


Air heater unit

Air Top 2000 ST D Additional Heater


*2001/56*0022

Installation Instructions

Opel Vivaro Combi Opel Vivaro Tour Opel Vivaro Life

Diesel

from Model Year 2007

For left-hand drive vehicles only

Not for vehicle with a 2nd heat exchanger



WARNING!

Hazard warning:

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

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

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

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

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

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| Preparing heater-unit wiring harness | 9 | Final Work | 29 |

Validity

| Manufacturer | Model | Type | EG-BE No./ABE |
|--------------|--------|------|------------------------|
| Opel | Vivaro | X83 | e1 *98 / 14 * 0170 ... |

| Engine type | Engine model | Output in kW | Displacement |
|-------------|--------------|--------------|--------------|
| M9R | Diesel | 66 | 1995 |
| M9R | Diesel | 84 | 1995 |
| G9U | Diesel | 107 | 2463 |

Foreword

These installation instructions apply to Opel Vivaro vehicles with Diesel engine from model year 2007 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded.

Vehicles and equipment variants not listed in these installation instructions have not been tested. However, installation according to these installation instructions may be possible. Depending on the version and equipment variants of the vehicle, changes compared to these "installation Instructions" may be necessary during installation and must be adjusted accordingly.

However, where this is the case the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Air Top 2000 ST* should be observed.

The installation location of heater controls and the routing of the air ducting parts must be coordinated with the final customer prior to installation!

WARNING!

Original load-bearing components of the vehicle and/or components used for crash safety may not be modified for the routing of heating and ventilation system!

Heater Units/Delivery Scope

| Quantity | Description | Order No.: |
|----------|--|------------|
| 1 | Specific Opel delivery scope AT2000 ST 12V D | 1311064A |

| Quantity | Description | Order No.: |
|----------|--|------------|
| 1 | Installation kit for Opel Vivaro AT2000ST from Model Year 2007 | 1311322A |

To be ordered as an option:

| Quantity | Description | Order No.: |
|----------|---|------------|
| 1 | Telestart T100 HTM Opel Vivaro (Opel-OSV; Westfalia) | 1311328A |
| or | | |
| 1 | Telestart T100 HTM (Opel aftersales) | 1303704B |
| 1 | Y-cable for Telestart for Air Top devices (Opel aftersales) | 1311677A |
| 1 | Extension cable for T100 HTM temperature sensor (Opel aftersales) | 1311816A |

| Quantity | Description | Order No.: |
|----------|--|------------|
| 1 | Installation frame for combination timer (can be ordered via Opel) | 09 267 211 |
| 1 | Air outlet panel (can be ordered via Opel) | 09 267 212 |

General Instructions

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.

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

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

Special Tools

- Torque wrench for 2.0 - 10 Nm
- Metric thread-setter kit
- Blind rivet tool
- Hole saw, 65 mm dia.

Explanatory Notes on Document

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

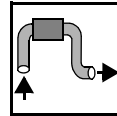
Mechanical work



Electrical system



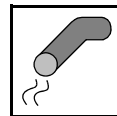
Hot air system



Fuel connection



Exhaust system



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



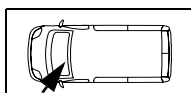
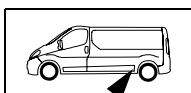
Specific risk of fire or explosion.



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



Reference to a special technical feature.

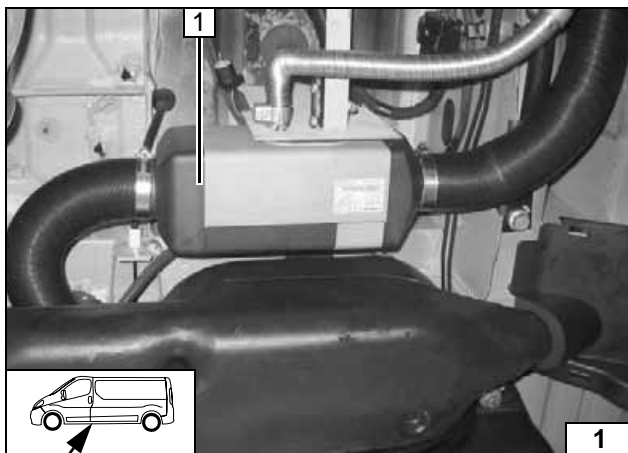


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

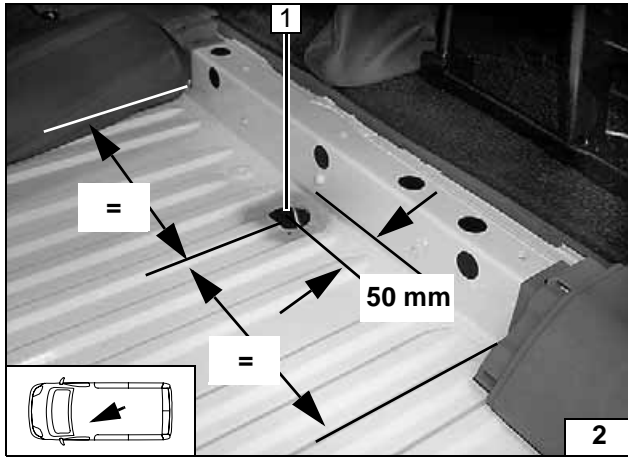
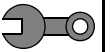
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- If installed, remove the seat row behind the driver's seat
- If installed, , remove the floor covering of the entrance strips for the sliding door
- Remove the floor covering behind the driver's seat
- Remove the driver's seat
- Remove the floor covering on the service cover
- Remove the battery cover in the driver's side footwell
- Disconnect the battery "earth" or "ground" connection.
- Remove the cover of the air guide behind the driver's/front passenger seat
- Remove the entrance trim pieces on the driver's side
- Unclip the interior light above the driver's seat
- Remove the A-pillar trim on the driver's side
- Remove the sun vizard on the driver's side
- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.



Heater unit installation location

- 1 Heater unit

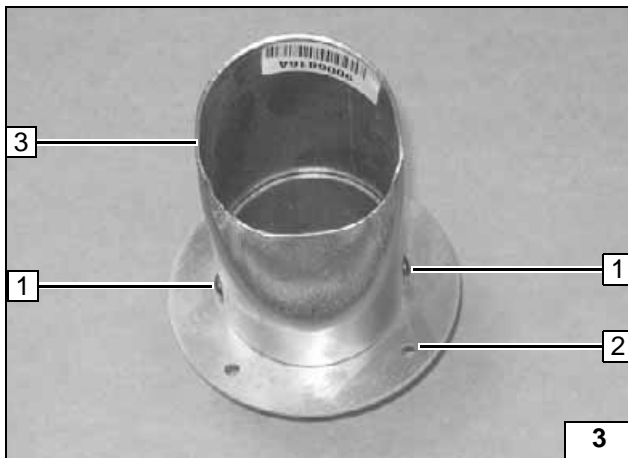
Installation location



Preparing air ducting

Drill 65 mm dia. hole 1 in center of floor panel.

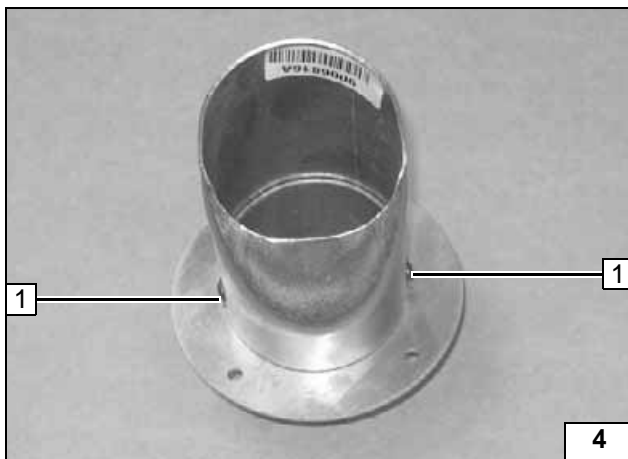
Copying hole pattern



Position air outlet 3 on wall fitting 2 and align as shown.
3 mm dia. holes [2x] 1 Ø for self-tapping screws

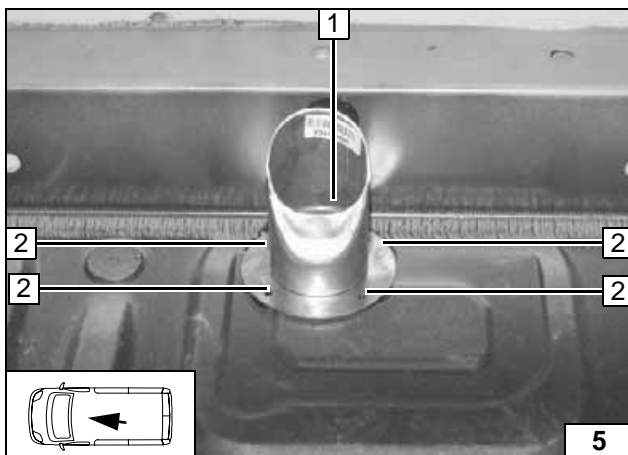


Preassembling air outlet



1 Self-tapping screw [2x]

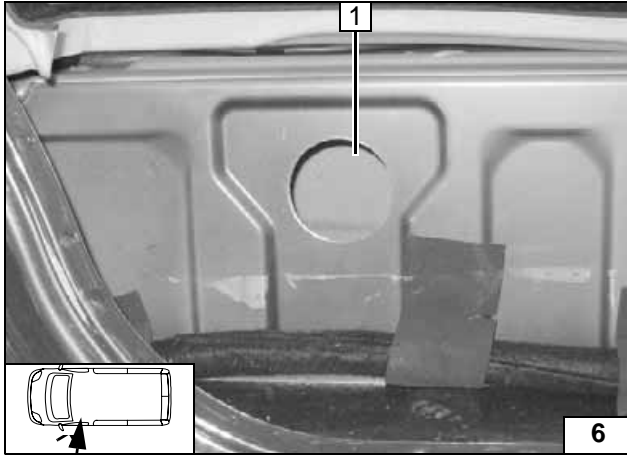
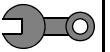
Preassembling air outlet



Insert preassembled air outlet 1 in 65 mm dia. hole, align and copy hole pattern 2 for 5 mm dia. hole [4x].
Apply corrosion protection to holes!
Air outlets will be installed later!



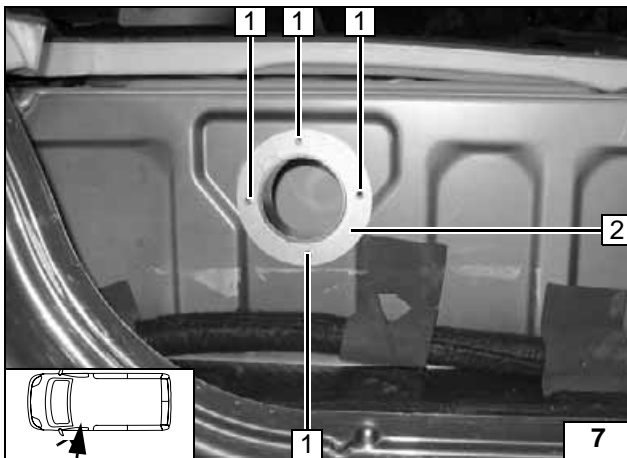
Copying hole pattern



Drill 65 mm dia. hole **1** in center of bead on driver's entrance.



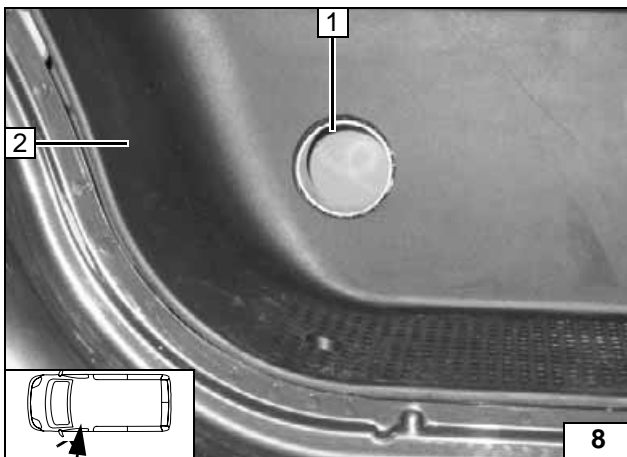
Copying hole pattern



Insert 60/60 wall fitting **2** in hole, align and copy hole pattern for 5 mm dia. hole **1** [4x]. Apply corrosion protection to holes!



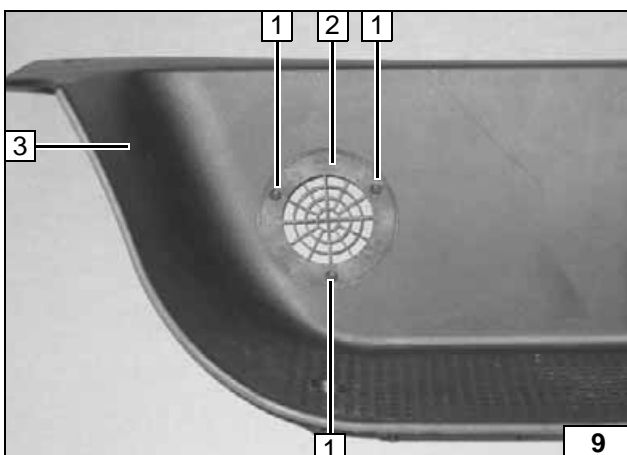
Copying hole pattern



Mount trim on driver's entrance **2** and copy hole pattern **1** for 65 mm dia. hole in trim **2** from behind.



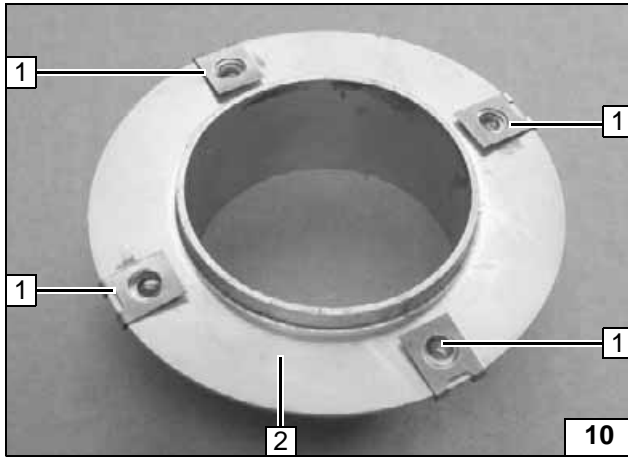
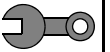
Copying hole pattern



Align air outlet **2** as shown and copy hole pattern **1** for 2.5 mm hole. Fasten air outlet **2** to trim **3** with self-tapping screws [3x]. Trim will be installed later!



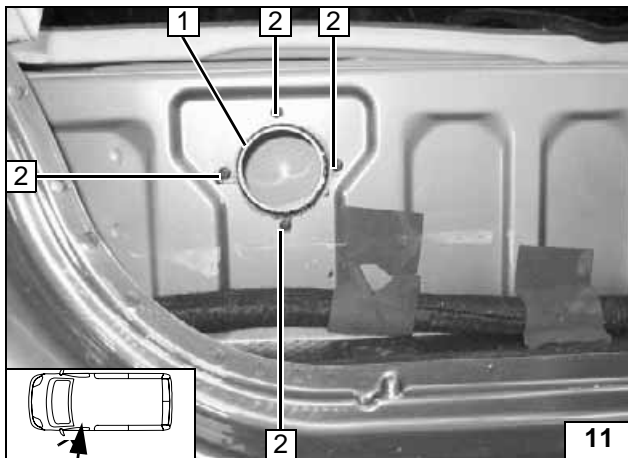
Installing air outlet



Push plate nuts 1 [4x] onto wall fitting 2.



Preassembling wall fitting

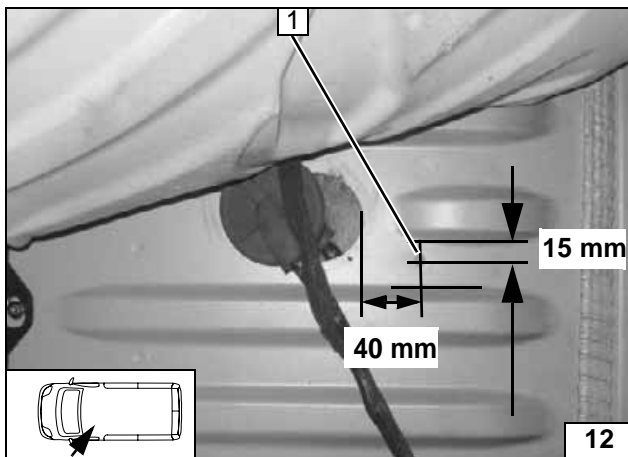


Provide wall fitting 1 with sealing compound and insert into 65 mm dia. hole from behind.



2 Self-tapping screw [4x]

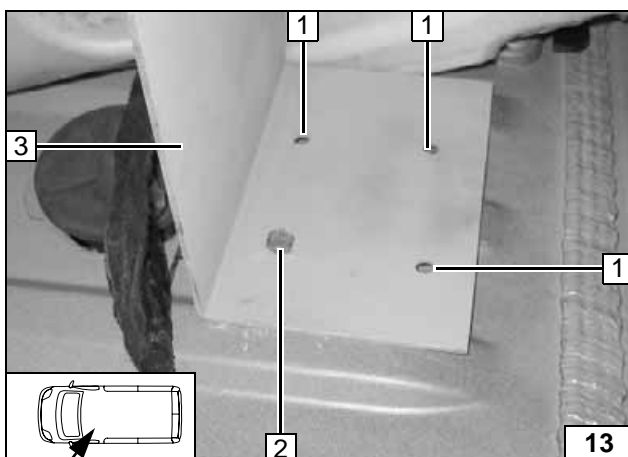
Installing wall fitting



Hole pattern 1 for 6.5 mm dia. hole



Hole pattern for heating unit bracket

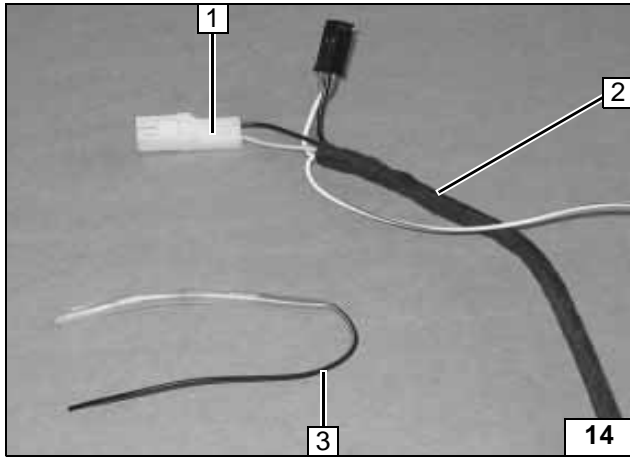


Align heating unit bracket 3 with bolt 2 as shown and fasten with M6x20 2 bolt
Apply corrosion protection to holes!



1 6.5 mm dia. hole [3x]

Hole pattern for heating unit bracket

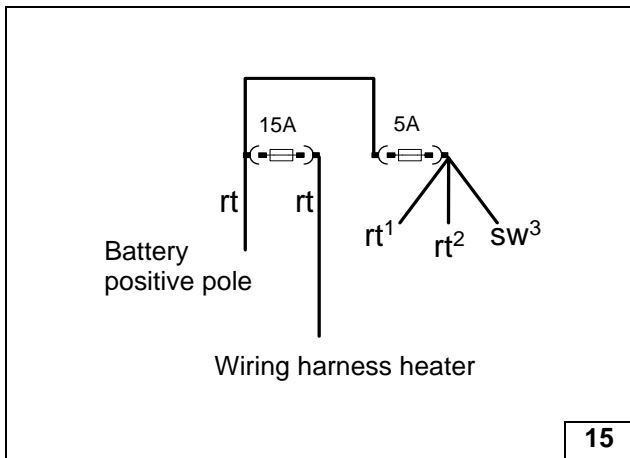


Preparing heater-unit wiring harness

Cut internal resistor 3 off wiring harness 2 and install connector 1 provided.



Con-
nection of
AT2000ST
tempera-
ture sensor



Connect 5 A and 15 A fuse accordingly with accessories provided.

Legend:

- rt¹ Combination timer
- rt² Telestart (if present)
- sw Permanent heating option



Con-
nection of fuse

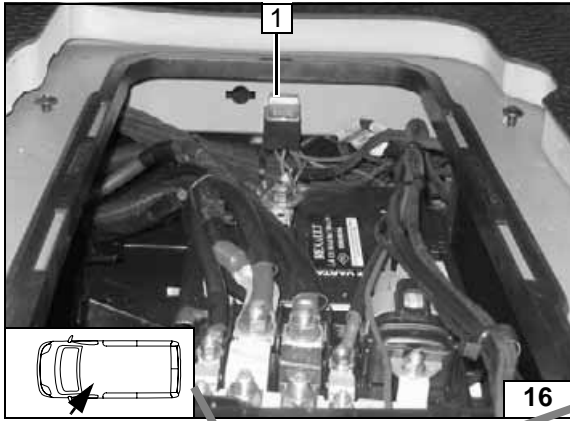


Electrical Connections



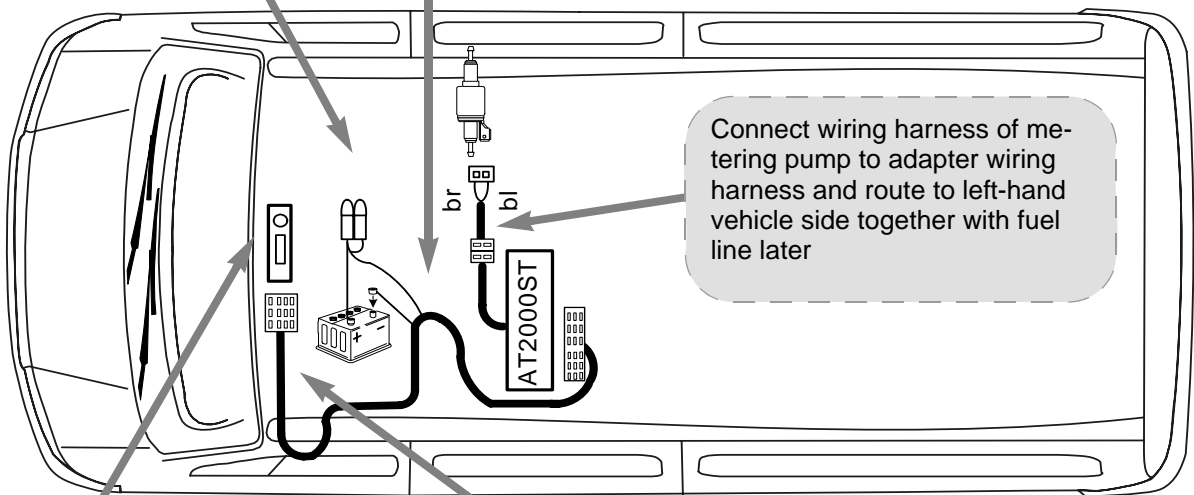
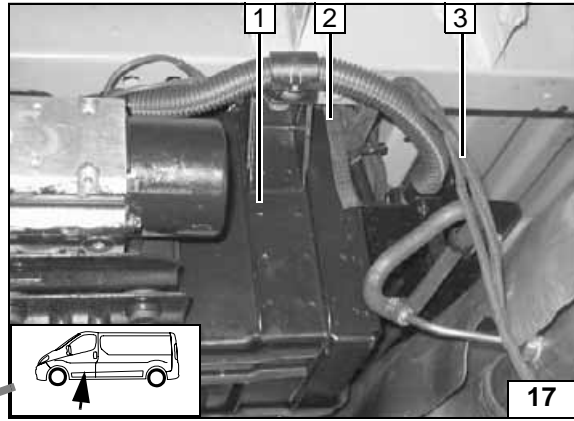
Fuse holder

1 2.5 mm dia. hole, fuse holder

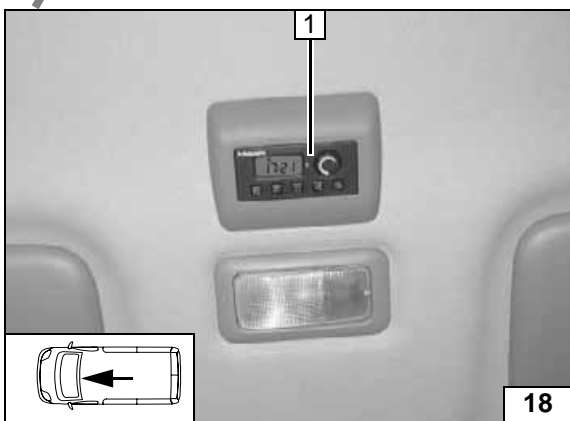


Wiring harness pass through

Route wiring harness of heater unit 3 out of battery box 1 to underbody, 100 mm edge protection 2

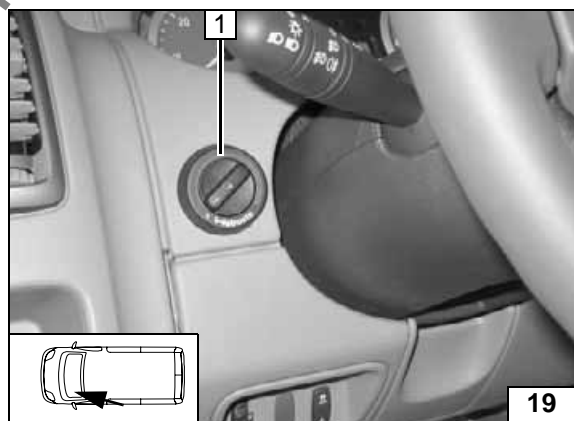


Wiring harness installation diagram



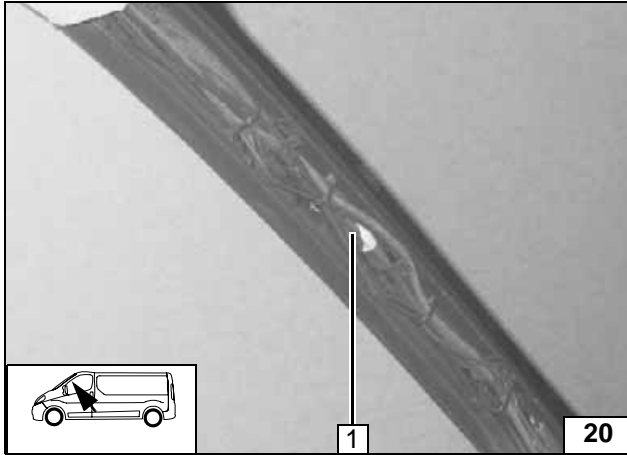
Heater control

1 Combination timer, installation frame



Heater control

1 Switch



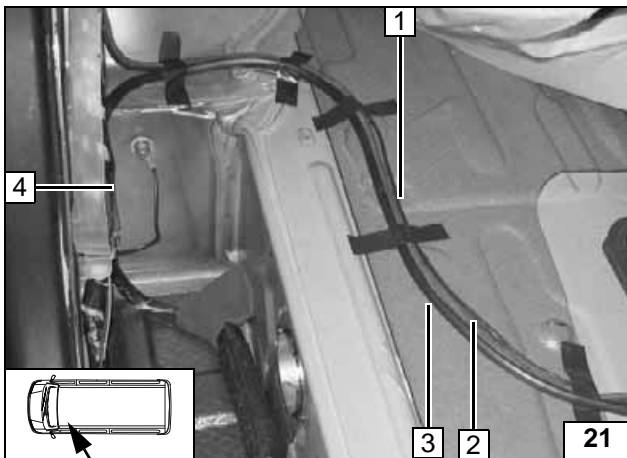
Routing wiring harnesses

Only with digital timer!

Observe connection diagram on page 13 and 15.
Route wiring harness from heater control along original vehicle wiring harnesses on left-hand A-pillar to entrance.



Routing wiring harness

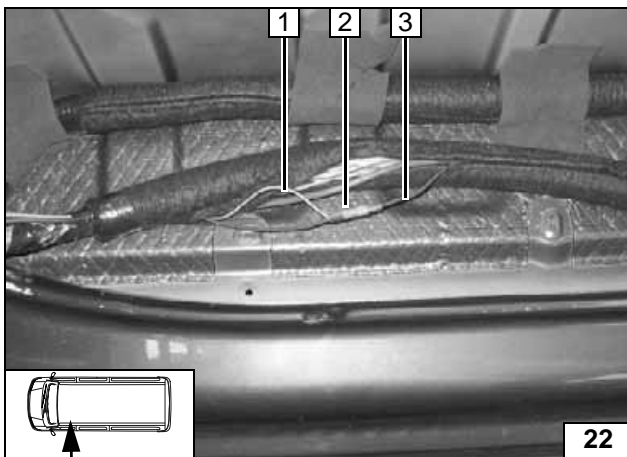


Secure wiring harnesses with installation strap.

- 1 Power supply cable only with Telestart T100 option
- 2 Wiring harness of heater unit
- 3 Wiring harness of combination timer, protective sleeving
- 4 Gray (gr) wire from combination timer, wiring harness of AT2000ST temperature sensor



Routing wiring harness

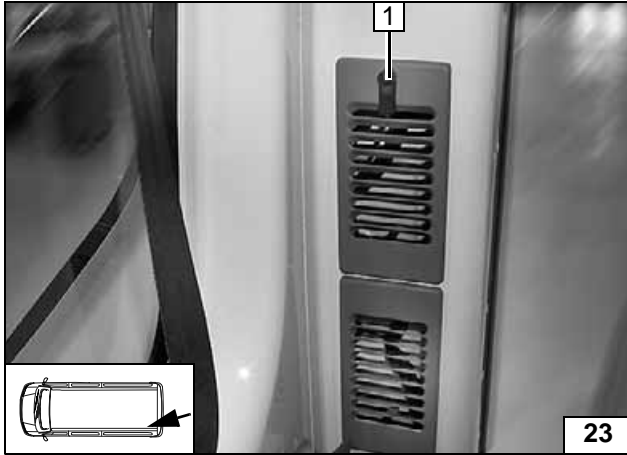


Check blue (bl) original vehicle wire Ter. 58 before connection.

- 1 Gray (gr) wire from combination timer
- 1 Blue (bl) connector
- 1 Blue (bl) line Ter. 58

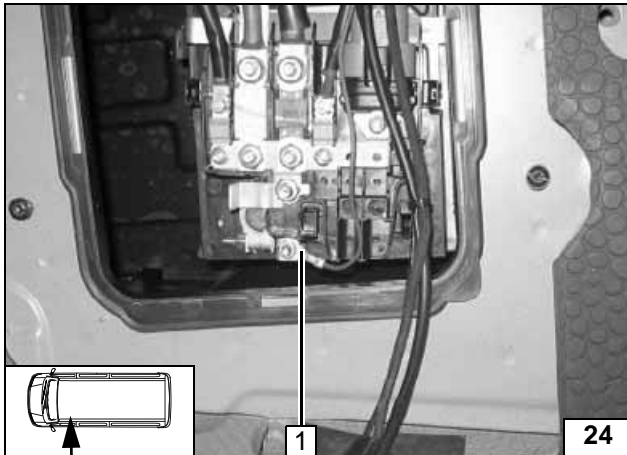


Connection of Ter. 58 for combination timer



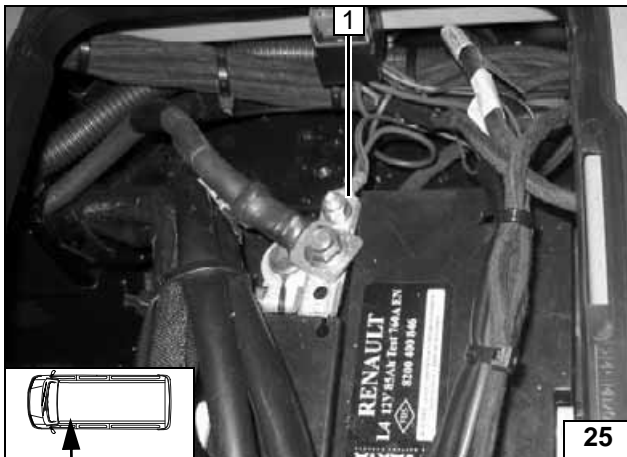
Route wire from temperature sensor from installation location of digital timer via original vehicle headliner to installation location of temperature sensor. Installation location of temperature sensor **1** is a recommendation. Please coordinate installation location with customer prior to installation.

Installing temperature sensor



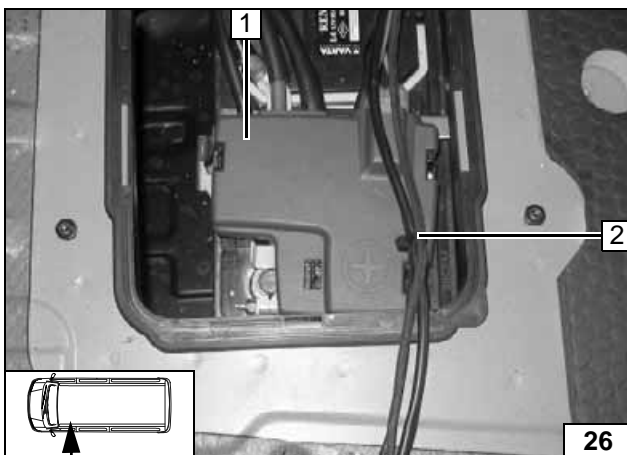
1 Red (rt) wire, claw cable lug, M6 flanged nut

Connection to positive battery terminal



1 Brown (br) wire, claw cable lug, M6 flanged nut

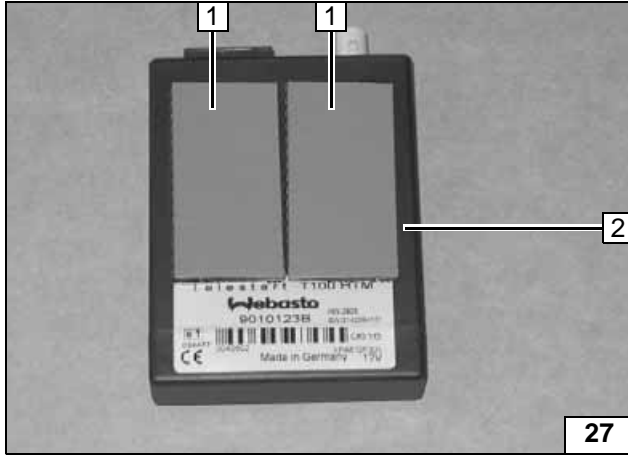
Connection to negative battery terminal



Remount cover **1**, route cable **2** as shown and secure with cable ties.



Installing positive terminal cover

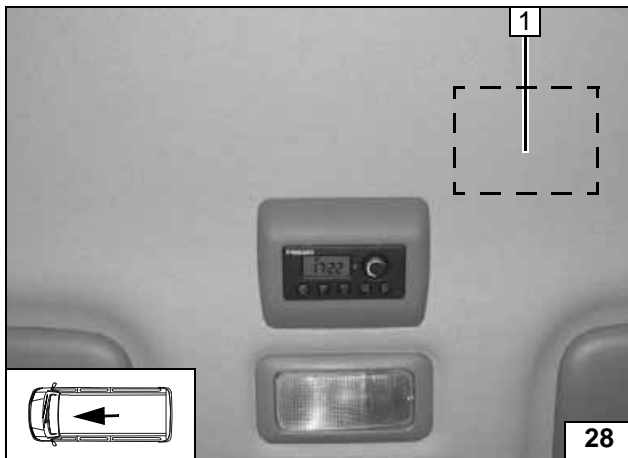


Telestart T100 HTM option

- 1 Self-adhesive Velcro strip [2x]
- 2 T100 HTM receiver



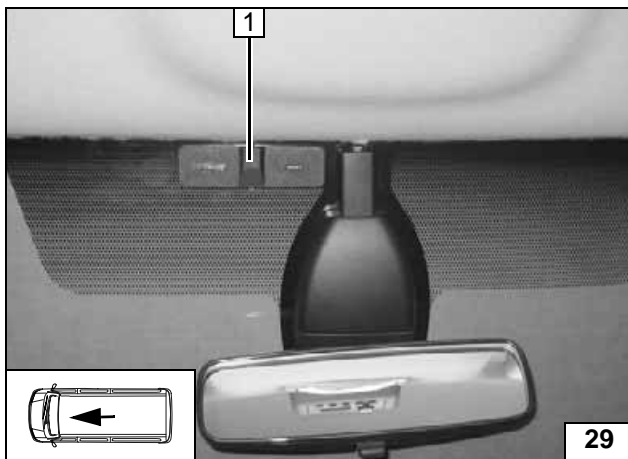
Installing receiver



Receiver 1 fastened on inside of headliner with Velcro strip [2x]



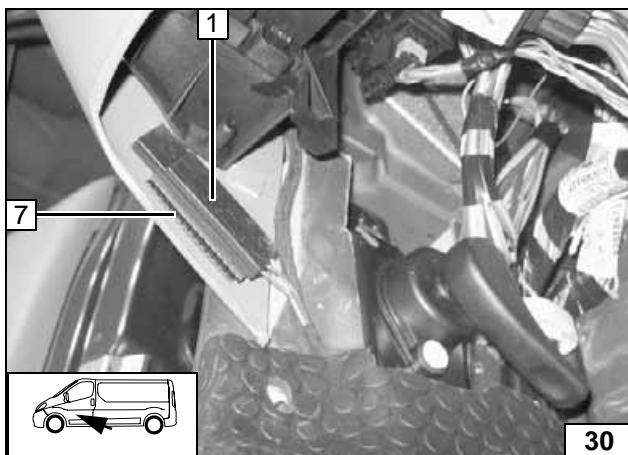
Installing receiver



1 Antenna



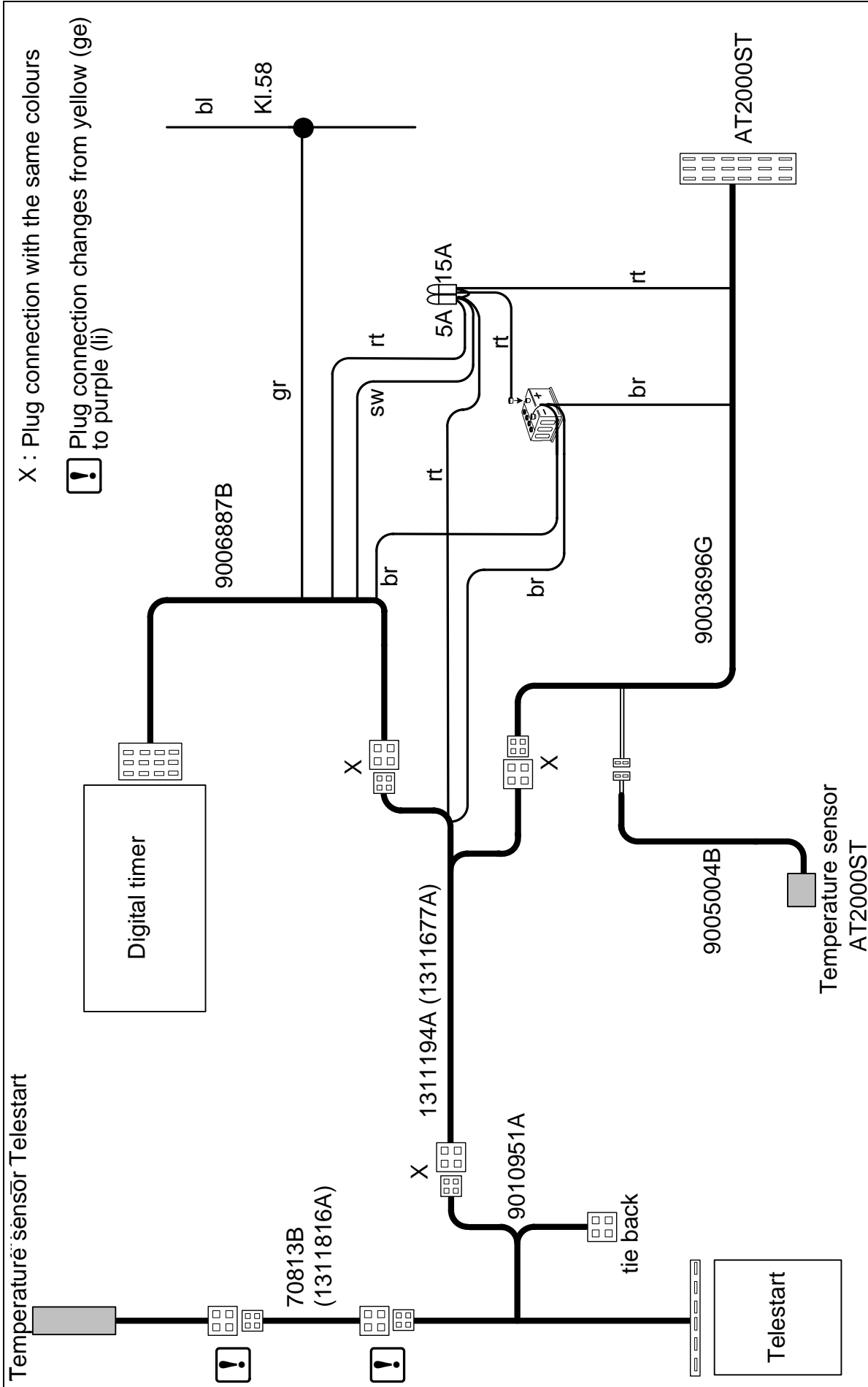
Installing antenna



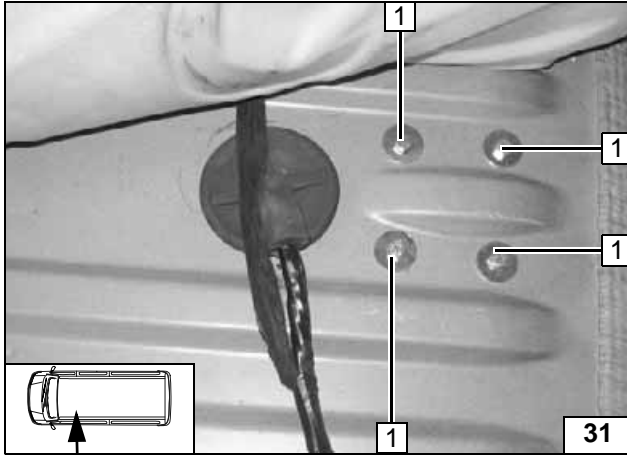
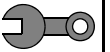
- 1 Temperature sensor
- 2 Self-adhesive Velcro strip



Installing T100 temperature sensor



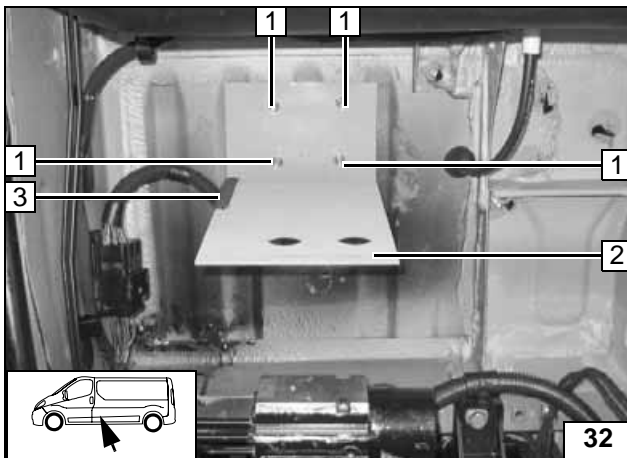
Connection Diagram for Combination Timer and Telestart T100



Installing bracket

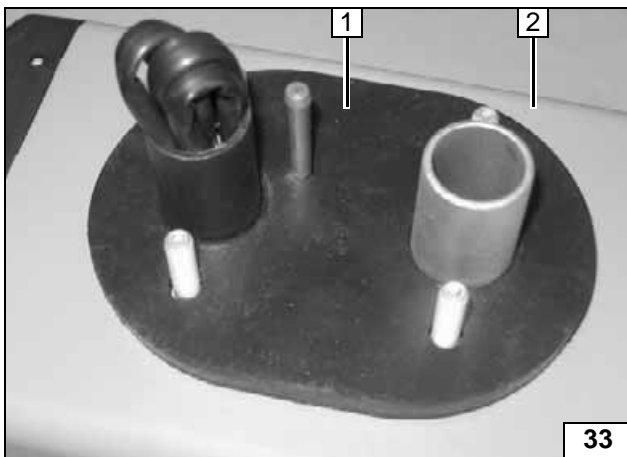
1 M6x20 bolts [4x], large diameter washers [4x]

Installing bracket



1 M6 flanged nut [4x]
2 Bracket
3 100 mm edge protection section

Installing bracket

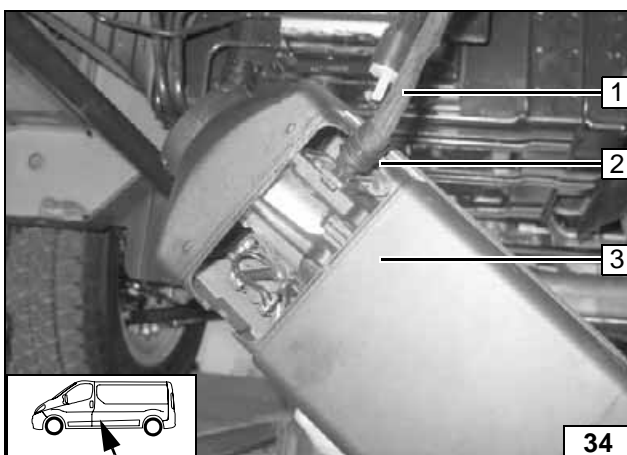


Installing heater unit

Install rubber gasket 1 on heater unit 2 as shown.



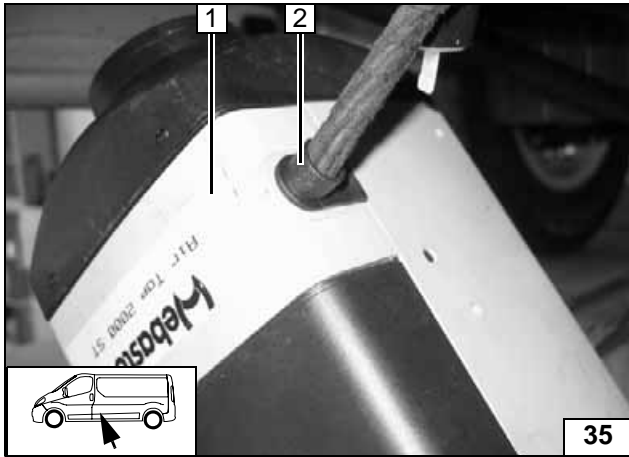
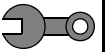
Installing heater unit



Connect heater unit connector from wiring harness 1 to heater unit 3 and align grommet 2.



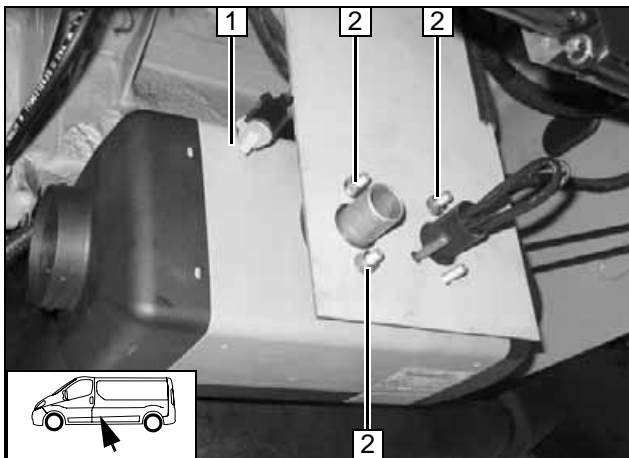
Installing heater unit



Install wiring harness **1** in cover **2**.

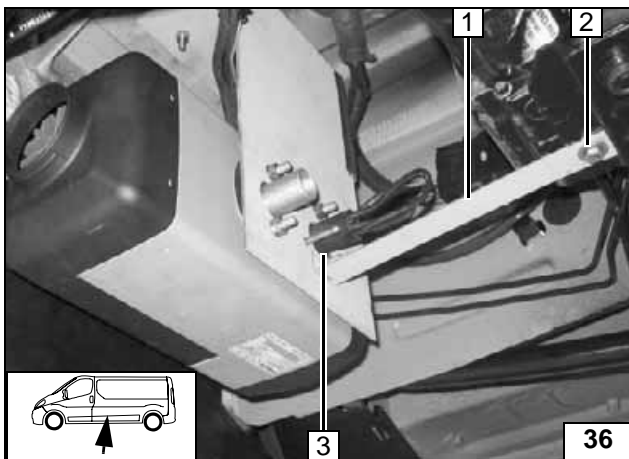


Installing heater unit



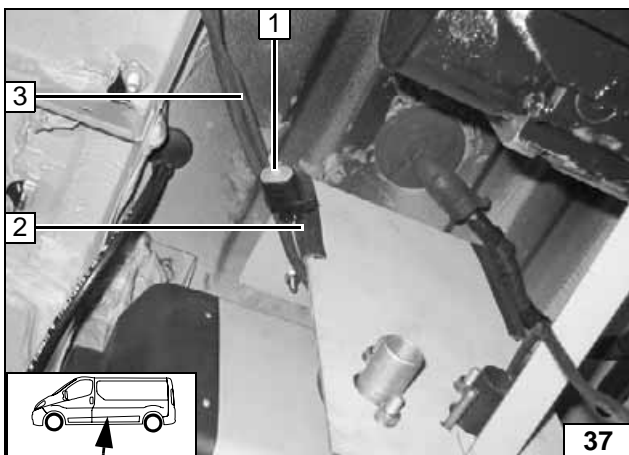
- 1** Heater unit
- 2** M6 flanged nut [3x]

Installing heater unit



- 1** Strut
- 2** Original vehicle bolt
- 3** M6 flanged nut

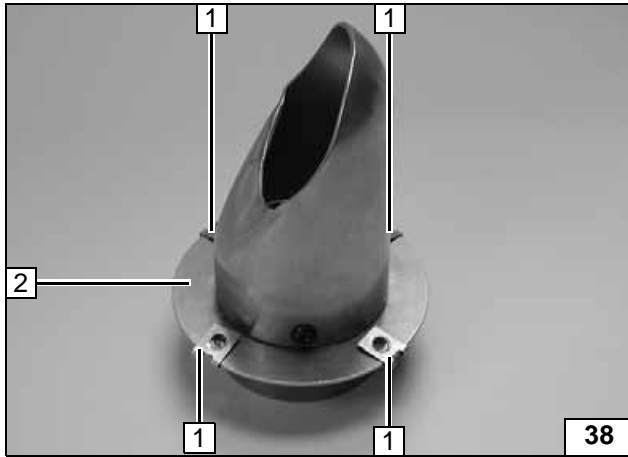
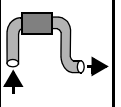
Installing strut



Secure diagnosis connector **1** on wiring harness **3** of heater unit with cable tie.

- 2** 100 mm edge protection section

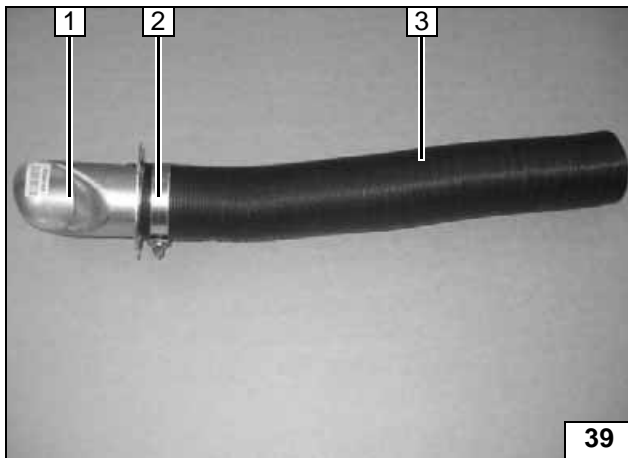




Hot air system

- 1 Plate nut [4x]
- 2 Wall fitting

Preassembling wall fitting

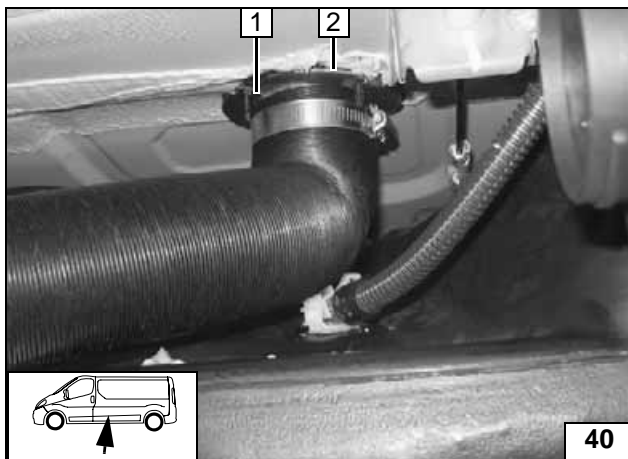


Provide wall fitting 1 with sealing compound.

- 2 50/70 mm dia. hose clamp
- 3 60 mm dia. flexible pipe, 400 mm long



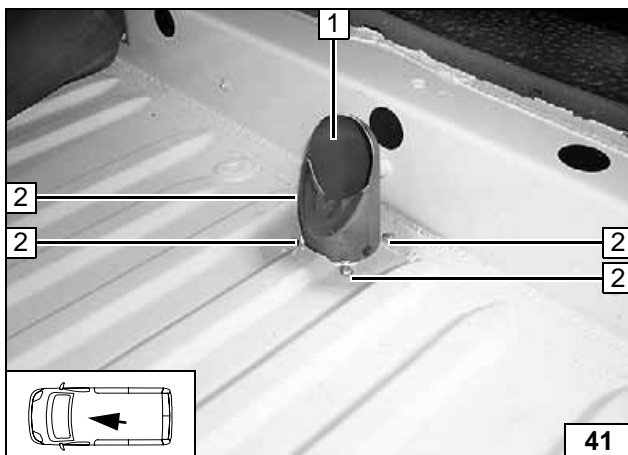
Preassembling hot air hose



Guide preassembled wall fitting 1 through 65 mm dia. hole 2 into passenger compartment.



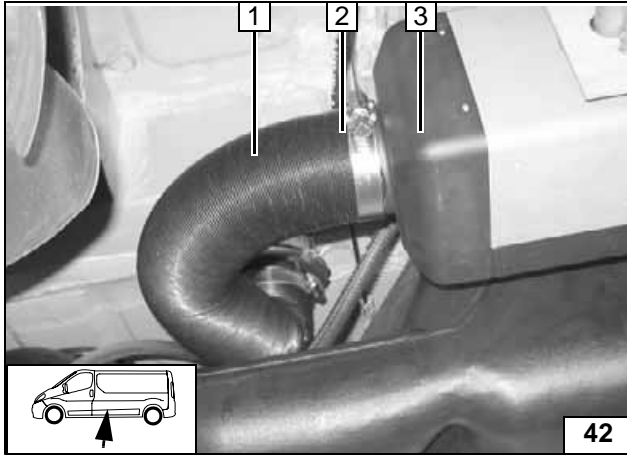
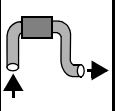
Routing through into passenger compartment



Position wall fitting 1 with hot air outlet toward rear and align with 5 mm dia. holes [4x] and install with self-tapping screws 2 [4x].



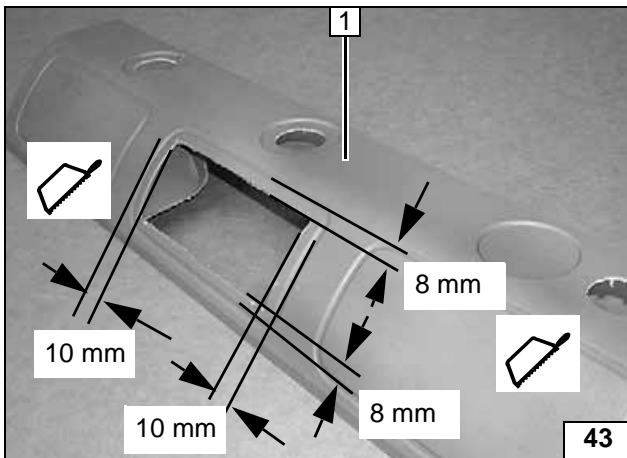
Installing wall fitting



- 1 60 mm dia. flexible pipe, 400 mm long
- 2 50/70 mm dia. hose clamp
- 3 Heater unit (hot air outlet)



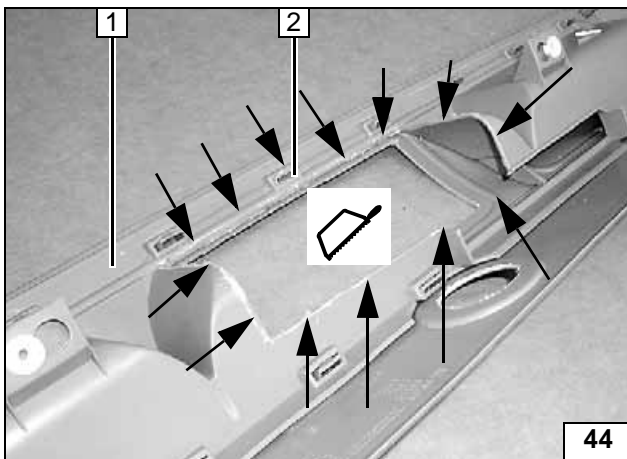
**Conne-
tion on
heater unit**



Cut out cover of air duct 1 as shown!



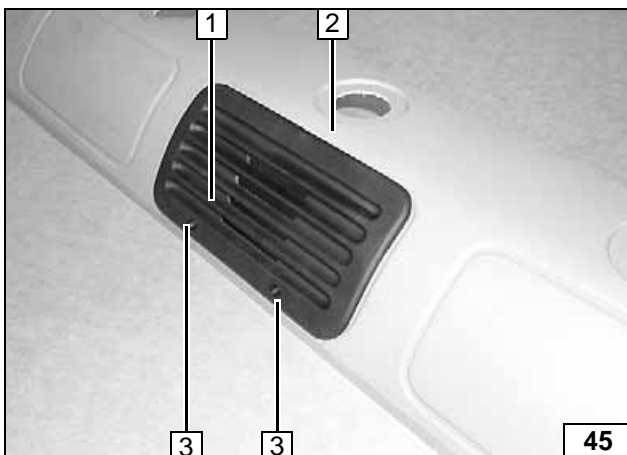
**Preparing
air duct**



Cut out back of cover for air duct 1 as shown and cut off fastening clip 2.



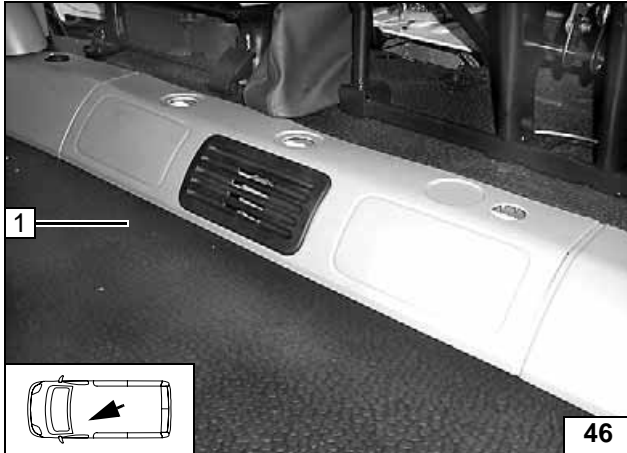
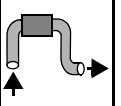
**Preparing
air duct**



Insert outlet plate 1 with retaining claws up-ward into cover 2 and center.
Copy hole pattern 3 [2x] for 2.5 mm dia. hole [2x].



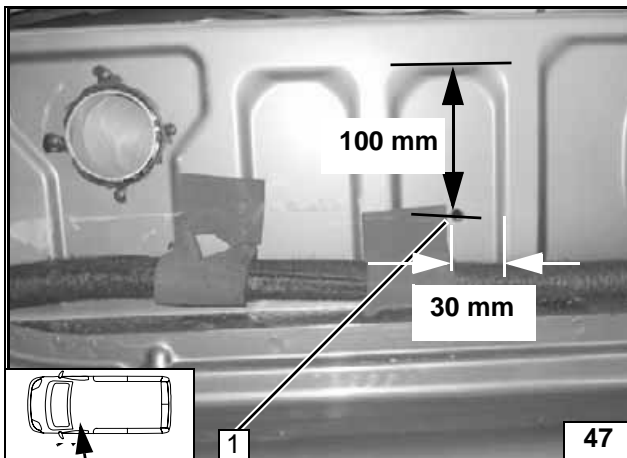
**Installing
outlet plate**



If floor covering **2** is installed in area of hot air ducting, cut out in area of hot air ducting.

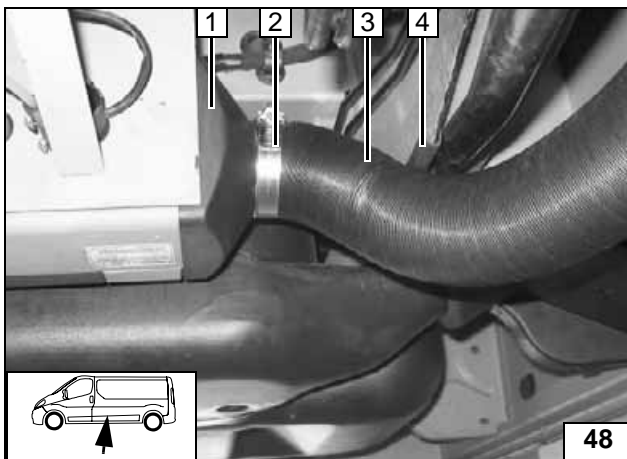


**Installing
air duct**



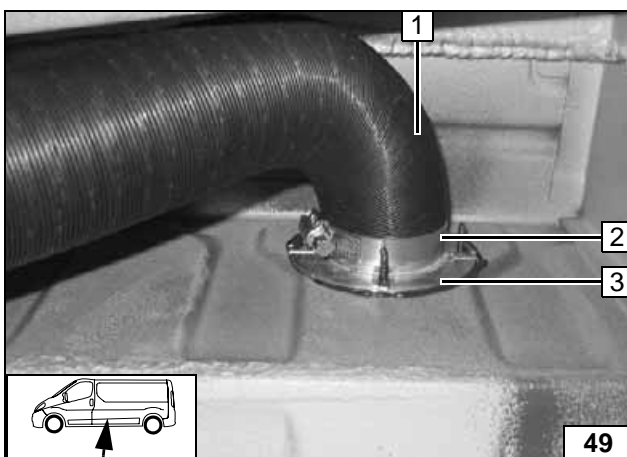
1 5 mm dia. hole

**Preparing
routing of
hot-air in-
take hose**



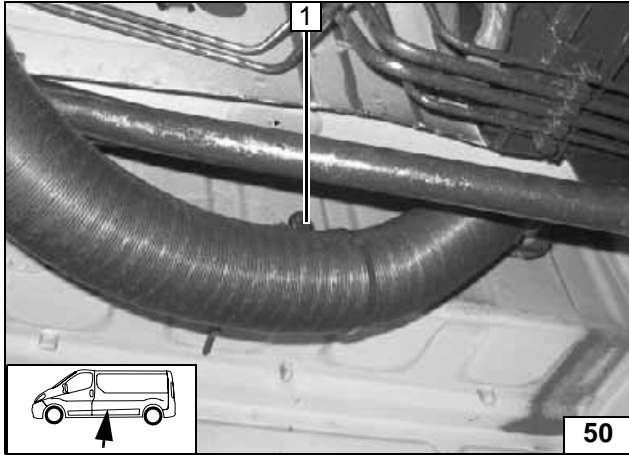
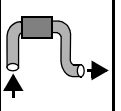
- 1** Heater unit (intake side)
- 2** 50/70 mm dia. hose clamp
- 3** 60 mm dia. flexible pipe, 830 mm long
- 4** 100 mm long edge protection section

**Connec-
tion on
heater unit**



- 1** 60 mm dia. flexible pipe, 830 mm long
- 2** 50/70 mm dia. hose clamp
- 3** Wall fitting

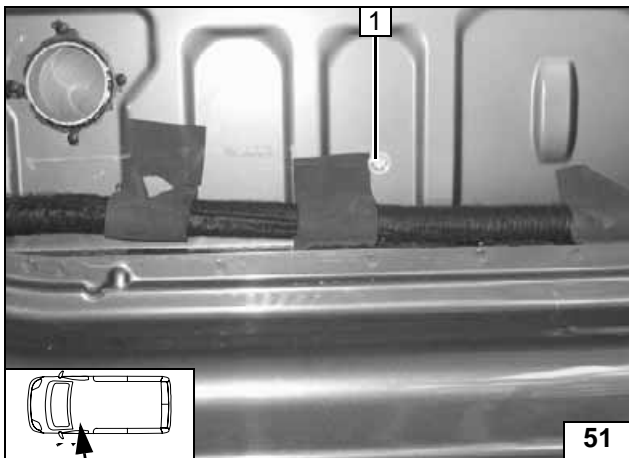
**Connec-
tion to wall
fitting**



Premount cable tie (screwable) 1 as shown



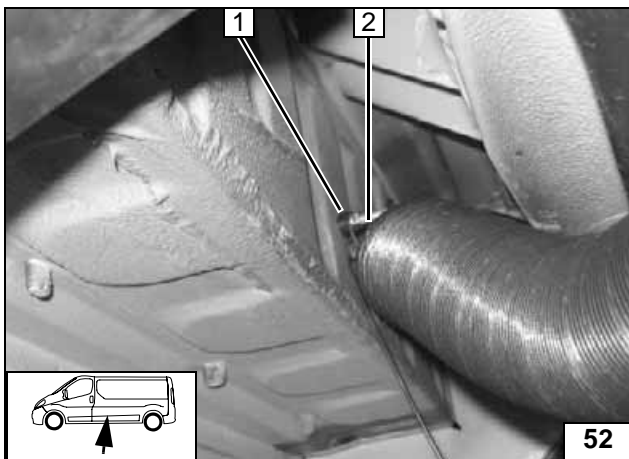
Routing hot-air intake hose



Insert M5x20 bolt 1, large diameter washer through hole.



Fastening hot-air intake hose



1 Cable tie (screwable)
2 M5x20 bolt, M5 flanged nut

Routing to pass through into passenger compartment



Fuel Connection

CAUTION!

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

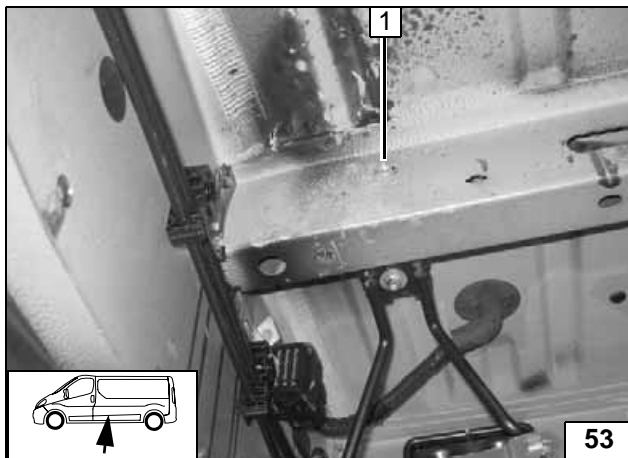
Catch any fuel running off with an appropriate container.

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

Mount the fuel line and wiring harness with rub protection on sharp edges.

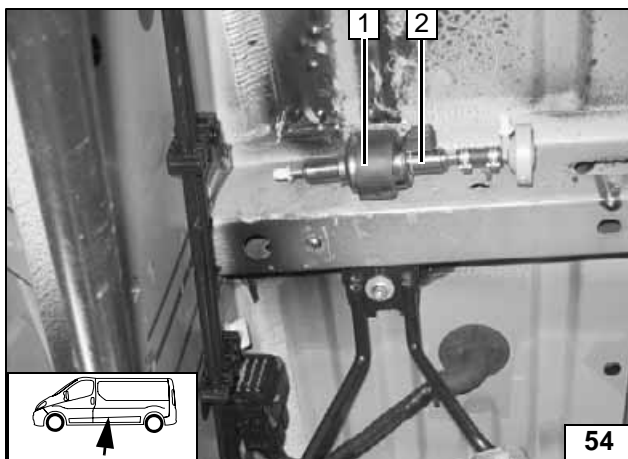
WARNING!

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



1 M6 rivet nut, existing hole

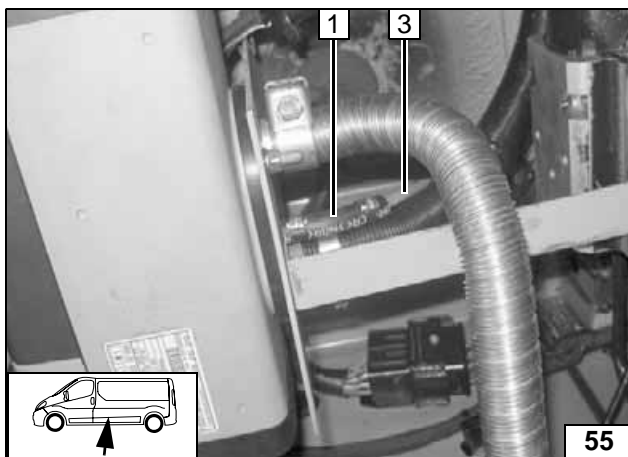
Installing metering pump



1 Metering pump bracket, spring lockwasher, washer, M6x30 bolt
2 Metering pump

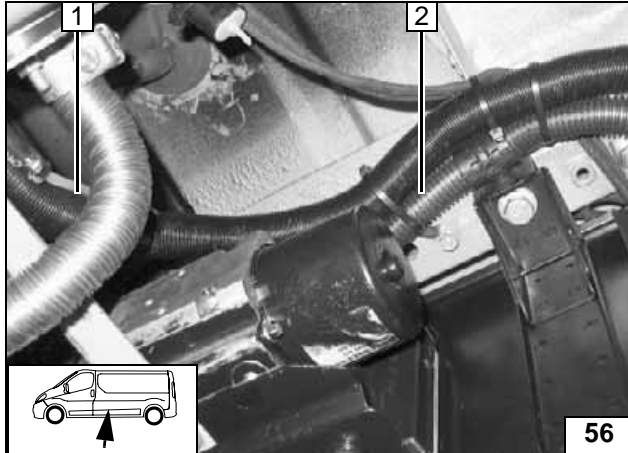


Installing metering pump



1 Hose section, 10 mm dia. hose clamp [2x]
2 Mecanyl fuel line

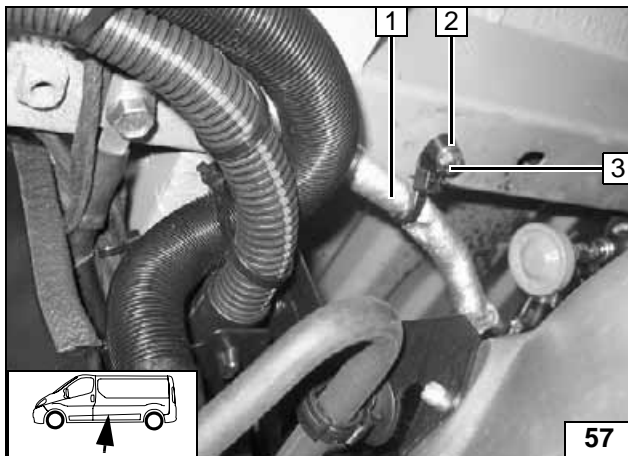
Connection on heater unit



Route fuel line 1 and metering-pump adapter line along original vehicle line 2 and secure with cable ties



Fuel line Routing metering pump line

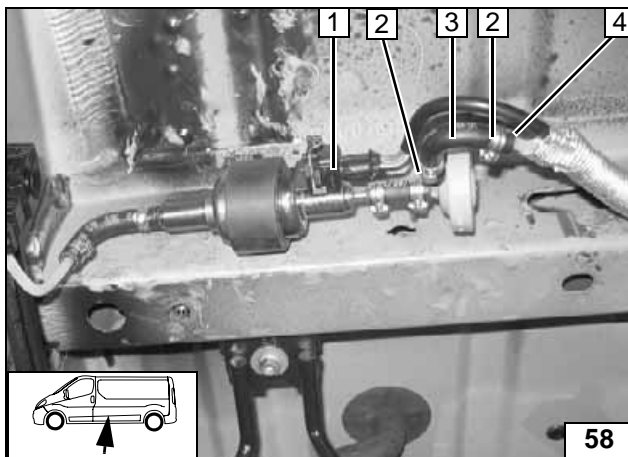


Pull fuel line and metering pump line into 14.5 mm dia. flexible pipe 1 and route to metering pump.



- 2 Cable tie (screwable)
- 3 M6x35 bolt, spring lockwasher, washer

Fuel line Routing metering pump cable

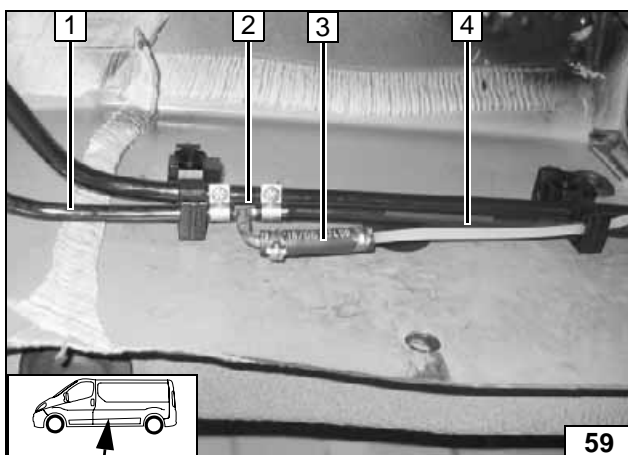


Fuel line from heater unit on pressure side of metering pump [side with connector]. Check the position of the components; adjust if necessary. Check that they have free clearance.



- 1 Connector of metering-pump wiring harness
- 2 10 mm dia. hose clamp [2x]
- 3 90° molded hose
- 4 Fuel line, cut to length

Connec- tion of me- tering pump

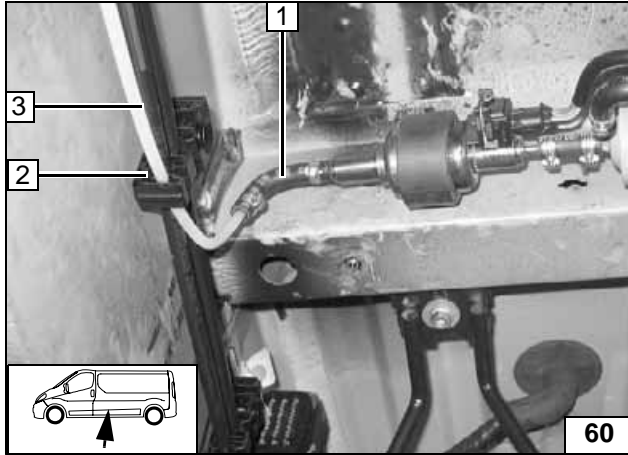


Fuel removal is carried out via original vehicle fuel return line 1 !



- 2 6x5x6 fuel standpipe, 8 mm dia. hose clamp [2x]
- 3 Hose section, 10 mm dia. hose clamps [2x].
- 4 Fuel line

Removing fuel



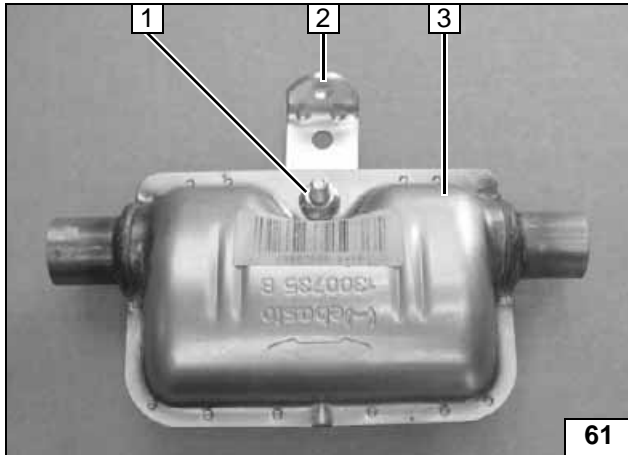
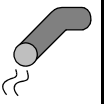
Fuel line from heater unit on intake side of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have free clearance.

Insert fuel line in line holder **2**.

- 1** 90° molded hose, 10 mm dia. hose clamp [2x]
- 3** Fuel line from fuel standpipe, cut to length



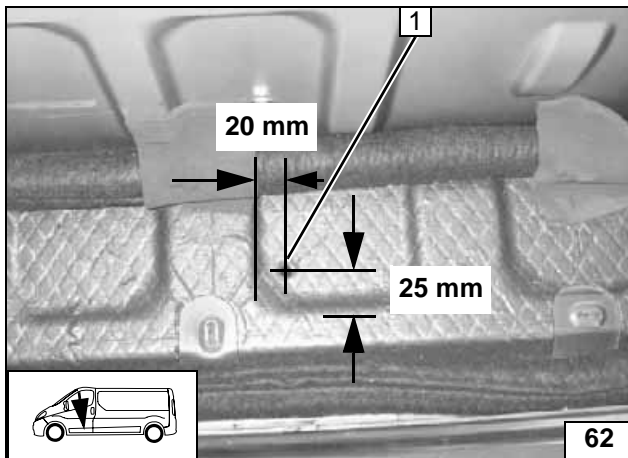
**Con-
tion of me-
tering
pump**



Exhaust system

- 1 M6x20 bolt, M6 flanged nut
- 3 Angle bracket
- 3 Exhaust muffler

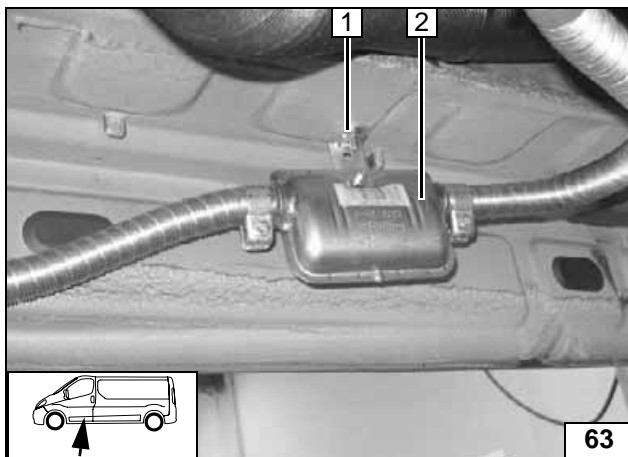
Preassembling exhaust muffler



Drill 6 mm dia. hole 1 in driver's entrance as shown.



Preparing installation of exhaust muffler

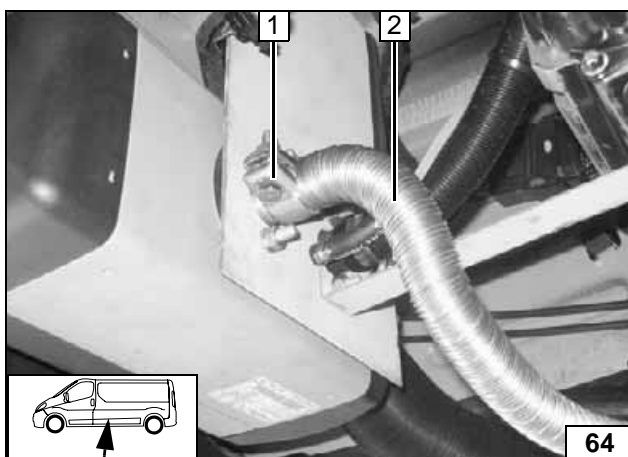


M6x20 bolt, large diameter washer is inserted through hole from above.

- 1 M6 flanged nut
- 2 Exhaust muffler, preassembled



Installing exhaust muffler

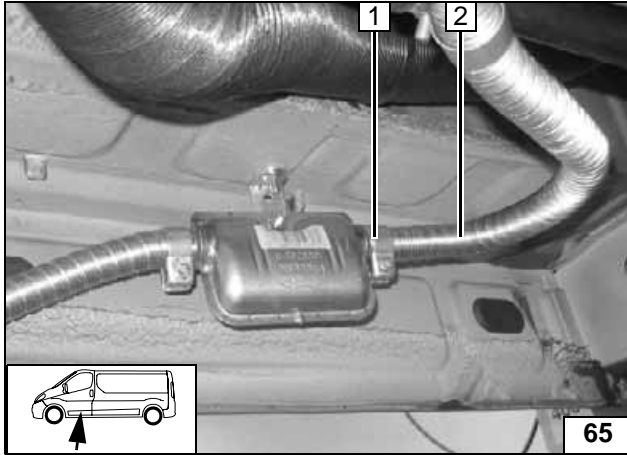
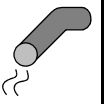


Ensure sufficient distance to neighboring components.

- 1 Hose clamp
- 2 Exhaust pipe, 750 mm long

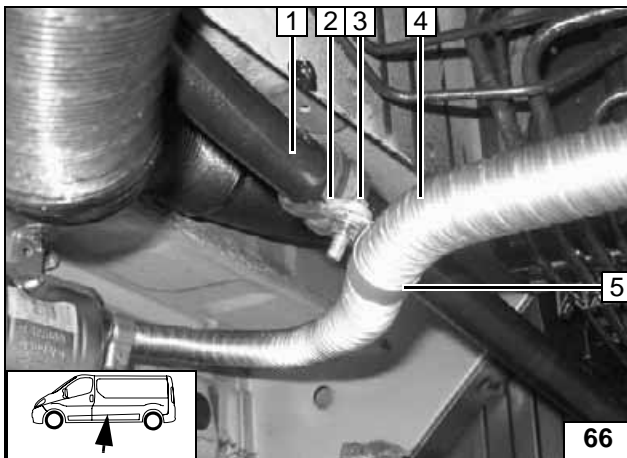


Installing exhaust pipe



- 1 Hose clamp
- 2 Exhaust pipe from heater unit

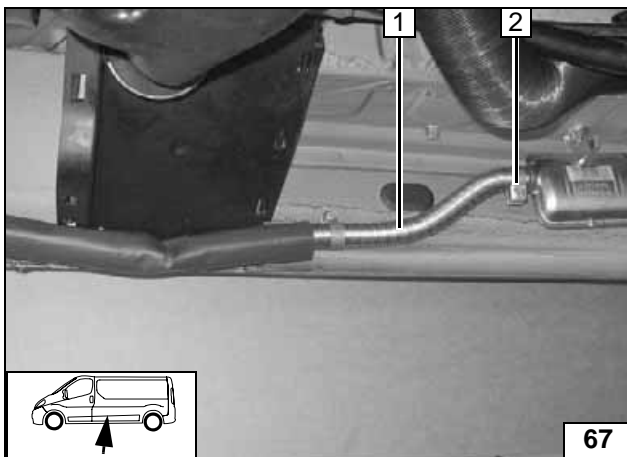
Installing exhaust pipe



Ensure sufficient distance to neighboring components.

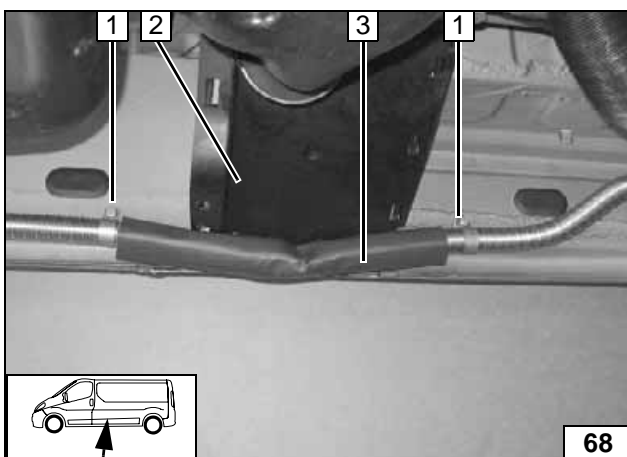
- 1 Original vehicle strut
- 2 Rubber-coated pipe clamp, 25 mm dia.
- 3 M6x20 bolt, M6 flanged nut
- 4 Exhaust pipe
- 5 P-clamp

Fastening exhaust pipe



- 1 Exhaust-pipe end piece, 1,500 mm long
- 2 Hose clamp

Installing exhaust pipe

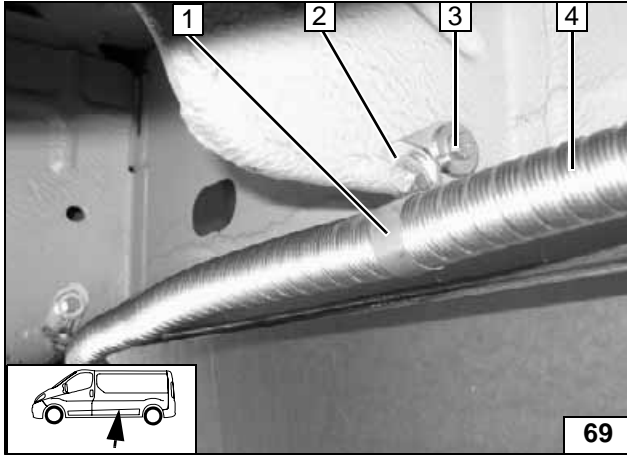
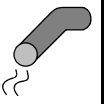


Align pipe insulation 3 to plastic shrouding 2 as shown.

Before installing, drill 9.1 mm dia. hole; M6 rivet nuts M6 at position 1 [2x each]

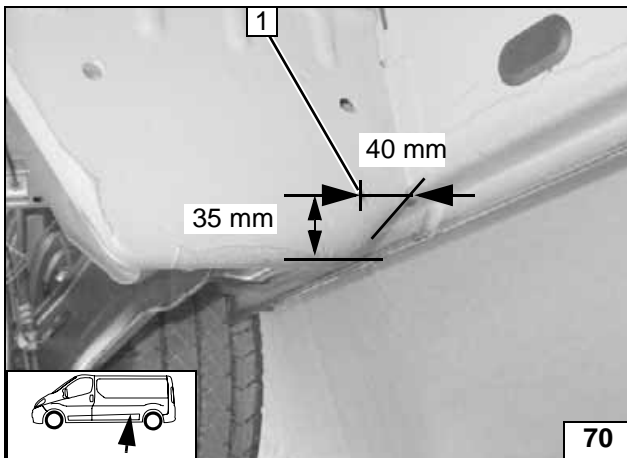
- 1 M6x30 bolt, spring lockwasher, p-clamp, 10 mm shim [2x each] on rivet nut

Installing exhaust pipe



- 1 P-clamp
- 2 M6x20 bolt, angle bracket, M6 flanged nut
- 3 M6x20 bolt, washer, M6 flanged nut on original vehicle hole
- 4 Exhaust-pipe end piece

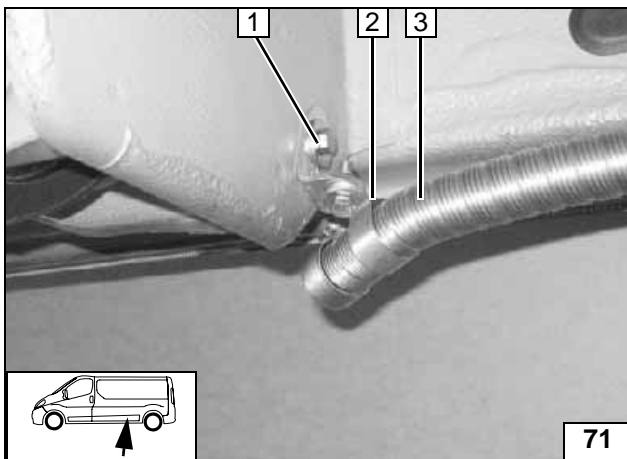
Installing exhaust pipe



Drill 6.5 mm dia. hole 1 as shown.

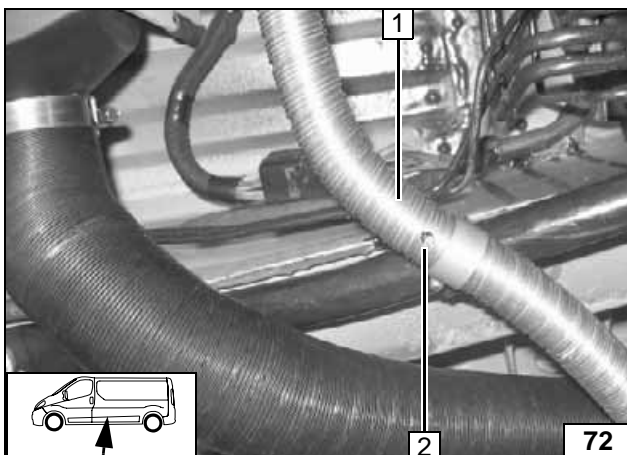


Installing exhaust pipe



- 1 M6x20 bolt, washer, angle bracket, M6 flanged nut
- 2 M6x20 bolt, p-clamp, M6 flanged nut
- 3 Exhaust-pipe end piece

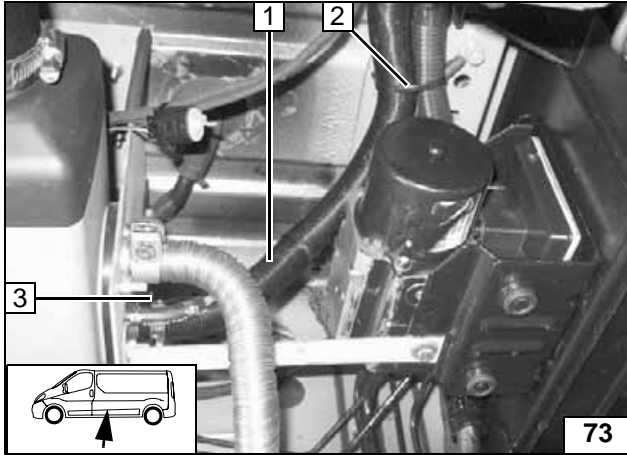
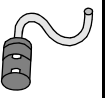
Installing exhaust pipe



Drill 2.5 mm dia. condensed-water drain hole 2 in exhaust pipe 1 as shown.



Installing intake pipe

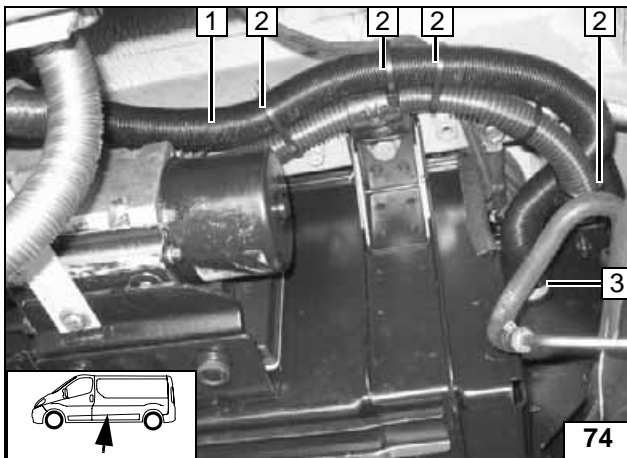


Combustion air

- 1 Combustion-air intake pipe
- 2 Cable tie
- 3 27 mm dia. hose clamp



Installing combustion air pipe

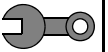


Mount protective cap 3 on combustion-air intake pipe 1.

- 2 Cable tie [4x]



Installing intake pipe



Final Work

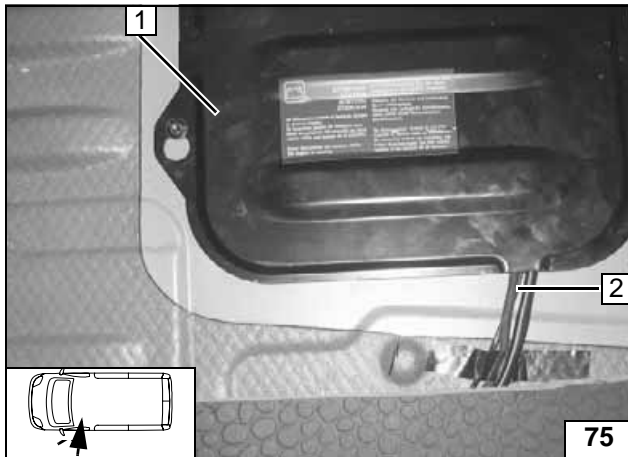
WARNING!

Reassemble the disassembled components in reverse order.

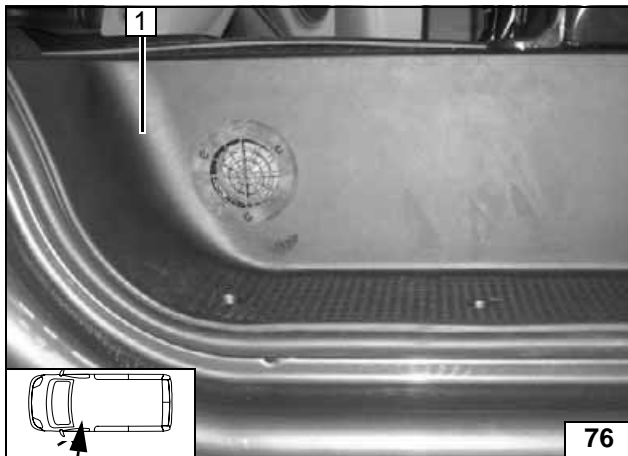
Check all hoses, hose, spring and Caillau clamps, as well as all electrical connections for firm seating. Secure all loose cables using cable ties.

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

- Connect the battery
- Train the Telestart (if installed)
- Set the digital timer.
- Check the proper operation of the air heater, see the operating instructions/installation instructions.
- Attach the "Switch off additional heater before refueling" sticker to the left-hand B-pillar.



Mount service cover of battery 1 and ensure proper positioning of wiring harness 2.



1 Preassemble trim



Installing
battery
cover

Installing
trim on
driver's
side en-
trance

Webasto

Feel the drive

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