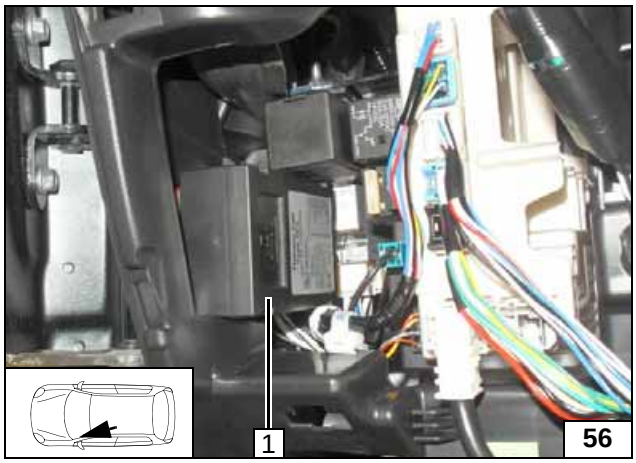
Installing antenna



Temperature sensor T100 HTM

Fasten temperature sensor **1** with double-sided adhesive tape.

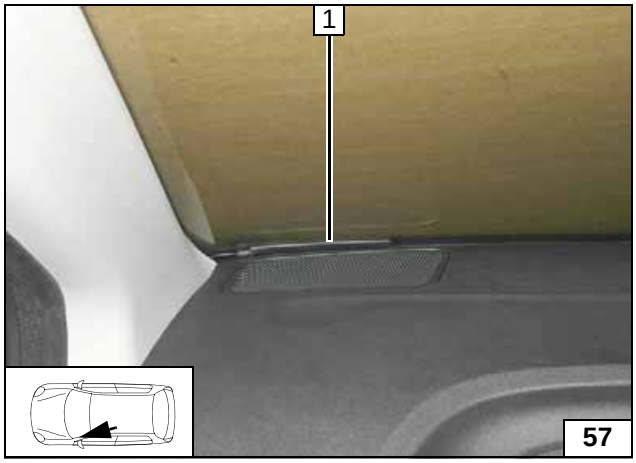
Installing temperature sensor



Remote Option (Thermo Call)

Fasten receiver **1** with double-sided adhesive tape.

Installing receiver

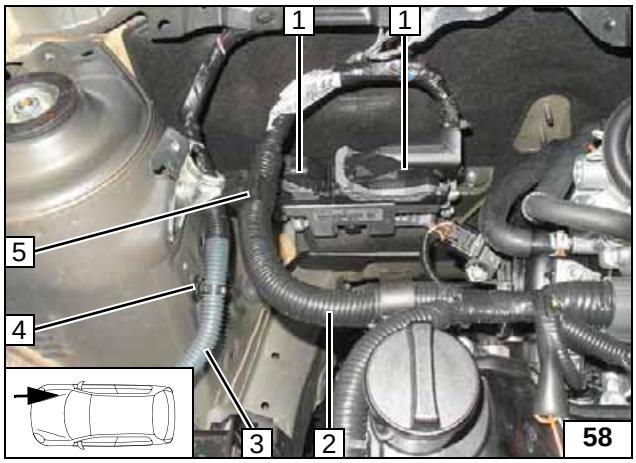


1 Antenna

Installing antenna

Preparing Installation Location

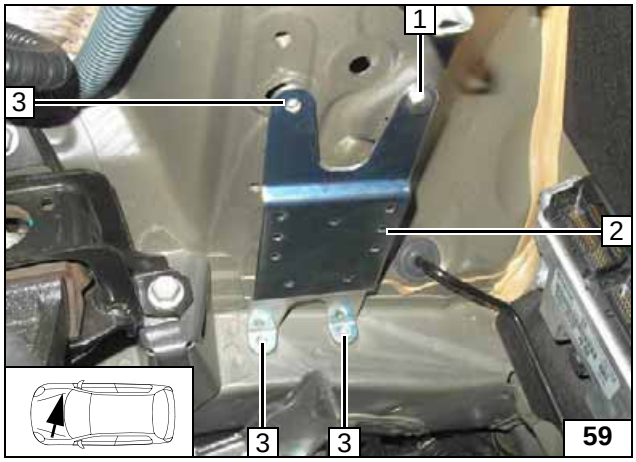
Preparing installation location



Detach original vehicle wiring harnesses **2** and **3** with retaining clip at positions **4** and **5** and lay aside!

1 Pull off connector [2x]

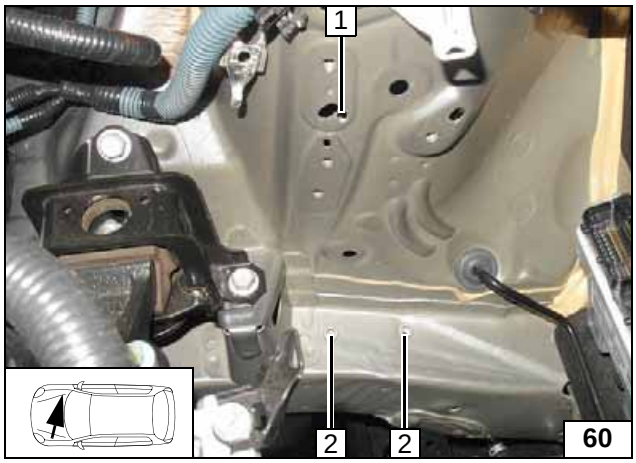
Copying hole pattern



Bend bracket **2** according to template!

1 Mount M6x16 bolt, flanged nut on existing hole loosely
3 Copy hole pattern [3x]

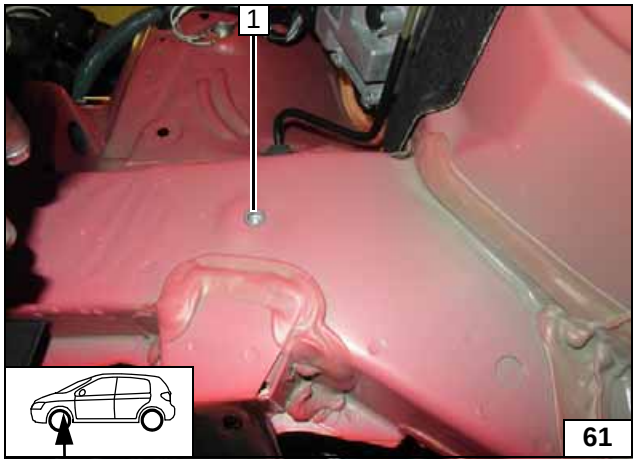
Installing rivet nut



Remove bracket.

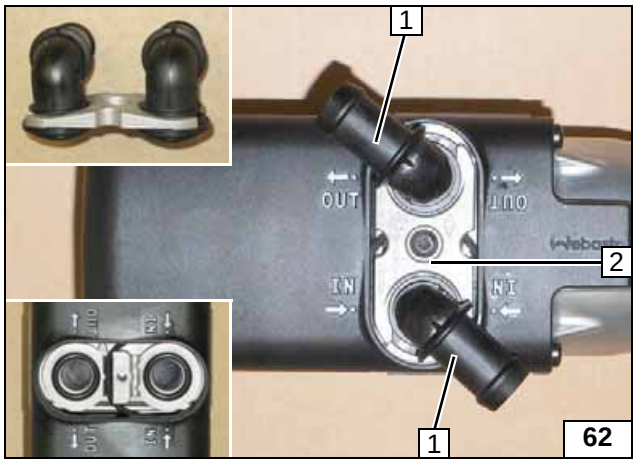
1 7 mm dia. hole
2 9.1mm dia. hole; rivet nut [2x each]

Installing rivet nut



1 Rivet nut in existing hole

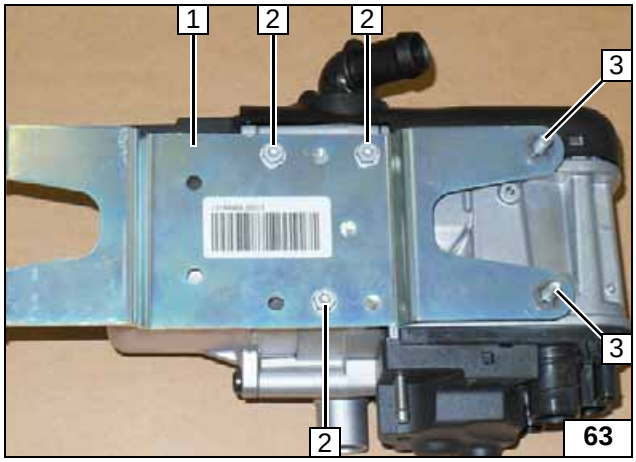
Preparing Heater



62

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

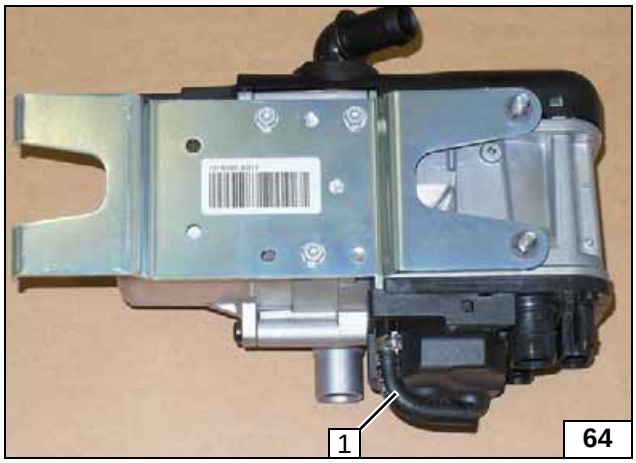
Installing water connection pieces



63

1 Bracket
2 5x13 self-tapping bolt [3x]
3 M6x16 bolt, pin lock [2x each]

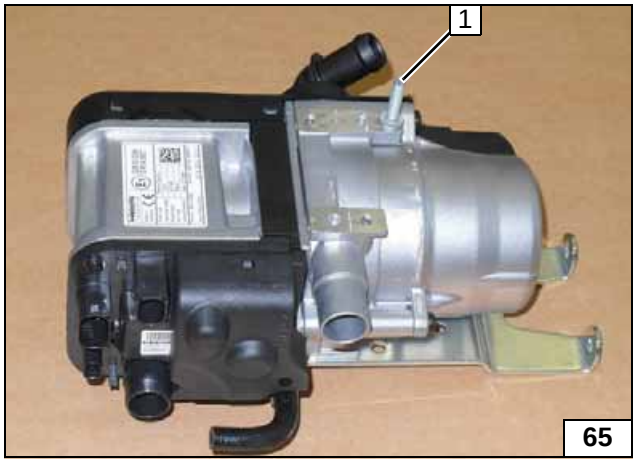
Installing bracket



64

1 90°, 4.5x4.5mm dia. moulded hose, 10 mm clamp

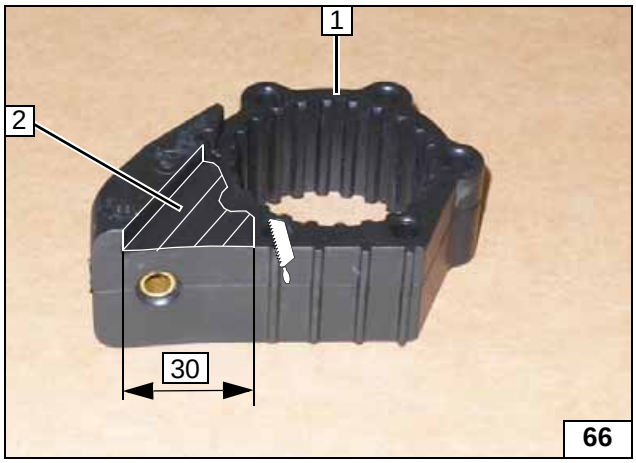
Mounting moulded hose



65

1 5x11 self-tapping stud bolt

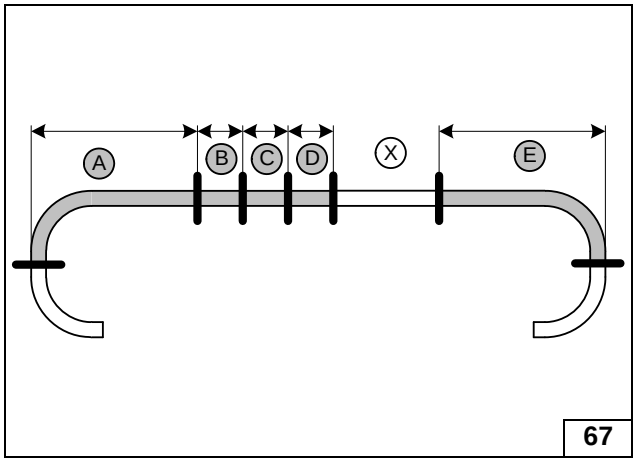
Mounting stud bolt



Cut off protruding rib flush at position **2** and discard!

1 Circulating pump mounting

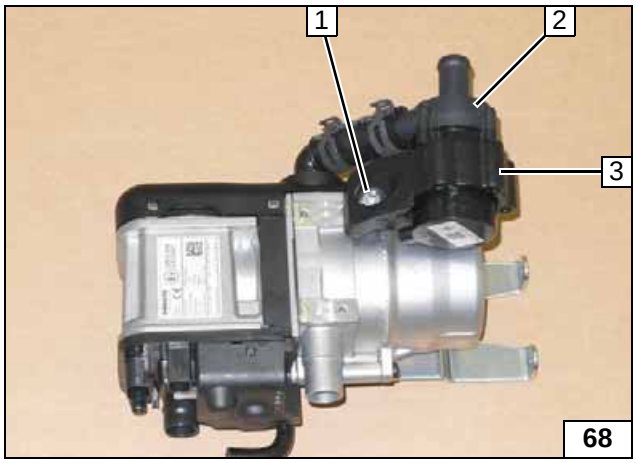
Preparing circulating pump mounting



Discard section **X**.

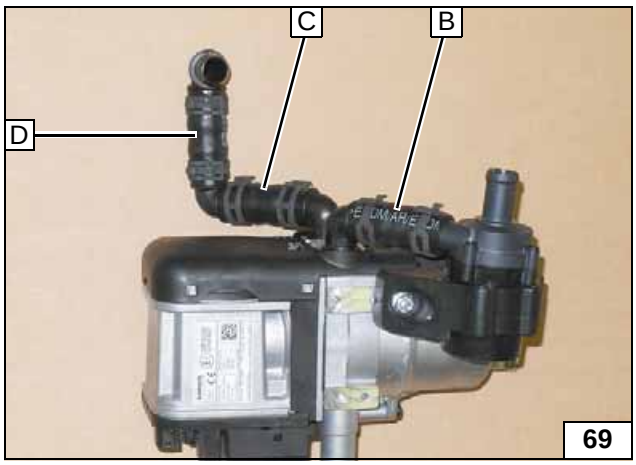
A = 520
B = 60
C = 60
D = 60
E = 740

Cutting hoses to length



1 M6 flanged nut on stud bolt
2 Circulating pump
3 Circulating pump mounting

Mounting circulating pump



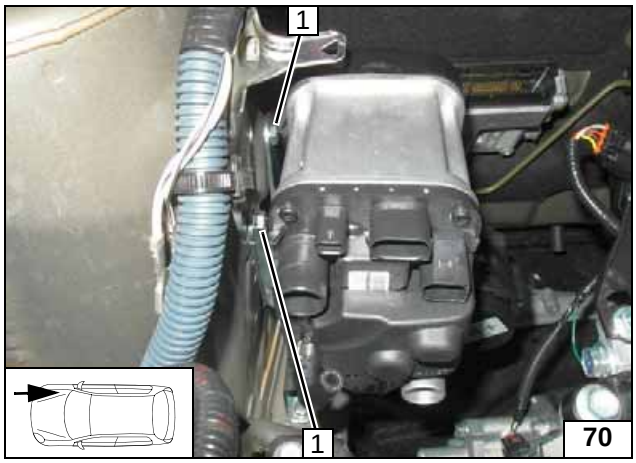
All spring clips = 25 mm dia.
All 90° connecting pipes = 18x18 mm dia.

Premounting hoses

Installing Heater

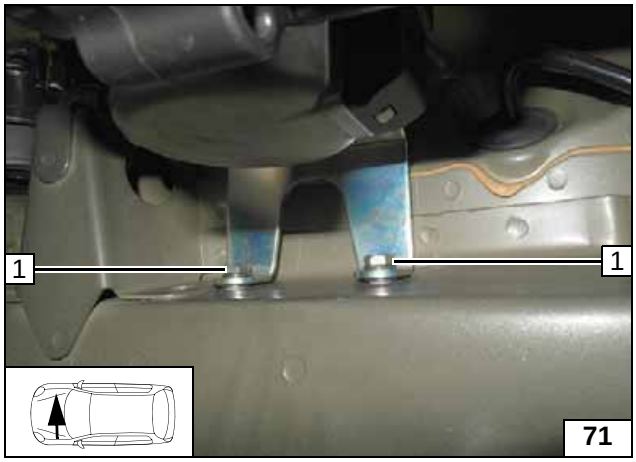
Install bracket of heater in holes using M6x16 bolts **1** [2x]!

Mounting heater



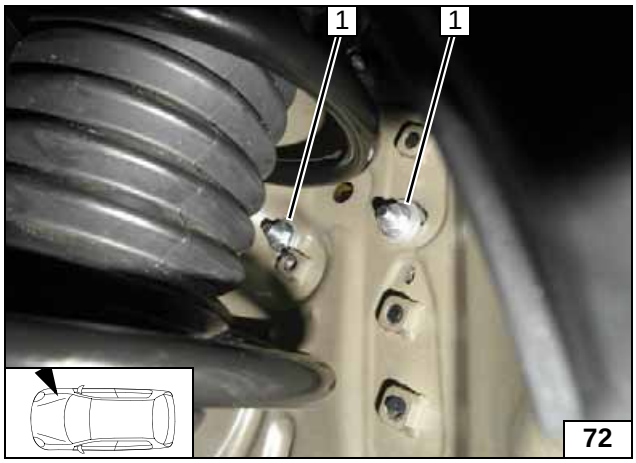
1 M6x20 bolt, spring lockwasher on rivet nut [2x each]

Mounting heater



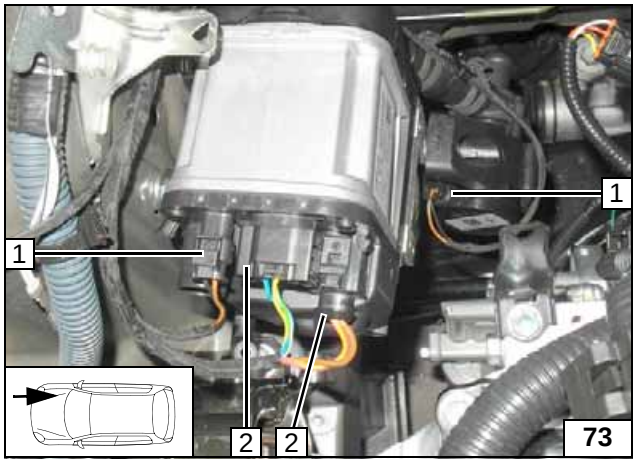
1 Large diameter washer with outer dia. d_a = 17mm, M6 flanged nut on M6x16 bolt [2x each]

Mounting heater



1 Connector of circulating pump wiring harness [2x]
2 Heater wiring harness connector [2x]

Mounting wiring harnesses



Fuel

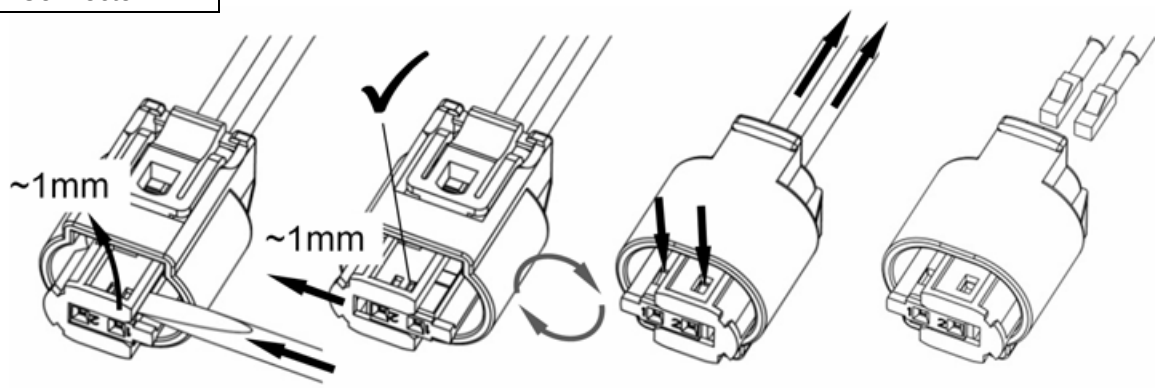
CAUTION!
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

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.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

Connector X7



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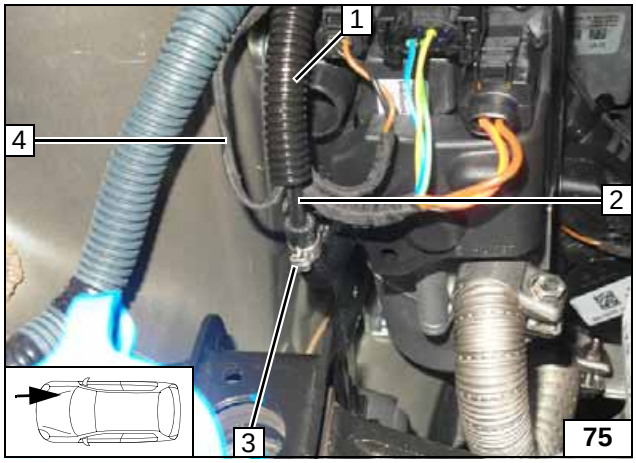
Dismantling connector of metering pump

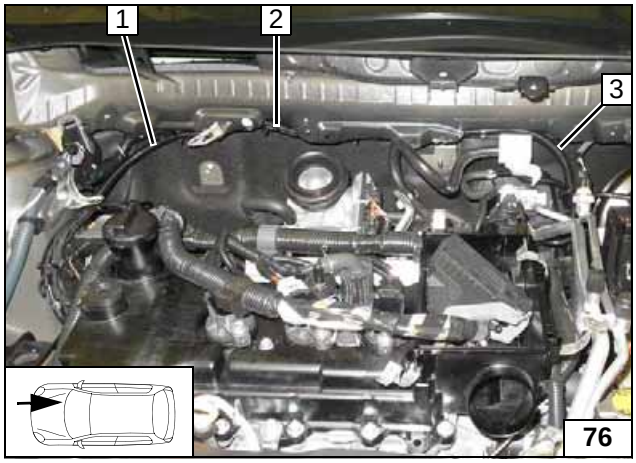


75

Pull wiring harness of metering pump **4** and fuel line of heater **2** into 10mm dia. corrugated tube **1**!

3 10mm dia. clamp

Connecting heater



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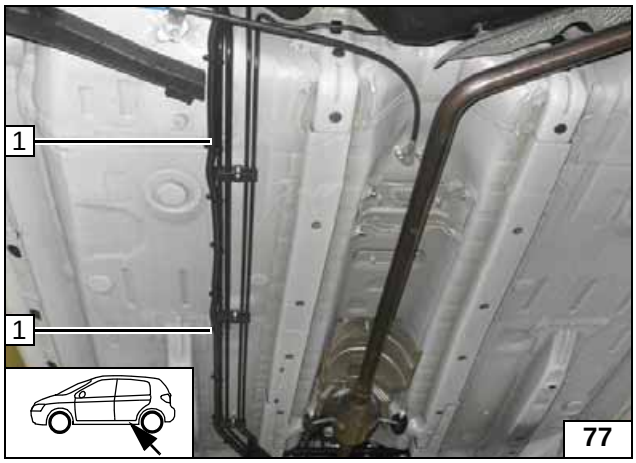
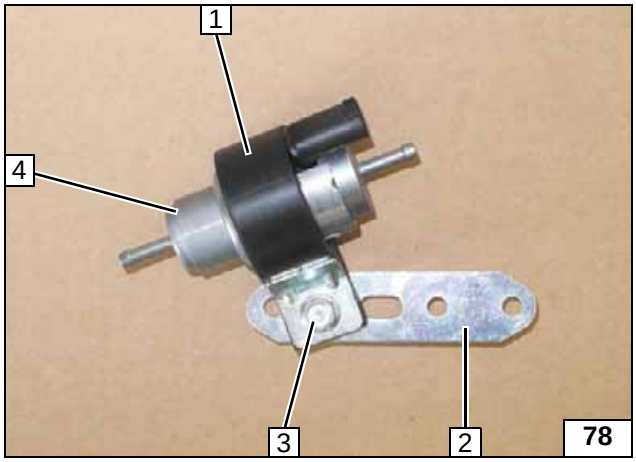
Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** along original vehicle wiring harness at position **2** and further along original vehicle fuel lines at position **3** to the underbody!

Routing lines



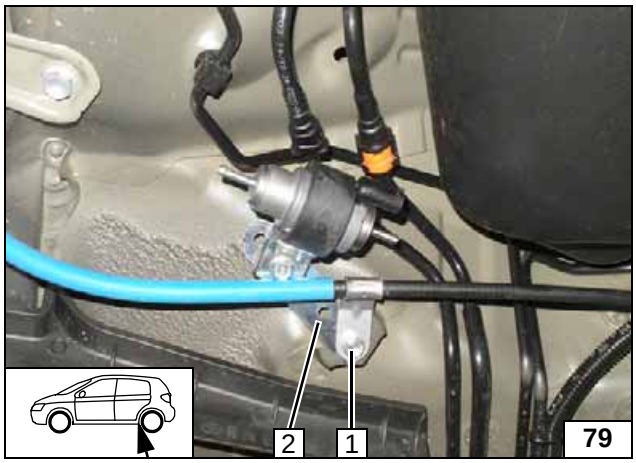
Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** along original vehicle fuel lines to installation location of metering pump.

Routing lines



1 Mounting of metering pump
2 Perforated bracket
3 M6x25 bolt, support angle bracket, flanged nut
4 Metering pump

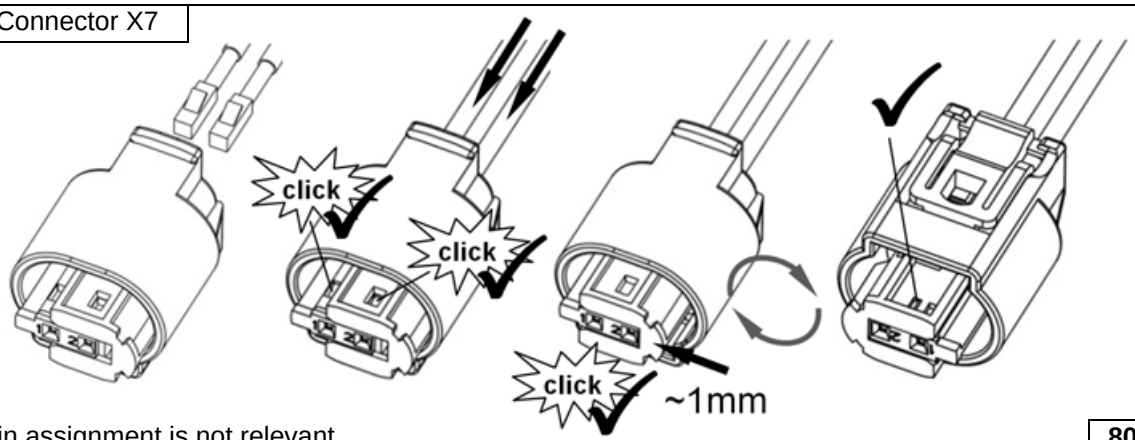
Premounting metering pump



1 Original vehicle bolt, bracket of handbrake cable
2 Perforated bracket

Installing metering pump

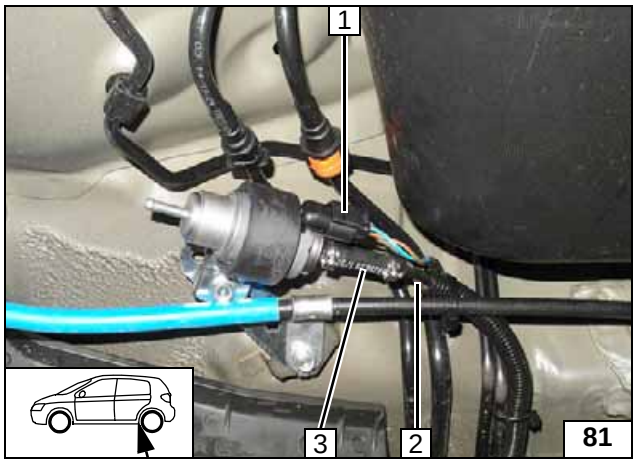
Connector X7



Pin assignment is not relevant.

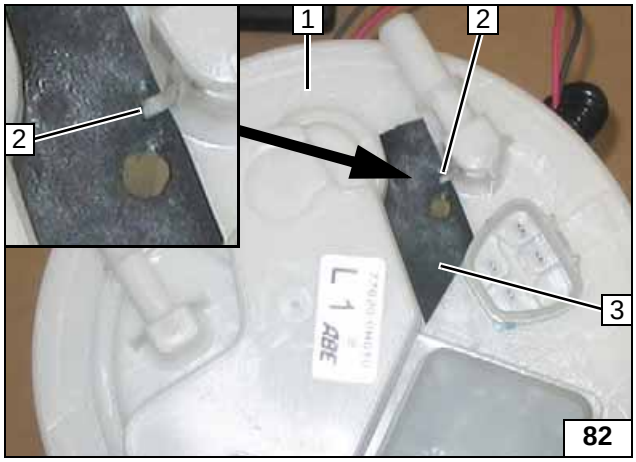
80

Completing connector of metering pump



1 Wiring harness of metering pump, connector X7 mounted
2 Fuel line of heater
3 Hose section, 10mm dia. clamp [2x]

Connecting metering pump

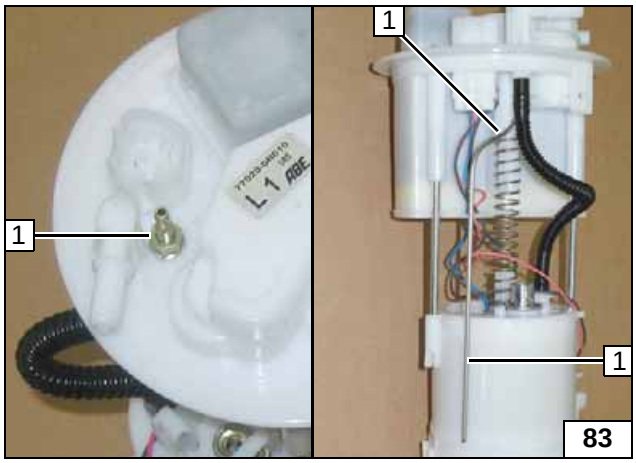


Remove fuel-tank sending unit **1** in accordance with the manufacturer's instructions.

3 Position template, copy hole pattern, 6mm dia. hole

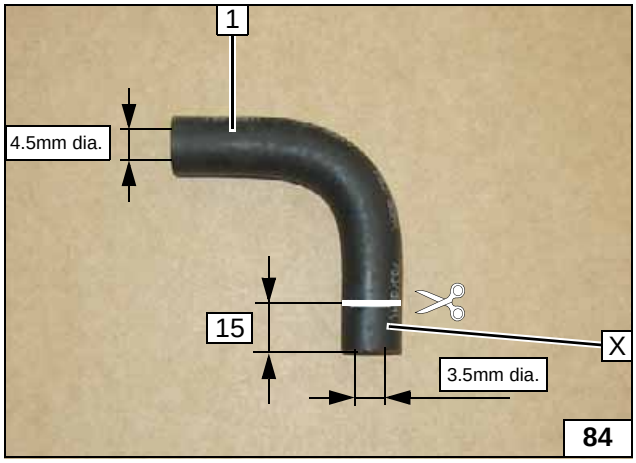
Remove plastic rib **2** .

Fuel extraction



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

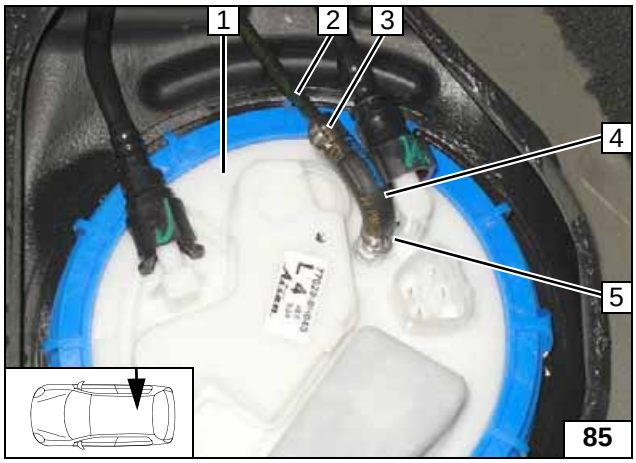
Installing fuel standpipe



Discard section **X**.

1 90° moulded hose

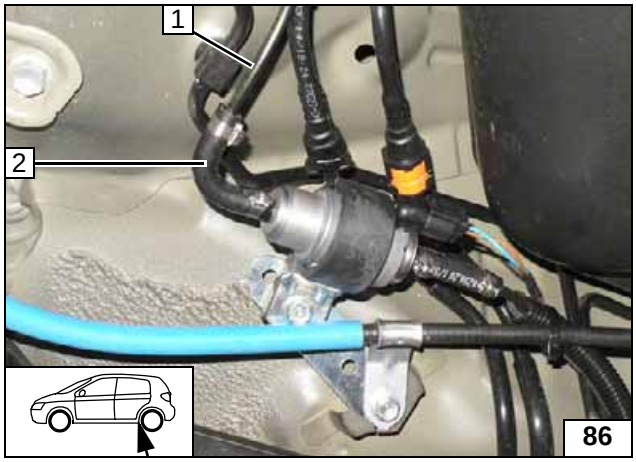
Shortening moulded hose



Install and complete fuel-tank sending unit **1** according to manufacturer's instructions. Moulded hose **4** with 3.5mm dia. side on the fuel standpipe!

2 Fuel line
3 10mm dia. Caillau clamp
4 90°, 3.5x4.5mm dia. moulded hose
5 9mm dia. Caillau clamp

Connecting fuel line

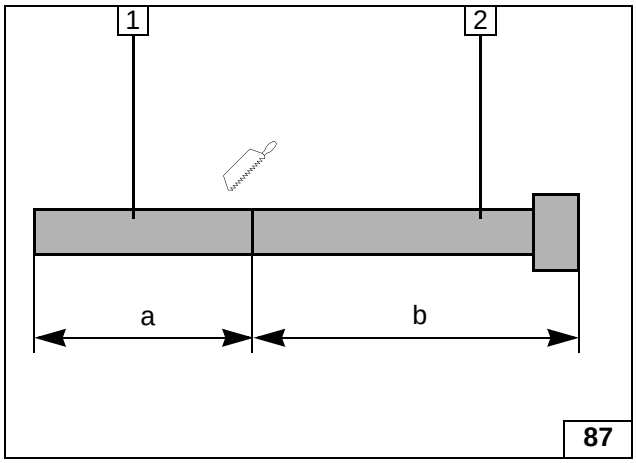


Ensure sufficient distance from neighbouring components; correct if necessary.

1 Fuel line of fuel standpipe
2 90° moulded hose; 10mm dia. clamp [2x]

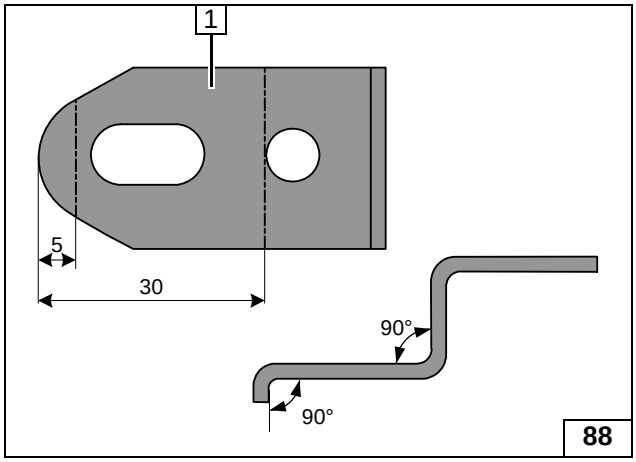
Connecting metering pump

Exhaust Gas



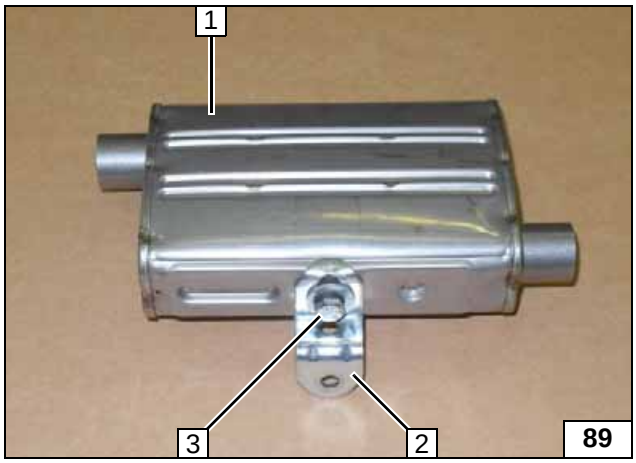
1 Exhaust pipe
a = 250
2 Exhaust end section
b = 350

Preparing exhaust pipe



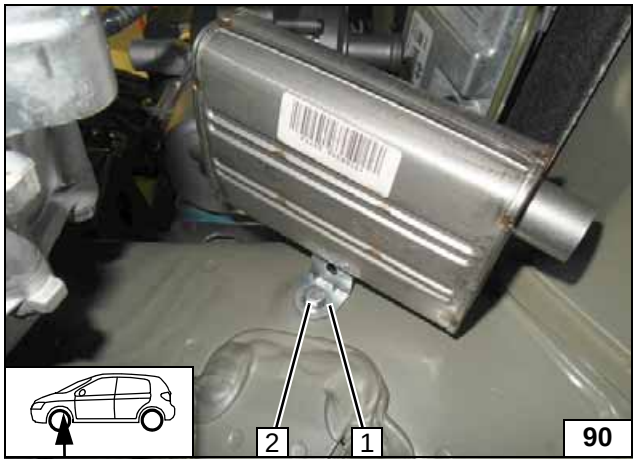
1 Angle bracket

Preparing angle bracket



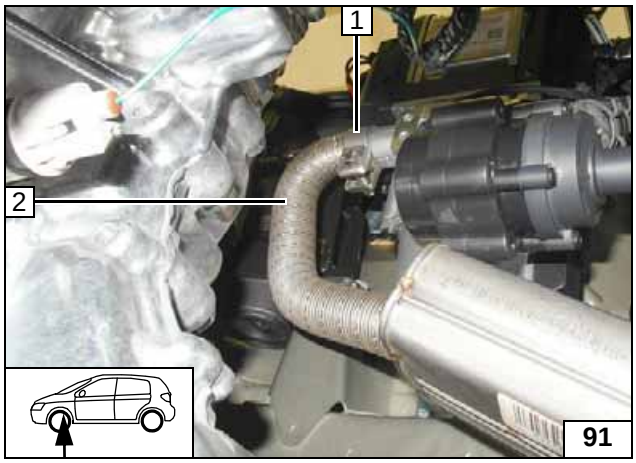
1 Silencer
2 Angle bracket
3 M6x16 bolt, spring lockwasher, large diameter washer

Premounting silencer



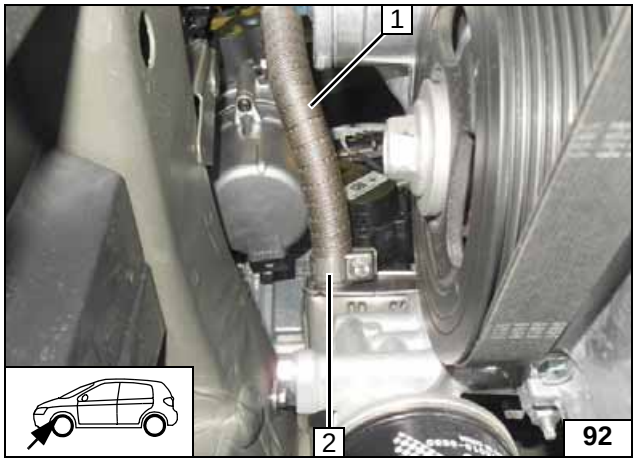
1 Angle bracket
2 M6x20 bolt, spring lockwasher on rivet nut

Mounting silencer



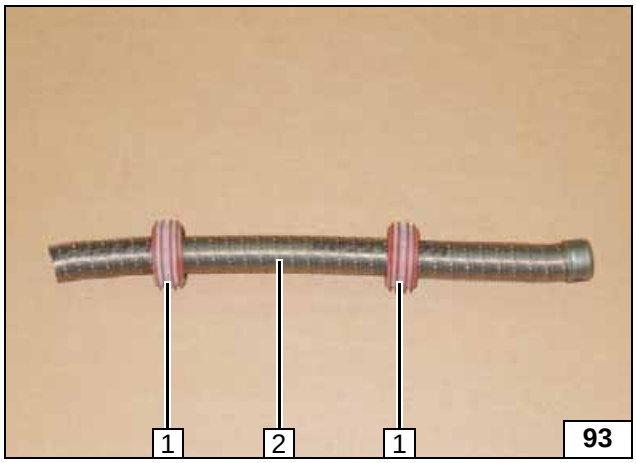
1 Hose clamp
2 Exhaust pipe

Installing exhaust pipe



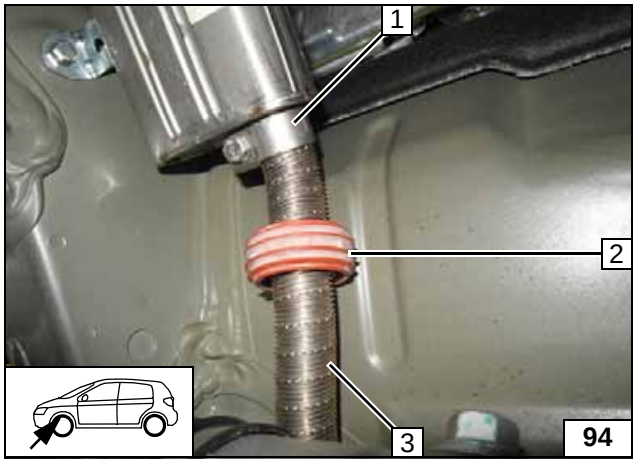
1 Exhaust pipe
2 Hose clamp

Installing exhaust pipe



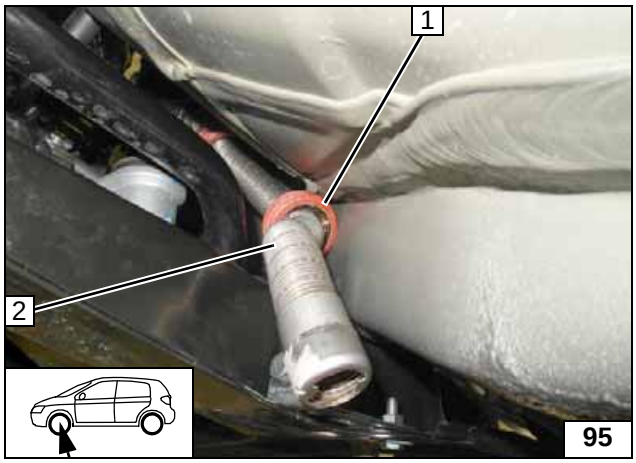
1 Slide on spacer bracket [2x]
2 Exhaust end section

Preparing exhaust end section



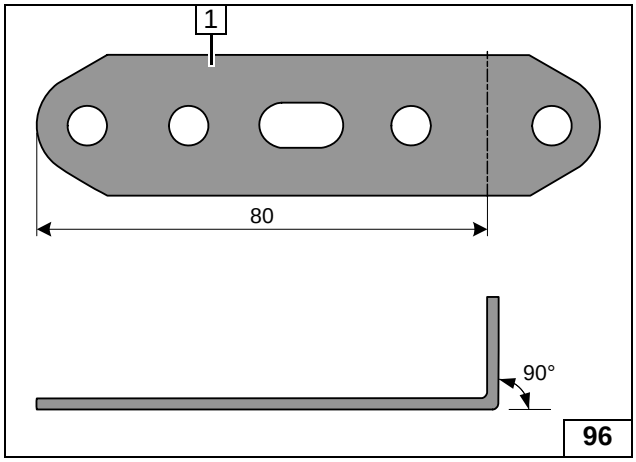
1 Hose clamp
2 Position spacer bracket
3 Exhaust end section

Installing exhaust end section



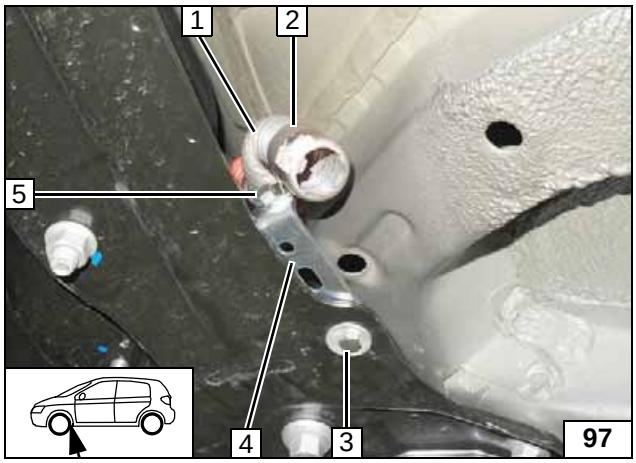
1 Position spacer bracket
2 Exhaust end section

Aligning exhaust end section



1 Perforated bracket

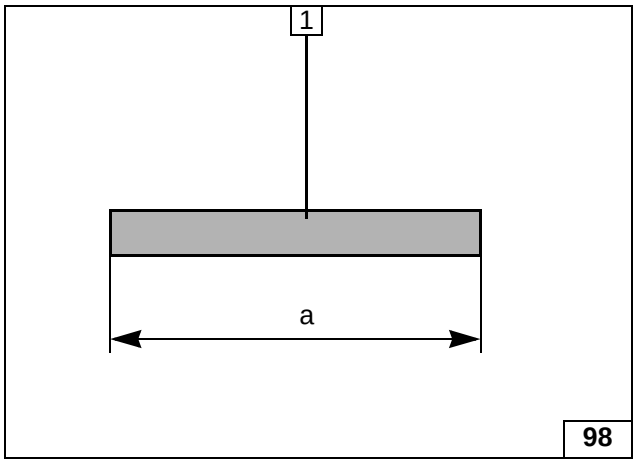
Preparing perforated bracket



Ensure sufficient distance from neighbouring components; correct if necessary.

1 Exhaust end section
2 P-clamp
3 M6x20 bolt, large diameter washer, flanged nut on existing hole
4 Perforated bracket
5 M6x20 bolt, flanged nut

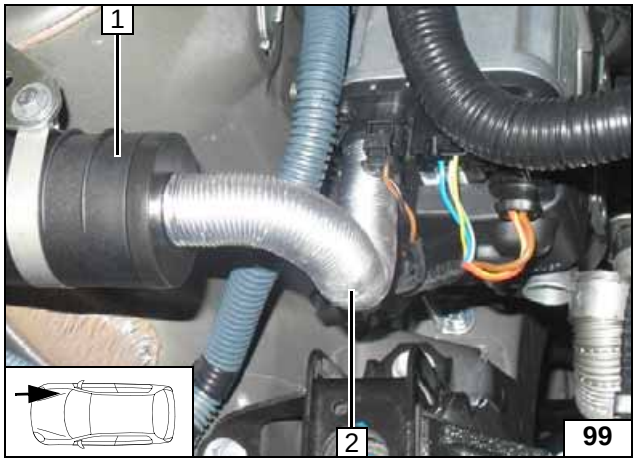
Securing exhaust end section



Combustion Air

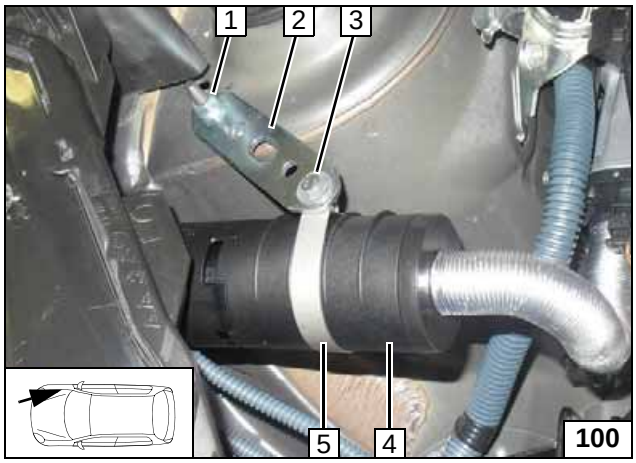
1 Combustion air pipe
a = 210

Combustion air pipe



1 Silencer
2 Combustion air pipe

Installing combustion air pipe

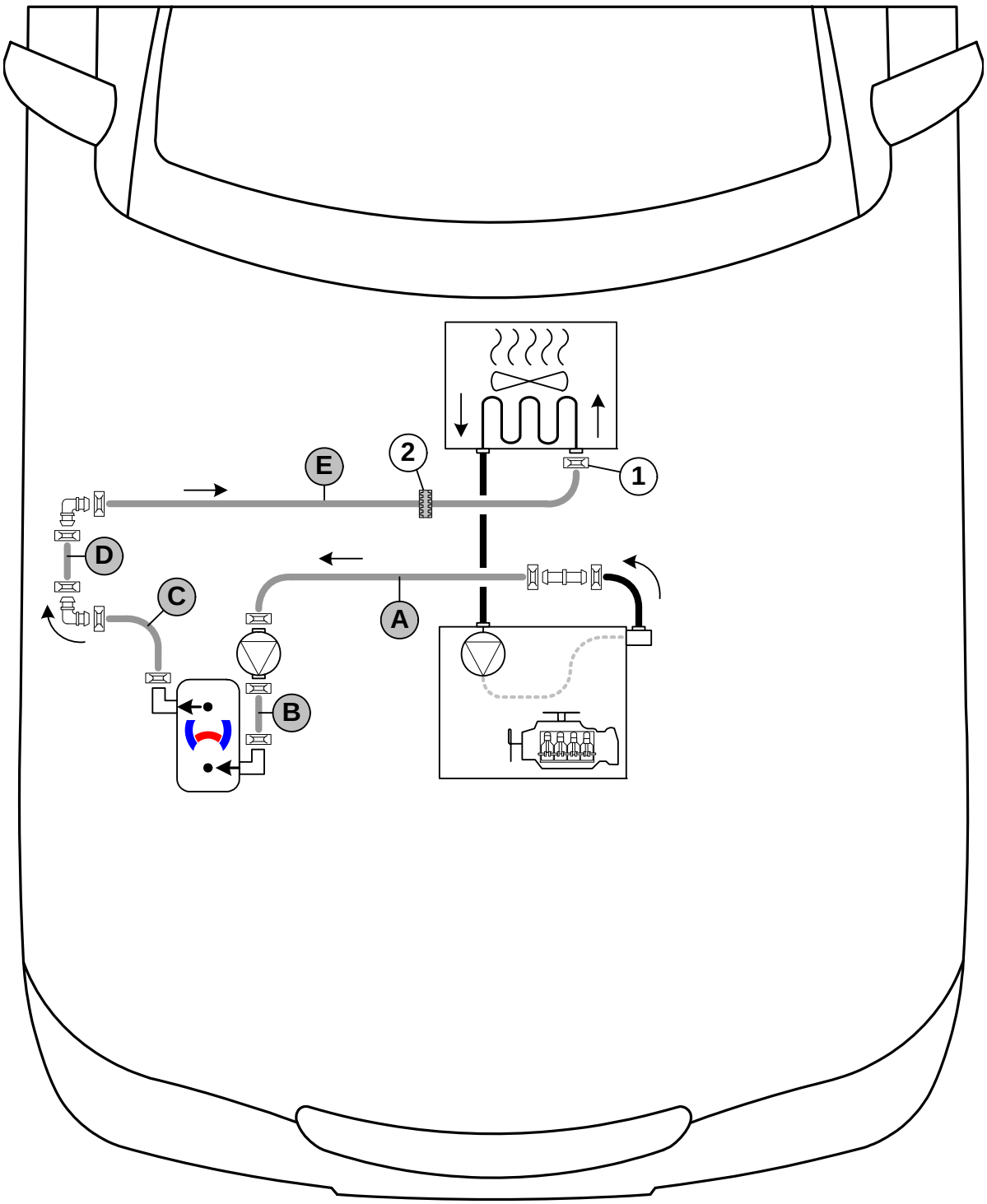


1 M6 flanged nut on original vehicle stud bolt
2 Perforated bracket
3 M5x16 bolt, large diameter washer, flanged nut
4 Silencer
5 51mm dia. clamp

Mounting silencer

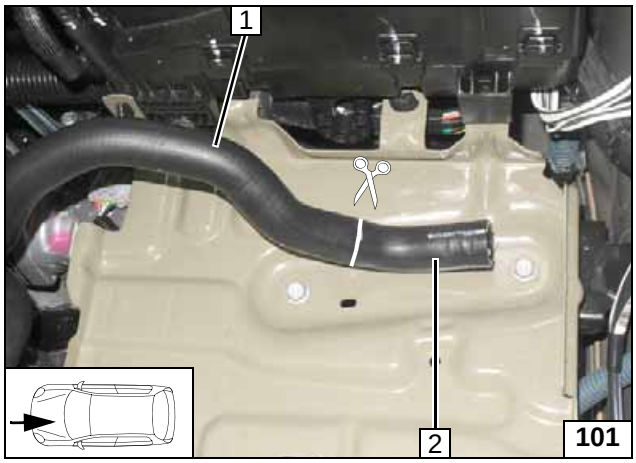
Coolant Circuit

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



Hose routing diagram

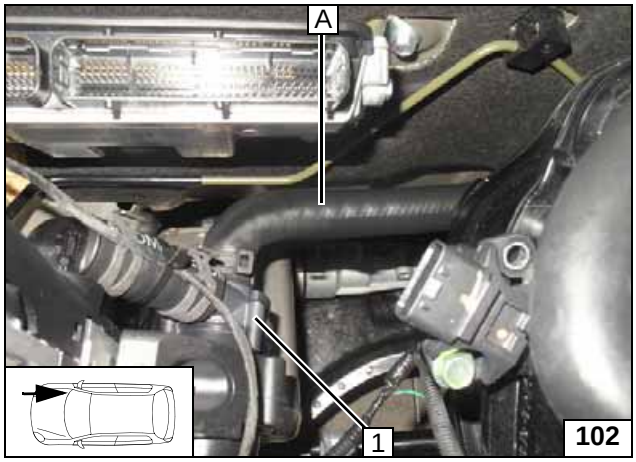
All connecting pipes without a specific designation = 25mm dia. **1** = Original vehicle spring clip . **2** = Black (sw) rubber isolator . All connecting pipes and = 18x18 mm dia.



Pull hose of engine outlet / heat exchanger inlet **1** from connection piece of heat exchanger inlet.
Original vehicle hose bracket and spring clip will be reused.

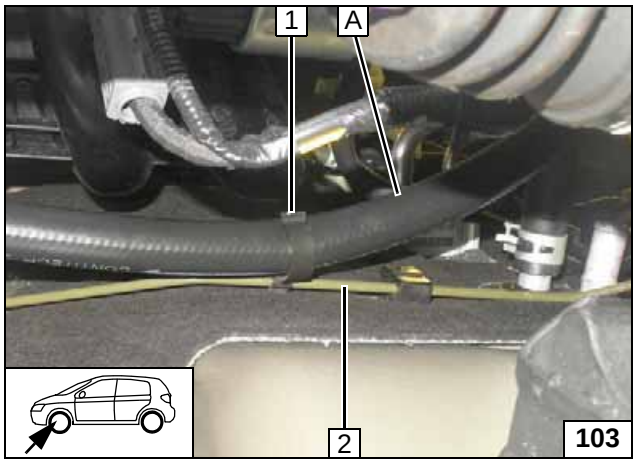
2 Discard hose section

Cutting point



1 Circulating pump

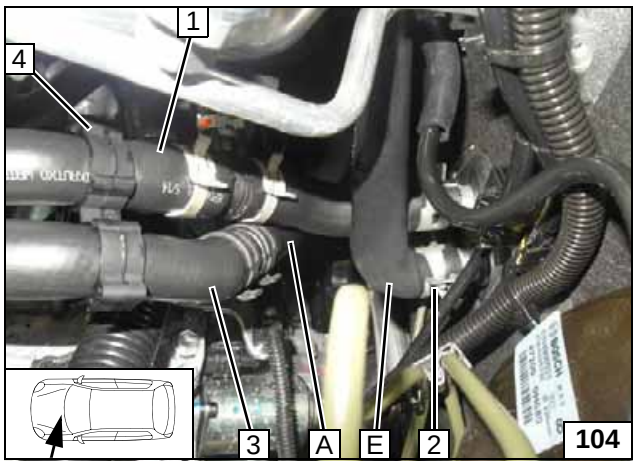
Connecting circulating pump



Route hose **A** along the firewall to the engine outlet!

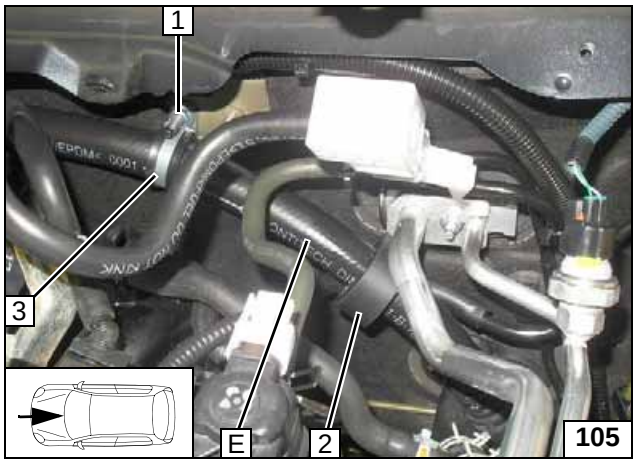
1 Install hose bracket (between hose **A** and original vehicle brake line **2**)

Routing in engine compartment



1 Hose of engine inlet
2 Original vehicle spring clip
3 Hose of engine outlet
4 Install original vehicle hose bracket (between hose of engine outlet **3** and hose of engine inlet **1**)

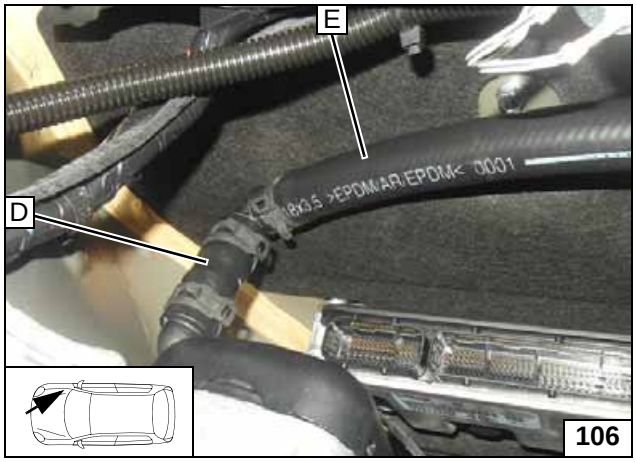
Connecting engine outlet / heat exchanger inlet



Slide black (sw) rubber isolator **2** onto hose **E** and align with A/C line.

1 Flanged nut on original vehicle stud bolt
3 25 mm dia. rubber-coated p-clamp

Routing in engine compartment



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

Connecting heater outlet

Final Work

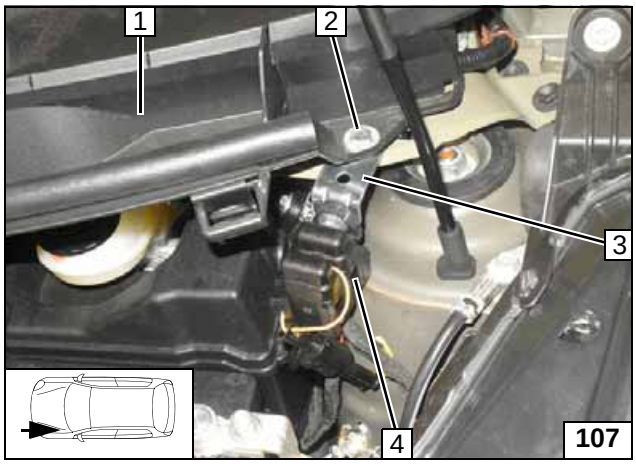
WARNING!
Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose wires and tie back.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Verification of the fan function (PWM Gateway):**
  Set the fan power to max. Then switch off the ignition and switch on the parking heater. On reaching the activation temperature - of 40°C for a TT-Evo with 4kW or 55°C for a TT-Evo with 5kW - the fan speed must correspond to the value of approx. 1/3 of the maximum speed specified by the PWM Gateway.
- **Check the proper function of the parking heater, see the operating instructions/installation instructions.**
- **Place the "Switch off parking heater before refuelling" caution label in the area of the filler neck.**

The initial startup is to be executed with the Webasto Thermo Test Diagnosis as follows:

- **Control coolant pump under Menu Component test, check coolant level**
- **Pump fuel for the heater under the menu pipe filling**
- **Check CO_2 settings; take setting values from the general installation instructions**
- **During the trial run, all water and fuel connections must be checked for leakage and firm seating**
- **An error search is to be conducted in case of fault.**

Installing fuse holder of engine compartment

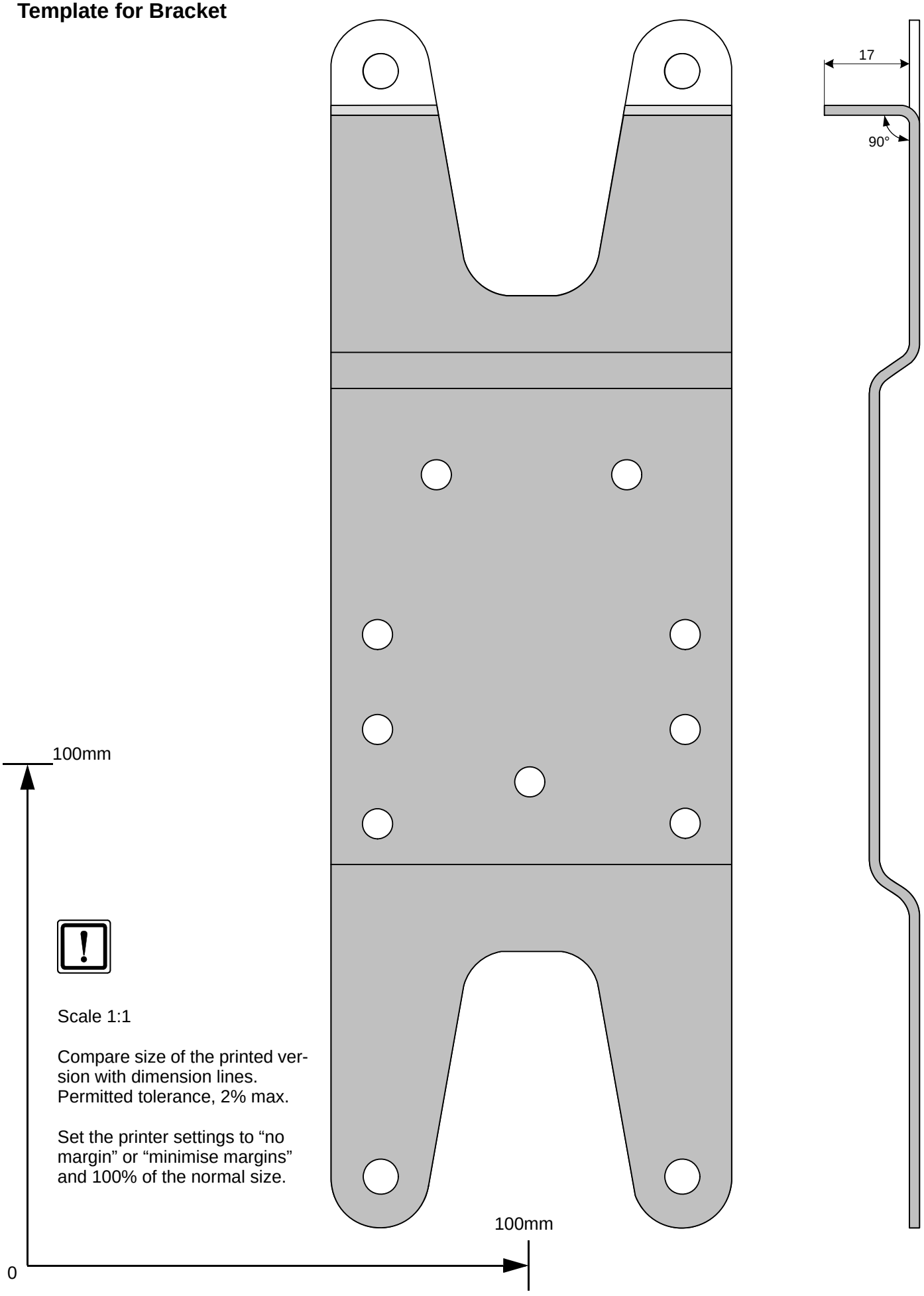


Original vehicle retaining clip at position **2** is omitted!

1 Mounting coolant reservoir cap
2 M6x20 bolt, large diameter washer, flanged nut on existing hole
3 Angle bracket
4 Engine compartment fuse holder

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

Template for Bracket

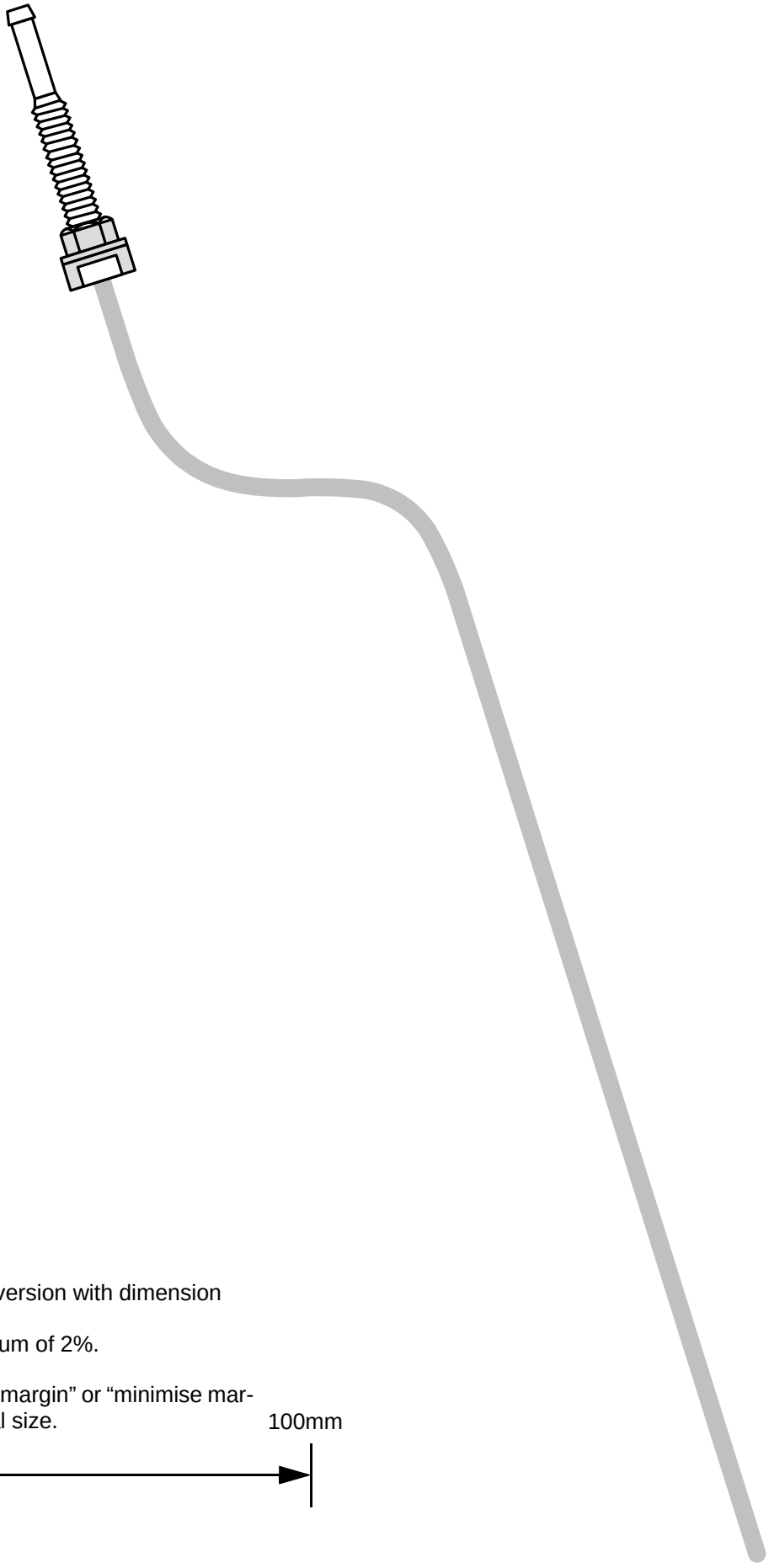


Scale 1:1

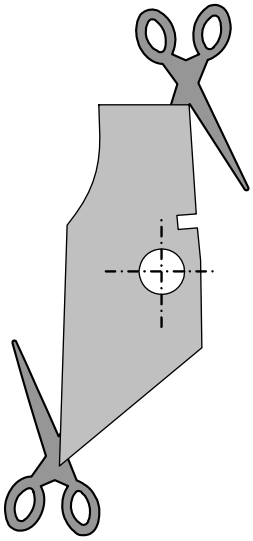
Compare size of the printed version with dimension lines. Permitted tolerance, 2% max.

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

Template for Fuel Standpipe



Template for Fuel-Tank Sending Unit



100mm

Scale 1:1

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

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

100mm

0

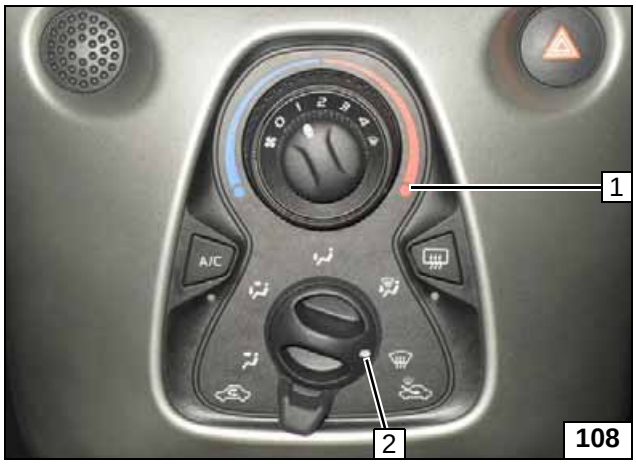
Operating Instructions for Manual Air-Conditioning

Please remove page and add to the vehicle operating instructions.

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

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

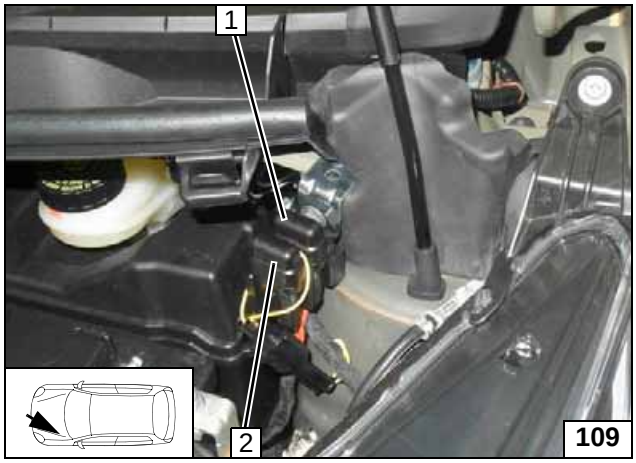
Before parking the vehicle, make the following settings:



A fan speed presetting is not required, it will be set to 1/3 of the fan capacity.

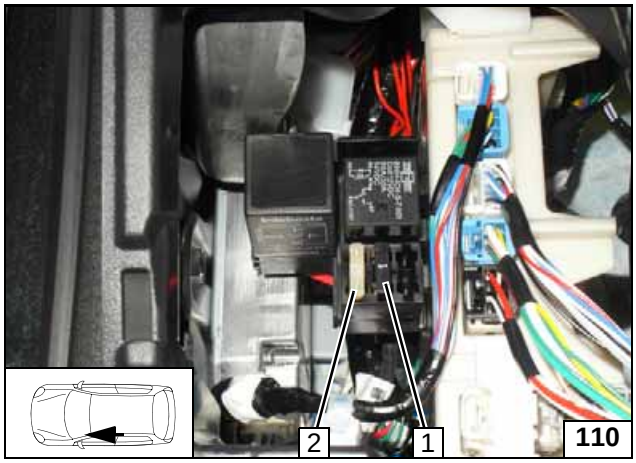
1 Set temperature to "max."
2 Air outlet onto windscreen

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment

Operating Instructions for Automatic Air-Conditioning

Please remove page and add to the vehicle operating instructions.

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

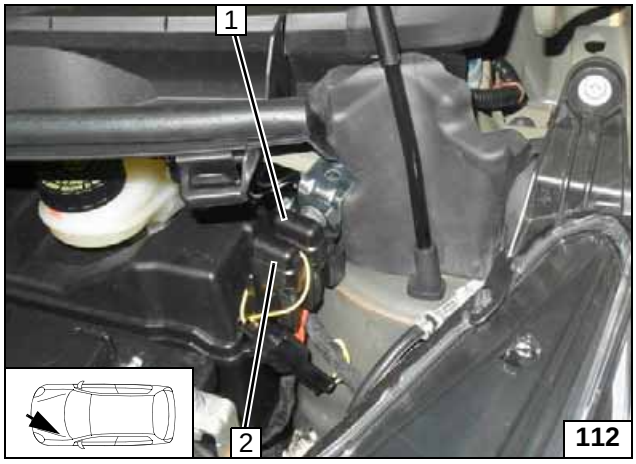
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A fan speed presetting is not required, it will be set to 1/3 of the fan capacity.

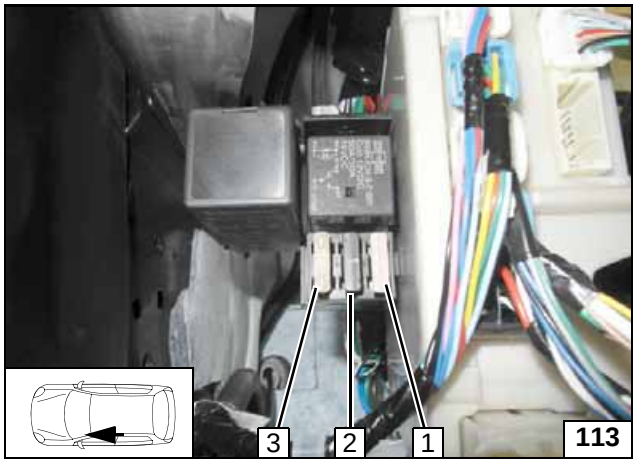
1 Set temperature to "max."
2 Air outlet onto windscreen

A/C control panel



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

Fuses of engine compartment



1 3A A/C control panel fuse F5
2 1A heater control fuse F3
3 25A fan controller fuse F4

Fuses of passenger compartment