

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation VW T6

Validity

Manufacturer	Model	Type	EG BE No. / ABE
VW	T6	7J0	e1 * 2007 / 46 * 0130 * 16

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
2.0 TDi	Diesel	SG	75	1968	CAAB

SG = manual transmission

From model year 2015
Left-hand drive vehicle

Verified equipment variants: Climatic
Halogen daytime running lights
Euro 5+ / Euro 6

Not verified: Passenger compartment monitoring
Climatronic
Multi-zone Climatronic
LED main headlights

Total installation time: approx. 8.5 hours

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Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit for VW T6 2015 Diesel: **1324236B**
- Heater control in accordance with price list and upon consultation with end customer
- In case of installation of MultiControl CAR: MultiControl installation frame: **9030077_**
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

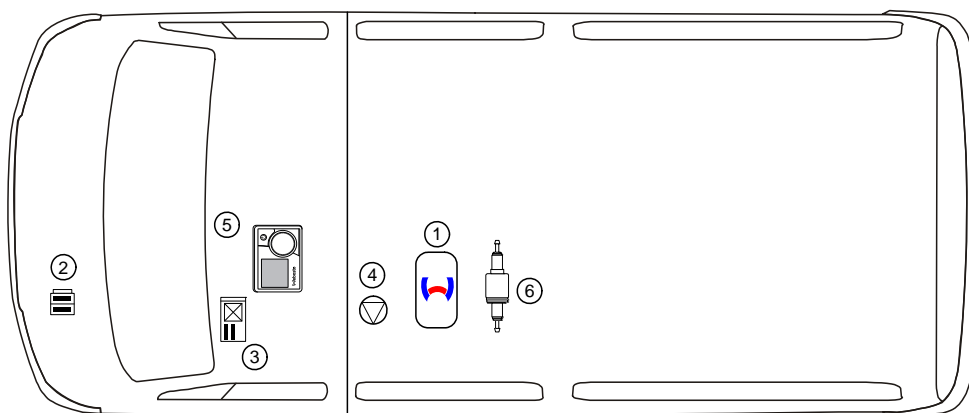
Installation instructions:

- 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 space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

Installation Overview

Legend:

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



Information on Total Installation Time

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

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair



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



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



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

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

1.2 Operation

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

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

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 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 must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

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	Thermo Top 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 ECE regulation 122 (heating system) paragraph 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 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.

Information on Validity

This installation documentation applies to VW T6 Diesel vehicles - for validity, see page 1 - from model year 2015 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this 'installation documentation'.

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

Technical Information

Special Tools

- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- 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 value 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.

Special features are highlighted using the following symbols:

Mechanical System



Electrical System



Coolant Circuit



Combustion Air



Fuel



Exhaust Gas



Software



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.



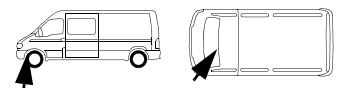
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



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.



Preliminary Work

Vehicle



- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the battery.
- Remove the cover behind the battery up to the firewall.
- Remove the lower engine cover.
- Remove the left underbody trim.
- Remove the lateral instrument panel trim on the left.
- Remove the footwell trim on the left.
- Remove the light switch and its frame (1x screw, 2x clip).
- Remove the instrument panel trim under the steering wheel.

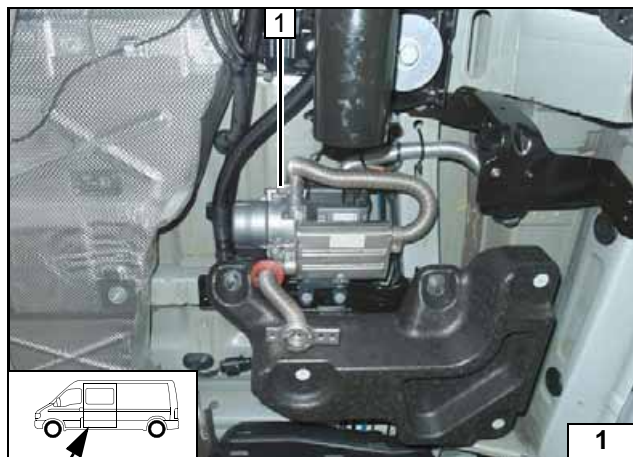
The following work should only be performed during the corresponding installation sequence:



- Empty the fuel tank according to the manufacturer's instructions.
- Remove the trim of the tank filler neck.
- Detach the screw fitting of the tank filler neck.
- Remove the fuel tank.
- Remove the fuel tank sending unit in accordance with the manufacturer's instructions.

Heater

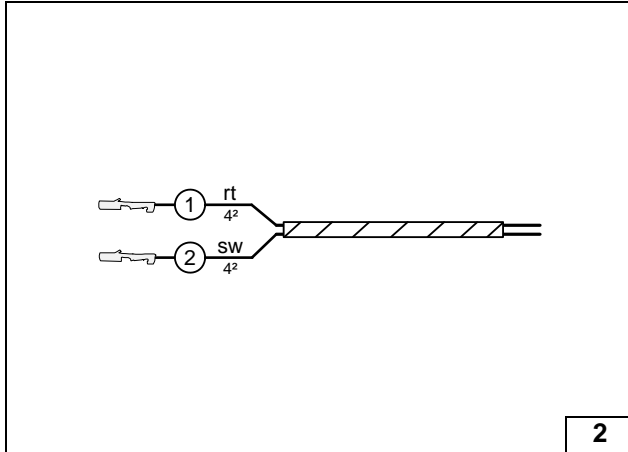
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater Installation Location

- 1 Heater

Installation location



2

Preparing Electrical System

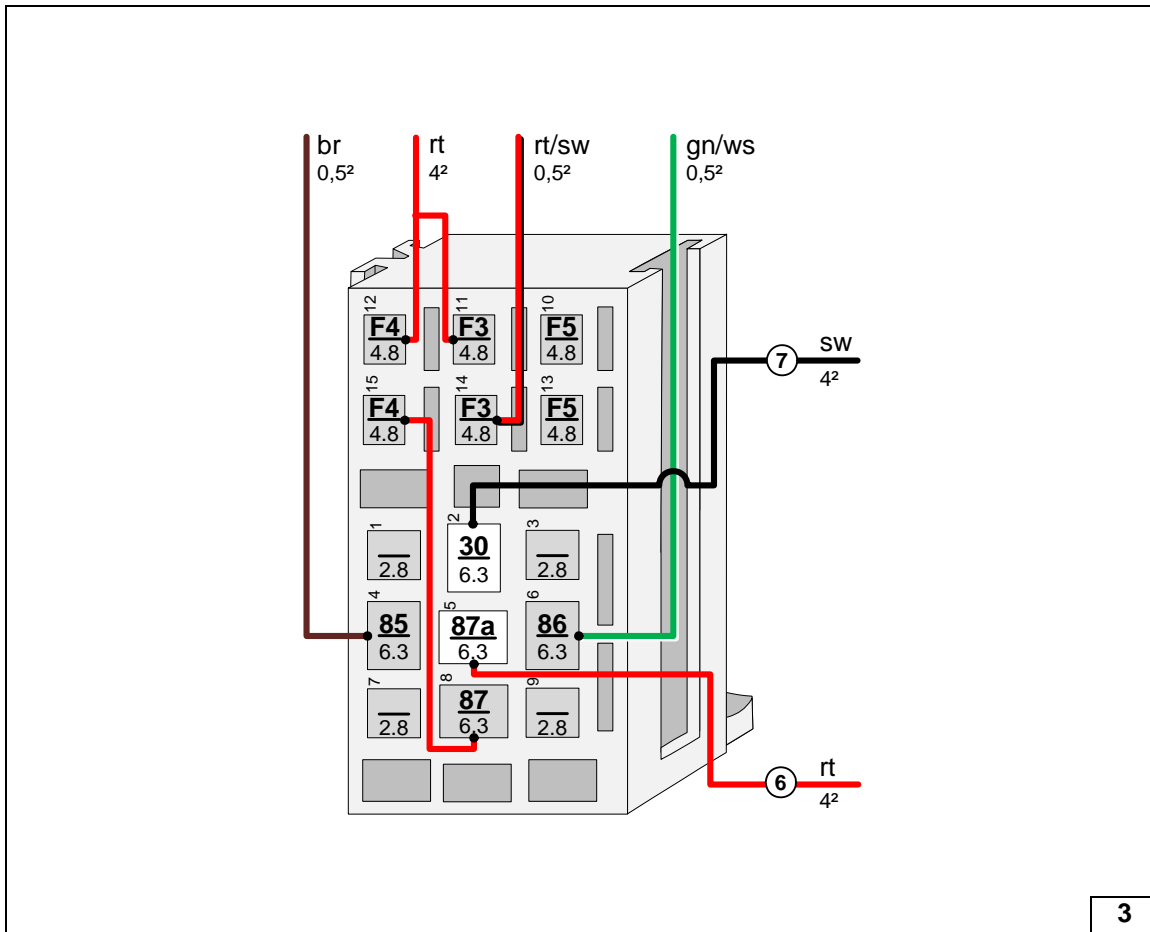
Wire sections retain their numbering in the entire document.

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

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

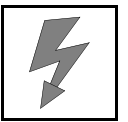


Assigning wires



3

Connecting wires to passenger compartment relay and fuse holder



Electrical System

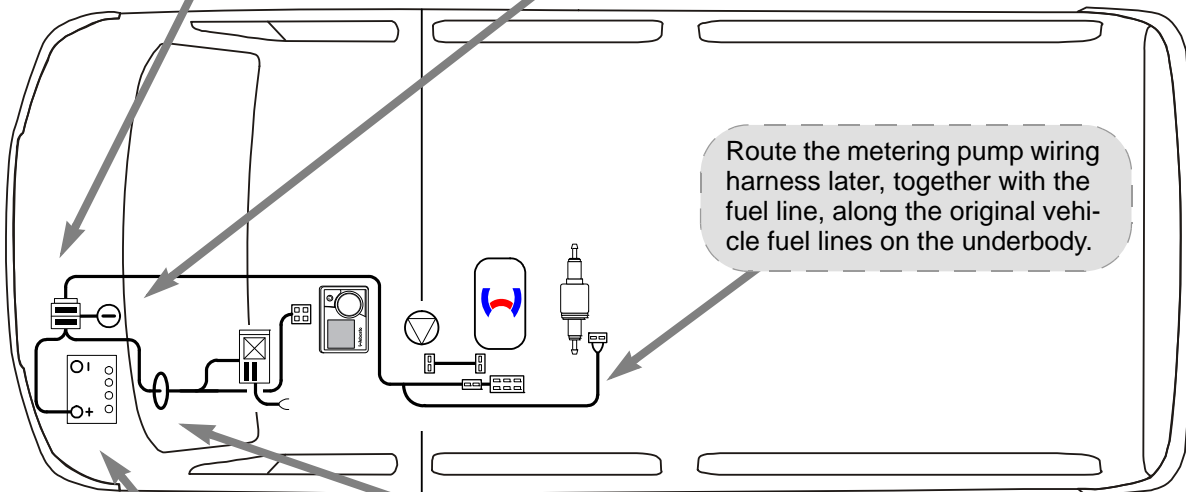
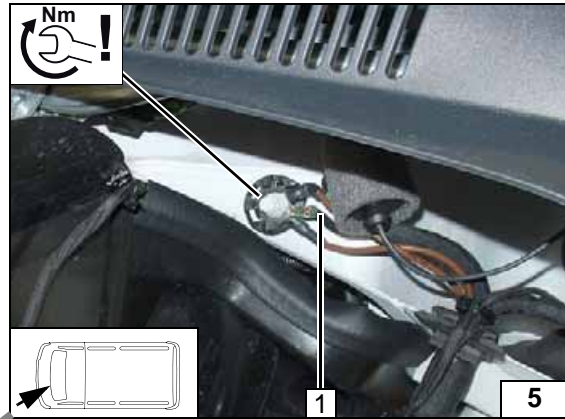
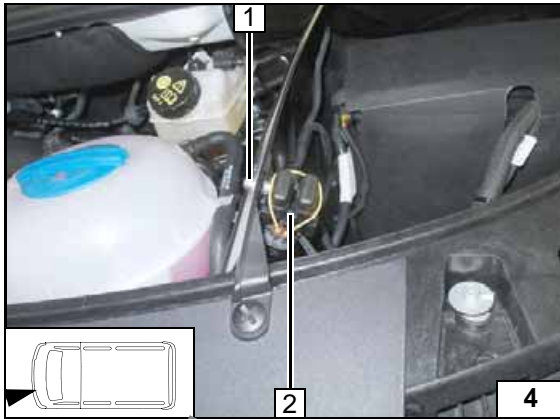


Engine compartment fuse holder

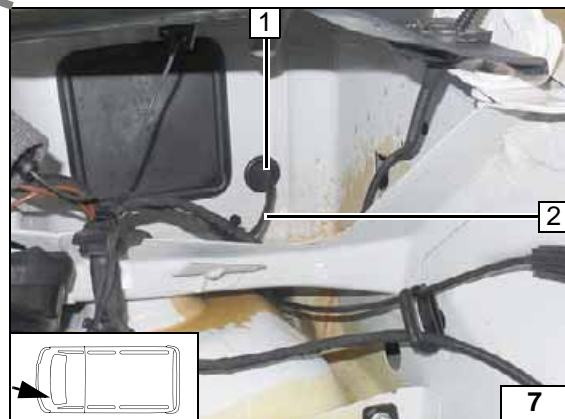
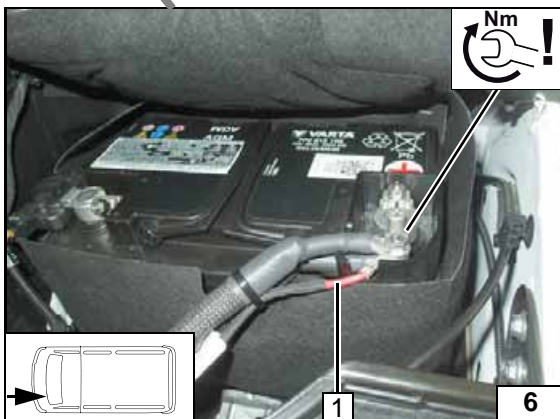
- 1 6mm dia. hole, M5x16 bolt, large diameter washer [2x], fuse holder retaining plate, nut
- 2 Fuses F1-2

Earth wire

- 1 Earth wire on original vehicle earth support point



Wiring harness routing diagram



Positive wire

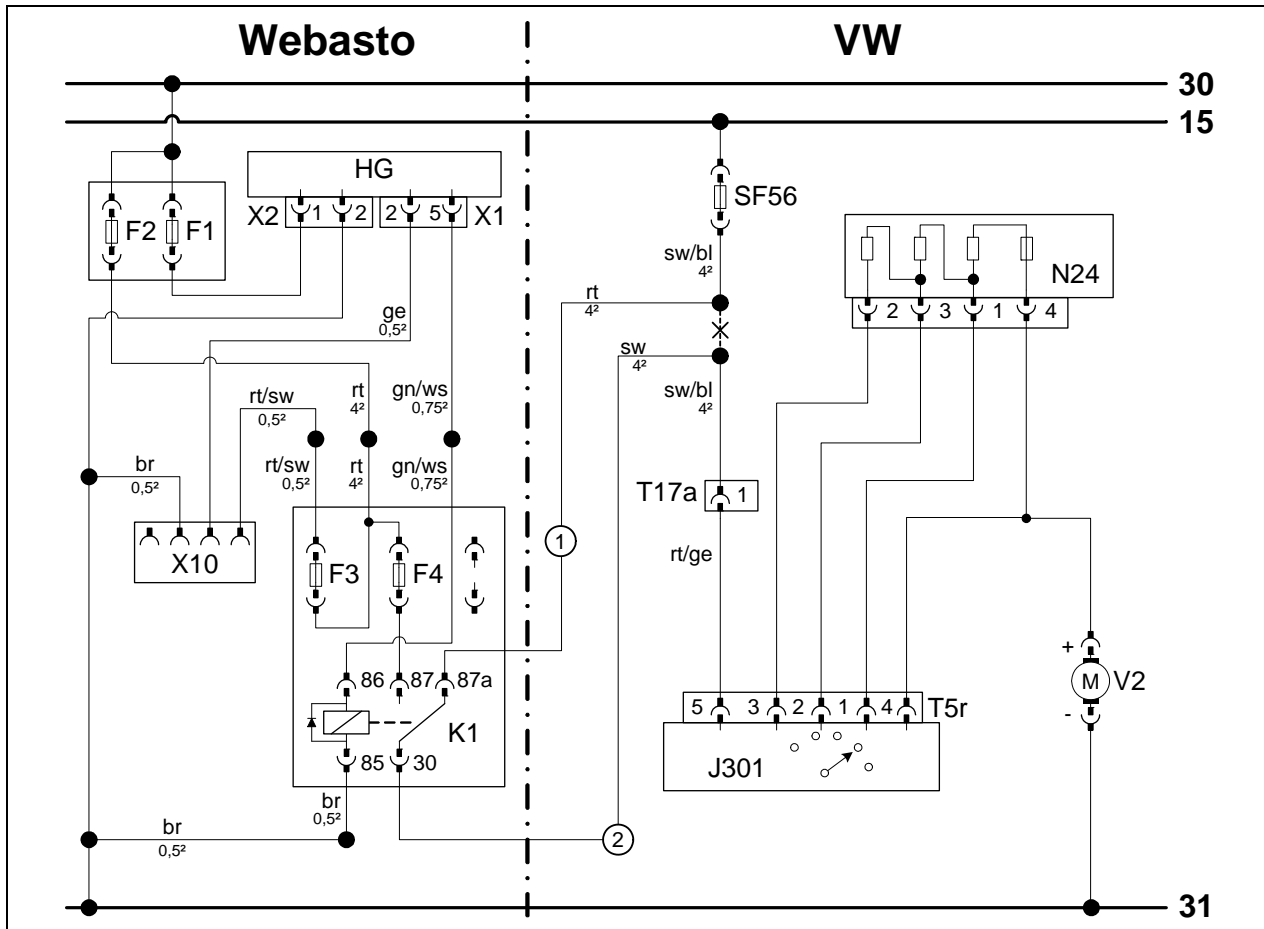
- 1 Positive wire on positive battery terminal

Wiring harness pass through

- 1 Protective rubber plug
- 2 Heater wiring harnesses, heater control



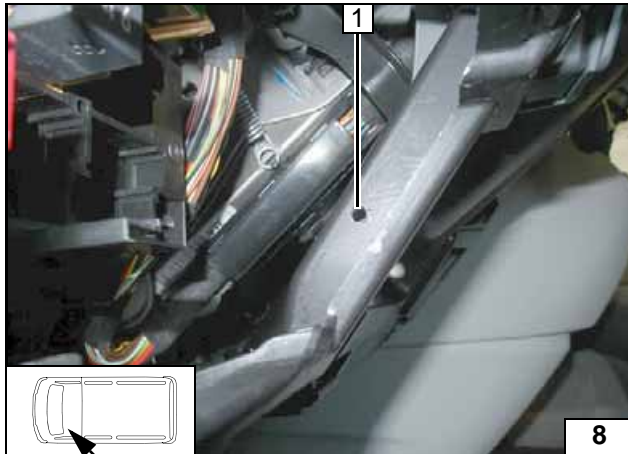
Climatic Fan Controller



Wiring diagram

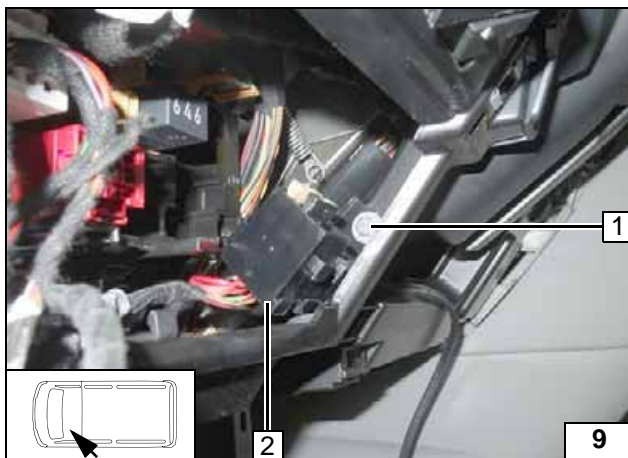
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	SF56	40A fuse	rt	red
X1	6-pin heater connector	N24	Resistor group	sw	black
X2	2-pin heater connector	T17a	17-pin intermediate connector	ge	yellow
F1	20A fuse	V2	Fan motor	gn	green
F2	30A fuse	J301	A/C control unit	bl	blue
X10	4-pin connector of heater control	T5r	5-pin connector J301	ws	white
F3	1A fuse			br	brown
F4	25A fuse				
K1	Fan relay				
				X	Cutting point
					Wiring colours may vary.

Legend



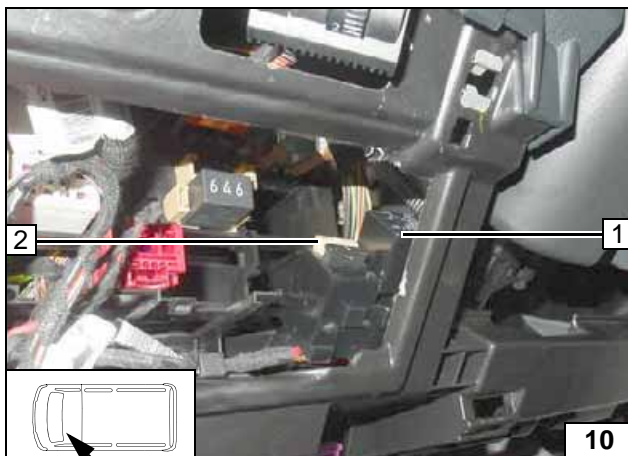
1 5.5 mm dia. hole

Hole for passenger compartment relay and fuse holder



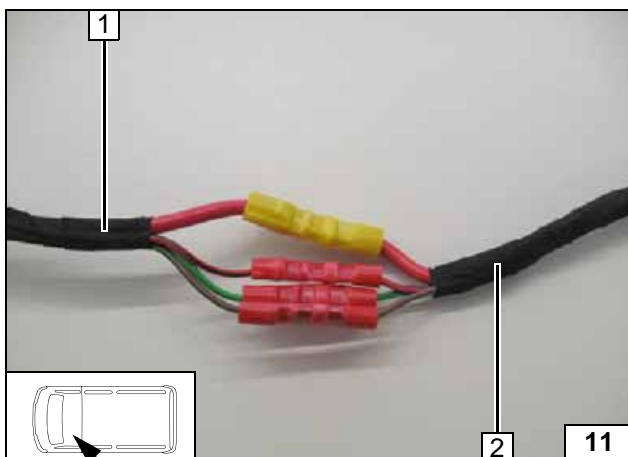
1 M5x16 bolt, large diameter washer [2x], nut
2 Passenger compartment relay and fuse holder

Installing passenger compartment relay and fuse holder



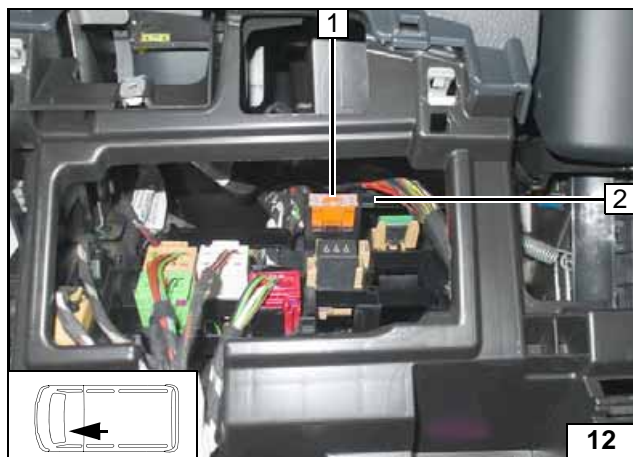
1 Relay K1
2 25A fuse F4

Installing relay K1 and fuse F4



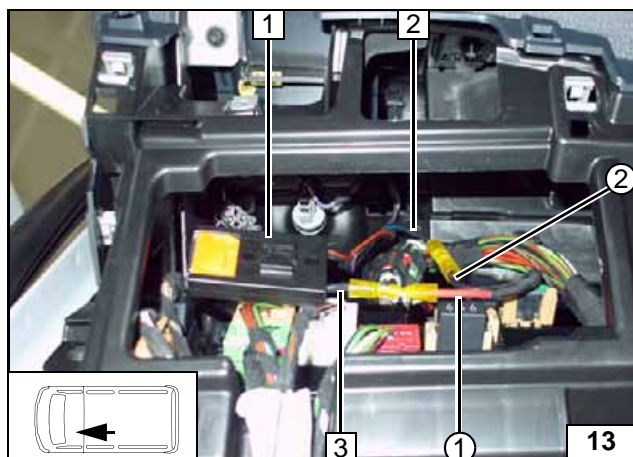
1 Passenger compartment relay and fuse holder wiring harness
2 Heater wiring harness

Connecting same colour wires of wiring harnesses



- 1 Fuse SF56
- 2 Remove fuse holder from mounting

Removing fan fuse

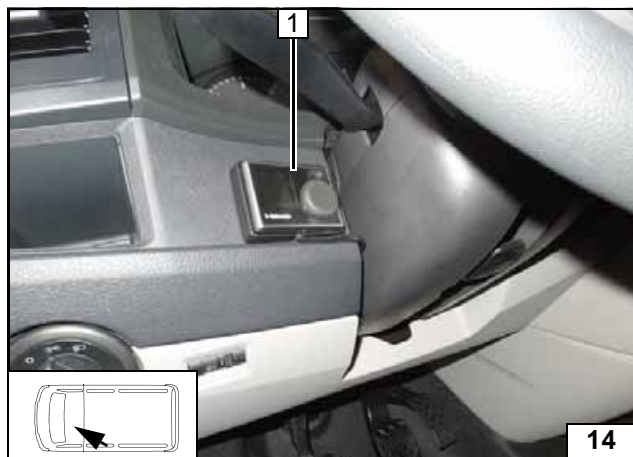


- 1 Holder of 40A fuse SF56
- 2 Black/blue (sw/bl) wire of A/C control unit
- 3 Black/blue (sw/bl) wire of fuse SF56
- ① Red (rt) wire of K1/87a, fan wiring harness
- ② Black (sw) wire of K1/30, fan wiring harness

Connecting A/C control unit



Install holder of fuse SF56

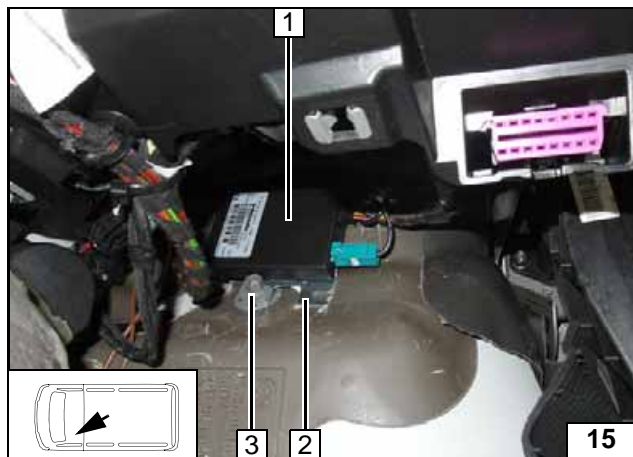


MultiControl CAR Option

- 1 MultiControl CAR with installation frame



Installing MultiControl CAR

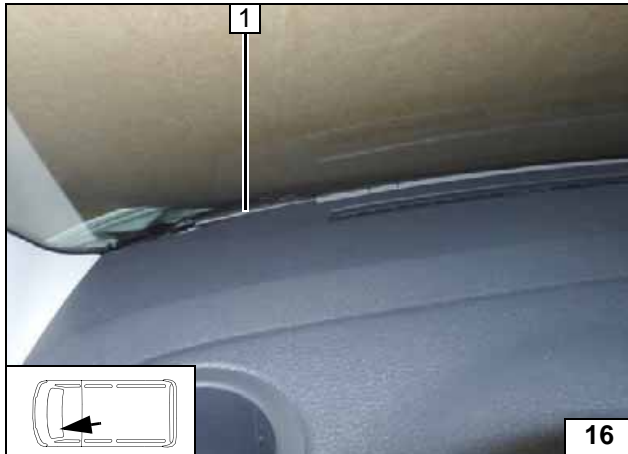


Remote Option (Telestart)

- 1 Receiver
- 2 Bracket of receiver
- 3 Original vehicle stud bolt with plastic nut



Installing receiver



1 Aerial

Installing aerial

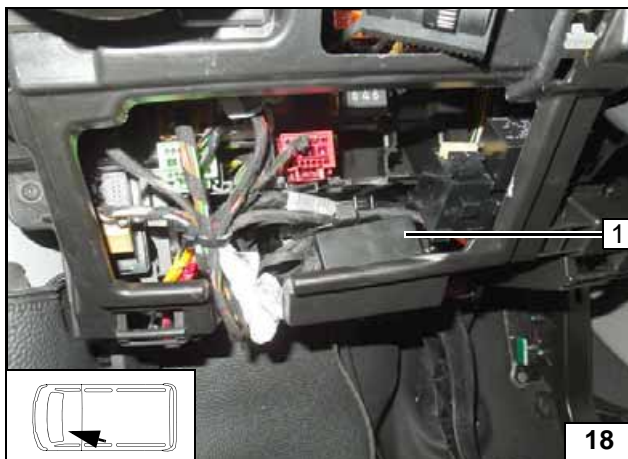


Temperature sensor T100 HTM

Fasten temperature sensor 1 with cable tie.



Installing temperature sensor

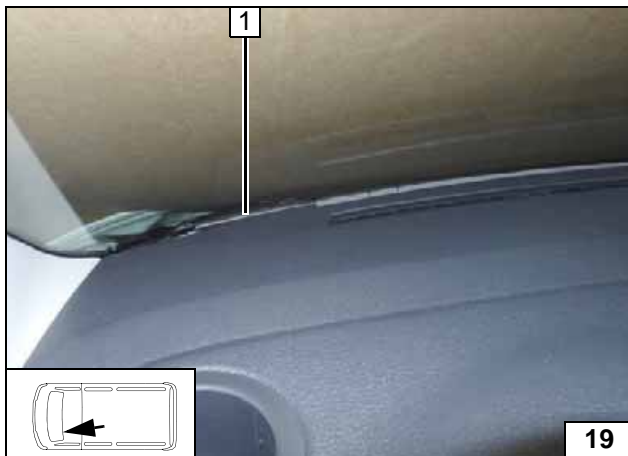


ThermoCall Option

Fasten receiver 1 with double-sided adhesive tape.

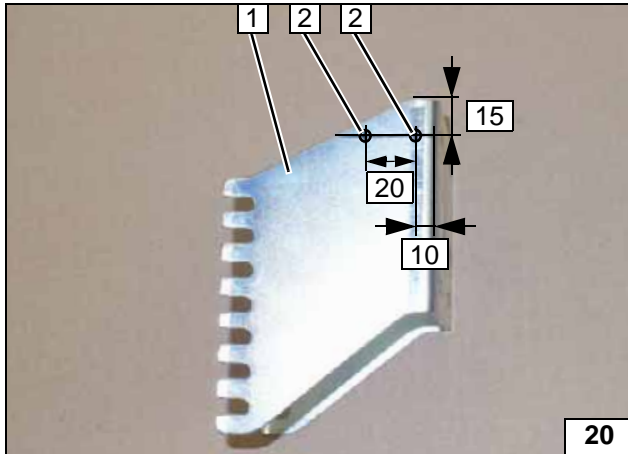
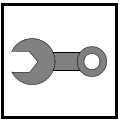


Installing receiver



1 Aerial (optional)

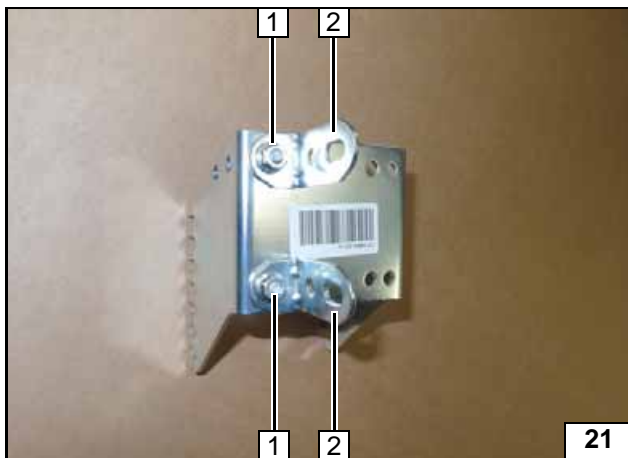
Installing aerial



Preparing Bracket

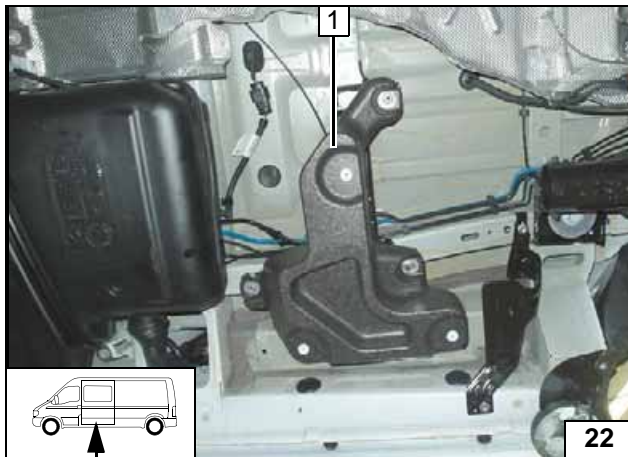
- 1 Bracket
- 2 Copy hole pattern, 6.5mm dia. hole [2x each]

Copying hole pattern



- 1 M6x12 bolt, flanged nut [2x each]
- 2 Angle bracket [2x each]

Installing angle bracket

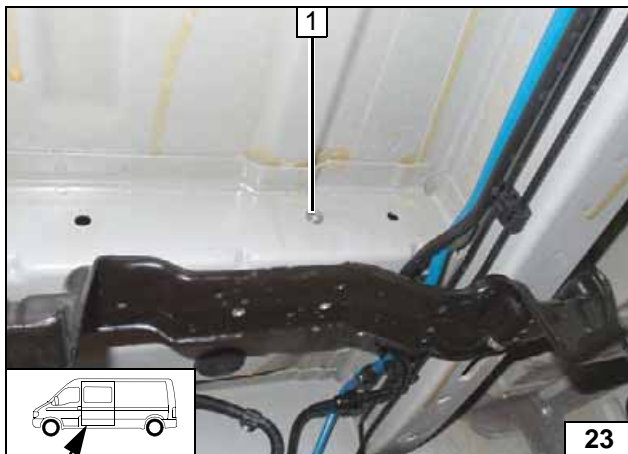


Preparing Installation Location

Dismantle original vehicle moulding 1. Will be reinstalled later.

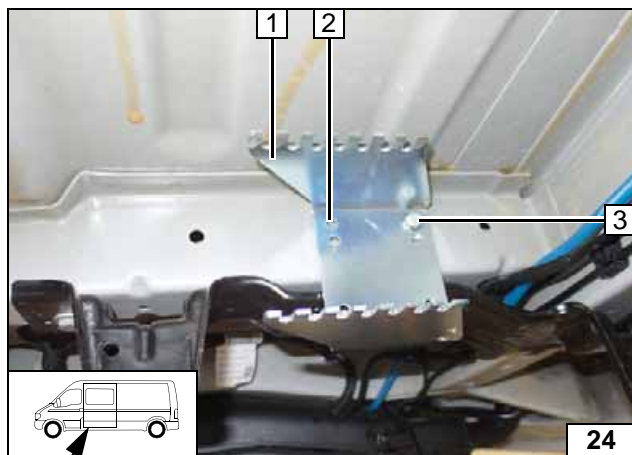


Dismantling moulding



- 1 Original vehicle hole, rivet nut

Installing rivet nut

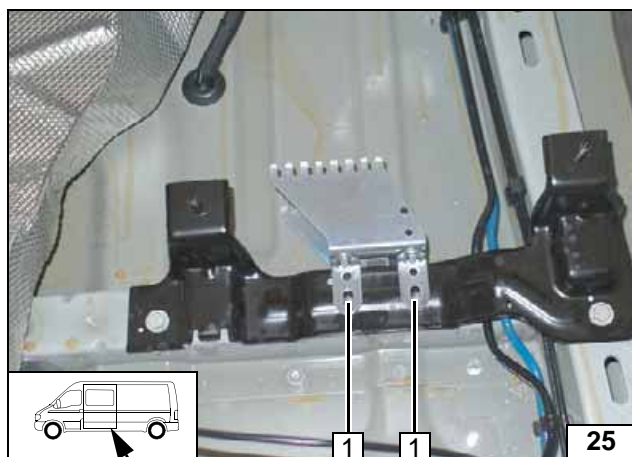


Install bracket 1 using M6x20 bolt 3 and align horizontally with underbody.

- 2 Copy hole pattern, 9.1mm dia. hole

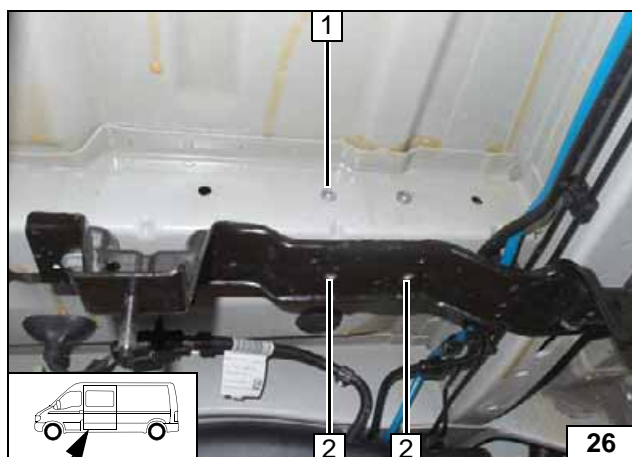


Copying hole pattern



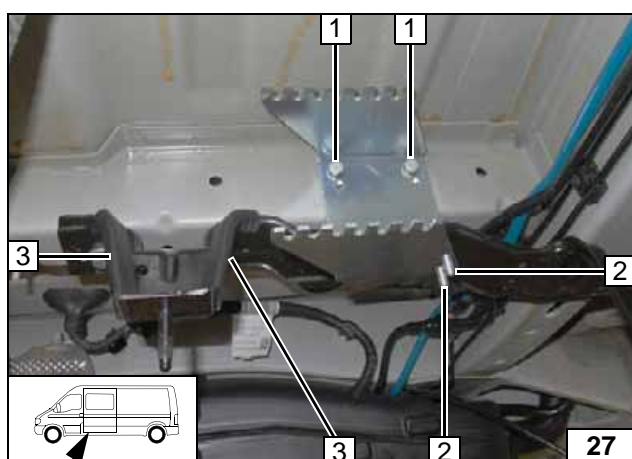
- 1 Copy hole pattern, 7 mm dia. hole [2x]

Copying hole pattern



- 1 Rivet nut
- 2 7 mm dia. hole [2x]

Installing rivet nut

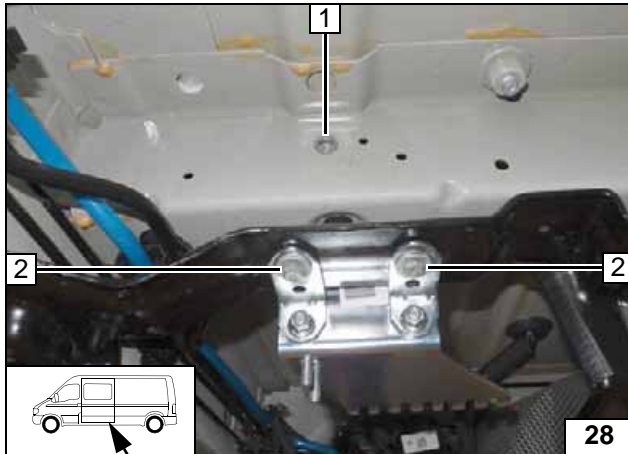
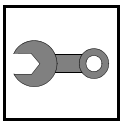


Install one 5mm shim each at position 1 between the bracket and the vehicle.

- 1 M6x25 bolt, spring lockwasher [2x each]
- 2 Loosely insert M6x20 bolt [2x]
- 3 Cut 100mm edge protection in half and install

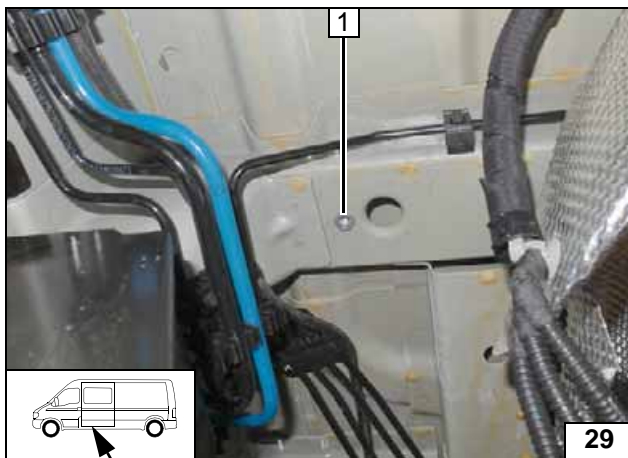


Installing bracket



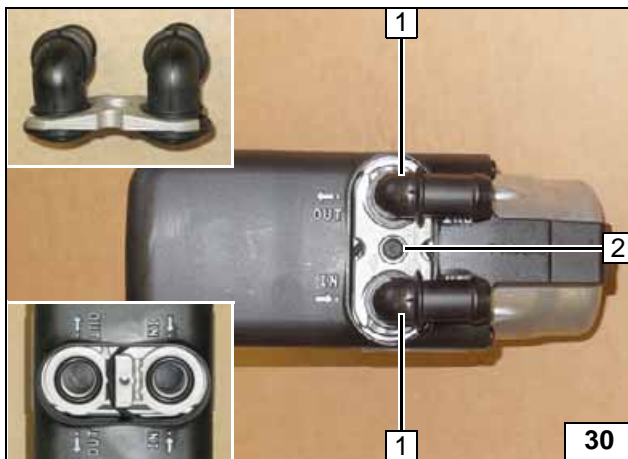
- 1 Drill out existing hole to 9.1 mm dia., insert rivet nut for metering pump
- 2 M6x12 bolt, large diameter washer, flanged nut [2x each]

Installing bracket



- 1 Drill out existing hole to 9.1 mm dia., insert rivet nut for circulating pump

Installing rivet nut

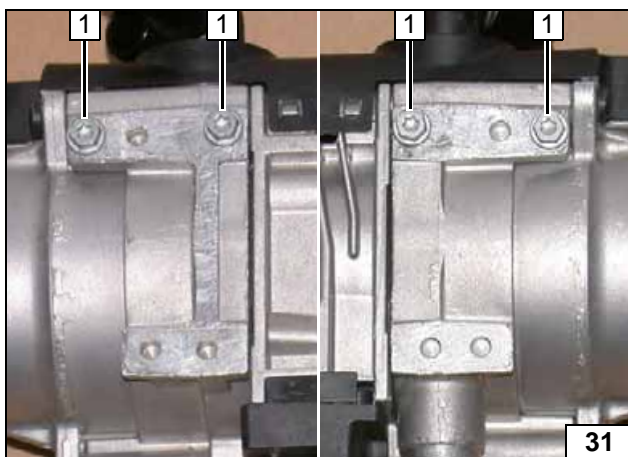


Preparing Heater

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



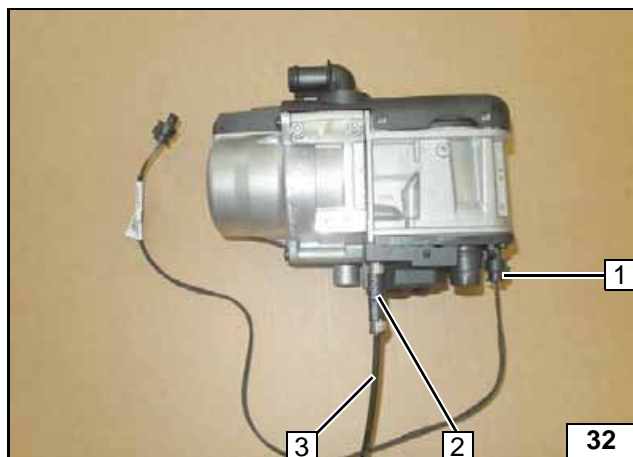
Installing water connection piece



Screw 5x13 self-tapping bolts 1 [4x] into existing holes by a maximum of 3 thread turns.



Premounting bolts loosely



- 1 Connector of circulating pump wiring harness
- 2 Hose section, 10mm dia. clamp [2x]
- 3 Fuel line

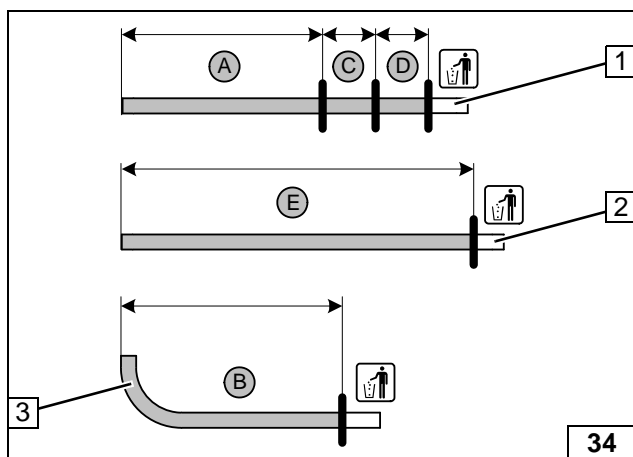
Premounting fuel line



- 1 Combustion air pipe

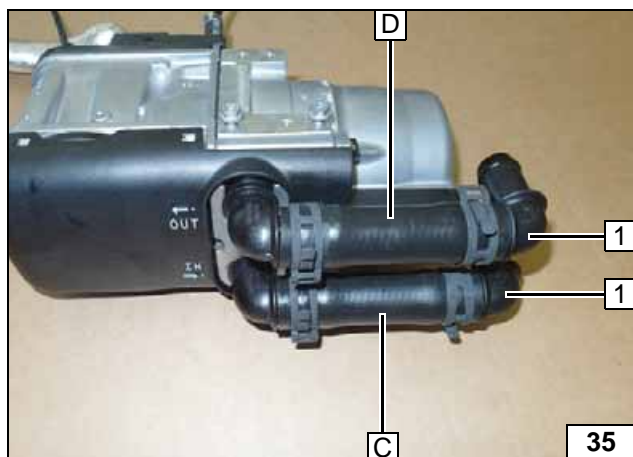


Premounting combustion air pipe



- 1 18mm dia., 1,000mm long hose
 A = 750
 C = 95
 D = 95
- 2 18mm dia., 1,200mm long hose
 E = 1130
- 3 90°, 18mm dia., 500mm long moulded hose
 B = 440

Cutting hoses to length

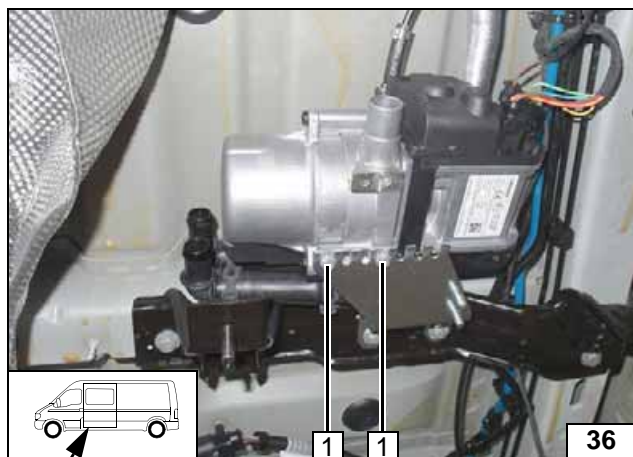


All spring clips 25 mm dia. [4x]

- 1 18x18, 90° connecting pipe [2x]



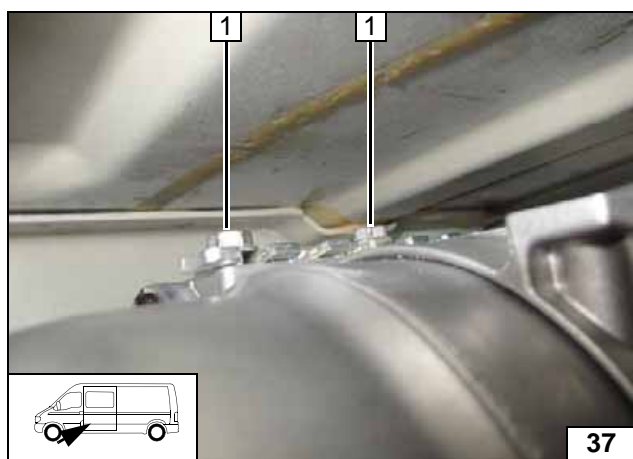
Premounting hoses



Installing Heater

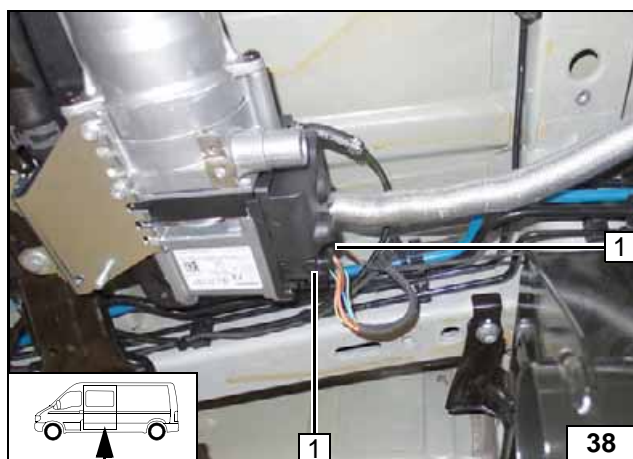
- 1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



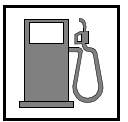
- 1 5x13 self-tapping bolt [2x]

Installing heater



- 1 Heater wiring harness connector [2x]

Installing heater wiring harness



Fuel



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

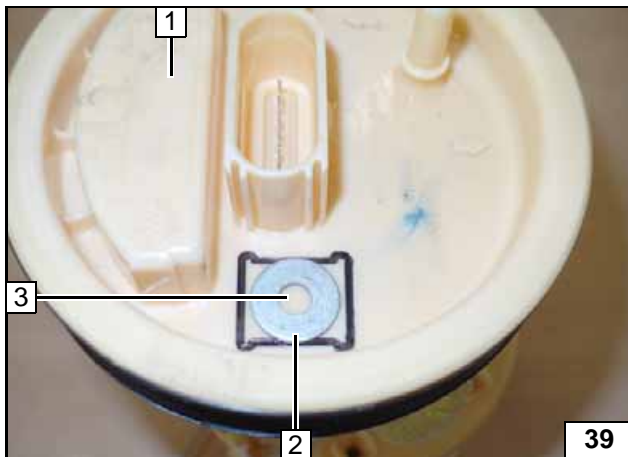
Catch any fuel running off in an appropriate container.



Route 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.

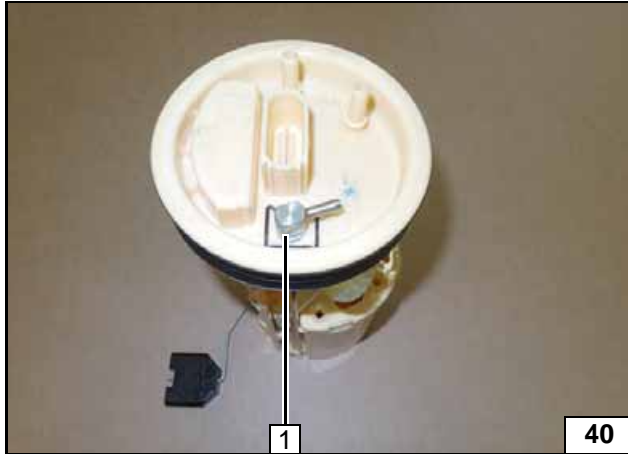
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



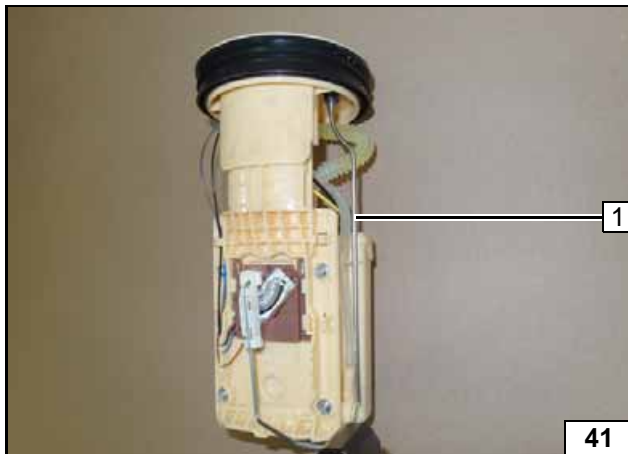
Version 1

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

- 2 Position washer with outer dia. $d_a = 18.0$ mm as a template inside the contour
- 3 Copy hole pattern, 6mm dia. hole



Bend fuel standpipe 1 according to template and cut to length.



- 1 Fuel standpipe



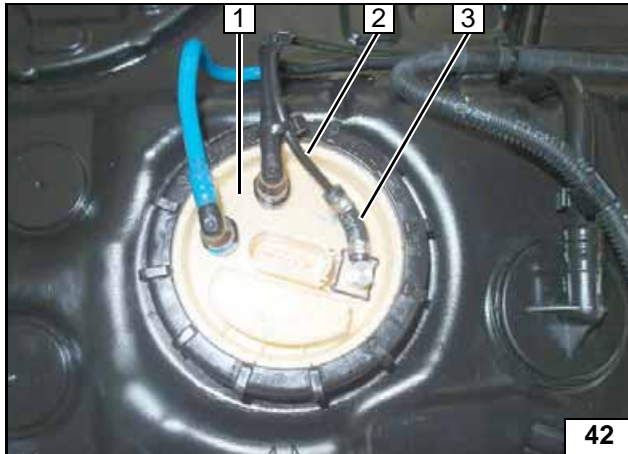
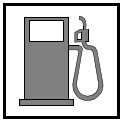
Fuel extraction



Installing fuel standpipe



Installing fuel standpipe

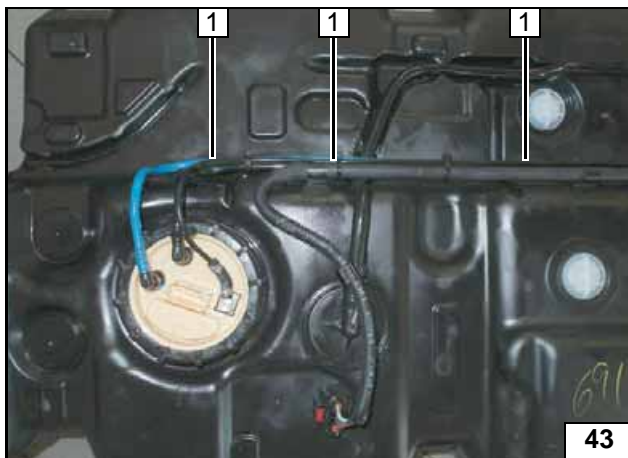


Install fuel tank sending unit 1 according to manufacturer's instructions.

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



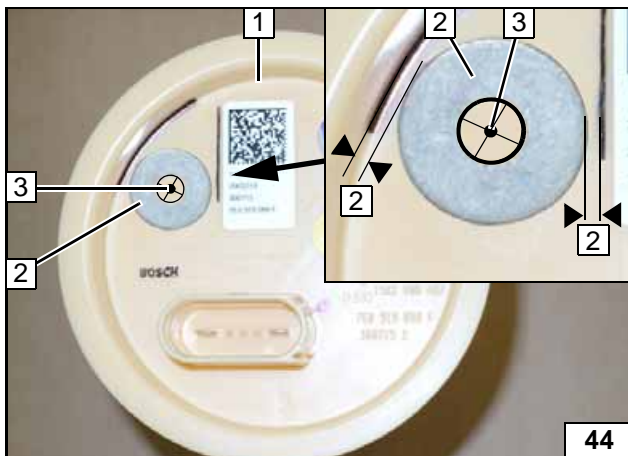
**Connect-
ing fuel line**



Route fuel line 1 along original vehicle lines, secure using cable ties.



**Routing
lines**



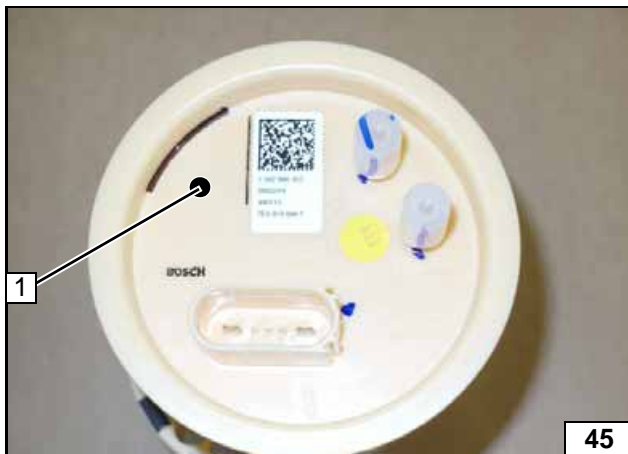
Version 2

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

- 1 Fuel tank sending unit
- 2 Position washer with outer dia. $d_a = 24$ mm as template at a distance of 2mm from the markings as shown
- 3 Hole pattern

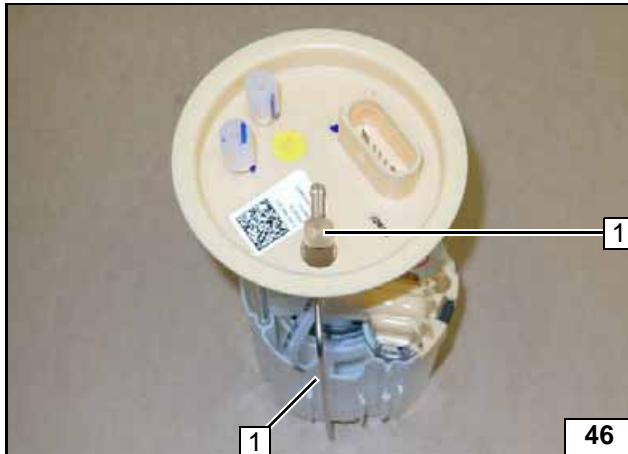


**Fuel extrac-
tion**



- 1 6 mm dia. hole

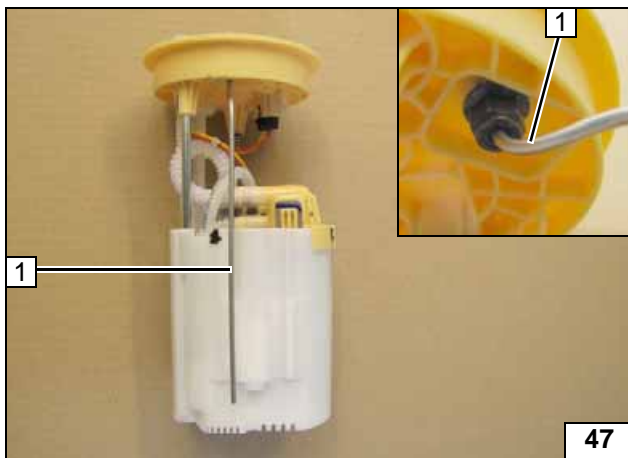
**Hole in fuel
tank sending
unit**



Bend fuel standpipe 1 according to template and cut to length.

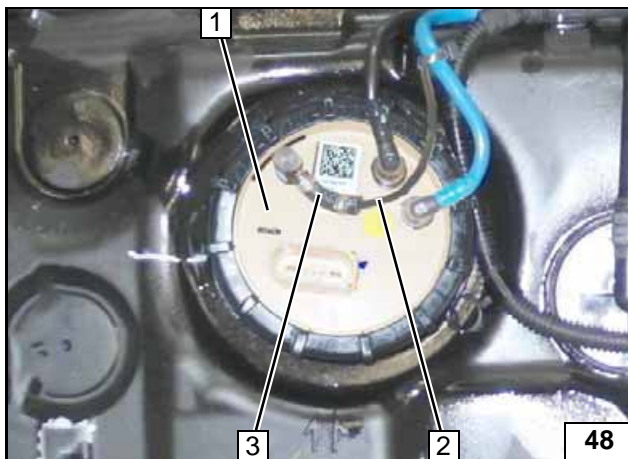


Installing fuel standpipe



1 Fuel standpipe

Installing fuel standpipe

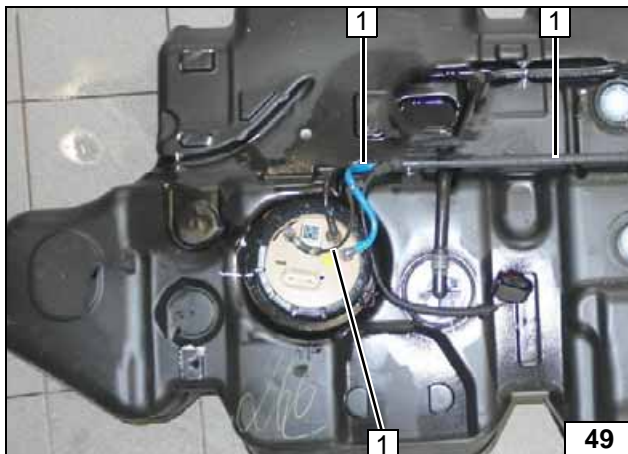


Install fuel tank sending unit 1 according to manufacturer's instructions.



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

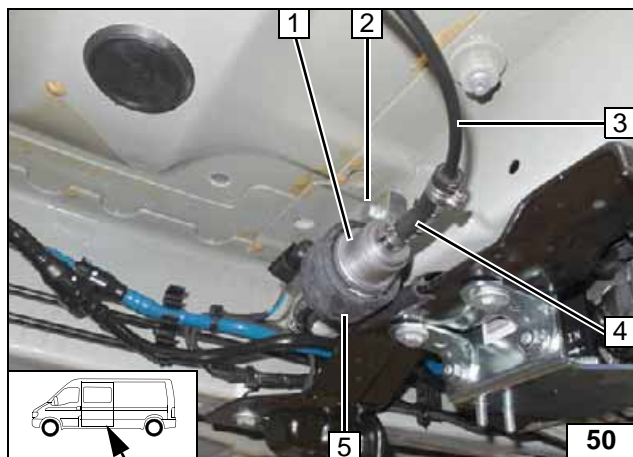
Connecting fuel line



Route fuel line 1 along original vehicle lines, secure using cable ties.



Routing lines



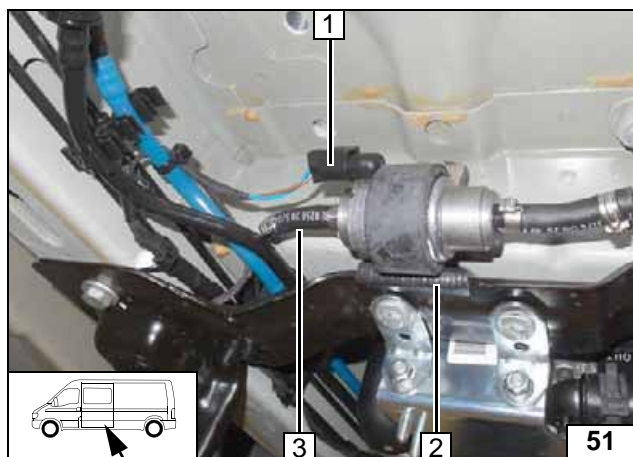
All vehicles

Install fuel tank in accordance with manufacturer's instructions.

- 1 Metering pump
- 2 M6x25 bolt, support angle bracket
- 3 Fuel line
- 4 Hose section, 10mm dia. clamp [2x]
- 5 Metering pump mount



**Connect-
ing meter-
ing pump**

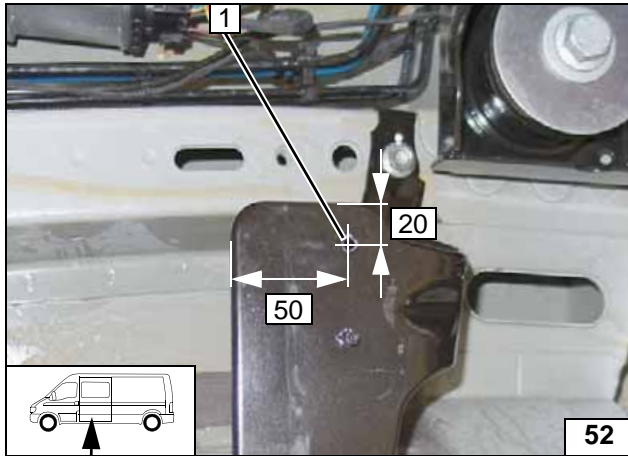
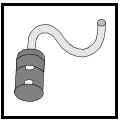


Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Metering pump wiring harness, connector X7 mounted
- 2 50 mm edge protection
- 3 Hose section, 10mm dia. clamp [2x]



**Connect-
ing meter-
ing pump**

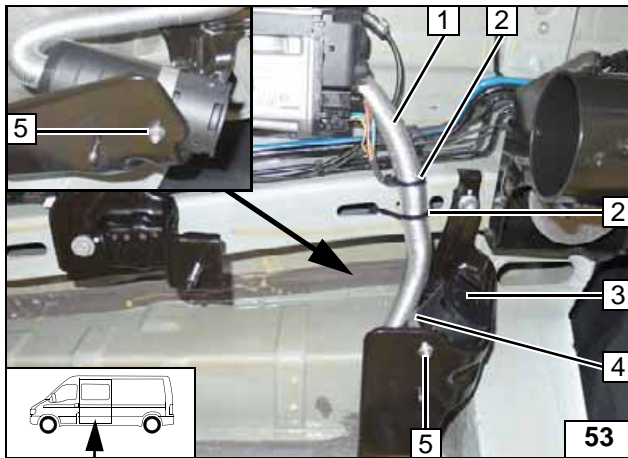


Combustion Air

- 1 5.5 mm dia. hole



Copying
hole pattern



- 1 Combustion air pipe
- 2 Cable tie [2x]
- 3 Silencer
- 4 51 mm dia. clamp
- 5 M5x16 bolt, flanged nut



Installing
combustion
air pipe

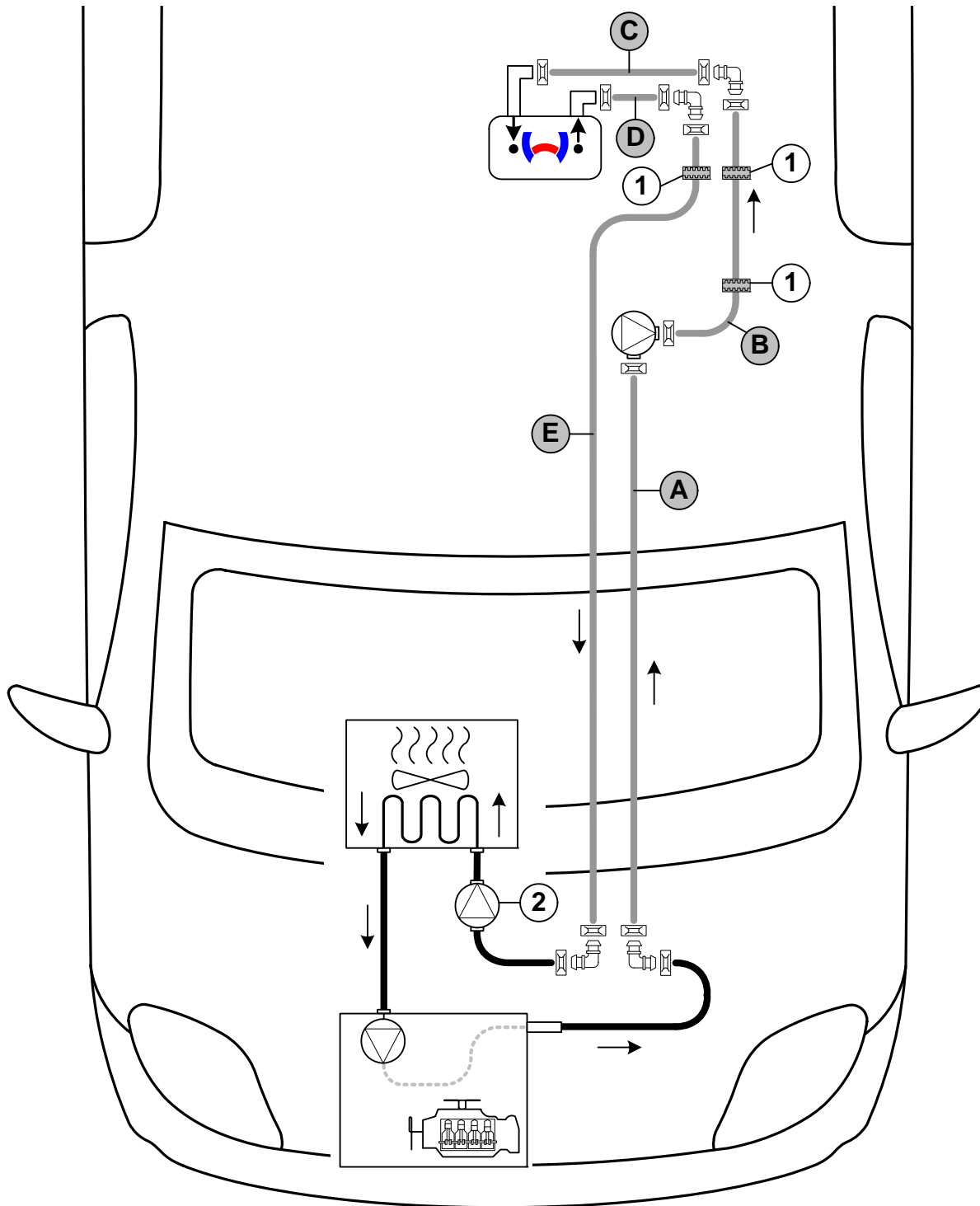


Coolant Circuit






Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

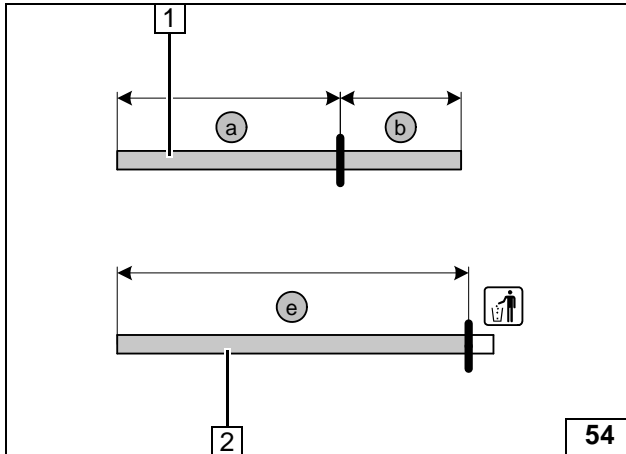
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

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





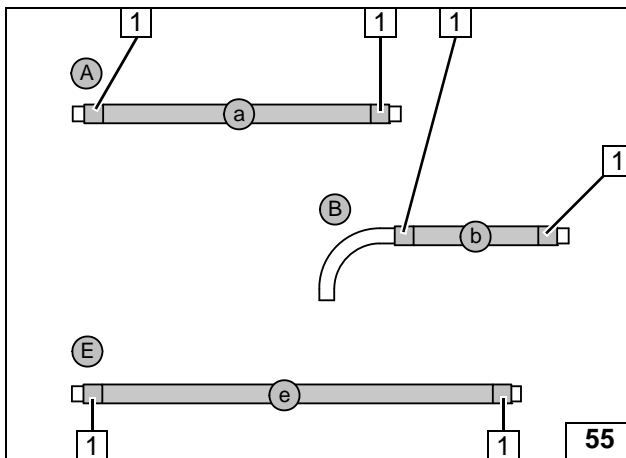
1 1500 mm long braided protection hose

a = 1000
b = 500

2 1690 mm long braided protection hose

e = 1550

Cutting to length / assigning braided protection hoses

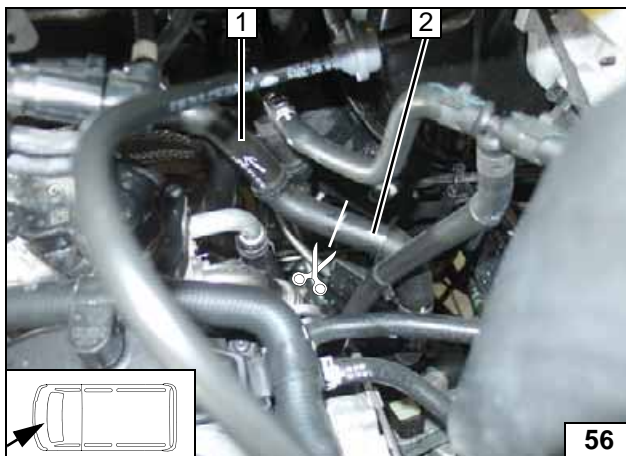


Sliding on braided protection hoses

1 Cut heat shrink plastic tubing to size, 50 mm long [6x]



Installing braided protection hoses

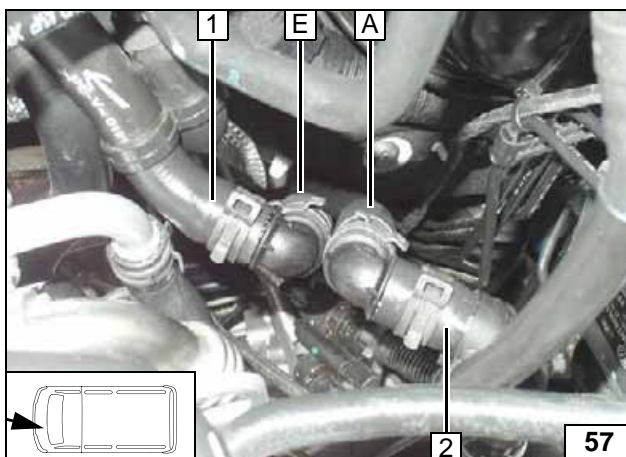


Cut hose of engine outlet / heat exchanger inlet 1 at the marking.

1 Heat exchanger inlet hose section
2 Engine outlet hose section

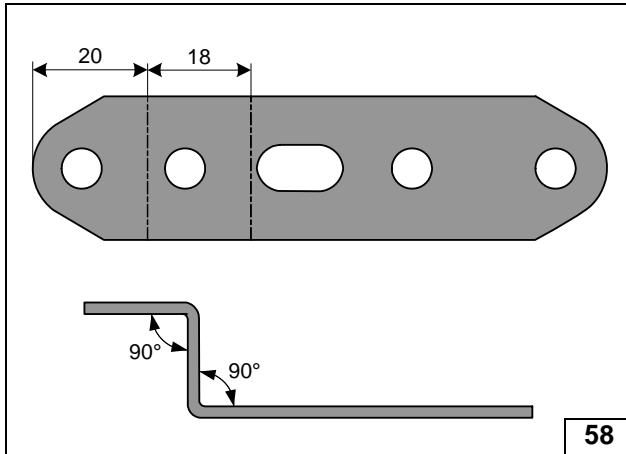


Cutting point

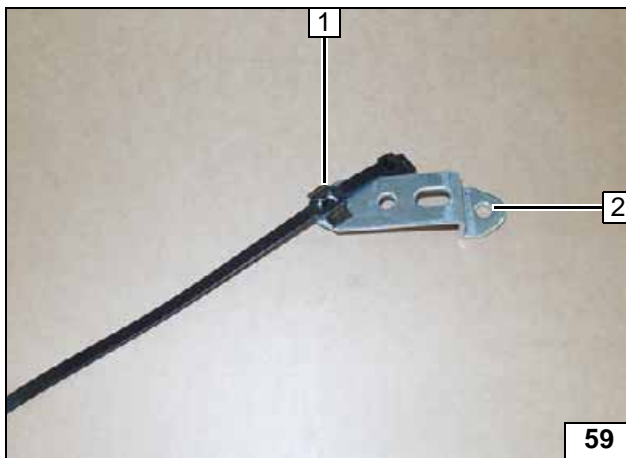


1 Heat exchanger inlet hose section
2 Engine outlet hose section

Connecting engine outlet / heat exchanger inlet

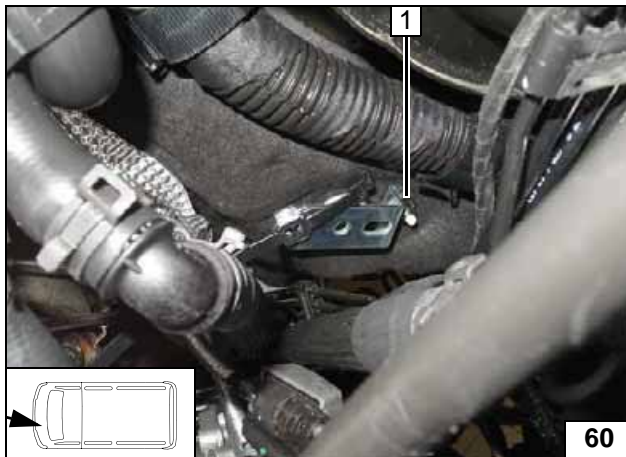


Bending perforated bracket



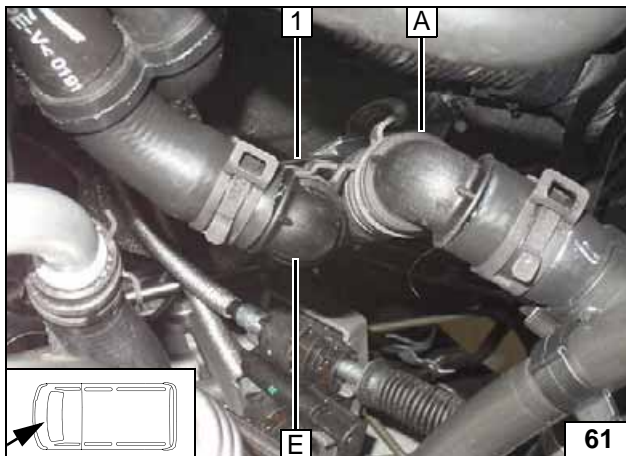
- 1 Cable tie with retaining clip
- 2 Perforated bracket

Premounting perforated bracket



- 1 Original vehicle stud bolt, plastic nut

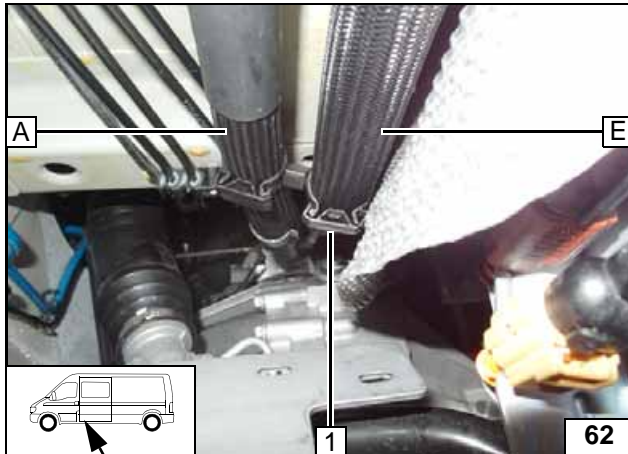
Installing perforated bracket



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary. Secure hoses using cable ties 1.

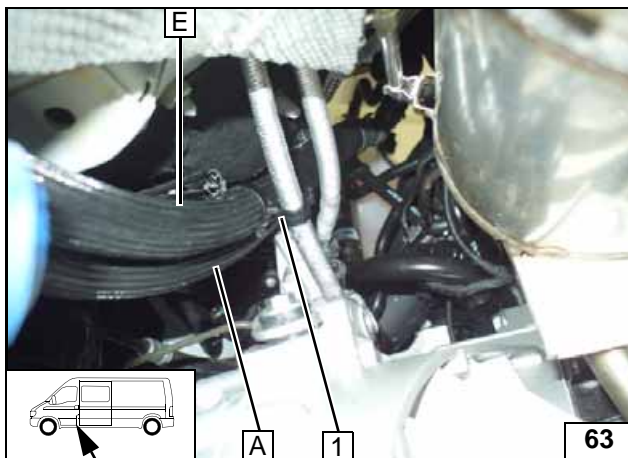


Attaching hoses to perforated bracket



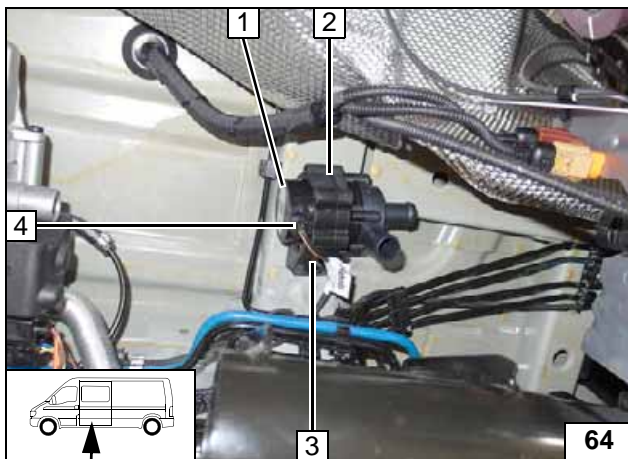
1 23x23 hose bracket

Routing in engine compartment



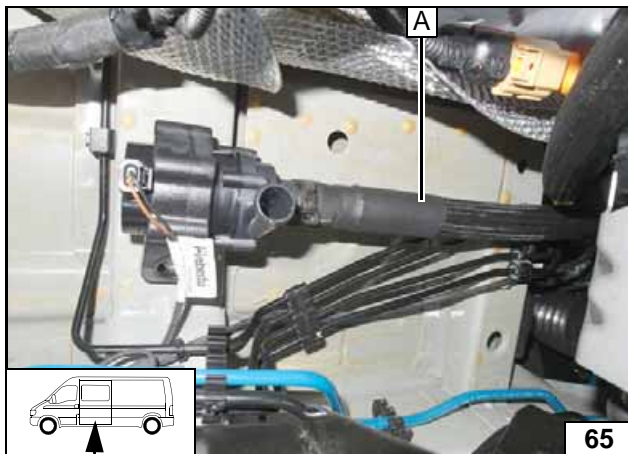
1 13x23 hose bracket

Routing in engine compartment

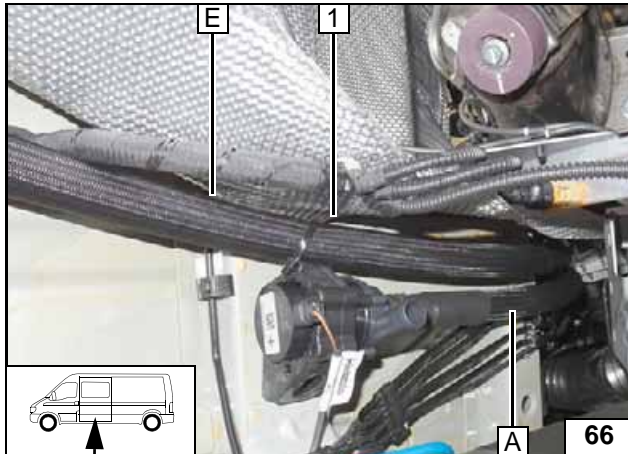


- 1 Circulating pump
- 2 Circulating pump mount
- 3 M6x25 bolt
- 4 Connector of circulating pump wiring harness

Installing circulating pump

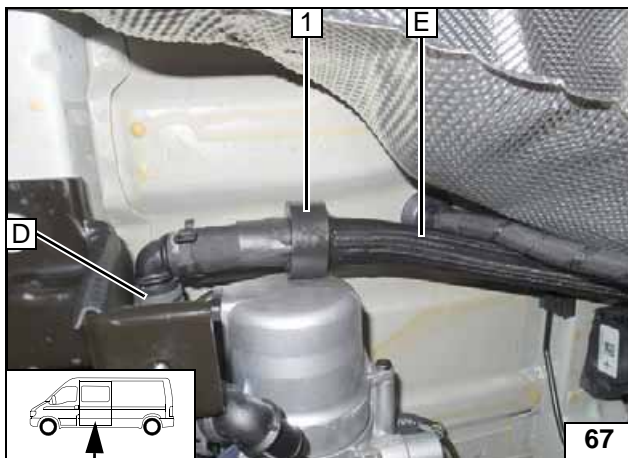


Connecting hose A



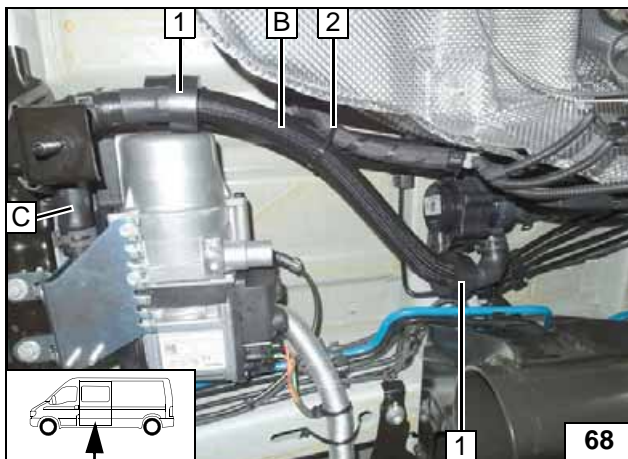
1 Cable tie

Routing hose E



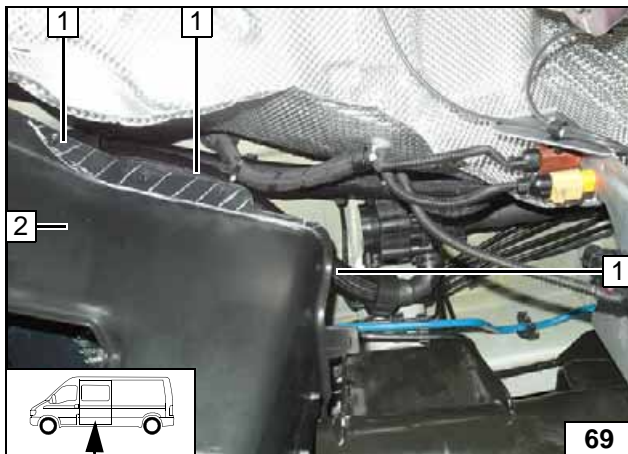
1 Black (sw) rubber isolator

Connect-
ing hose E



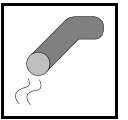
1 Black (sw) rubber isolator [2x]
2 Cable tie

Connect-
ing hose B



Install under-ride protection **2** for checking purposes. Ensure sufficient distance from neighbouring components **1**, correct if necessary. Remove under-ride protection.

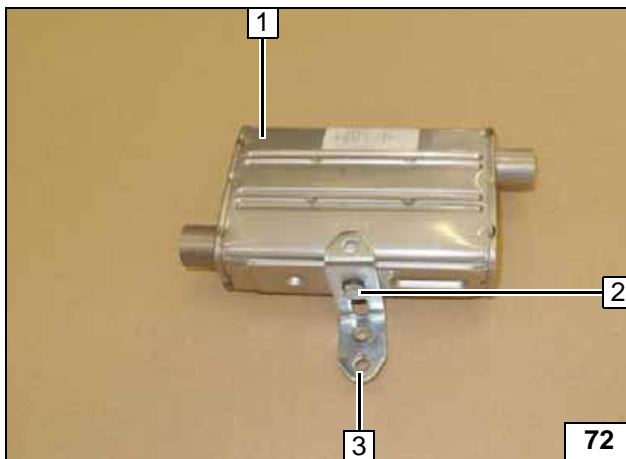
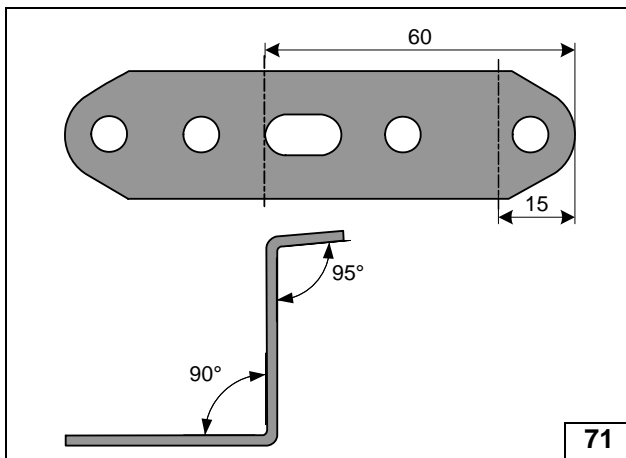
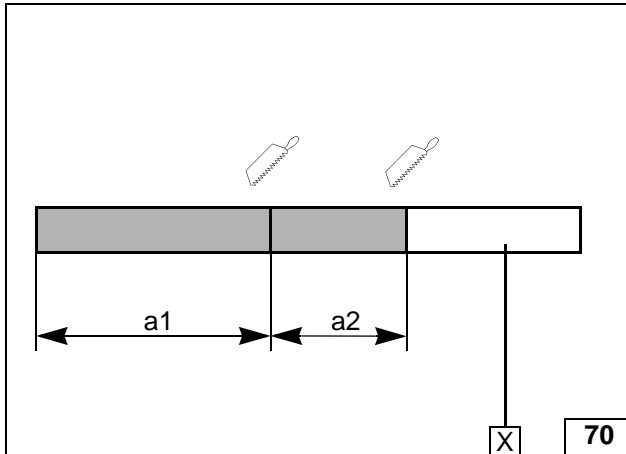
Routing in-
spection
using un-
derride pro-
tection



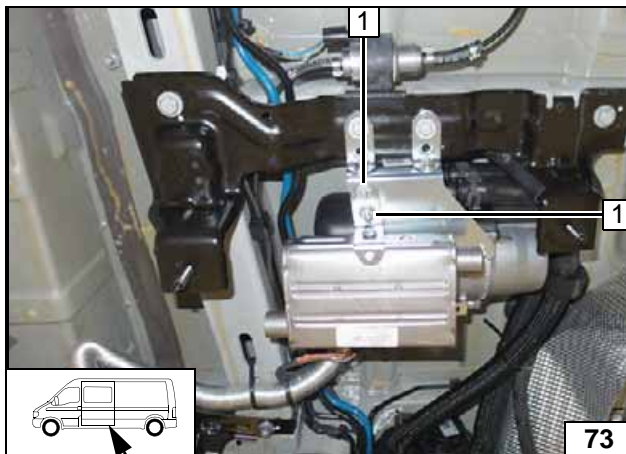
Exhaust Gas

a1 = 430
a2 = 215

X =



- 1 Silencer
- 2 M6x16 bolt, spring lockwasher
- 3 Perforated bracket



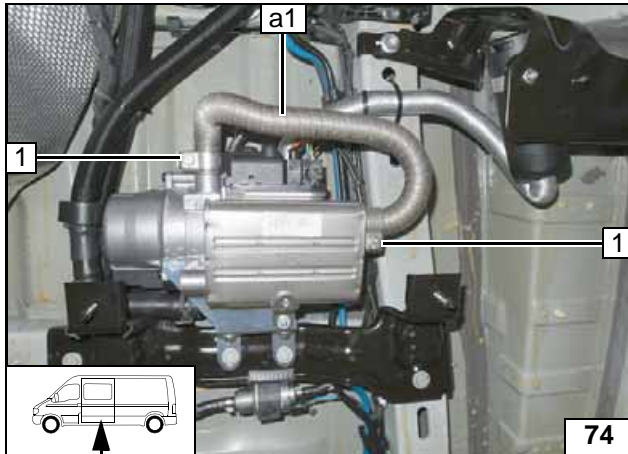
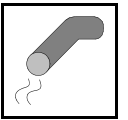
- 1 M6x20 bolt premounted, flanged nut [2x each]

Preparing exhaust pipe

Bending perforated bracket

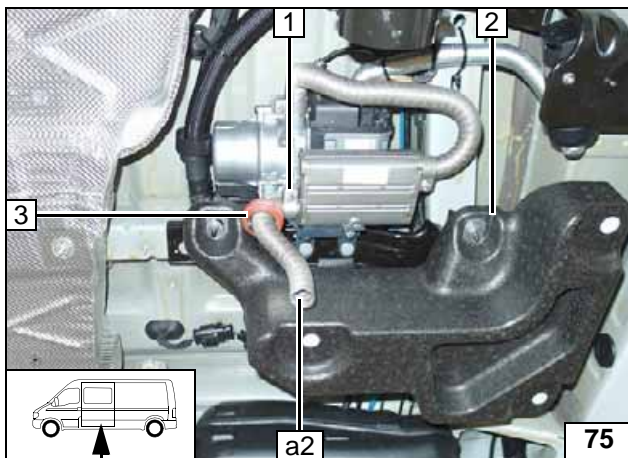
Premounting silencer

Installing silencer



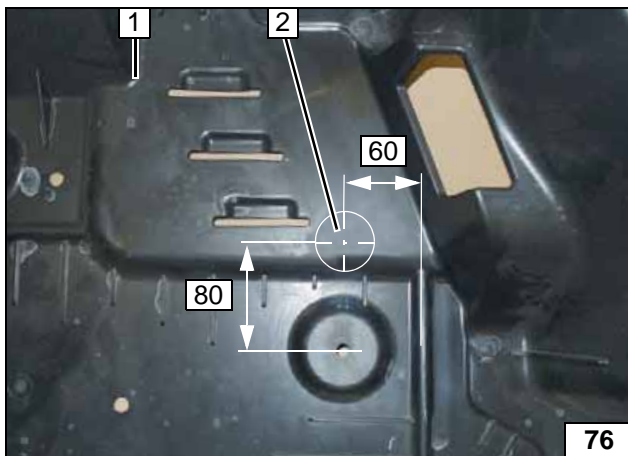
- 1 Hose clamp [2x]

Installing exhaust pipe a1



- 1 Hose clamp
- 2 Install original vehicle moulding
- 3 Spacer bracket

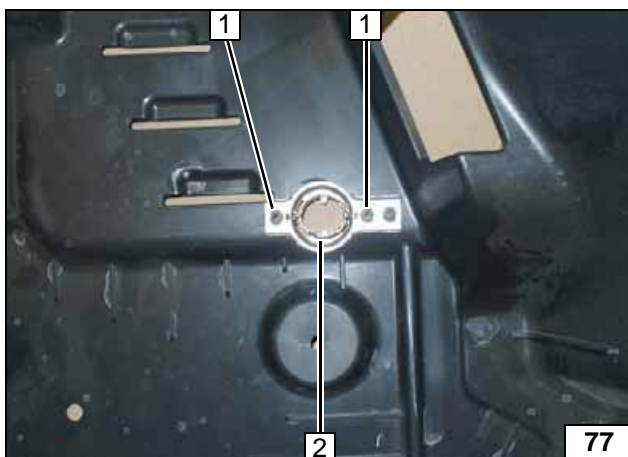
Installing exhaust pipe a2



- 1 Underride protection
- 2 Hole (as per work step 1 of the installation instructions)



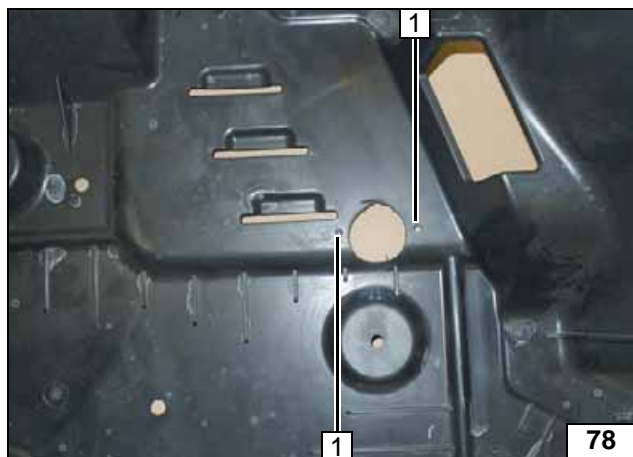
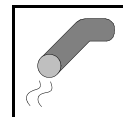
Installing exhaust end fastener



Position exhaust end fastener 2 as per work step 3 of the installation instructions and copy hole pattern 1 [2x].



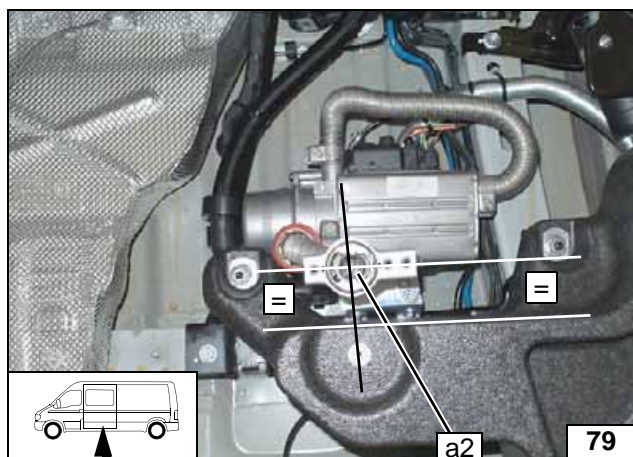
Copying hole pattern



Hole 1 [2x] as per work step 4 of the installation instructions.



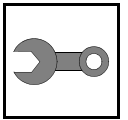
Holes in underderride protection



Install exhaust pipe a2 as per work steps 6 - 8 of the installation instructions and align as shown.



Installing exhaust end fastener

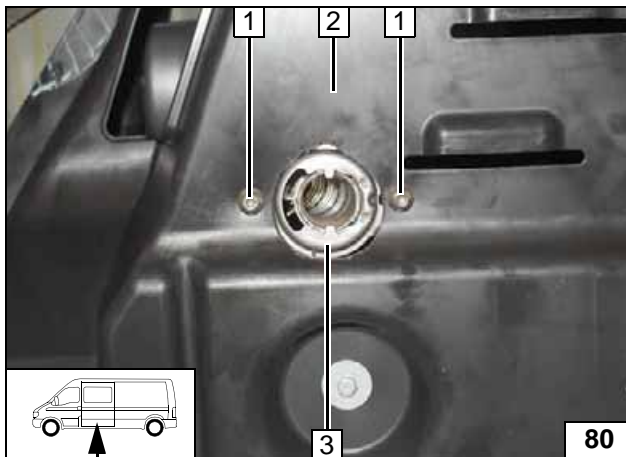


Final Work



Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back loose lines. Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Program MultiControl CAR, teach Telearstart transmitter.**
- **Make settings on the A/C control panel according to the 'operating instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**

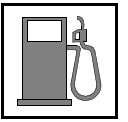


Install underdrive protection 2.

- 1 Self-tapping screw 5x13 [2x] as per work step 5 of the installation instructions
- 3 Exhaust end fastener

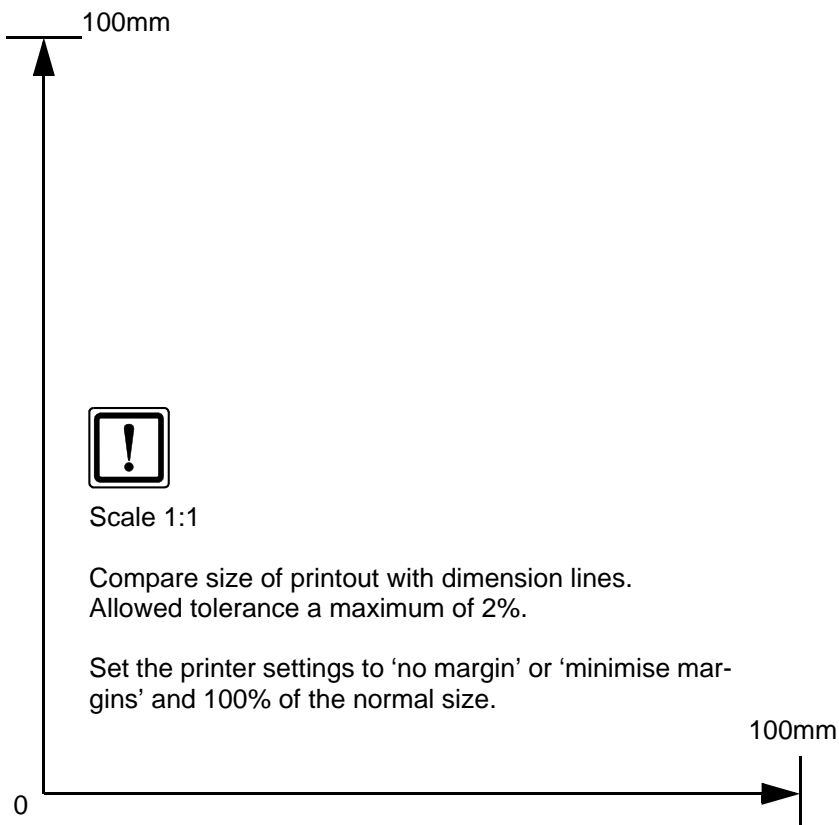
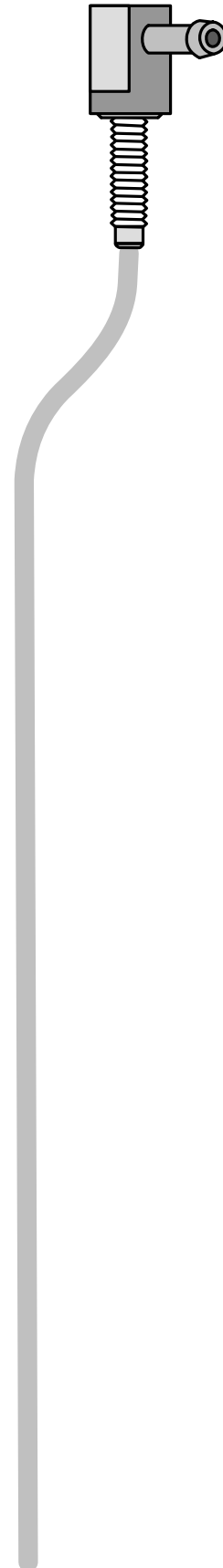
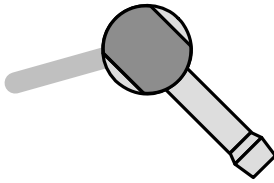


**Installing
exhaust
end fastener**



Fuel Standpipe Template Version 1

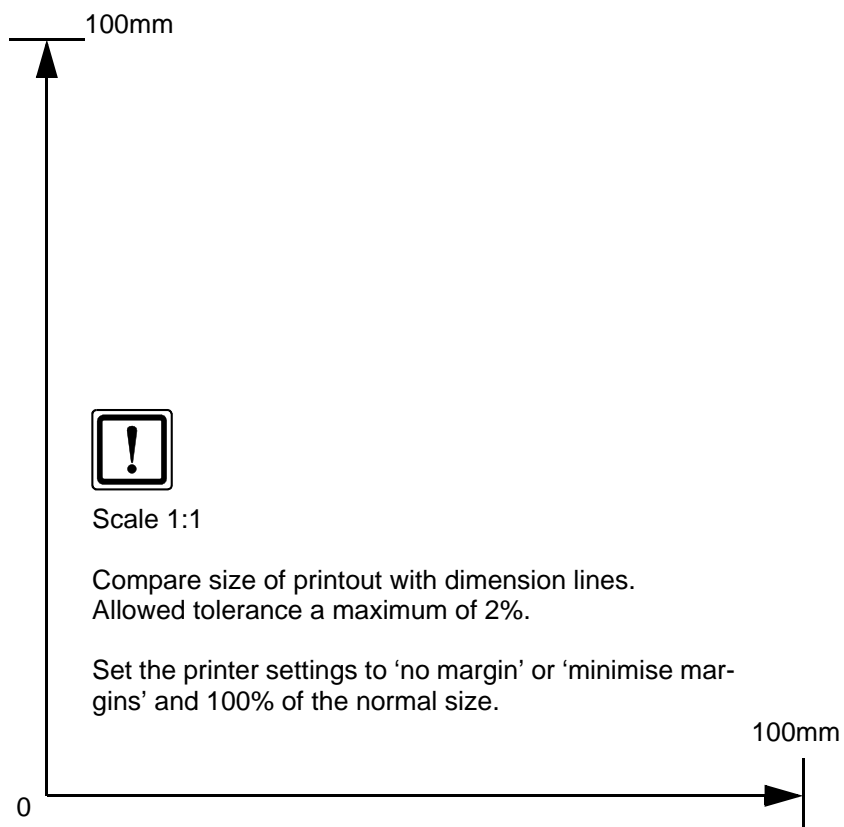
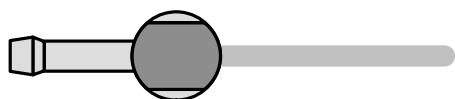
Top view





Fuel Standpipe Template Version 2

Top view



Operating Instructions for Climatic

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

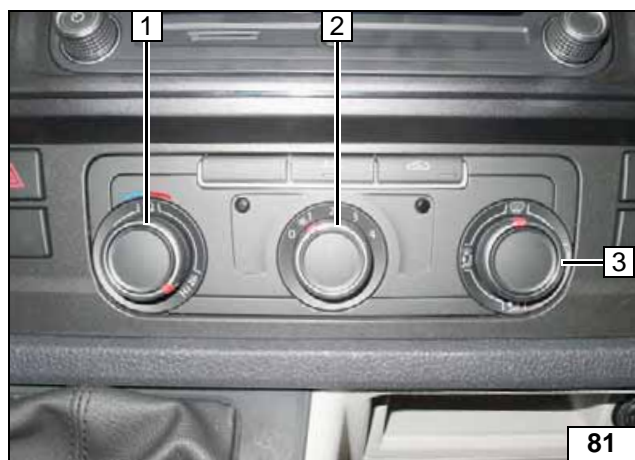
Example:

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.

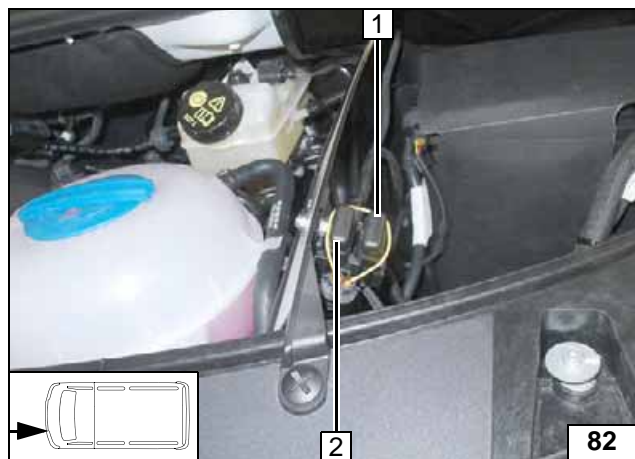
Before parking the vehicle, make the following settings:



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

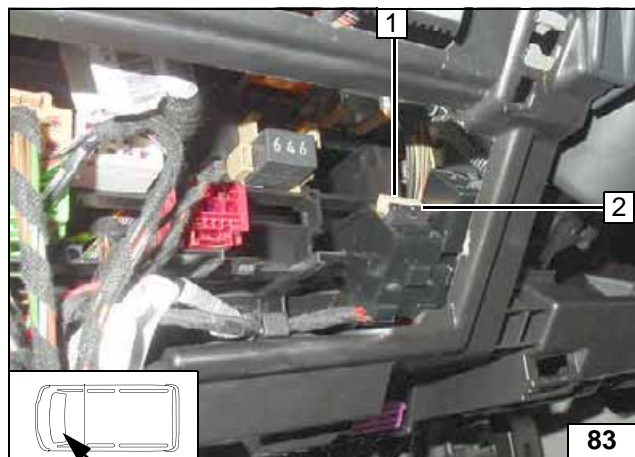


A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses

