Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Hyundai i30 / i30 Coupe

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Hyundai	i30	GDH	e11 * 2007 / 46 * 0337 * ...
Hyundai	i30 Coupe	GDH	e11 * 2007 / 46 * 0337 * ...

Hyundai i30:

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 CVVT	Petrol	6-speed SG	73	1396	G4FA
1.4	Petrol	6-speed SG	74	1368	G4LC
1.6 GDI	Petrol	6-speed SG	99	1591	G4FD
1.6 GDI	Petrol	6-speed AG	99	1591	G4FD

Hyundai i30 Coupe:

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 CVVT	Petrol	6-speed SG	73	1396	G4FA

SG = manual transmission
AG = automatic transmission

Hyundai i30 from model year 2012
Hyundai i30 Coupe from model year 2013
Left-hand drive vehicle

Verified equipment variants: Manual / automatic air-conditioning system
Front fog lights
Start-Stop
Passenger compartment monitoring / alarm system

Total installation time: approx. 7 hours

Hyundai i30 / i30 Coupe

Table of Contents

Necessary Components

- Basic delivery scope of *Thermo Top Evo* based on price list
- Installation kit for Hyundai i30 / i30 Coupe 2012 Petrol: **1318487C**
- Heater control in accordance with price list and upon consultation with end customer
- In case of MultiControl CAR installation: Clock wire extension: **1319724A**
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

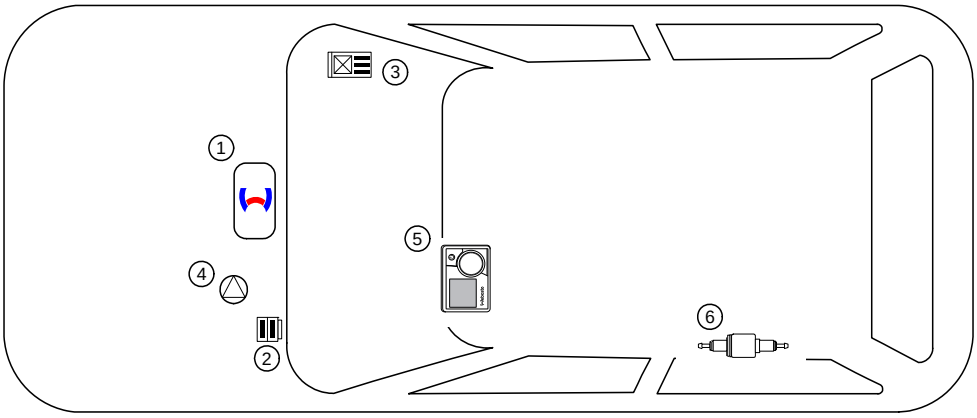
Installation instructions:

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

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. Circulating pump
5. MultControl CAR
6. Metering pump



Information on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important 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 tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

Hyundai i30 / i30 Coupe

Information on Validity

This installation documentation applies toHyundai i30 Petrol from model year 2012 and later as well asHyundai i30 Coupe petrol vehicles from model year 2013 and later - for validity, see page 1 - , 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

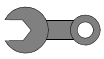
Dimensions
- All dimensions are in mm.

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

Explanatory Notes on Document

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

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents.

Specific risk due to electrical voltage

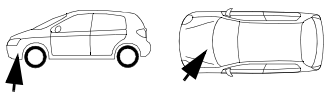
Specific risk of damage to components.

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.

Hyundai i30 / i30 Coupe

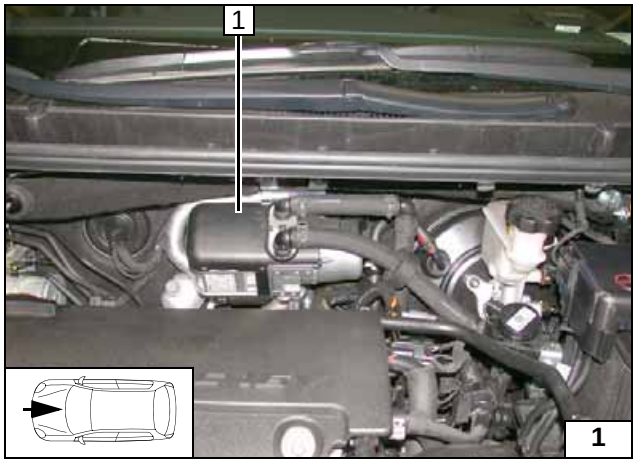
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove the lateral instrument panel trim on the front passenger's side.
- Remove the glove compartment.
- Remove the decorative panel above glove compartment
- Remove the glove compartment frame
- Remove the instrument panel trim on the right (only with automatic air-conditioning).
- Remove the A/C control panel (only with automatic air-conditioning).
- Remove the lateral underride protection on the left.
- Fold up the rear bench seat.
- Open the right-hand 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

Figure shows 1.4 CVVT

1 Heater

Installation location

Preparing Electrical System

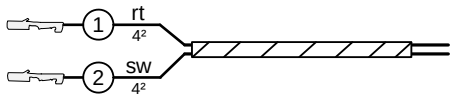
Manual A/C system

Wire sections retain their numbering throughout the entire document.

Produce all following electrical connections as shown in wiring diagram.

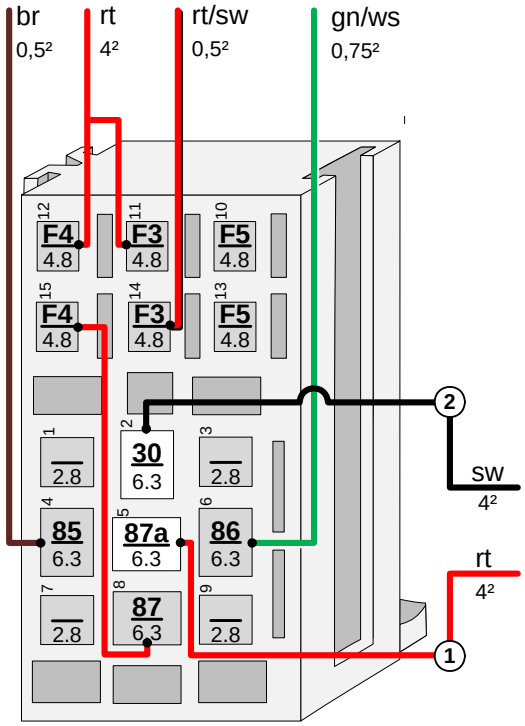
① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness

Cutting wires to length



2

Connecting wires to passenger compartment relay and fuse holder

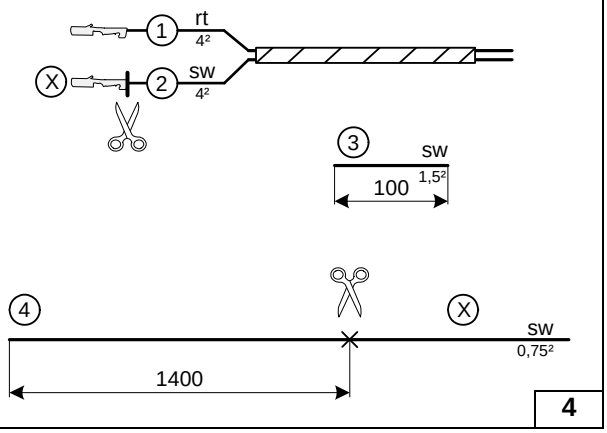


3

Automatic air-conditioning

Discard section **X**.

Cutting to length / assigning wires



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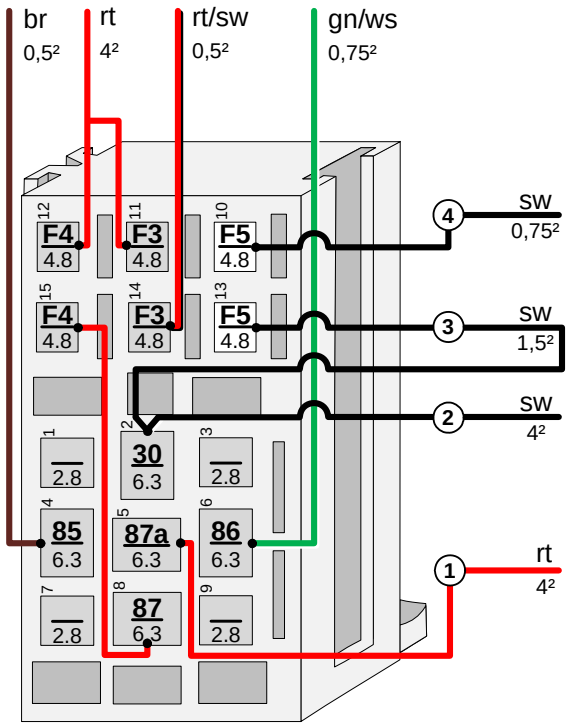

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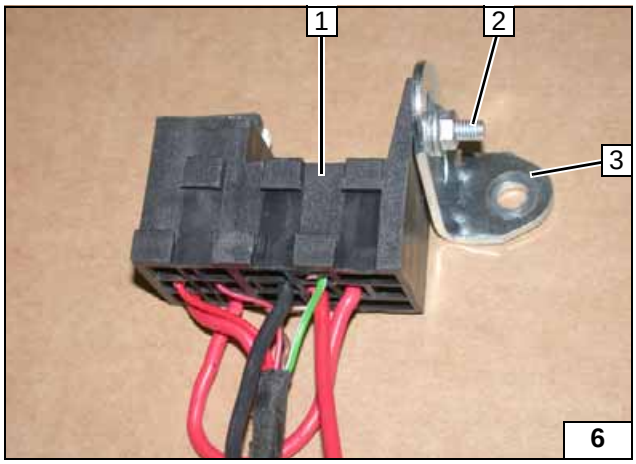
Connecting wires to passenger compartment relay and fuse holder



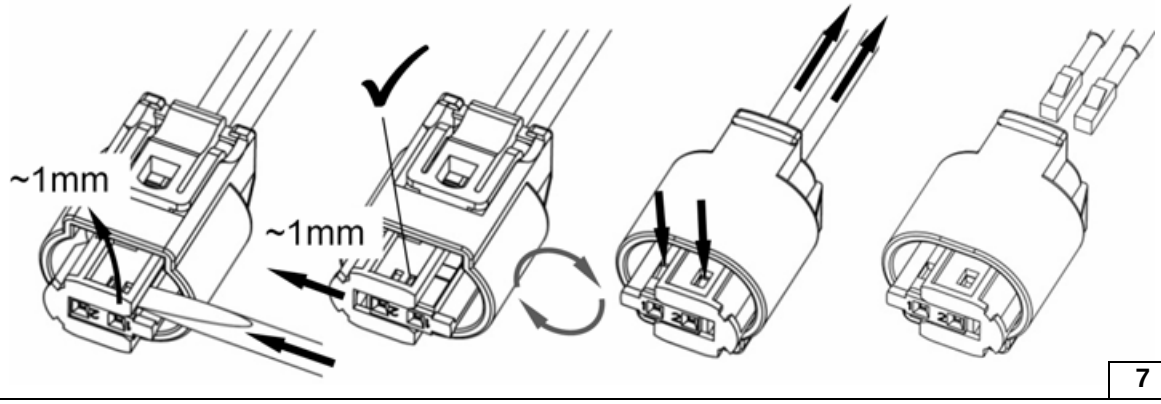
6

All vehicles

1 Passenger compartment relay and fuse holder
2 M5x16 bolt, washer [2x], nut
3 Angle bracket

Premounting passenger compartment relay and fuse holder

Connector X7



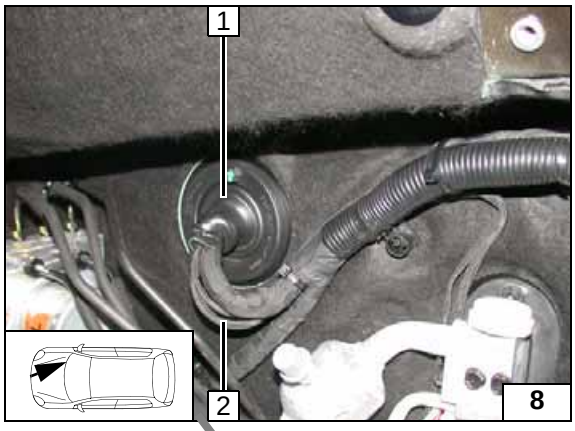
7

Dismantling metering pump connector

Electrical System

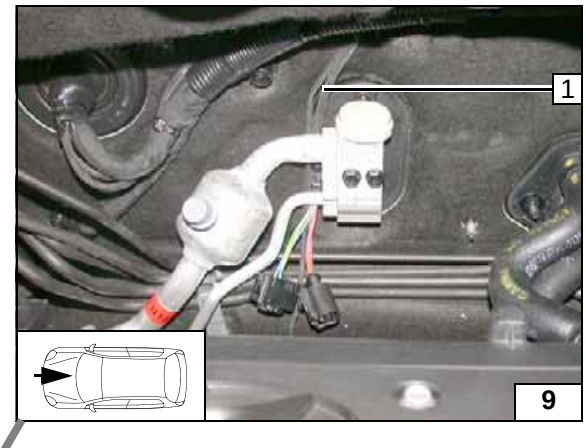
Wiring harness pass through

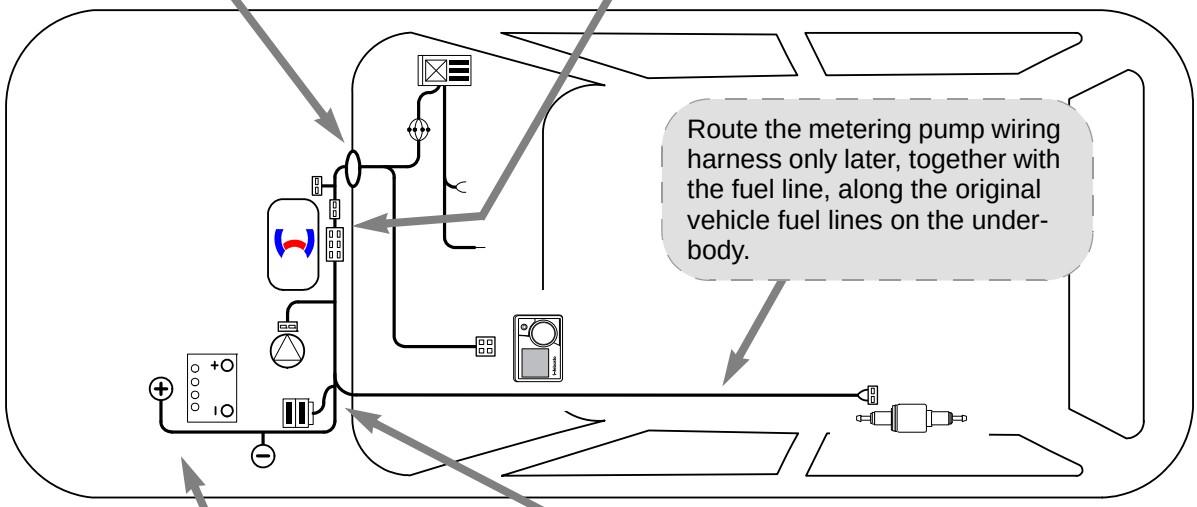
1 Protective rubber plug
2 Wiring harnesses of heater, heater control



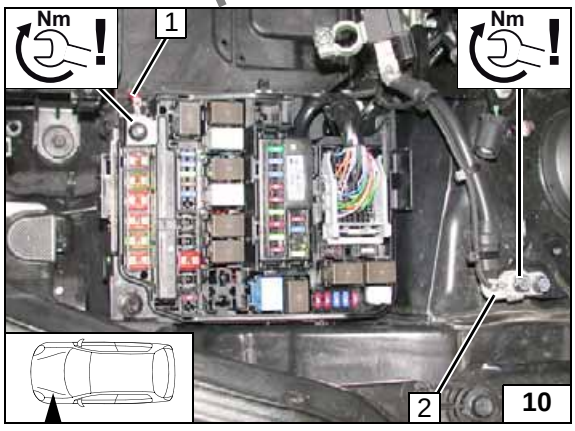
Wiring harness routing

1 Wiring harness of heater



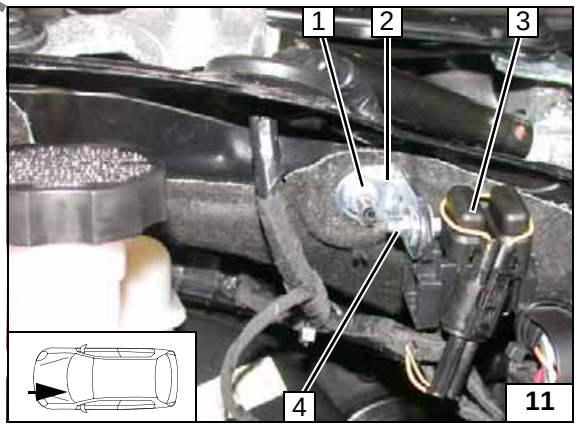


Wiring harness routing diagram



Positive and earth wire

1 Positive wire on original vehicle positive distributor
2 Earth wire on original vehicle earth support point



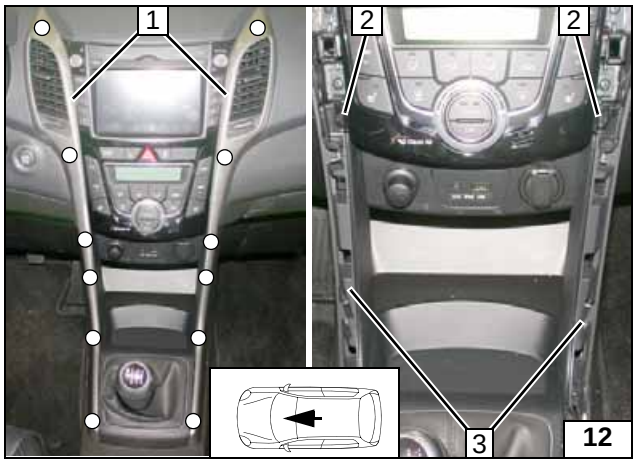
Engine compartment fuse holder

Remove plastic nut at position **1**.

1 M6 flanged nut, original vehicle stud bolt
2 Angle bracket
3 Fuses F1-2
4 M5x16 bolt, washer [2x], retaining plate of fuse holder, nut

Instrument Panel Dismantling Instructions

Only with automatic air-conditioning



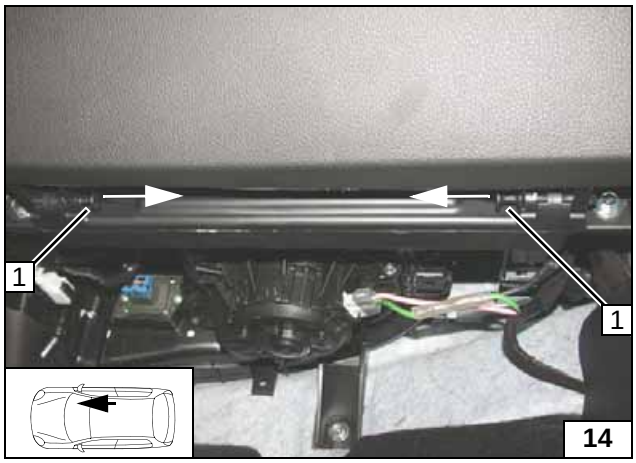
Removing A/C control panel

1 Take out trim piece by pulling it forward
○ Retaining clip
2 Remove bolts [2x]
3 Remove frame

Removing A/C control panel

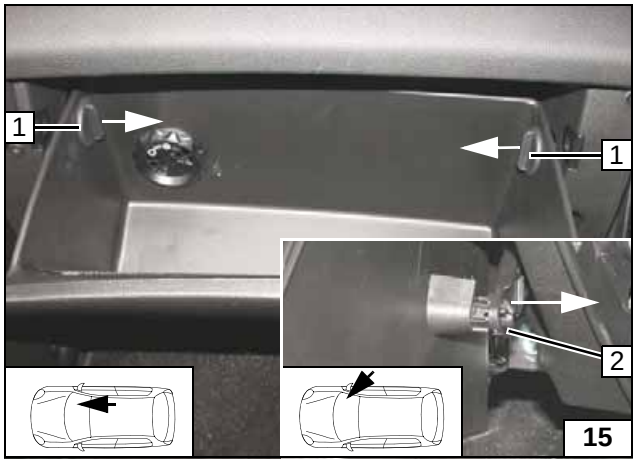
1 Remove bolts [4x]

All vehicles



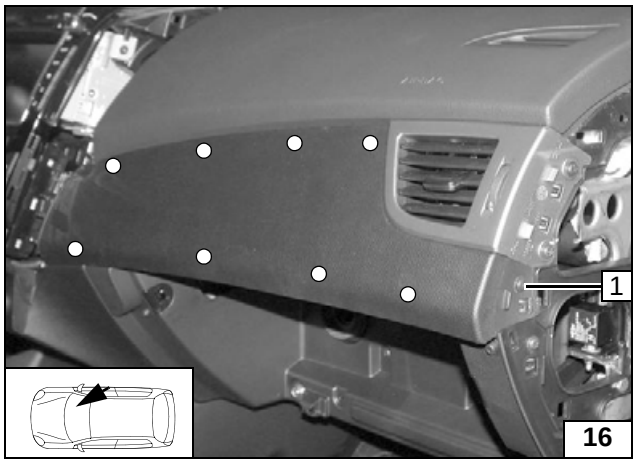
Removing glove compartment

1 Remove plugs [2x] in direction of arrow



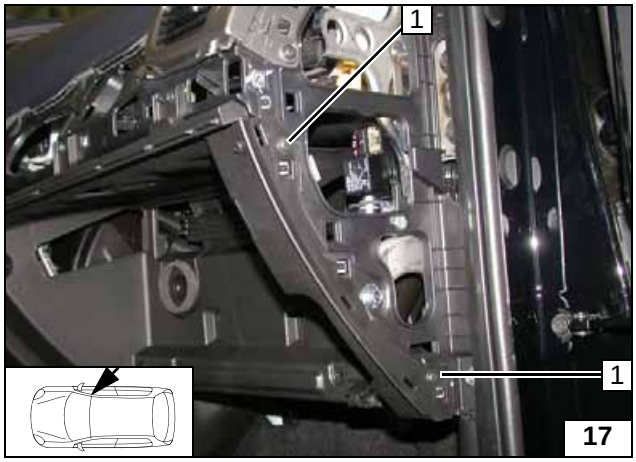
Removing glove compartment.

1 Turn stop button, take it off in direction ofarrow
2 Take off retaining strut in direction of arrow



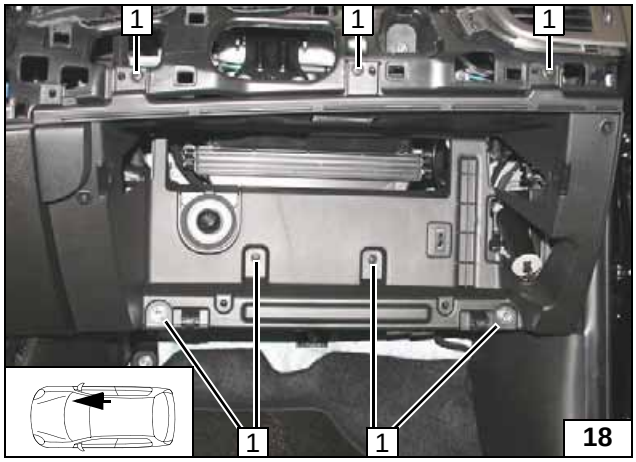
1 Remove bolt
○ Mounting clip of decorative panel

Removing decorative panel above glove compartment



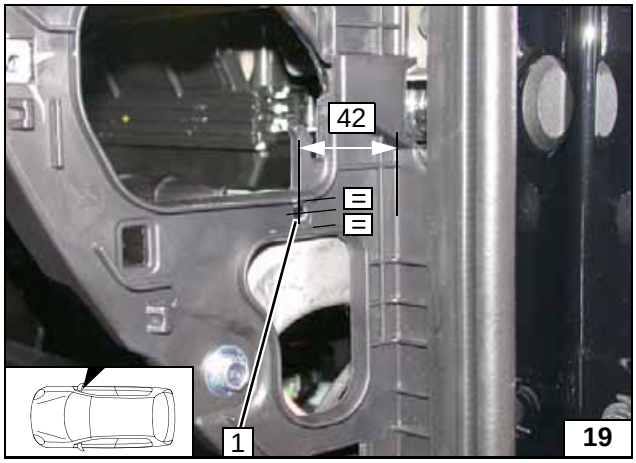
1 Remove bolts [2x]

Removing glove compartment frame



1 Remove bolts [7x]

Removing glove compartment frame

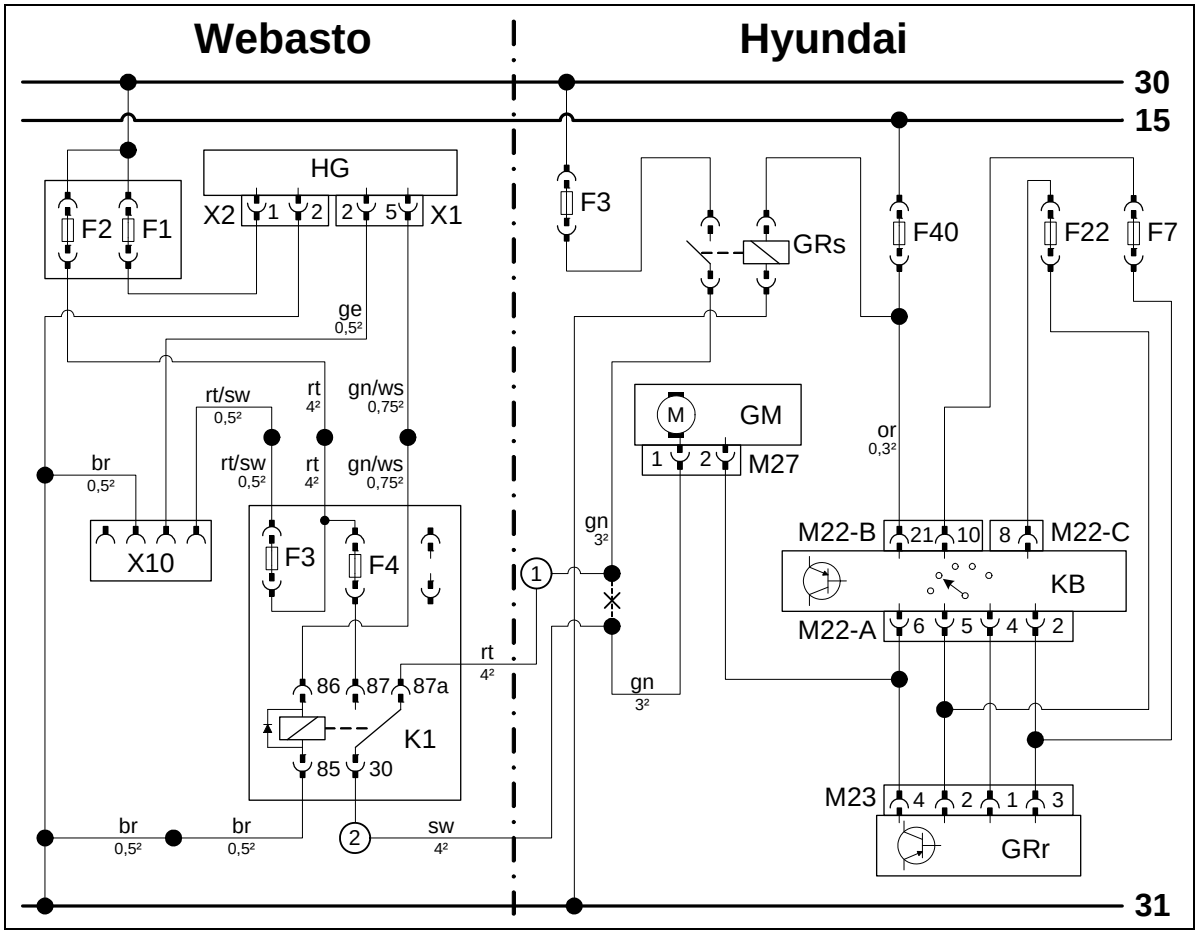


1 7mm dia. hole in centre of bar

Hole for passenger compartment relay and fuse holder

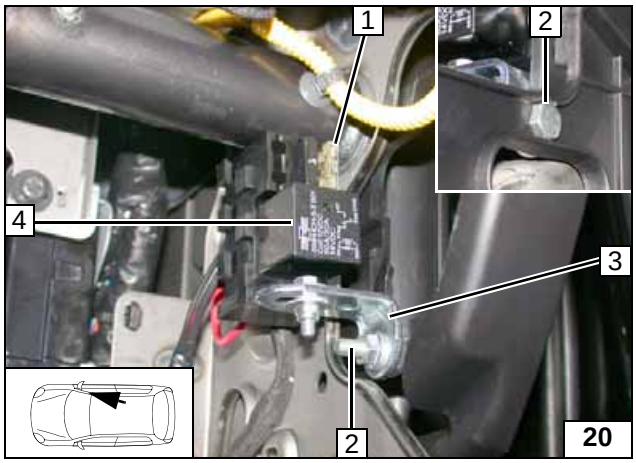
Fan Controller for Manual Air-Conditioning

Wiring diagram



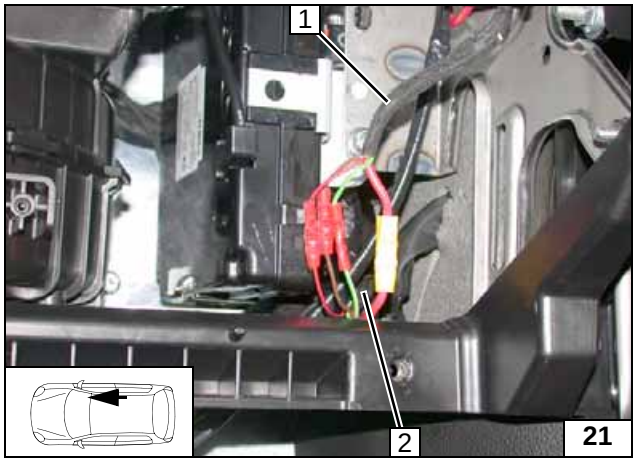
Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F3	40A fuse	rt	red
X1	6-pin heater connector	F40	7.5A fuse	sw	black
X2	2-pin heater connector	F22	10A fuse	ge	yellow
F1	20A fuse	F7	7.5A fuse	gn	green
F2	30A fuse	GRs	Fan relay	or	orange
X10	4-pin connector of heater control	GM	Fan motor	ws	white
		M27	2-pin connector GM	br	brown
F3	1A fuse	KB	A/C control unit		
F4	25A fuse	M22-B	40-pin connector of KB		
K1	Fan relay	M22-C	16-pin connector of KB		
		M22-A	6-pin connector of KB		
		GRr	Fan controller		
		M23	4-pin connector GRr		
				X	Cutting point
				Wiring colours may vary.	



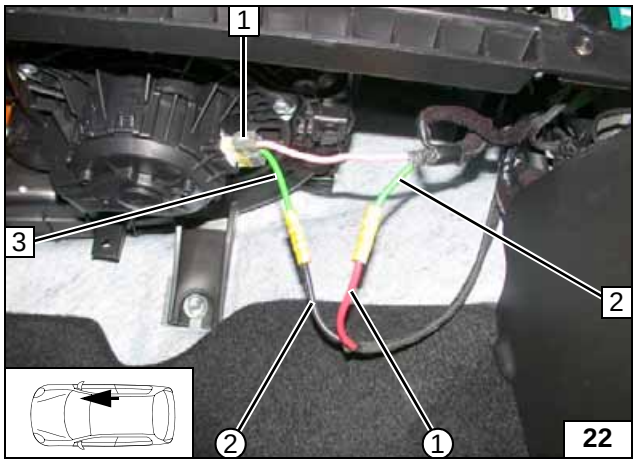
1 25A fuse F4
2 M6X20 bolt, flanged nut
3 Angle bracket
4 K1 relay

Installing passenger compartment relay and fuse holder



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

Connecting same colour wires of wiring harnesses

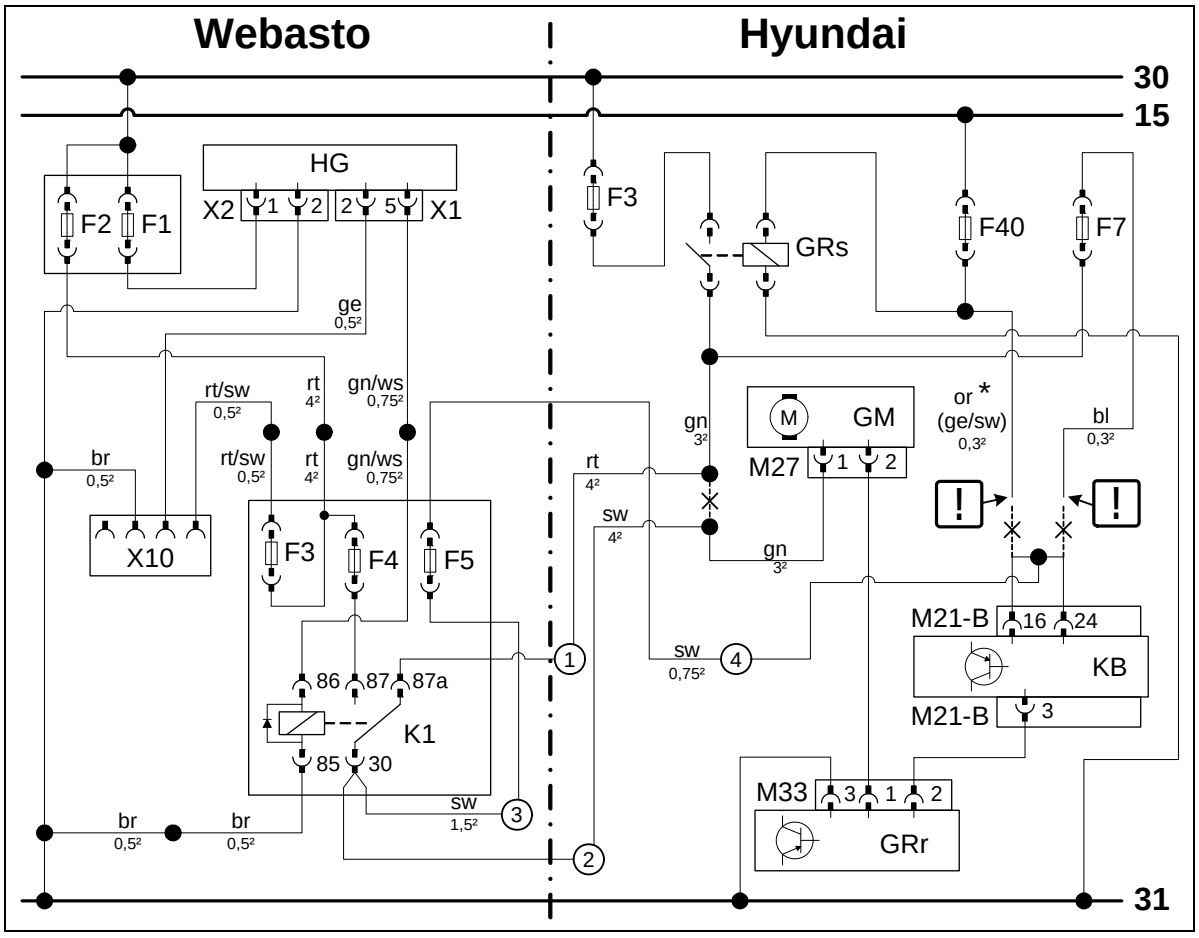


1 2-pin connector M27 of fan motor
2 Green (gn) wire of fan relay
3 Green (gn) wire of connector M27, pin 1
① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

Connection of fan motor

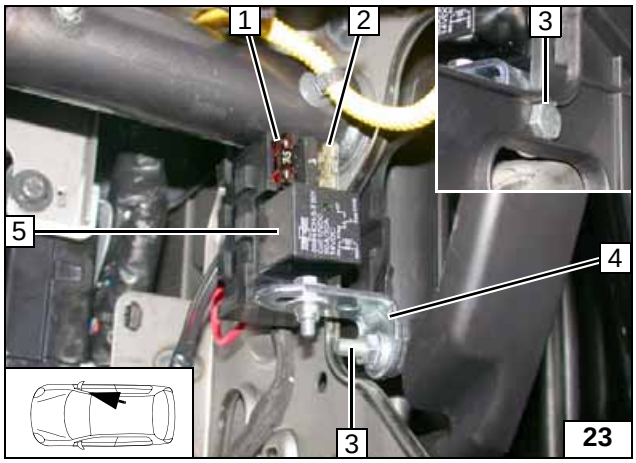
Fan Controller for Automatic Air-Conditioning

Wiring diagram



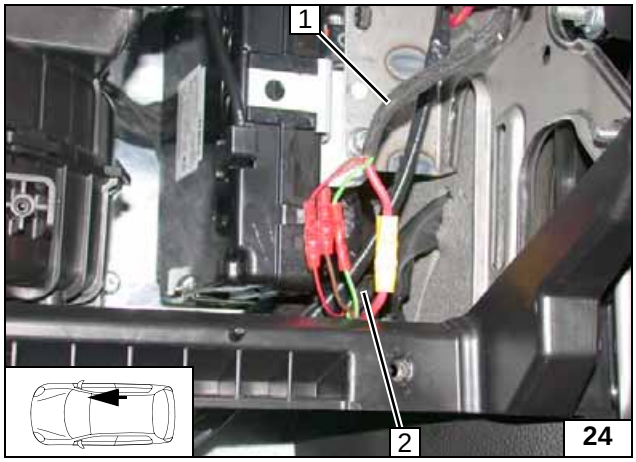
Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F3	40A fuse	rt	red
X1	6-pin heater connector	F40	7.5A fuse	sw	black
X2	2-pin heater connector	F7	7.5A fuse	ge	yellow
F1	20A fuse	GRs	Fan relay	gn	green
F2	30A fuse	GM	Fan motor	or	orange
X10	4-pin connector of heater control	M27	2-pin connector GM	ws	white
		KB	A/C control unit	br	brown
F3	1A fuse	M21-B	32-pin connector of KB	bl	blue
F4	25A fuse	GRr	Fan controller		
F5	7.5A fuse	M33	4-pin connector GRr		
K1	Fan relay			*	Wiring colours may vary.
				!	Insulate wire end and tie back
				X	Cutting point



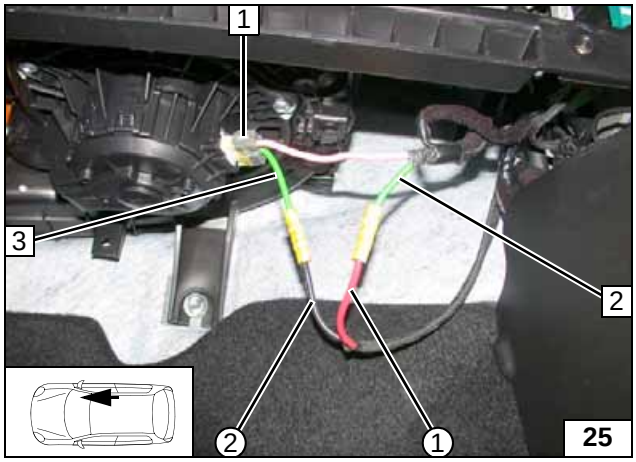
1 7.5A fuse F5
2 25A fuse F4
3 M6X20 bolt, flanged nut
4 Angle bracket
5 K1 relay

Installing passenger compartment relay and fuse holder



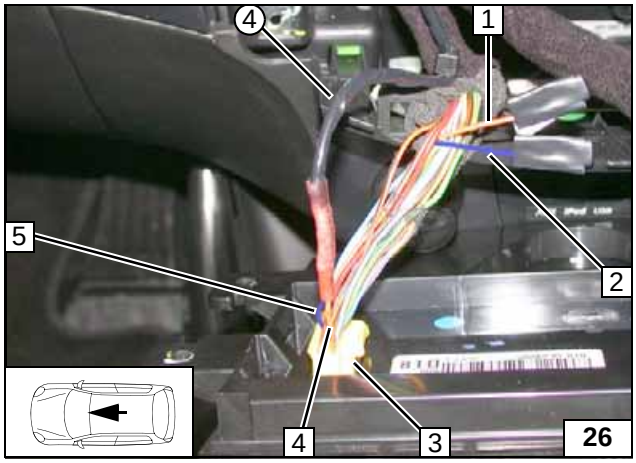
1 Wiring harness of passenger compartment relay and fuse holder
2 Wiring harness of heater

Connecting same colour wires of wiring harnesses



1 2-pin connector M27 of fan motor
2 Green (gn) wire of fan relay
3 Green (gn) wire of connector M27, pin 1
① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

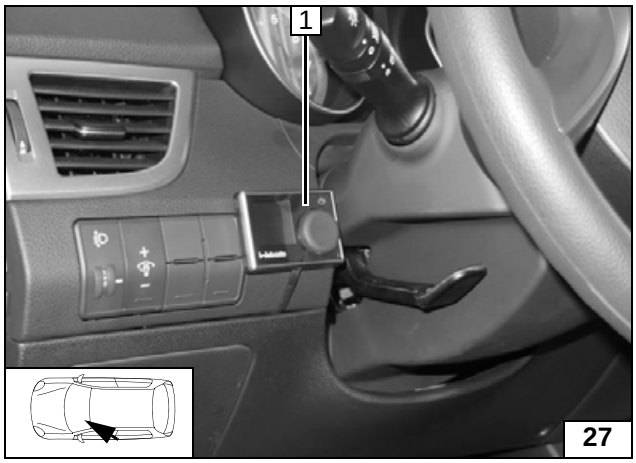
Connection of fan motor



Insulate orange (or) or yellow/black (ge/sw) wire **1** of fuse F40 and blue (bl) wire **2** of fuse F7 and tie back.

3 32-pin connector M21-B of A/C control unit
4 Orange (or) or yellow/black (ge/sw) wire of connector M21-B, pin 16
5 Blue (bl) wire of connector M21-B, pin 24
④ Black (sw) wire of 7.5A fuse F5

Connecting A/C control unit

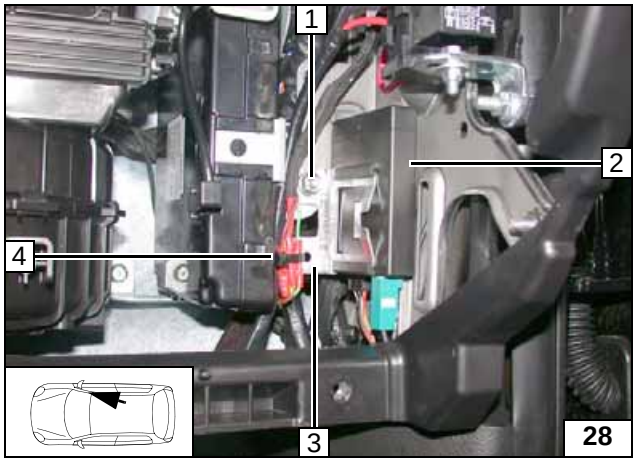


MultiControl CAR

The wiring harness extension is required when installing a MultiControl CAR!

1 MultiControl CAR

Installing MultiControl CAR

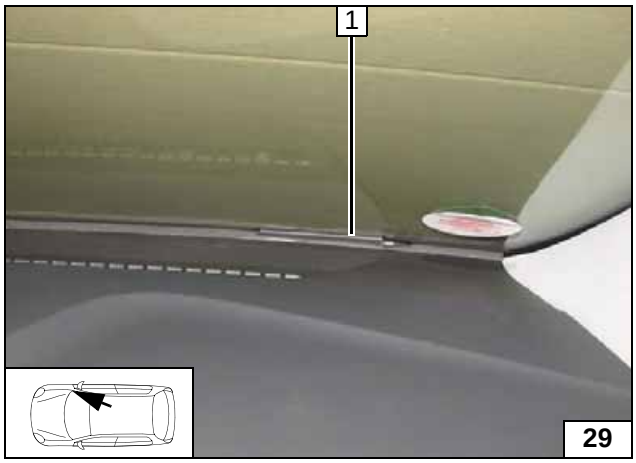


Remote Option (Telestart)

Bend bracket **3** by 90° and install on original vehicle stud bolt **1**.

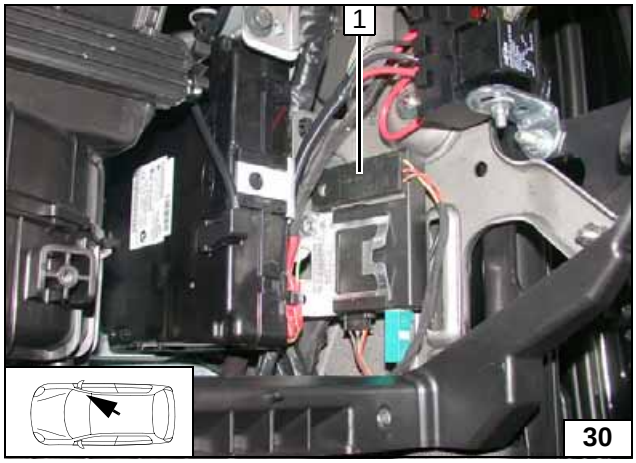
2 Receiver
4 Cable tie, wiring harness of heater

Installing receiver



1 Antenna

Installing antenna



Temperature sensor T100 HTM

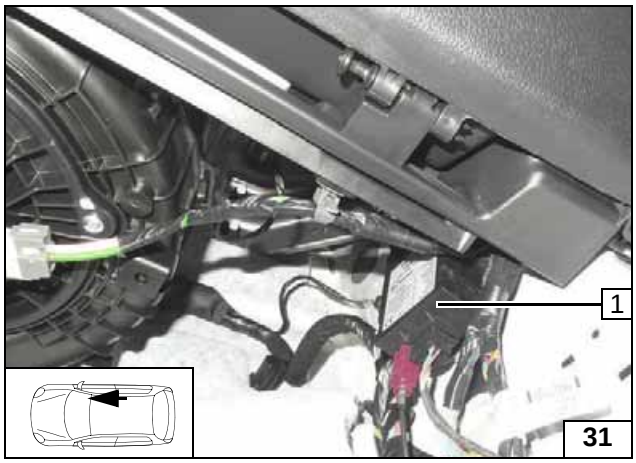
Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor

Thermo Call TC3 Option

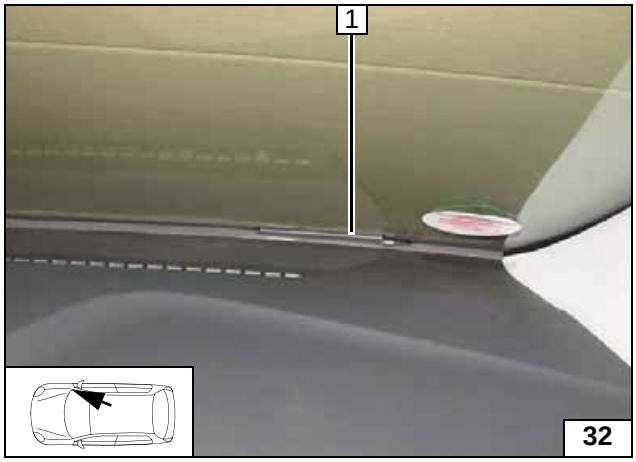
Installing receiver

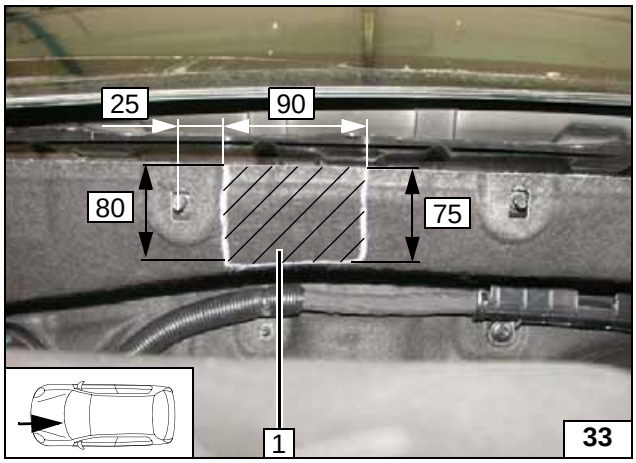
Fasten receiver **1** with double-sided adhesive tape.



1 Antenna

Installing antenna

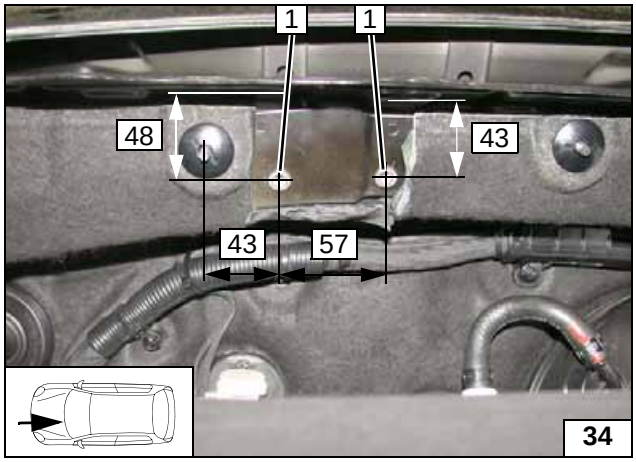




Preparing Installation Location

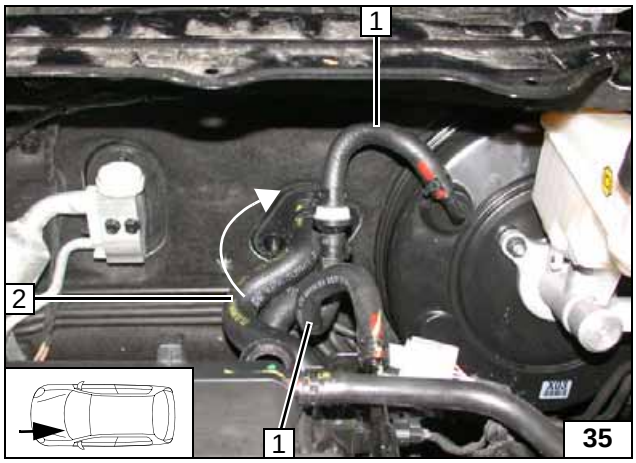
Cut out marked area **1** of the insulation mat.

Cutting out insulation mat



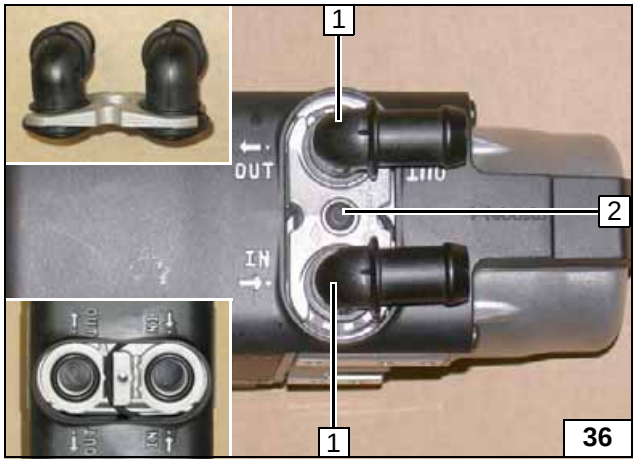
1 9.1mm dia. hole; rivet nut [2x each]

Installing rivet nuts



Align vacuum hose **1** as shown. Loosen originalvehicle hose **2** on heat exchanger connection piece and engine, turn clockwise byapprox. 90° and fasten again.

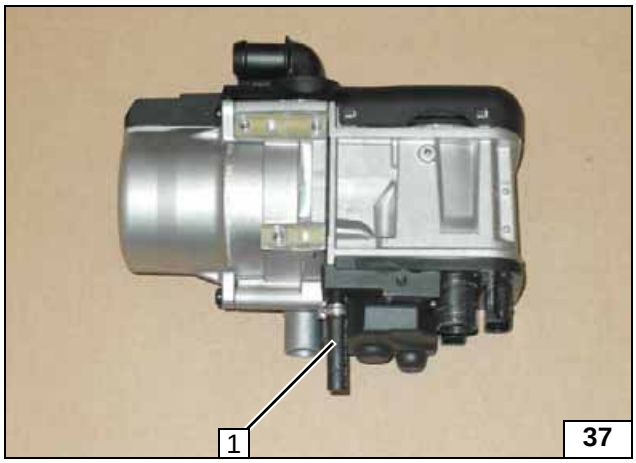
Aligning hoses



Preparing Heater

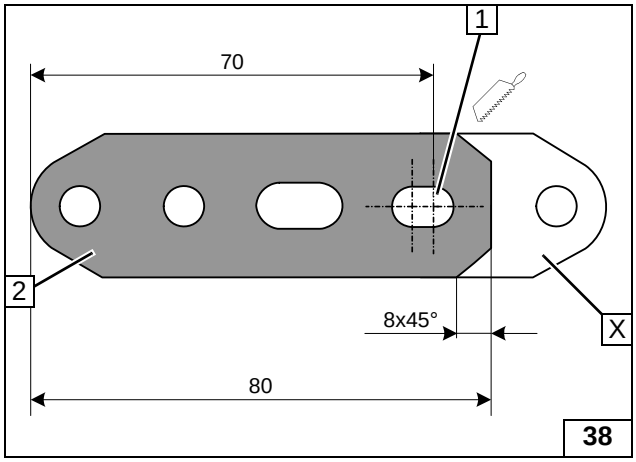
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection pieces

Mounting water connection piece



1 Hose section, 10 mm dia. clamp

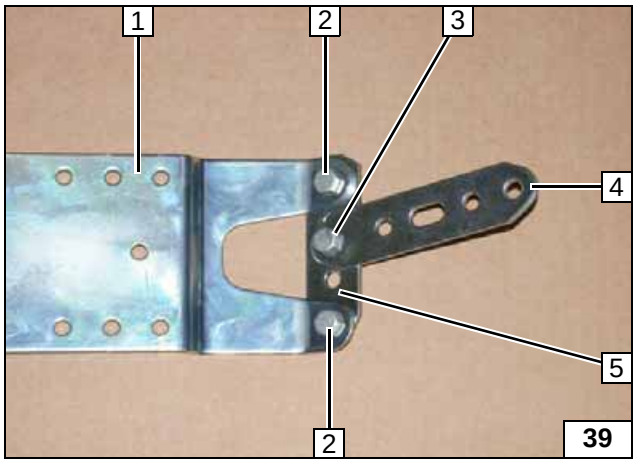
Installing hose section



Enlarge 7 mm dia. hole at position **1** to oblong hole.
Discard section **X**.

2 Perforated bracket A

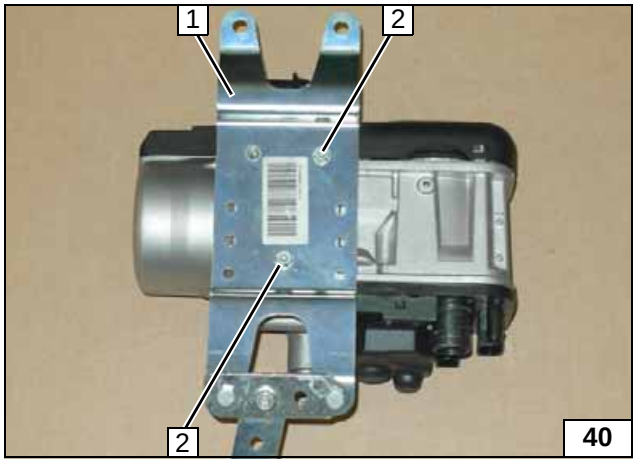
Preparing perforated bracket A



Bend bracket of heater **1** as per template 3x.

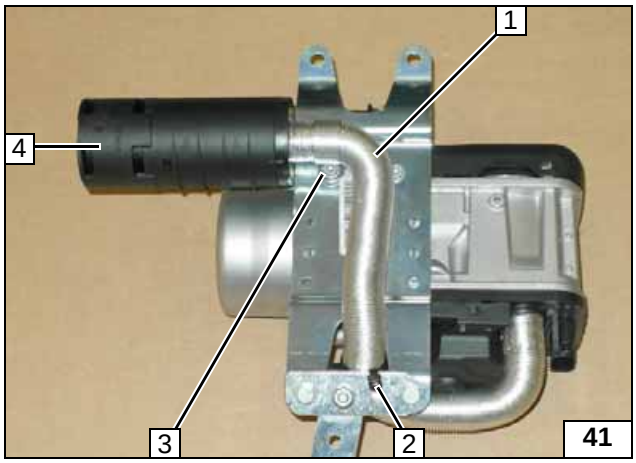
2 M6x12 bolt, flanged nut [2x each]
3 Loosely install M6x12 bolt, flanged nut
4 Perforated bracket B
5 Perforated bracket A

Premounting bracket



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

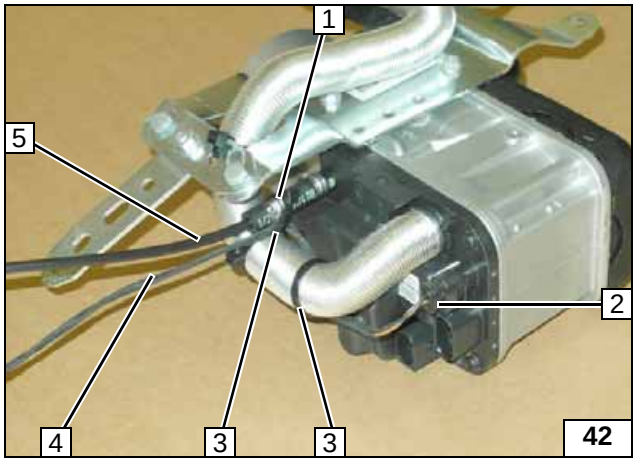
Installing bracket



Shape combustion air pipe **1** and align.

2 Cable tie
3 5x13 mm self-tapping bolt, p-clamp
4 Silencer

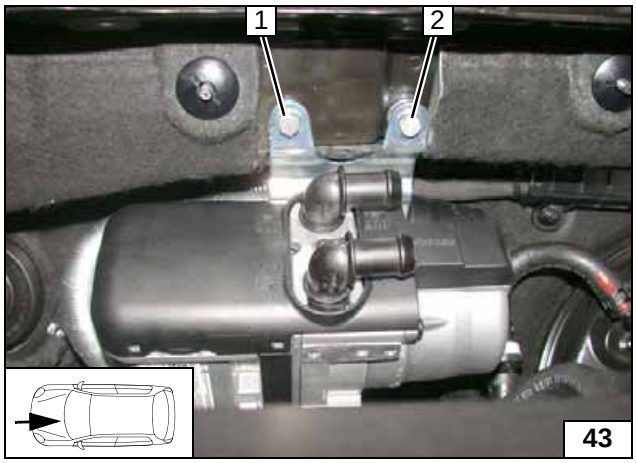
Mounting combustion air pipe and silencer



1 10 mm dia. clamp
2 Connector of circulating pump wiring harness
3 Cable tie [2x]
4 Wiring harness of circulating pump
5 Fuel line

Premounting fuel line and wiring harness of circulating pump

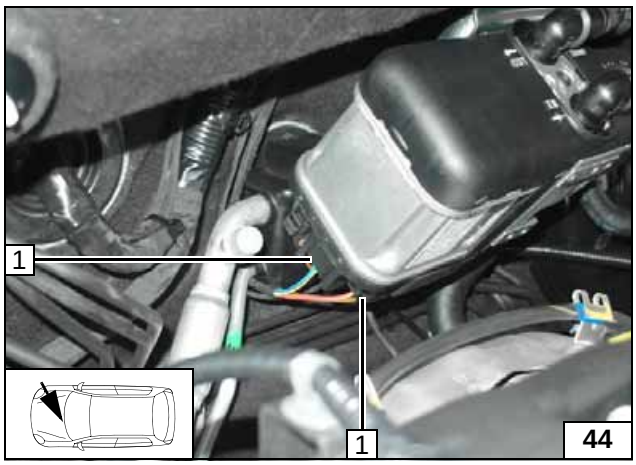
Installing Heater



Insert 5mm shim between bracket and body at position **2**.

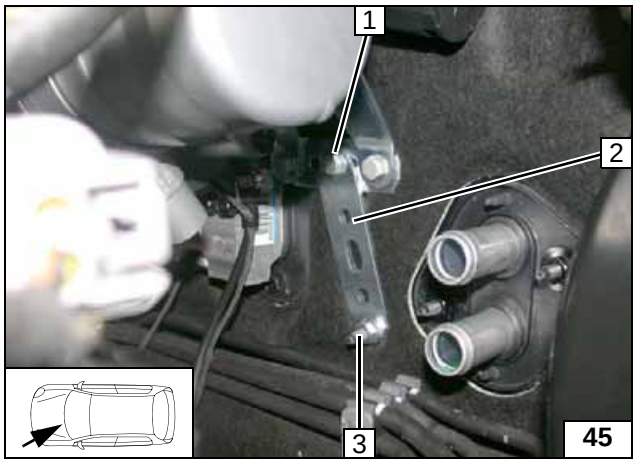
1 M6x20 bolt, spring lockwasher
2 M6x25 bolt, spring lockwasher, 5mm shim

Mounting heater



1 Heater wiring harness connector [2x]

Mounting heater wiring harness



1 Tighten bolt
2 Perforated bracket B
3 Flanged nut, original vehicle stud bolt

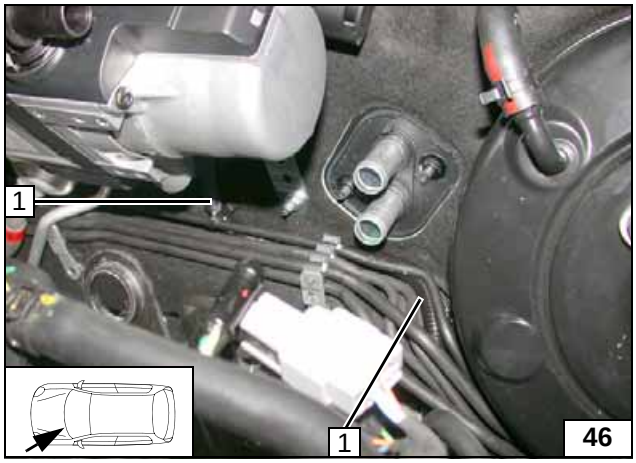
Fuel

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.

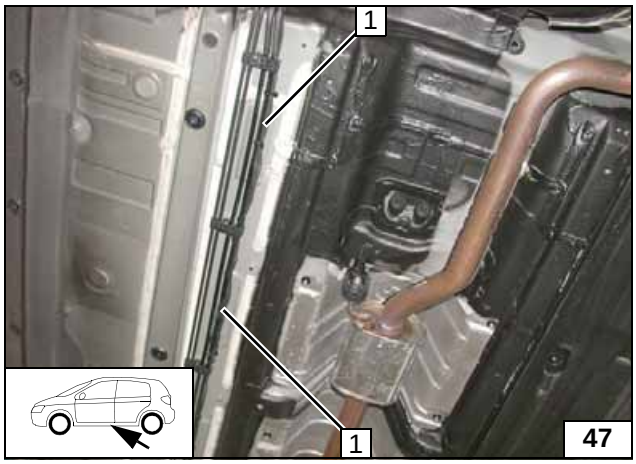
Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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



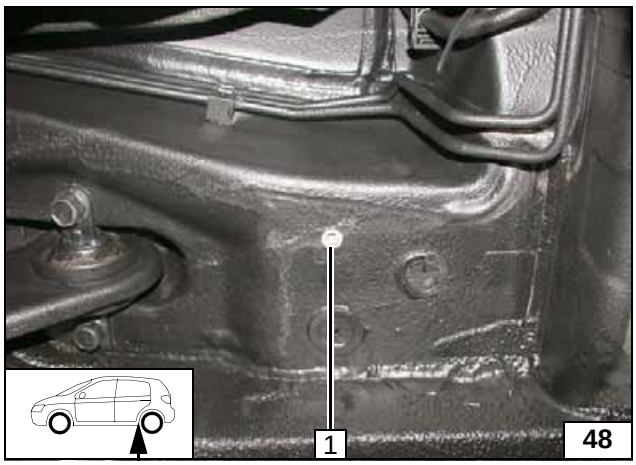
Route fuel line and wiring harness of metering pump in 10 mm dia., 1130mm long corrugated tube **1** along original vehicle lines to the underbody.

Routing lines



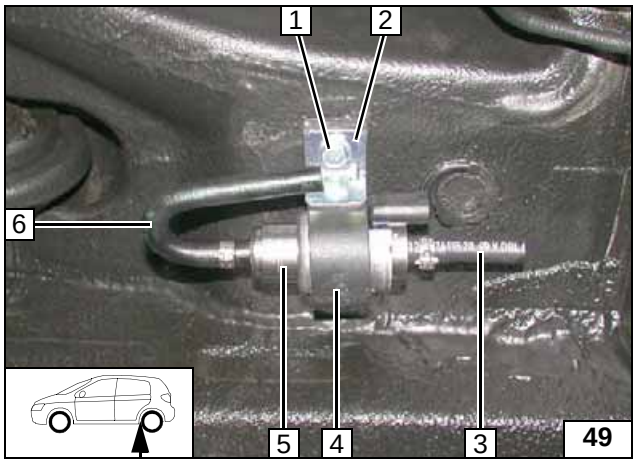
Route fuel line and wiring harness of metering pump **1** on original vehicle lines to installation location of metering pump.

Routing lines



1 Rivet nut, existing hole

Installing rivet nut



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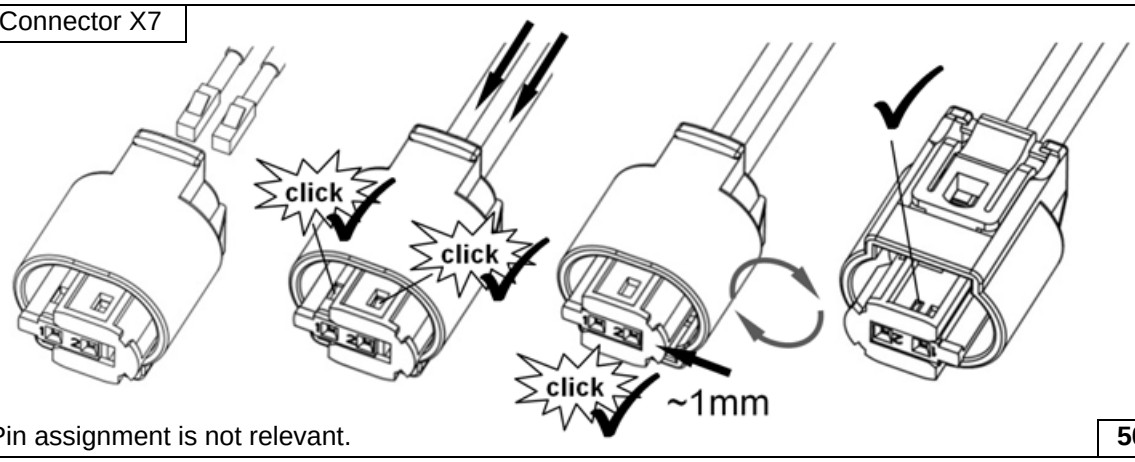
1 M6x25 bolt
2 Support angle bracket
3 Hose section, 10 mm dia. clamp
4 Mounting of metering pump
5 Metering pump
6 180° moulded hose, 10mm dia. clamp

Installing metering pump

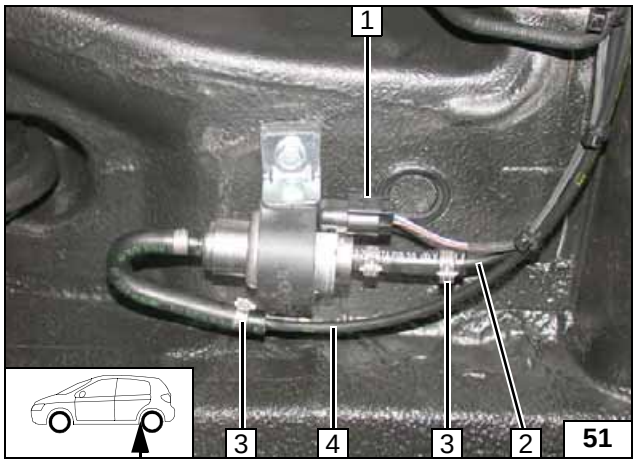
Connector X7



Pin assignment is not relevant.

50

Completing metering pump connector



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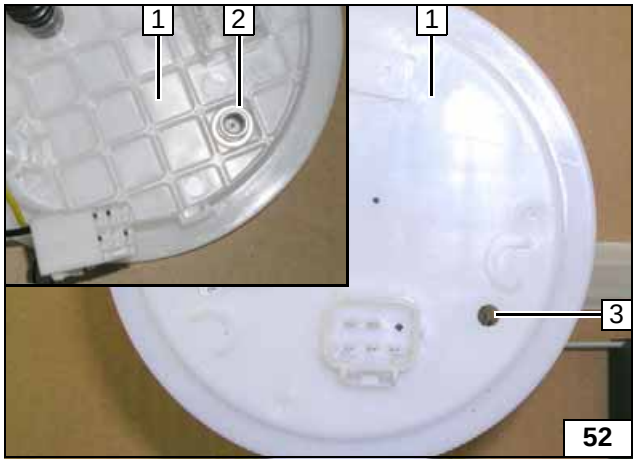
Check the position of the components; adjust if necessary. Check that they have freedom of movement.

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

Connecting metering pump



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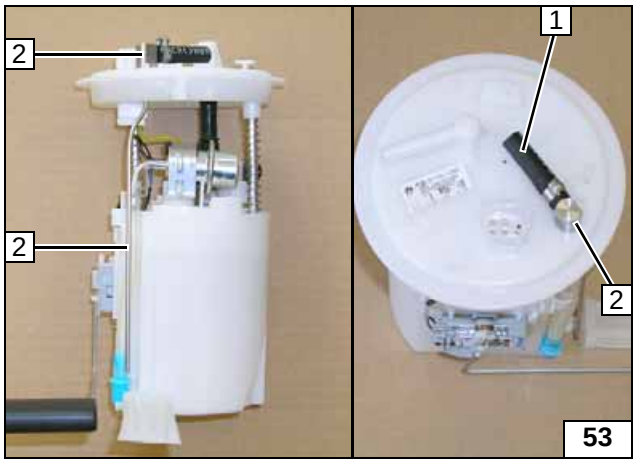
1.4 P and CVVT

Remove and dismantle fuel-tank sending unit according to manufacturer's instructions. Insert rivet nut **2** for centring in the middle of cover segment **1** and pre-drill a 5 mm dia. hole.

3 Drill out 6 mm dia. hole

Drilling hole in fuel-tank sending unit



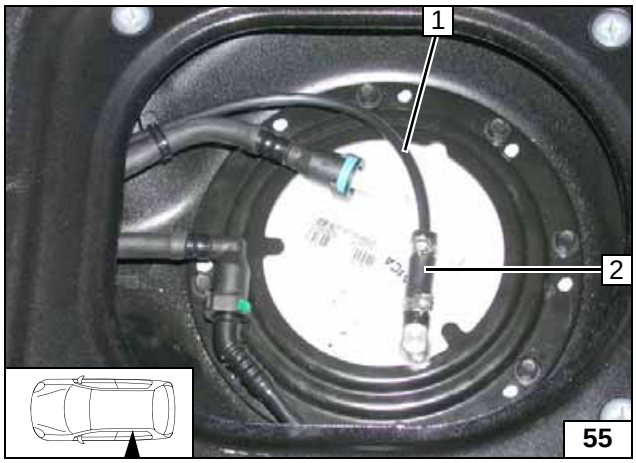
Bend fuel standpipe **2** according to template and cut to length.
Insert 4x 6mm dia. washers between cover of fuel-tank sending unit and flanged nut of fuel standpipe as height compensation.

1 Hose section, 10 mm dia. clamp

Installing fuel standpipe

Process mounting flange **1** in marked area

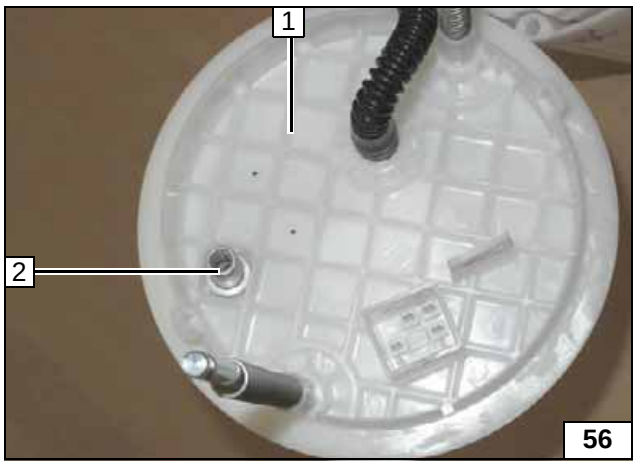
Adapting mounting flange



Install fuel-tank sending unit in accordance with manufacturer's instructions.

1 Fuel line
2 Hose section, 10 mm dia. clamp

Installing fuel line



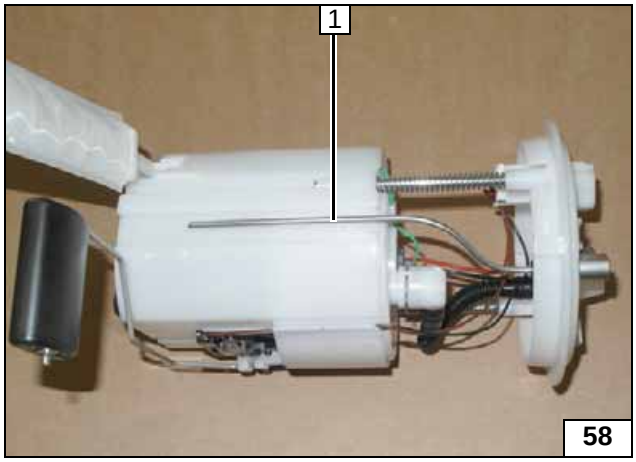
1.6 GDI

Remove and dismantle fuel-tank sending unit according to manufacturer's instructions. Insert rivet nut **2** for centring in the middle of cover segment **1** and pre-drill a 5 mm dia. hole. Drill out hole to 6mm dia.

Copying hole pattern

Bend fuel standpipe **2** according to template and cut to length.
Insert large diameter washer A7.4 **1** between cover of fuel-tank sending unit and flanged nut of fuel standpipe as height compensation.

Installing fuel stand-pipe

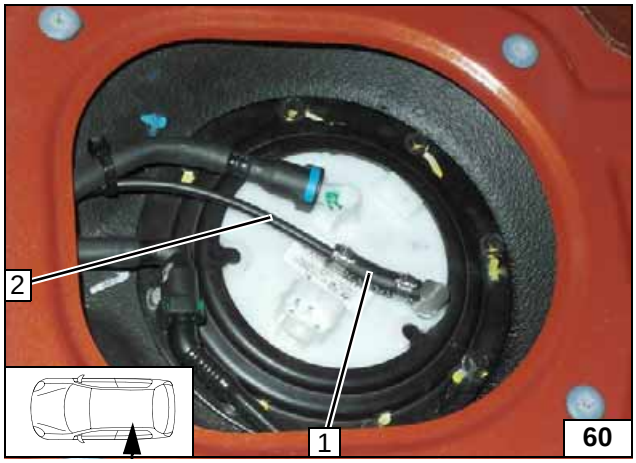


Align fuel standpipe **1**.
Ensure freedom of movement of float.

Installing fuel stand-pipe

Process mounting flange **1** in marked area

Adapting mounting flange



Install fuel-tank sending unit in accordance with manufacturer's instructions.

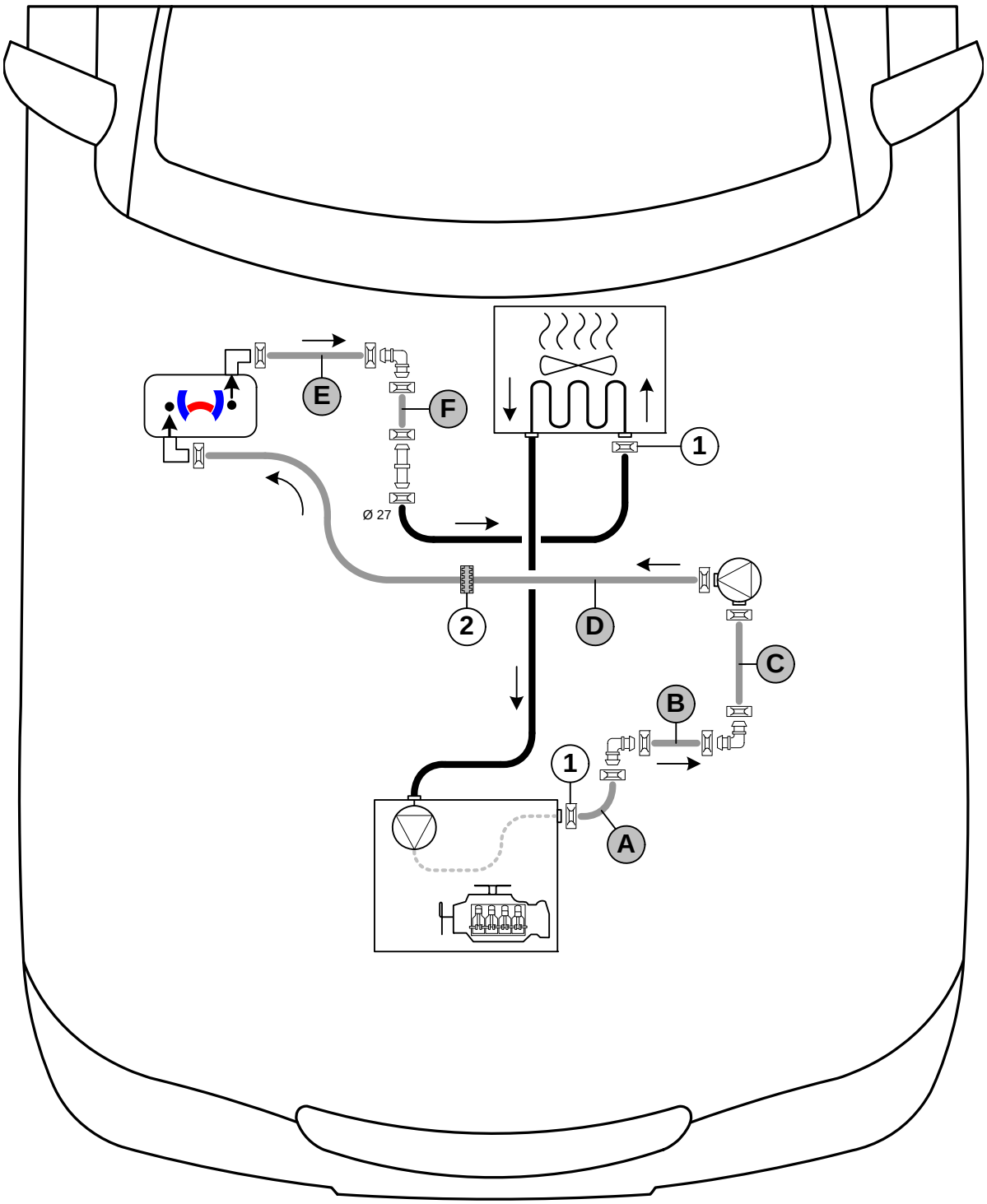
1 Hose section, 10 mm dia. clamp
2 Fuel line

Installing fuel line

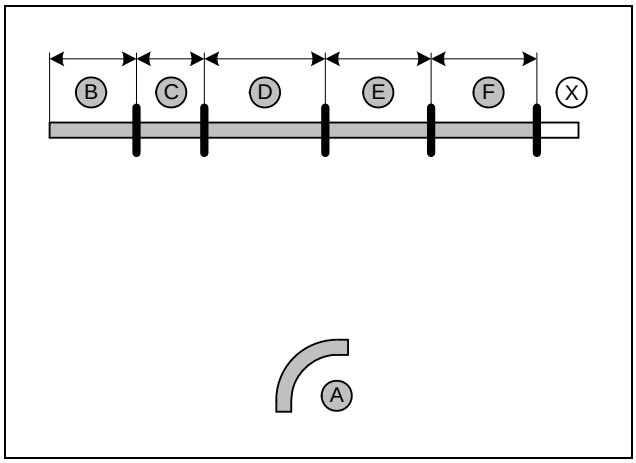
Coolant Circuit of 1.4 CVVT (73kW) and 1.6 GDI

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. The heater must be filled with coolant when installing the hoses.
The connection should be modelled on an "inline" circuit and based on the following diagram:

Hose routing diagram



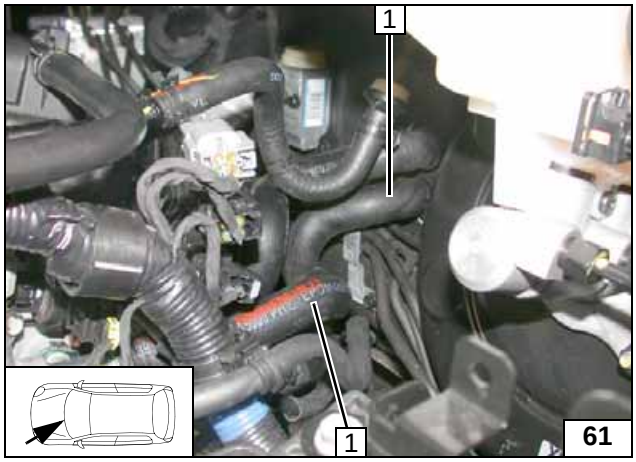
All spring clips without a specific designation = 25 mm dia.
1 = Original vehicle spring clip. **2** = Black (sw) rubber isolator.
Connecting pipe = 18x20mm dia. All connecting pipes = 18x18 mm dia.



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

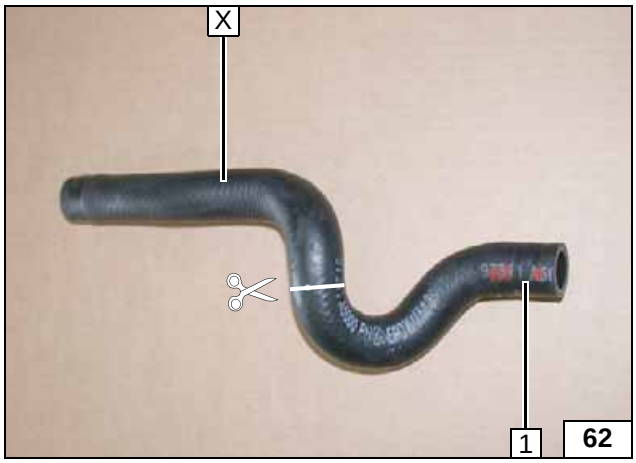
1.4 CVVT (73kW)		1.6 GDI	
B =	120	**B** =	120
C =	100	**C** =	100
D =	290	**D** =	315
E =	130	**E** =	110
F =	160	**F** =	160

Cutting hoses to length



Remove hose **1** from engine outlet/heat exchanger inlet. Spring clips will be re-used.

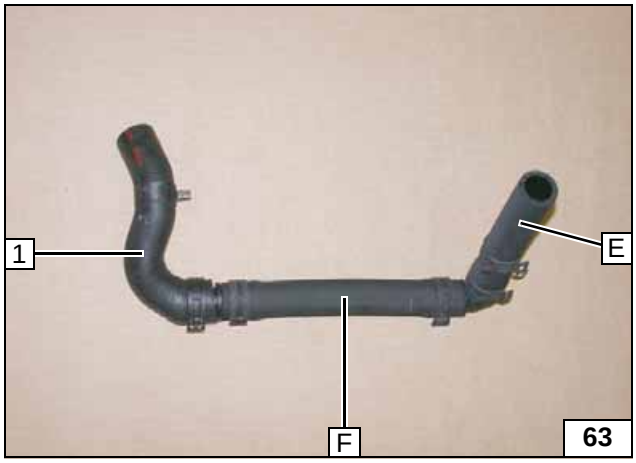
Cutting point



Discard section X.

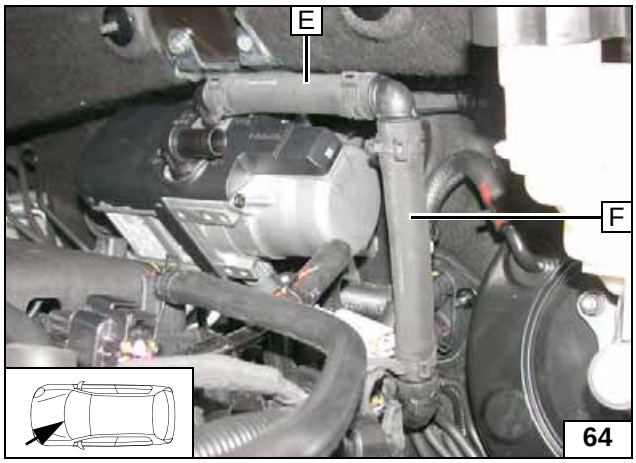
1 Hose section of heat exchanger inlet

Cutting point

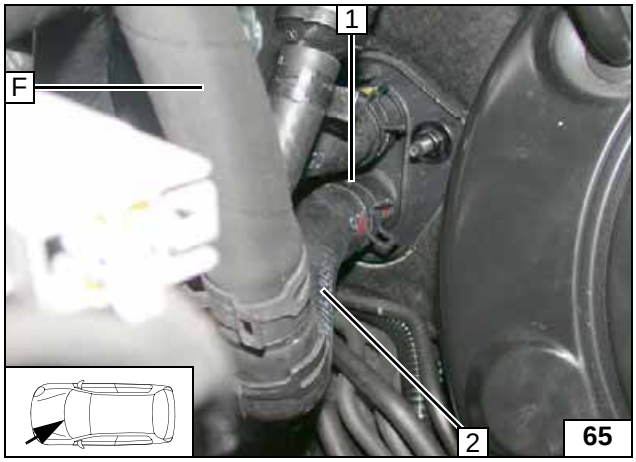


1 Hose section of heat exchanger inlet

Premounting hoses

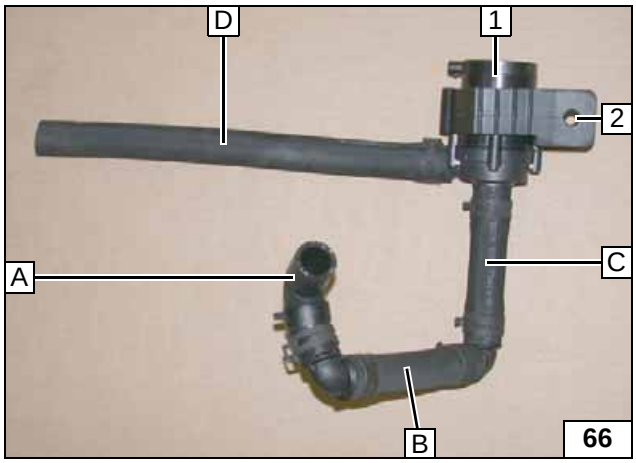


Connecting heater outlet



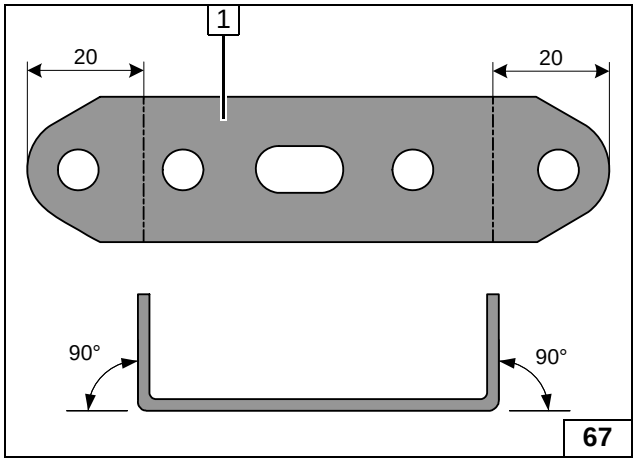
1 Original vehicle spring clip
2 Hose of heat exchanger inlet

Connecting heat exchanger inlet



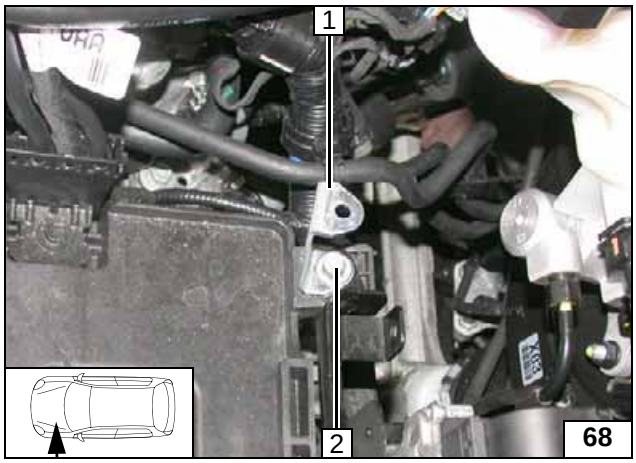
1 Circulating pump
2 Circulating pump mounting

Premounting hoses



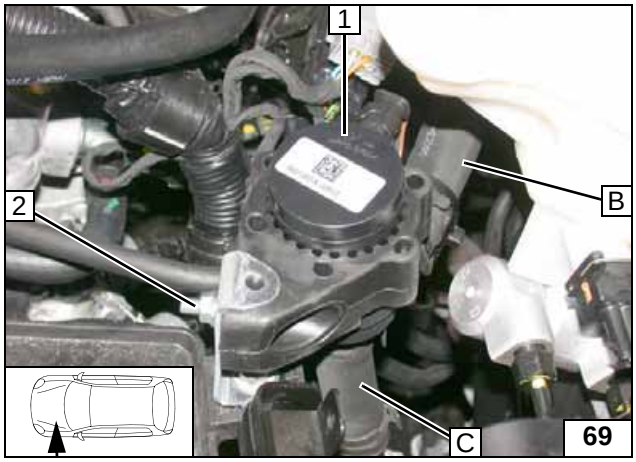
1 Perforated bracket

Bending perforated bracket



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

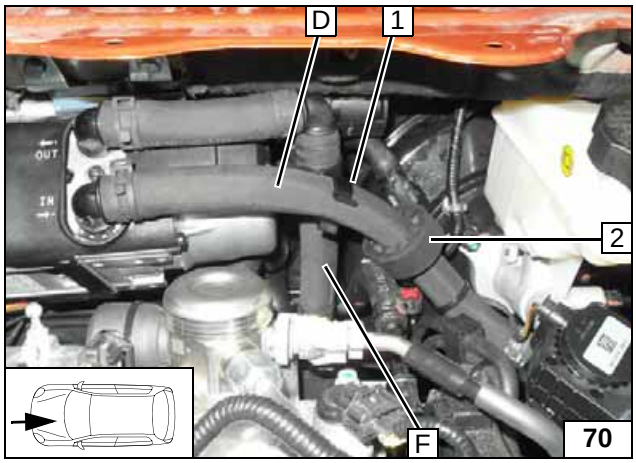
Installing perforated bracket



Route hose **B** to the heater.

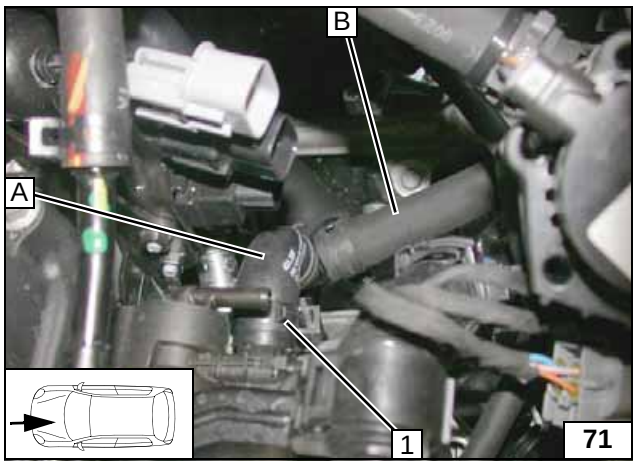
1 Circulating pump
2 M6x25 bolt, bracket of circulating pump, perforated bracket, flanged nut

Mounting circulating pump



Slide black (sw) rubber isolator **2** onto hose **D** and align. Insert hose bracket **1** between hoses **D** and **F**.

Connecting heater inlet



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

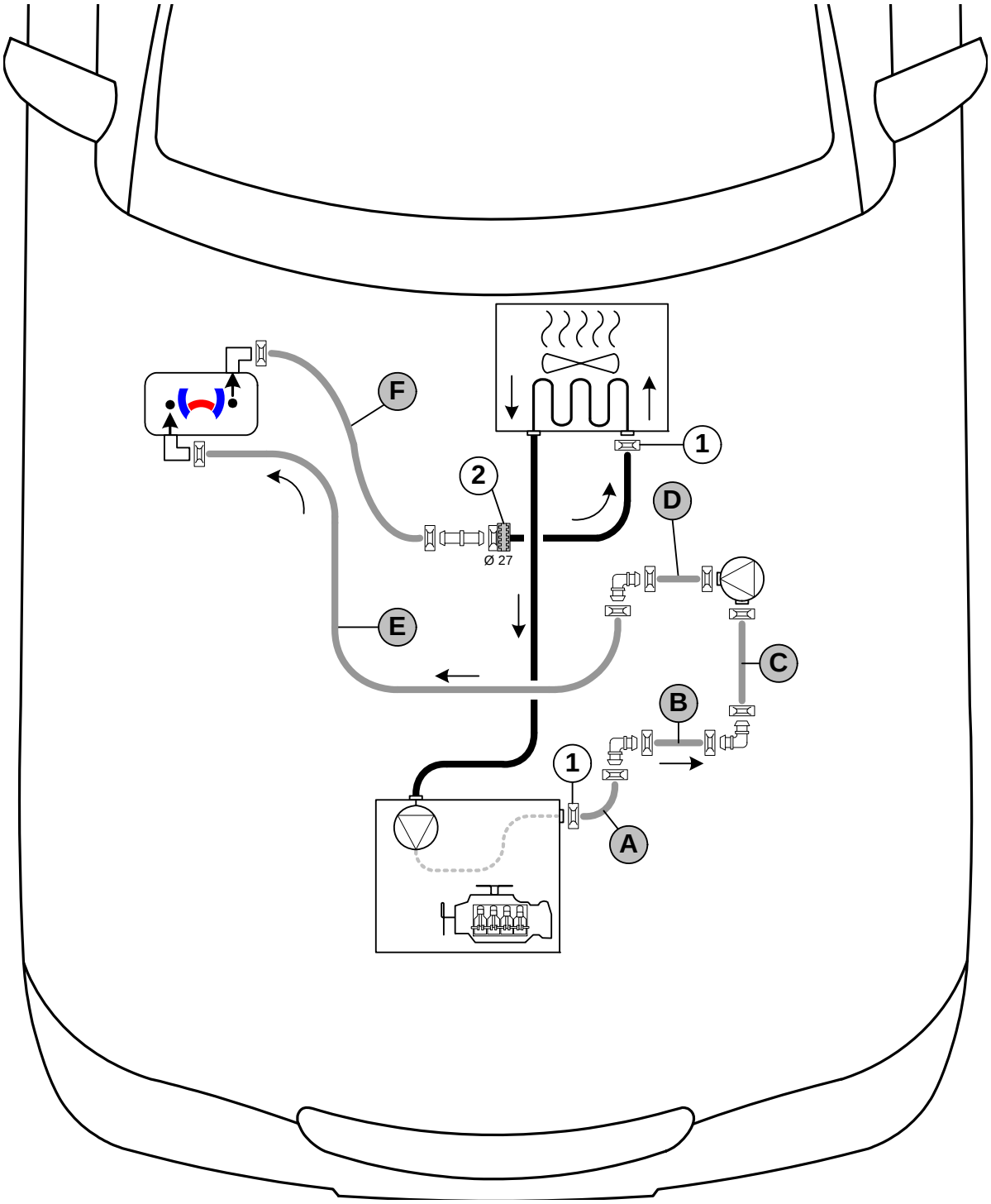
1 Original vehicle spring clip

Connecting engine outlet

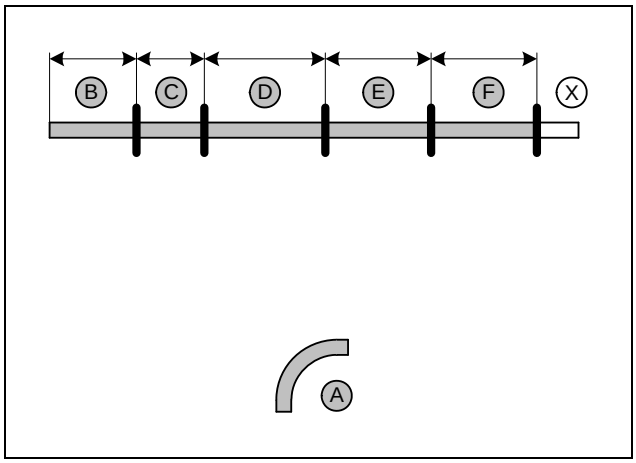
Coolant Circuit of 1.4 P vehicle (74kW)

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. The heater must be filled with coolant when installing the hoses.
The connection should be modelled on an "inline" circuit and based on the following diagram:

Hose routing diagram



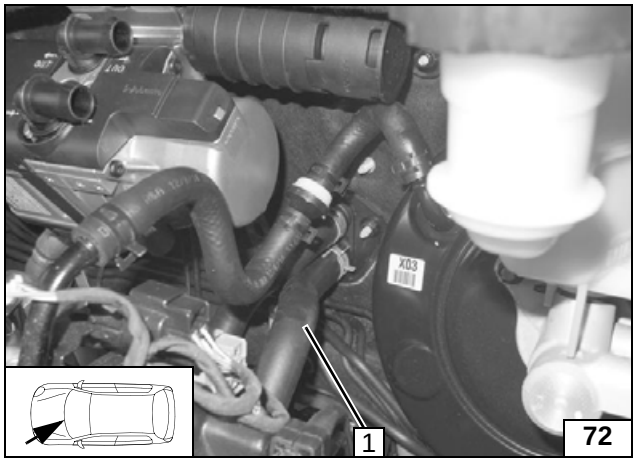
All spring clips without a specific designation = 25 mm dia.
1 = Original vehicle spring clip .
2 = black (sw) rubber isolator (pushed onto 27mm dia. spring clip).
Connecting pipe = 18x20mm dia. All connecting pipes = 18x18 mm dia.



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

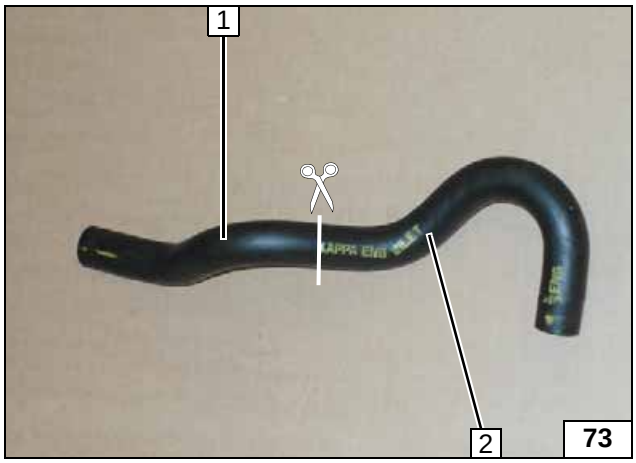
B = 90
C = 60
D = 60
E = 300
F = 170

Cutting hoses to length



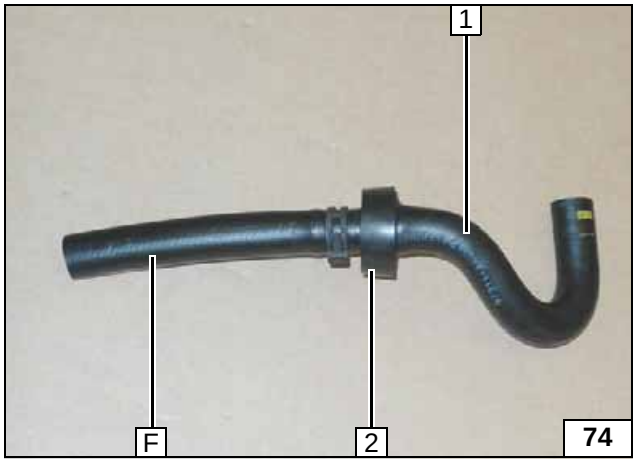
Remove hose **1** from engine outlet/heat exchanger inlet. Spring clips will be re-used.

Cutting point



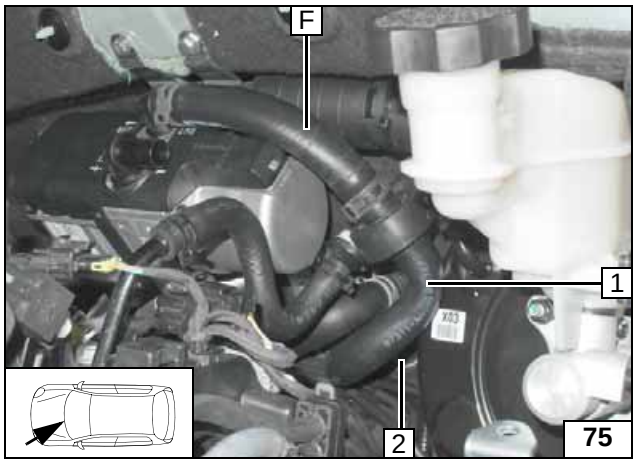
1 Discard hose section of heat exchanger inlet
2 Hose section of engine outlet, will be used later as hose section of heat exchanger inlet

Cutting point



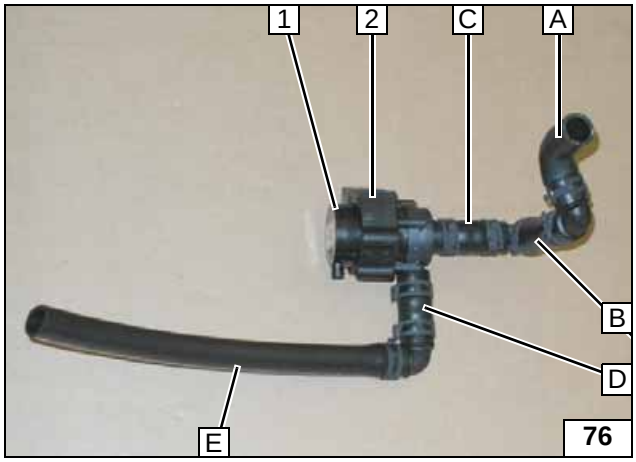
1 Hose section of heat exchanger inlet
2 Position the black (sw) rubber isolator over the spring clip

Premounting hoses



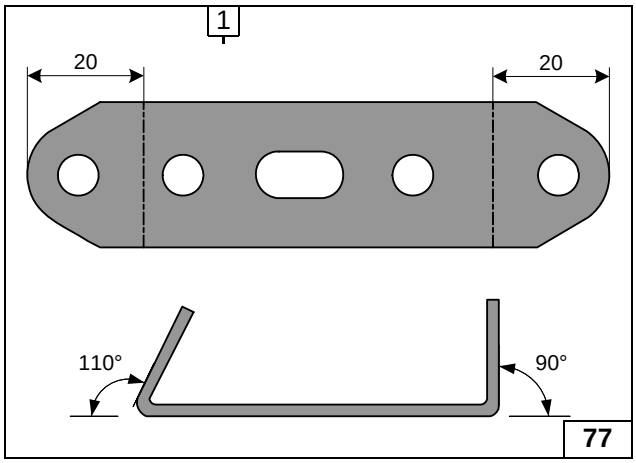
1 Hose of heat exchanger inlet
2 Original vehicle spring clip

Connecting heater outlet/heat exchanger inlet



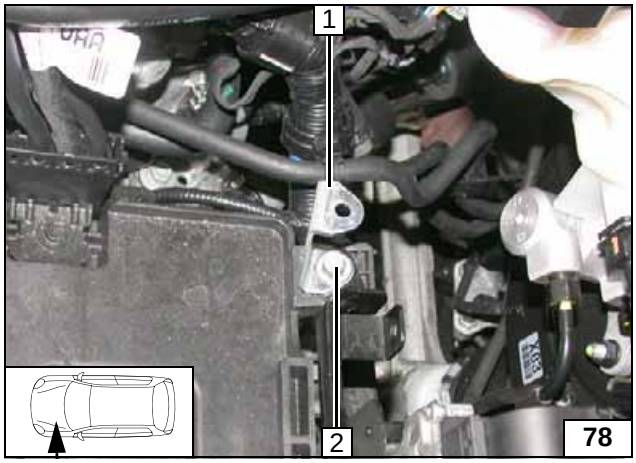
1 Circulating pump
2 Circulating pump mounting

Premounting hoses



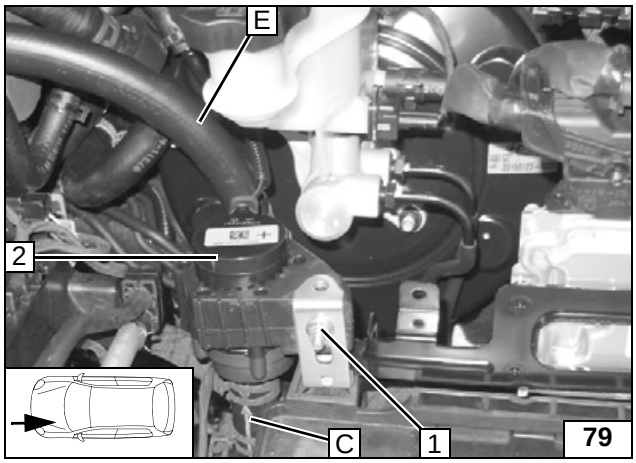
1 Perforated bracket

Bending perforated bracket



1 Perforated bracket, installed on the 110° angled-down side
2 M6x20 bolt, flanged nut, existing hole

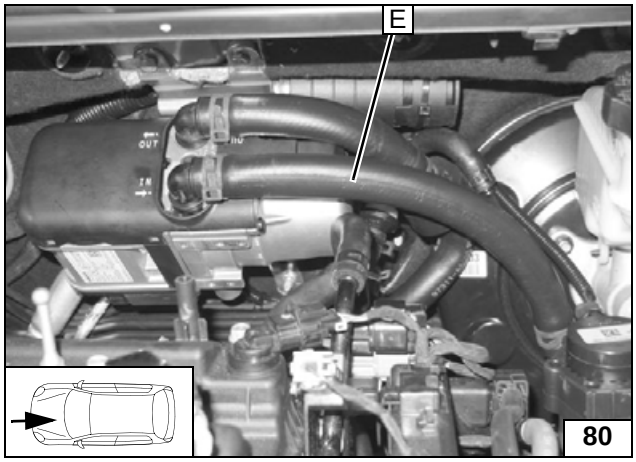
Installing perforated bracket



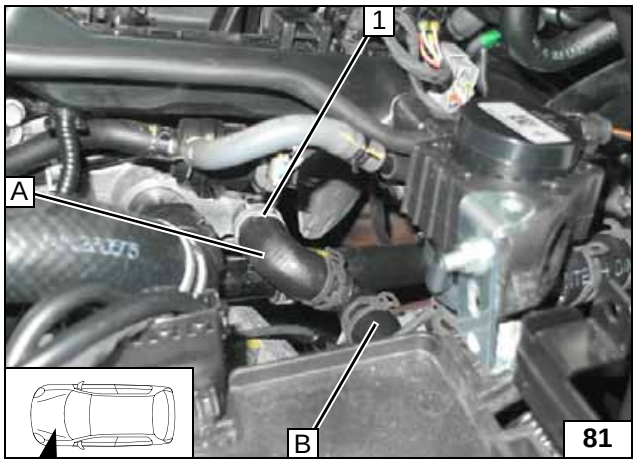
Route hose **E** to the heater.

1 M6x20 bolt, bracket of circulating pump, perforated bracket, flanged nut
2 Circulating pump

Mounting circulating pump



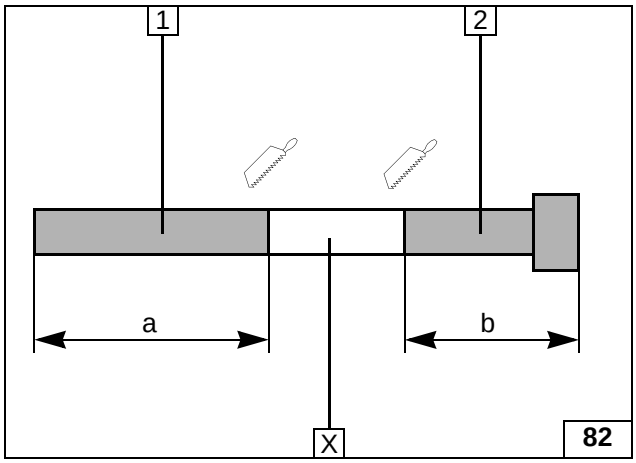
Connecting heater inlet



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

1 Original vehicle spring clip

Connecting engine outlet

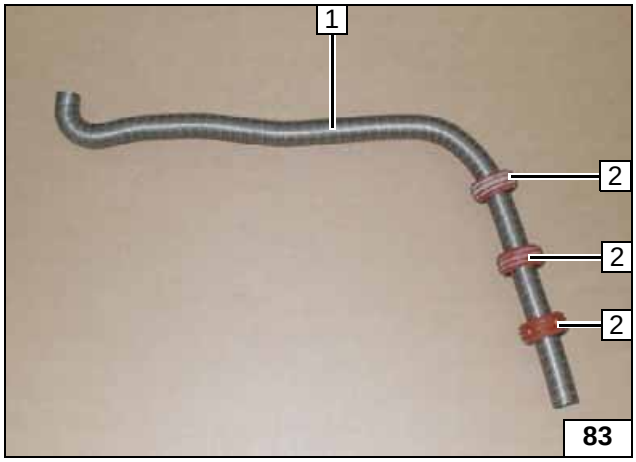


Exhaust Gas

Discard section **X**.

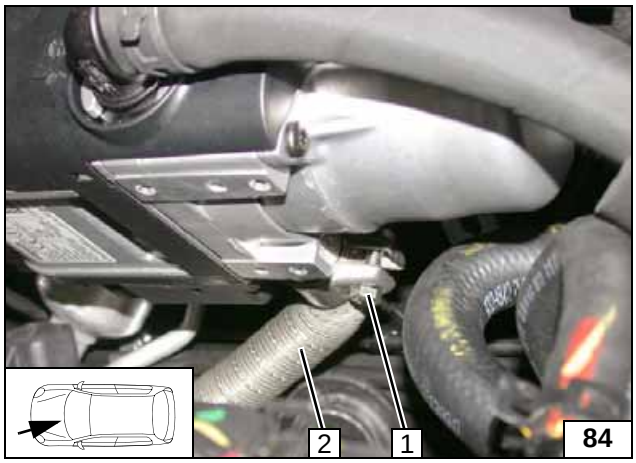
1 Exhaust pipe
a = 800
2 Exhaust end section
b = 140

Preparing exhaust pipe



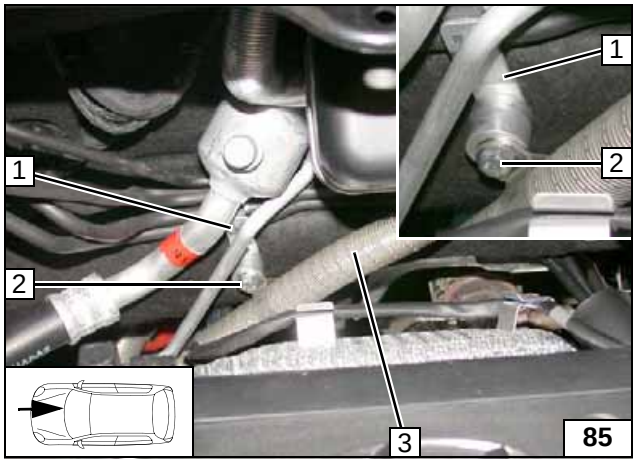
1 Exhaust pipe
2 Push on spacer bracket [3x]

Preparing exhaust pipe



1 Hose clamp
2 Exhaust pipe

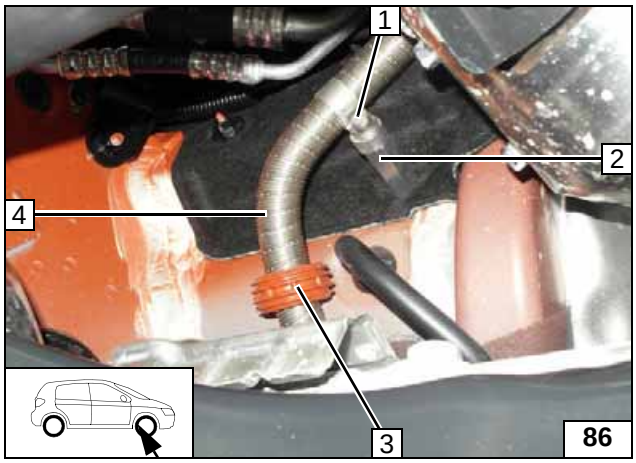
Installing exhaust pipe



Remove and discard original vehicle bolt at-position **2**. Insert 15mm shim between p-clamp and original vehicle bracket.

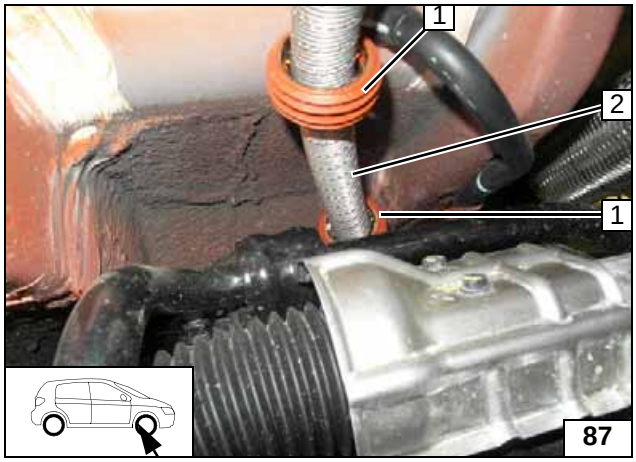
1 Original vehicle bracket
2 M6x25 bolt, p-clamp, 15mm shim, original vehicle threaded hole
3 Exhaust pipe

Installing exhaust pipe



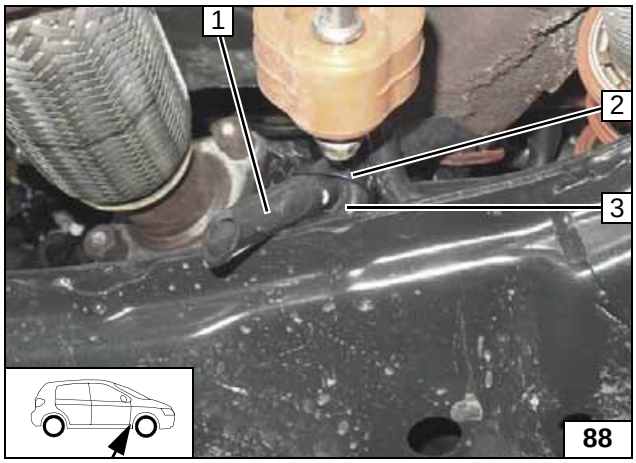
1 M6x20 bolt, p-clamp, 10mm shim
2 M6x40 spacer nut, original vehicle stud bolt
3 Align spacer bracket
4 Exhaust pipe

Installing exhaust pipe



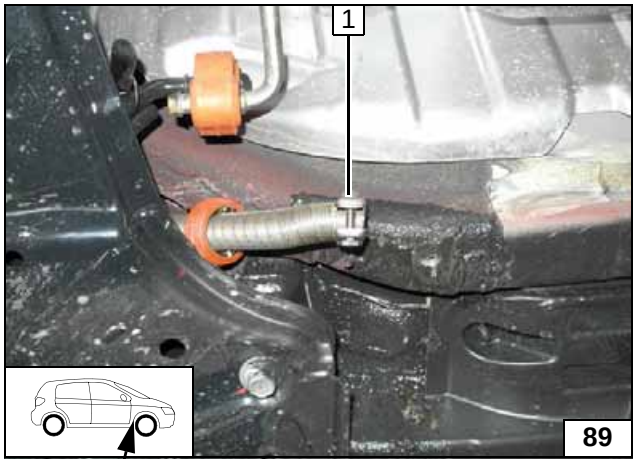
Align spacer bracket **1** [2x] with exhaust pipe **2**.

Installing exhaust pipe



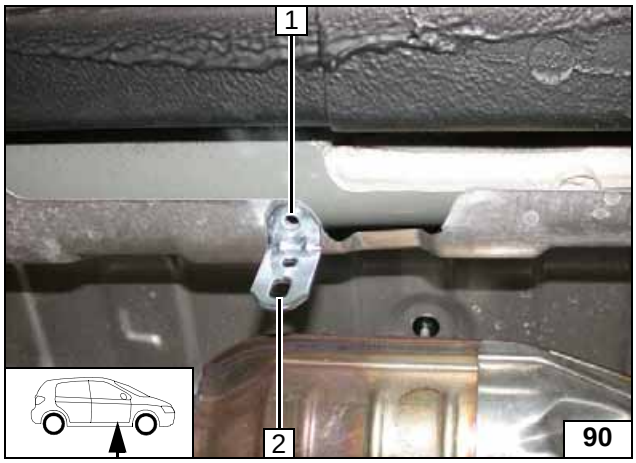
Fasten condensed-water drain **1** to eyelet of cross member **3** with cable tie **2**.

Fastening condensed-water drain



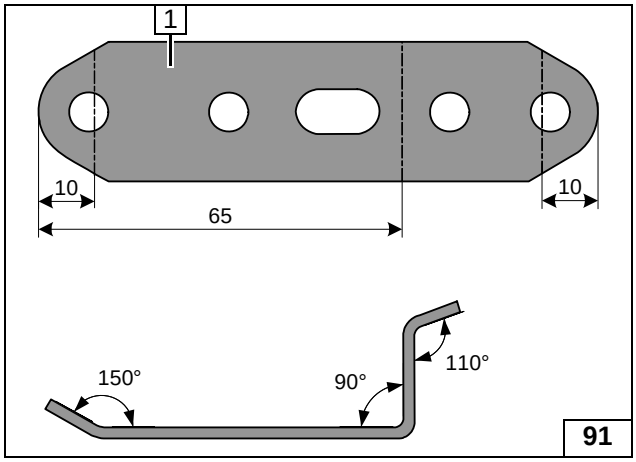
1 Push on hose clamp

Installing exhaust pipe



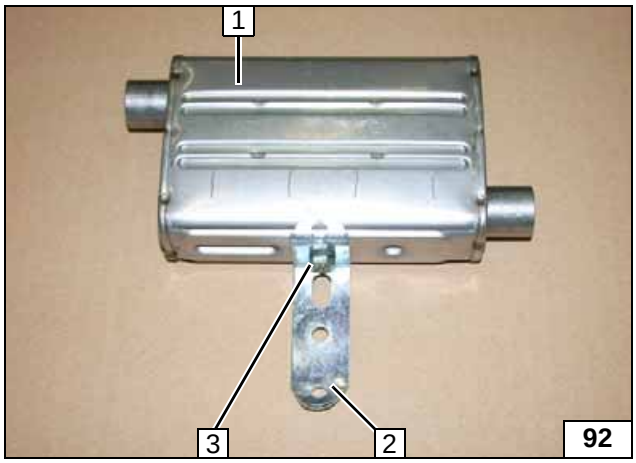
Place angle bracket **2** on heat shield plate, copy hole pattern **1** and 7mm dia. hole.

Hole for exhaust end section



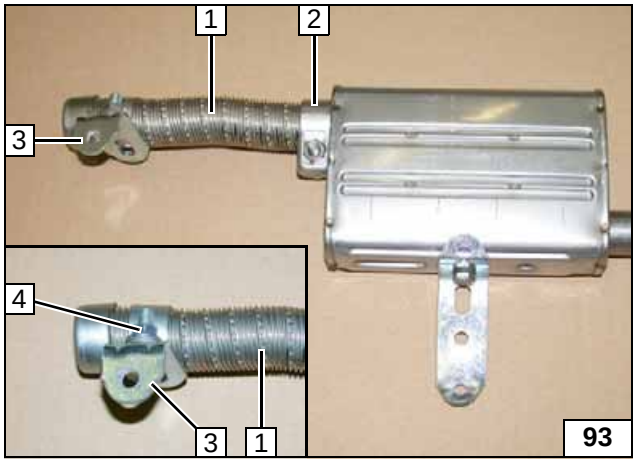
1 Perforated bracket

Bending perforated bracket



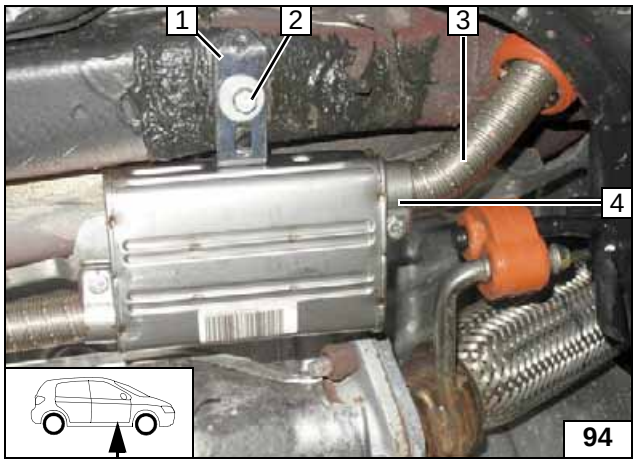
1 Silencer
2 Perforated bracket
3 M6x16 bolt, spring lockwasher

Premounting silencer



1 Exhaust end section
2 Hose clamp
3 Angle bracket
4 M6x20 bolt, p-clamp, flanged nut

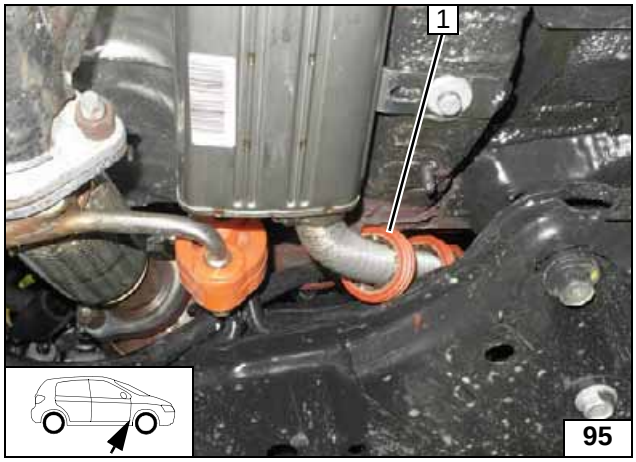
Premounting exhaust end section



Ensure sufficient distance from neighbouring components, adjust if necessary.

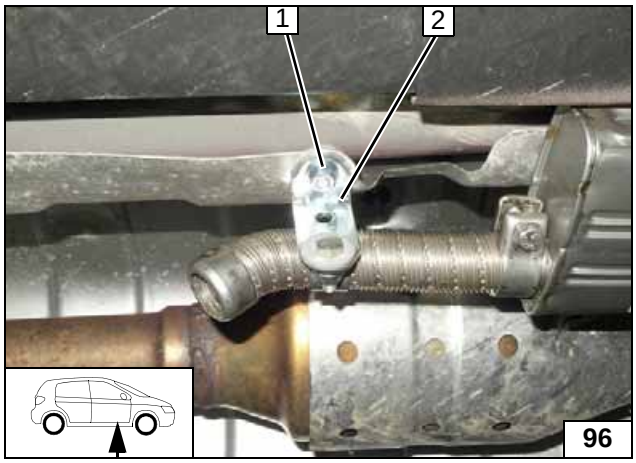
1 Perforated bracket
2 M6x20 bolt, spring lockwasher, large diameter washer, existing threaded hole (possibly hidden by underbody protection, uncover it if that is the case)
3 Exhaust pipe
4 Hose clamp

Installing silencer



Align spacer bracket **1**. Ensure sufficient distance from neighbouring components, adjust if necessary.

Aligning spacer bracket



Ensure sufficient distance from neighbouring components, adjust if necessary.

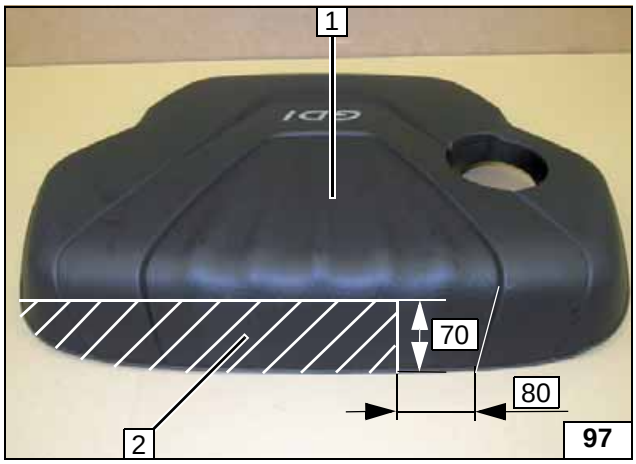
1 M6x20 bolt, large diameter washer, flanged nut
2 Angle bracket

Installing exhaust end section

Final Work

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

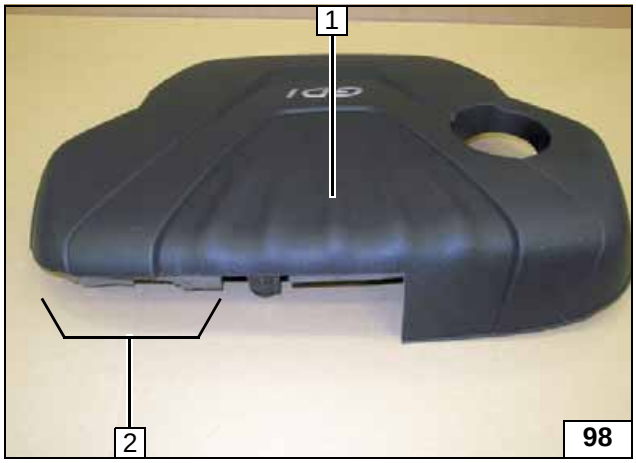
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Program MultiControl CAR, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" caution label near the filler neck**
- **See installation instructions for initial start-up and function check**



1.6 GDI

Cut out marked area **2** of engine cover **1**.

Preparing engine cover



1 Engine cover
2 Remove insulation material in cuttingarea

Preparing engine cover

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

Template for Fuel Standpipe of 1.4 P and CVVT

100mm

Scale 1:1

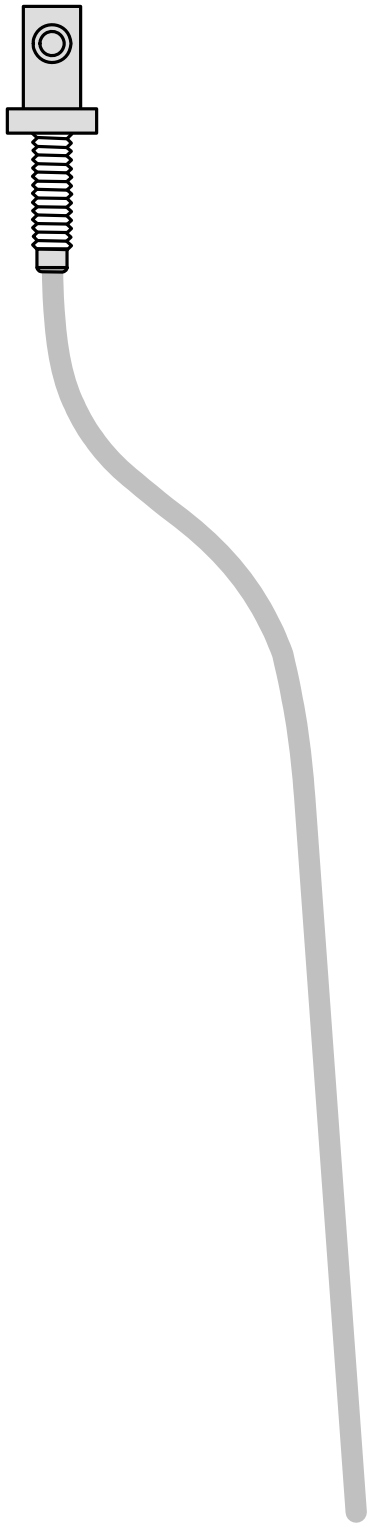
Compare size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

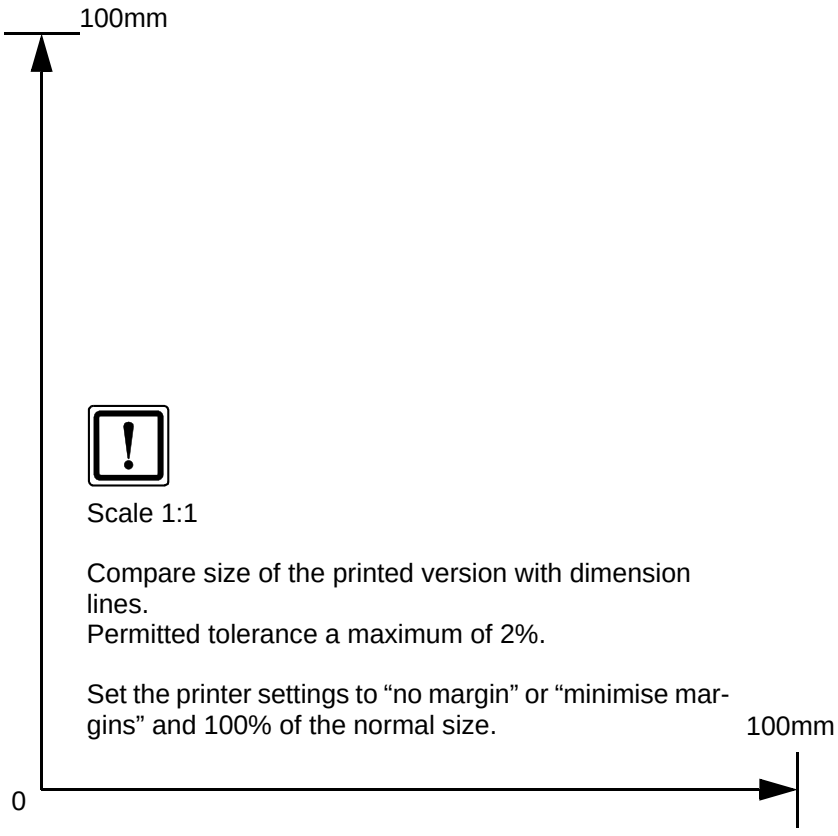
Set the printer settings to “no margin” or “minimise margins” and 100% of the normal size.

100mm

0

Template for Fuel Standpipe of 1.6 GDi



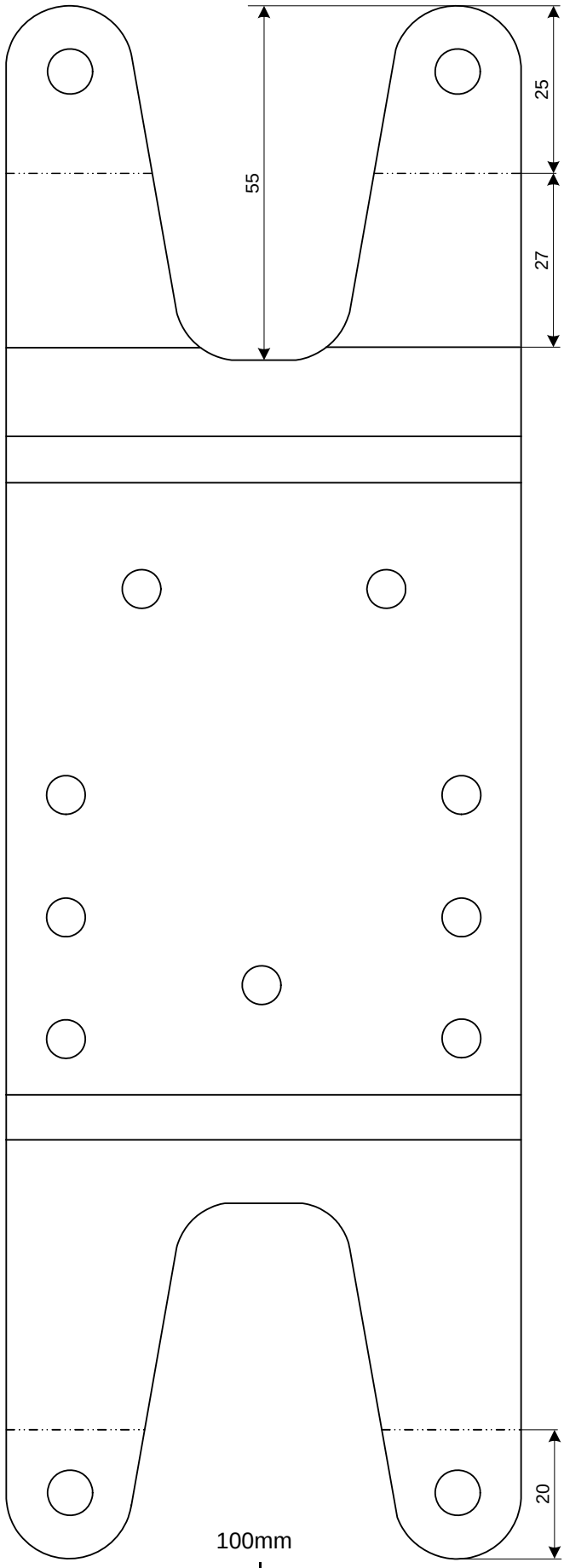


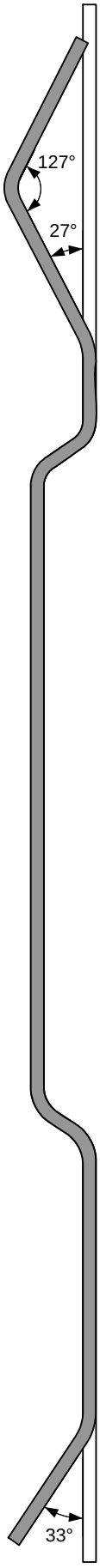
Scale 1:1

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.

Template for Bracket





100mm

100mm

0

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.

Webasto
Feel the Drive

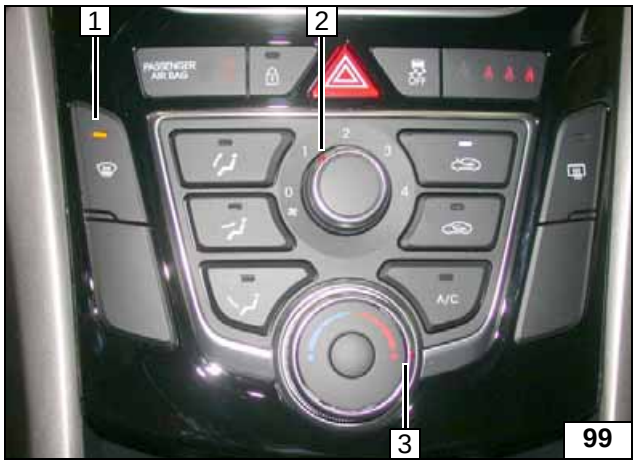
Operating Instructions for Manual A/C

Please remove page and add to the vehicle operating instructions.

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

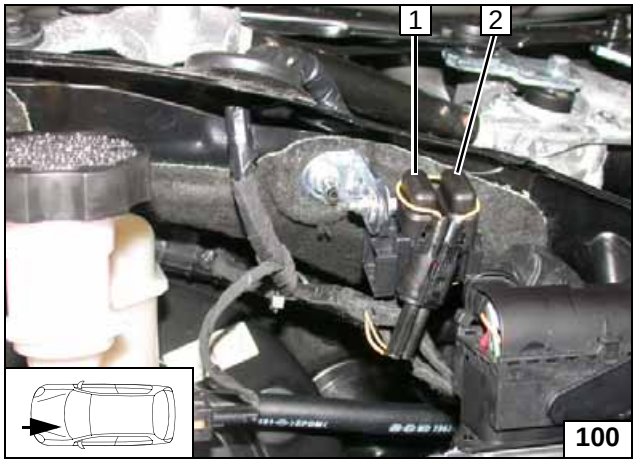
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



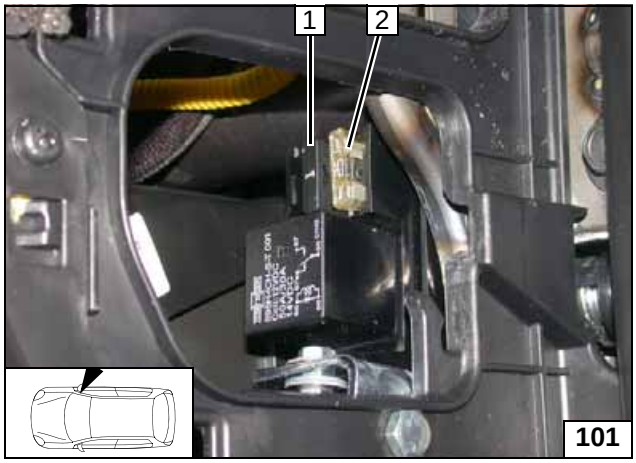
1 Air outlet onto windscreen
2 Set fan to level "1", or max. "2"
3 Set temperature to "max."

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses

Operating Instructions for Automatic A/C

Please remove page and add to the vehicle operating instructions.

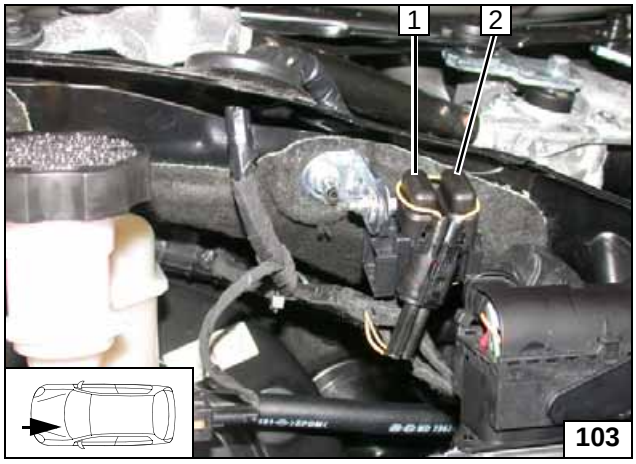
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

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

Before parking the vehicle, make the following settings:

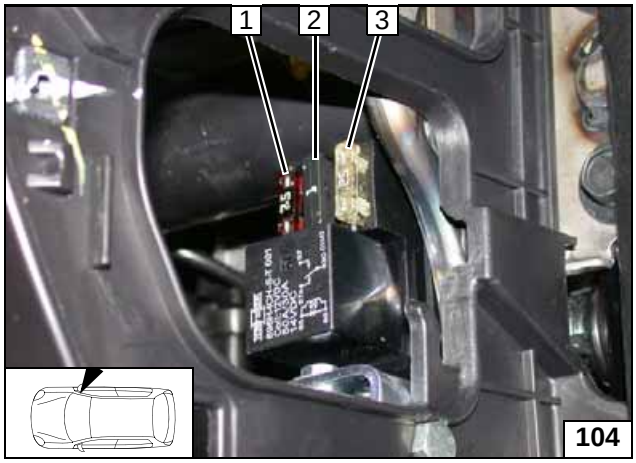
1 Set temperature on both sides to "HI"
2 Air outlet faces "upward"
3 Set fan to level "2", or max. "3"

A/C control panel



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

Engine compartment fuses



1 7.5A fuse of A/C control panel F5
2 1A heater control fuse F3
3 25A fan fuse F4

Passenger compartment fuses