

Air Heater

Air Top Evo 40 Air Heater



Installation Documentation

Renault Master / Opel Movano / Nissan NV400

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Renault	Master	MR	e2 * 2007 / 46 * 0016
Renault	Master	MR	e2 * 2007 / 46 * 0019
Renault	Master with Oberaigner conversion	MR	e2 * 2007 / 46 * 1192
Opel	Movano	MR	e2 * 2007 / 46 * 0362
Opel	Movano	MR	e1 * 2007 / 46 * 0471
Nissan	NV400	M1	e2 * 2007 / 46 * 0137

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
2.3 D	Diesel	6-speed SG	74	2299	M9T
2.3 D	Diesel	6-speed SG	92	2299	M9T
2.3 D	Diesel	6-speed AG	92	2299	M9T
2.3 D	Diesel	6-speed SG	107	2299	M9T
2.3 D	Diesel	6-speed SG	120	2299	M9T

SG = manual transmission

AG = Quickshift transmission

From model year 2010

Left-hand drive vehicle

Verified equipment variants: Van with partition wall
 Twin seat on the front passenger's side (with and without lateral trim)
 Front and rear-wheel drive (74kW, 92kW and 107kW only)
 120kW rear-wheel drive
 120kW all-wheel drive, Oberaigner conversion

Not verified: Alarm system
 Single front passenger seat bench

Total installation time: approx. 8.5 hours

Renault Master / Opel Movano / Nissan NV400

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Necessary Components

- Basic delivery scope of *Air Top Evo 40* according to price list
- Installation kit for Renault Master / Opel Movano / Nissan NV400 2010 Diesel: **1316147C**
- Additionally required in case of exhaust silencer option: Exhaust silencer kit **1311960A**
- Additionally required for heater control option in consultation with end customer and based on price list:
 - SmartControl / MultiControl HD heater control: **see price list**
 - ThermoCall heater control: **see price list**
 - Heater control wiring harness extension **1319724_**
 - Bag of external temperature sensor (in case of cargo space temperature control): **93205_**

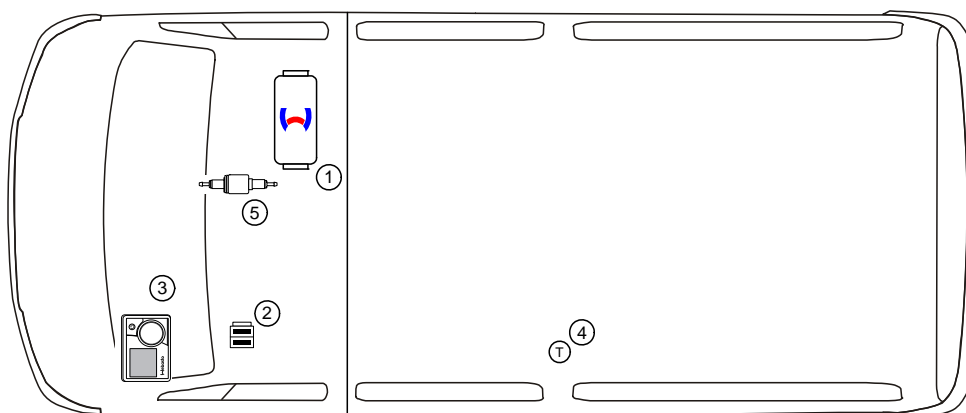
Note:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Thermo Call should be confirmed with the end customer.
- The position of the external temperature sensor should be confirmed with the end customer.
- The position of the cargo space air outlet should be confirmed with the end customer.

Installation Overview

Legend:

1. Heater
2. Heater fuse
3. SmartControl HD/
MultiControl HD
4. External room temperature
sensor
5. 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 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).

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	AT 40
Heating Directive ECE R122	E1 00 0385
EMC Directive ECE R10	E1 03 5529

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./ 7.1. (Annex 7) A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. / 5.3. VEHICLE INSTALLATION REQUIREMENTS

2.1. / 5.3.1. (Part I) Scope

2.1.1. / 5.3.1.1 (Part I) Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. / 5.3.1.2 (Part I) Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. / 5.3.2. (Part I) Positioning of heater

2.2.1. / 5.3.2.1. (Part I) 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. / 5.3.2.2. (Part I) 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. / 5.3.2.3. (Part I) 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 / paragraph 5.3.2.2. (Part I) may be used.

2.2.4. / 5.3.2.4. (Part I) The label as per section 1.4. / Annex 7 Subsection 1.4 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. / 5.3.2.5. (Part I) Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. / 5.3.3. (Part I) Fuel Supply

2.3.1. / 5.3.3.1. (Part I) 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. / 5.3.3.2. (Part I) 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. / 5.3.3.3. (Part I) 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. / 5.3.4. (Part I) Exhaust system

2.4.1. / 5.3.4.1. (Part I) 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. / 5.3.5. (Part I) Combustion Air Inlet

2.5.1. / 5.3.4.1. (Part I) The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. / 5.3.5.2. (Part I) The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. / 5.3.6. (Part I) Heating air inlet

2.6.1. / 5.3.6.1. (Part I) 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. / 5.3.6.2. (Part I) The inlet duct must be protected by mesh or other suitable means.

2.7. / 5.3.7. (Part I) Heating Air Outlet

2.7.1. / 5.3.7.1. (Part I) 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. / 5.3.7.2. (Part I) 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.

Renault Master / Opel Movano / Nissan NV400

Information on Validity

This installation documentation applies to Renault Master / Opel Movano / Nissan NV400 Diesel vehicles - for validity, see page 1 - from model year 2010 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

- Torque wrench for 2.0 - 10 Nm
- Webasto flattening tool ident. No.: 1319729A
- Hole circle bit 81 mm dia., 84 mm dia.
- Automatic wire stripper, 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector, 0.5 - 6mm²
- 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 value of M6 heater nuts = 6Nm +1Nm.
- Tighten bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art technology.





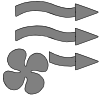









Installation of heater

- A seal has to be attached between heater and body and must also be replaced prior to every installation.

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		Specific risk of injury or fatal accidents.	
Electrical System		Specific risk due to electrical voltage.	
Hot Air		Specific risk of damage to components.	
Combustion Air		Specific risk of fire and explosion.	
Fuel		Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.	
Exhaust Gas		Reference to a special technical feature.	
Software		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.	

Renault Master / Opel Movano / Nissan NV400

Preliminary Work

Vehicle

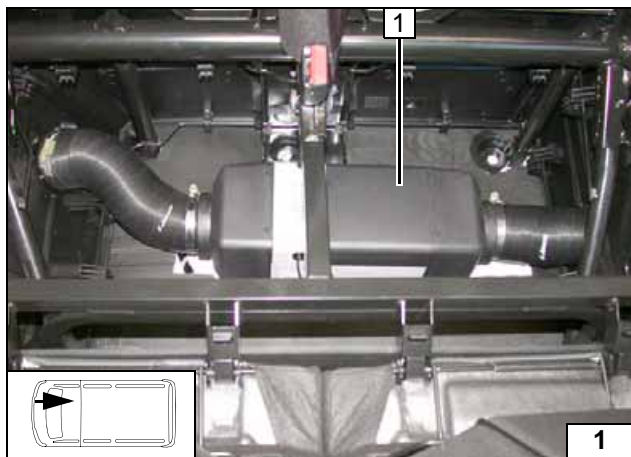
- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Remove the twin seat on the front passenger's side.
- Remove the driver's seat.
- Remove the trim of the front passenger bench seat on the left- and right-hand sides (if present).
- Remove the instrument panel trim on the driver's side.

Only carry out the following steps during the corresponding installation sequence:

- Remove the fuel tank according to the manufacturer's instructions.
- 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.



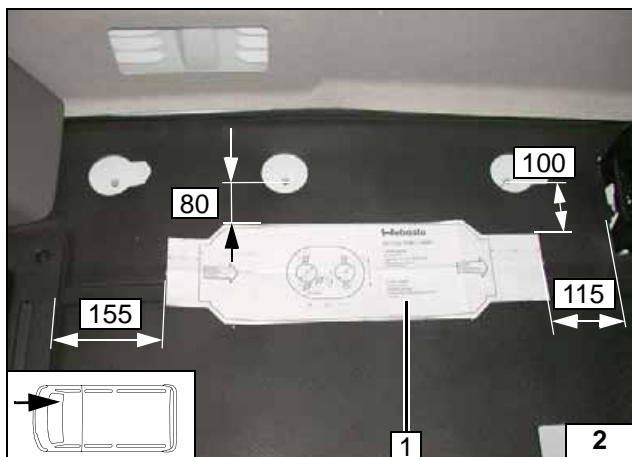
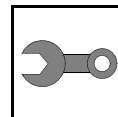
Heater Installation Location

Figure shows vehicle with trim on the left and right side of the front passenger bench seat.

- 1 Heater



Installation location

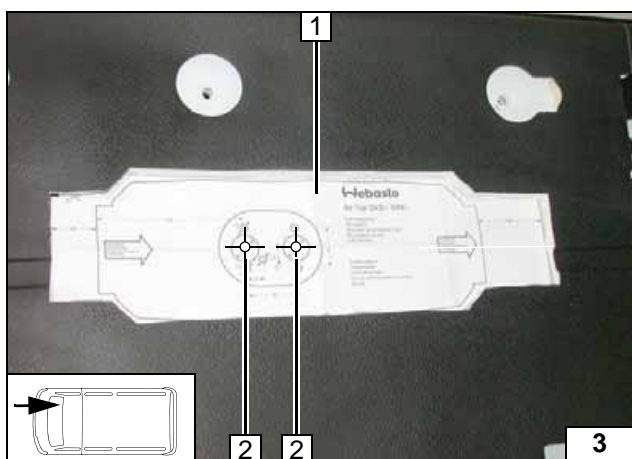


Preparing Installation Location

Place template 1 and copy outline. Cut out floor covering using suitable means, be mindful of underlying components.



Cutting out floor covering

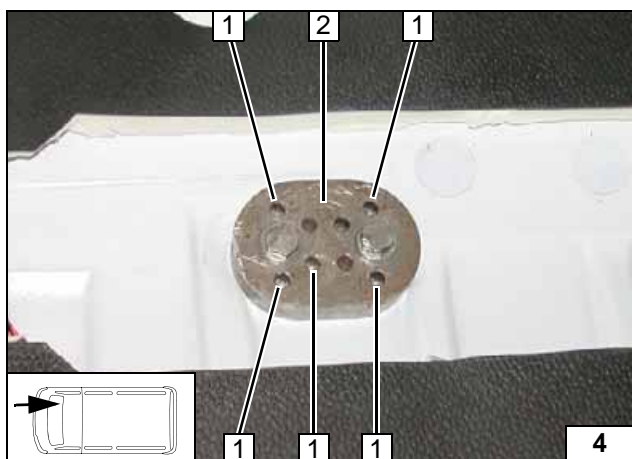


Place and align template 1.

2 Copy hole pattern, 12mm dia. hole [2x]



Holes for flattening tool



Install flattening tool 2 and flatten underbody (use Webasto flattening tool).

1 7 mm dia. hole [5x]



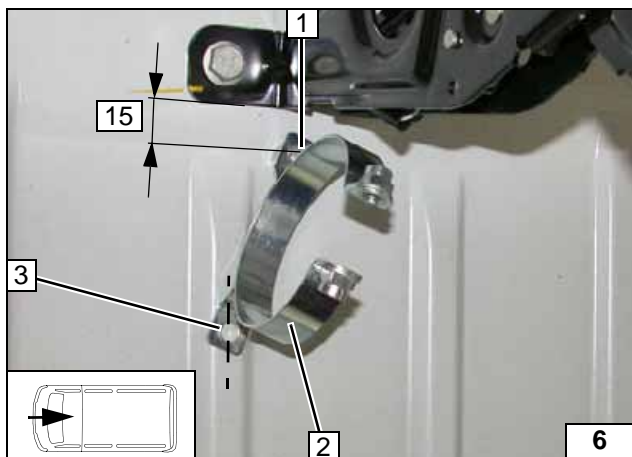
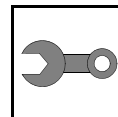
Flattening underbody



Remove flattening tool. Enlarge holes at position 1 [2x] to 26 mm dia. Provide corrosion protection for all holes.



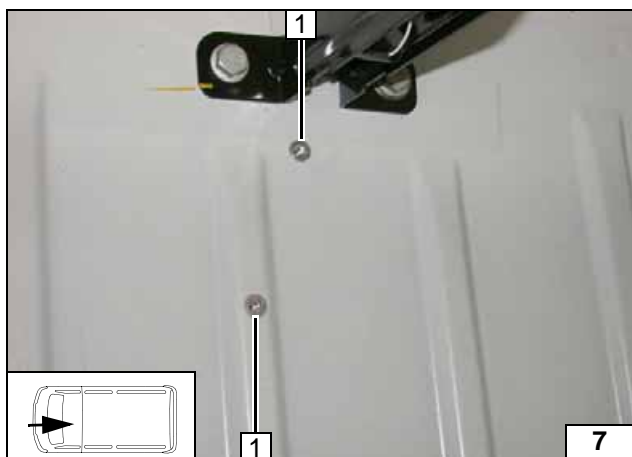
Enlarging holes



Fold back floor covering.
Position and align console of distributor **2** at position **3** in the centre of the corrugation.
Copy hole pattern at position **1** and **3**.



Hole pattern for console of distributor

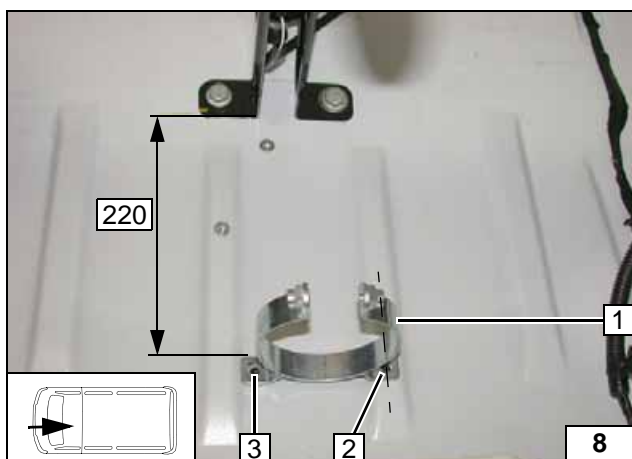


When drilling, pay attention to the underlying tank!



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

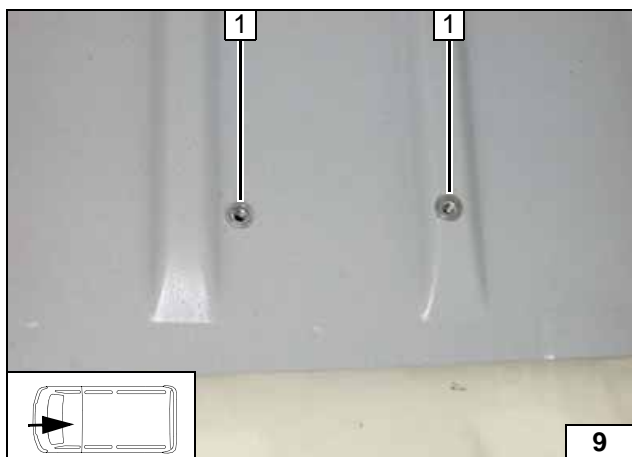
Rivet nuts for console of distributor



Position and align console of air outlet **1** at position **2** in the centre of the corrugation.
Copy hole pattern at position **2** and **3**.



Hole pattern for console of air outlet

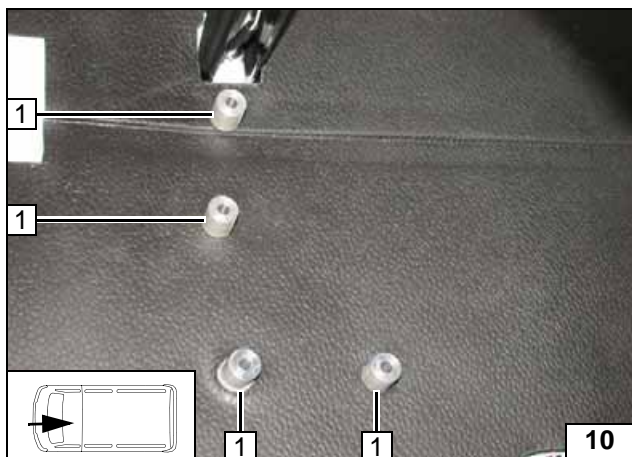


When drilling, pay attention to the underlying tank!



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

Rivet nuts for console of air outlet

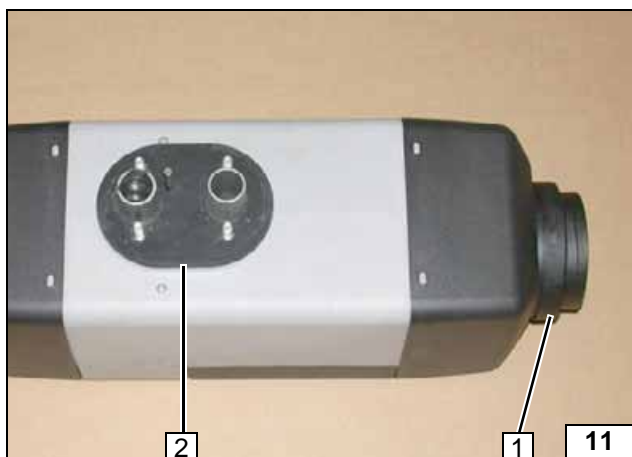


Copy hole pattern of rivet nuts on the re-
placed floor covering.

- 1 22 mm dia. cutout, 40 mm shim [4x each]



**Inserting
shims**



Preparing Heater

- 1 90x80 reducer
- 2 Install base seal

**Preparing
heater**



**Only in case of vehicles without trim on
the right side of the front passenger bench
seat.**

- 1 Intake side of the air outlet



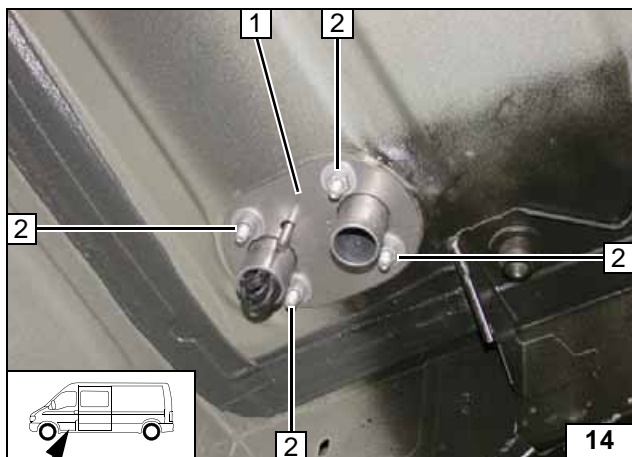
**Preparing
heater**



Installing Heater

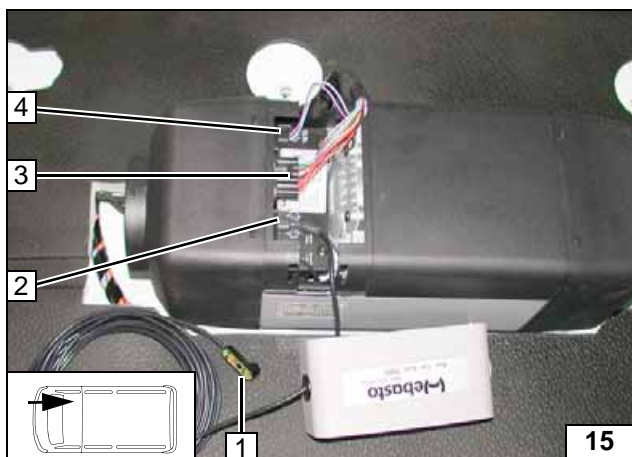


**Aligning
heater**



- 1 Mounting panel
- 2 Large diameter washer, spring lockwasher, nut [4x each]

Installing heater



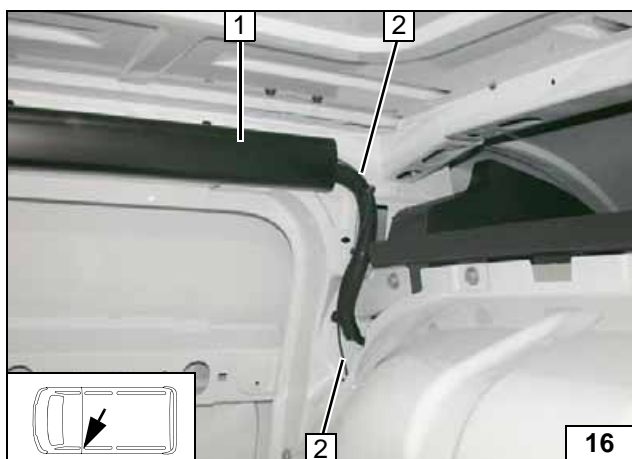
Optional external temperature sensor (in case of cargo space temperature control):

- 1 External temperature sensor
- 2 Socket of temperature sensor
- 3 Heater wiring harness

Preparing heater

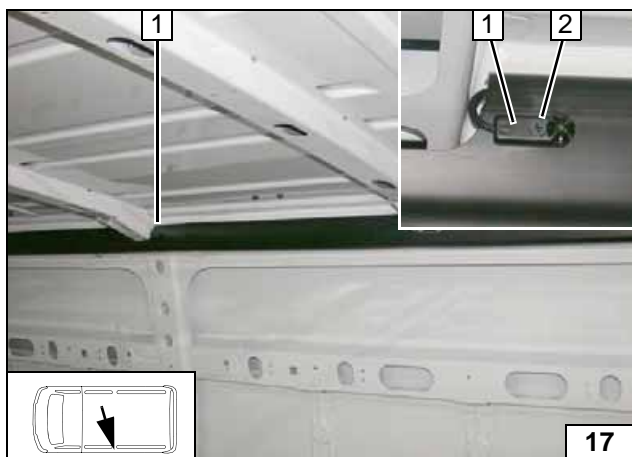
ADR option:

Remove rubber plug at position 4 and connect ADR connector to heater.



Route external temperature sensor 2 in original vehicle cable duct 1 to the rear left part of the cargo space.

Routing of external temperature sensor



The position of external temperature sensor 1 should be confirmed with the end customer. Adapt if necessary.

- 2 4x13 mm countersunk head screw

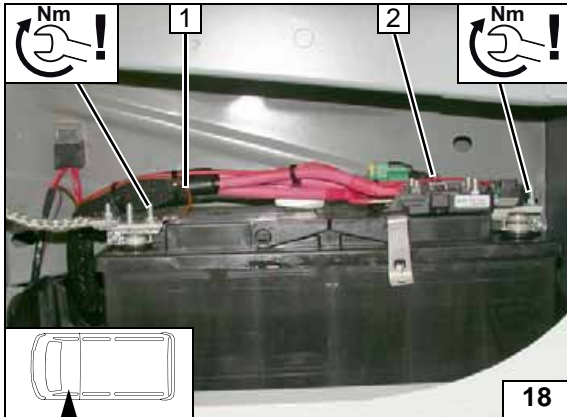
Installation of temperature sensor



Electrical System

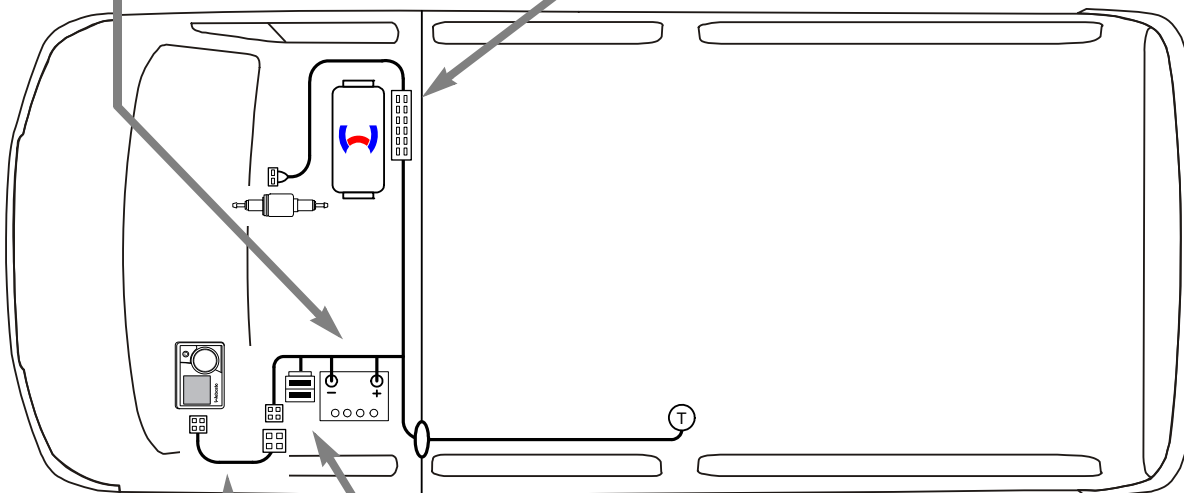
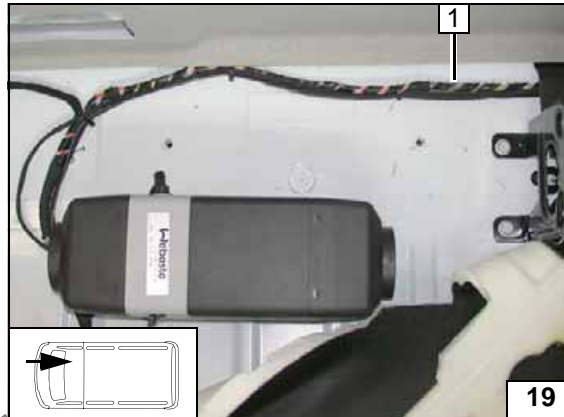
Positive and earth wire

- 1 Earth wire on negative battery terminal
- 2 Pull positive wire into protective sleeving, connect to positive battery terminal

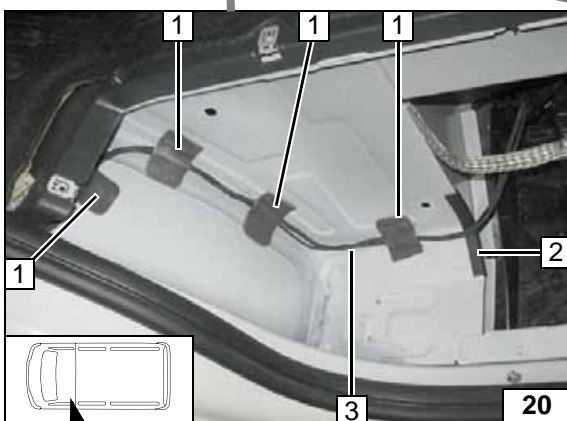


Wiring harness routing

- 1 Heater wiring harness, heater control wiring harness, external temperature sensor



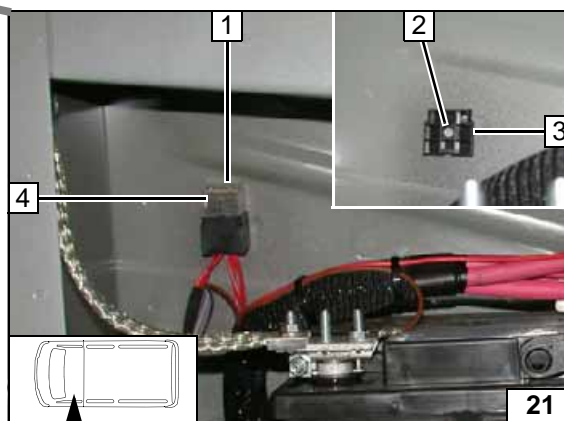
Wiring harness routing diagram



Routing wiring harnesses

Cut damping strips 1 at the centre. Route wiring harness of heater control 3 to the centre section (radio).

- 2 100 mm long edge protection

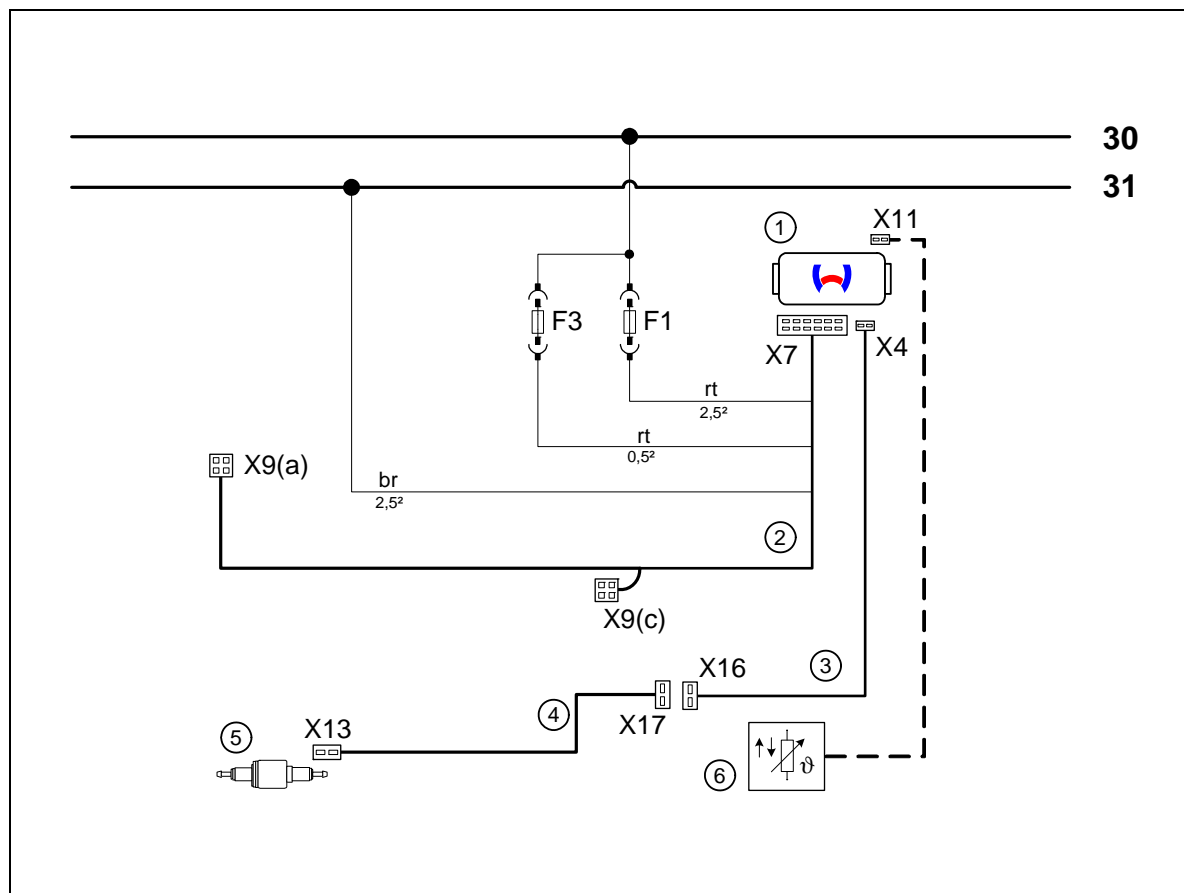


Fuse holder

Drill 4 mm dia. hole at position 2 in the rear wall of the battery carrier. Fasten retaining plate of fuse holder 3 with 4x12 countersunk head screw. Complete fuses F1 1 and F3 4.



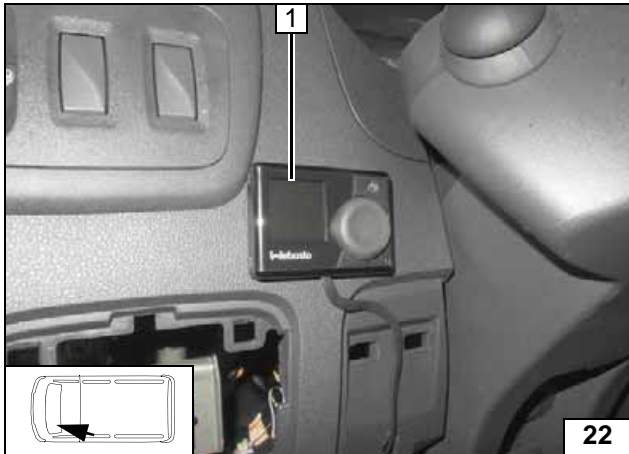
Heater Control Connection Diagram



**Conne-
tion dia-
gram**

Components		Colours and symbols	
①	AT Evo 40 heater	rt	red
X11	2-pin connector of external room temperature sensor B4	br	brown
X4	2-pin socket of metering pump connecting wire		
X7	12-pin heater connector		
F1	20 A heater fuse (included in wiring harness)		
F3	1A heater control fuse (included in wiring harness)		
X9(a)	Remains free		
②	Wiring harness of heater		
X9(c)	4-pin connector of MultiControl, TC4		
③	Connecting wire of metering pump		
X16	2-pin connector of metering pump connecting wire		
X17	2-pin connector of metering pump wiring harness		
④	Metering pump wiring harness		
X13	2-pin connector of metering pump		
⑤	Metering pump		
⑥	External room temperature sensor B4		
		Wiring colours may vary.	

Legend

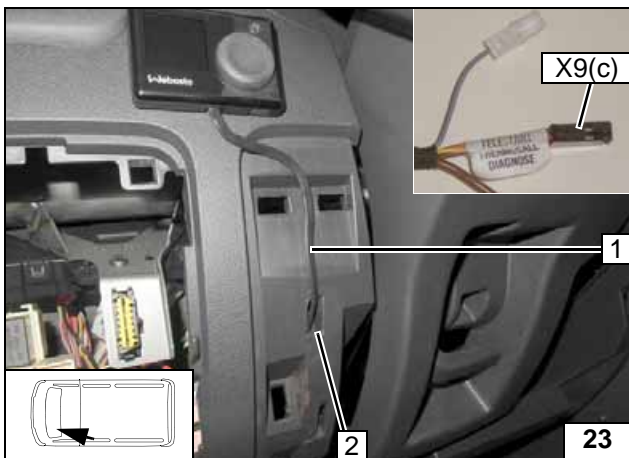


SmartControl/ MultiControl HD

Install SmartControl/ MultiControl HD 1 using provided adhesive tape.
Use heater control wiring harness extension.

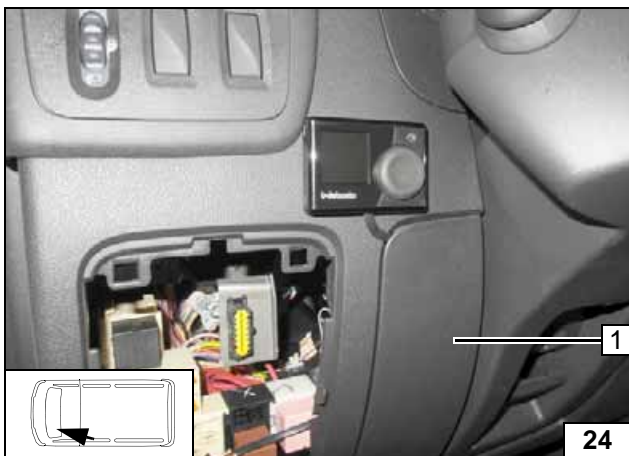


Installing SmartControl/ MultiControl HD



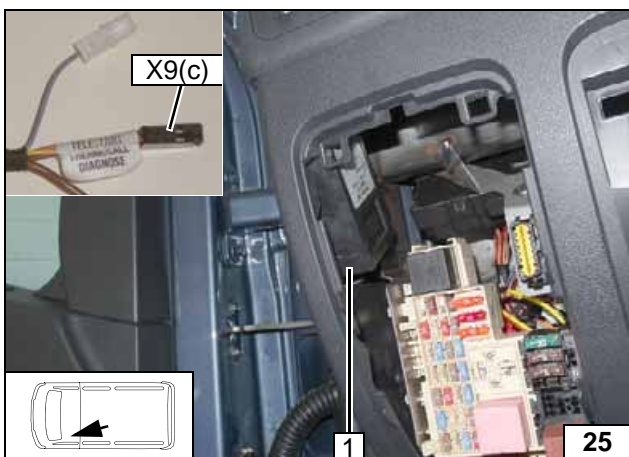
- 1 Connect wiring harness of SmartControl / MultiControl HD to wiring harness extension
- 2 Enlarge wiring harness pass through to a width of 20mm

Routing wiring harness



- 1 Cover

Installing cover

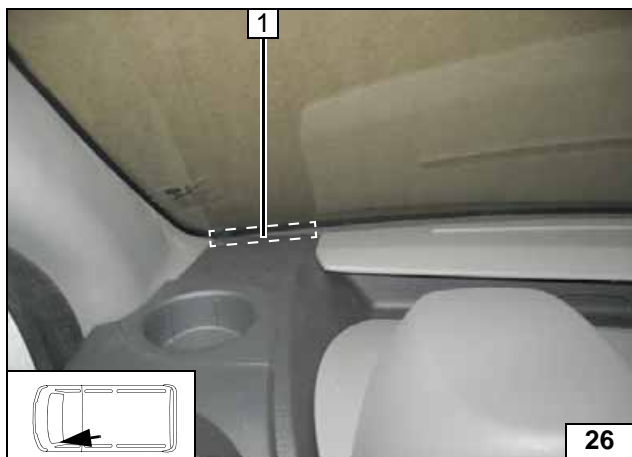
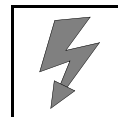


ThermoCall Option

Fasten receiver with double-sided adhesive tape.

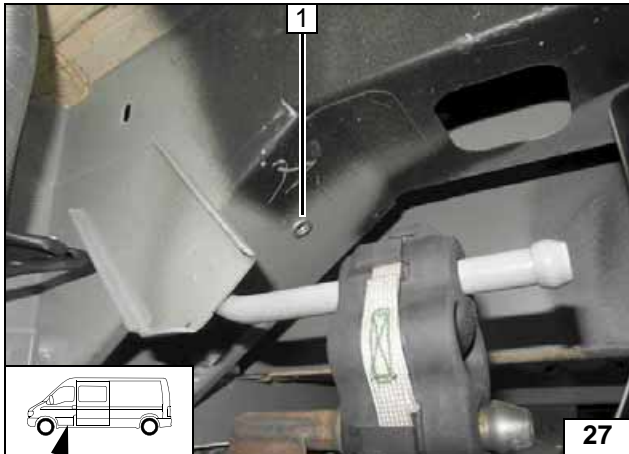
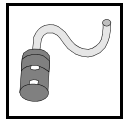


Installing receiver



1 Aerial (optional)

Installing
aerial



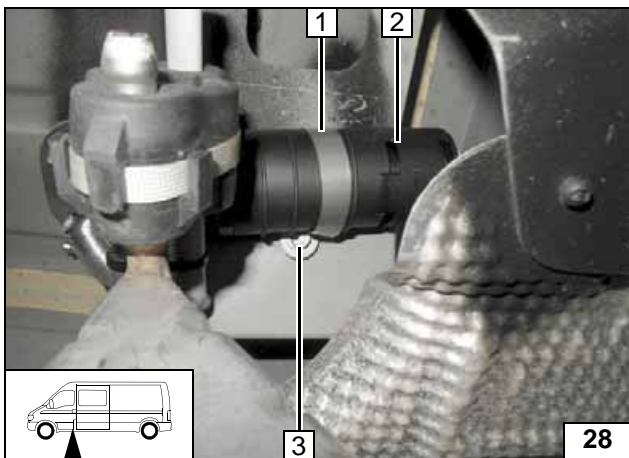
Combustion Air

If there is no hole present, drill a 9.1mm dia. hole as shown.

- 1 Rivet nut

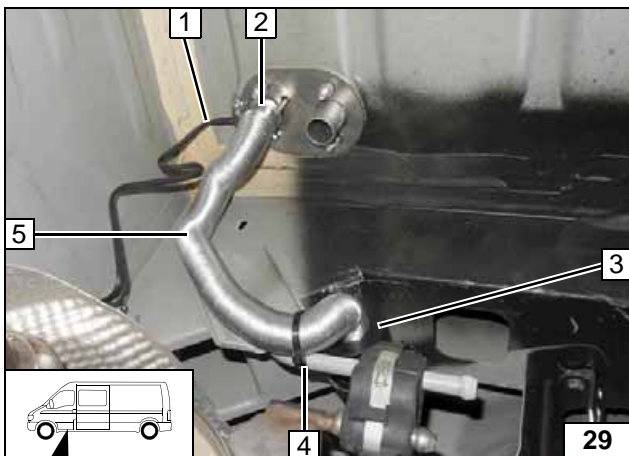


Installing rivet nut



- 1 48mm dia. P-clamp, rubber coating removed
- 2 Silencer
- 3 M6x20 bolt, spring lockwasher, large diameter washer on rivet nut

Installing silencer

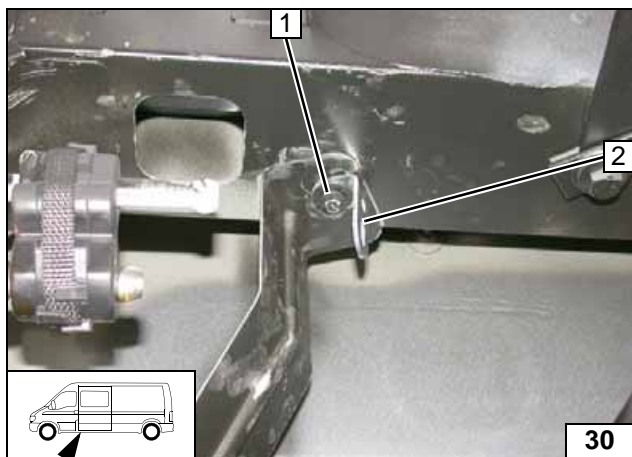
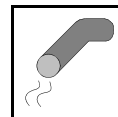


Disconnect wiring harness of metering pump **1** from air intake connection piece and route through guide slit in connection piece to the outside.

- 2 27 mm dia. clamp
- 3 Silencer
- 4 Cable tie
- 5 Combustion air pipe



Installing combustion air pipe



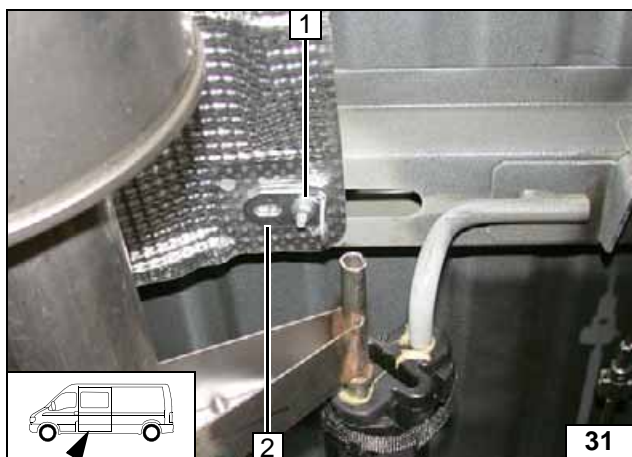
Exhaust Gas

The installation of the exhaust system is dependent on the respective vehicle equipment and is differentiated between versions **A** and **B**.

Version A:

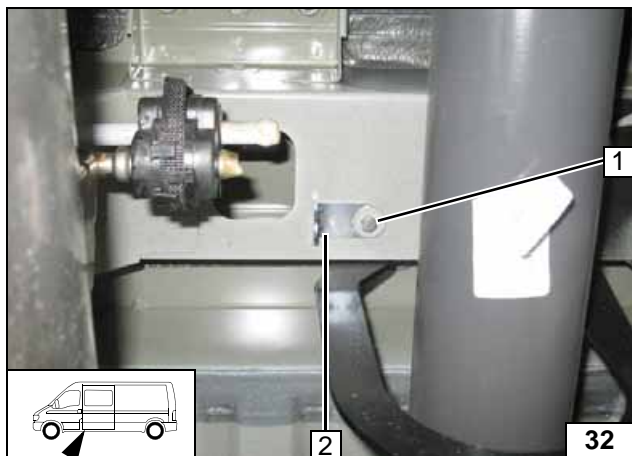
- 1 Original vehicle bolt
- 2 Angle bracket

Installing angle bracket



- 1 Flanged nut, existing stud bolt
- 2 Angle bracket

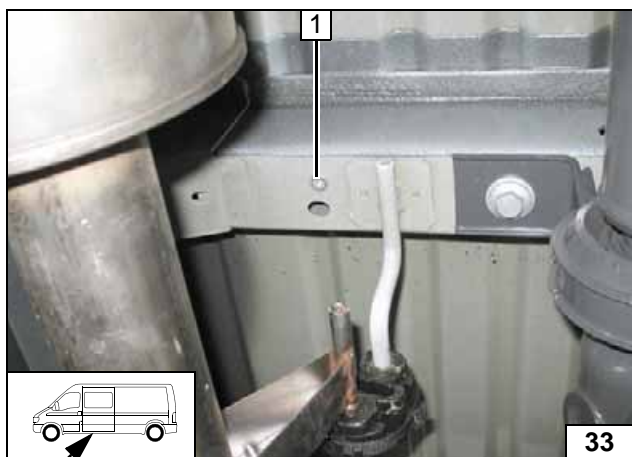
Installing angle bracket



Version B:

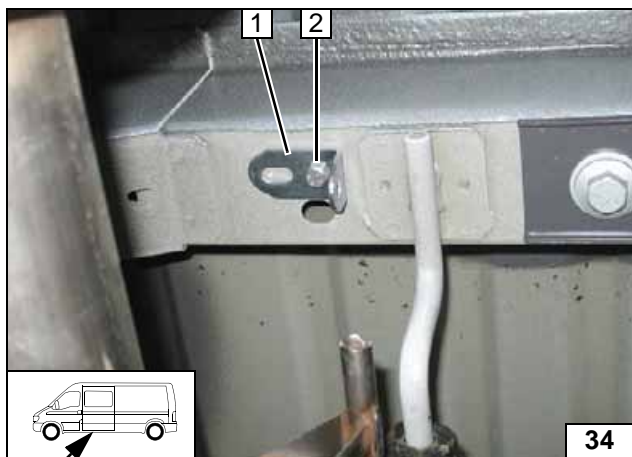
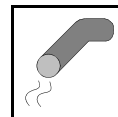
- 1 M6x20 bolt, spring lockwasher, large diameter washer, existing threaded hole
- 2 Angle bracket

Installing angle bracket



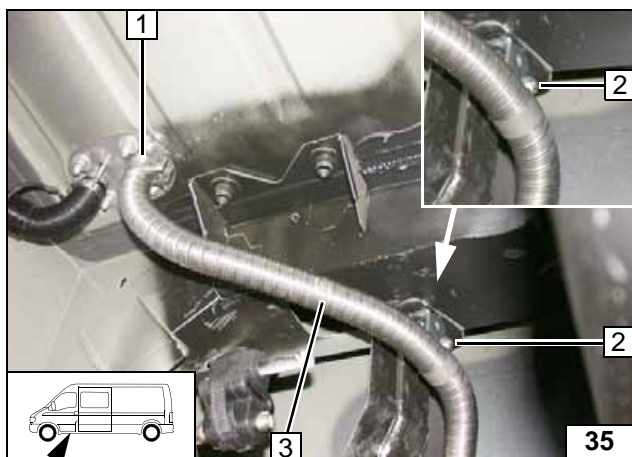
- 1 9.1 mm dia. hole; rivet nut

Installing rivet nut



- 1 Angle bracket
- 2 M6x20 bolt, spring lockwasher

Installing angle bracket

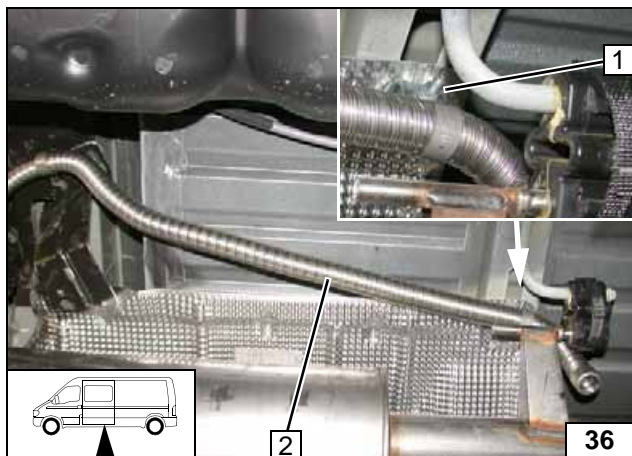


Exhaust without silencer

The next figures show vehicle equipment for version **A!**

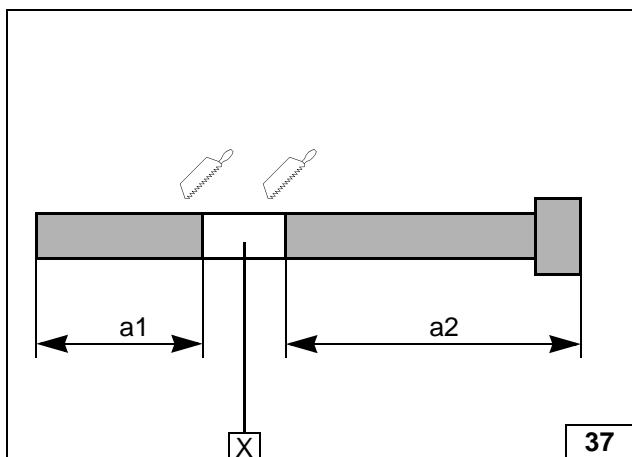
- 1 Hose clamp
- 2 M6x20 bolt, p-clamp, flanged nut
- 3 Exhaust pipe

Installing exhaust pipe



- 1 M6x20 bolt, p-clamp, flanged nut
- 2 Exhaust pipe

Installing exhaust pipe

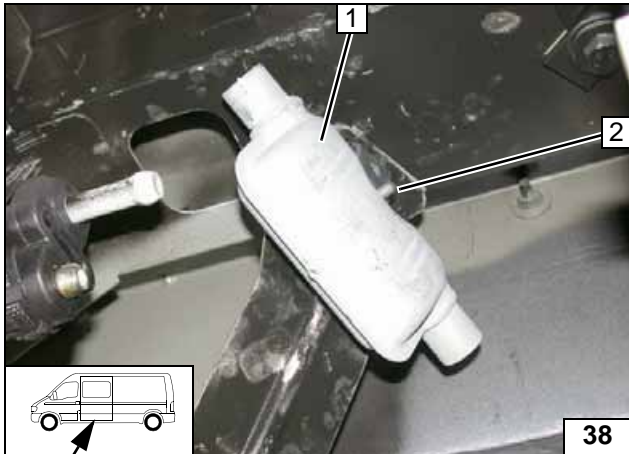


Option exhaust with silencer

- a1 = 320
- a2 = 690

X =

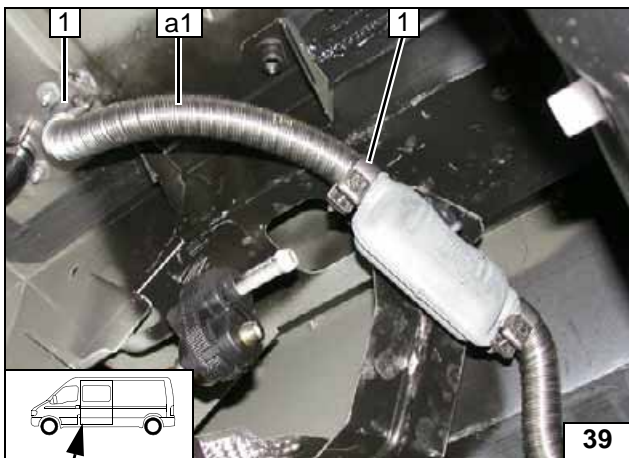
Preparing exhaust pipe



The next figures show vehicle equipment for version **A!**

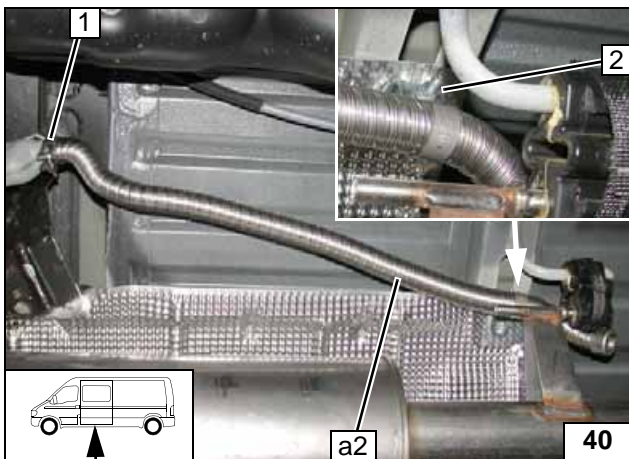
- 1 Silencer
- 2 M6x20 bolt, flanged nut

Installing silencer



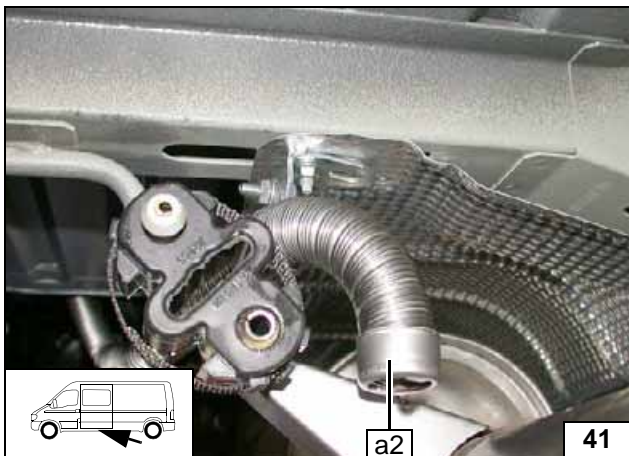
- 1 Hose clamp [2x]

Installing exhaust pipe a1



- 1 Hose clamp
- 2 M6x20 bolt, p-clamp, flanged nut

Installing exhaust pipe a2



Aligning exhaust pipe a2



Fuel Connection

CAUTION!

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

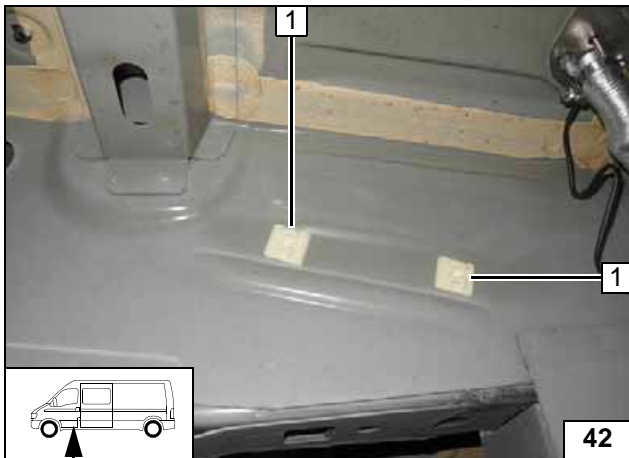
Catch any fuel running off in an appropriate container.

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.

WARNING!

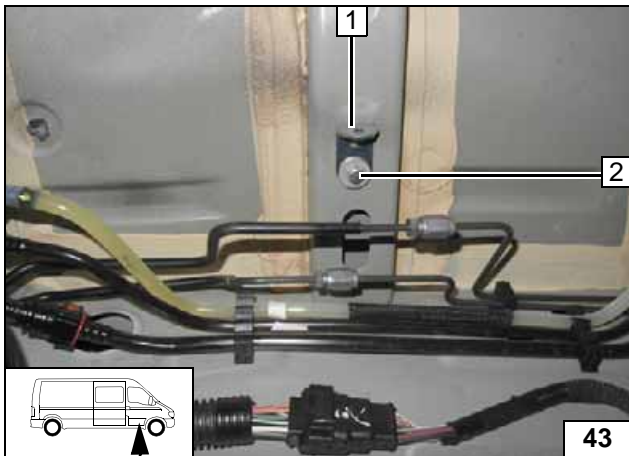
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Degrease bonding surfaces beforehand.

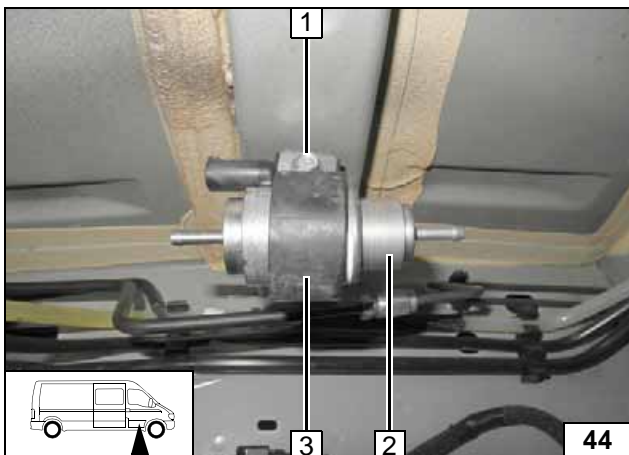
- 1 Adhesive base [2x]

Sticking on adhesive base



- 1 Angle bracket
- 2 M6x20 bolt, large diameter washer [2x], flanged nut

Installing angle bracket



- 1 M6x25 bolt, support angle bracket, flanged nut
- 2 Metering pump
- 3 Metering pump mount



Installing metering pump



Versions of fuel extraction



Fuel extraction



Fuel extraction



Fuel extraction

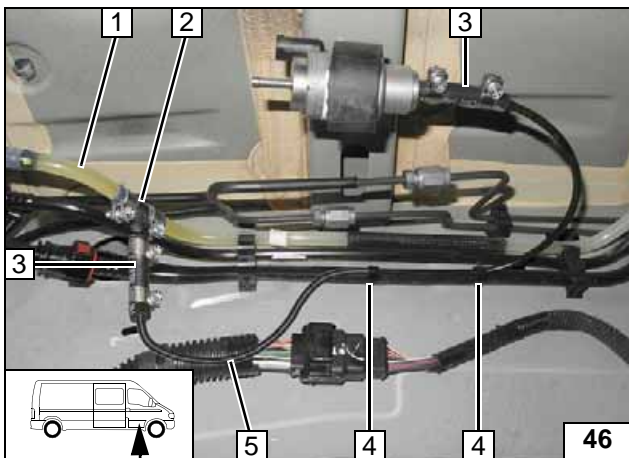


Version 1.

Vehicle with hand pump 1 (without pre-feed pump in tank), fuel extraction with T-piece in supply line.

Version 2 and version 3.

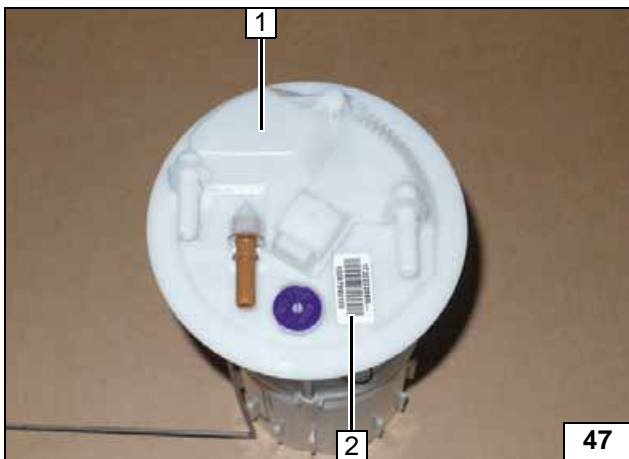
Vehicle without hand pump 1 (with pre-feed pump in tank): Fuel extraction with fuel standpipe in the fuel tank sending unit.



Version 1

Cut off fuel supply line 1 at position 2. Check the position of the components; correct if necessary. Check that they have freedom of movement.

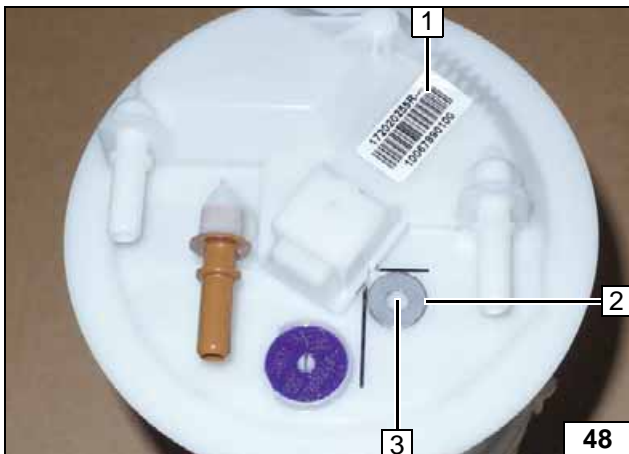
- 2 8x5x8 fuel standpipe, 10mm dia.clamp [2x]
- 3 Hose section [2x], 10 mm dia. clamp [4x]
- 4 Cable tie [2x]
- 5 Fuel line from fuel standpipe



Version 2

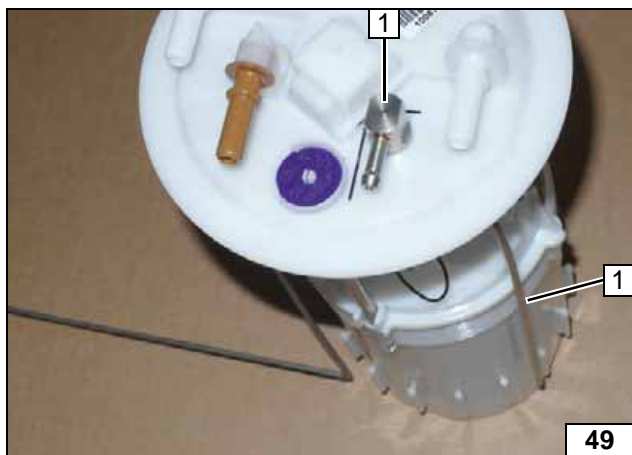
Remove fuel tank and fuel tank sending unit 1 in accordance with manufacturer's instructions.

- 2 Remove bar code label



Place washer with outer dia. $d_a = 14.6\text{mm}$ 2 against the ridges (see markings).

- 1 Stick bar code label on again
- 3 Copy hole pattern, 6 mm dia. hole



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



Installing fuel standpipe

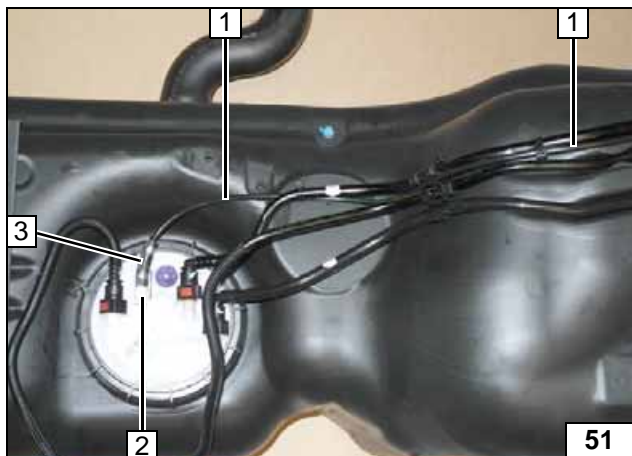


Insert three washers with outer dia. $d_a = 12\text{mm}$ as height compensation at position 1.



2 Fuel standpipe

Installing fuel standpipe

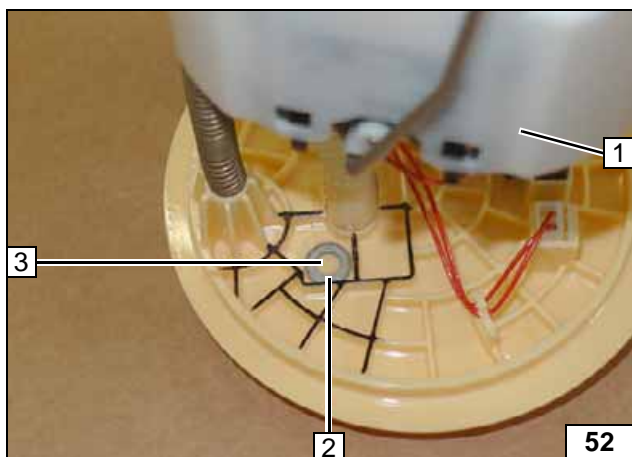


Install fuel tank sending unit and fuel tank in accordance with manufacturer's instructions.



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

Connecting fuel line



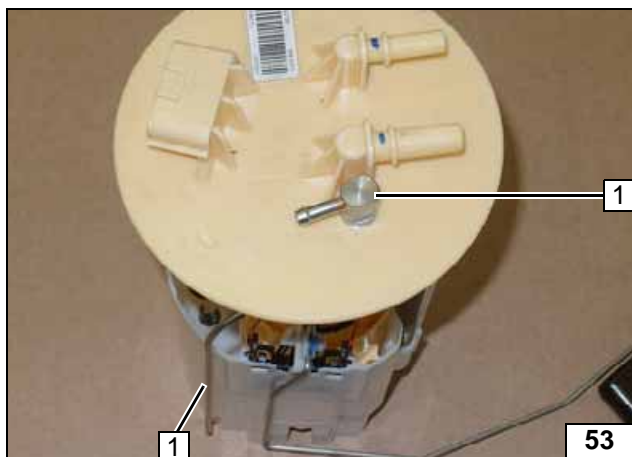
Version 3

Remove fuel tank and fuel tank sending unit 1 in accordance with manufacturer's instructions. Place washer with outer dia. $d_a = 12\text{mm}$ 2 against the marked ribs.



3 Copy hole pattern, 6 mm dia. hole

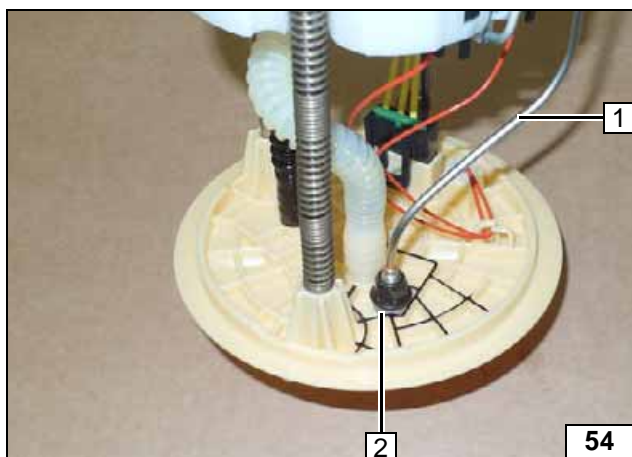
Fuel extraction



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



Installing fuel standpipe

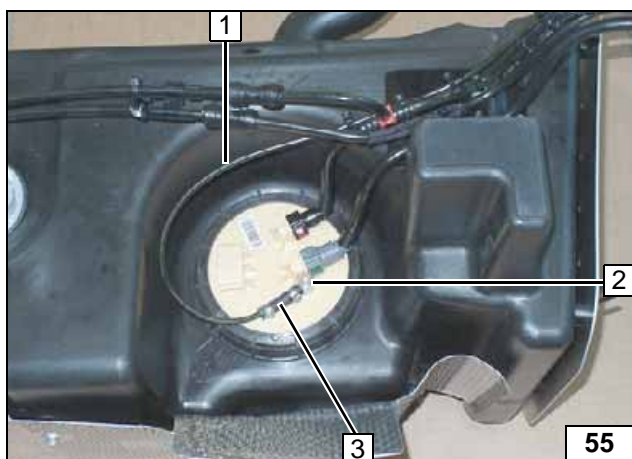


Insert three washers with outer dia. $d_a = 12$ mm as height compensation at position 2.



- 1 Fuel standpipe

Installing fuel standpipe

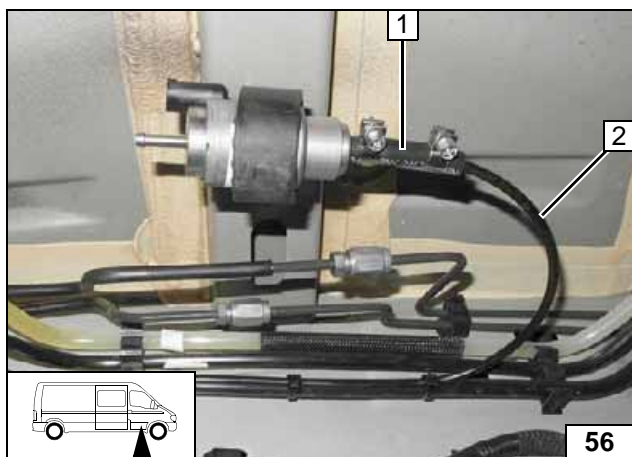


Install fuel tank sending unit and fuel tank in accordance with manufacturer's instructions.



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

Connecting fuel line

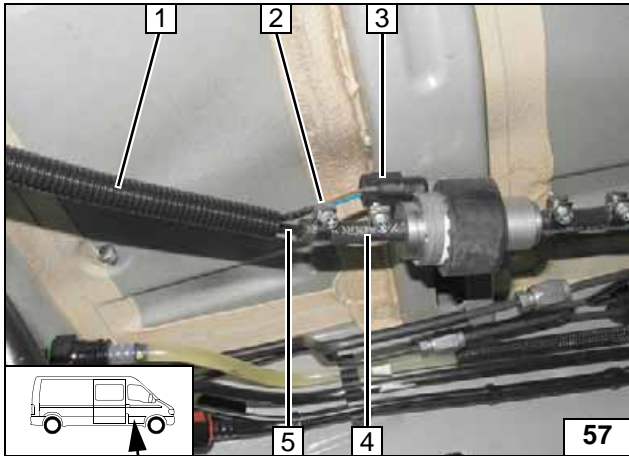
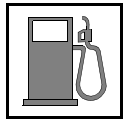


All vehicles

- 1 Hose section, 10mm dia. clamp [2x]
- 2 Fuel line from fuel standpipe

Connecting metering pump

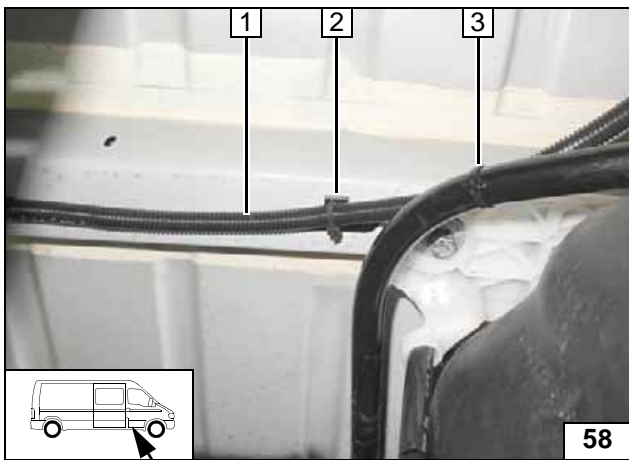




Pull wiring harness of metering pump **2** and fuel line of heater **5** into 10mm dia. corrugated tube **1** and route to installation location of heater.

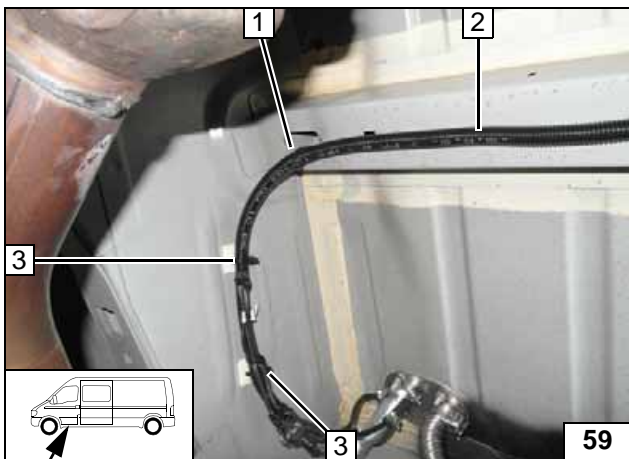
- 3** Wiring harness connector X13
- 4** Hose section, 10mm dia. clamp [2x]

Connect-
ing meter-
ing pump



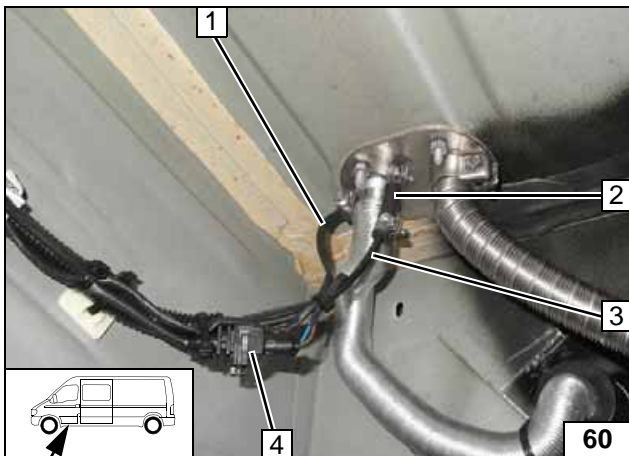
- 1** Metering pump wiring harness and heater fuel line in 10mm dia. corrugated tube
- 2** Attach clip-type cable tie to the edge
- 3** Cable tie

Securing
corrugated
tube




- 1** Attach clip-type cable tie to the edge
- 2** Metering pump wiring harness and heater fuel line in 10mm dia. corrugated tube
- 3** Cable tie [2x] on adhesive base

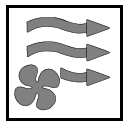
Securing
corrugated
tube



Disconnect wiring harness of metering pump **1** from air intake connection piece, install connector X16. Install coupling X17 on wiring harness extension and connect to connector X16 at position **4** .

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


Connect-
ing heater



Hot Air

Route flexible tubes kink-free.

The following diagram shows the hot air distribution for the separate heating of the passenger compartment and / or the cargo space. You also have the option to regulate the hot air by closing or opening the respective air outlets in

the passenger compartment and / or the cargo space.

Different options should individually be discussed with the customer.

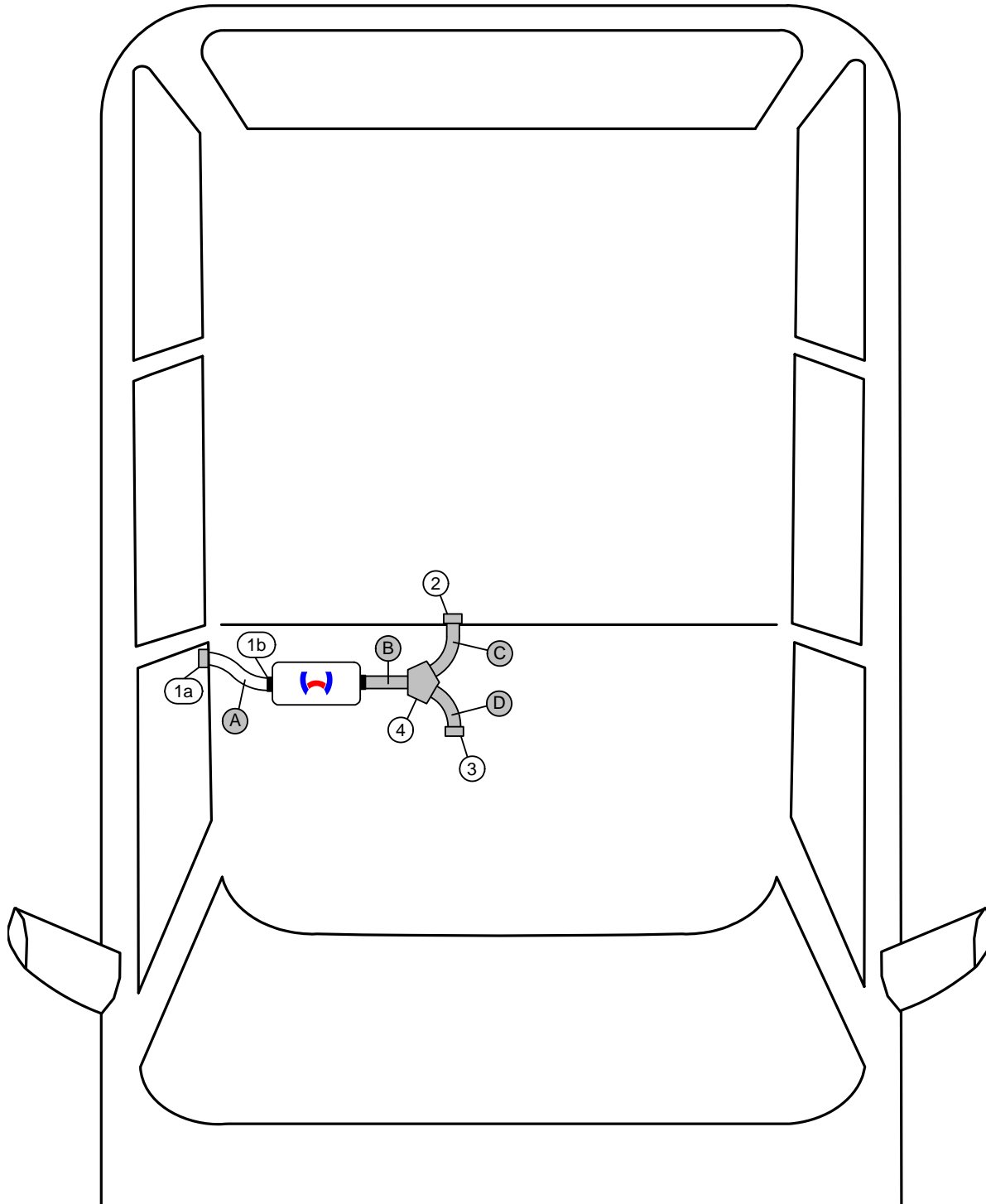
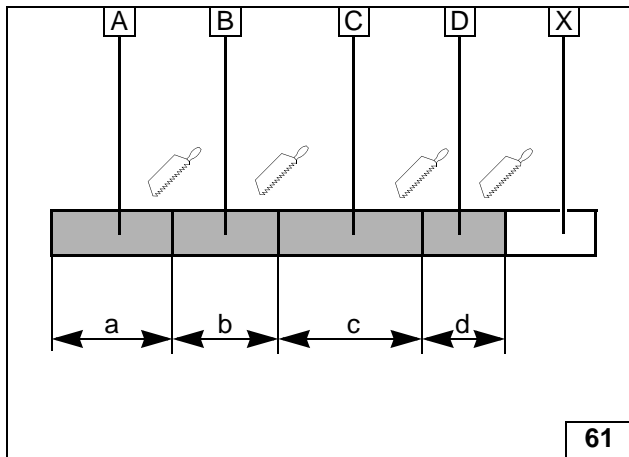
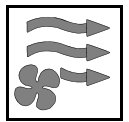


Diagram of flexible tube routing

- 1a** = Pass through in case of vehicles with lateral trim
- 1b** = Outlet screen in case of vehicles without lateral trim
- 2** = Cargo space pass through
- 3** = Air outlet of passenger compartment
- 4** = Air distribution flap

- A** = 80 mm dia. flexible tube
- B** = 80 mm dia. flexible tube
- C** = 80 mm dia. flexible tube
- D** = 80 mm dia. flexible tube





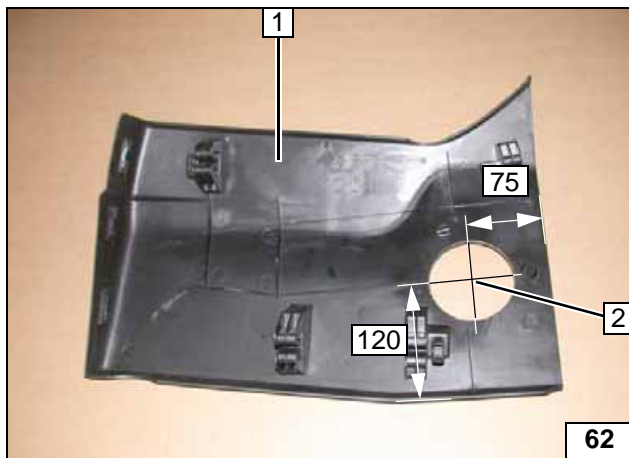
Cut 80mm dia. flexible tube to length.

- A = 280
- B = 170
- C = 325
- D = 130

X =



Cutting flexible tubes to length



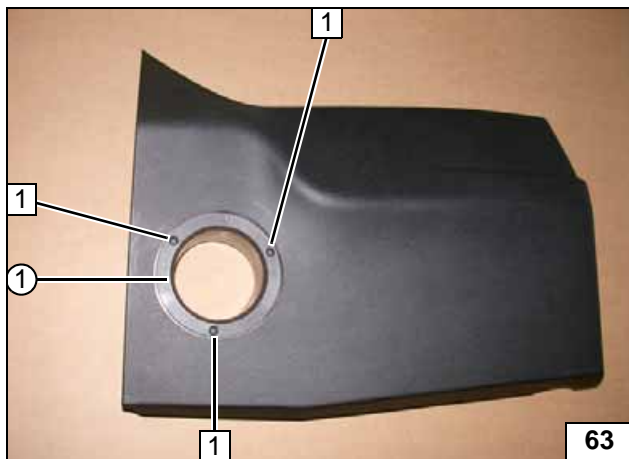
Air Intake

Only in case of trim on the right side of the front passenger bench seat

- 1 Right-hand side trim of front passenger bench seat
- 2 81 mm dia. hole



Hole in trim of front passenger's seat, right side



- 1 2.5 mm dia. hole; self-tapping screw 4x13 [3x each]

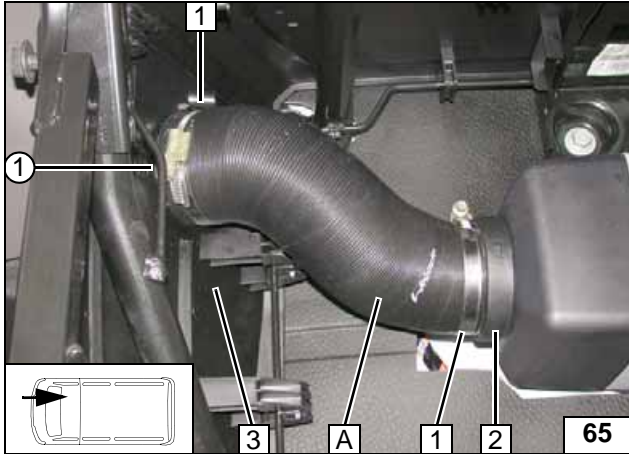
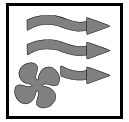
① Pass through

Installing pass through



- 1 Cover cap

Attaching cover cap

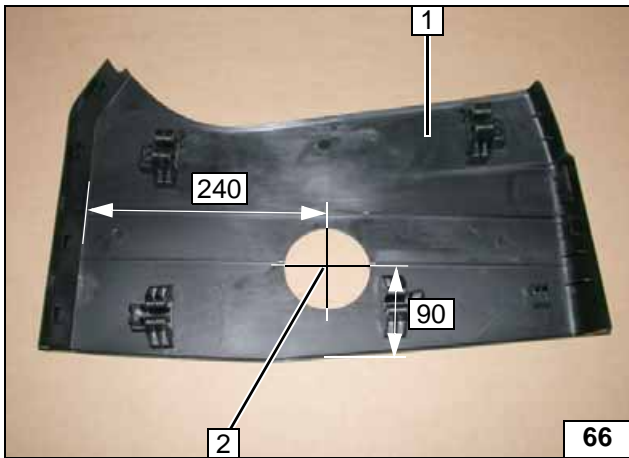


Install trim on the right side of front passenger's seat 3.

- 1 Hose clamp [2x]
- 2 90x80 adapter
- ① Pass through



Installing flexible tube A



Hot Air Distribution

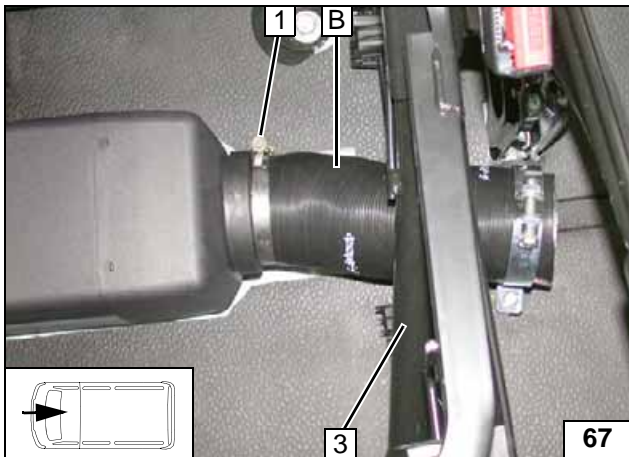
Only in case of trim on the left side of the front passenger bench seat

- 1 Left-hand side trim of front passenger bench seat
- 2 84 mm dia. hole

Install trim on the left side of the front passenger bench seat.



Hole in trim of front passenger's seat, left side



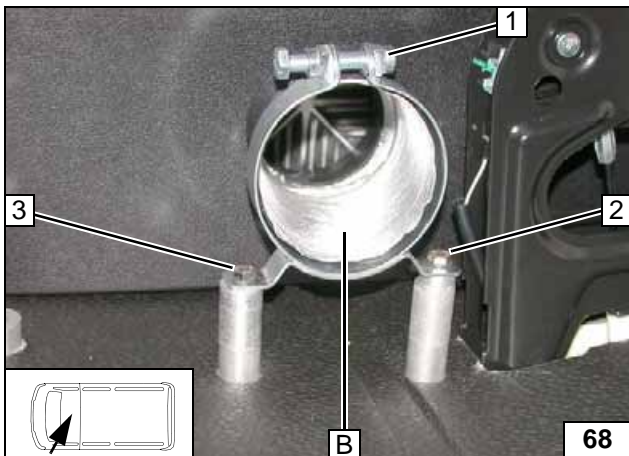
All vehicles

This and the following figures show vehicles in which the front passenger bench seat has a trim on the left side.

- 1 Hose clamp

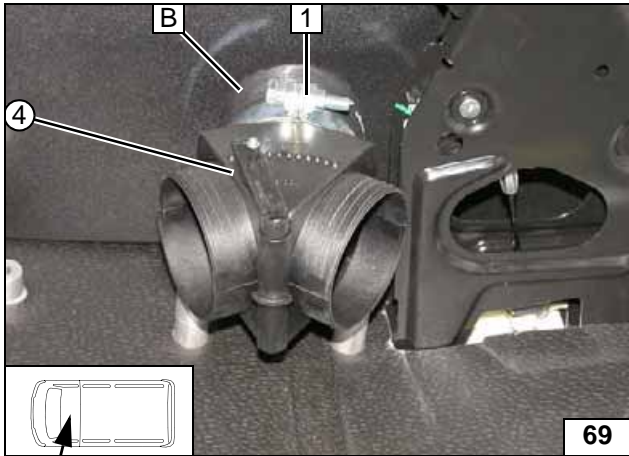
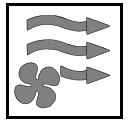


Installing flexible tube B



- 1 Console (will be tightened later)
- 2 M6x90 bolt, spring lockwasher, 8 mm shim, 30 mm shim, 40 mm shim (pre-mounted), rivet nut (pre-mounted)
- 3 M6x90 bolt, spring lockwasher, 30 mm shim, 40 mm shim (pre-mounted), rivet nut (pre-mounted)

Installing console for flexible tube B

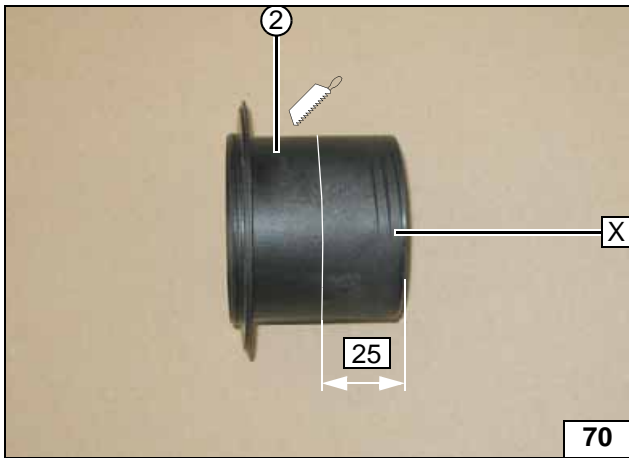


Push distribution flap ④ onto flexible tube B.



1 Tighten console

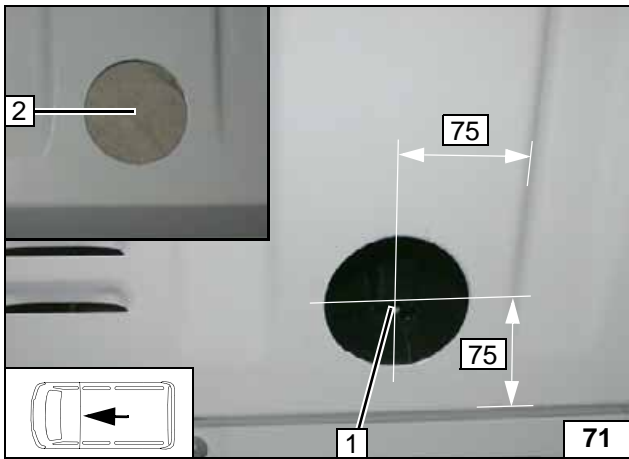
Installing distribution flap



② Cargo space pass through

X =

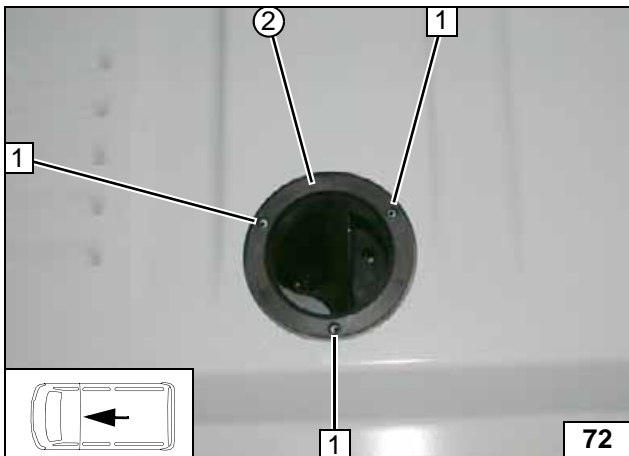
Shortening pass through



81 mm dia. hole at position 1 in partition wall. Cut out trim 2 in the vicinity of the hole (if present).



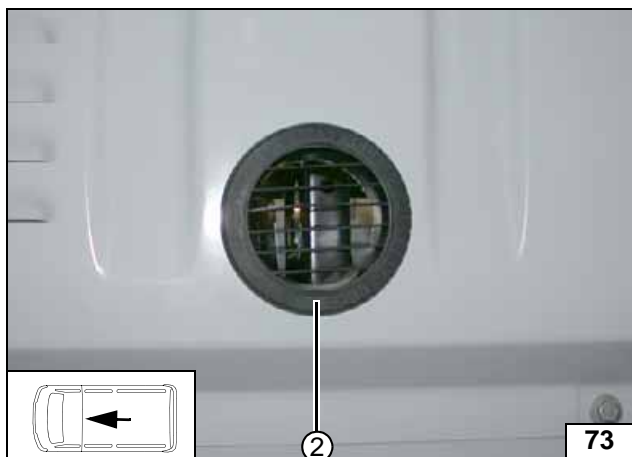
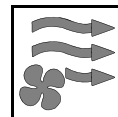
Hole in partition wall



Insert cargo space pass through ② and copy hole pattern at position 1 [3x] onto the partition wall. Remove cargo space pass through ② and drill 3 mm dia. holes [3x] in the partition wall.



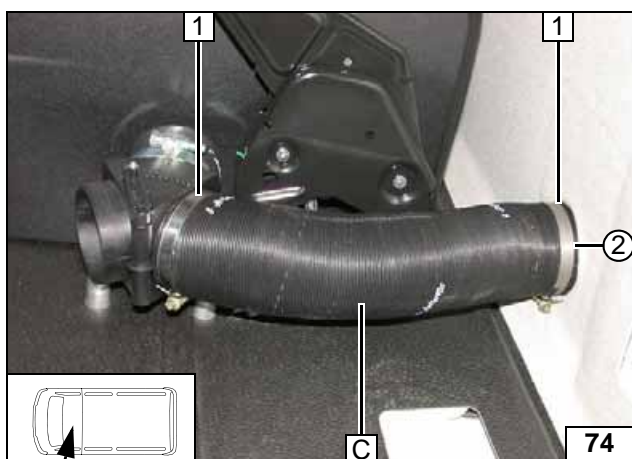
Hole in partition wall



Install cargo space pass through ② using 4x13 self-tapping screws with countersunk heads [3x] and attach air outlet.

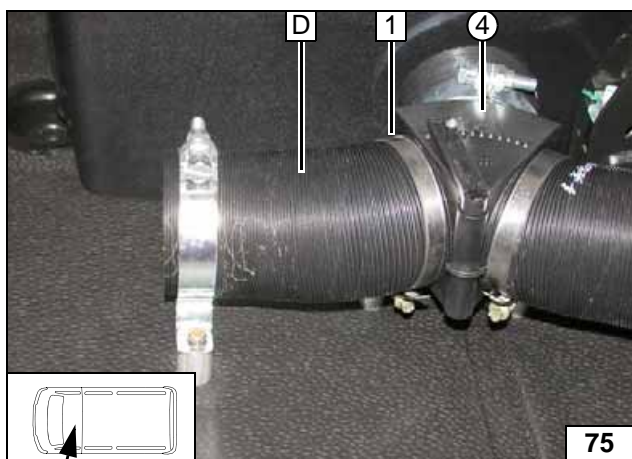


Installing pass through



- 1 Hose clamp [2x]
- ② Cargo space pass through

Installing flexible tube C

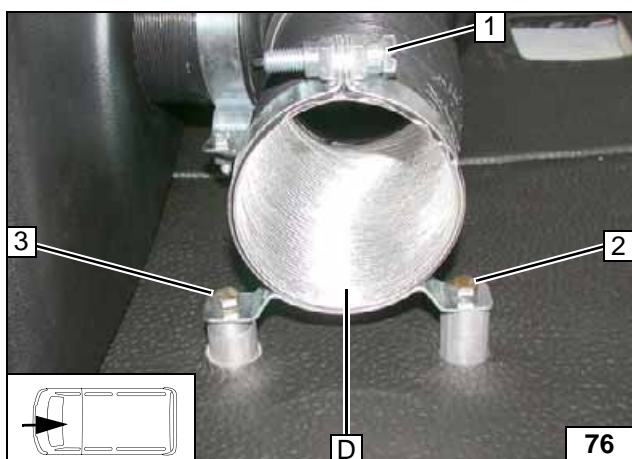


Push flexible tube D onto distribution flap ④.



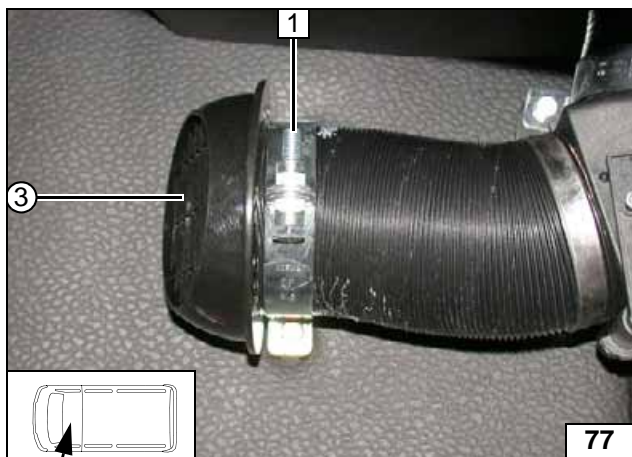
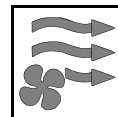
- 1 Hose clamp

Installing flexible tube D



- 1 Console (will be tightened later)
- 2 M6x60 bolt, spring lockwasher, 40 mm shim (premounted), rivet nut (premounted)
- 3 M6x60 bolt, spring lockwasher, 8 mm shim, 40 mm shim (premounted), rivet nut (premounted)

Installing console for flexible tube D



Insert passenger compartment air outlet ③ and tighten console 1. Ensure sufficient distance from neighbouring components, correct if necessary.



Installing air outlet



Final Work

WARNING!

Reassemble the components in reverse order. Check all clamps and all electrical connections for firm seating. Insulate and tie back all loose lines.

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



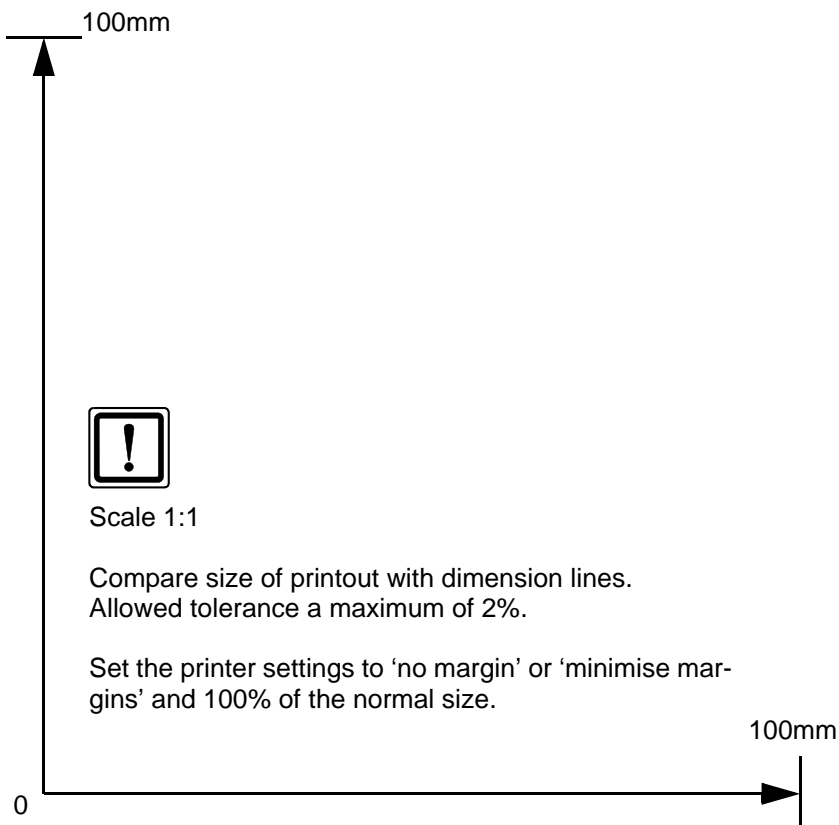
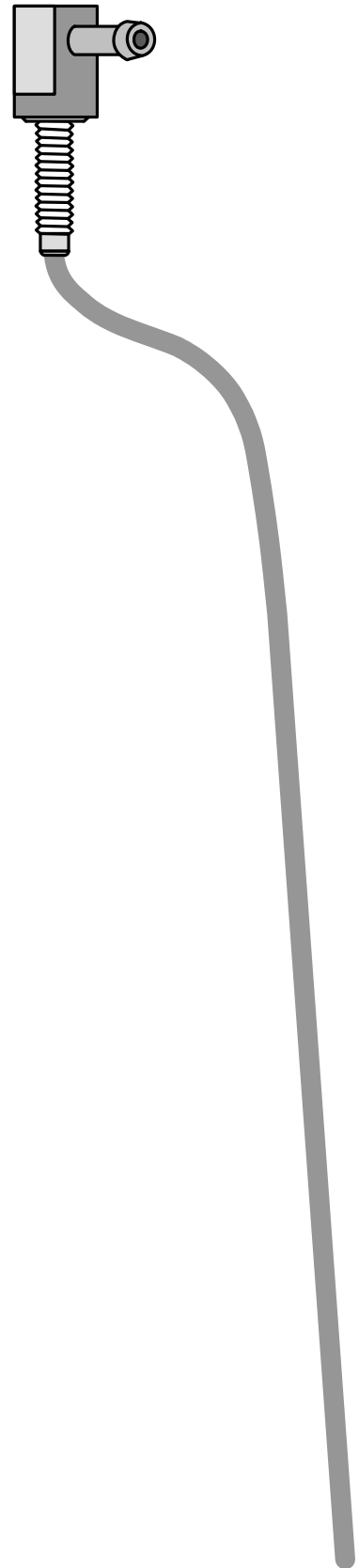
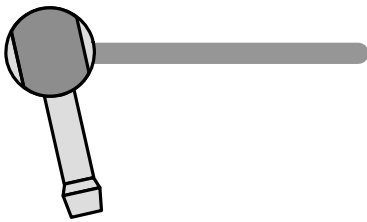
- **Connect the battery.**
- **Program SmartControl/ MultiControl HD, select TT Evo 40 heater**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**





Template for Fuel Standpipe - Version 2

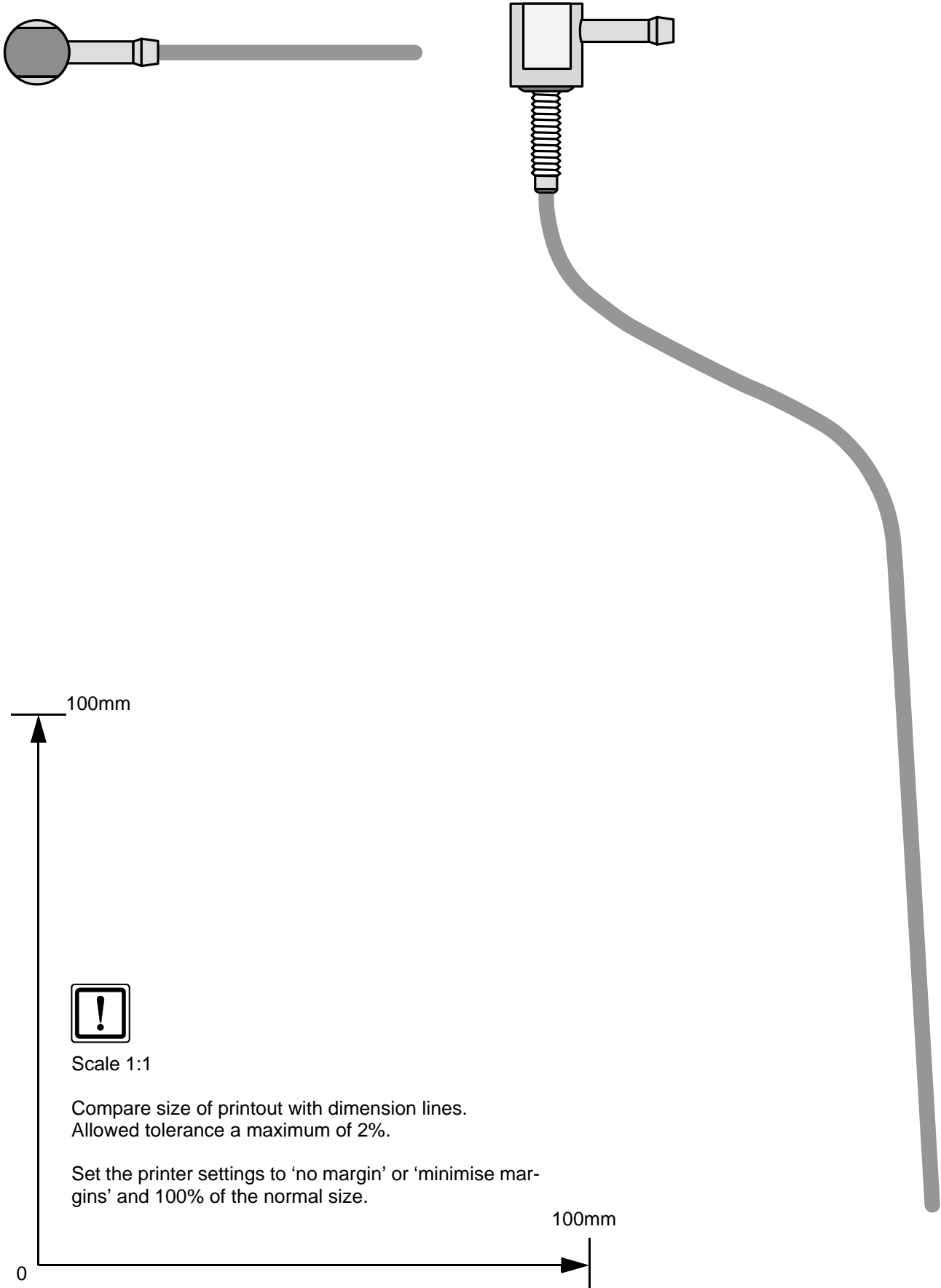
Top view





Template for Fuel Standpipe - Version 3

Top view

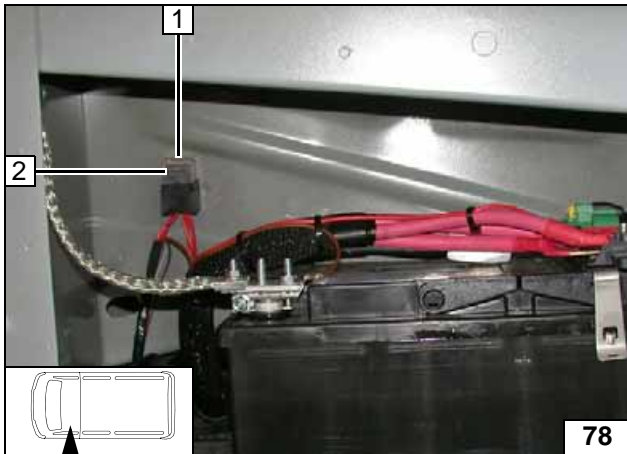


Operating Instructions for End Customer

Please remove page and add it to the vehicle operating instructions.

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.



- 1 20A heater fuse F1
- 2 1A heater fuse F3

Fuses

