Water Heater Unit



Auxiliary heating *Thermo Top E* 000003 Auxiliary heating *Thermo Top C* 000002 Auxiliary heating *Thermo Top P* 000104

Installation Instructions

Fiat Sedici

Gasoline and diesel From model year 2006 For left-hand drive vehicles only



WARNING!

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.

Specialist company training, technical documentation, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

ALWAYS follow all Webasto installation and repair instructions and observe all warning instructions.

Webasto does not accept any liability for defects and damage that are attributable to an installation by untrained staff.

Ident. No.: 1311715A €10 fee © Webasto AG

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Validity

Manufacturer	Model	Туре	EG-BE No. / ABE
Fiat	Sedici	FY	e4 * 2001 / 116 * 0106 *

Engine type	Engine type	Power in kW	Engine capacity in cm ³
M16A	Gasoline	79	1586
D19AA	Diesel	88	1910

Vehicle and engine types, equipment variants as well as national specifications, which are not listed in these installation instructions, have not been tested. Installation according to these installation instructions may, however, be possible.

The installation location of a time switch and summer / winter switch should be confirmed with the end customer before installation.

Heater Unit / Installation Kit

Amount	Description	Order no.:
1	Commercial supply of required control	See price list
1	Installation kit for Fiat Sedici Gasoline and diesel	1311710A

Recommended heater unit for the relevant vehicle class:

Vehicle	Heater unit
Compact car	Thermo Top E
Mid-class, station wagon	Thermo Top C
Luxury, van, off-roader	Thermo Top P

The choice of heater unit is based on the size of the vehicle passenger compartment and the customer's comfort requirements.



Foreword

These installation instructions apply to Fiat vehicles with Sedici Gasoline and diesel – validity, see page 2 – from model year 2006 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 these installation instructions.

However, the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Thermo Top C/P/E* are to be observed in any event.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General Instructions

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and cable harnesses to original vehicle lines and cable harnesses using cable clips.

Sharp edges should be fitted with edge protectors (split open plastic hose).

Spray unfinished body areas, such as bore holes, with anti-corrosion wax (Tectyl 100K, Order no. 111329).

Special Tools

- Torque spanner for 2.0 10 Nm
- Vice-grip wrench
- Riveting nut tool

Explanatory Notes on the Document

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

Mechanics



Electrics



Water Connection



Fuel connection



Exhaust System



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



Specific risk of fire or explosion.



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



Reference to a special technical feature.





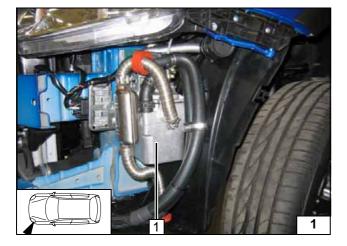
The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary work

WARNING!

- Let off pressure in the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Completely remove the air filter with intake hose (diesel only).
- Open the tank cap, ventilate the tank.
- Close the tank cap again.
- Completely remove the battery.
- Loosen the right and left wheel-house panel.
- Remove the bumper.
- Remove the left wheel-house panel.
- Remove the lower cover to the fuel pipe (only diesel)
- Remove the fuel tank according to the manufacturer's instructions.
- Remove tank mounting according to manufacturer's instructions.
- Remove the lower panelling on the right dashboard.
- Remove air conditioning control (only for automatic air conditioning systems)

Remove page 34 "Operating instructions for the end customer" and insert with vehicle operating instructions.



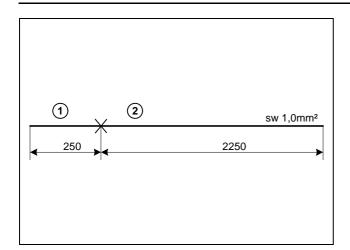
Heater unit installation location

1 Heater unit

Installation location

<u>.</u>



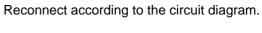


Preparing the Electronics

Only for automatic air conditioning

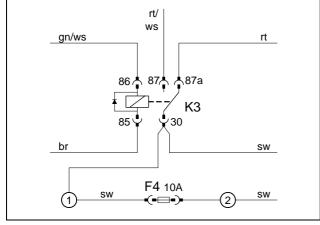


Cutting wires into sections





Preparing fuse F4



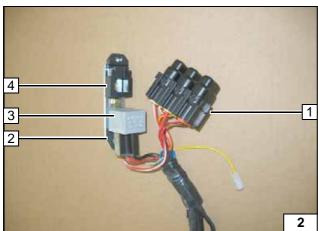
All vehicles



For automatic air conditioning, insert fuse F4 25A on fuse holder 1.

- 2 Fastening strap with holes
- **3** K3 relay, M5x16 bolt, flanged nut M5
- **4** Fuse holder retaining plate (will later be fastened together with the fastening strap using a self-tapping screw)

Cutting wires into sections



1311715A

6



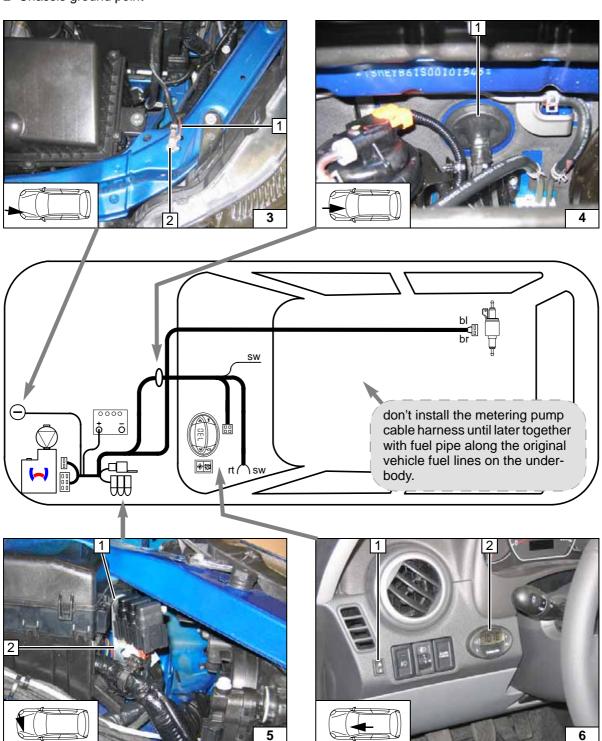
Electrical Connections

Ground connection

- 1 Ground wire
- 2 Chassis ground point

Cable harness feed-through

1 Protective rubber sleeve



fuse holder, K3 relay

- **1** Fuse holder retaining plate, 5.5x13 self-tapping screw
- 2 Preassembled fastening strap

Time switch, summer / winter switch option

- 1 Summer / winter switch, hole Ø 12 mm
- 2 Time switch



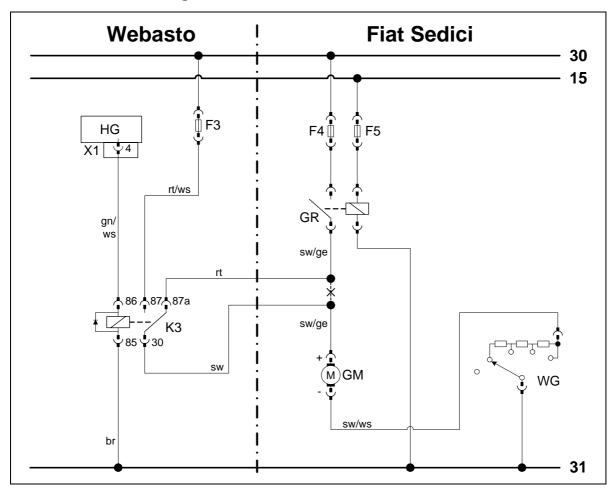
Cable harness installation diagram

5

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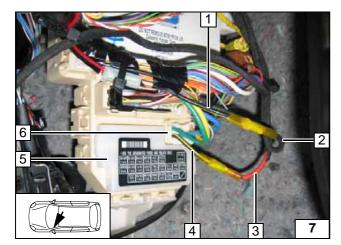
Circuit Diagram

Manual air conditioning blower control



Webasto components		Vehic	Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	GM	Blower motor	rt	red	
X1	6-pin connector	GR	Blower relay	ws	white	
F3	Fuse 25A	WG	Resistor group	sw	black	
K3	Blower relay	F4	Fuse 30A	br	brown	
		F5	Fuse 10A	gn	green	
				ge	yellow	
				Х	Splitting point	
				Cable	Cable colors may vary.	

Legend



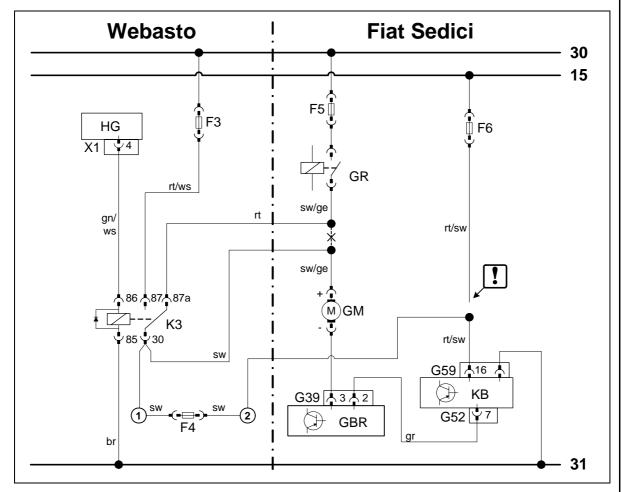
Connection to connector G70/06 **6** from the blower motor central electrics **5**. Reconnect according to the circuit diagram.

- 1 Black/yellow (sw/ge) wire to blower motor.
- 2 Black (sw) wire to K3/30
- 3 Red (rt) wire from K3/87a
- 4 Black/yellow (sw/ge) wire from blower motor

Connecting the blower mo-



Automatic air conditioning blower control



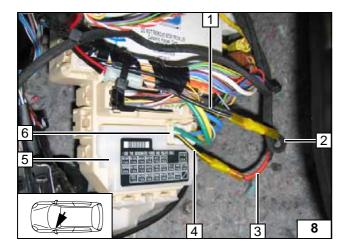
Webasto components		Vehicl	Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	GM	Blower motor	rt	red	
X1	6-pin connector	GR	Blower relay	ws	white	
K3	Blower relay	KB	Air conditioning control	sw	black	
F3	Fuse 25A	G59	Connector KB	br	brown	
F4	Fuse 10A	G52	Connector KB	gn	green	
		GBR	Blower controller	ge	yellow	
		G39	GBR connector	gr	grey	
		F5	Fuse 30A			
		F6	Fuse 10A		Insulate and tie back wire	
				ا	ends	
				Х	Splitting point	
				Cable colors may vary.		

i

Circuit Diagram

Legend



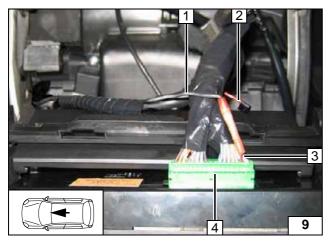


Connection to connector G70/06 6 from the blower motor central electrics 5. Reconnect according to the circuit diagram.



- 1 Black/yellow (sw/ge) wire to blower motor.2 Black (sw) wire to K3/30
- 3 Red (rt) wire from K3/87a
- 4 Black/yellow (sw/ge) wire from blower mo-

Connecting the blower motor



Connection to G52 connector 4 from the air conditioner controller.

Reconnect according to the circuit diagram.

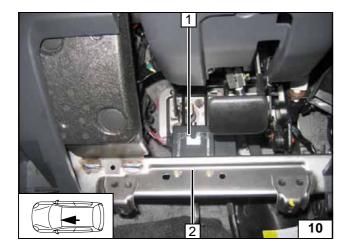


- 2 Insulate the red/black (rt/sw) wire from fuse F6 and tie back the ends.
- 3 Red/black (rt/sw) wire from connector G52/16



Air conditioning control connection

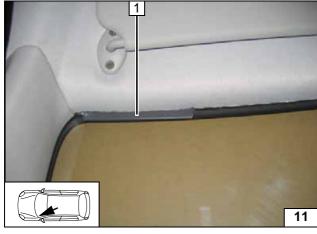




Remote Start Option

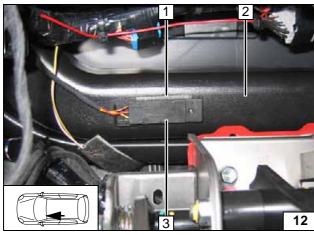
- 1 Receiver, bracket, M5x16 bolts [2x], washers [2x], flanged nuts [4x] to existing bore holes [2x]
- 2 Carrier under the steering column





1 Antenna





Temperature sensor for HTM100 only

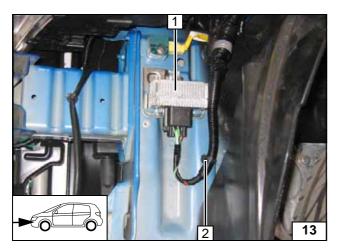
Clean adhesive surfaces.

- 1 Double-sided Velcro tape (self adhesive)
- 2 Air duct
- 3 Temperature sensor

Assem-

bling the temperature sensor



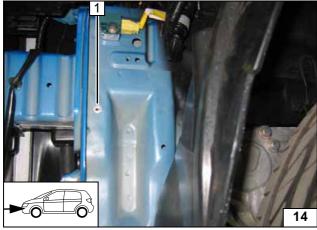


Preparing the Installation Location

Only for diesel vehicles

Remove the cooler fan multiplier 1, this will be mounted on the heater unit later. Remove the retaining clip 2 from the cable harness.

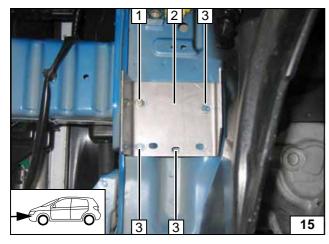
Remove the multiplier



All vehicles

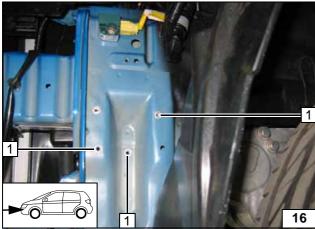
1 M6 rivet nuts to original vehicle bolt

Inserting rivet nuts



- 1 M6x20 bolt on rivet nut
- 2 Loosely fit the bracket
- **3** Transfer template [3x]

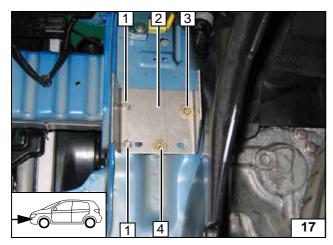
Copying the hole image



1 Ø 9.1mm bore hole, M6 rivet nut [3x]

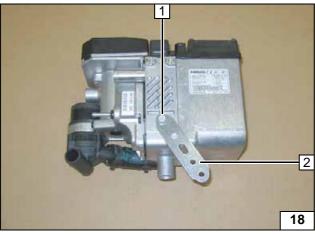
Inserting rivet nuts





- 1 M6x20 bolt, spring washer, washer [2x each]
- 2 Bracket
- **3** M6x20 bolt, spring washer, body washer
- **4** M6x50 bolt, spring washer, body washer, 30 mm spacer washer

Assembling the bracket



Preparing the Heater Unit

Ejot screw bolt 1, tightening torque 10 Nm.

2 Fastening strap with holes



Preparing the Heater Unit



Ejot stay bolts, tightening torque 10 Nm.

1 Ejot stay bolts, M6x30 spacer nut



Preparing the Heater Unit



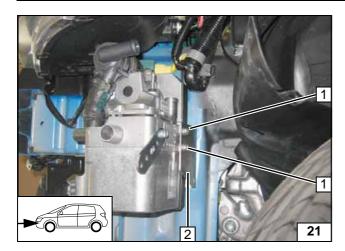
Installing the Heater Unit

Run the cable harness 1 to the heater unit installation location. Prior to assembly, slide onto the heater unit.



Assembling the Heater Unit





Ejot screw bolt tightening torque 10 Nm!

- 1 Ejot screw bolt [2x]
- 2 Bracket



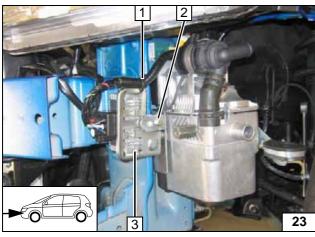
Assembling the Heater Unit





- 1 Angle bracket, Ejot screw
- 2 Bracket
- 3 Ejot screw bolt





Assemble the cooler fan multiplier **3** on the bracket.

1 Cable clips

22

2 M6x20 bolt, flanged nut M6



Gasoline vehicles only.

Ejot screw bolt tightening torque 10 Nm!

- 1 Bracket
- 2 Ejot screw bolt [2x]

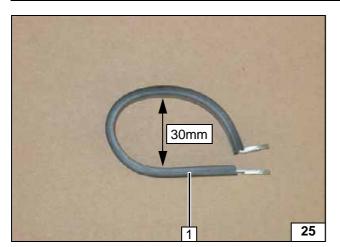


Assembling the Heater Unit







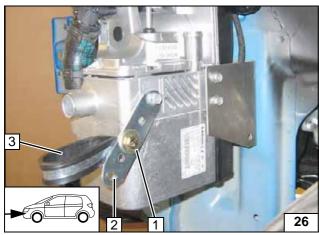


All vehicles

Shape the \varnothing 48mm rubberized tube clamp 1 as shown in the figure.



Preparing the tube clamp



- 1 M6x20 bolt, body washer, M6 flanged nut
 2 Fastening strap with holes
 3 Rubberized tube clamp Ø 48mm

Assembling the tube clamp



Water connection for gasoline

WARNING!

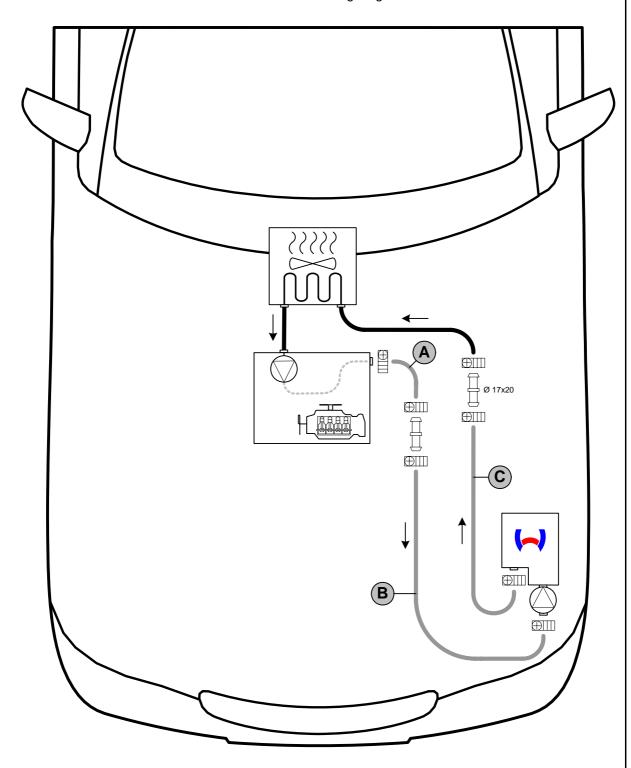
Tighten all hose clamps to 2.0 + 0.5 Nm.

Any coolant running off should be collected using an appropriate container!

Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable clips.

Position hose clamps and spring band clamps so that no other hose can be damaged.

The connection should be "inline" based on the following diagram:

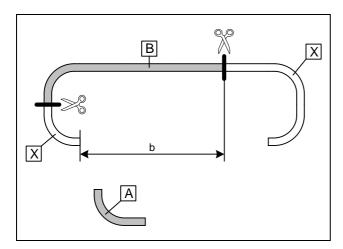


Water installation diagram

All undesignated connecting pipes = \emptyset 18x20. \square \square All hose clamps = \emptyset 20-27 mm. \square



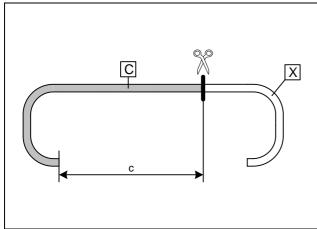




A = moulded hoseb = 1,170mm

Dispose of section X

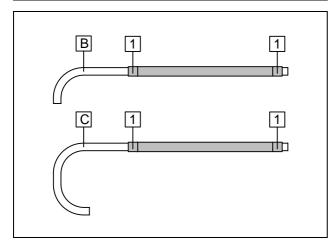
Cutting water hoses into sections



c = 1,100mm

Dispose of section X

Cutting water hoses into sections



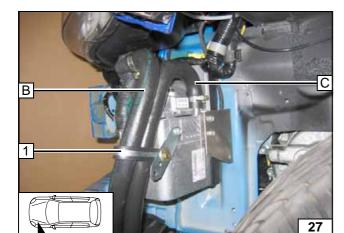
Slide the braided protective hoses onto hose **B** and hose **C** and cut into sections. Cut shrink-fit hose to size.

1 50mm shrink-fit hose [4x]

F

Preparing the water hoses

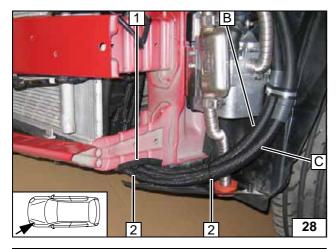




Run the water hoses **B** and **C** through the rubberized tube clamp **1** as shown in the figure

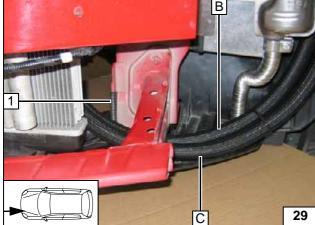


Connection to heater



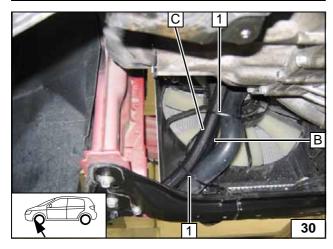
- 1 Cut 140mm long edge protection to size and insert.
- 2 Cable clips [2x]

Placing water hoses



1 Cut 60mm long edge protection to size and insert.

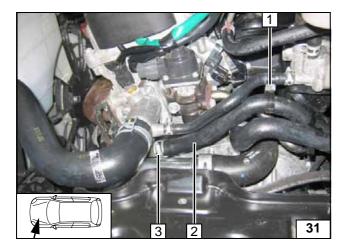
Inserting edge protection



1 Cable clips [2x]

Placing water hoses

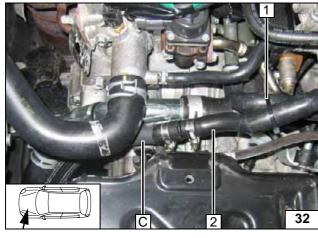




Pull the hose **2** off the engine outlet connecting piece. Dispose of original vehicle clamp **3** and retaining clip **1**.

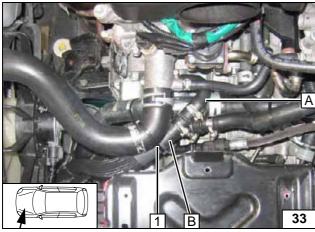


Splitting point



- 1 Cable clips
- 2 Heat exchanger inlet hose section

Heat exchanger inlet connection

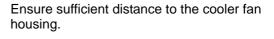


Before connecting, fill the water hoses with coolant.



1 Cable clips







Aligning the water hoses





Water connection for diesel

WARNING!

Tighten all hose clamps to 2.0 + 0.5 Nm.

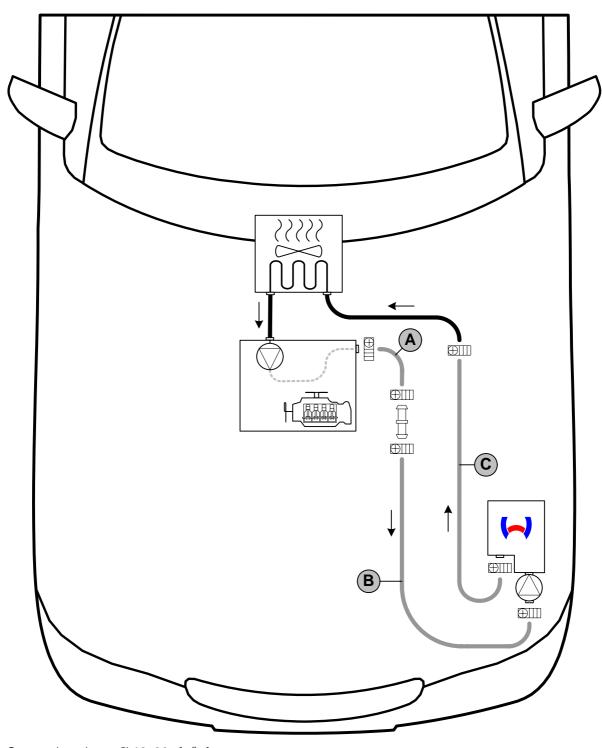
Any coolant running off should be collected using an appropriate container.

Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable clips.

Position hose clamps and spring band clamps so that no other hose can be damaged.

The connection should be "inline" based on the following diagram:

(The diagram shows a vehicle with electric auxiliary heater. If there is no auxiliary heater, the hose is cut from the engine outlet – see page 24.)

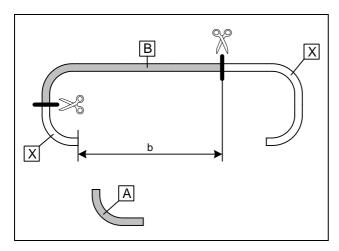


Water installation diagram

Connecting pipe = Ø 18x20. All hose clamps = Ø 20-27 mm.⊕III



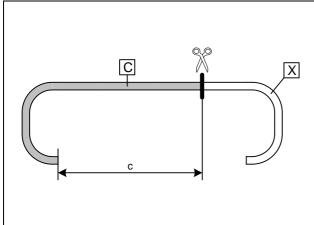




 $A = 90^{\circ}$ moulded hose b = 1,240mm

Dispose of section X

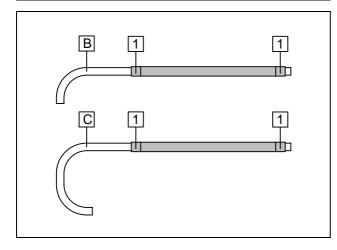
Cutting water hoses into sections



c = 1,240mm

Dispose of section X

Cutting water hoses into sections



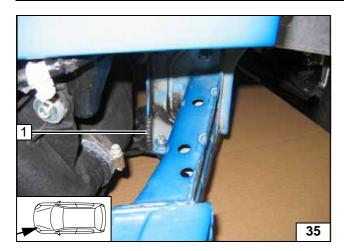
Slide the braided protective hoses onto hose **B** and hose **C** and cut into sections. Cut shrink-fit hose to size.

1 50mm shrink-fit hose [4x]



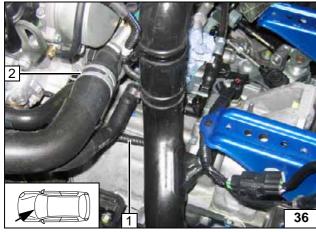
Preparing the water hoses





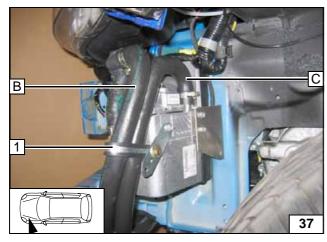
1 Cut 40mm long edge protection to size and insert.

Inserting edge protection



- 1 Cut 40mm long edge protection to size and insert.
- **2** Position the spring band clamp as shown in the figure.

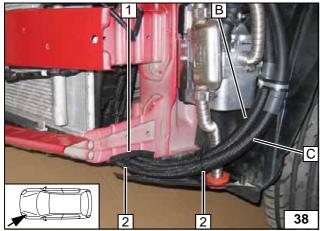
Inserting edge protection



Run the water hoses **B** and **C** through the rubberized tube clamp **1** as shown in the figure



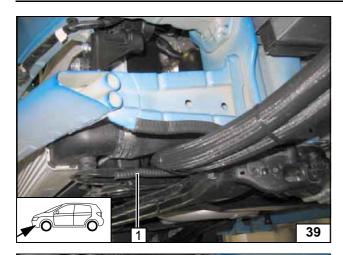
Connection to heater



- 1 Cut 140mm long edge protection to size and insert.
- 2 Cable clips [2x]

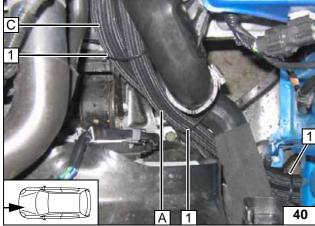
Placing water hoses





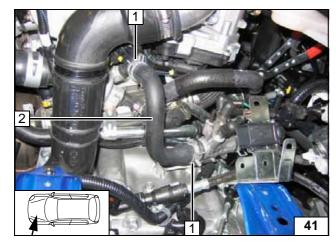
1 Cut 100mm long edge protection to size and insert.

Inserting edge protection



1 Cable clips [3x]

Placement in the engine compartment



Only on vehicles with electric auxiliary heater.

ric auxiliary | \lhd

Remove the original vehicle engine exhaust hose to the electric auxiliary heater **2** and dispose. Dispose of spring band clamps **1** [2x].

Splitting point



- 1 Engine outlet connecting piece
- 2 Connecting piece for electric auxiliary heater

Connections





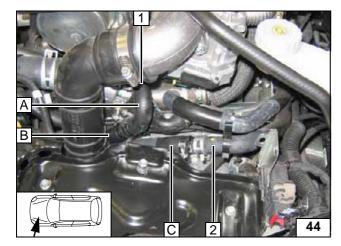
Only on vehicles without electric auxiliary heater.



Separate the original vehicle engine hose on the marking.

- 1 Heat exchanger inlet hose section2 Remove the engine outlet hose section and dispose.

Splitting point



- 1 Engine outlet connecting piece2 Heat exchanger inlet hose section

Connections



Fuel Connection

CAUTION!

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

Catch any fuel running off with an appropriate container.

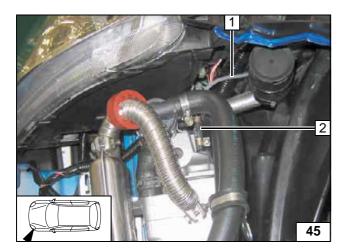
Install fuel line and metering pump cable harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable clips.

Fit the fuel line and cable harness with edge protectors around sharp edges.

!

WARNING!

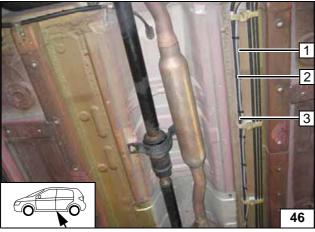
The fuel line and cable harness to the metering pump should be installed based on the cable harness installation diagram.



Gasoline vehicles only.

- 1 Fuel line
- 2 Hose section, Ø 10 mm hose clamps [2x]

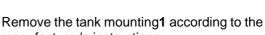
Connecting to the heater unit

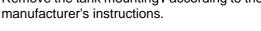


Install the Mecanyl fuel pipe 1 and the metering pump cable harness 2 on the original vehicle fuel lines 3 to the metering pump installation location.



Installing lines



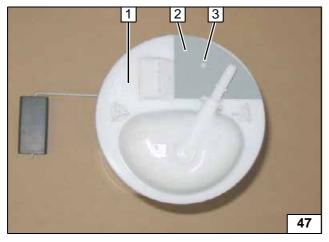




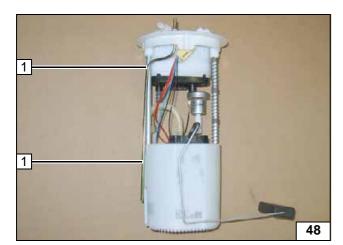
3 Copy the hole template, Ø 6mm bore hole



Fuel Take-Off



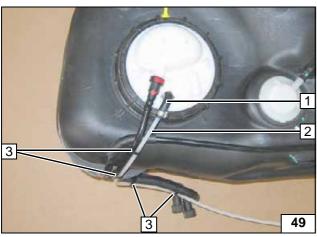




Shape, cut into sections, and insert the tank extracting device 1 according to the template, see the Installation Instructions.



Inserting tank extracting device



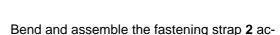
Install the tank mounting according to manufacturer's instructions. Shorten the moulded hose by 10 mm for \emptyset 3.5 mm. Put the shortened side on the tank extracting device with \emptyset 8mm hose clamps.

After assembly, install the fuel tank according to manufacturer's instructions.

- 1 Moulded hose Ø 3.5 mm x 4.5 mm, universal clip Ø 8 mm, universal clip Ø 10 mm
- 2 Fuel line
- 3 Cable clips [4x]

cording to the template

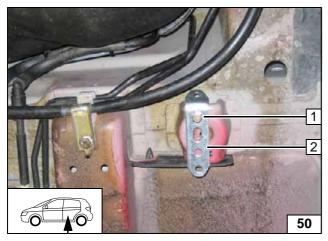
Connecting the fuel line





1 Original vehicle bore hole, M6x20 bolt, flanged nut M6



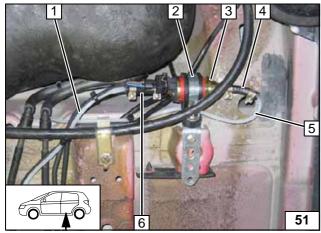


Fuel line 1 from the heater unit on the pressure side of the metering pump 3 [side with connector].

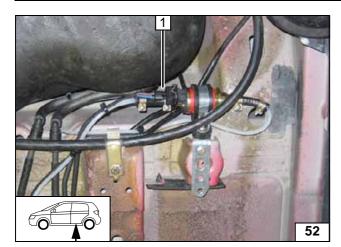
Fuel line **5** from the tank extracting device on the intake side of the metering pump **3** [side without connector].

- 2 Rubber tube clamp, silentblock, flanged nut M6 [2x] on fastening strap
- 4 Hose section, Ø 10 mm hose clamps [2x].
- 6 Hose section, Ø 10 mm hose clamps [2x].

Assembling the metering pump





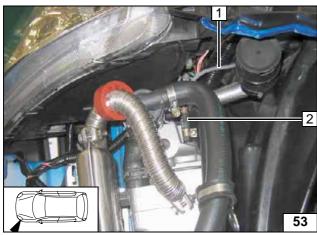


Check the position of the components; adjust if necessary. Check that they have free clearance.



1 Metering pump cable harness, single wire seals [2x], flat connector [2x], connector housing

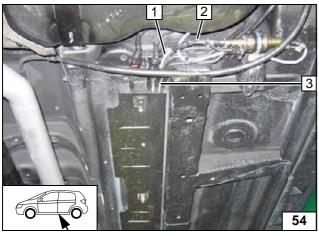
Assembling the cable harness



Diesel vehicles only.

- 1 Fuel line
- 2 Hose section, Ø 10 mm hose clamps [2x]

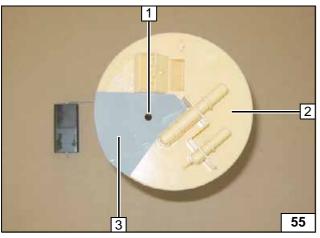
Connecting to the heater unit



Install the Mecanyl fuel pipe 1 and the metering pump cable harness 2 on the original vehicle fuel lines 3 to the metering pump installation location.



Installing lines

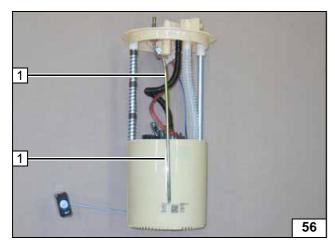


Remove the tank mounting **2** according to the manufacturer's instructions.

- 1 Copy the hole template, Ø 6mm bore hole
- 3 Template



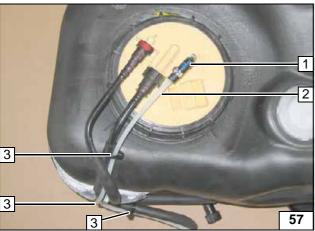
Fuel Take-Off



Shape, cut into sections, and insert the tank extracting device **1** according to the template.



Inserting tank extracting device



Install the tank mounting according to manufacturer's instructions. Shorten the moulded hose by 10 mm for \emptyset 3.5 mm. After assembly, install the fuel tank according to manufacturer's instructions.



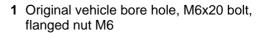
- 1 Moulded hose Ø 3.5 mm x 4.5 mm, universal clip Ø 8 mm, universal clip Ø 10 mm
- 2 Fuel line
- 3 Cable clips [3x]

Connecting the fuel line



Bend the fastening strap 2 and mount as shown in the figure.

Asser

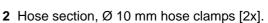


Assembling the fastening strap



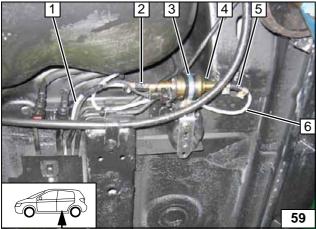
Fuel line 1 to the heater unit on the pressure side of the metering pump 4 [side with connector].

Fuel line **6** from the tank extracting device on the intake side of the metering pump **4** [side without connector].

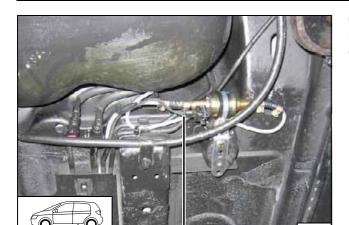


- **3** Rubber tube clamp, silentblock, flanged nut M6 [2x] on fastening strap
- 5 Hose section, Ø 10 mm hose clamps [2x].

Assembling the metering pump







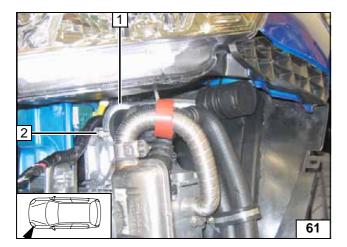
Check the position of the components; adjust if necessary. Check that they have free clearance

1 Metering pump cable harness, single wire seals [2x], flat connector [2x], connector housing



Assembling the cable harness



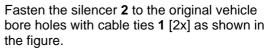


Combustion Air

- 1 Combustion air pipe2 Ø 27mm hose clamp

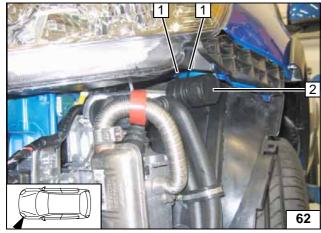


Assembling the vacuum line.



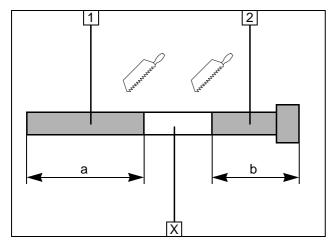


Assembling the silencer









Exhaust System

- 1 Exhaust pipe a = 200mm
- 2 Exhaust end section b = 250mm

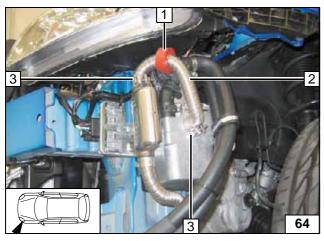
Dispose of section X

Preparing the exhaust pipe



- 1 Silencer
- 2 M6x12 bolt, spring washer on spacer nut

Assembling the silencer

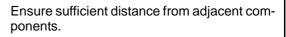


Ensure sufficient distance from adjacent components.



- 1 Red (rt) rubber profile
- 2 Exhaust pipe
- 3 Hose clamp [2x]

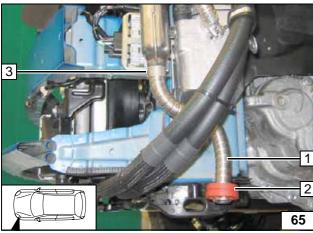
Assembling the exhaust pipe.





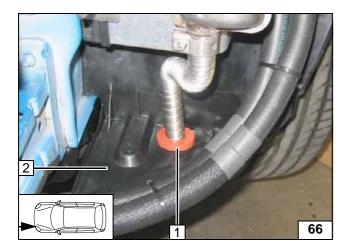
- 1 Exhaust end section
- 2 Red (rt) rubber profile with groove
- 3 Hose clamp

Assembling the exhaust end section







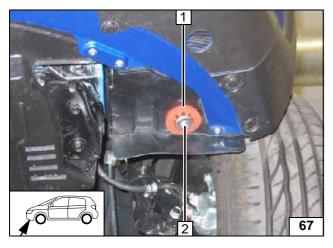


Reassemble the wheel-house panel **2**. Drill bracket at position **1** to \varnothing 42 mm.



1 Red (rt) rubber profile with groove

Assembling the exhaust end section



Ensure sufficient distance from adjacent components.



- 1 Red rubber profile with nut in Ø 42mm bore hole
- 2 Aligning exhaust end section flush

Positioning the rubber profile



Final Work

WARNING!

Reassemble disassembled components in reverse order.

Check that all hose lines, clips, and all electrical connections are securely fastened.

Secure all loose cables using cable clips.

Only use manufacturer-approved coolant.

Spray heating unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect battery
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Set the time switch.
- Set the manual air conditioning or automatic air conditioning according to the "operating instructions for the end customer".
- Check that the auxiliary heating operates properly, see operating instructions / installation instructions.
- Attach the "Switch off auxiliary heating before re-fuelling" sticker onto the left side of the B-pillar.





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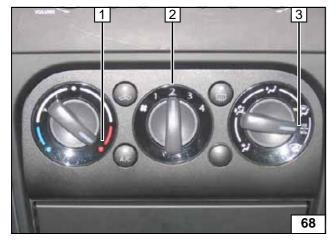
Operating instructions for the end customer

Please remove page and add to the vehicle operating instructions.



Rule of thumb for operating the auxiliary heating: driving time = heating time.

Before parking the vehicle, make the following settings:

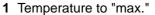


- 1 Temperature to "max."2 Blower set to "1" or "2"
- 3 Air outlet to windshield

For vehicles with manual air conditioning



The "AC" display blinks when the heater is on.





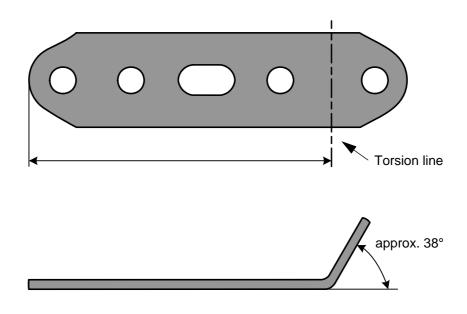
3 Air outlet to windshield

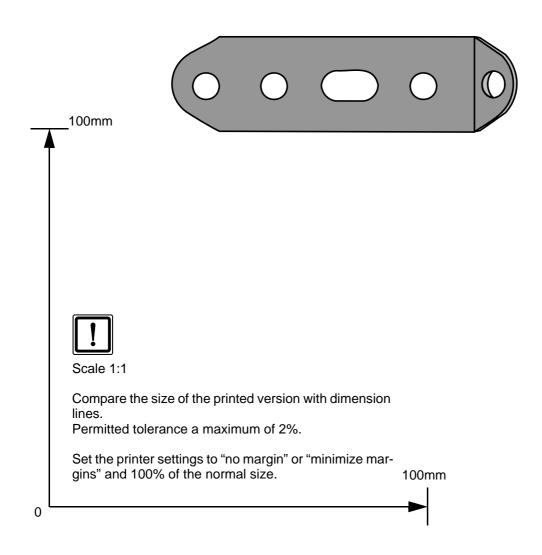


For vehicles with automatic air conditioning



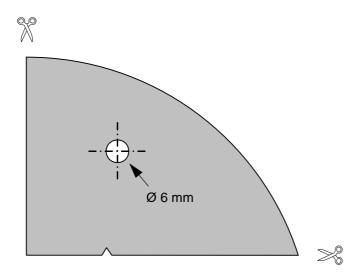
Fastening Strap Template

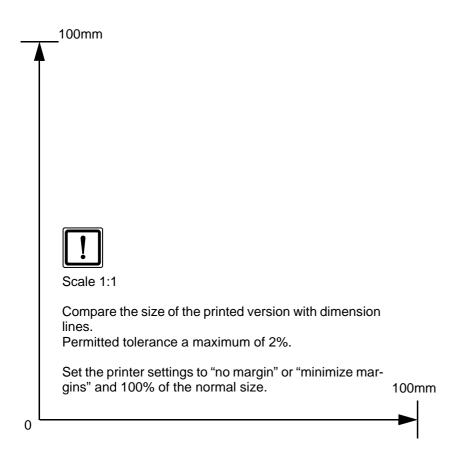






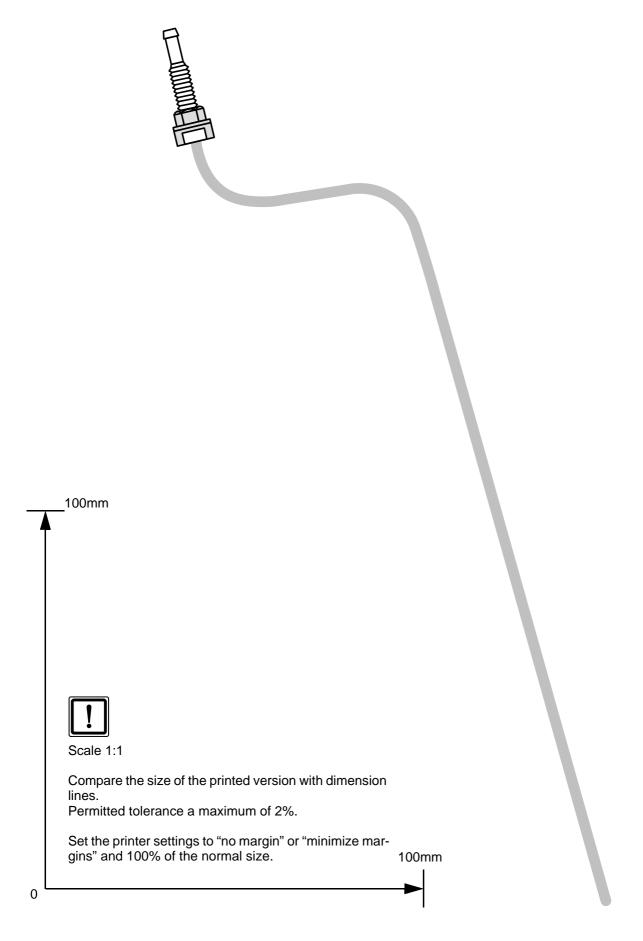
Tank Mounting Template for Gasoline Engines





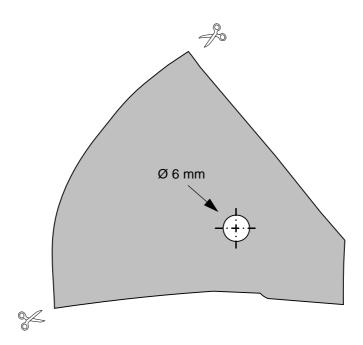


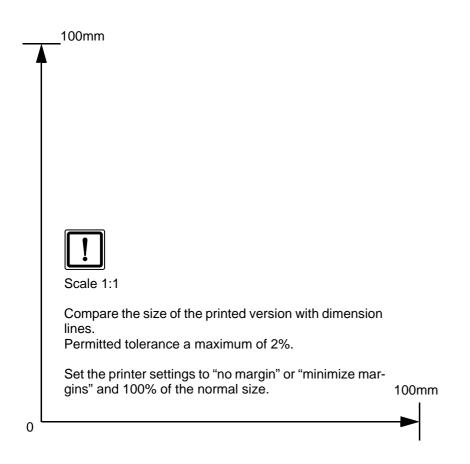
Tank Extracting Device Template for Gasoline Engines





Tank Mounting Template Diesel







Diesel tank extracting device template

