Air Heater

Air Top Evo 40 Air Heater

E1
00 0358

With FuelFix

Installation Documentation
Mercedes Benz Sprinter

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Mercedes Benz	Sprinter	906	e11 * 2007 / 46 * 0301 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
2.2 CDI	Diesel / R4	6-speed SG	95	2143	OM 651
2.2 CDI Blue Tec	Diesel / R4	6-speed SG	120	2143	OM 651
3.0 CDI	Diesel / V6	AG	140	2987	OM 642

SG = Manual transmission
AG = Automatic transmission

From Model Year 2009
Left-hand drive vehicle

Verified equipment variants: Van with partition wall
Long wheel base
Front passenger twin seat
Euro 6

Not verified: Passenger compartment monitoring
Front passenger single seat

Total installation time: approx. 9.5 hours

Mercedes Benz Sprinter

Table of Contents

Necessary Components

- Basic delivery scope of Air Top Evo 40 based on price list
- Installation kit with FuelFix Mercedes Benz Sprinter 2009 Diesel: **1323403A**
- Smart / MultiControl HD Heater control: **See price list**
- Wiring harness extension for Heater control **1319724A**
- Bag for external temperature sensor (for thermostat in cargo space): **93205A**

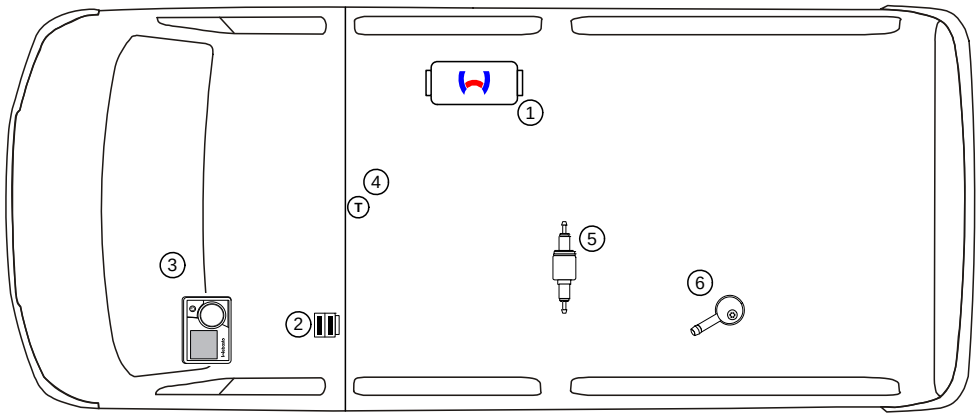
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full!

Installation Overview

Legend:

1. Heater
2. Heater fuses
3. SmartControl HD
MultiControl HD
4. External room temperature sensor
5. Metering pump
6. FuelFix



Notes on Total Installation Time

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

The total installation time may vary for vehicle equipment other than provided.

Mercedes Benz Sprinter

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, Order No. 111329).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

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

2 Statutory regulations governing installation

Guidelines	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 / Subsection 5.3.2.2. (Part I) may be used.

2.2.4. / 5.3.2.4. (Part I) The label referred to in paragraph 1.4 / Annex 7 Subsection 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.

Mercedes Benz Sprinter

Information on Validity

This installation documentation applies to Mercedes Benz Sprinter Diesel vehicles - for validity, see page 1 - from model year 2009 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
- Hose clamp pliers for Clic hose clamps of type W
- Hole circle bit 83 mm dia., 95 mm dia.
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Metric thread-setter kit
- Webasto Thermo Test diagnosis with current software

Dimensions
- All dimensions are in mm.

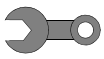
Tightening torque values
- Tightening torque for M6 heater nuts = 6 Nm +1 Nm
- Tighten bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Heater installation
- A gasket must be inserted between the heater and the body and replaced prior to each new installation.

Explanatory Notes on Document

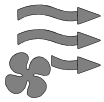
You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical system



Electrical system

Heating air



Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage

Specific risk of injury or fatal accidents.

Specific risk of fire or explosion

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

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

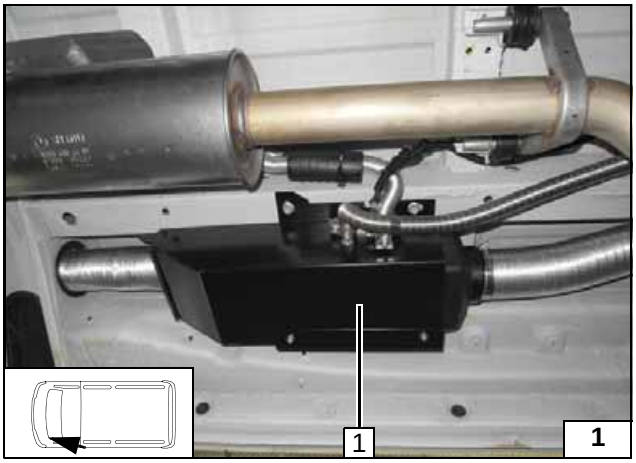
- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Disconnect the battery.
- Remove the front passenger twin seat.
- Remove the seat on the driver's side.
- Remove the trim of the cargo space side entrance.
- Remove the heat guard plate of the exhaust silencer.
- Remove the lateral instrument panel trim on the left (only for Telestart / Thermo Call).

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

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

Heater

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



Heater Installation Location

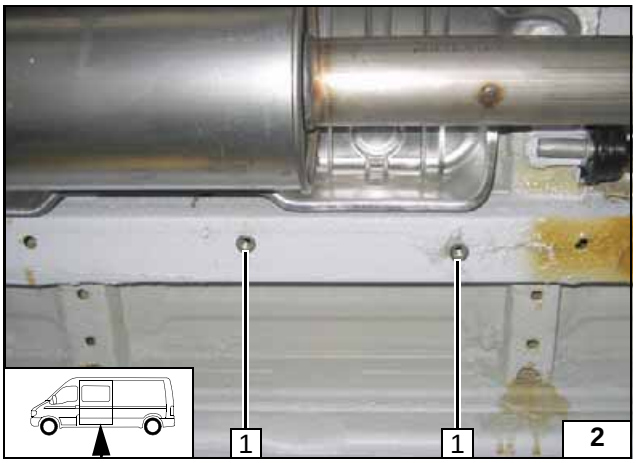
1 Heater

Installation location

Preparing Installation Location

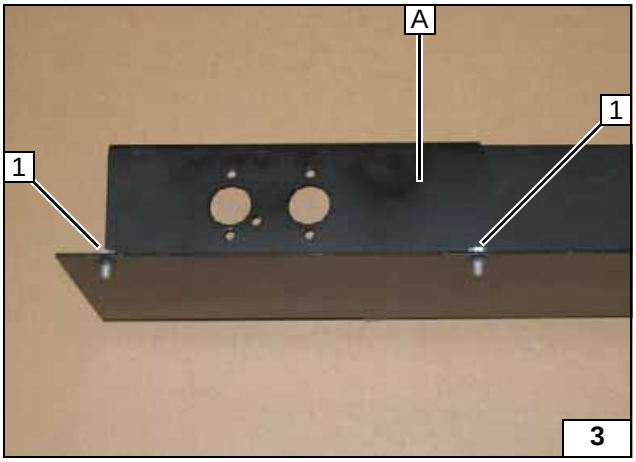
1 Drill existing hole to 15 mm dia., M10 rivet nut [2x]

Installing rivet nut



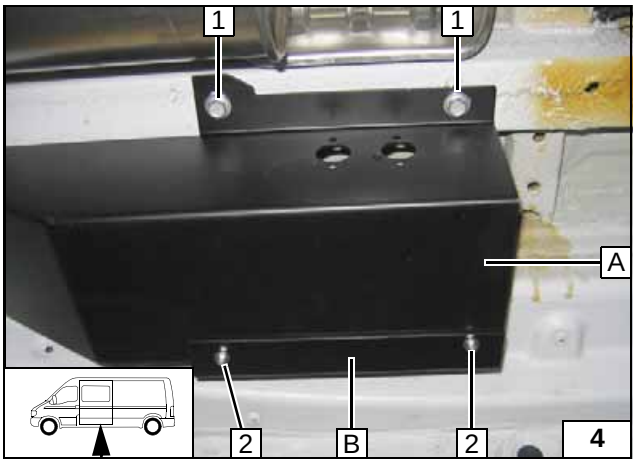
A Bracket
1 M6x12 bolt, pin lock [2x]

Preparing bracket A



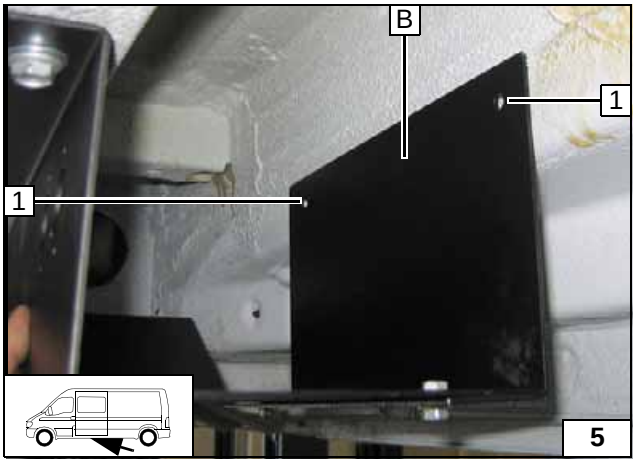
1 M10x30 bolt [2x]
A Bracket
2 Flanged nut [2x]
B Install bracket loosely

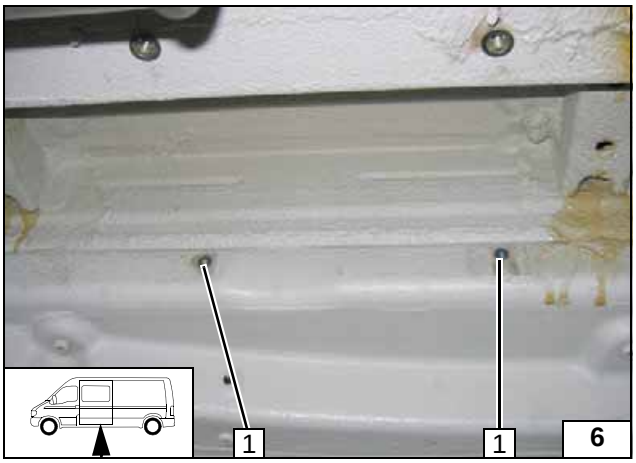
Installing brackets A and B



B Aligning bracket
1 Copy hole pattern [2x]

Copying hole pattern

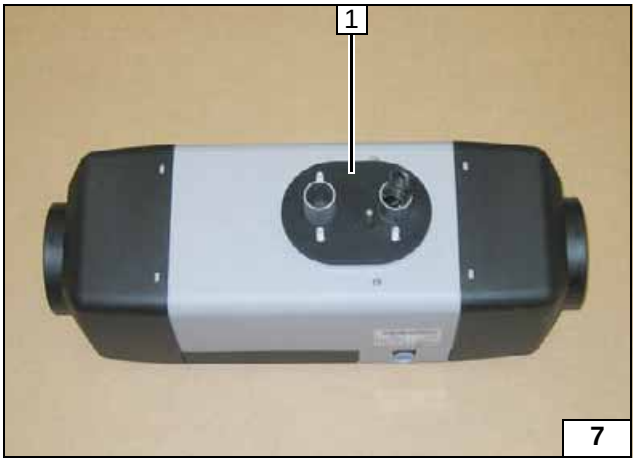




Remove brackets **A** and **B**. Remove underbody protection around the holes.

1 9.1 mm dia. hole; M6 rivet nut [2x each]

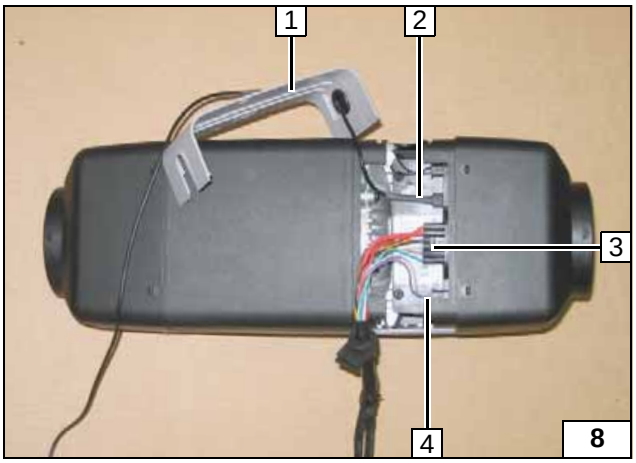
Installing rivet nuts



Preparing heater

1 Base seal

Installing base seal



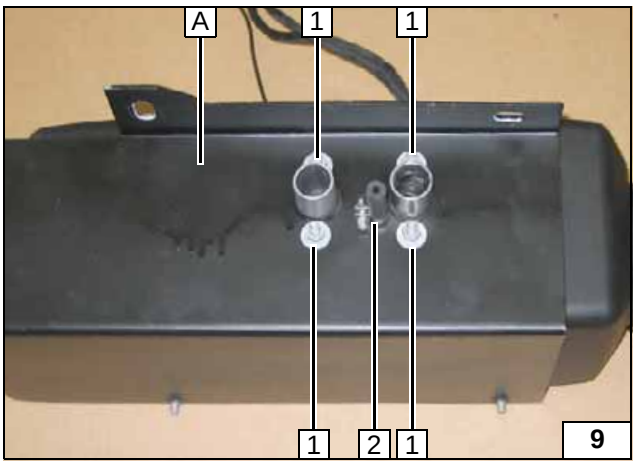
Replace cover **1** with provided connector cover. Remove connector for internal temperature sensor at position **2**. Mount external temperature sensor **2** on heater. Mount wiring harness connector **3** on heater.

ADR option:

Remove rubber plug at position **4** and fit ADR connector on heater.

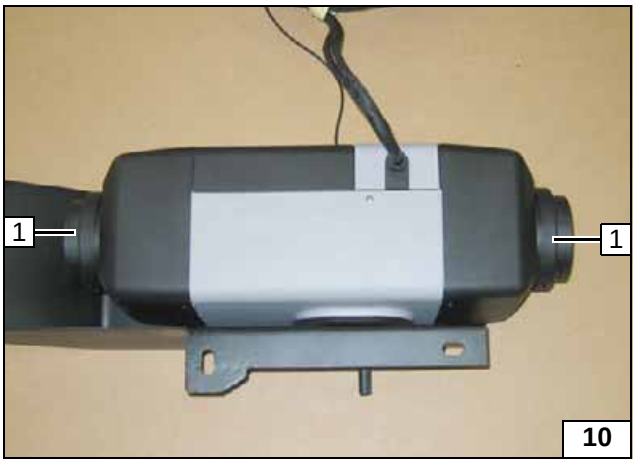
Reattach connector cover **1**.

Preparing heater



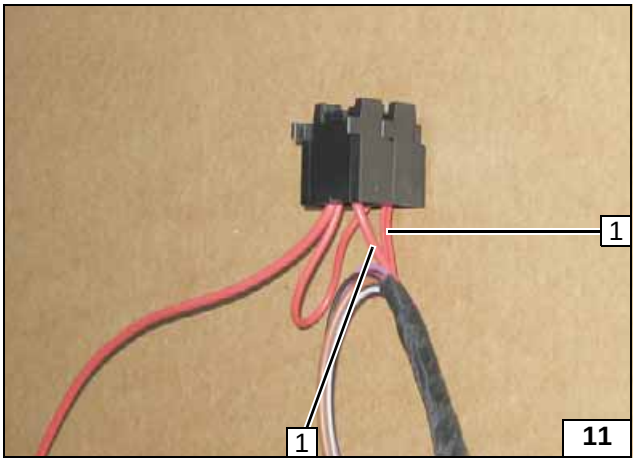
A Bracket
1 Large diameter washer, M6 nut [4x each]
2 Hose section, 10mm dia. clamp

Mounting bracket A



1 90 mm dia. to 80 mm dia. adapter [2x]

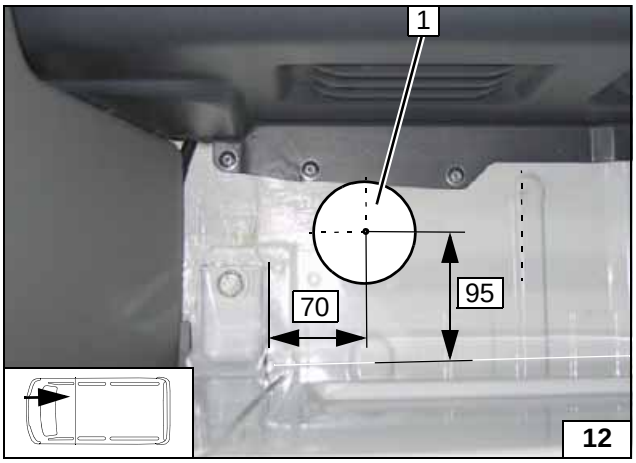
Assembling reducer sections



Detach red (rt) wires **1** [2x] from fuse holder for easier installation, will be reused later.

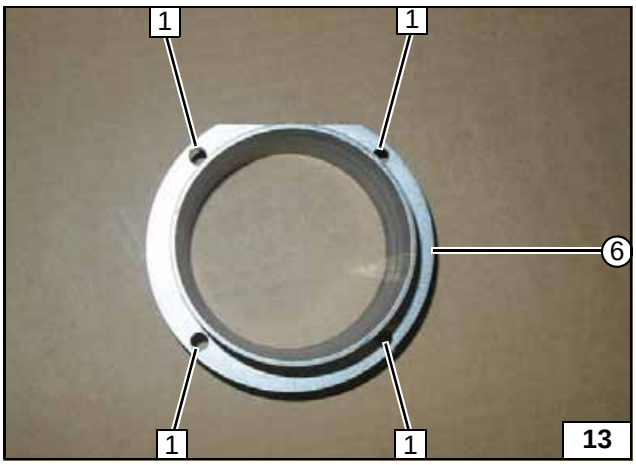
Preparing wiring harness of heater

Preparing Hot Air Routing



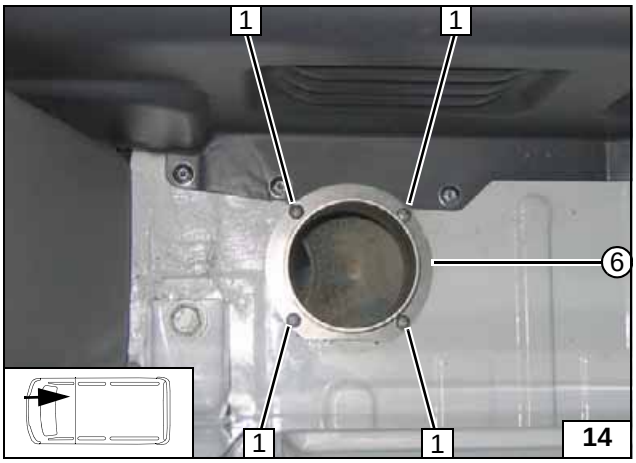
1 83 mm dia. hole

Hole in cross member



1 Drill out holes to 6 mm dia. [4x]
⑥ 80x80 mm dia. pass through for passenger compartment

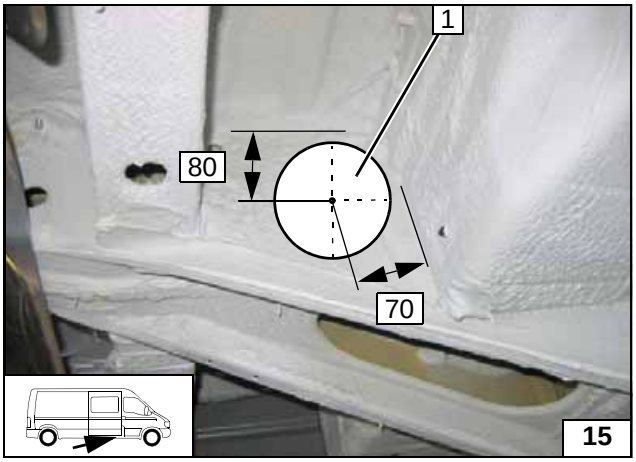
Preparing pass through



During installation, use body putty between passenger compartment pass through **2** and body.

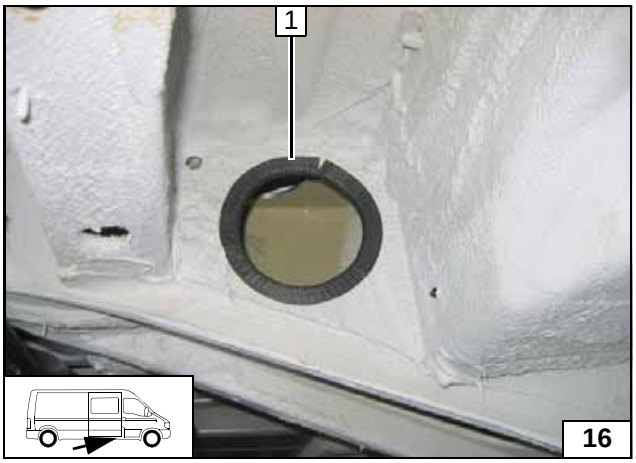
1 5 mm dia hole, 5.5x13 self-tapping screw [4x each]
⑥ 80x80 mm passenger compartment pass through (with 30 mm long connection piece to underbody)

Installing passenger compartment pass through



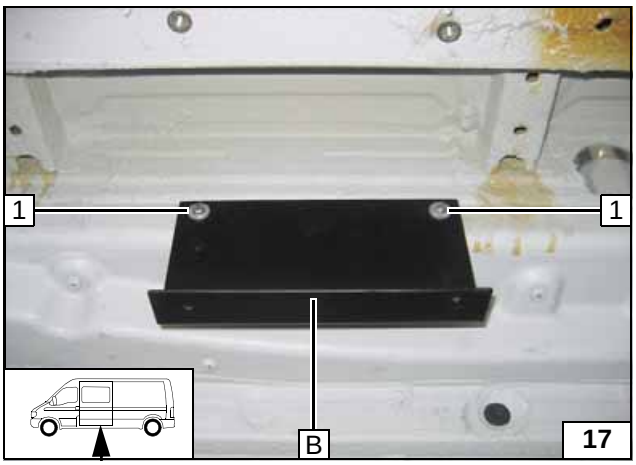
1 95 mm dia. hole

Hole in cross member



Cut edge protection **1** to length and install.

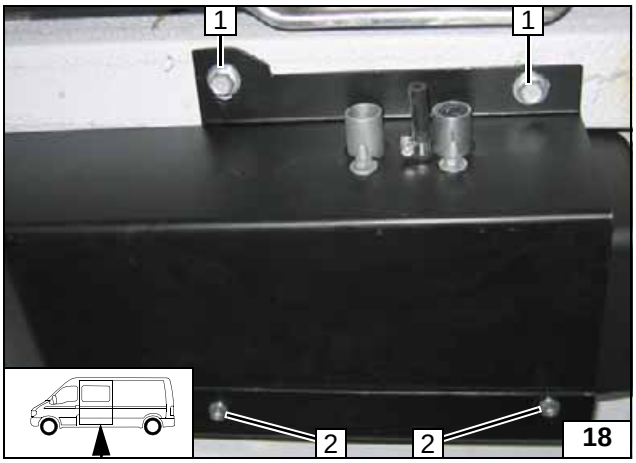
Installing edge protection



Installing Heater

1 M6x20 bolt, spring lock washer, large diameter washer [2x each]
B Bracket

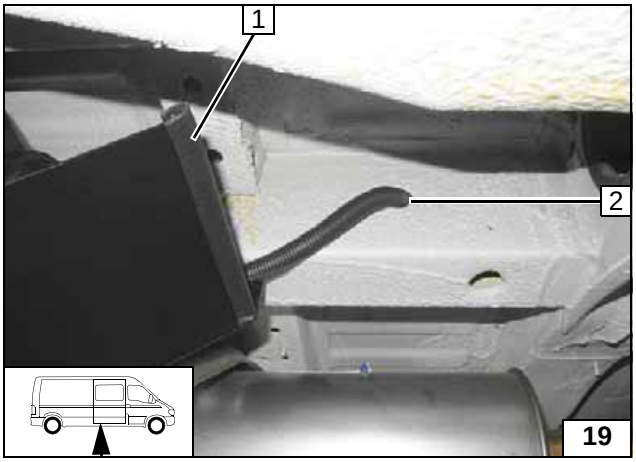
Installing bracket B loosely



Tighten all bolted connections.

1 M10x30 bolt [2x]
2 M6 flanged nut [2x]

Installing heater

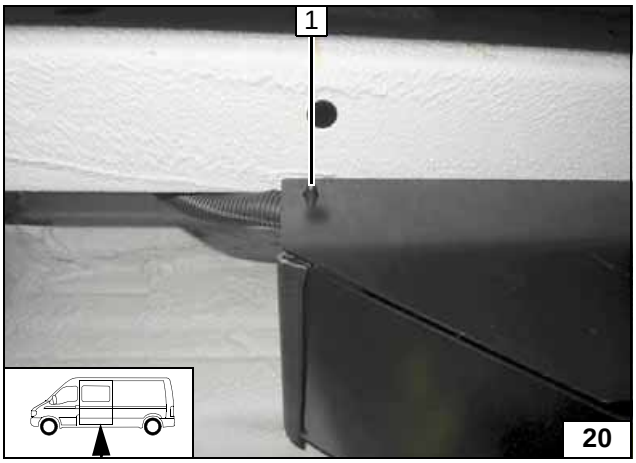


Wiring harness routing

Route wiring harnesses for heater, heater control and temperature sensor in 17 mm dia. corrugated tube **1** through the frame side member to the front.

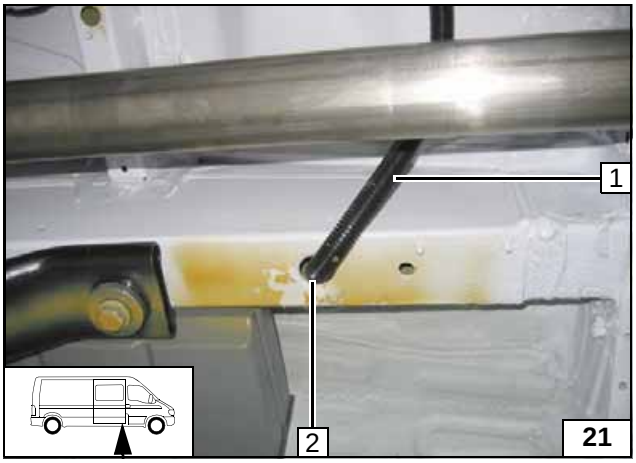
1 Cut edge protection to length and install
2 Existing hole in frame side member

Wiring harness routing



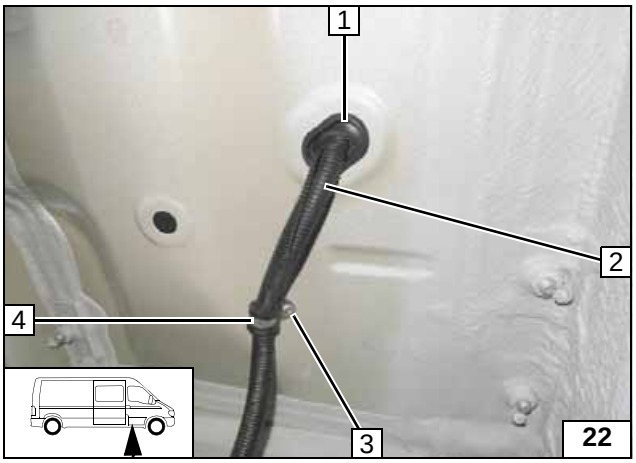
1 Cable tie, existing hole

Securing corrugated tube



Guide the 17 mm dia. corrugated tube **1** out of the existing hole in frame side member **2** and route towards the vehicle centre.

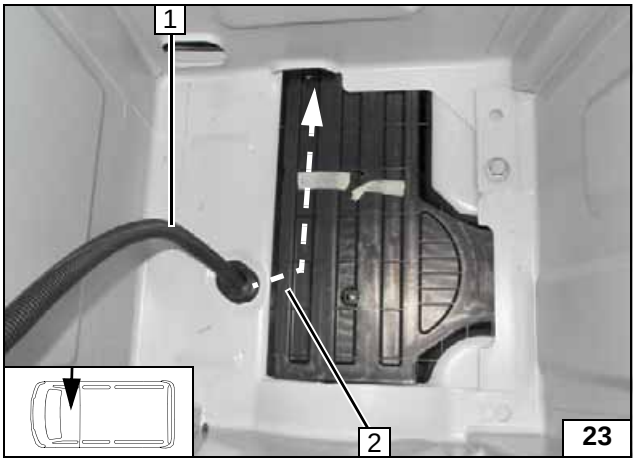
Wiring harness routing



Route 17 mm dia. corrugated tube **2** through original vehicle protective rubber plug **1** (20 mm dia. hole) into the passenger compartment.

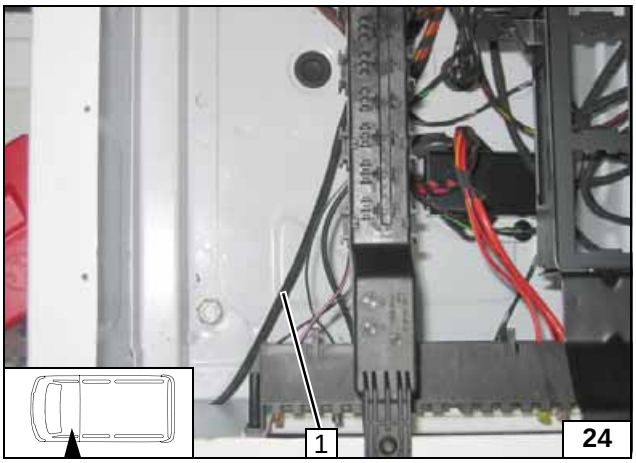
3 5.5 mm dia. hole, body-bound rivet
4 15 mm dia. rubber-coated p-clamp

Wiring harness routing



Guide the wiring harnesses for the heater and external room temperature sensor out of corrugated tube **1** and route through the channel at position **2** towards the front passenger's seat according to the marking (arrow).

Wiring harness routing



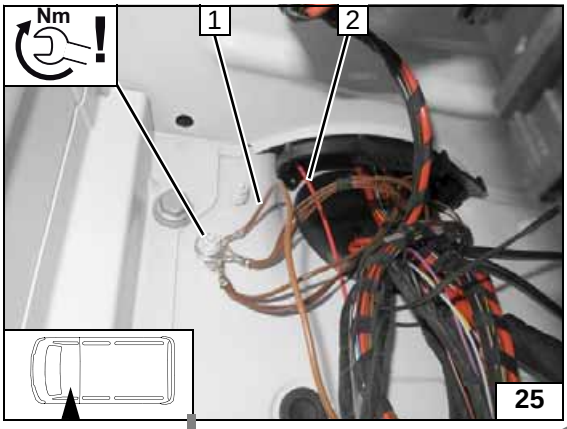
Route heater control wiring harness **1** towards the left A-pillar.

Wiring harness routing

Electrical System

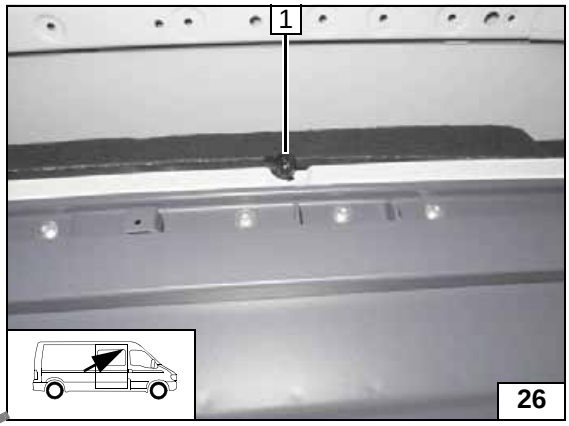
Earth wire

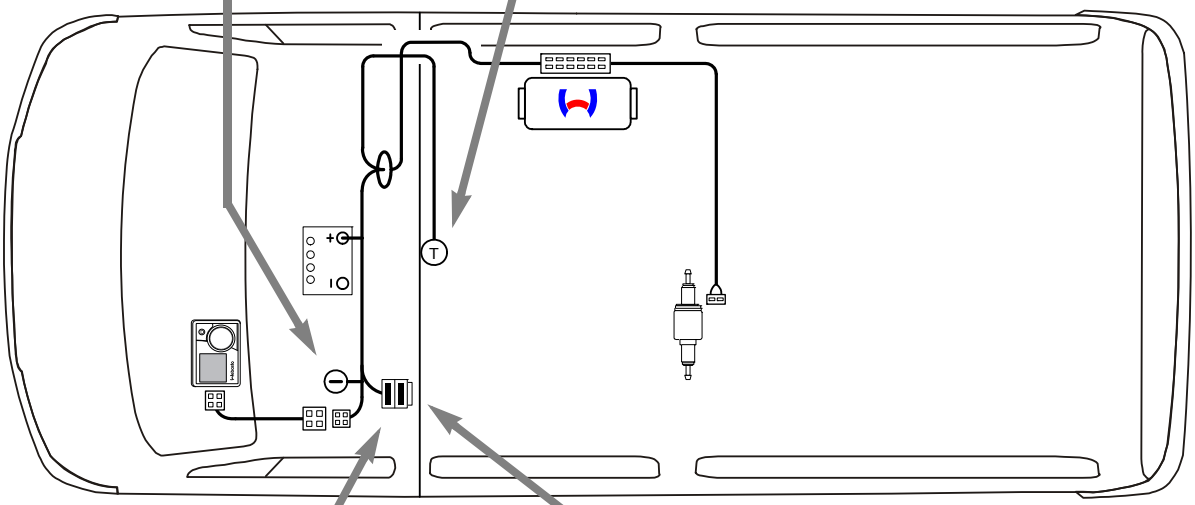
1 Earth wire on original vehicle earth support point
2 Route the positive wire through the original vehicle cable duct towards the battery



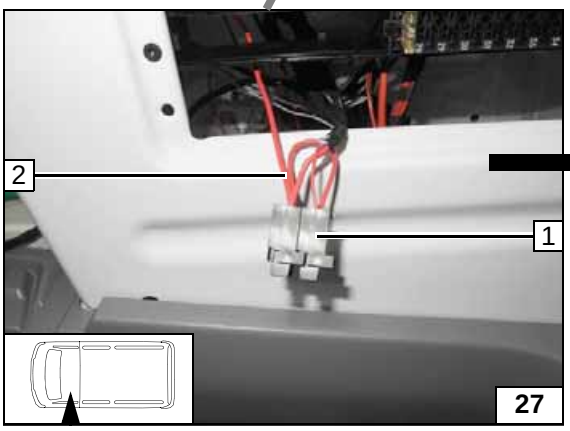
Temperature sensor

Route external room temperature sensor **1** behind B-pillar trim towards the partition wall and secure at the existing hole using a cable tie.



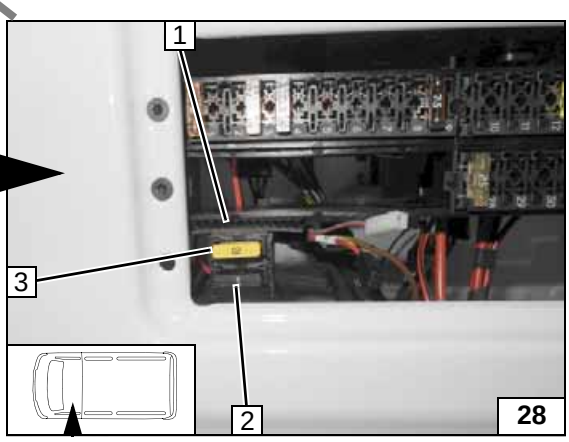


Wiring harness routing diagram



Fuse holder installation

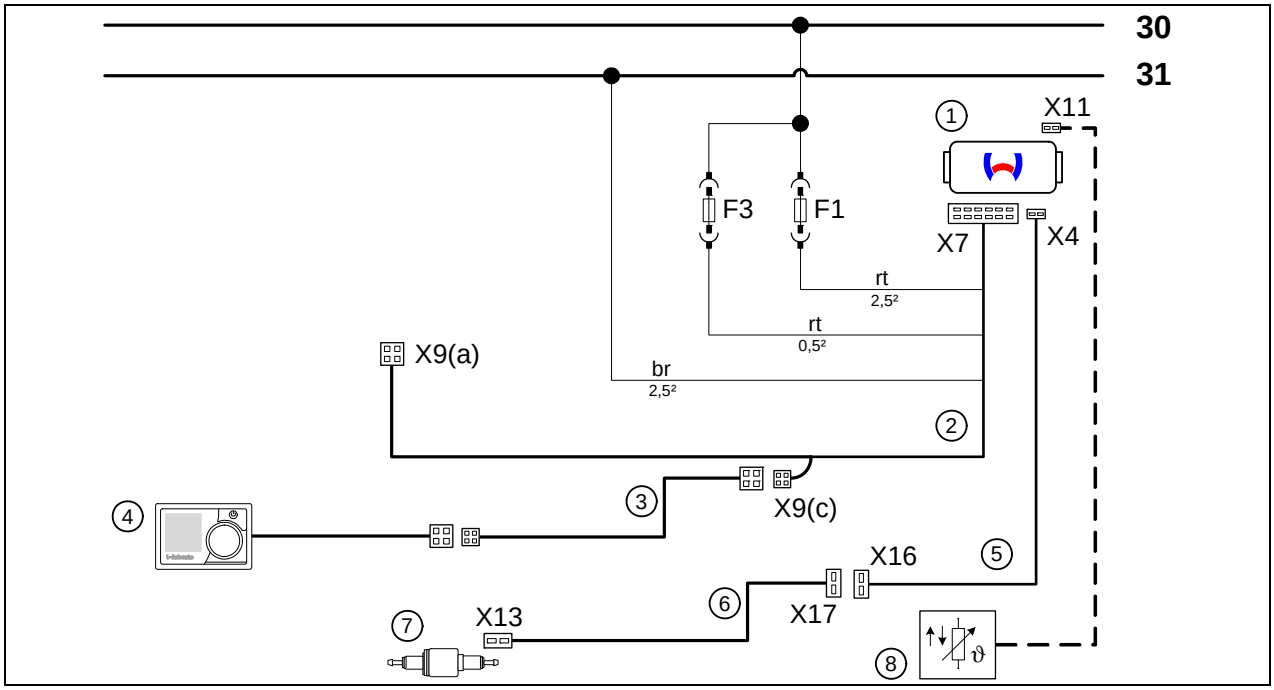
Reinsert red (rt) wires **1** [2x] in fuse holder **2**.



Fuse holder installation

Secure fuse holder retaining plate **1** on the original vehicle fuse holder using adhesive tape. Complete fuse F1 **3** and F3 **2**.

Smart / MultiControl HD Diagram:



Connection diagram

Components		Colours and symbols	
①	AT Evo 40 heater	rt	red
F1	20A fuse (included in wiring harness)	br	brown
F3	1A fuse (included in wiring harness)		
②	Wiring harness for heater		
X7	12-pin heater connector		
X9(c)	4-pin connector for W-Bus		
X9(a)	Connector remains free		
③	Wiring harness extension for heater control		
④	Smart / MultiControl HD		
⑤	Metering pump connection line		
X4	2-pin connector for connection line of metering pump		
X16	2-pin connector for connection line of metering pump		
⑥	Wiring harness of metering pump		
X17	2-pin connector for wiring harness of metering pump		
X13	2-pin connector for metering pump		
⑦	Metering pump		
⑧	External room temperature sensor B4		
X11	2-pin connector for external room temperature sensor B4	Wiring colours may vary.	

Legend

Smart / MultiControl HD

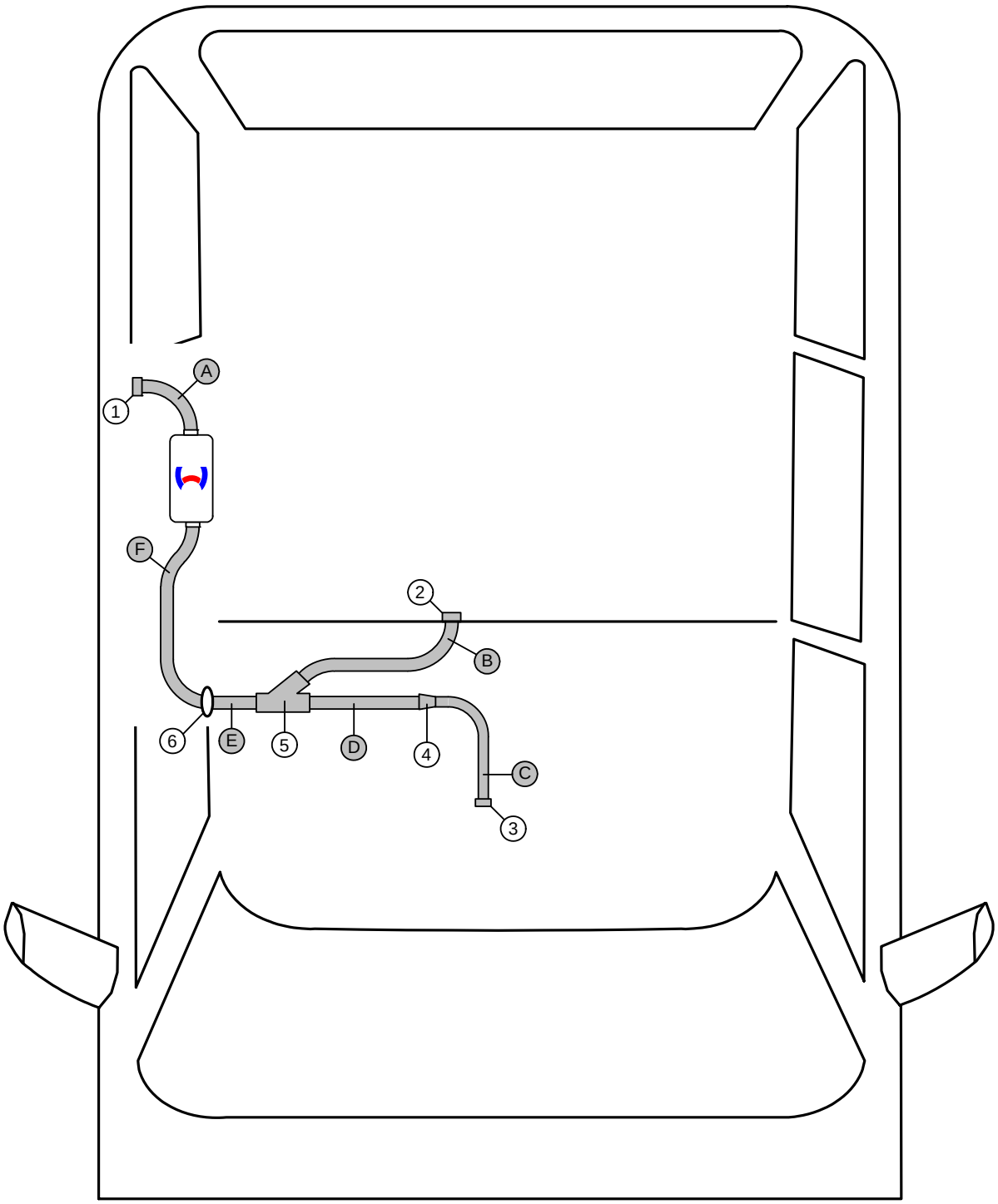
Drill hole for wiring harness pass through according to installation position.
Install Smart / MultiControl HD **1** using the provided adhesive tape.
Use wiring harness extension for heater control.

Installing SmartControl/ MultiControl

Hot Air

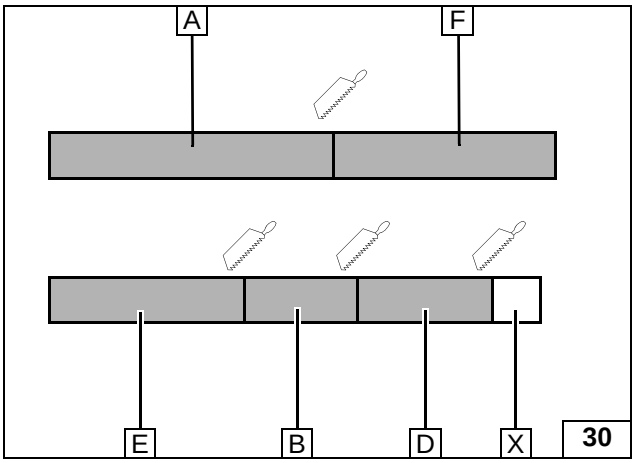
Install flexible tubes so that they are kink-free.
The following diagram shows the hot air distribution for separate heating of the passenger and / or cargo space. Optionally the hot air in the passenger compartment and/or the cargo space can be controlled by opening or closing the respective air outlet.

Flexible tube routing diagram



1 = Entrance pass through with cap
2 = Air outlet of cargo space with cap
3 = Air outlet of passenger compartment with cap
4 = 80x60 mm dia. reducer
5 = 80x80x80 mm dia. Y-distributor
6 = Passenger compartment pass through

A = 80mm dia., 700mm long, aluminium flexible tube
B = 80mm dia., 260mm long flexible tube, black (sw)
C = 60mm dia., 600mm long flexible tube, black (sw)
D = 80mm dia., 300mm long flexible tube, black (sw)
E = 80mm dia., 400mm long flexible tube, black (sw)
A = 80mm dia., 600mm long, aluminium flexible tube



Discard section **X**.

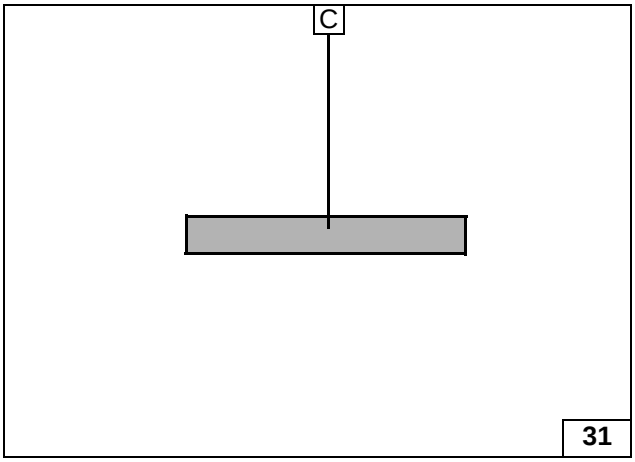
Aluminium, 80 mm dia.

A = 700
F = 600

Black (sw), 80 mm dia.

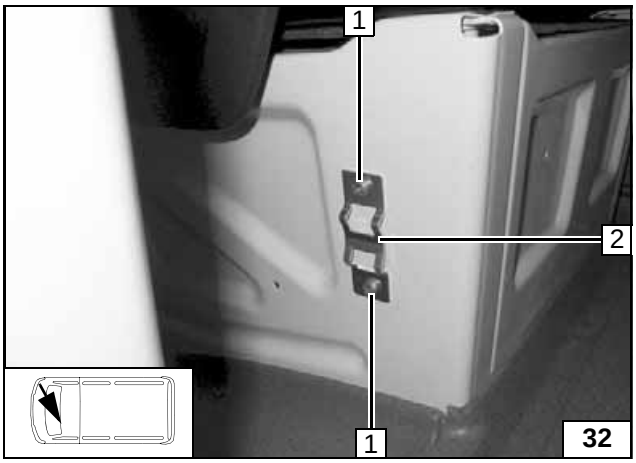
B = 260
D = 300
E = 400

Cutting to length/assigning 80 mm dia flexible tube



C = 600

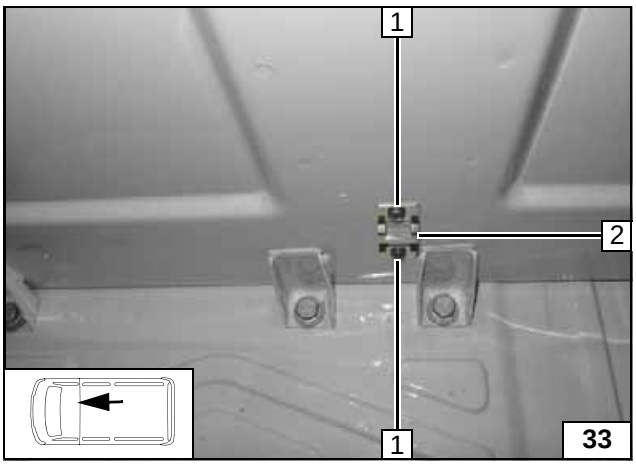
Assigning 60 mm dia. black (sw) flexible tube



Install console **2** on right lower section of driver's seat.

1 5 mm dia hole, 5.5x13 self-tapping screw [2x]

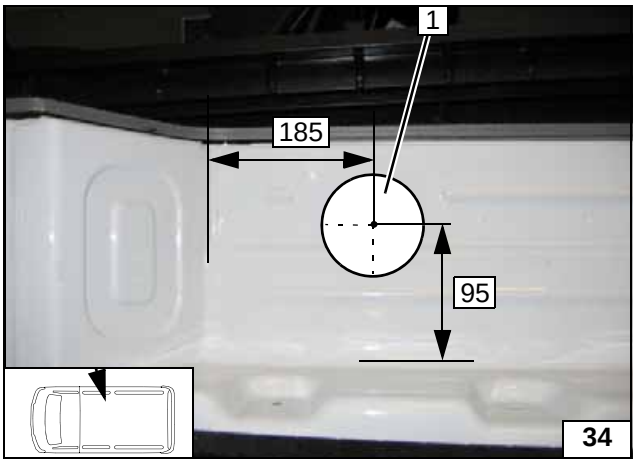
Installing console



Install console **2** on rear lower section of front passenger's seat.

1 5 mm dia hole, 5.5x13 self-tapping screw [2x]

Installing console

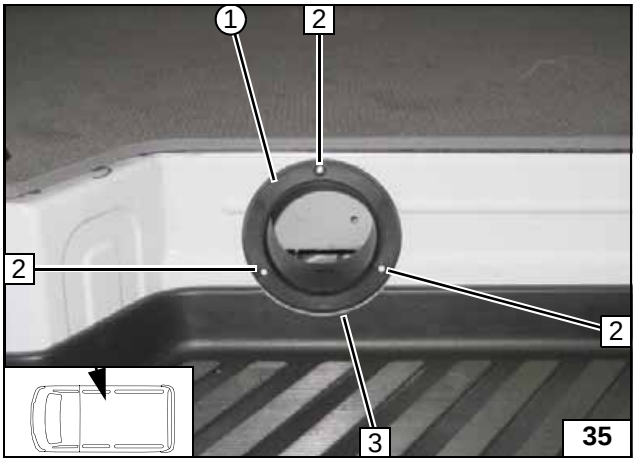


Fresh air intake

Remove trim of cargo space side entrance.

1 83 mm dia. hole

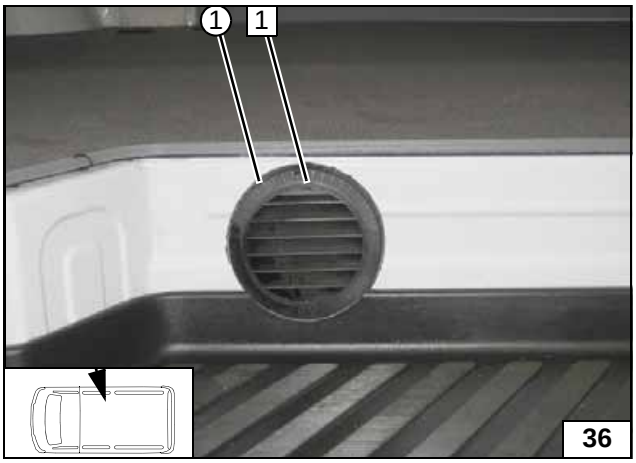
Hole in side entrance



Cut out trim of side entrance at position **3**. During installation, use body putty between entrance pass through ① and the body.

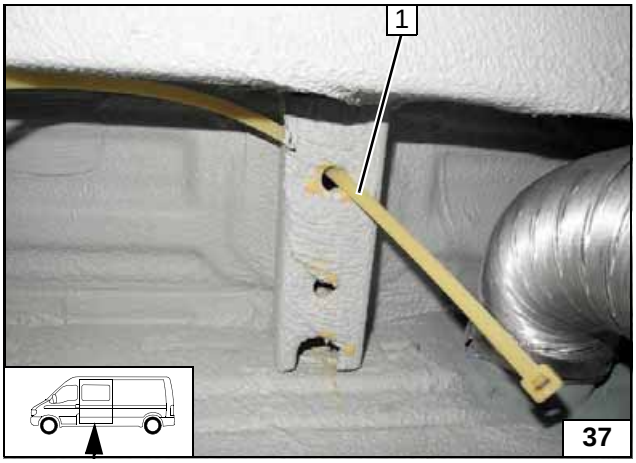
2 2.5 mm dia. hole, 4x13 self-tapping countersunk screw [3x each]

Air intake pass through



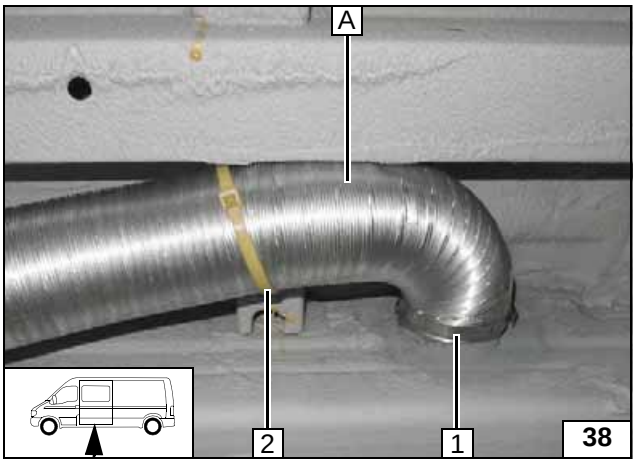
1 Cap on entrance pass through ①

Installing cap



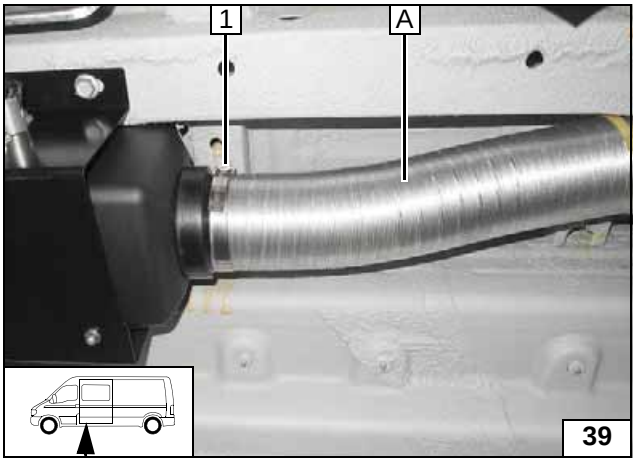
Relocate cable tie **1** through original vehicle hole.

Cable tie, large



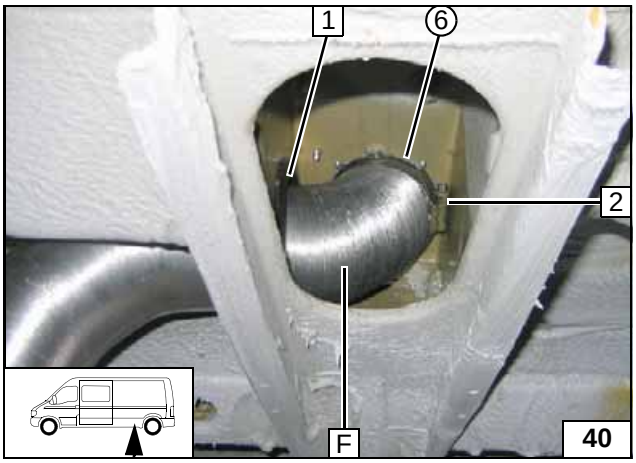
1 Clamp
2 Close cable tie

Installing flexible tube A



1 Clamp

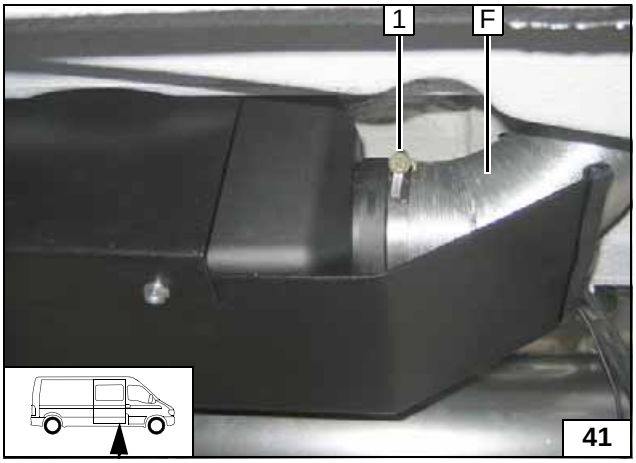
Connecting heater inlet



Hot air distribution

Route flexible tube **F** through prepared hole **1** and secure at passenger compartment pass through ⑥ using clamp **2**.

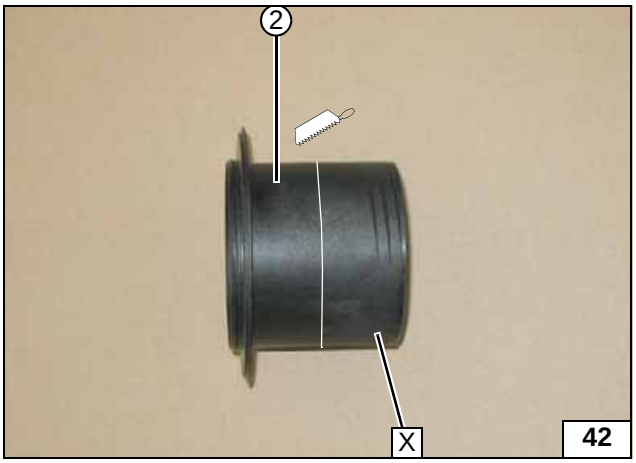
Installing flexible tube F



1 Clamp

Connecting heater outlet

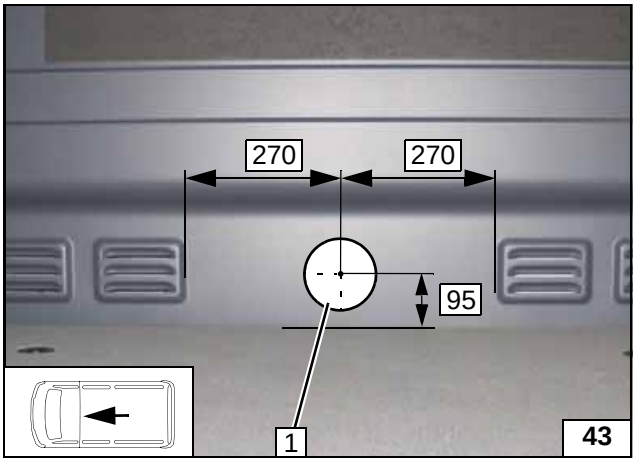
Shortening air outlet



Discard section **X**.

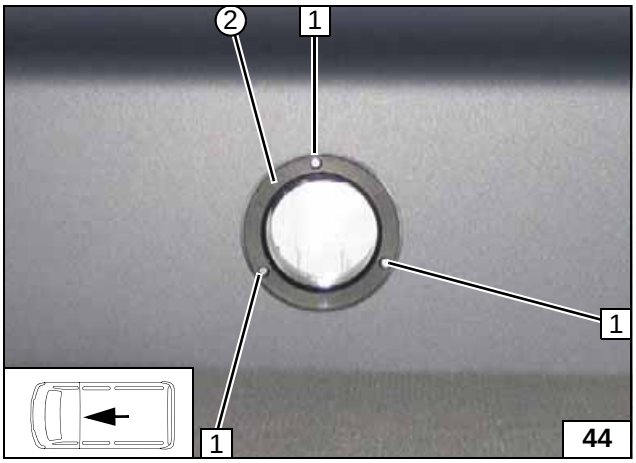
② 80 mm dia. air outlet for cargo space

Cargo space pass through



1 83 mm dia. hole

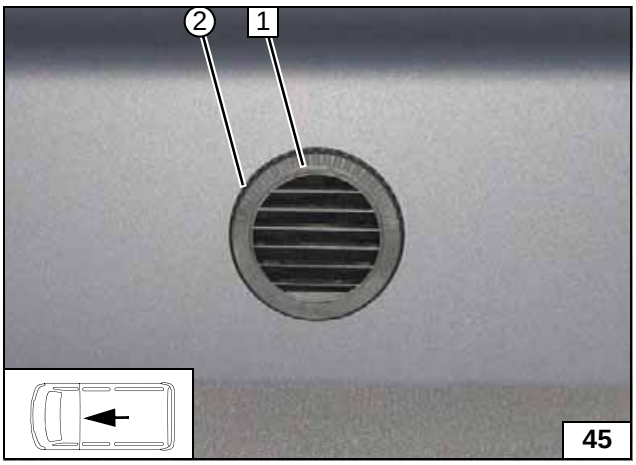
Installing cargo space air outlet



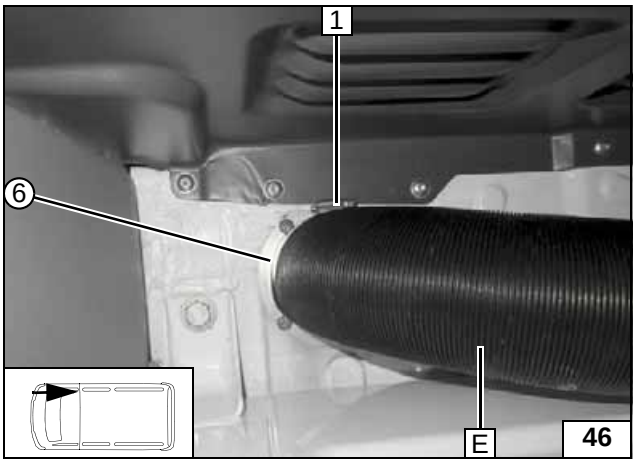
During installation, use body putty between air outlet of cargo space ② and the body.

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

Installing cap

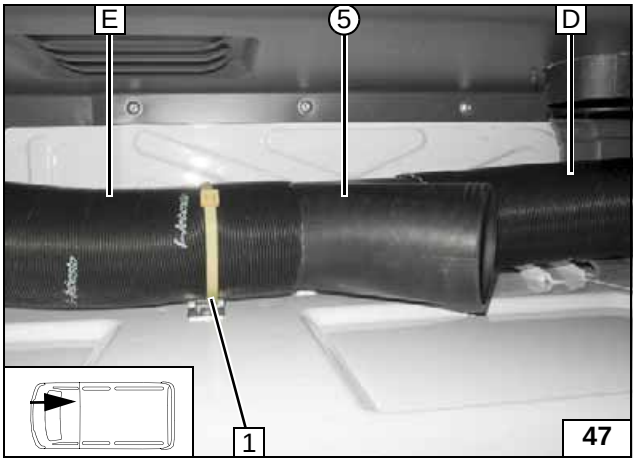


1 Cap on cargo space air outlet ②



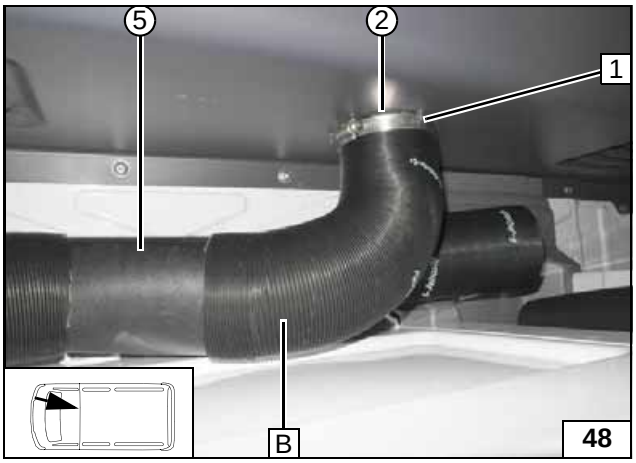
Secure flexible tube **E** at passenger compartment pass through ⑥ using clamp **1**.

Installing flexible tube E



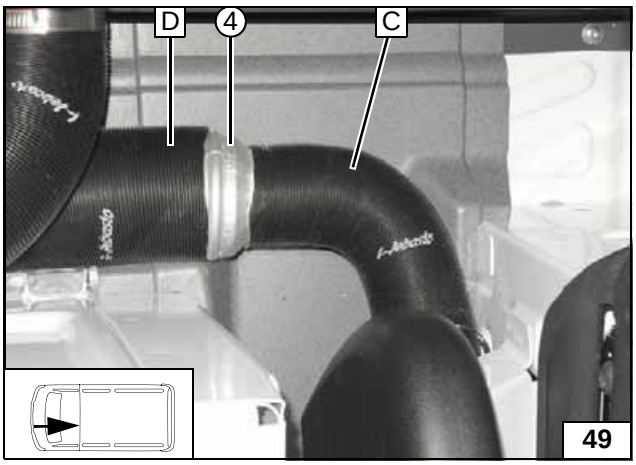
Connect Y-adapter ⑤ to flexible tube **E**. Connect flexible tube **D** to Y-adapter ⑤ . Secure flexible tube **E** to console using large cable tie **1**.

Installing Y-adapter



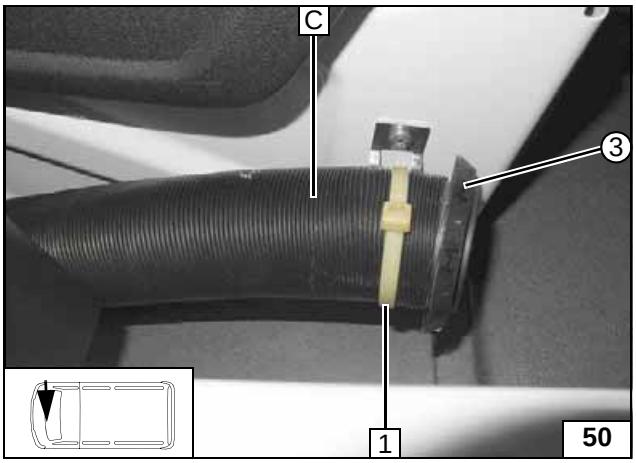
Connect flexible tube **B** to Y-adapter ⑤ . Secure flexible tube **B** to cargo space air outlet ② using clamp **1**.

Installing flexible tube B



Install 80 mm dia. reducer ④ in flexible tube **D**. Connect flexible tube **C** to ④ 60 mm dia. reducer.

Installing flexible tube C



Screw 60 mm dia. air outlet ③ into flexible tube **C**. Affix cap. Secure flexible tube **C** to console using large cable tie **1**.

Installing flexible tube C

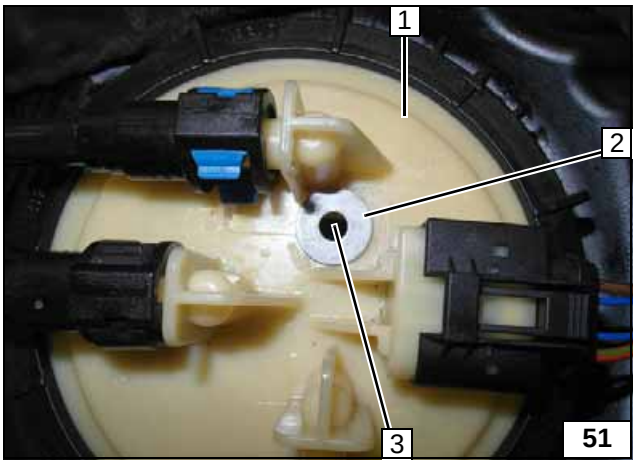
Fuel

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.



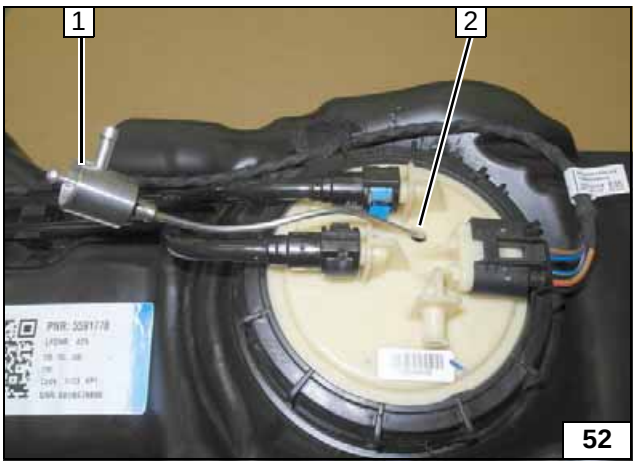
Installing FuelFix

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

Work steps 1, 2 and 3.

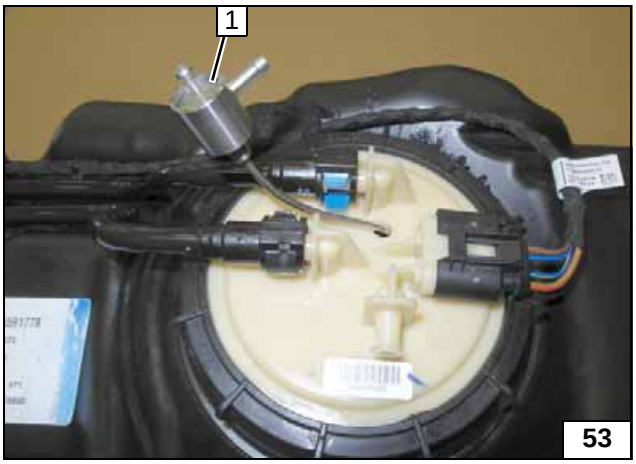
1 Fuel-tank sending unit
2 Place washer with outer dia. d_a = 17.8mm as a template against the ribs.
3 Copy hole pattern, remove washer, drill hole using provided drill

Hole for FuelFix



Work steps 4 and 5.
Shape FuelFix **1** according to template and cut to length.
Insert in hole **2**.

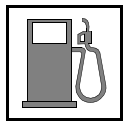
Inserting FuelFix

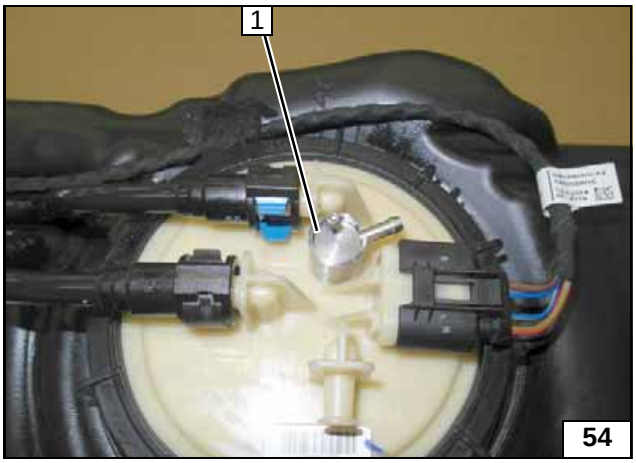


Work step 5.

1 FuelFix

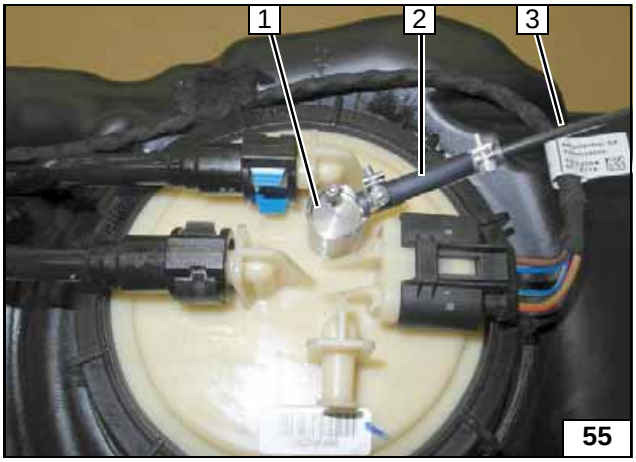
Inserting FuelFix





Work step 5.4.
Align FuelFix **1** as shown.

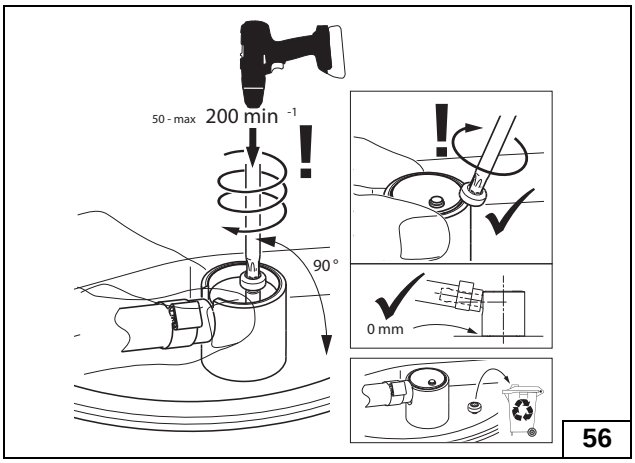
Aligning FuelFix



Work step 6.

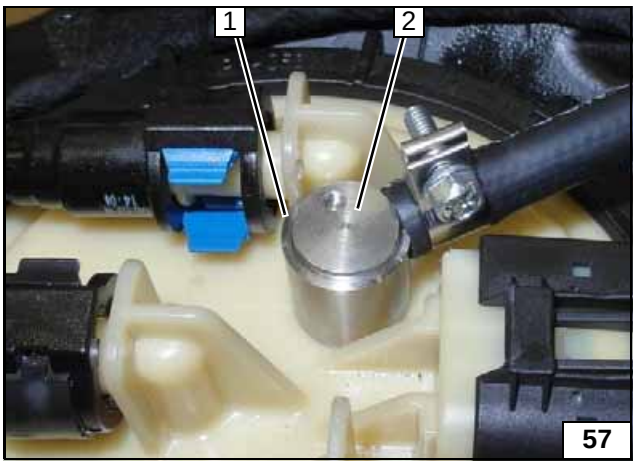
1 FuelFix
2 Hose section, screw clamp [2x]
3 Fuel line

Connecting fuel line



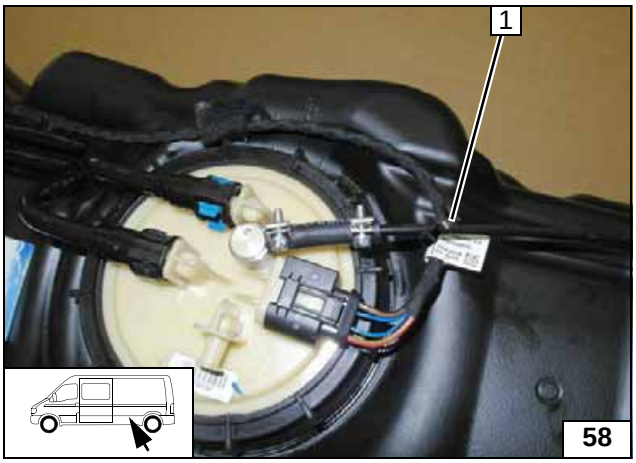
Work step 7.

Installing FuelFix



Work step 8.
Check the firm seating of the FuelFix and the position of clamping piece **2** with respect to housing upper edge **1**.

Checking FuelFix

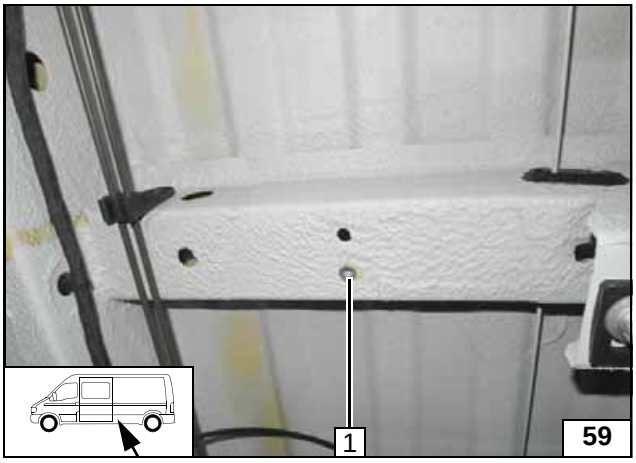


Work step 8.

Secure FuelFix fuel line using cable tie **1** as strain relief.

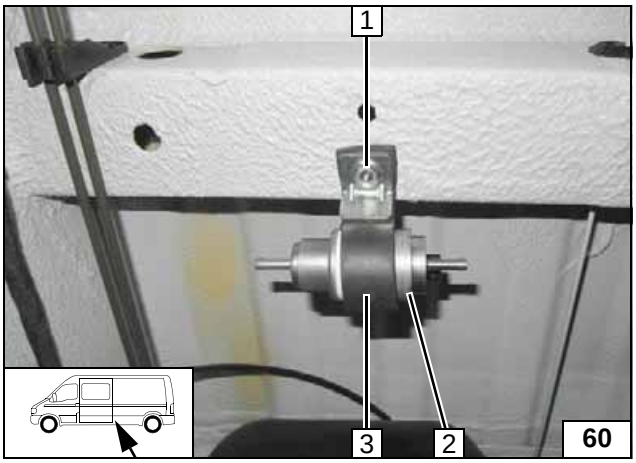
Fuel extraction

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



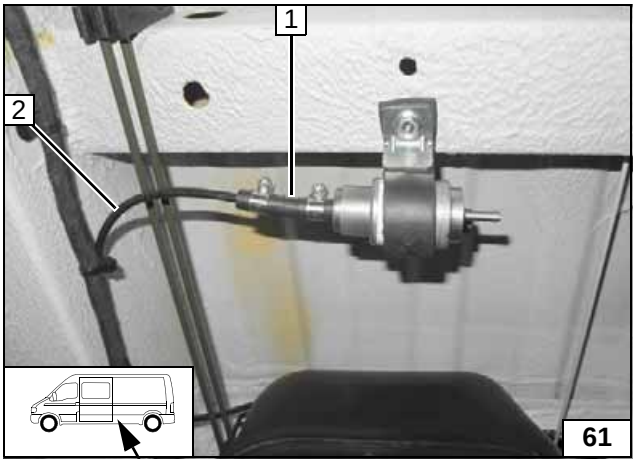
1 Rivet nut in existing hole

Installing rivet nut



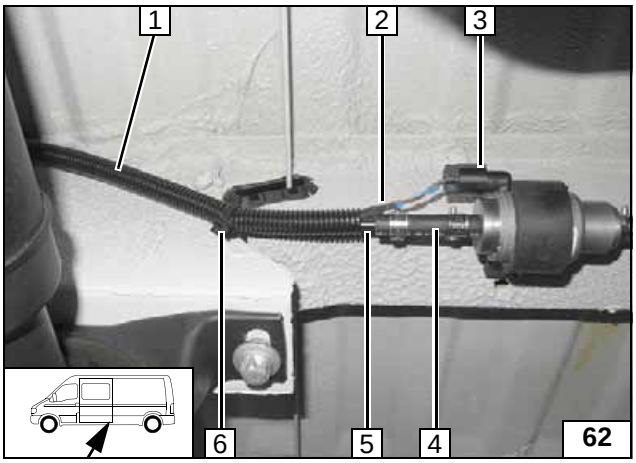
1 M6x25 bolt, support angle bracket on rivet nut
2 Metering pump
3 Metering pump support

Installing metering pump



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

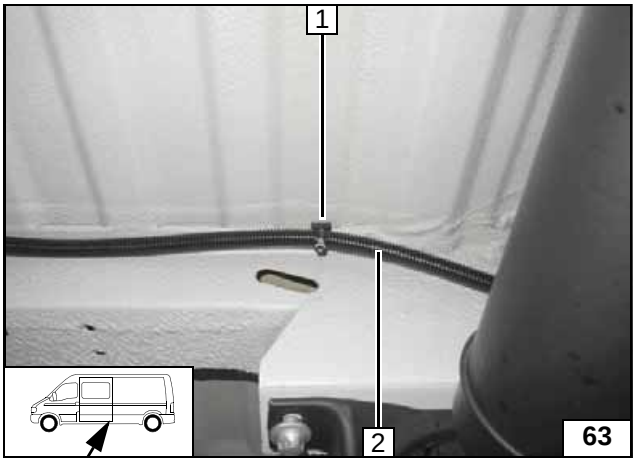
Connection of metering pump



Draw wiring harness for metering pump **2** and fuel line for heater **5** into 10 mm dia. corrugated tube **1** and route towards the heater installation location.

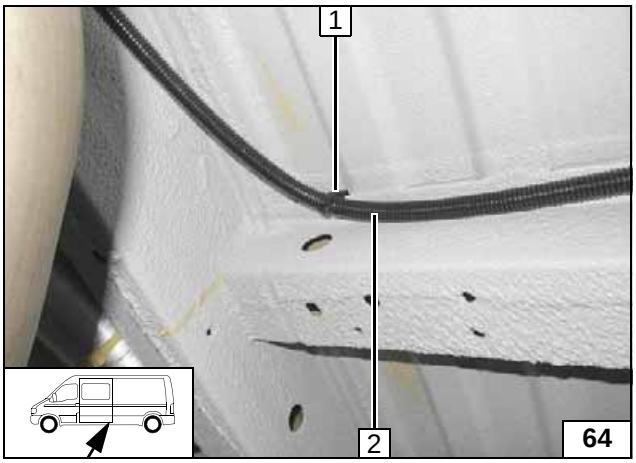
3 Connector X13 of wiring harness
4 Hose section, 10 mm dia. clamp [2x]
6 Affix clamp cable tie at the edge

Connection of metering pump



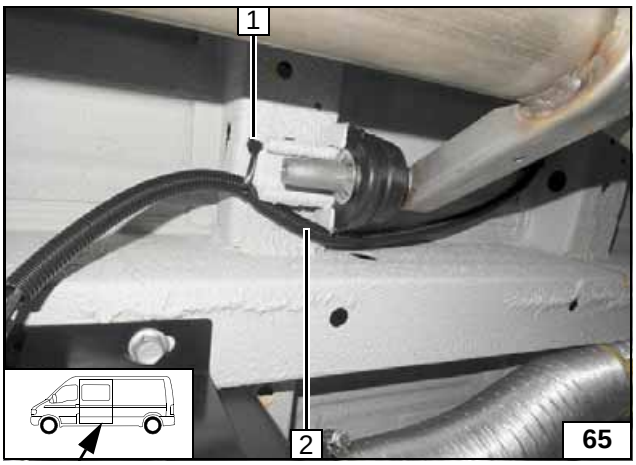
1 Affix clamp cable tie at the edge
2 Wiring harness of metering pump and fuel line of heater in 10 mm dia. corrugated tube

Securing corrugated tube



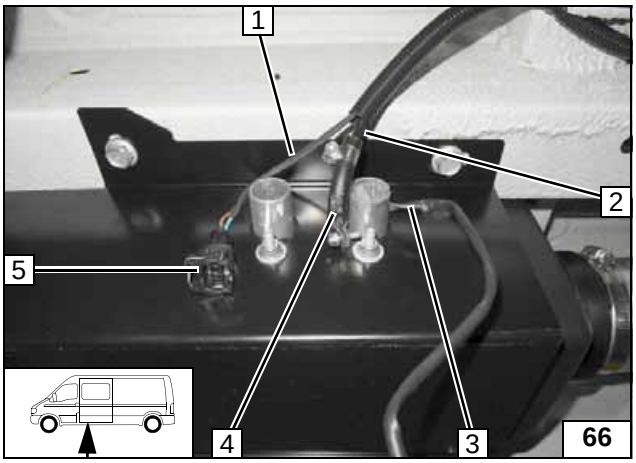
1 Affix clamp cable tie at the edge
2 Wiring harness of metering pump and fuel line of heater in 10 mm dia. corrugated tube

Securing corrugated tube



1 Cable ties through existing holes
2 Wiring harness of metering pump and fuel line of heater in 10 mm dia. corrugated tube

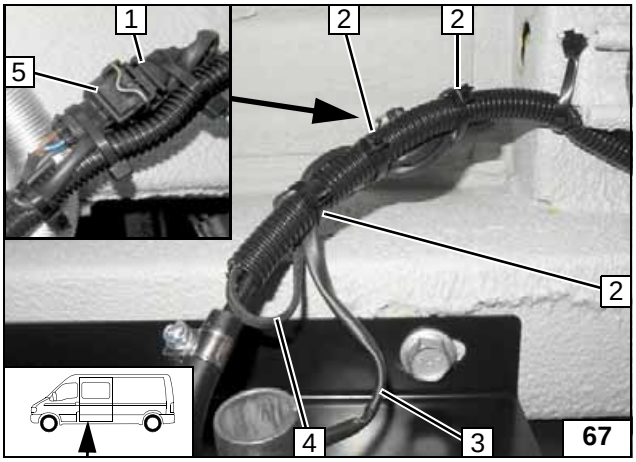
Securing corrugated tube



Pull connection line of metering pump **3** out of the air intakes and route to the outside through the guide slit in the intakes. Guide wiring harness of metering pump **1** and fuel line of heater **2** out of the 10 mm dia. corrugated tube.

4 Hose section, 10 mm dia. clamp [2x]
5 Fit connector X17 onto the wiring harness of the metering pump

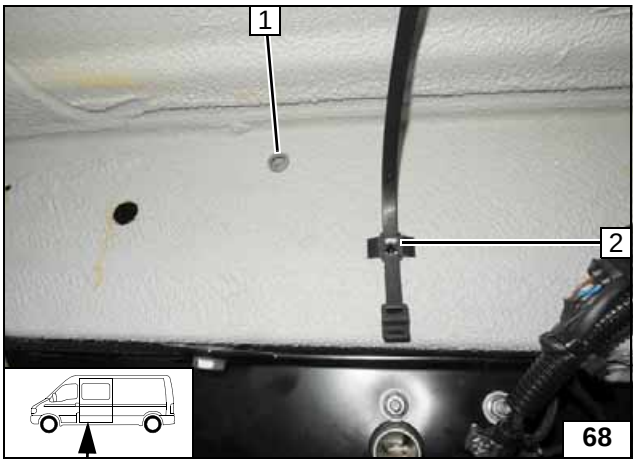
Connection of heater



Assemble connector X16 **1** on the connection line of metering pump **3** of the heater and connect coupling X17 **5** from wiring harness **4**. Ensure sufficient distance from neighbouring components, correct if necessary.

2 Cable tie [3x]

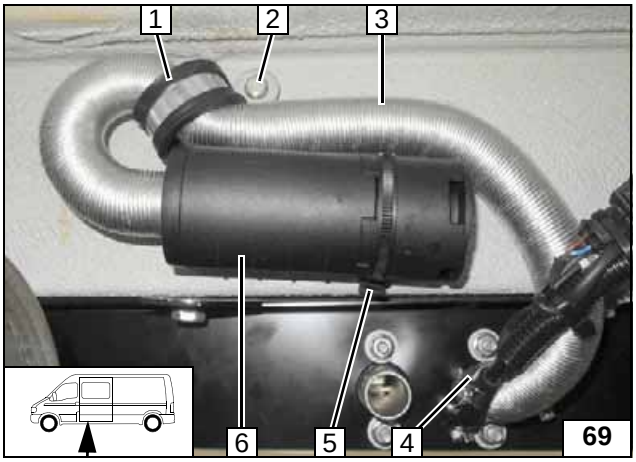
Connecting wires



Combustion Air

1 Rivet nut in existing hole
2 Clip-type cable tie in existing hole

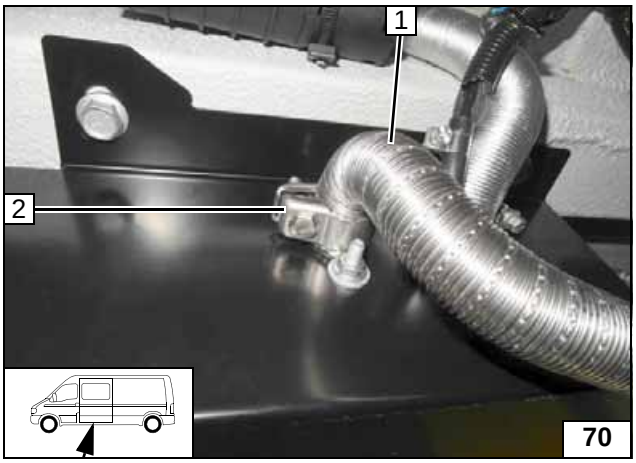
Installing rivet nut



1 34 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lock washer, large diameter washer on rivet nut
3 Combustion air pipe
4 Hose clamp
5 Close clip-type cable tie
6 Silencer

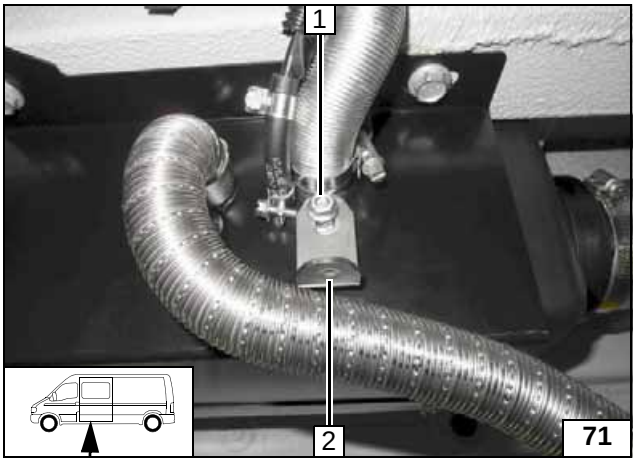
Mounting silencer

Exhaust Gas



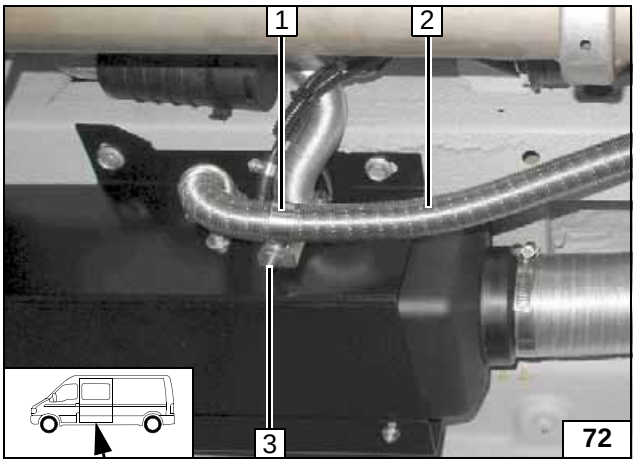
1 Exhaust pipe
2 Position hose clamp, lock

Mounting exhaust pipe



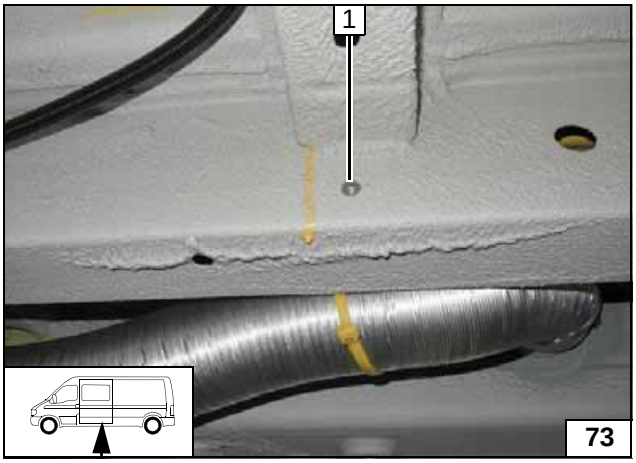
1 Flanged nut on heater stud bolts
2 Angle bracket

Mounting angle bracket



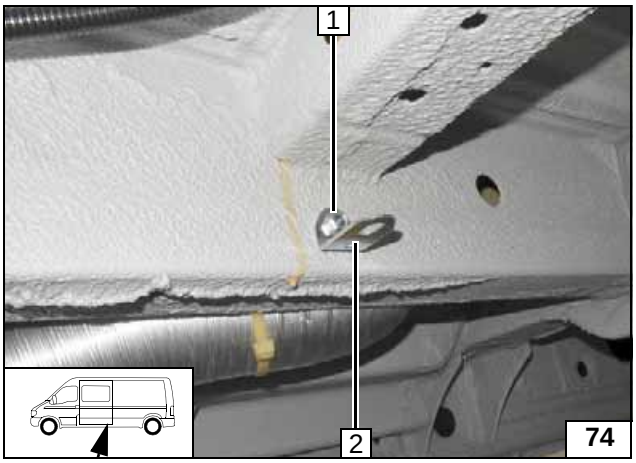
1 Pipe clamp
2 Exhaust pipe
3 M6x20 bolt, flanged nut

Mounting exhaust pipe



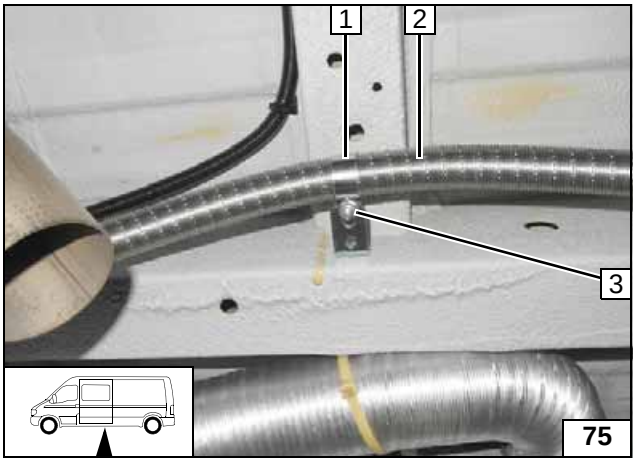
1 Rivet nut in existing hole

Installing rivet nut



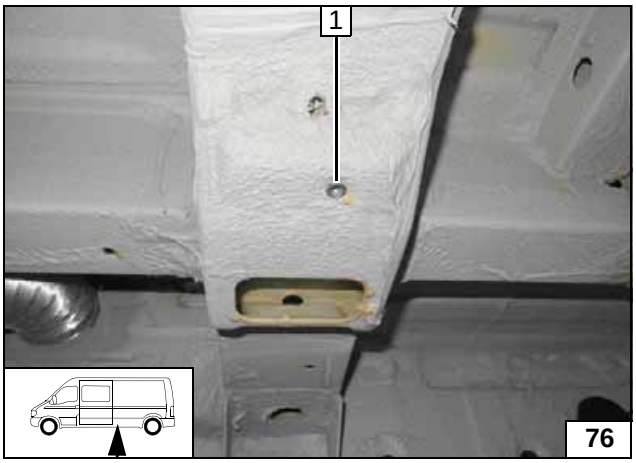
1 M6x25 bolt on rivet nut
2 Angle bracket

Mounting angle bracket



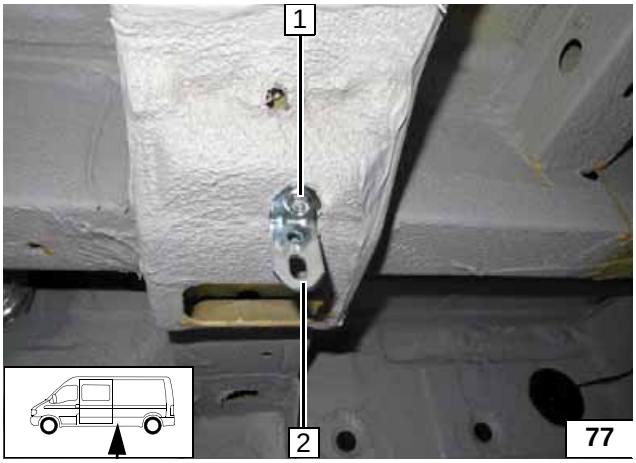
1 Pipe clamp
2 Exhaust pipe
3 M6x20 bolt, flanged nut

Mounting exhaust pipe



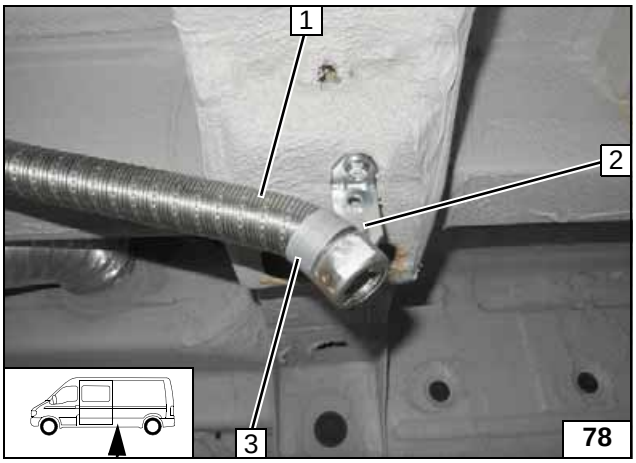
1 Rivet nut in existing hole

Installing riv-et nut



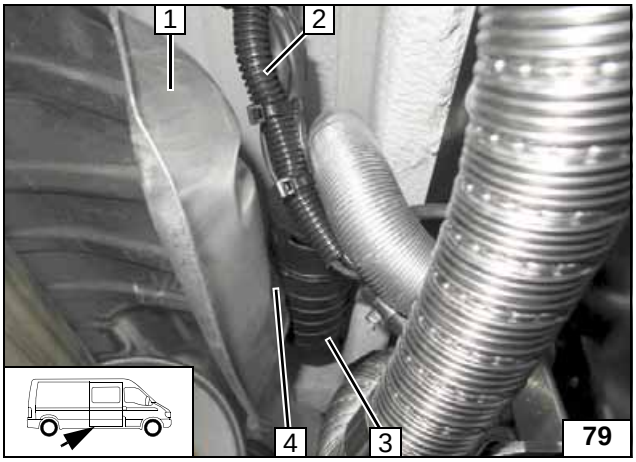
1 M6x25 bolt on rivet nut
2 Angle bracket

Mounting angle bracket



1 Exhaust pipe
2 M6x20 bolt, flanged nut
3 Pipe clamp

Mounting exhaust pipe



Mount heat guard plate **1**. Ensure sufficient distance between corrugated tube **2** as well as silencer **3** and heat guard plate **1** in position **4**, correct heat guard plate **1** if necessary.

Checking distance

Final Work

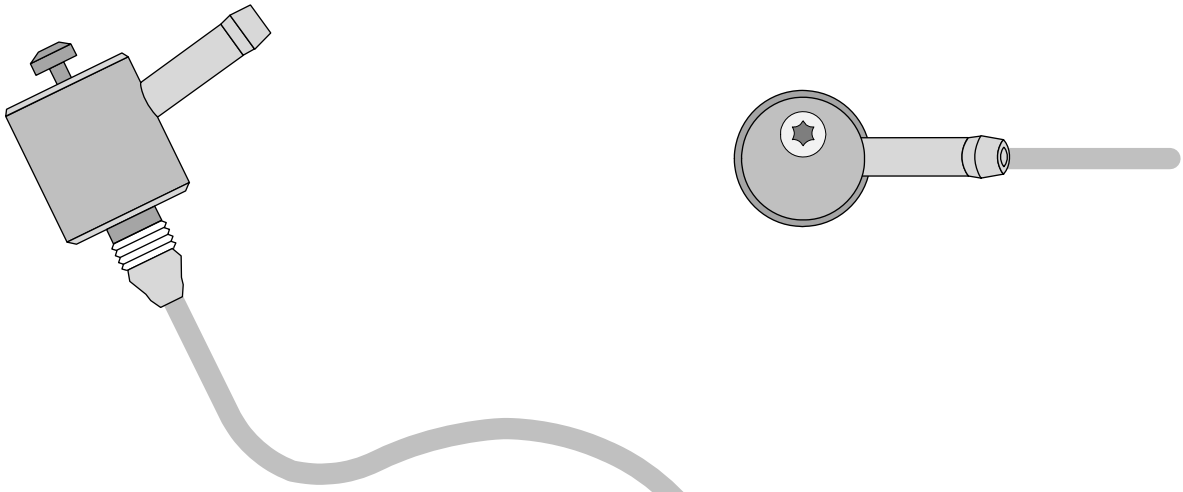
WARNING!
Reassemble the disassembled components in reverse order. Check all clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Program Smart / MultiControl HD, select TT Evo 40 heater**
- **Teach Telestart transmitter**
- **Place caution label "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial start-up and function check, see installation instructions**

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

FuelFix Template

Top view



100 mm

1:1 scale

Compare size of printout with dimension lines.
Permitted tolerance maximum of 2%.

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

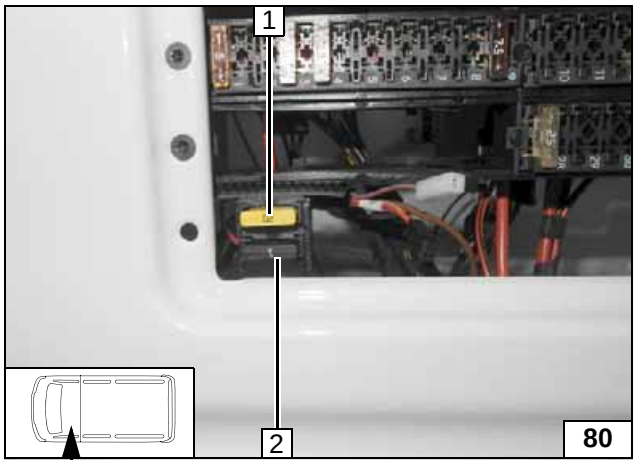
100 mm

0

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

If vehicles have passenger compartment monitoring, this must be deactivated for the heating operation. Deactivation instructions can be found in the operating instructions of the vehicle.



1 20A heater fuse F1
2 1A fuse F3 of heater control

Heater fuse