

K Installation documentation

for air heater AT2000STC

Citroen e-Spacetourer / e-Jumpy

Peugeot e-Traveller / e-Expert

Opel Vivaro-e / Zafira-e

Toyota Proace Electric / Verso Electric

Fiat e-Scudo / e-Ulysse

Left-hand drive vehicle

Brand	Model	Type	Model year	EG-BE-No. / ABE
Citroen	e-Spacetourer	V	2022	e2* 2007/46* 0530*...
Citroen	e-Jumpy	V	2022	e2* 2007/46* 0531*...
Peugeot	e-Traveller	V	2022	e2* 2007/46* 0532*...
Peugeot	e-Expert	V	2022	e2* 2007/46* 0533*...
Opel	Vivaro-e	V	2022	e2* 2007/46* 0532*...
Opel	Zafira-e	V	2022	e2* 2007/46* 0532*...
Toyota	Proace Electric	V	2022	e2* 2007/46* 0538*...
Toyota	Proace Verso Electric	V	2022	e2* 2007/46* 0537*...
Fiat	e-Scudo, e-Scudo Estate Car	V	2022	e2* 2007/46* 0533*...
Fiat	e-Ulysse	V	2022	e2* 2007/46* 0532*...

Validity	Equipment variants	All models
Verified equipment variants	Panel van	x
	Estate car	x
	Bus	x
	Battery 50 kWh and 75 kWh	x
	Sliding door on driver's side and front passenger's side	x
	Medium and long vehicle length	x
Unverified equipment variants	Tow hitch	x
Exclusion	Spare wheel	x

Total installation time	Note
10.5 hours	

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1 List of abbreviations

DP	Fuel pump
HG	Heater
MCC	MultiControl (control element)
SH2	Engine compartment fuse holder for F1/F3
Veh.	Vehicle
X13	Female plug for additional fuel pump wiring harness
X16	Male plug for fuel pump wiring harness
X17	Female plug for additional fuel pump wiring harness

2 Installation notes

2.1 Information on validity

This installation documentation applies to vehicles - see page 1 – 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.

2.2 Note for vehicles with high-voltage system



All work on vehicles with high-voltage systems must only be carried out by personnel with sufficient qualifications to perform the appropriate tasks on these vehicles. High-voltage systems must be taken out of operation and secured before starting work and reactivated according to the manufacturer's instructions once work has been completed.

2.3 Components used

Designation		Order number
Scope of delivery Stellantis / Toyota KO BEV AT2000STC		1329439A
Attention: An individual approval according to §21 of the German Road Traffic Licensing Regulations (StVZO) is required for the fuel tank 1329219A included in the scope of delivery after installation. The respective applicable requirements must be observed outside Germany. The test protocol for the fuel tank is included in the annex.		
Vehicle-specific additional parts:	Brand	Order number
Filler tube	Toyota Opel / Peugeot / Citroen / Fiat	SU001-A5604 9819332980
Hose bracket for ventilation line	Toyota Opel / Peugeot / Citroen Fiat	SU001-A5679 6990C1 155253346
Filler neck housing	Toyota Opel / Peugeot / Citroen / Fiat	SU001-A4206 9809503280
Tank lid	Toyota Opel / Peugeot / Citroen Fiat	SU001-A4207 98087269ZM 6000640887
Mechanical sliding door lock option		Order number
Mechanical lock for driver's side sliding door (not for vehicles with electric sliding doors)		Parts must be requested separately from the authorised dealer.
Door lock with Bowden cable		
Door lock cover		
External temperature sensor option		Order number
External temperature sensor		9029776_
MultiControl HD control element option		Order number
MultiControl HD		9030025_
MultiControl installation frame		9030077_



Observe the following page.

Rotary switch control element option	Order number
Rotary switch	1322581_

ThermoConnect control element option	Order number
ThermoConnect	9040223_

2.4 Notes on installation, in coordination with the end customer

- The installation location of the following options must be chosen in coordination with the end customer:
- Rotary switch
 - MultiControl HD
 - ThermoConnect push button
 - External temperature sensor

2.5 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.

3 About this document

3.1 Purpose of the document

This installation documentation is part of the product and contains all the information required to ensure professional vehicle specific installation of the:

Air Top 2000STC heater

3.2 Warranty and liability

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 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.

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 start-up 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.

3.2.1 Statutory regulations governing installation

The Air Top 2000STC, Air Top 3900/5500 and Air Top 40/55 heaters have been type-tested and approved in accordance with ECE-R 10 (EMC) and ECE-R 122 (heater). 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.

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

3.3 Safety

Qualifications of installation personnel

The installation personnel must have the following qualifications:

- Successful completion of Webasto training
- Corresponding qualification for working on technical systems

Regulations and legal requirements

The regulations from the heater's general installation and operating instructions must be observed.

3.3.1 Safety information on installation

Danger posed by live parts

- ▶ Prior to installation, disconnect the vehicle from the voltage supply.
- ▶ Make sure the electrical system is earthed correctly.
- ▶ Always comply with legal requirements.
- ▶ Observe data on type label.

Danger of fire and leaking toxic gases due to improper installation

- ▶ Vehicle parts in the vicinity of the heater must be protected against excessive heating by the following measures:
 - ⇒ Maintain minimum safety distances.
 - ⇒ Ensure adequate ventilation.
 - ⇒ Use fire-resistant materials or heat shields.
 - ⇒ In the case of M2 and M3 vehicles, the combustion heater must not be positioned in the passenger compartment.

Danger due to sharp edges

- Lacerations
- Short circuit due to electrical wire damage
- ▶ Fit protectors on sharp edges.

3.4 Using this document

Before installing and operating the heater, read this installation documentation, the installation instructions of the heater, the operating instructions and supplementary sheets provided.

3.4.1 Explanatory Notes on the Document

There is an identification mark near the respective work step to allow you to quickly allocate the other applicable documents to the Webasto components to be installed:

Generally valid Webasto documentation	
Vehicle-specific installation documentation	
Webasto Comfort A/C control	
Webasto Standard A/C control	
Tank extracting device (e.g. FuelFix)	
Exhaust end fastener (EFIX)	
Combustion air intake silencer	
Spacer bracket (ASH)	

3.4.2 Use of symbols



DANGER

Type and source of the risk

Consequences: Failure to follow the instructions can result in death.

► Actions to protect yourself against risks.



WARNING

Type and source of the risk

Consequences: Failure to follow the instructions can lead to serious or even fatal injuries.

► Actions to protect yourself against risks.



CAUTION

Type and source of the risk

Consequences: Failure to follow the instructions can lead to minor injuries.

► Actions to protect yourself against risks.



Type and source of the risk

Consequences: Failure to follow the instructions can lead to material damage.

► Actions to protect yourself against risks.



Reference to the vehicle manufacturer's specific documents.



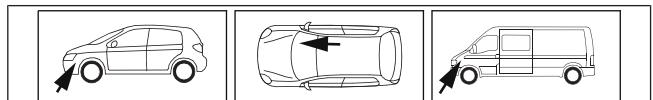
Note on a special technical feature

3.4.3 Work step identification marks

The ongoing work step is indicated on the outside top corner of the page:

Mechanical system	Electrical system	High-voltage	Hot air
Combustion air	Fuel	Exhaust	Software

3.4.4 Orientation aid



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

3.4.5 Use of highlighting

Highlight	Explanation
✓	Action
►	Necessary action
⇒	Result of an action
1 / 12 / a1	Position numbers for the image descriptions
① / ⑫ / Ⓐ	Position numbers for the image descriptions for electrical wires and components as well as coolant hose sections

4 Technical Information

Dimension specifications

- All dimensions specified in mm
- Perforated brackets and mounting angles are shown to scale
- Observe data regarding scale on the templates

Tightening torque specifications

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

Heater mounting

- A seal must be fitted between the heater and the vehicle body. It should be replaced before each re-installation

Necessary special tools

- Hose clamp pliers for Clic hose clamps of type W
- Ø30, Ø60 and Ø64 circle bit
- Automatic wire stripper 0.2 - 6 mm²
- Crimping pliers for cable lugs 0.5 – 10 mm²
- Crimping pliers for male connector 0.14 – 6 mm²
- Crimping pliers for connector 0.25 – 6 mm²
- Torque wrench for 2.0 - 10 Nm
- Deep-hole marker
- Metric thread-setter kit
- Webasto Thermo Test Diagnosis with current software

Sealant



Sealing and adhesive compound in accordance with the specifications of the vehicle manufacturer.

5 Preparations

5.1 Vehicle preparation



Further information can be found in the vehicle manufacturer's technical documentation.



DANGER

Take the high-voltage system (if present) out of operation according to the manufacturer's instructions and secure it.

Vehicle area	Components to be removed	Other applicable documents
Passenger compartment	<ul style="list-style-type: none"> ▶ Disconnect the 12V battery ▶ Driver's side 3rd seat row ▶ Driver's side 2nd seat row ▶ C-pillar trim on the driver's side ▶ D-pillar trim on the driver's side ▶ Rear side trim on the driver's side (bus only) ▶ Step trim at the driver's door ▶ Complete B-pillar trim on the driver's side (bus only) ▶ Step trim at the sliding door on the driver's side 	
Vehicle body/underbody	<ul style="list-style-type: none"> ▶ Rear wheel on the driver's side ▶ Rear wheel-well inner panel on the driver's side ▶ Lower rear bumper trim pieces on the driver's and front passenger's side 	

5.2 Heater preparation

Engine compartment	<ul style="list-style-type: none"> ▶ Remove years that do not apply from the type and duplicate label ▶ Attach the duplicate label (type label) in the appropriate place in the engine compartment 	
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6 Installation overview

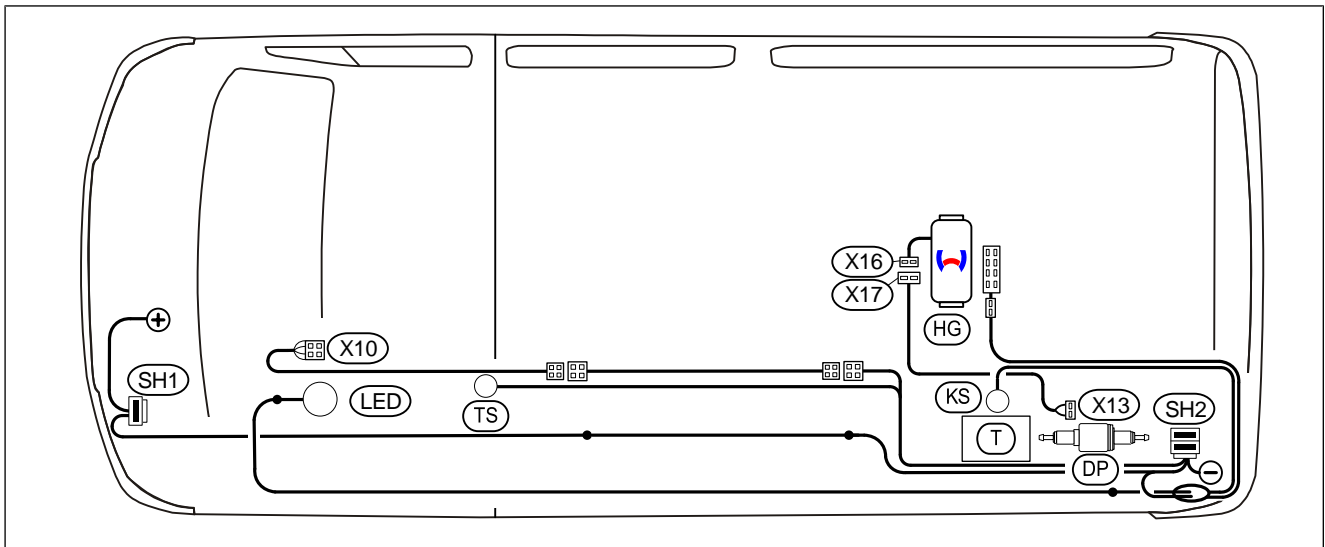


Fig. 1

Legend to installation overview

Abbreviation	Component
DP	Fuel pump
HG	Heater
KS	Fuel sensor
LED	Fuel tank level indicator
SH1	Main fuse F0
SH2	F1/F2 fuse holder
T	Fuel tank
TS	Temperature sensor
X10	Female plug for control element
X13	Female plug for additional fuel pump wiring harness
X16	Male plug for fuel pump wiring harness
X17	Female plug for additional fuel pump wiring harness

Heater and fuel tank installation location

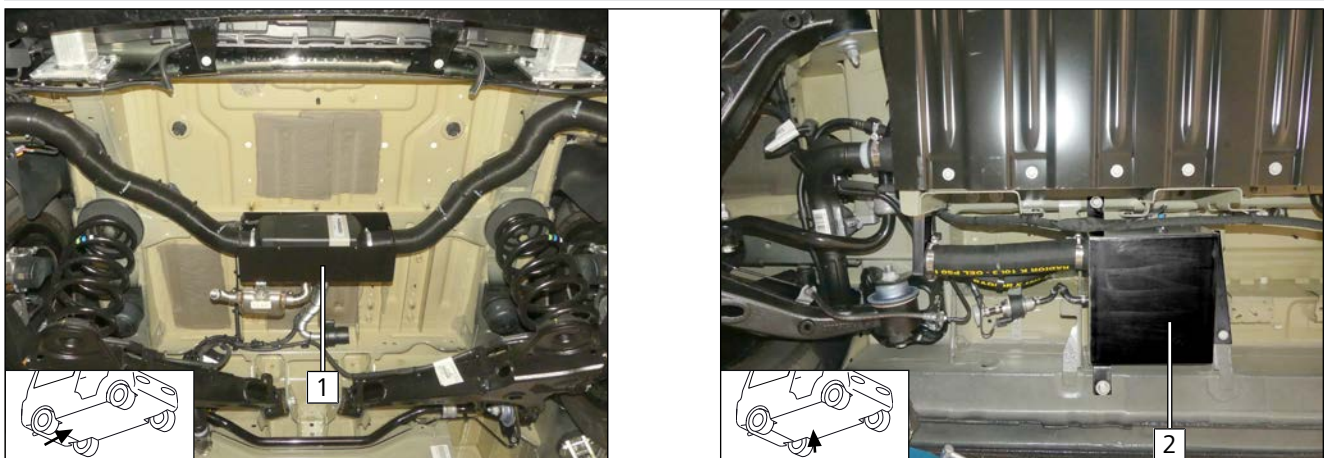


Fig. 2

1 Heater (shown without cover on the installation box)

2 Fuel tank

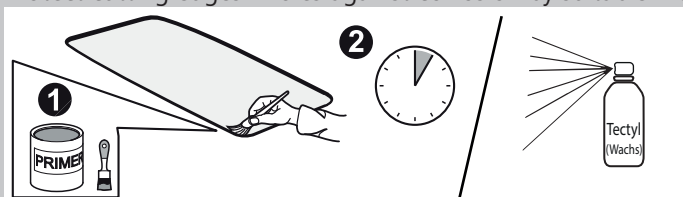


7 Mechanical system



Danger of damage to components

► Protect cutting edges / holes against corrosion by suitable means.



7.1 HG installation location preparation

Preparing 2x angle brackets

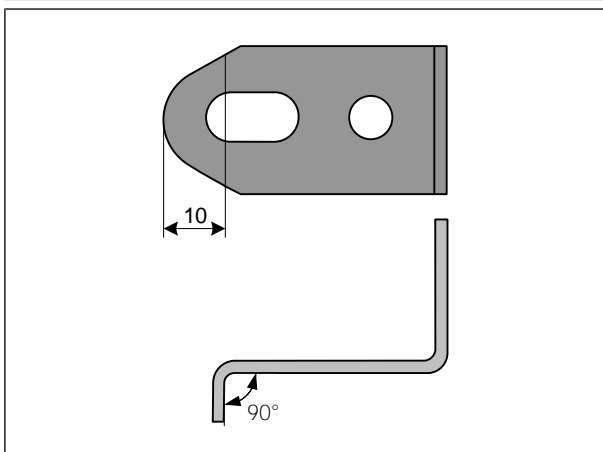


Fig. 3

Drilling holes in HG box

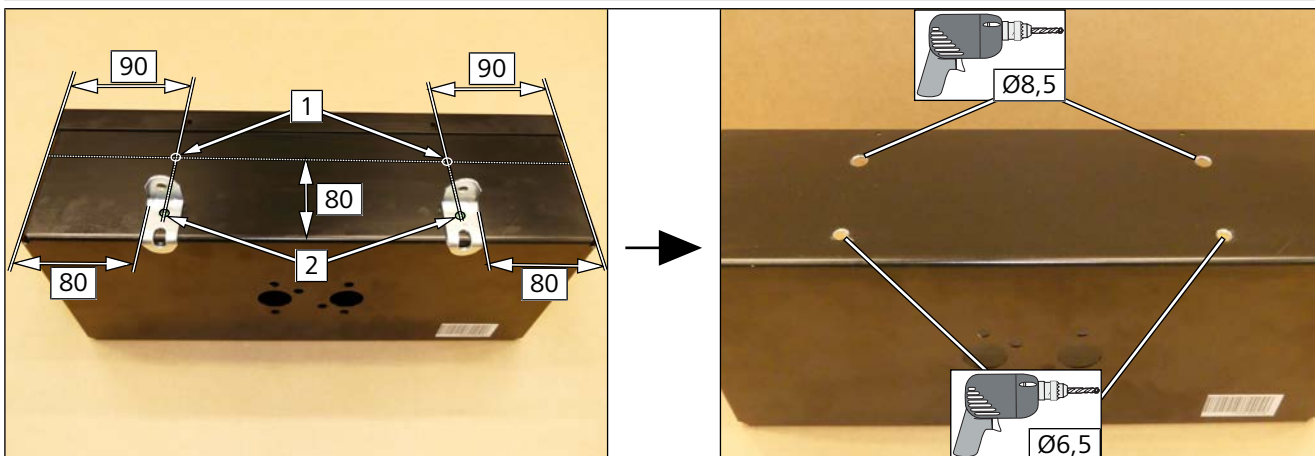


Fig. 4

1 Create the hole pattern as shown.

2 Copy hole pattern as shown.

► Drill holes.

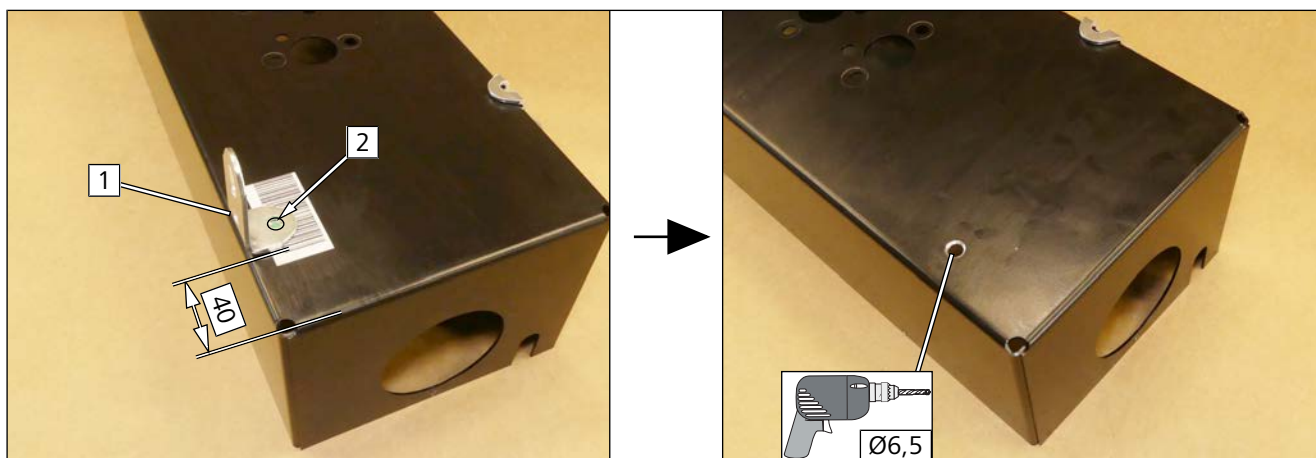


Fig. 5

- 1 Position the angle flush as shown.
- 2 Copy hole pattern.

► Drill hole.

Mounting angle bracket on HG box

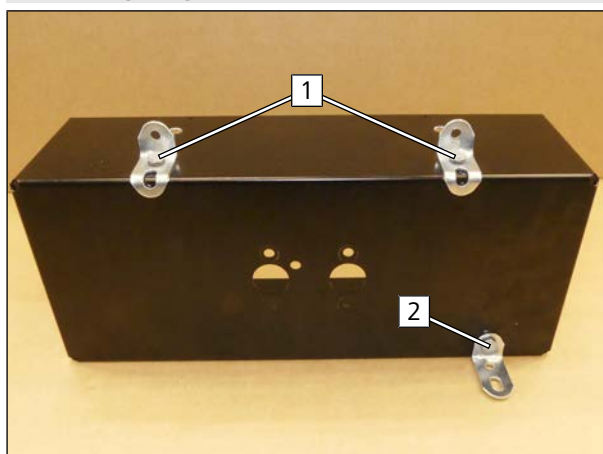


Fig. 6

- 1 M6x12 bolt, spring lock washer, prepared angle bracket, drilled hole, nut
- 2 M6x12 bolt, spring lock washer, angle bracket, drilled hole, nut

Positioning HG box

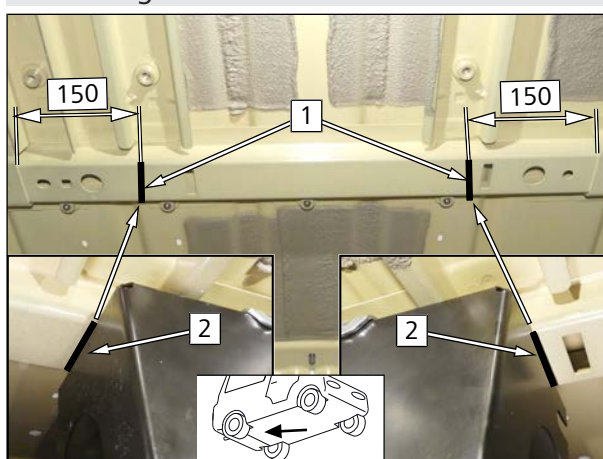


Fig. 7

- Draw marking 1 as shown.
- Align HG 2 box with the marking.



Copying hole patterns



Fig. 8

1 Copy hole pattern.

2 Copy hole pattern.

Drilling holes, inserting rivet nuts

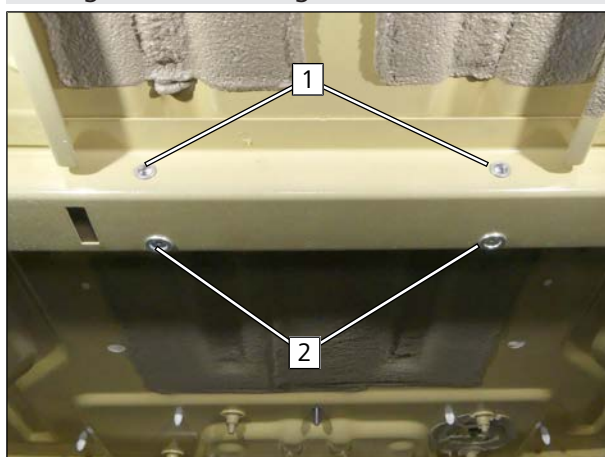


Fig. 9

1 Ø9 hole, M6 rivet nut

2 Ø12.5 hole, M8 rivet nut

Mounting HG box



Fig. 10

1 Loosely premount M6x16 bolt, spring lock washer, premounted angle bracket, rivet nut

2 M8x16 bolt with serrated flange, HG box, rivet nut

► Tighten all loose screw connections.



7.2 Heater preparation



Fig. 11

1 Mount rubber gasket.

2 Remove HG cover.

7.3 Heater mounting

Mounting heater

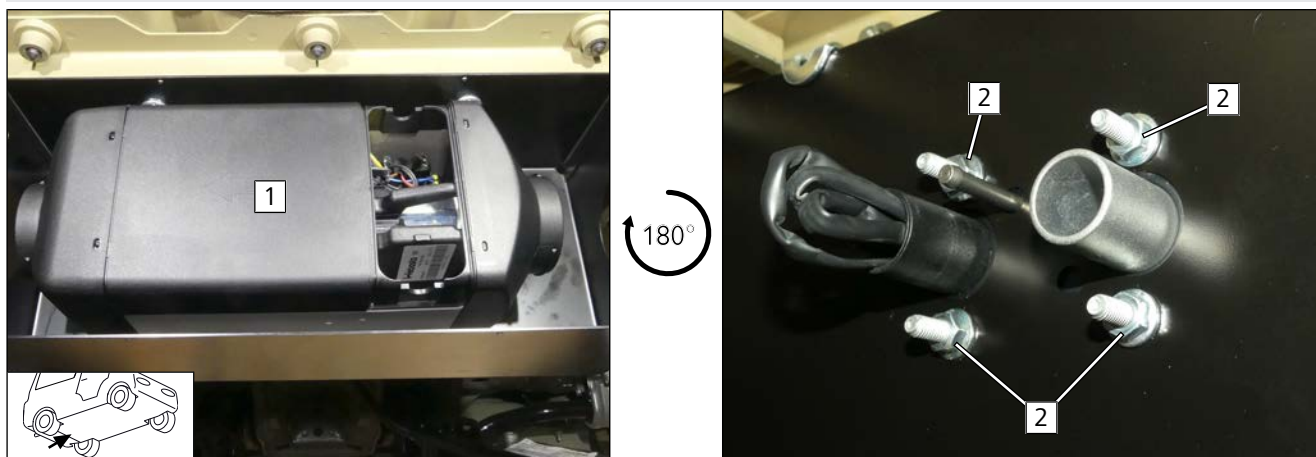


Fig. 12

1 Insert HG in box.

2 Fasten HG with self-locking nuts.

Preparing cable grommet



Fig. 13

1 Cut additional cable grommet as shown.



Mounting heater wiring harness

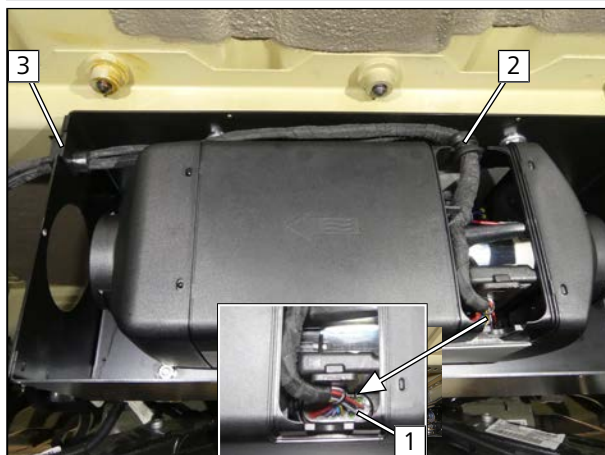


Fig. 14

- 1 Heater wiring harness connector
- 2 Cable grommet on HG wiring harness
- 3 Additional cable grommet

Mounting HG cover

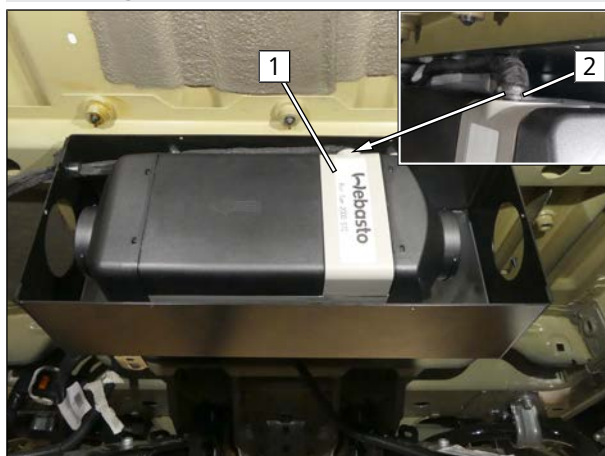


Fig. 15

- 1 HG cover



Make sure that the cable grommet **2** is seated correctly.

7.4 Preparation for fastening hot air line and HG wiring harness

Mounting perforated bracket 1 and eyelet cable tie

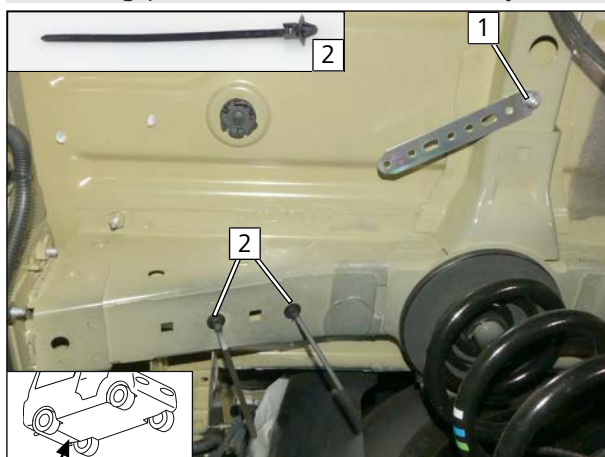


Fig. 16

- 1 M6x16 bolt, spring lock washer, large diameter washer, perforated bracket 1, original vehicle hole, nut
- 2 Eyelet cable tie



Mounting edge clip cable tie

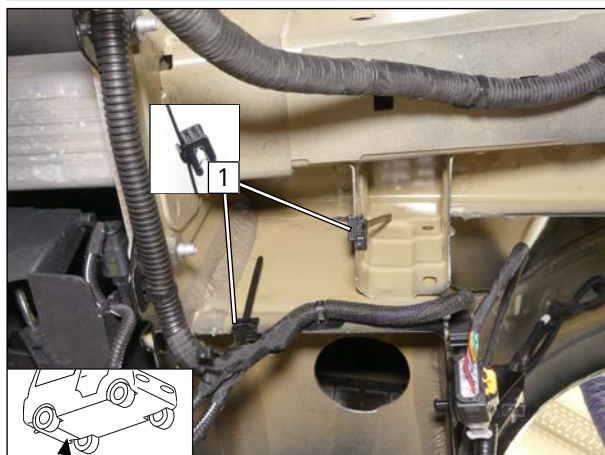


Fig. 17

- 1 Edge clip cable tie

Mounting perforated bracket 2

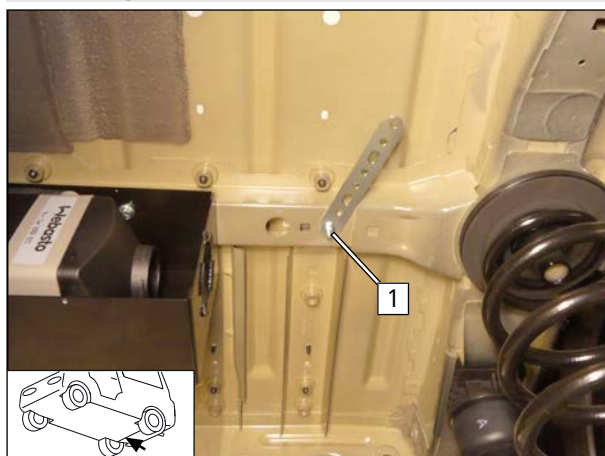


Fig. 18

- 1 M6x16 bolt, spring lock washer, large diameter washer, original vehicle hole, perforated bracket 2, nut

Mounting perforated bracket 3

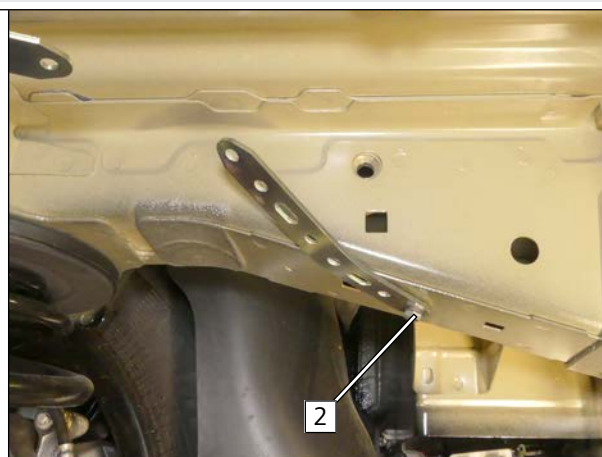
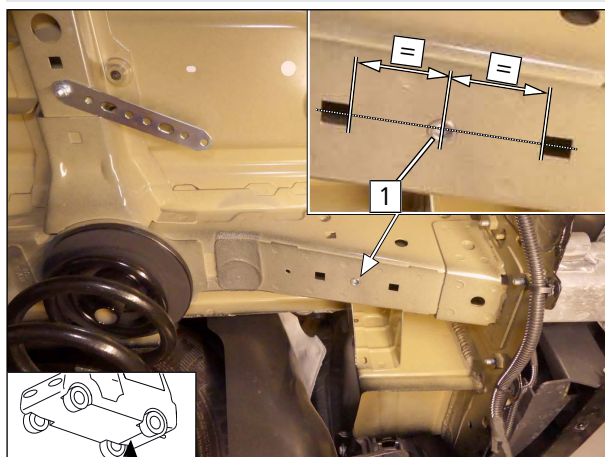


Fig. 19

- 1 Copy hole pattern, drill $\varnothing 9$ hole, insert M6 rivet nut.

- 2 M6x16 bolt, spring lock washer, perforated bracket 3, rivet nut

► Align perforated bracket 3 as shown.

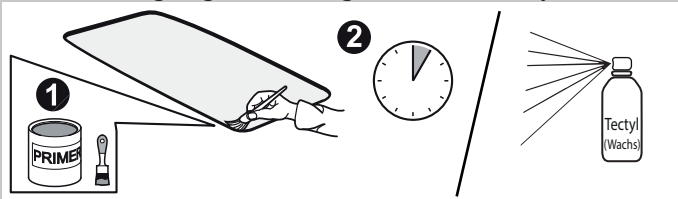


8 Combustion air



Danger of damage to components

► Protect cutting edges / holes against corrosion by suitable means.



Drilling hole

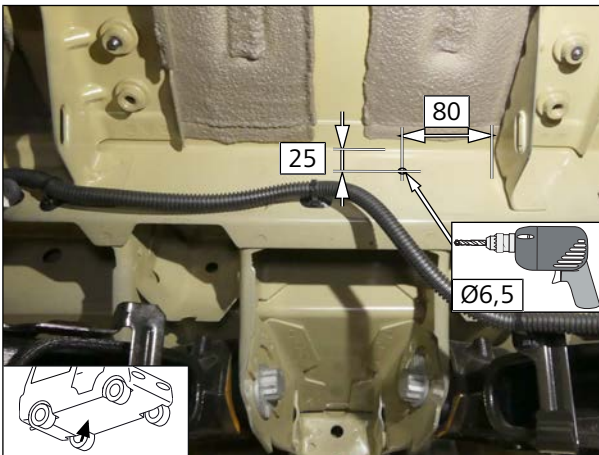


Fig. 20

Preparing and mounting perforated bracket

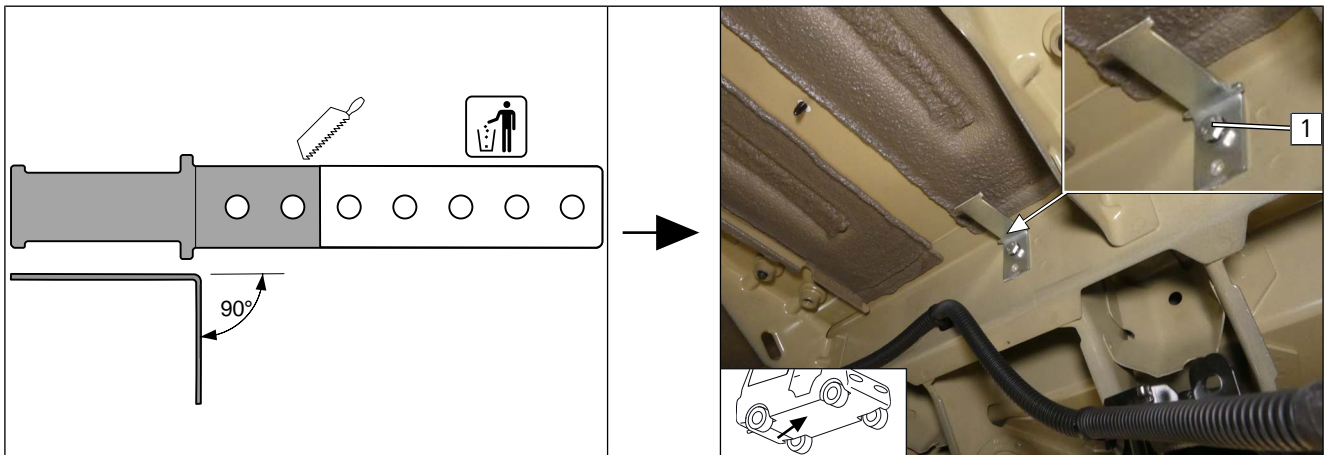


Fig. 21

1 M6x16 bolt, spring lock washer, perforated bracket, drilled hole, nut



Mounting combustion air intake silencer

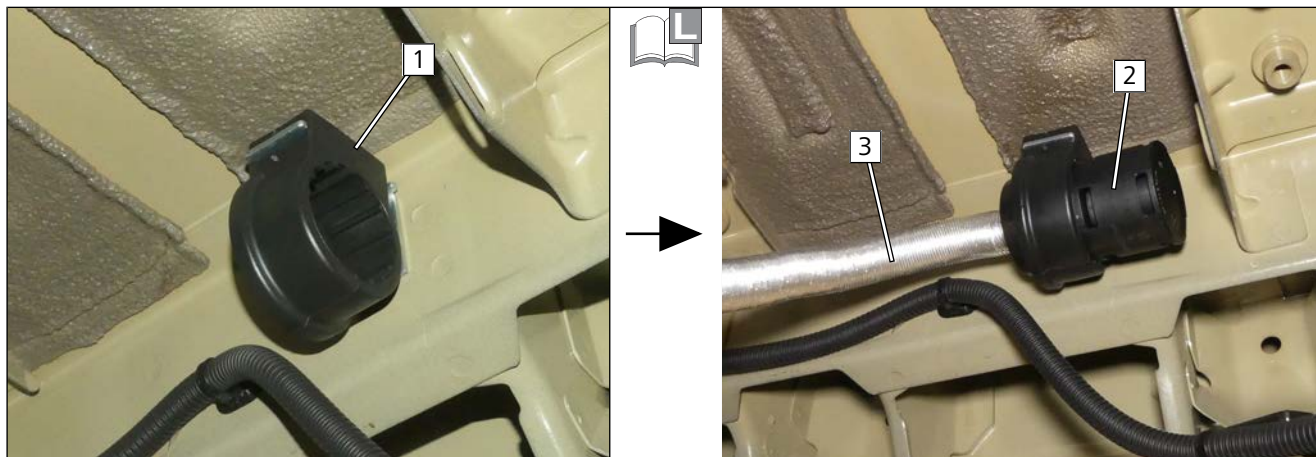


Fig. 22

1 Slide combustion air intake silencer mount onto perforated bracket.

2 Combustion air intake silencer

3 Combustion air intake line on combustion air intake silencer

Mounting combustion air intake pipe onto HG

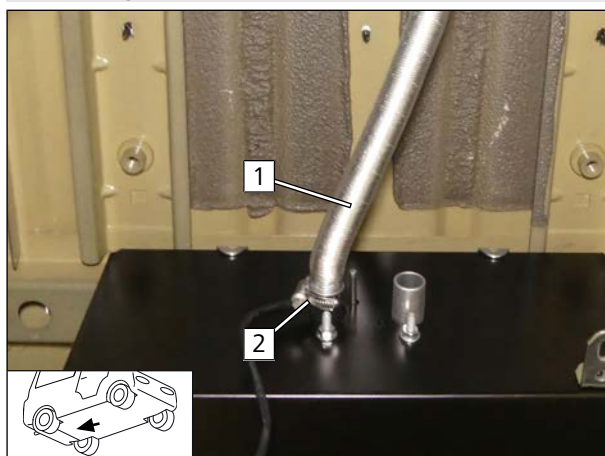


Fig. 23

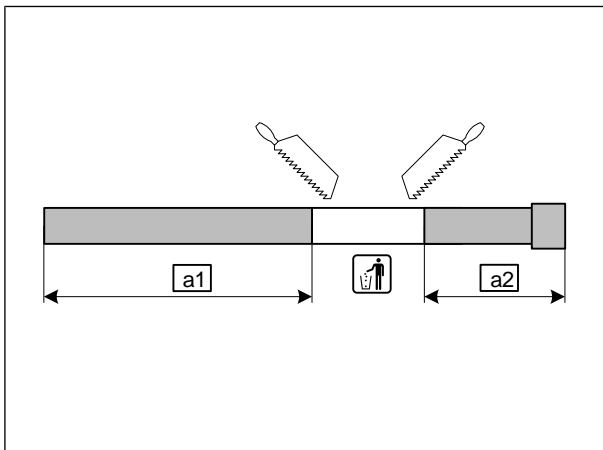
1 Combustion air intake line

2 Ø16-27 screw clamp



9 Exhaust

Cutting exhaust pipe to length

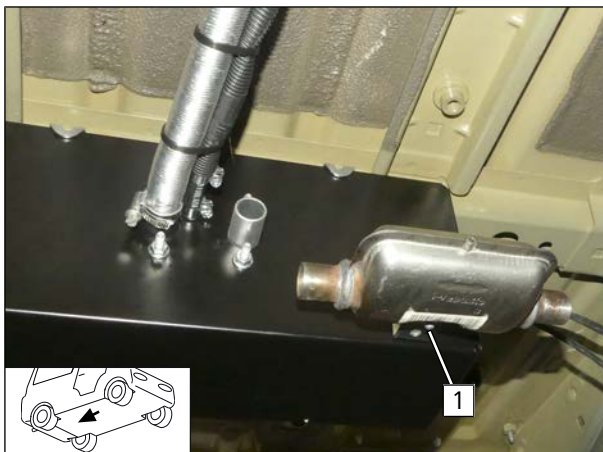


a1 160

a2 80

Fig. 24

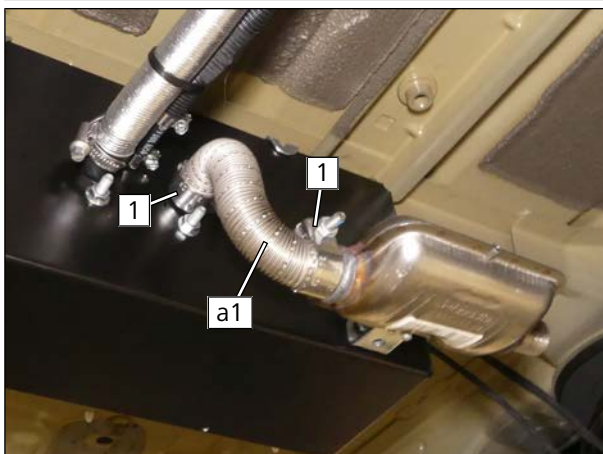
Mounting exhaust silencer



- 1** M6x16 bolt, spring lock washer, exhaust silencer, angle bracket, flanged nut

Fig. 25

Mounting exhaust pipes



- 1** Hose clamp



- 1** Hose clamp

Fig. 26



10 Fuel



Danger of damage to components

- ▶ Install fuel line and fuel pump wiring harness so that they are protected against stone impact.
- ▶ Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

10.1 Connection to HG

Mounting connector

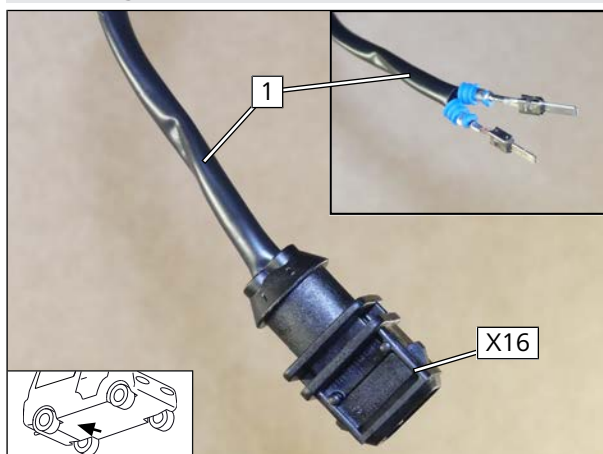


Fig. 27

- ▶ Mount fuel pump wiring harness from HG **1** in connector **X16**.

Cutting (slit) corrugated tube to length

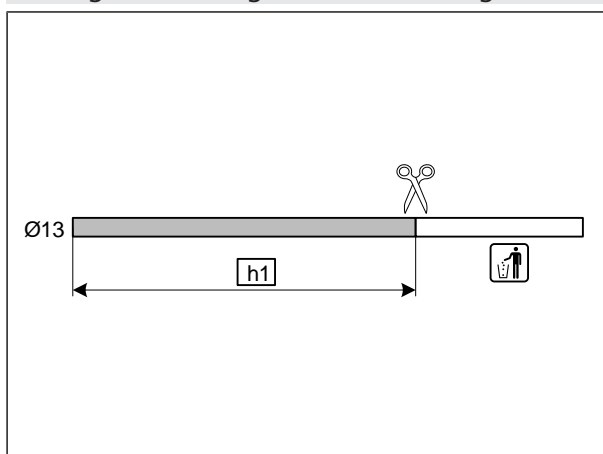


Fig. 28

h1 360



Connecting, routing and fastening fuel line

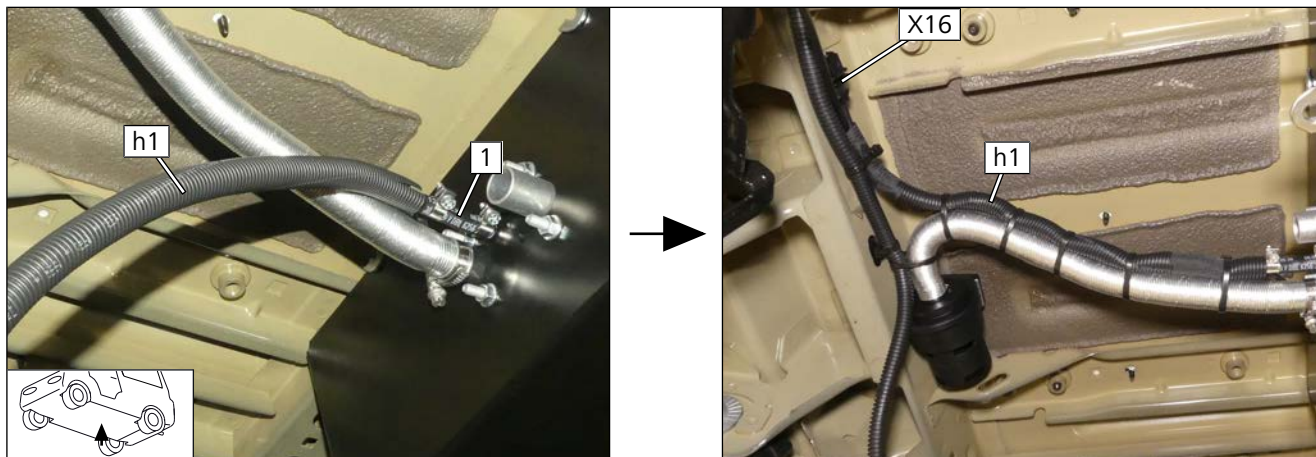


Fig. 29

☞ Exhaust silencer removed for a better view.

▶ Draw fuel line and fuel pump wiring harness into corrugated tube **h1**.

1 Hose section, Ø10 screw clamp [2x]

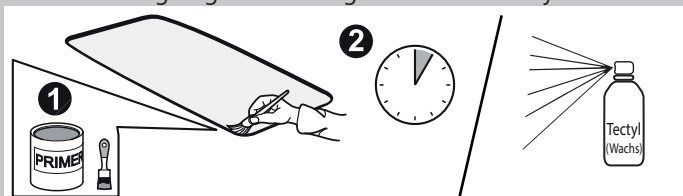
▶ Route corrugated tube **h1** as shown and attach with cable ties to combustion air intake line.

10.2 Preparing tank installation location



Danger of damage to components

▶ Protect cutting edges / holes against corrosion by suitable means.



Tank installation location

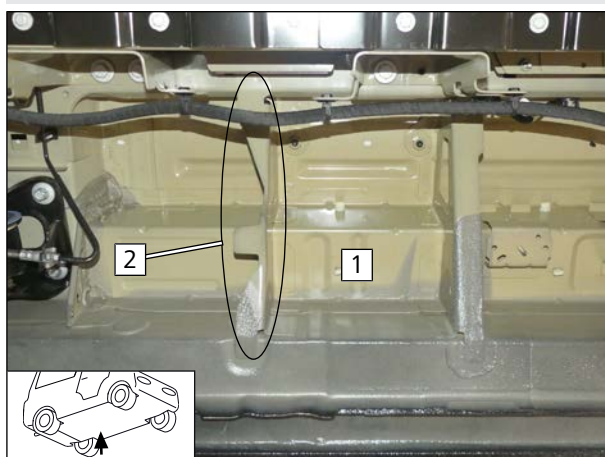


Fig. 30

1 Tank installation location

2 Original vehicle sheet metal only available with passenger car/bus variants



Copying hole patterns, drilling holes

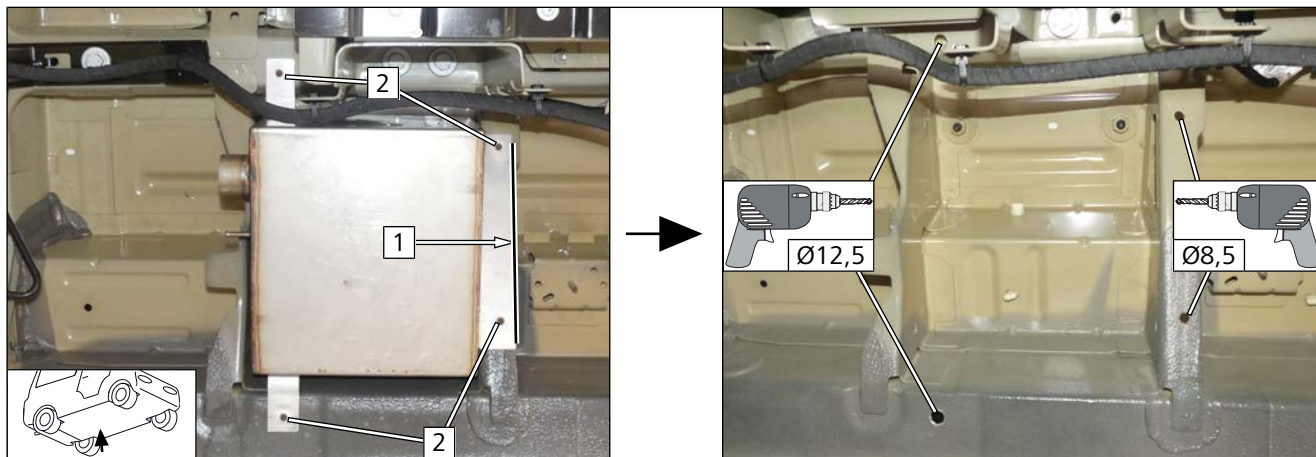


Fig. 31

- 1 Align the tank flush to the vehicle body.
- 2 Copy hole pattern.

► Drill holes.

Inserting and tightening rivet nuts

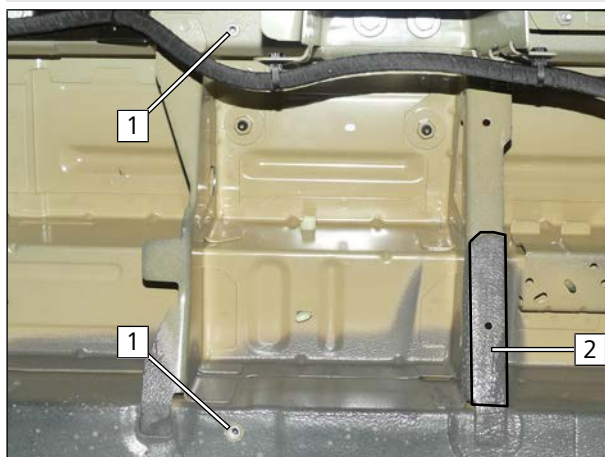


Fig. 32

- 1 M8 rivet nut
- 2 Remove underbody protection in marked area.

Drilling hole – passenger car/bus vehicle variant

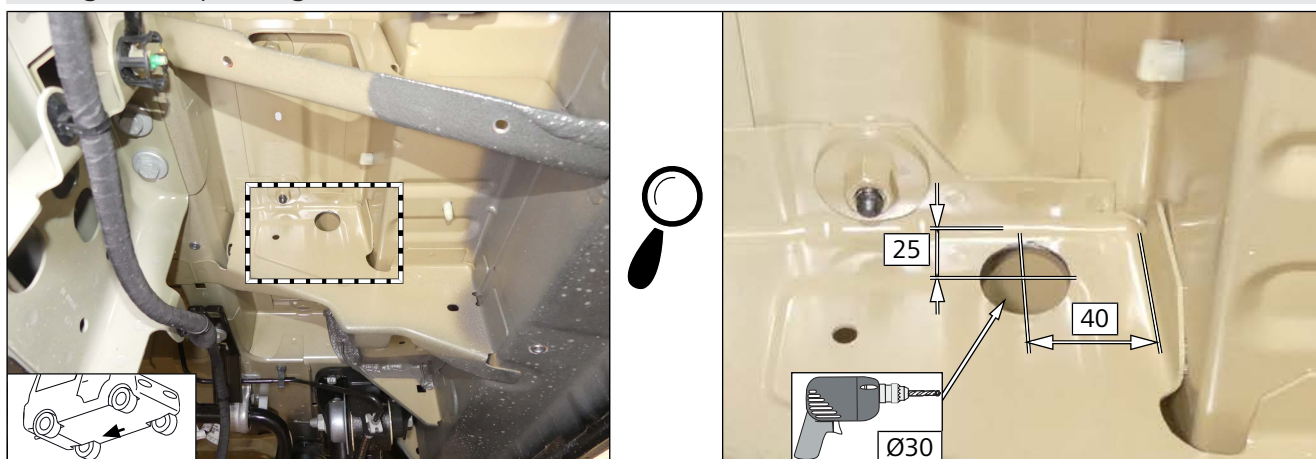


Fig. 33



Adapting and installing protective rubber plug – passenger car/bus vehicle variant

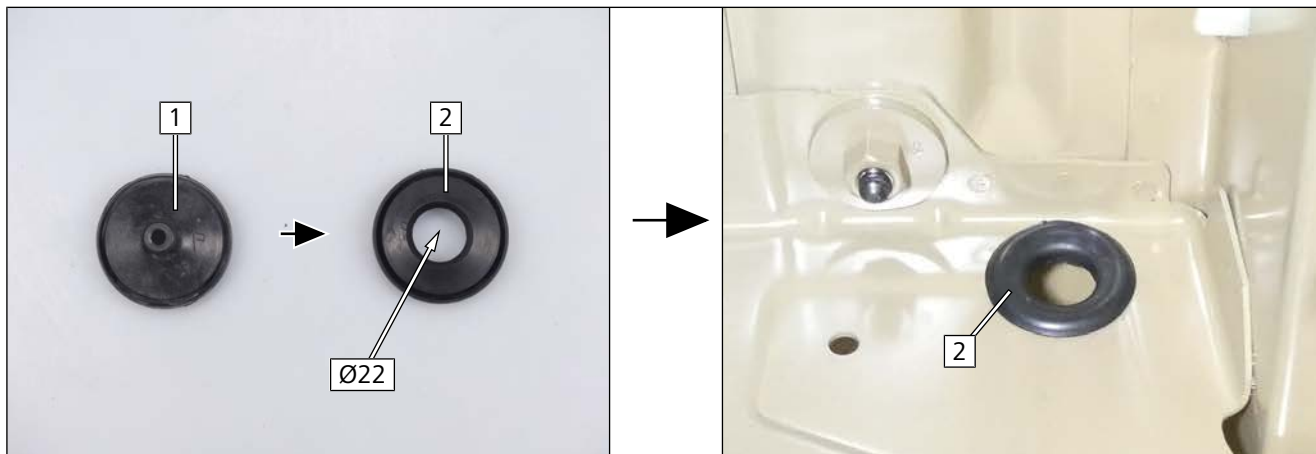


Fig. 34

- 1 Original protective rubber plug
- 2 Enlarge the opening in the protective rubber plug as shown.
- 2 Mount the protective rubber plug in the drilled hole.

Removing original vehicle bracket

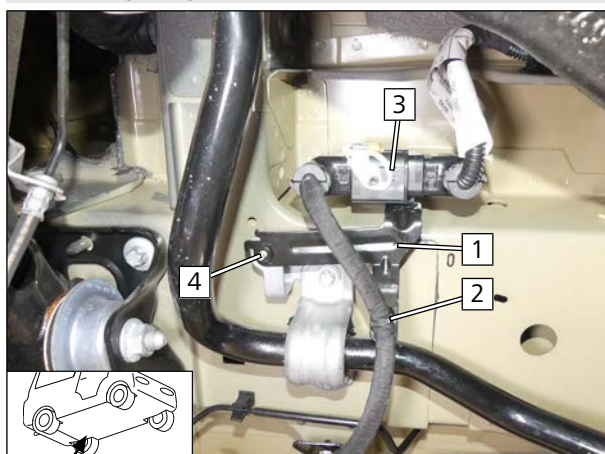


Fig. 35

- 1 Original vehicle bracket
- 2 Detach wiring harness bracket.
- 3 Disconnect connector and detach it from the bracket.
- 4 Remove bolt, it will be reused.

Inserting rivet nut

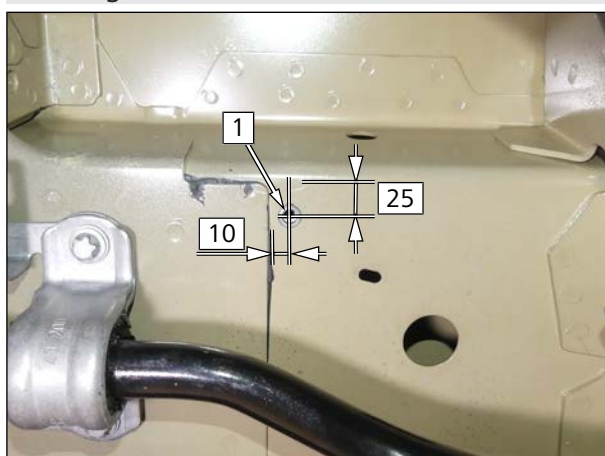


Fig. 36

- 1 Ø9 hole, M6 rivet nut



Adapting original vehicle bracket

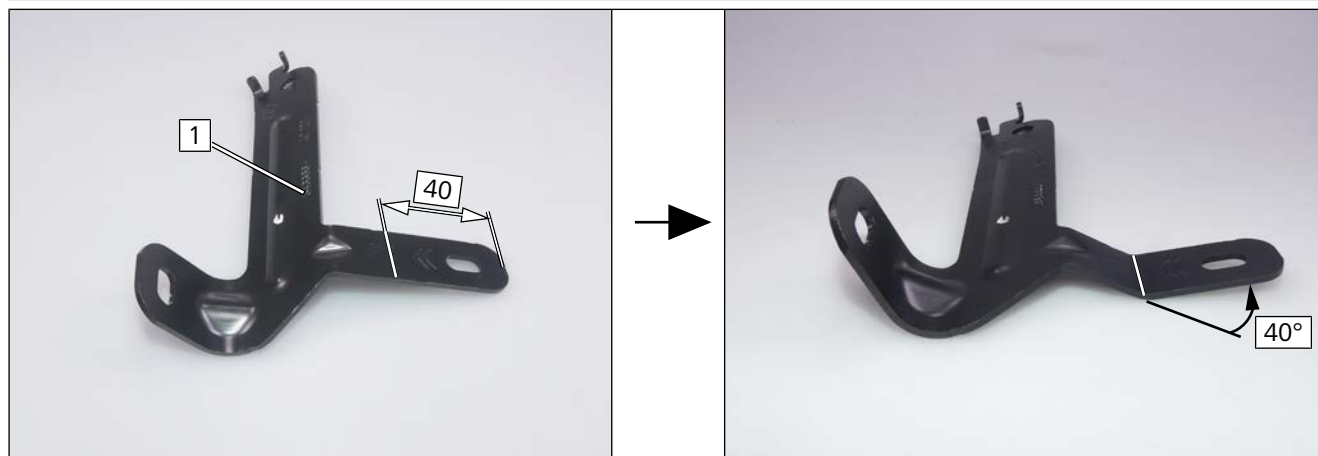


Fig. 37

1 Mark bending line as shown.

1 Bend tab of bracket as shown.

Mounting original vehicle bracket

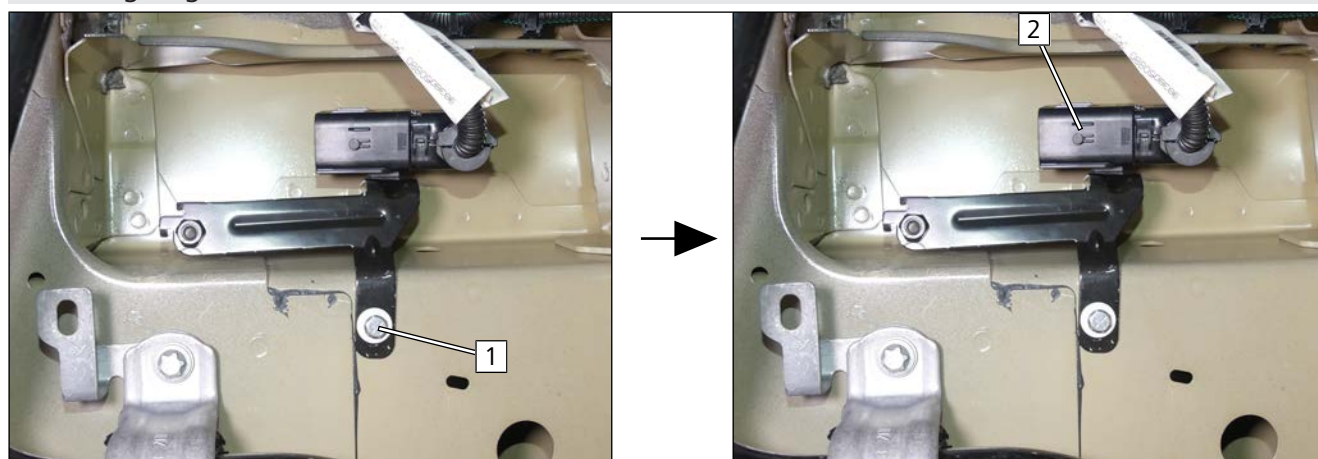


Fig. 38

1 M6x20 bolt, spring lock washer, large diameter washer, original vehicle bracket, rivet nut

2 Insert original vehicle connector into bracket.

Cutting off original vehicle lug – vehicle with 75 kW battery

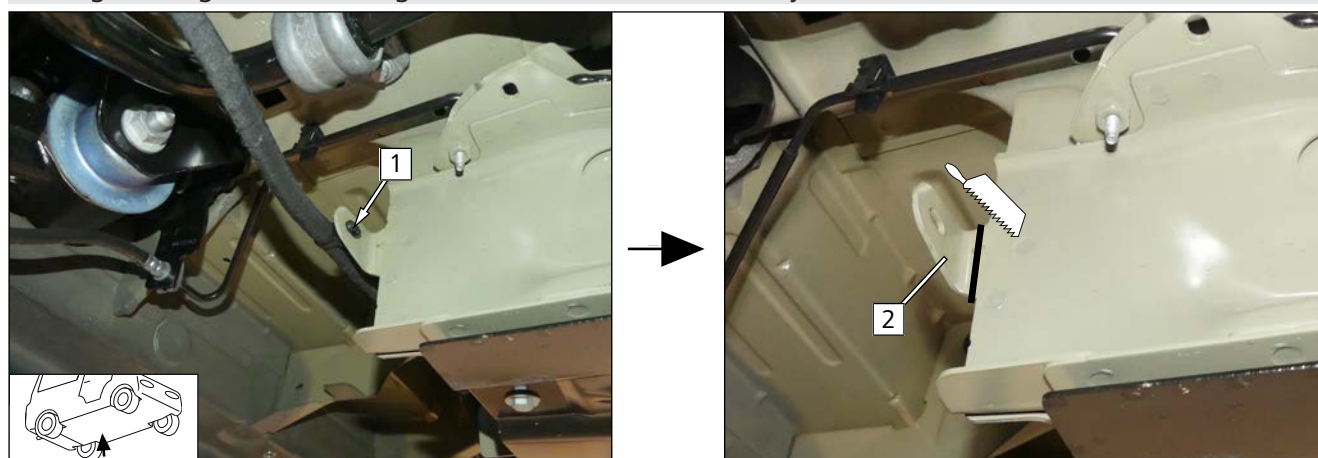


Fig. 39

1 Remove wiring harness bracket from the hole.

2 Cut off the lug.



Replacing original vehicle bolts – vehicle with 75 kW battery

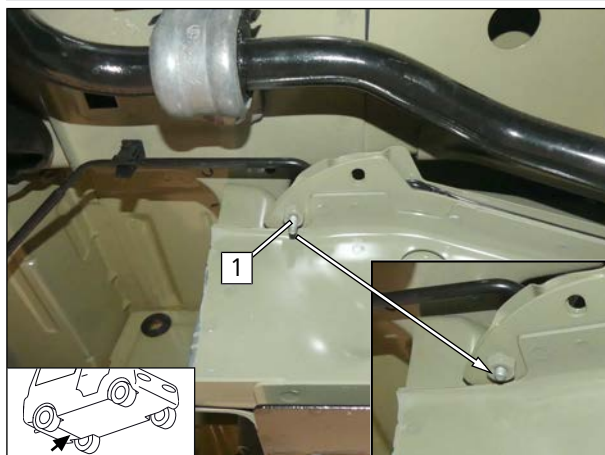


Fig. 40

- 1 Replace original vehicle bolt with M6x12 bolt and large diameter washer.

Fastening original vehicle wiring harness

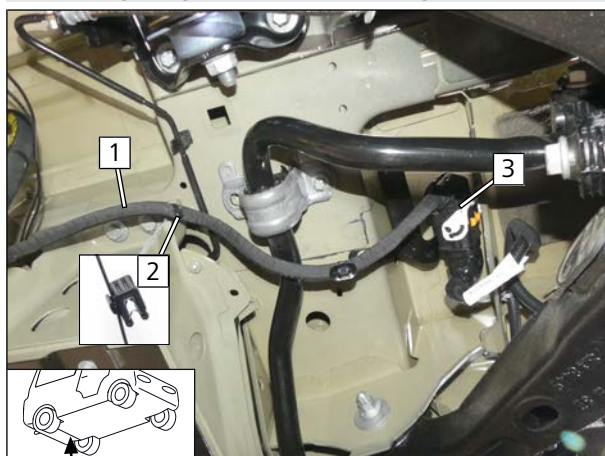


Fig. 41

- 1 Original vehicle wiring harness
- 2 Edge clip cable tie
- 3 Connect the connector.

Inserting rivet nut

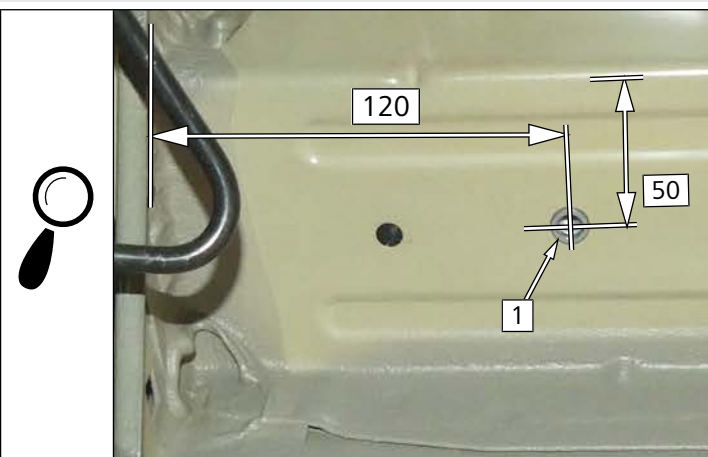


Fig. 42

- 1 Ø9 hole, M6 rivet nut



10.3 Preparing fuel tank

Preparing fuel sensor

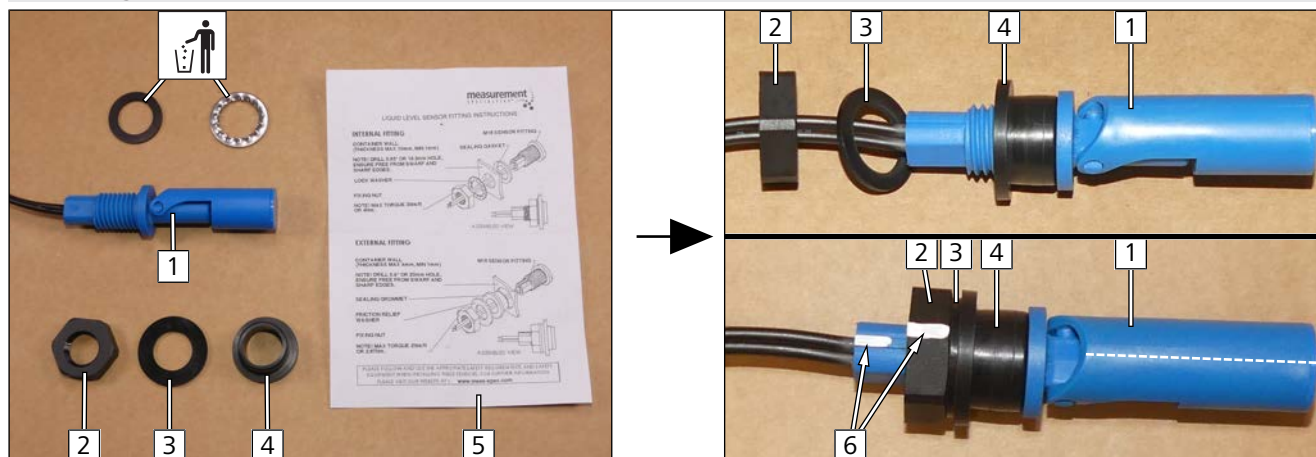


Fig. 43

Observe maximum torque of 2.67 Nm.

Selection of the required parts:

- 1 Fuel sensor
- 2 Nut
- 3 Washer
- 4 Sealing sleeve
- 5 Fuel sensor operating instructions

Premounting:

- ▶ Screw nut 2 with washer 3 onto fuel sensor until they are in contact with the sealing sleeve without distorting the sleeve.
- ▶ Mark fuel sensor 1 and nut 2 on top as shown 6.

Inserting fuel sensor in fuel tank

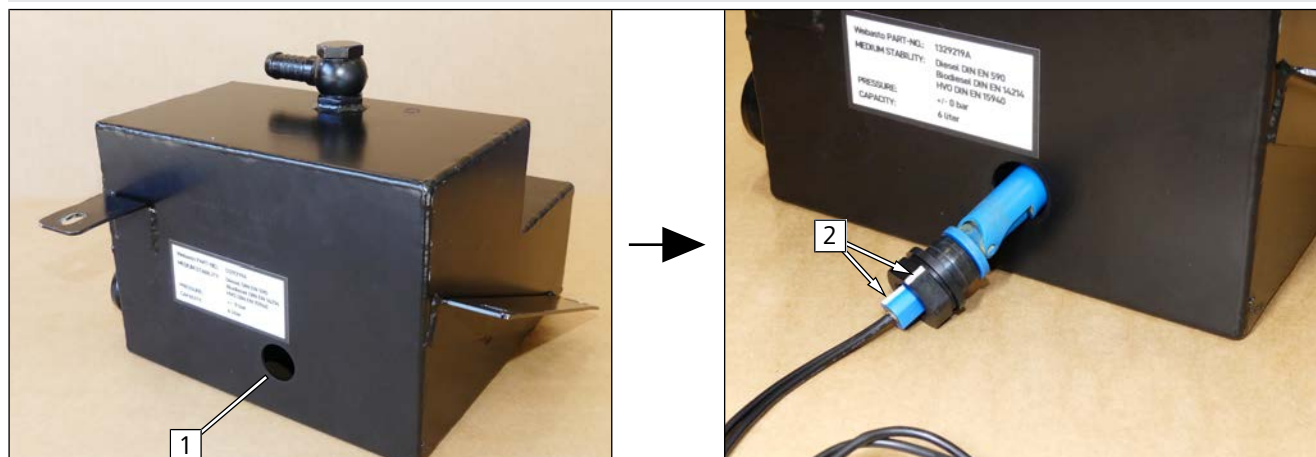


Fig. 44

- 1 Remove grease from the tank near the hole.

- 2 Insert the fuel sensor into the tank with the markings facing up.



Mounting fuel sensor in fuel tank

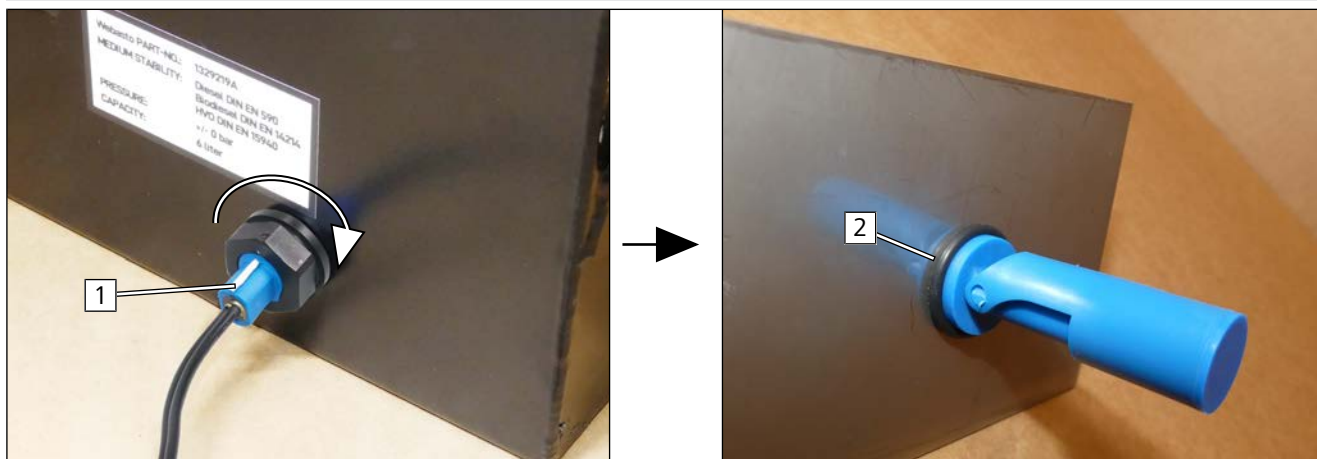


Fig. 45

View of tank exterior

- 1 Tighten the nut with 3.5 turns.

View of the inside of the tank (recreated)

- 2 Sealing sleeve between fuel tank and fuel sensor

Checking fuel sensor

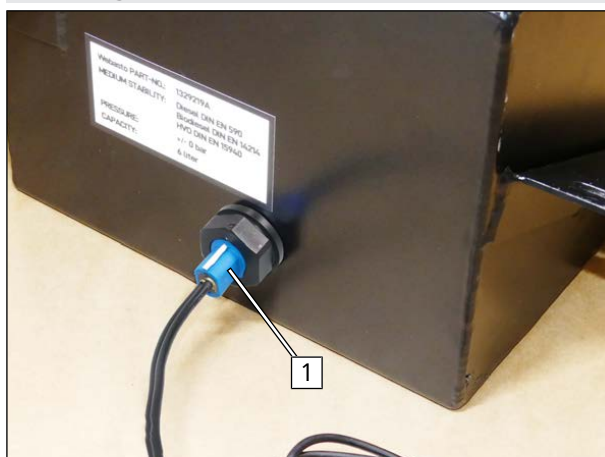


Fig. 46



- ▶ Fuel sensor **1** can no longer be rotated and tilted.
- ▶ Check firm seating.
- ▶ Do not apply force to the fuel sensor.
- ▶ Check the tank for leaks when it is full. If necessary, tighten the nut more.

Mounting ventilation hose

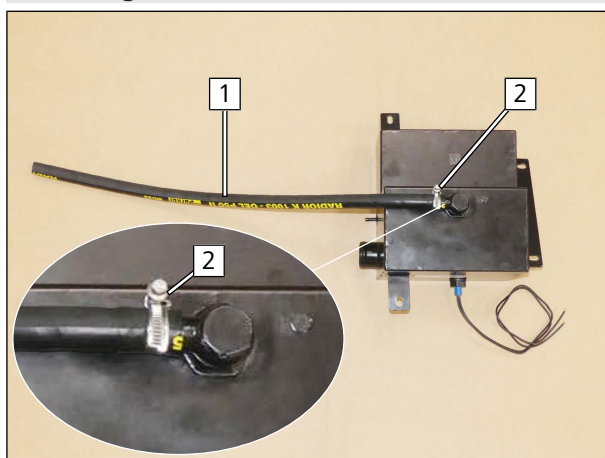


Fig. 47

- 1 Ventilation hose of tank, 700 long.
- 2 Ø16-27 screw clamp



10.4 Tank installation

Positioning tank

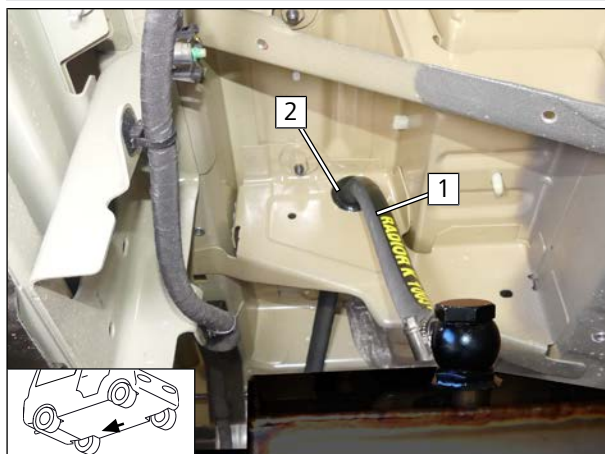


Fig. 48



Passenger car/bus vehicle variants

- ▶ Guide the ventilation hose **1** through the premounted protective rubber plug **2**.

Mounting tank

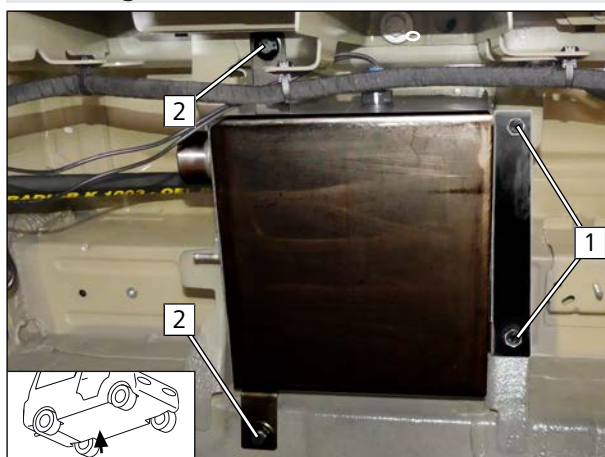


Fig. 49

- 1** M8x20 bolt, large diameter washer, tank, drilled hole, flanged nut
- 2** M8x20 bolt, spring lock washer, large diameter washer, lug, tank, rivet nut

Removing original vehicle bolt

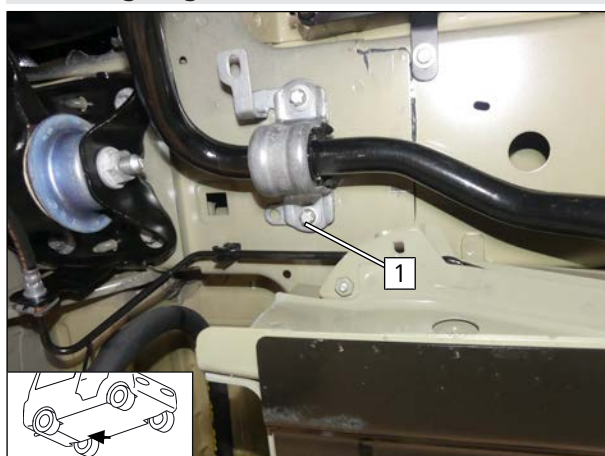


Fig. 50

- ▶ Remove original vehicle bolt **1**, it will be reused.



Cutting the filling hose to length and mounting it

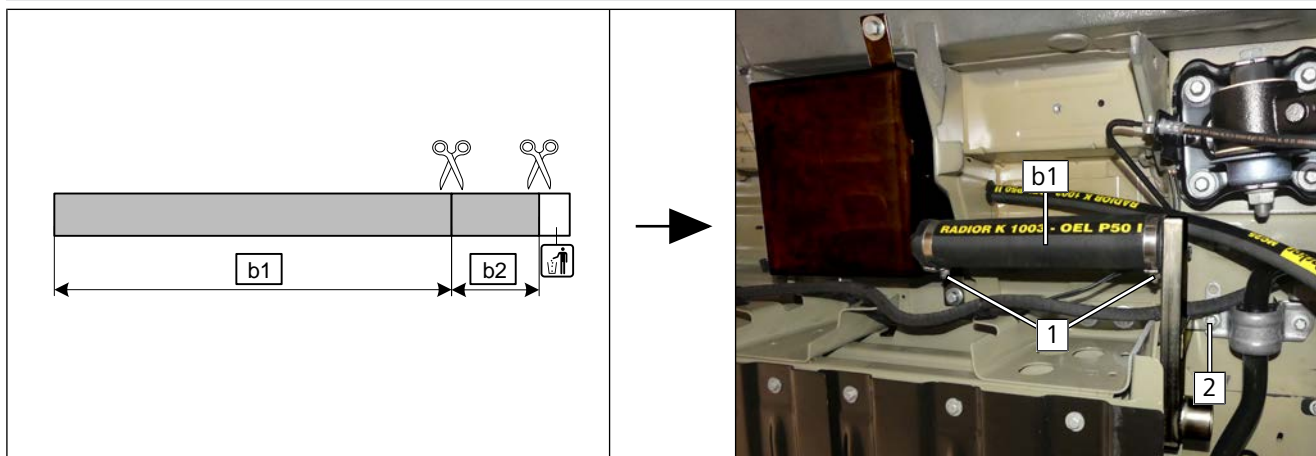


Fig. 51

b1 270

b2 70

1 Ø40-60 screw clamp

2 Original vehicle bolt, bracket, intermediate piece of filling hose, original vehicle thread

Fastening ventilation hose



Fig. 52

1 Hose bracket around ventilation hose and filling hose

2 50 lg. edge protection

3 Fasten the ventilation hose with a cable tie in the hole in the intermediate piece of the bracket.



10.5 Fuel pump installation and connection

Preparing and mounting fuel pump

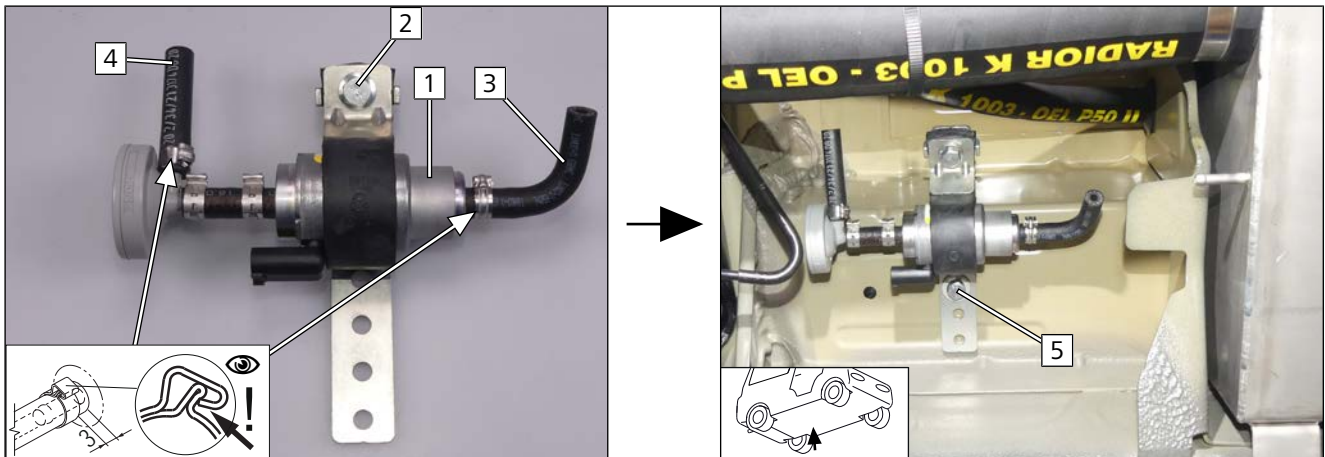


Fig. 53

- 1 Fuel pump
- 2 M6x25 bolt, support angle bracket, fuel pump mount, perforated bracket, flanged nut
- 3 90° hose section, Ø10 clamp
- 4 Hose section, Ø10 clamp
- 5 M6x20 bolt, spring lock washer, large diameter washer, perforated bracket, rivet nut

Mounting fuel line

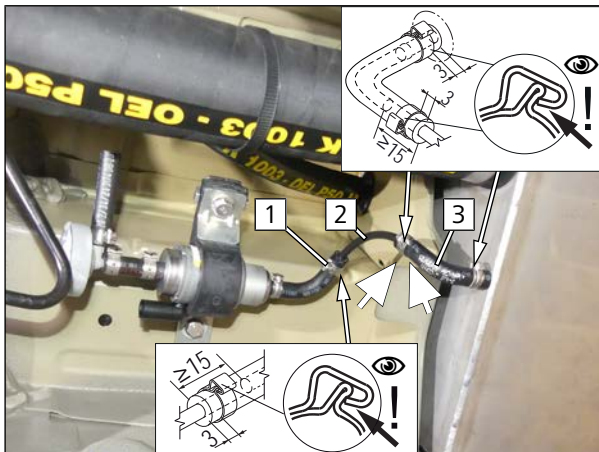
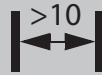


Fig. 54



Ensure sufficient distance from neighbouring components, correct if necessary.



- 1 Ø10 clamp
- 2 Fuel line approximately 100 long
- 3 90° moulded hose, Ø10 clamp [2x]



Preparing fuel pump wiring harness

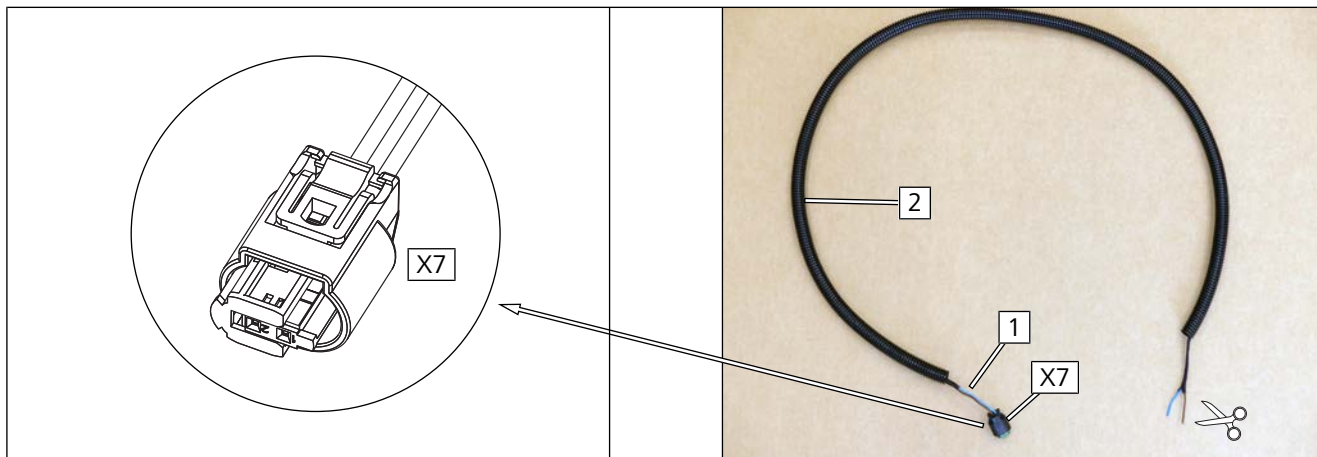


Fig. 55

X7 Fuel pump wiring harness connector

- ▶ Cut wiring harness of fuel pump **1** to approx. 1250 mm. The rest of the wiring harness is used as an extension for connecting the fuel level indicator lamp.
- ▶ Pull wiring harness of fuel pump into corrugated tube Ø10, 1130 long **2**.

Preparing wires, mounting connectors

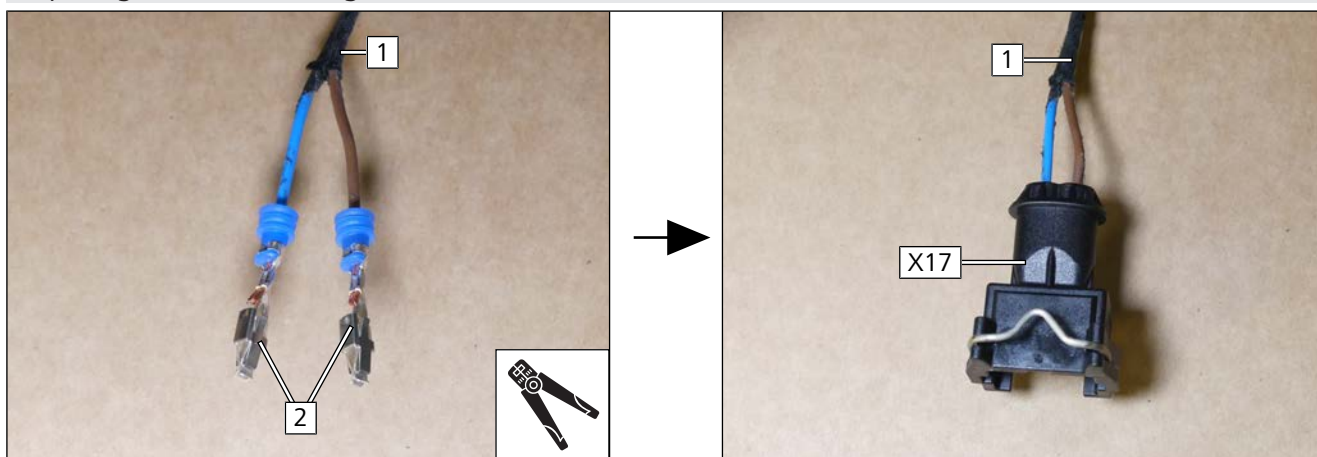


Fig. 56

- 1** Fuel pump wiring harness
- 2** Crimp on crimp receptacle with single wire seal for female connector **X17**.

- 1** Mount fuel pump wiring harness in female connector **X17**.



Connecting fuel pump wiring harness connector

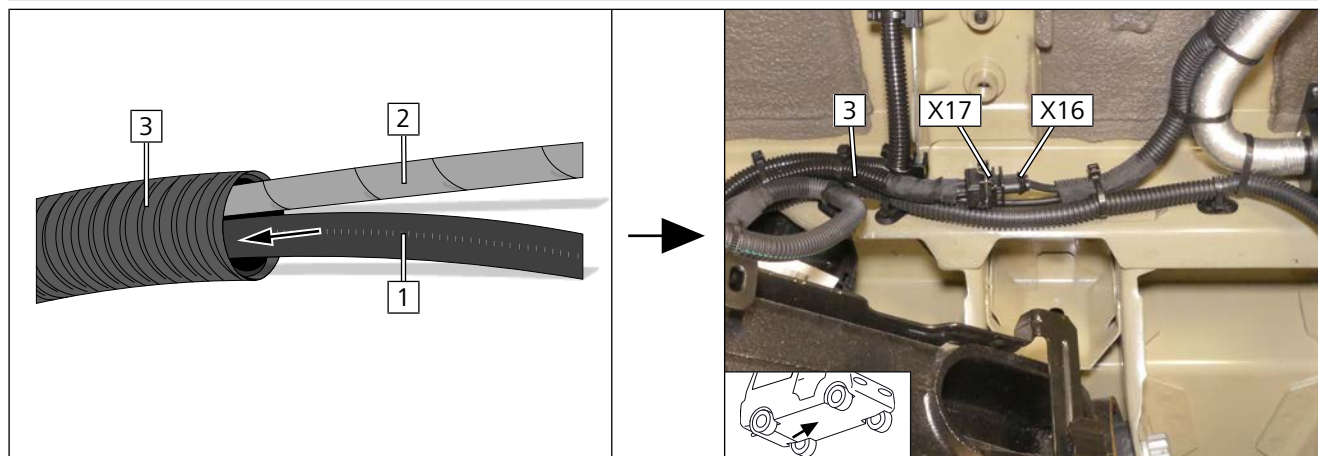


Fig. 57

- 1 Insert fuel line into $\varnothing 10$ corrugated tube 3.
 - 2 Premounted fuel pump wiring harness
- ▶ Connect connector X16 and female connector X17.
 - ▶ Route $\varnothing 10$ corrugated tube 3 to fuel pump installation location and fasten it.

Routing wires

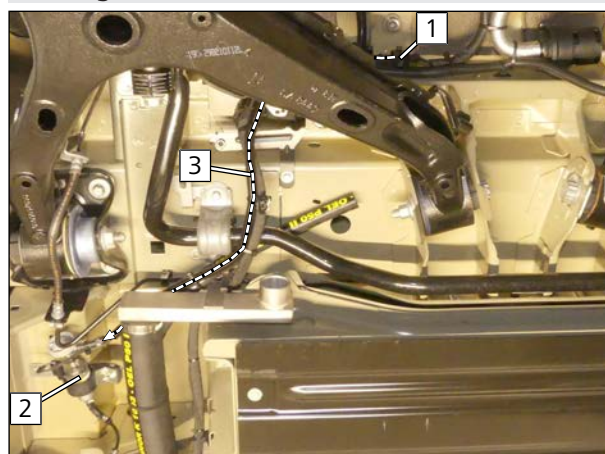


Fig. 58

- 1 Plug connection X16/X17
- 2 Fuel pump installation location
- 3 Corrugated tube with fuel line and fuel pump wiring harness

Fuel pump connection

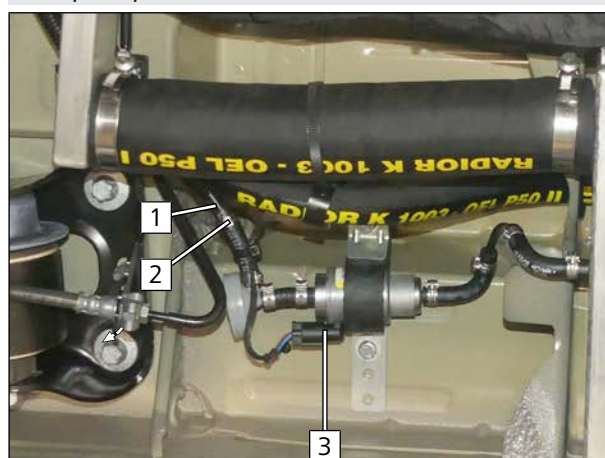


Fig. 59

- 1 HG fuel line
- 2 $\varnothing 10$ screw clamp
- 3 Fuel pump wiring harness, connector X7 mounted



10.6 Mounting filler neck

Preparing filler tube

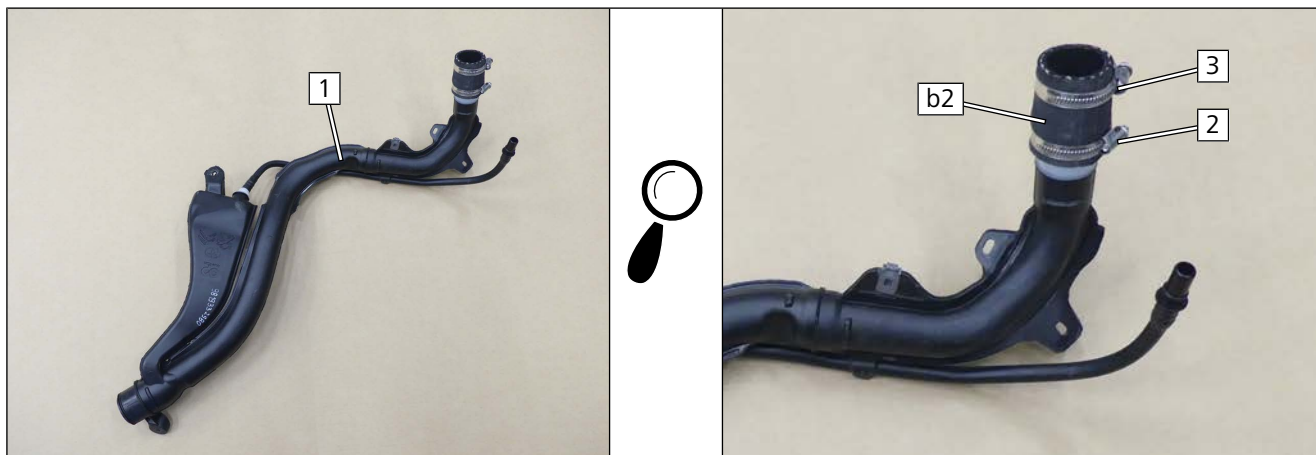


Fig. 60

1 Filler tube

2 Ø40-60 screw clamp

3 Loosely premount Ø40-60 screw clamp.

Removing fuel tank cap cover

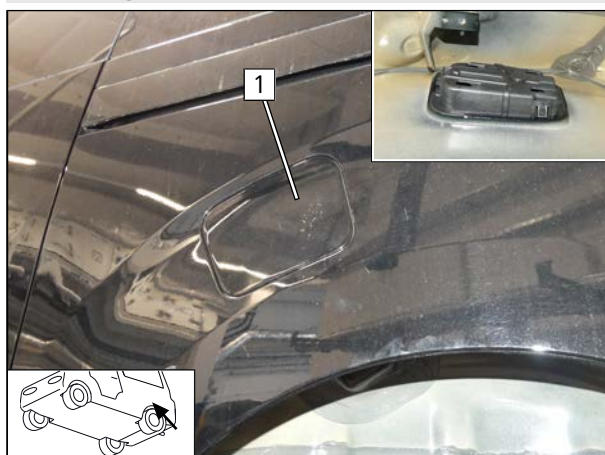


Fig. 61

1 Unlock the retaining clips from the inside, remove the tank cover and hand it over to the customer.

Mounting fuel tank cap filler neck



Fig. 62

1 Insert and mount filler neck.



Positioning filler tube at the installation location

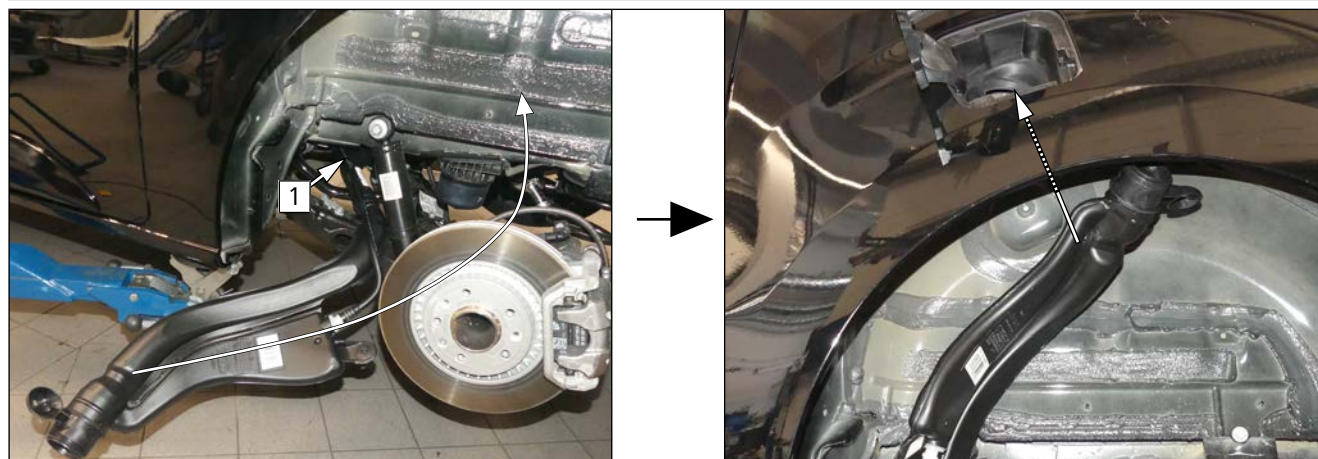


Fig. 63

- ▶ Carefully insert the filler tube in position **1** and swing it into the wheel well as shown.
- ▶ Position the filler tube in relation to the filler neck of the fuel filler cap as shown below.

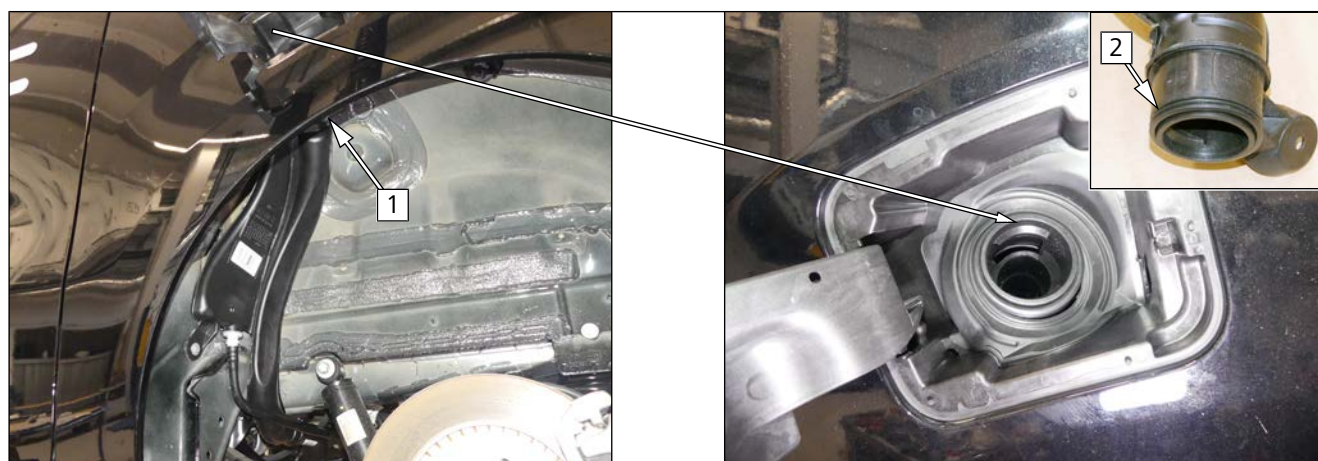


Fig. 64

- ▶ Position the filler tube in the filler neck of the fuel tank cap. Make sure that the premounted seal **2** is in the correct position on the filler tube.



Mounting filler tube

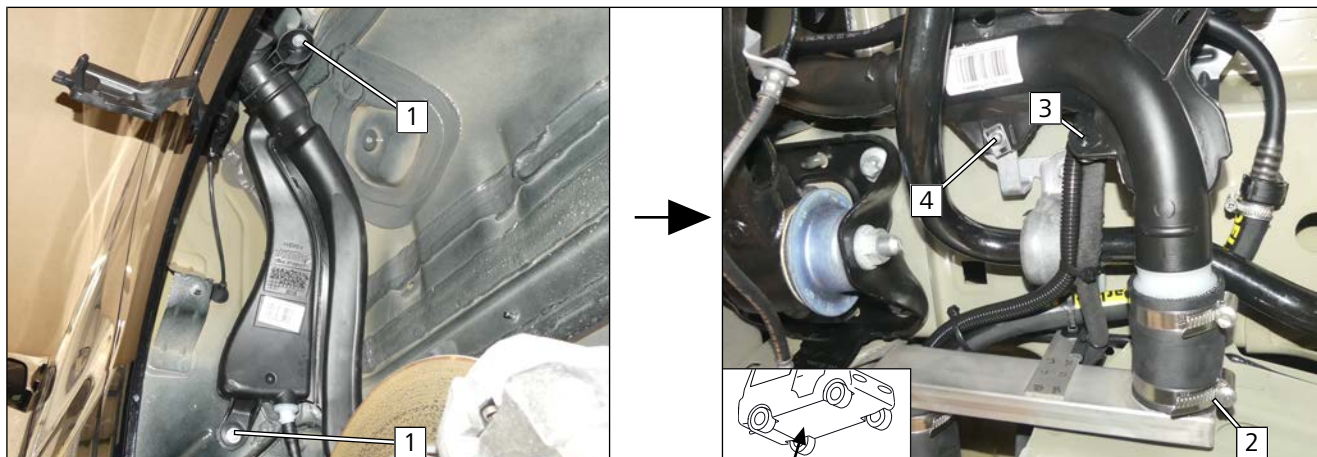


Fig. 65

- 1** Mount filler tube with M6x20 bolt, large diameter washer in existing thread.
- 2** Mount the premounted connection piece on the filler tube with the screw clamp on the intermediate piece.
- 3** Fasten original vehicle wiring harness with clip in filler tube hole.
- 4** Original vehicle bolt, original vehicle bracket, threaded piece for filler tube

Connecting and fastening ventilation hose

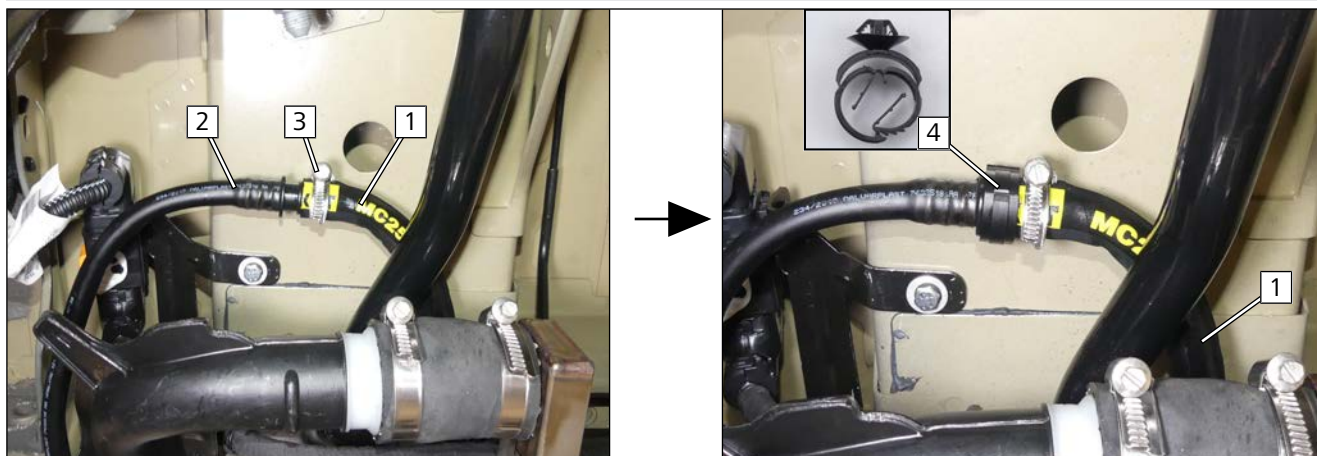


Fig. 66

- 1** Tank ventilation hose
- 2** Hose bracket for filler tube
- 3** Ø16-27 screw clamp
- 1** Align the tank ventilation hose so that it is kink-free.
- 4** Insert the hose bracket into the original vehicle hole and close it around the ventilation line of the filler tube.



Checking distance



Fig. 67



Ensure sufficient distance between the ventilation line and the stabiliser tube and correct if necessary.



10.7 Door lock mounting option - vehicle with manual sliding door on driver's side (not with electric sliding door)

Overview of parts

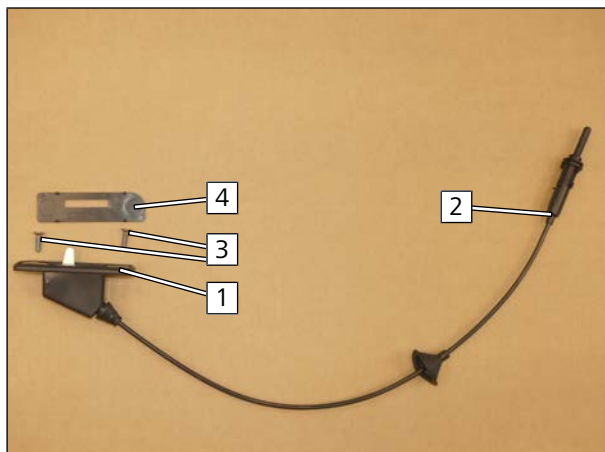


Fig. 68

- 1 Door lock with Bowden cable
- 2 Bowden cable
- 3 M6x16 countersunk head screw
- 4 Cover

Removing plug

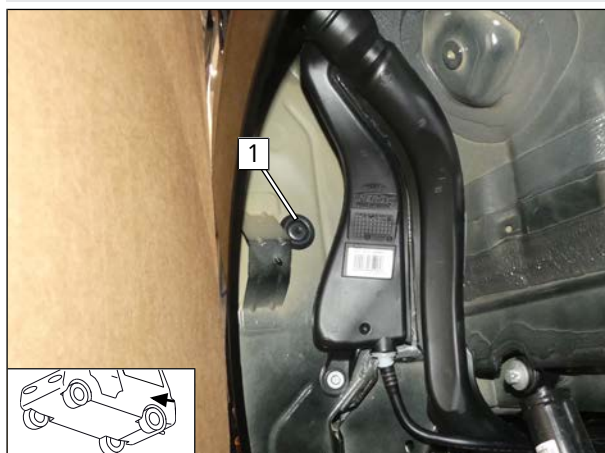


Fig. 69

- 1 Remove and discard original vehicle plug.



Removing cover



Fig. 70

- 1 Loosen and discard the original vehicle bolt.
- 2 Remove and discard cover.

Mounting door lock

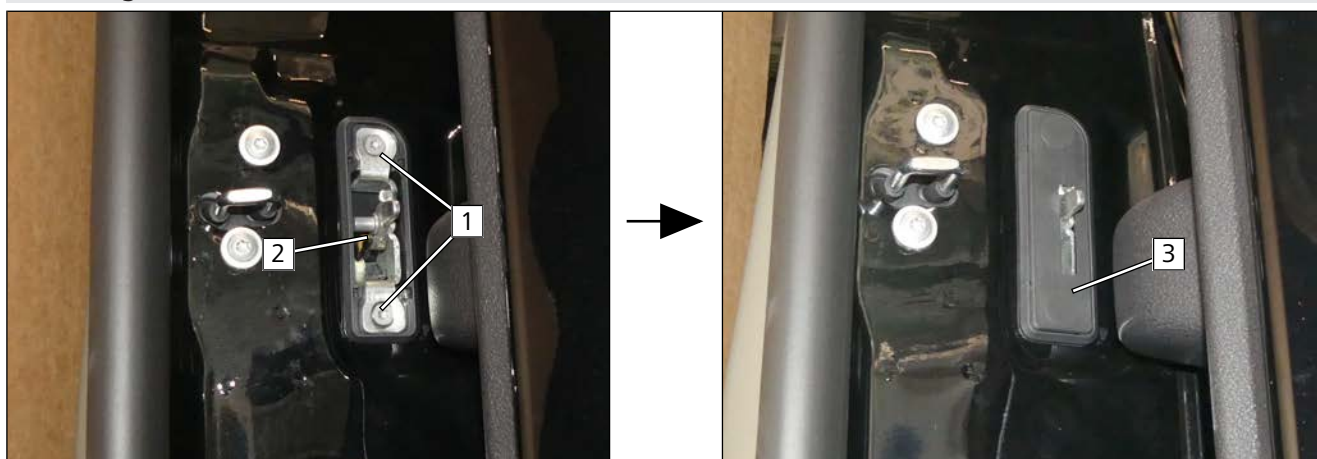


Fig. 71



► Manually operate the door lock during installation when opening and closing the sliding door to avoid damage.

► Insert the Bowden cable (see following figure).

3 Attach door lock cover.

1 Countersunk head screw

2 Door lock



Mounting Bowden cable

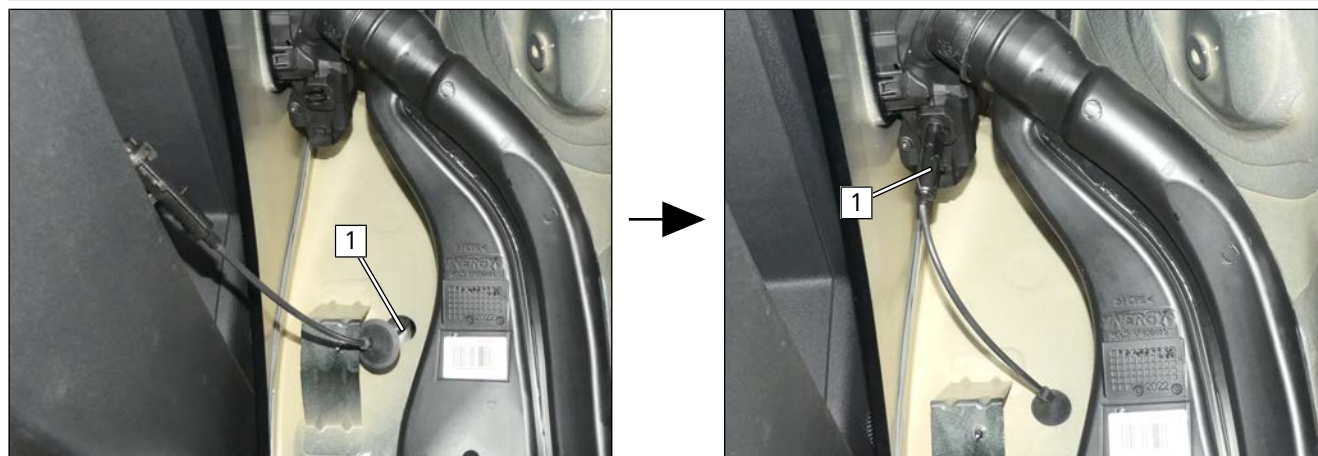


Fig. 72

1 Guide the Bowden cable through the hole in the wheel well.

1 Insert the Bowden cable in the tank cap and fasten it by twisting. Insert the protective rubber plug into the hole.

Checking door lock

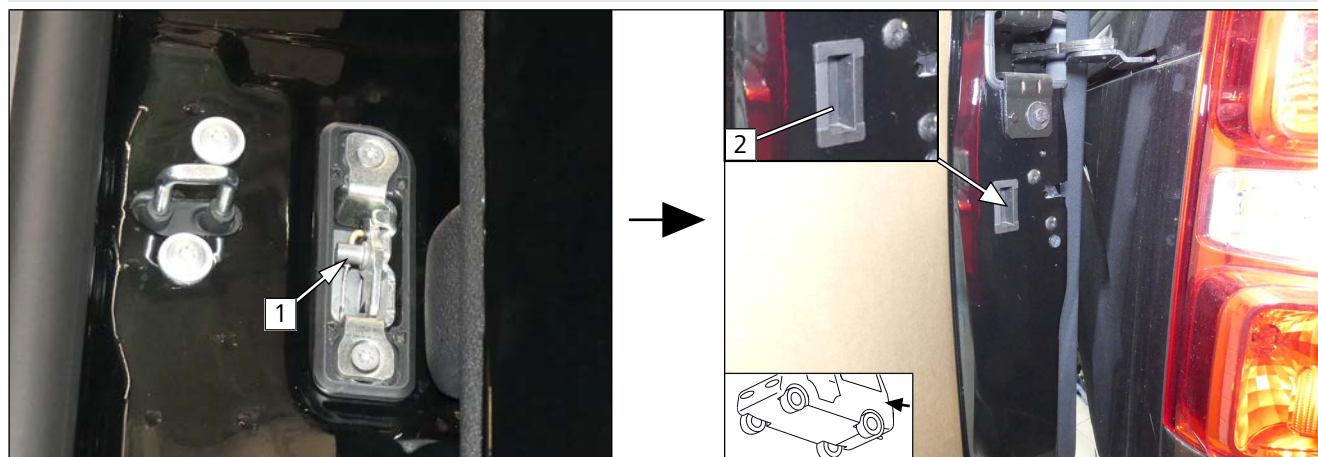


Fig. 73

1 Check the position of the lock before closing the sliding door.

2 Check counterpart for door lock

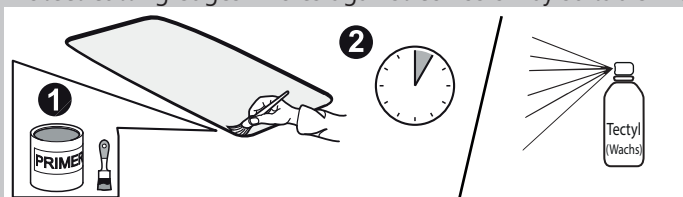


11 Preparing hot air outlet and wiring harness pass through

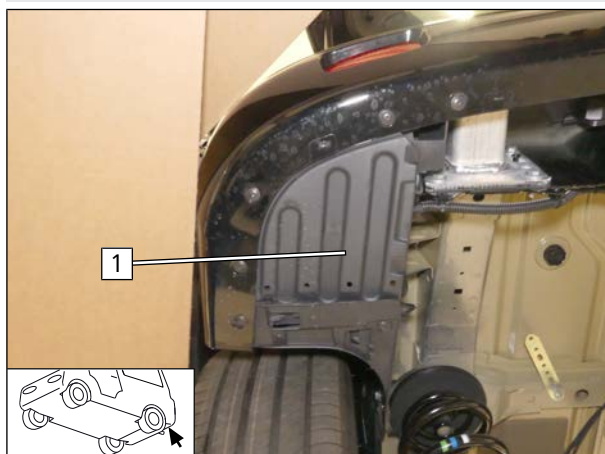


Danger of damage to components

► Protect cutting edges / holes against corrosion by suitable means.



Removing trim piece



1 Trim piece

Fig. 74

Drilling holes

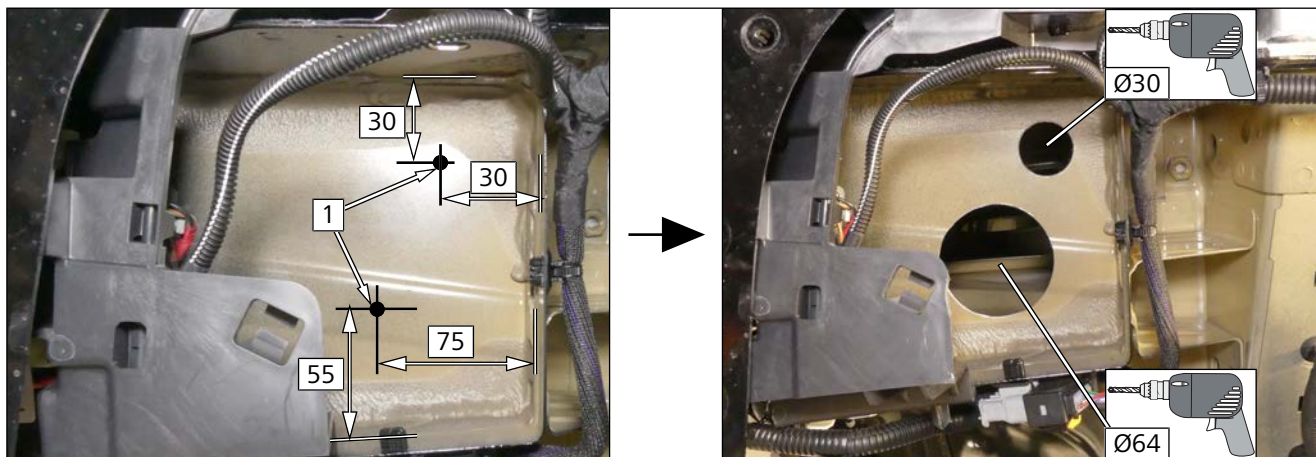


Fig. 75

1 Copy hole pattern.

► Drill holes.



Danger of damage to components

Watch out for overlying components when working on them.



12 Electrical system at underbody

Shortening and assigning fuel sensor wires

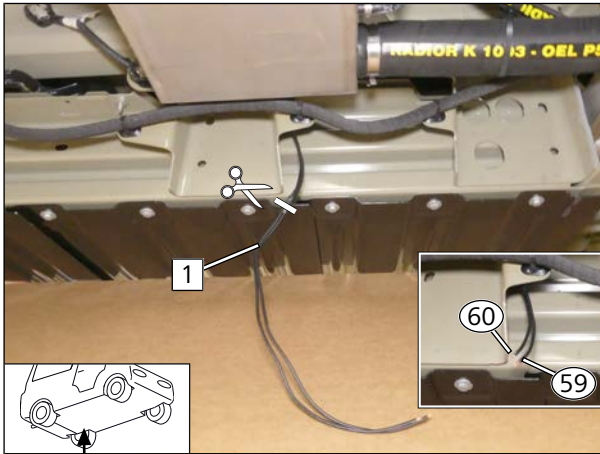


Fig. 76

- 1 Shorten the fuel sensor line to a length of 200 mm.
- 59 Fuel sensor line
- 60 Fuel sensor line

Preparing wiring harnesses for fuel sensor extension, assigning them and connecting same colour wires

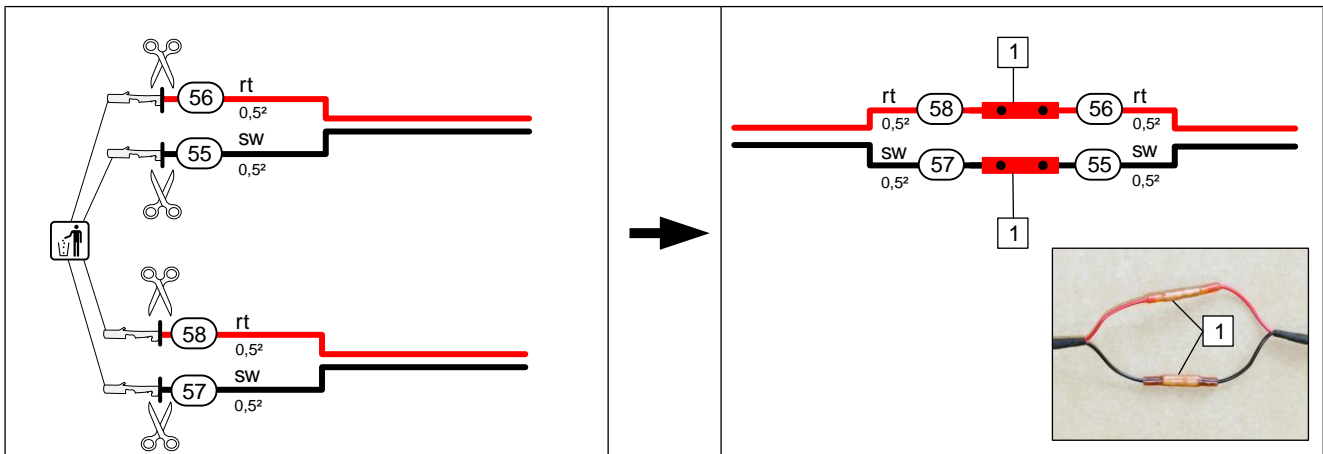


Fig. 77

► Prepare wires and connect with red shrinkable butt connectors 1, shrink and wrap with insulating tape.

- 55 Black (sw) wire of fuel sensor wiring harness extension
- 56 Red (rt) wire of fuel sensor wiring harness extension
- 57 Black (sw) wire of fuel sensor wiring harness extension
- 58 Red (rt) wire of fuel sensor wiring harness extension



Connecting fuel sensor wiring harness extension to fuel sensor wire

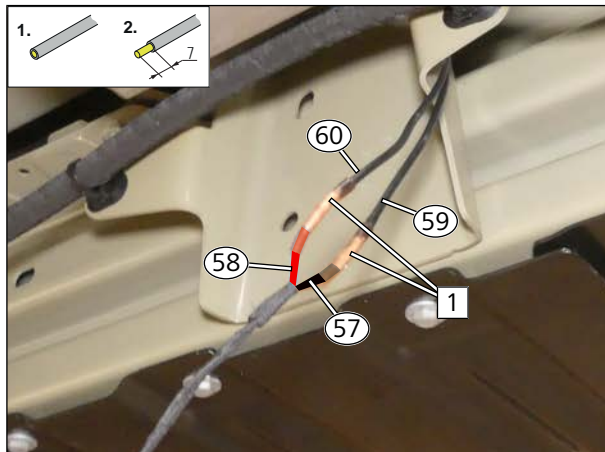


Fig. 78

- ▶ Connect wires with red shrinkable butt connectors **1**, shrink and wrap with insulating tape.

Routing wiring harness



Fig. 79

- ▶ Route the wiring harness extension for fuel sensor **57/58** and **55/56** along the original vehicle wiring harness and secure it.

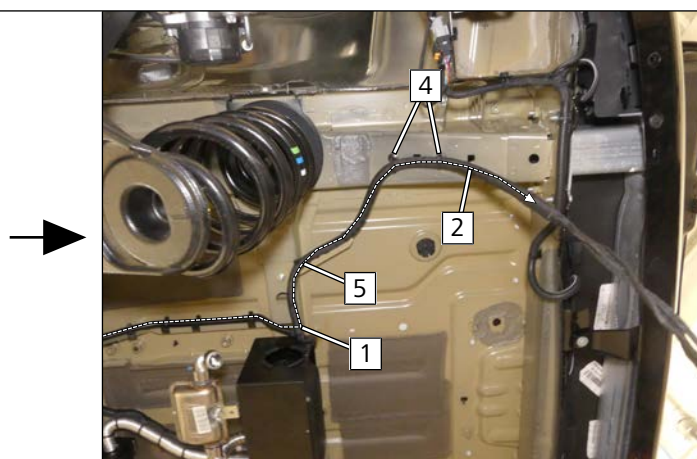
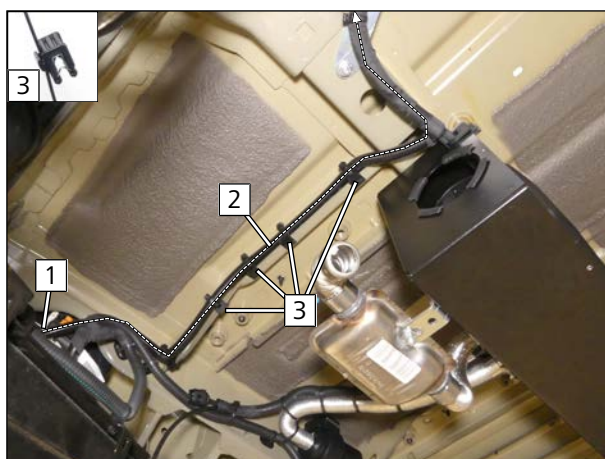


Fig. 80

From pos. **1**, route wiring harness extension for fuel sensor (**55/56**) in Ø13 slit corrugated tube 2250 long **2** as shown and fasten.

3 Edge clip cable tie

From pos. **1**, route wiring harness extension for fuel sensor and heater wiring harness together in Ø13 slit corrugated tube **2** and fasten.

4 Close premounted eyelet cable tie.

5 Fasten the corrugated tube to premounted perforated bracket 1 with cable ties.

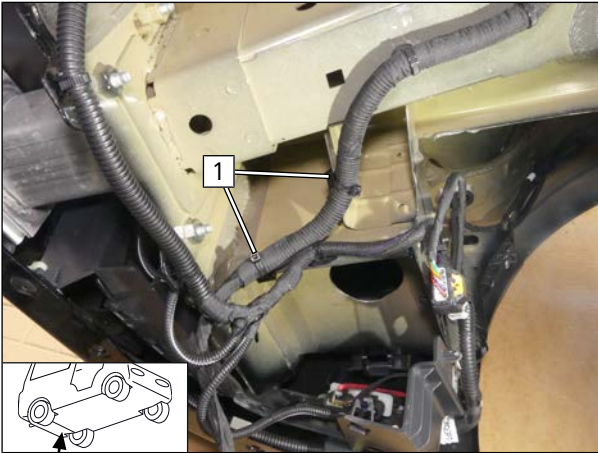


Fig. 81

- 1 Secure wiring harness extension for fuel sensor and heater wiring harness with premounted edge clip cable tie.

Disconnecting wires from SH2, preparing and assigning them

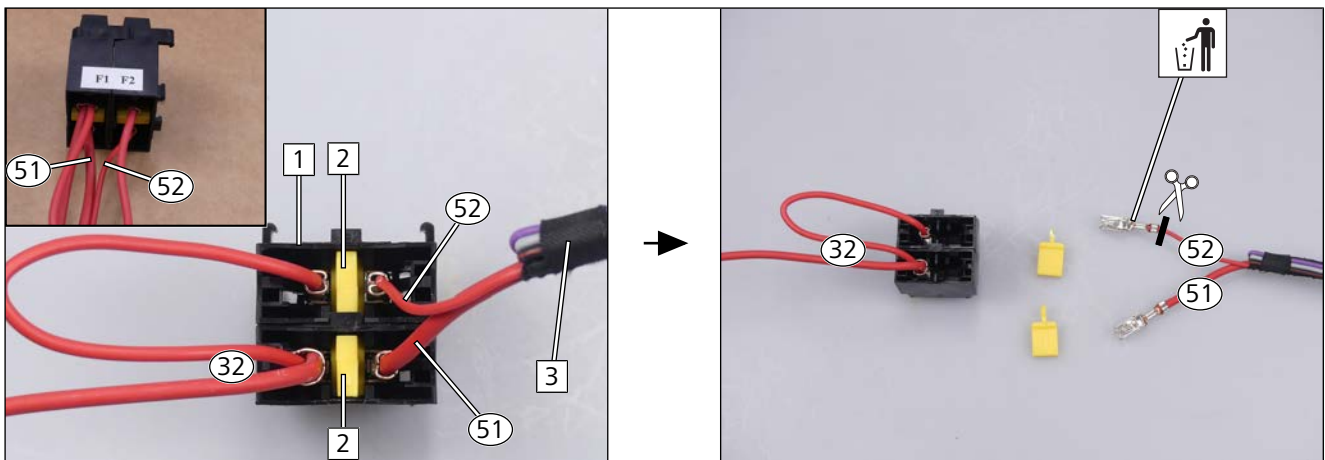


Fig. 82

- 1 SH2
- 2 Secondary lock
- 3 Heater wiring harness
- 51 Red (rt) 2.5 mm² wire of wiring harness SH2 (fuse F1)
- 52 Red (rt) 0.5 mm² wire of wiring harness SH2 (fuse F2)
- 32 Red (rt) 2.5 mm² positive wire SH2 (fuse F1) with bridge

- Prepare red (rt) 0.5 mm² wire 52 (fuse F2) as shown.



Routing wiring harnesses in passenger compartment

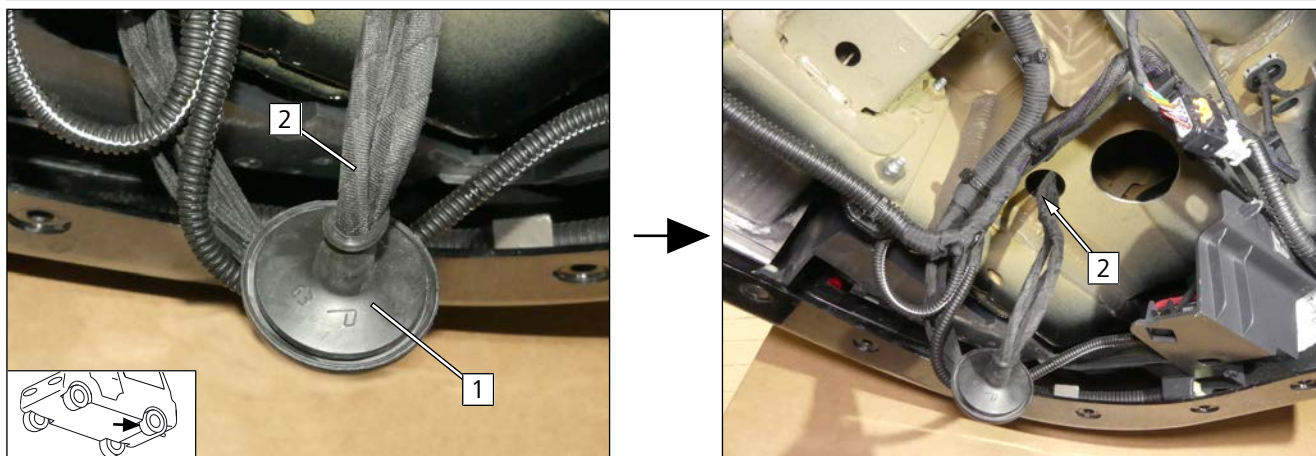


Fig. 83

1 Mount protective rubber plug on fuel sensor wiring harness extension and HG wiring harness **2**.

2 Route the fuel sensor wiring harness extension and the heater wiring harness through the $\varnothing 30$ hole in the passenger compartment as shown in this and the following figures.



Fig. 84

1 Fuel sensor wiring harness extension and heater wiring harness in the passenger compartment

Mounting protective rubber plug

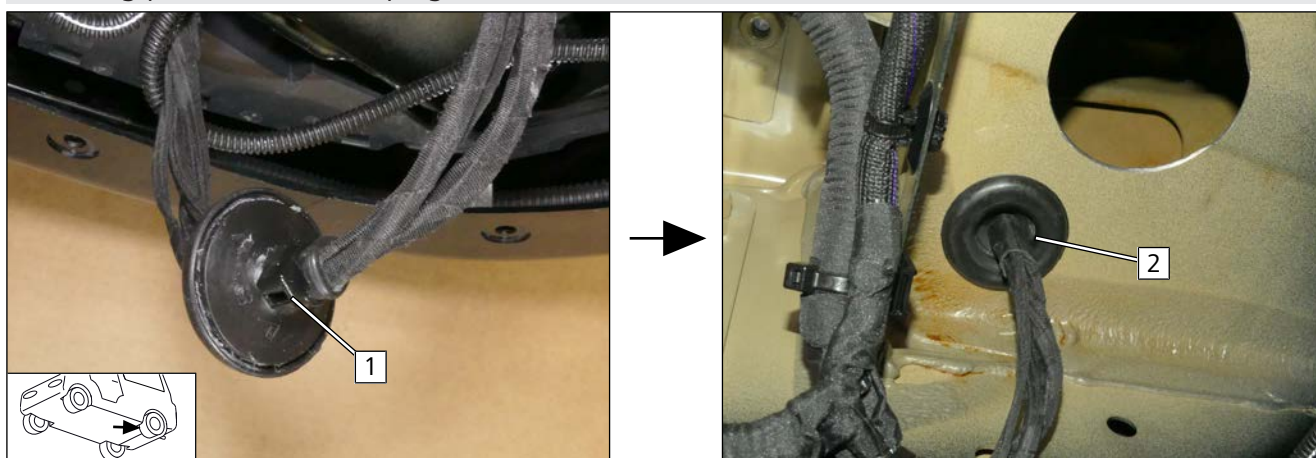
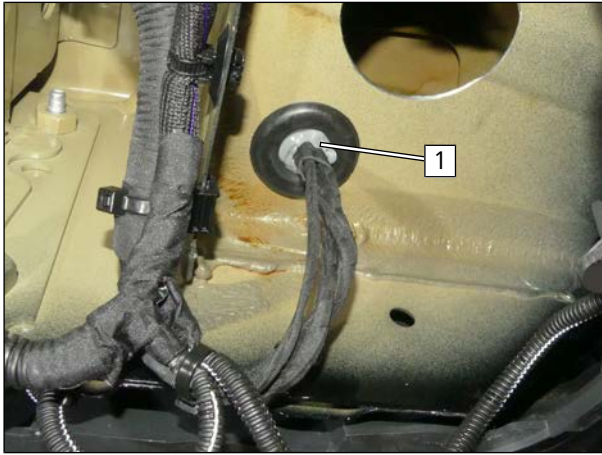


Fig. 85

1 Cable tie as tension relief around protective rubber plug

2 Mount the protective rubber plug in the hole.



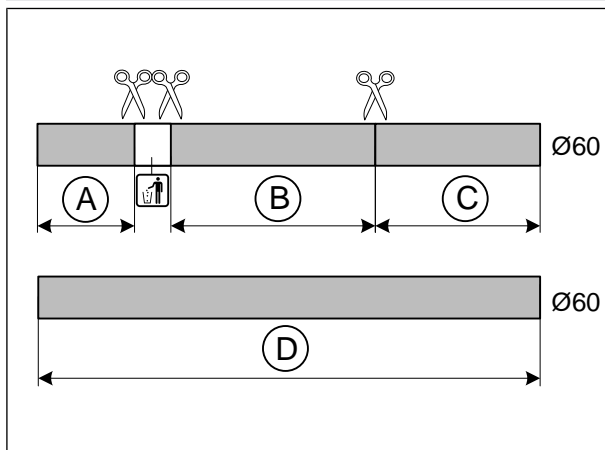
- 1 Apply sealant to the protective rubber plug opening.

Fig. 86



13 Hot air

Cutting hot air line to length



- A** 100
- B** 900
- C** 800
- D** 2000, cut to length during installation

Fig. 87

Hot air routing diagram

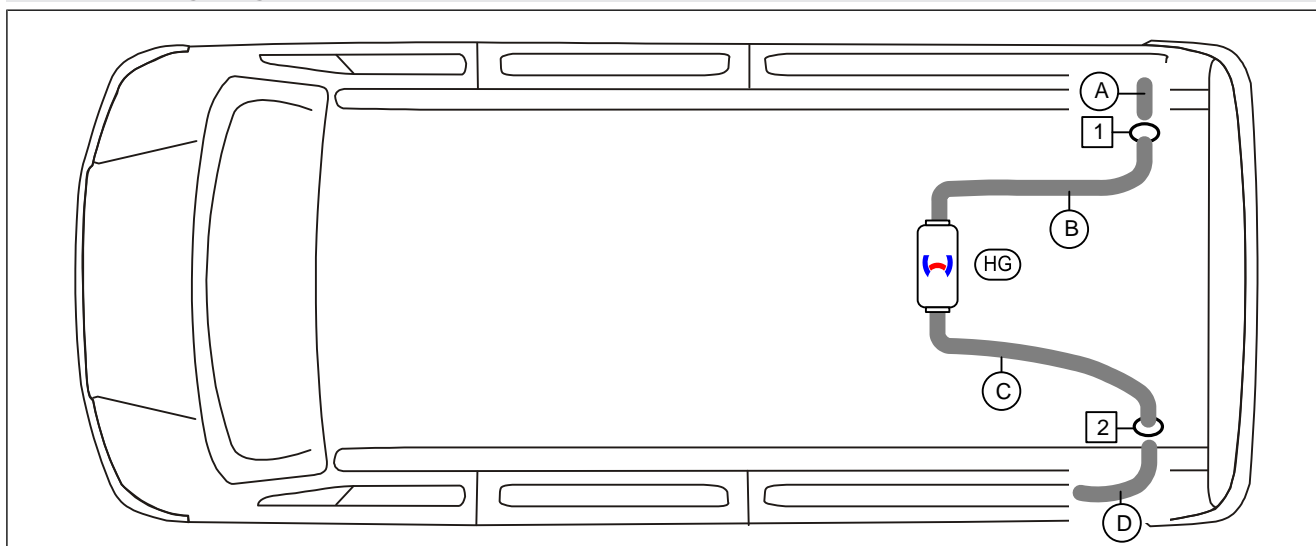


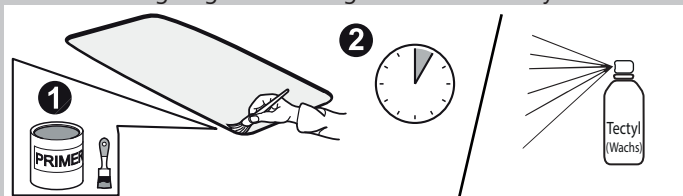
Fig. 88

- 1** Hot air inlet
- 2** Hot air outlet



Danger of damage to components

► Protect cutting edges / holes against corrosion by suitable means.





13.1 Hot air outlet

Preparing heater

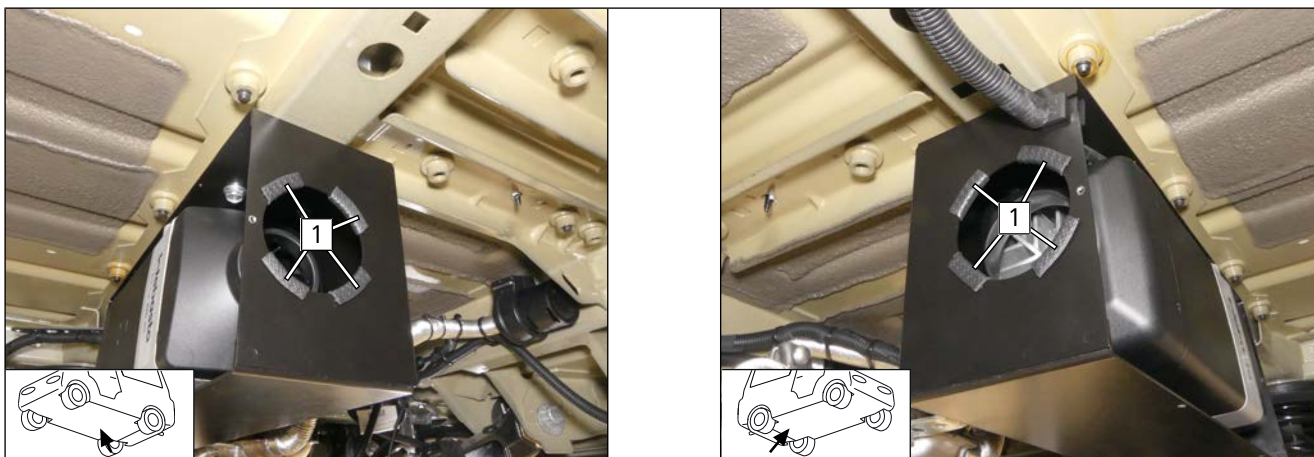


Fig. 89

1 4x edge protectors, each 25 mm long, on hot air inlet

1 4x edge protectors, each 25 mm long, on hot air outlet

Preparing wall feed-through

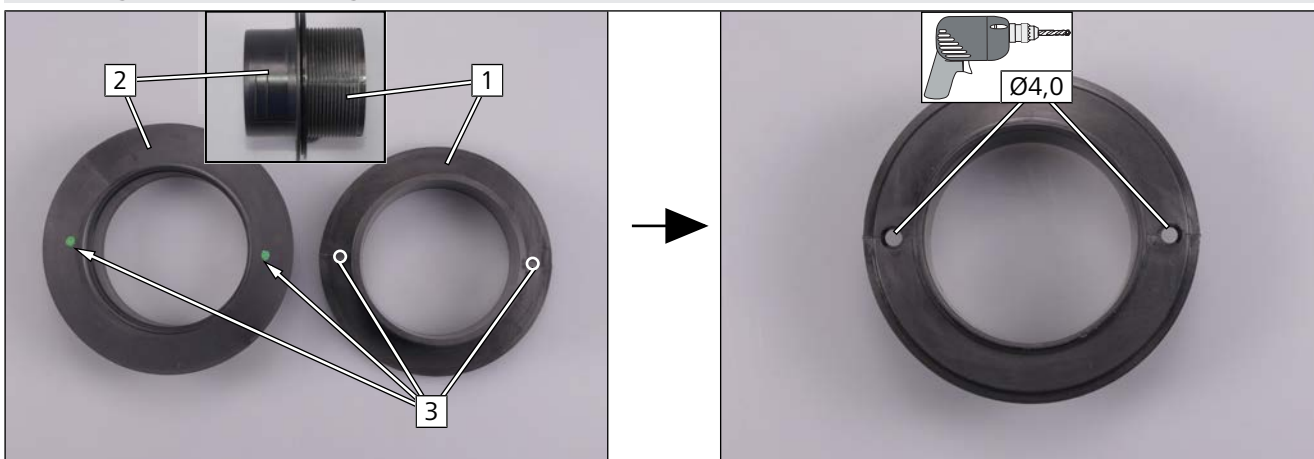


Fig. 90

1 Wall feed-through with thread, holes available

2 Wall feed-through

3 Copy hole pattern.

► Drill holes.

Routing hot air line in passenger compartment



Fig. 91

- Route hot air line **D** in the passenger compartment through the $\varnothing 64$ hole that has been drilled.

View of passenger compartment - Fig. shows bus vehicle variant

Mounting wall feed-through



Fig. 92

- 1** Mount the wall feed-through with thread in hot air line **D**.

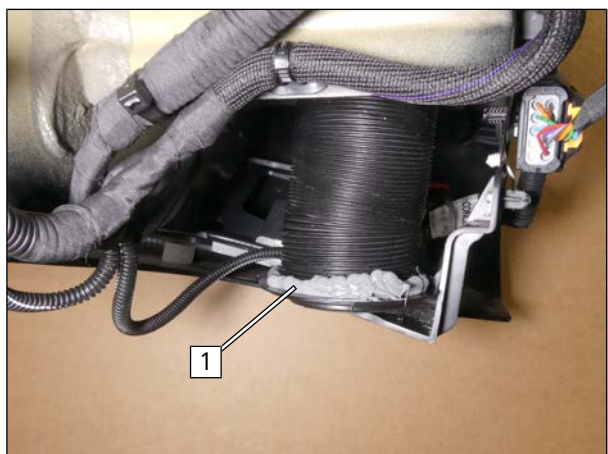
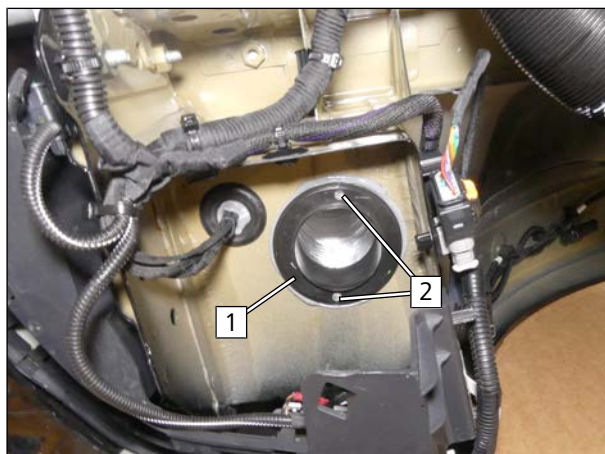


Fig. 93

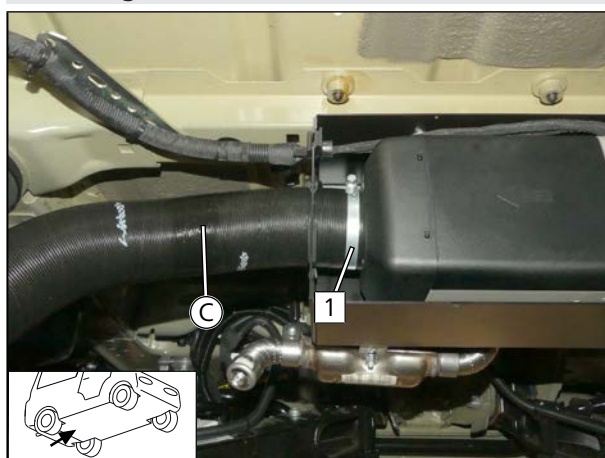
- Apply sealant **1**.



- ▶ Press wall feed-through **1** in hole.
- ▶ Align wall feed-through as shown.
- ▶ Copy hole pattern **2**, drill Ø2.5 hole.

Fig. 94

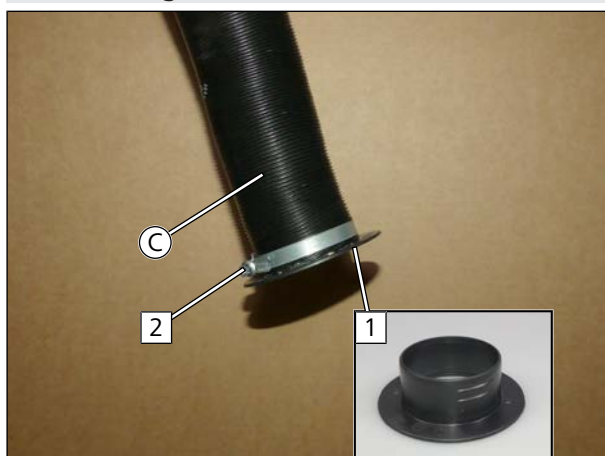
Mounting HG hot air outlet



- 1** Ø50-70 screw clamp

Fig. 95

Premounting hot air line

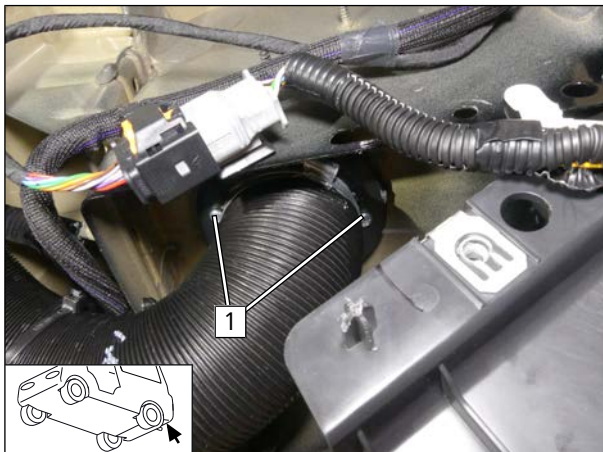


- 1** Wall feed-through
- 2** Ø50-70 screw clamp

Fig. 96



Mounting hot air line



- ▶ Mount both wall feed-throughs with self-tapping screws 3.9x13 **1**.

Fig. 97

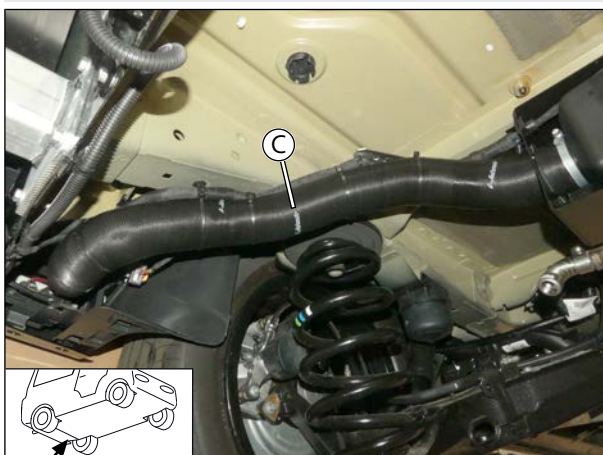
Fitting edge protection



- 1** 100 lg. edge protection

Fig. 98

Routing hot air line



- ▶ Route hot air line **C** along the heater wiring harness on the underbody as shown and secure it with cable ties.

Fig. 99



13.2 Hot air inlet

Removing trim piece



Fig. 100

1 Trim piece

Drilling hole

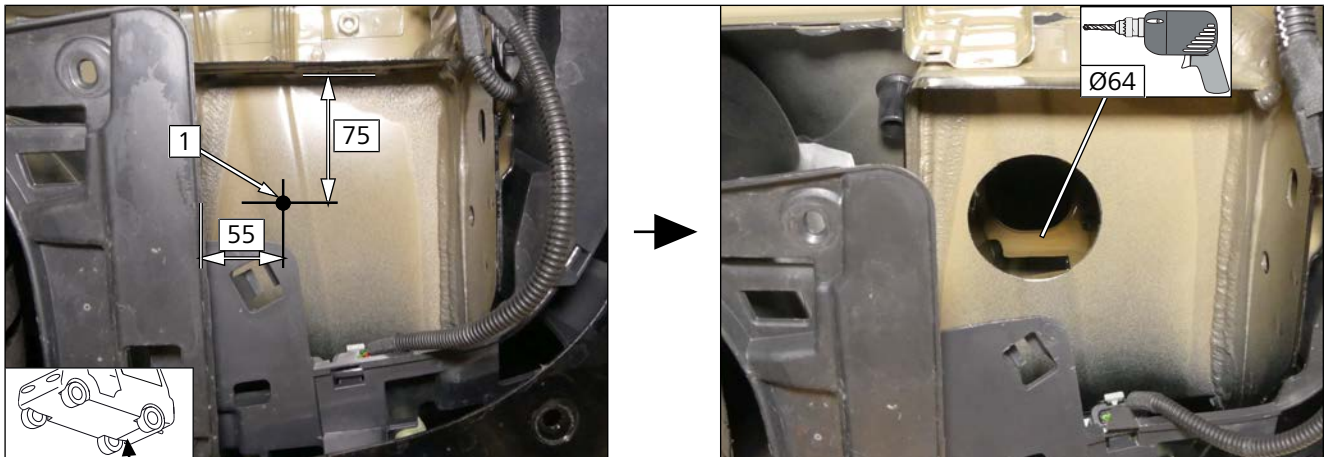


Fig. 101

1 Copy hole pattern.

► Drill hole.

Preparing wall feed-through

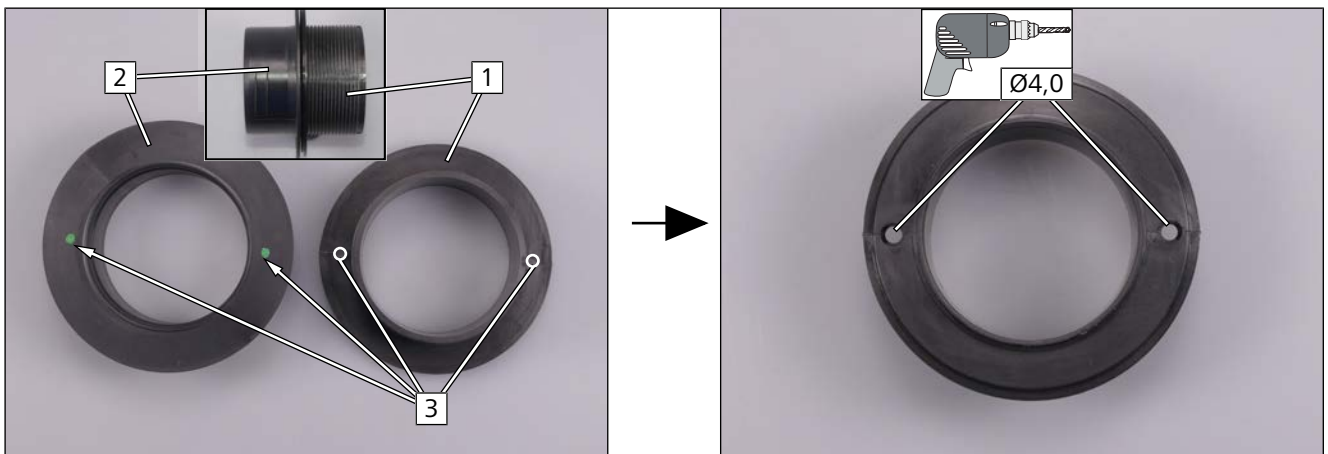


Fig. 102

1 Wall feed-through with thread, holes available

2 Wall feed-through

3 Copy hole pattern.

► Drill holes.

Premounting hot air line

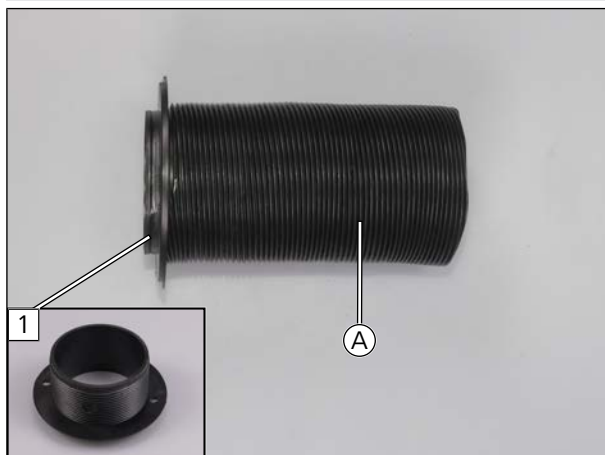


Fig. 103

- 1 Wall feed-through with thread

Mounting wall feed-through

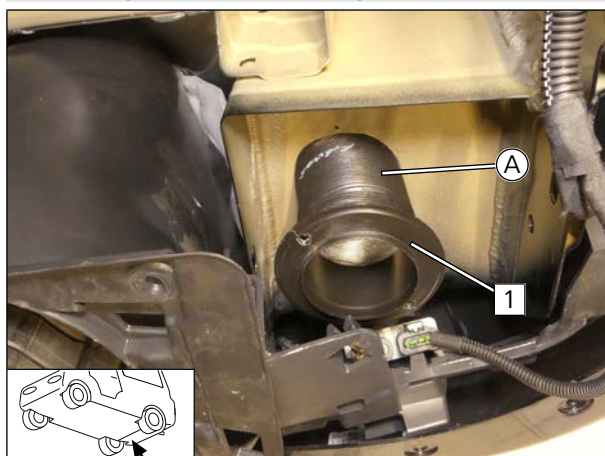


Fig. 104

- 1 Place hot air line (A) in the $\varnothing 64$ hole.

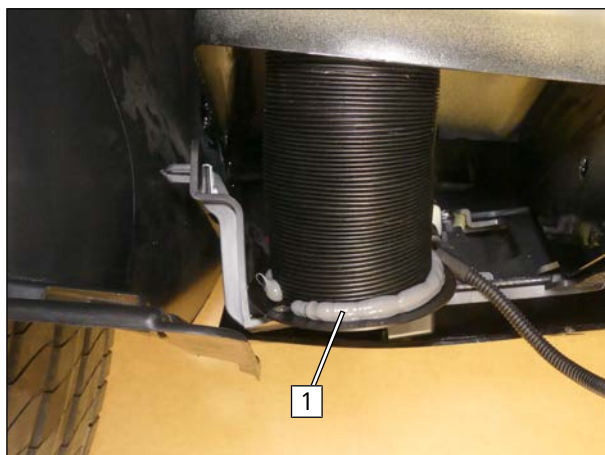
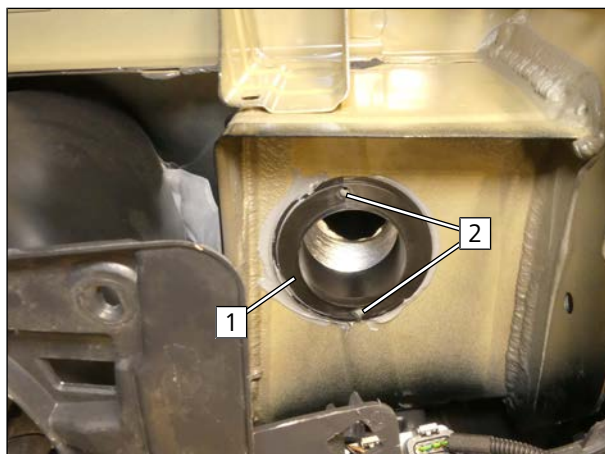


Fig. 105

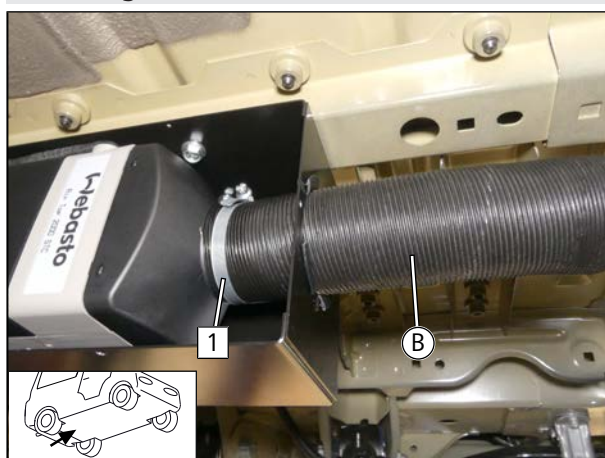
- Apply sealant **1**.



- ▶ Press wall feed-through **1** in hole.
- ▶ Copy hole pattern **2**, drill $\text{\O}2.5$ hole.

Fig. 106

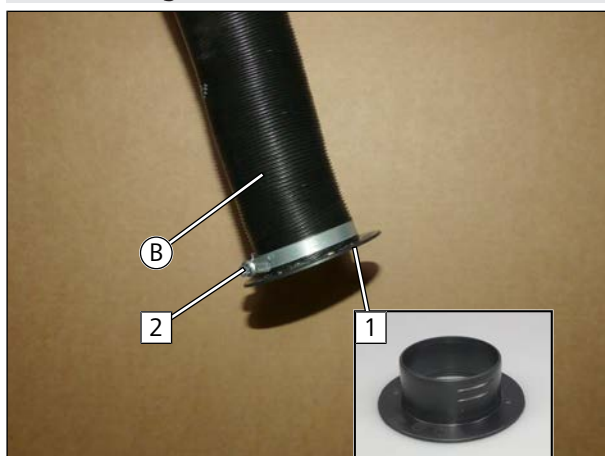
Mounting HG hot air inlet



- 1** $\text{\O}50-70$ screw clamp

Fig. 107

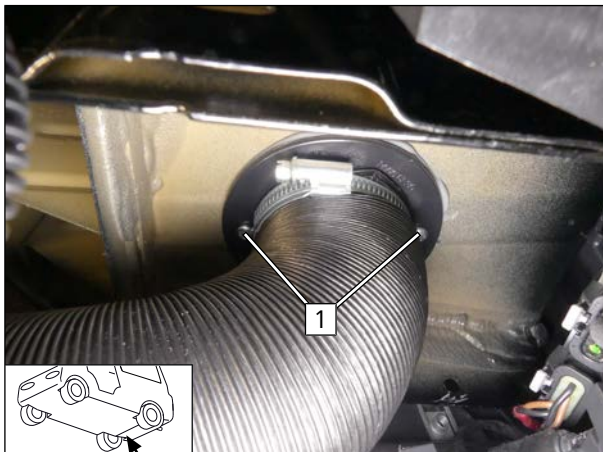
Premounting hot air line



- 1** Wall feed-through
- 2** $\text{\O}50-70$ screw clamp

Fig. 108

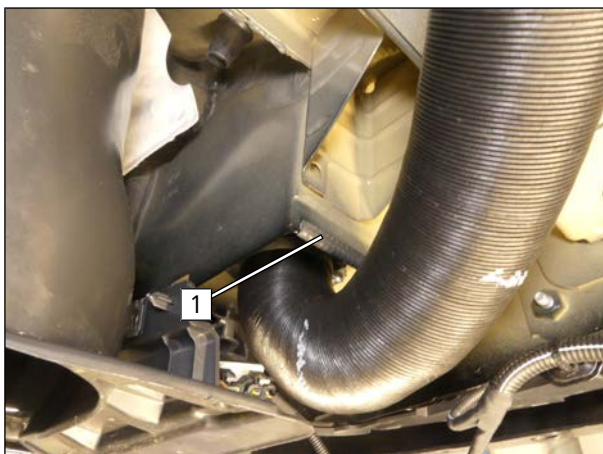
Mounting hot air line



- ▶ Mount both wall feed-throughs with self-tapping screws 3.9x13 **1**.

Fig. 109

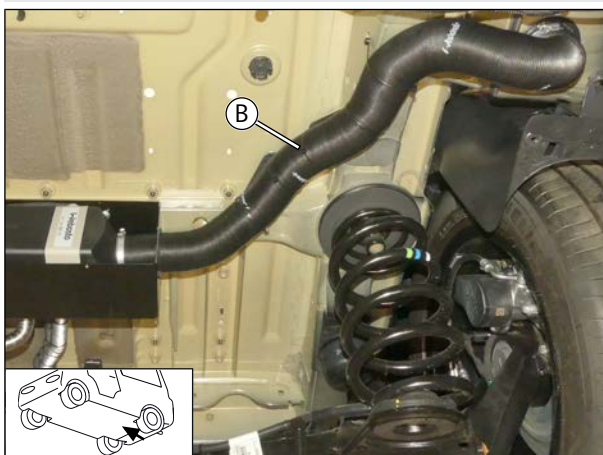
Fitting edge protection



- 1** 100 lg. edge protection

Fig. 110

Routing hot air line



- ▶ Route hot air line **B** on the underbody as shown and fasten it with cable ties to pre-mounted perforated brackets 2 and 3.

Fig. 111



Preparing trim pieces

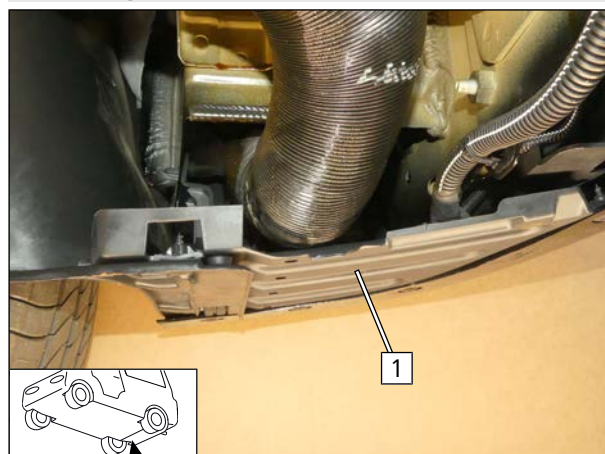


Fig. 112

1 Adapt the bumper trim on the lower part of the driver's side as shown.

2 Adapt the bumper trim on the lower part of the front passenger's side as shown.

Mounting trim pieces



Mount trim piece **1** on the driver's and front passenger's side. Fig. shows installation on front passenger's side.

Fig. 113



14 Electrical system

Overview of wiring harnesses

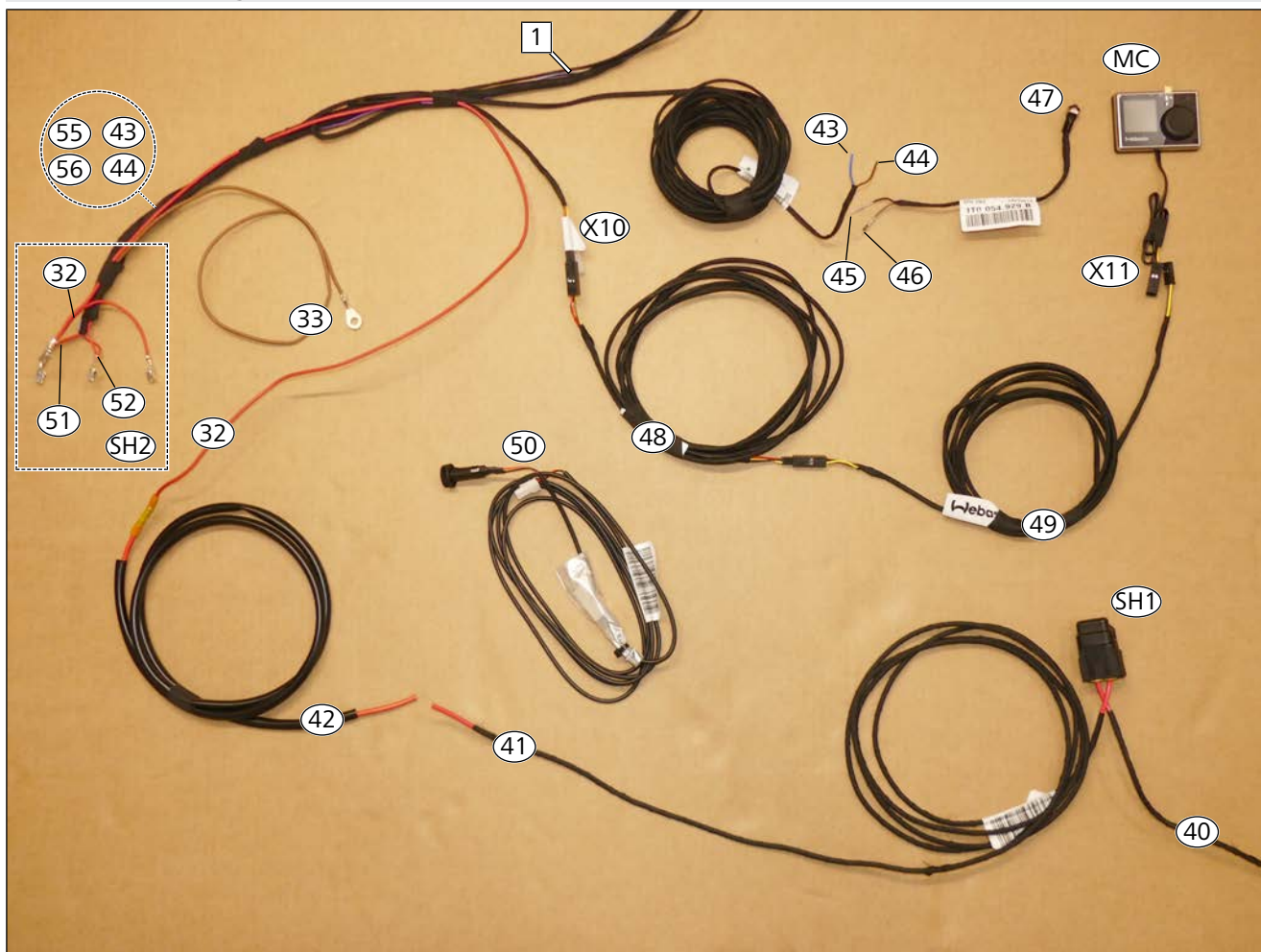


Fig. 114

1	Heater wiring harness	48	Heater control element wiring harness extension 1
32	Red (rt) 2.5 mm ² positive wire of heater wiring harness	49	Heater control element wiring harness extension 2
33	Brown (br) 2.5 mm ² wire, earth wire of heater wiring harness	50	External temperature sensor (optional)
40	Red (rt) 4 mm ² wire, wiring harness SH1 (connection to the 12V battery)	51	Red (rt) 2.5 mm ² wire of wiring harness SH2 (fuse F1)
41	Red (rt) 4 mm ² wire of wiring harness SH1	52	Red (rt) 0.5 mm ² wire of wiring harness SH2 (fuse F2)
42	Red (rt) 4 mm ² wire as wire extension in protective sleeving	55	Black (sw) 0.5 mm ² wire of fuel sensor wiring harness extension
43	Blue (bl) 0.5 mm ² wire of fuel sensor wiring harness extension (wiring harness section from fuel pump wiring harness)	56	Red (rt) 0.5 mm ² wire of fuel sensor wiring harness extension
44	Brown (br) 0.5 mm ² wire of fuel sensor wiring harness extension (wiring harness section from fuel pump wiring harness)	MC	MultiControll HD (optional control element)
45	Red (rt) 0.5 mm ² wire of LED fuel level wiring harness	SH1	Main fuse holder
46	Black (sw) 0.5 mm ² wire of LED fuel level wiring harness	SH2	Secondary fuses holder (disassembled)
47	LED fuel level	X10	Female plug for control element
		X11	Male plug for control element



Installing SH1



Fig. 115

1 Remove original vehicle bolt.

1 Original vehicle bolt, angle bracket, original vehicle thread

2 M5x16 bolt, washer, SH1 retaining plate, angle bracket, self-locking nut

► Fit (SH1) with 30A fuse F0 on retaining plate.

Positive wire connection

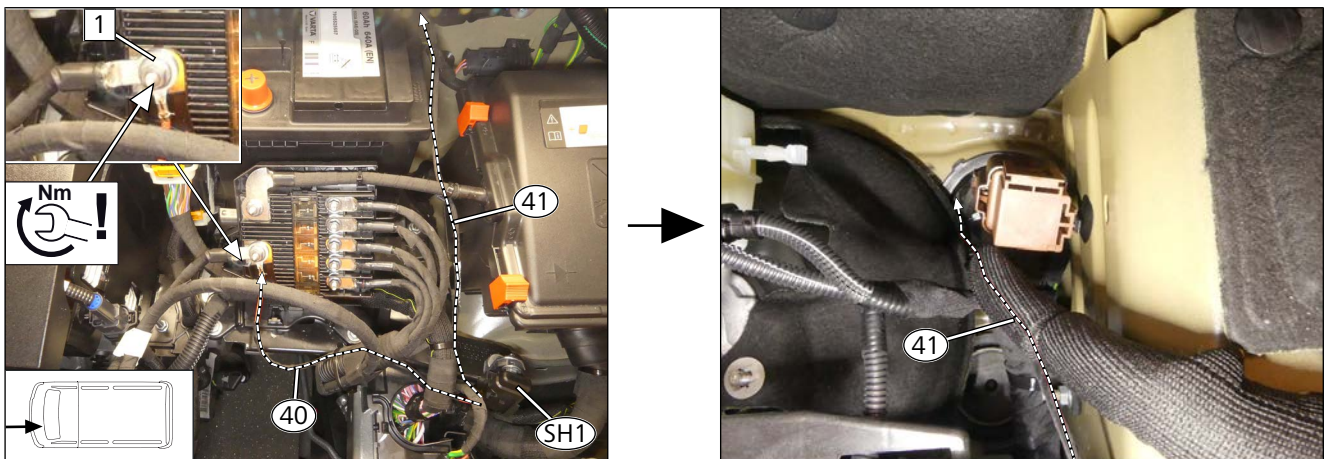


Fig. 116



Observe tightening torque

1 Original vehicle positive support point

► Route positive extension wire (41) in the passenger compartment.



To prevent water seeping into the passenger compartment, the wiring harness must be routed upwards to the protective rubber plug and this plug must then be sealed with a suitable sealing compound.



Routing positive extension wire

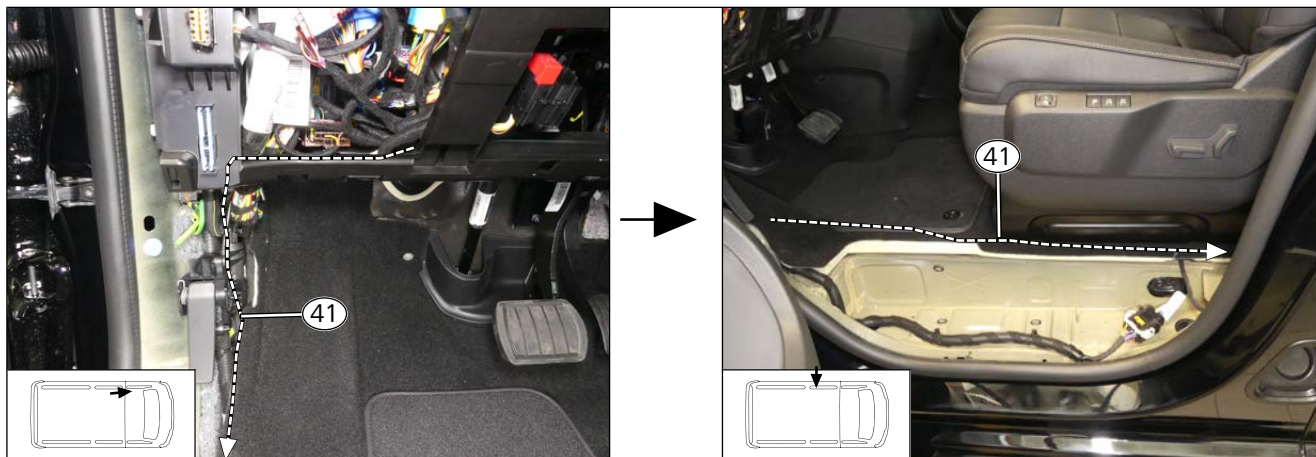


Fig. 117

► Route positive extension wire (41) in the footwell on the driver's side.

Removing sliding door motor (if present)

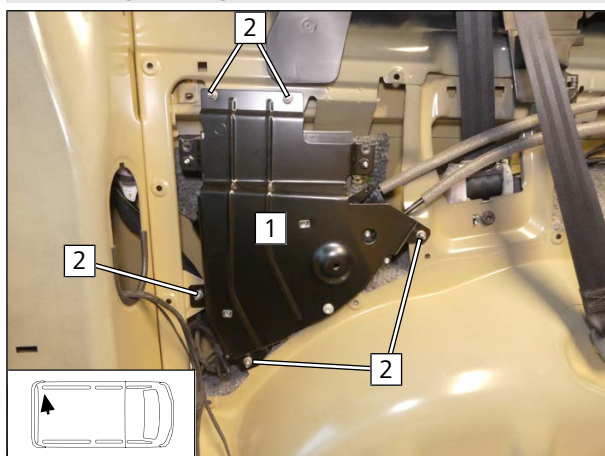


Fig. 118

- 1 Sliding door motor on the driver's side
- 2 Remove original vehicle bolts.

Cutting wire, connecting wiring harnesses

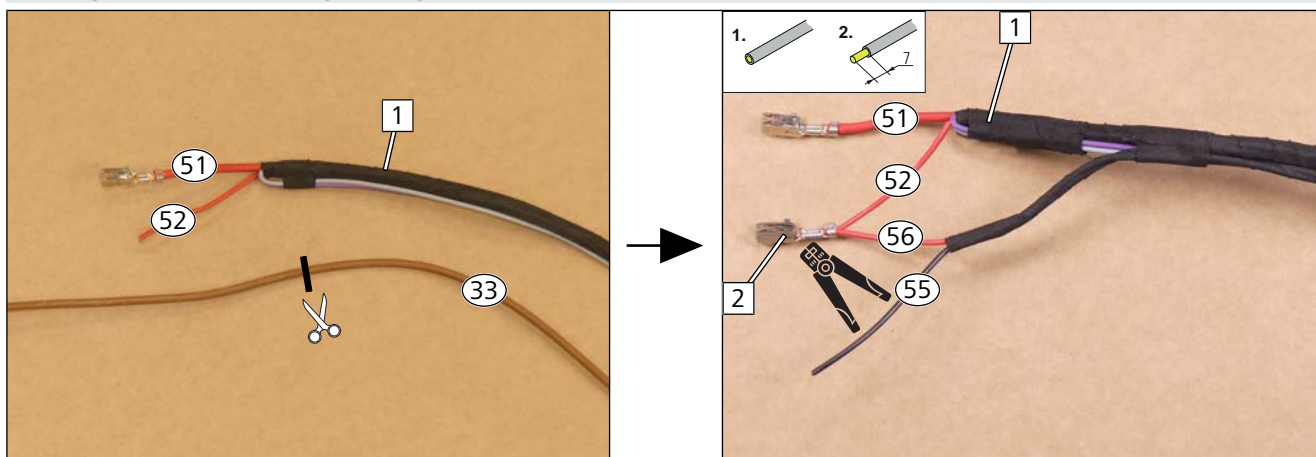


Fig. 119

- 1 Heater wiring harness
- 33 Cut the earth wire of the heater wiring harness.

- 2 Flat spring contact



Connecting wiring harnesses

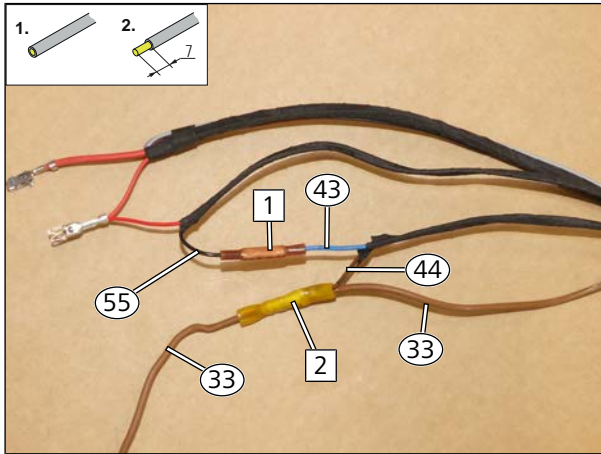


Fig. 120

- 1 Crimp and shrink red butt connector
- 2 Crimp and shrink yellow butt connector
- 43 Blue (bl) wire of fuel sensor wiring harness extension
- 44 Brown (br) wire of fuel sensor wiring harness extension

Removing red (rt) wire 32 with bridge from SH2

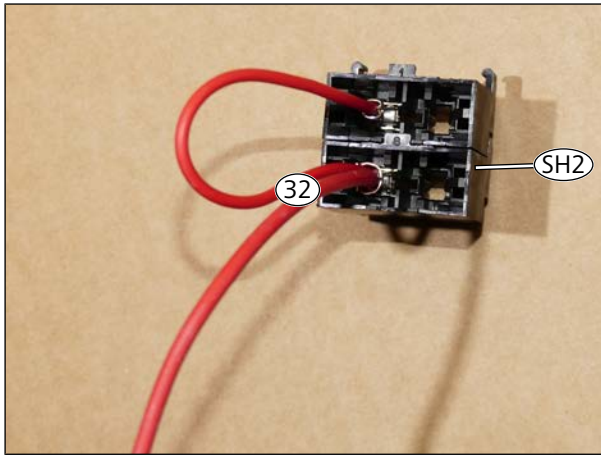


Fig. 121

Extending positive wire, securing wiring harnesses

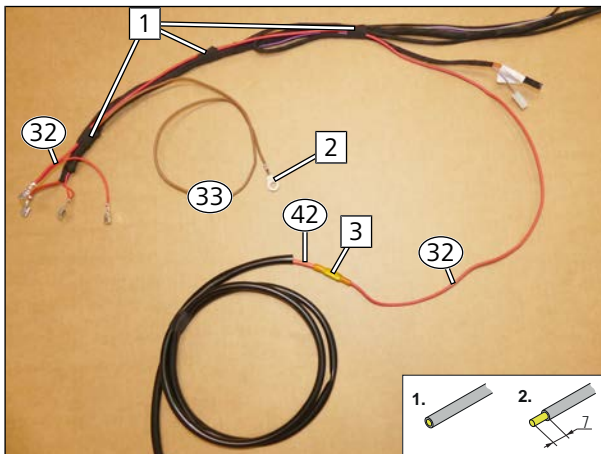


Fig. 122

- 1 Secure wiring harnesses with insulating tape.
- 2 Pre-mounted Ø6 cable lug
- 42 Draw positive extension of red (rt) 4 mm² 3000 long wire in Ø6, 1500 long protective sleeving.
- 3 Crimp and shrink yellow shrinkable butt connector.



Connecting wiring harnesses

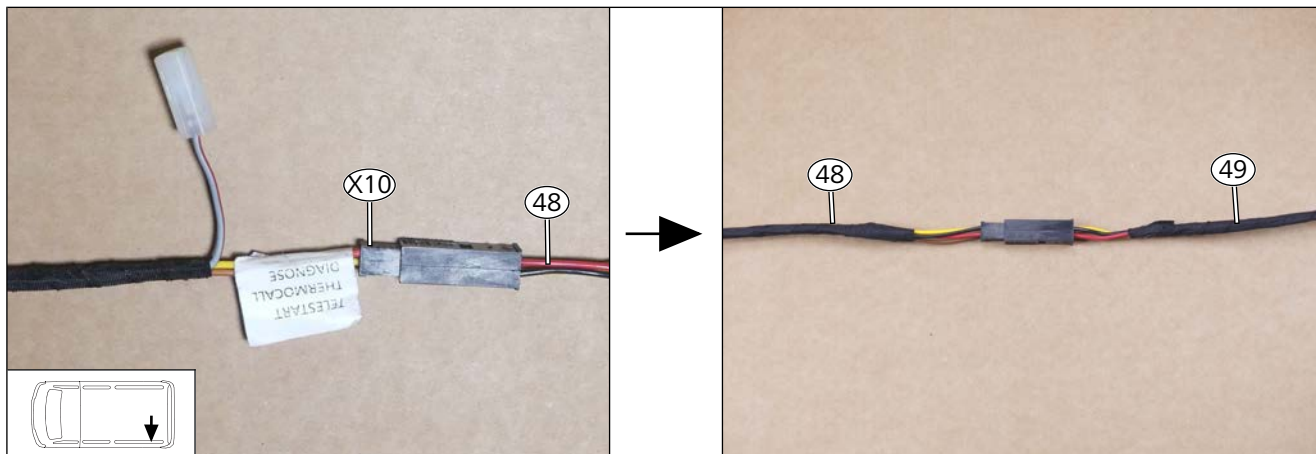


Fig. 123

Connection of earth wires



Fig. 124



DANGER

Observe tightening torque

- 1 Original vehicle earth point

Routing wiring harnesses on driver's side

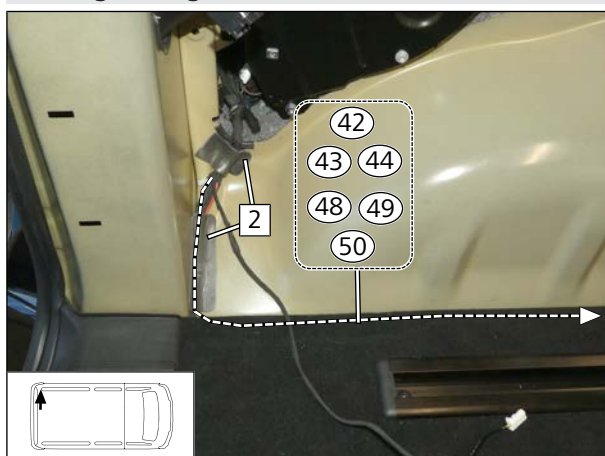


Fig. 125

- Route wiring harnesses for control element 48 / 49, fuel level 43 / 44, wire extension for power supply 42 and wire for external temperature sensor 50 (optional) and secure with adhesive pads 1.

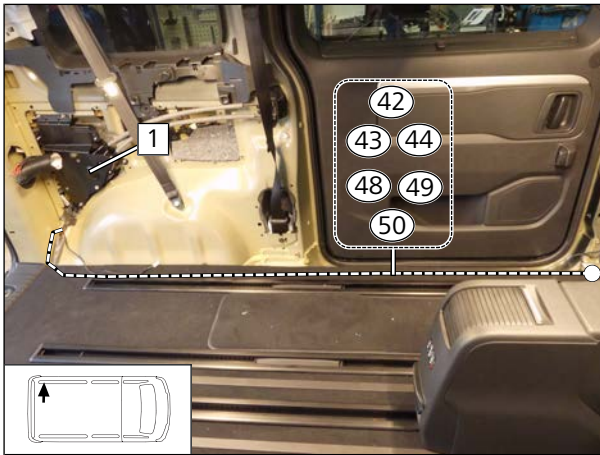


Fig. 126

► Route wiring harnesses for control element (48) / (49), fuel level (43) / (44), wire extension for power supply (42) and wire for external temperature sensor (50) (optional) under the carpet up to the B-pillar.

- 1 Fit the sliding door engine (if present).

Connecting positive wire

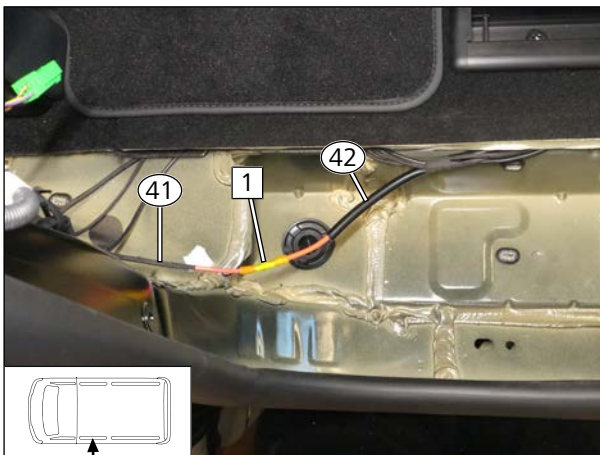


Fig. 127



The positive wire is not routed under the carpet for a better view of the wire connection.

- 1 Crimp and shrink the yellow shrinkable butt connector.

Routing wiring harness of control element in driver's side footwell

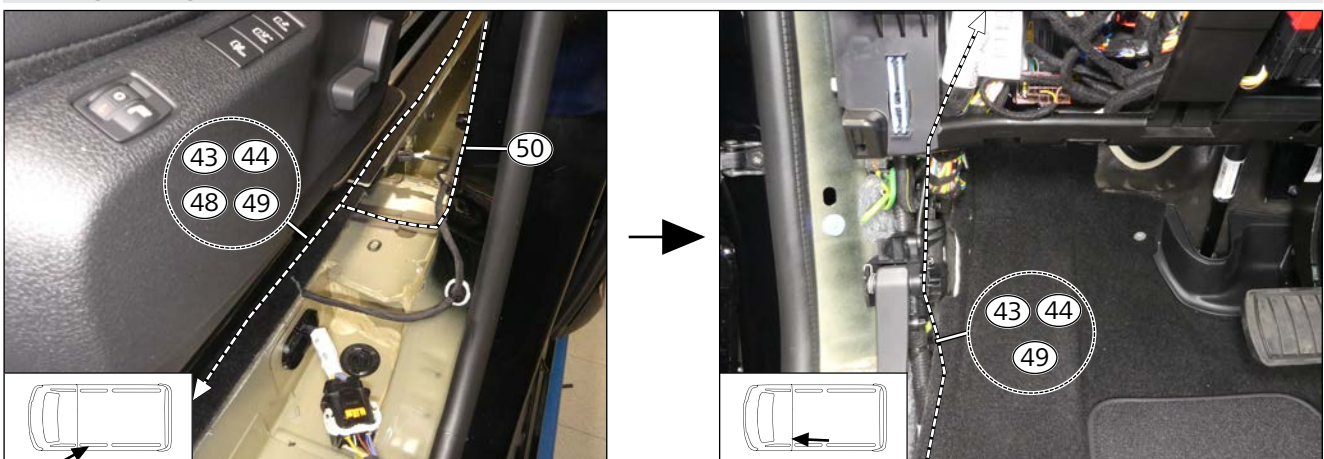


Fig. 128



14.1 External temperature sensor option

Preparing wiring harness connection for external temperature sensor

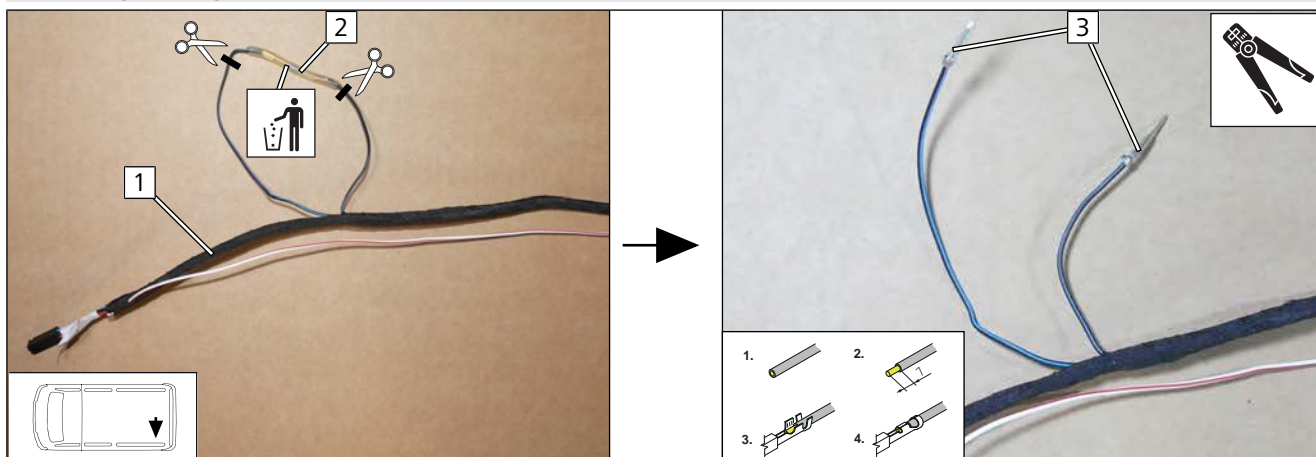


Fig. 129

1 Potentiometer wiring harness section of HG wiring harness

2 Remove and discard resistor.

3 Crimp on pin contact.

Connecting wiring harnesses

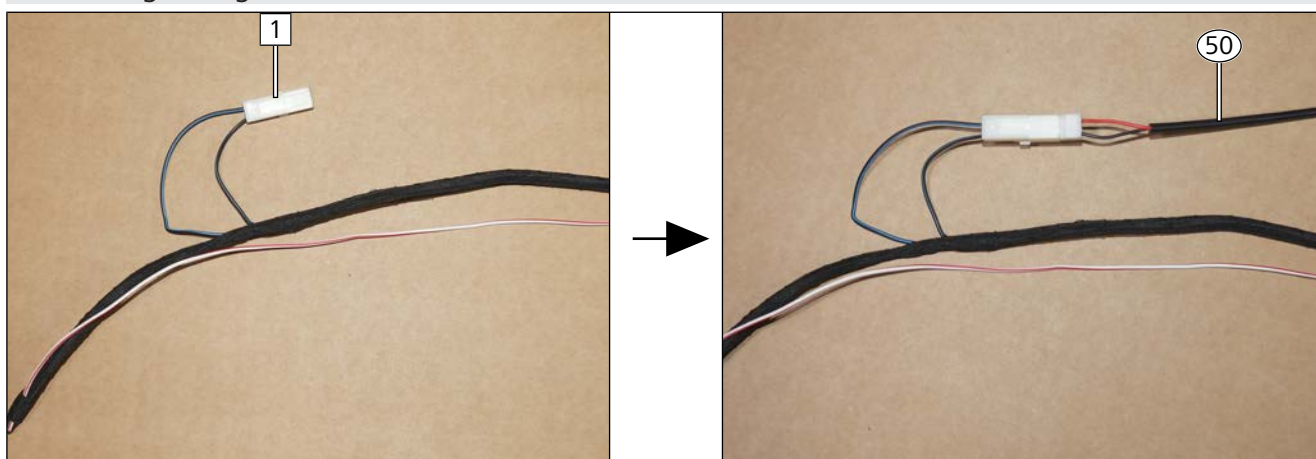
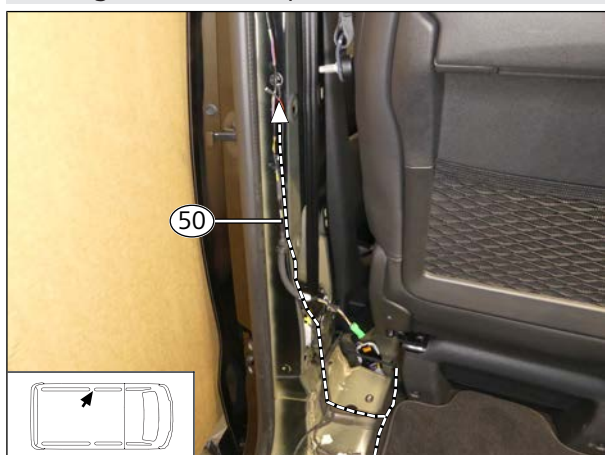


Fig. 130

► Mount connector housing 1 (pin assignment is not relevant).

► Connect external temperature sensor 50 wiring harness.

Routing external temperature sensor wire



► Route external temperature sensor 50 wire to B-pillar.

Fig. 131



Mounting external temperature sensor – passenger car/bus

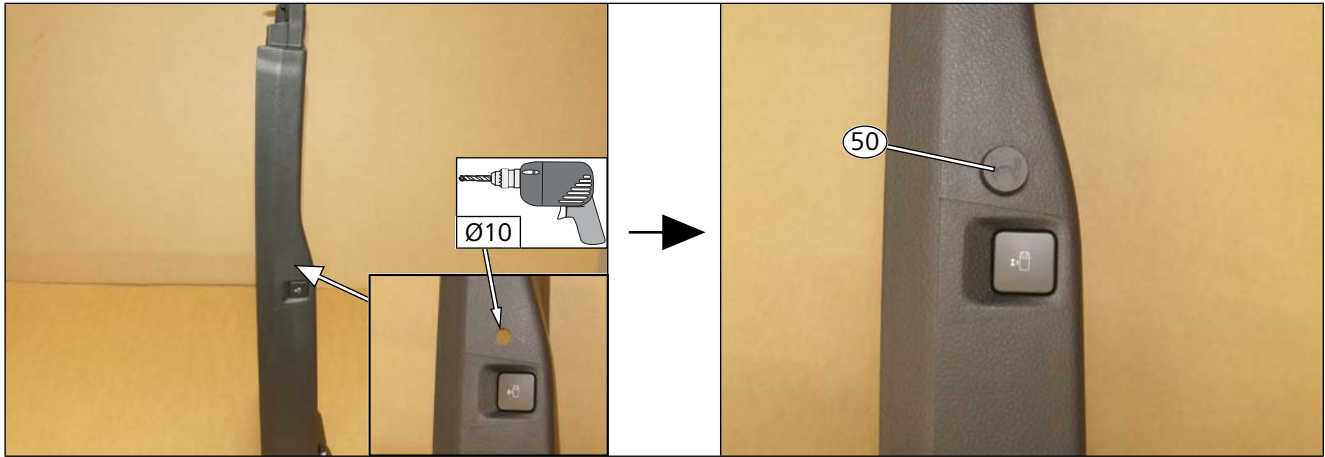


Fig. 132

1 Drill hole as shown.

50 Mount external temperature sensor.

Mounting external temperature sensor – light commercial vehicle

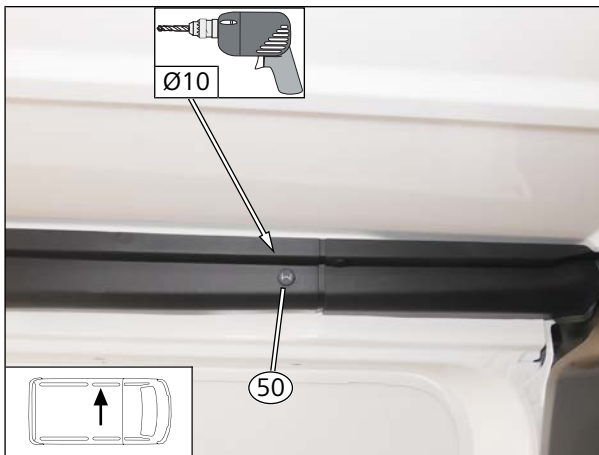


Fig. 133

► Mount external temperature sensor **50** on the inner roof trim as shown and according to the installation conditions.



15 Control element

The installation is carried out/shown with the MultiControl option. When using the other optional control elements (rotary switch or ThermoConnect), please follow the instructions in the provided general installation instructions.

Figure shows bus vehicle variant.

Installing MultiControl

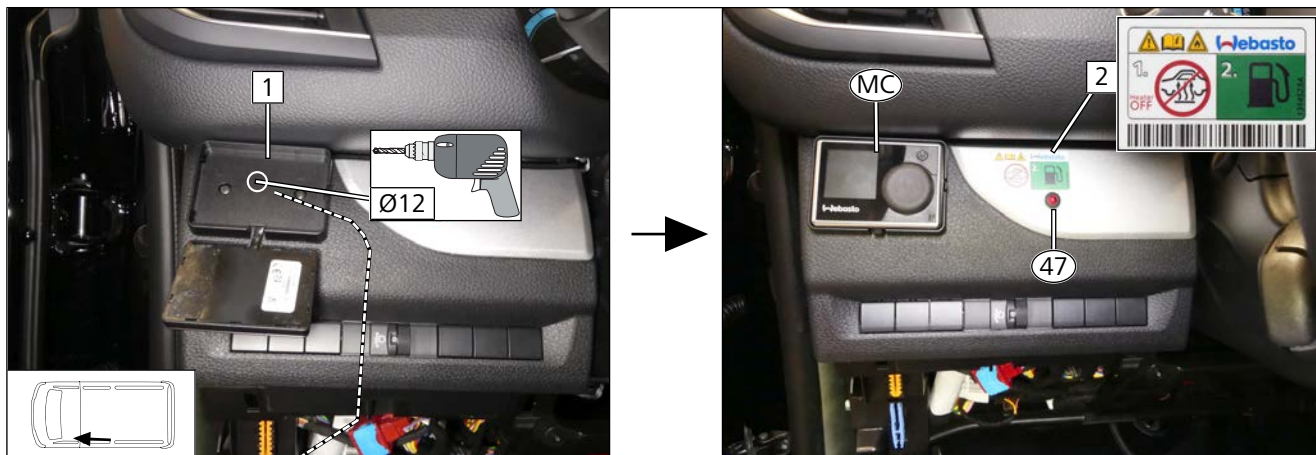


Fig. 134

► Position installation frame **1**, drill hole for MultiControl wire and mount with 2.9x19 bolts.

► Insert **MC**.

► Use the dimensions of the LED **47** to drill the hole. Mount LED.

► Attach sticker 'Switch Off Heater Before Refuelling' **2** as shown.

Connecting wiring harnesses

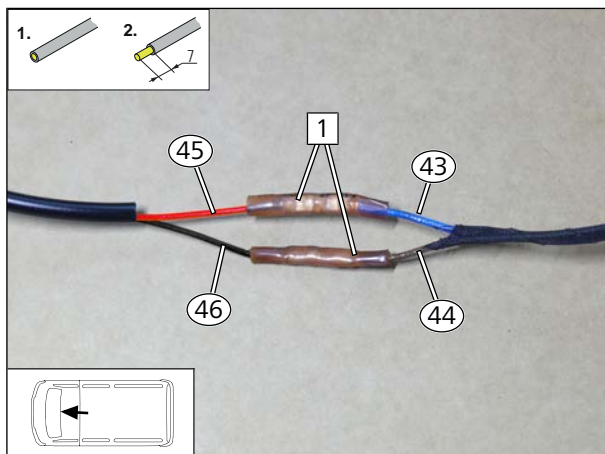


Fig. 135

Strip the wires before the installation as shown.

- 1** Crimp and shrink the shrinkable butt connector.
- 43** Blue (bl) 0.5 mm² wire of fuel sensor wiring harness extension
- 44** Brown (br) 0.5 mm² wire of fuel sensor wiring harness extension
- 45** Red (rt) 0.5 mm² wire of LED fuel level wiring harness
- 46** Black (sw) 0.5 mm² wire of LED fuel level wiring harness



16 Electrical system of passenger compartment - passenger car/ bus

Routing and fastening hot air line

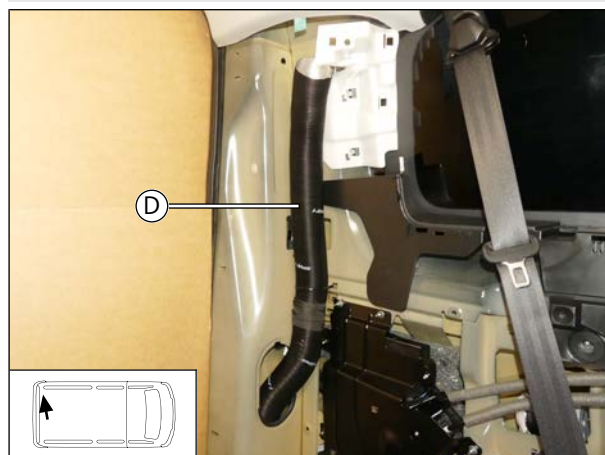


Fig. 136

► Route hot air line **D** as shown and fasten with cable ties.

Drilling hole in side trim

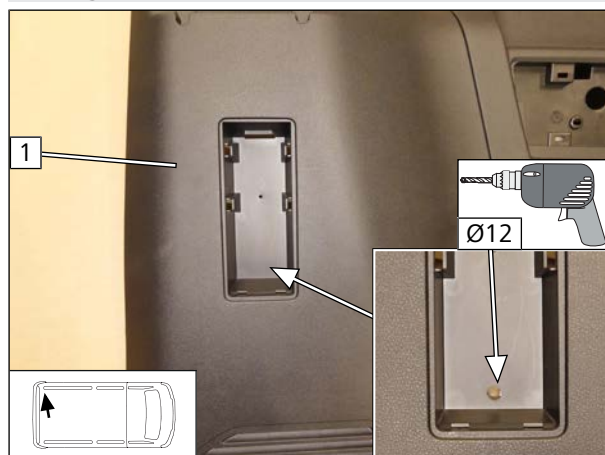


Fig. 137

► Drill hole as shown.

1 Lower side trim

Installing SH2 lines



Fig. 138

1 Guide the SH2 lines from the heater wiring harness through the Ø12 hole from the rear.

Completing SH2 in passenger compartment

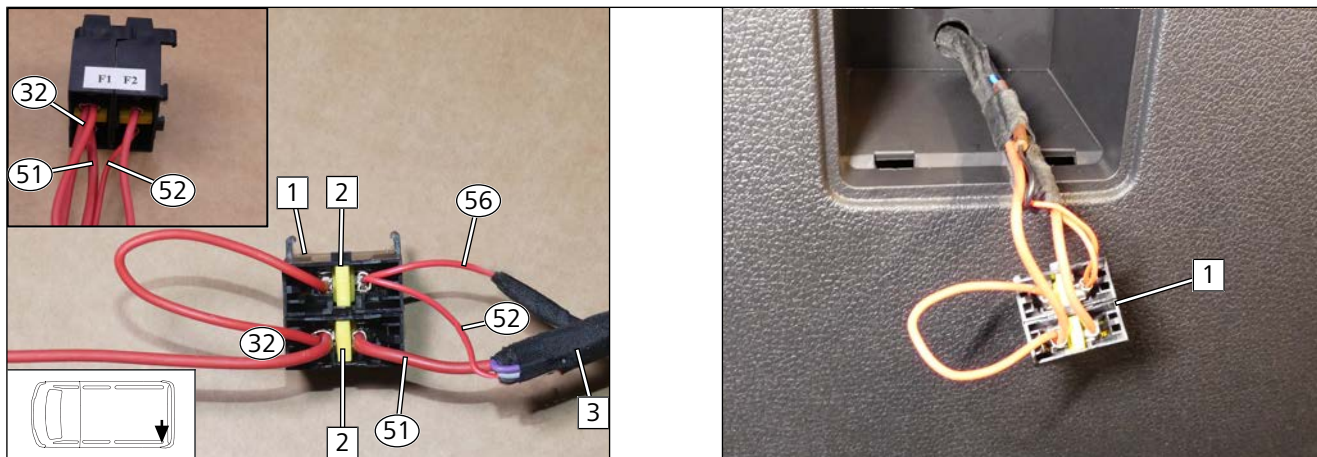


Fig. 139

- 1 SH2
- 2 Secondary lock
- 3 HG wiring harnesses and fuel sensor

- 1 View of heater wiring harness at SH2

Installing SH2

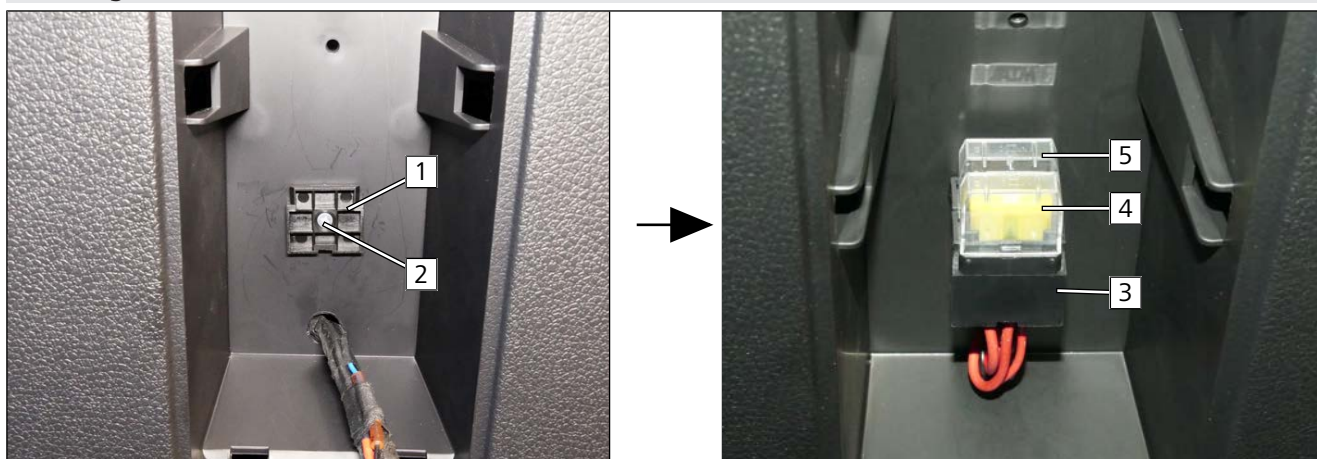


Fig. 140

- 1 Retaining plate SH2
- 2 Self-tapping screw

- 3 Attach SH2 onto retaining plate.
- 4 1A fuse F20
- 5 1A fuse F2

Mounting hot air outlet

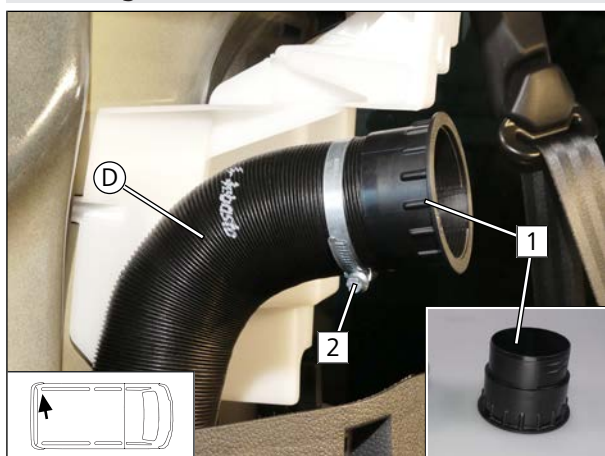


Fig. 141

► Cut hot air line (D) to length according to the installation conditions and the following work steps.

- 1 Wall feed-through
- 2 Ø50-70 screw clamp



Adapting side trim

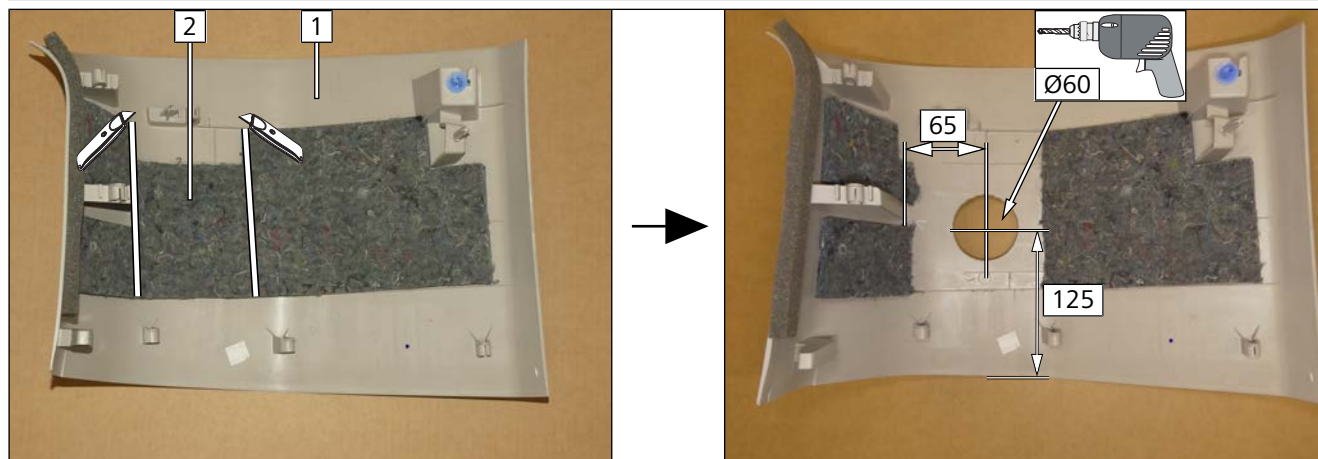


Fig. 142

- 1 Upper side trim
- 2 Remove felt as shown.

► Drill hole.

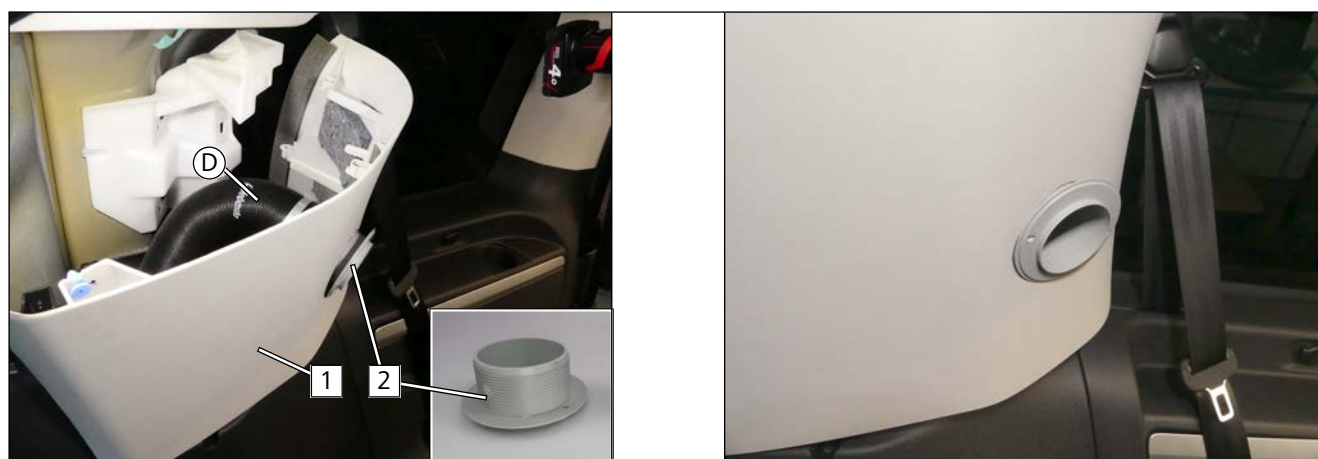


Fig. 143

- 1 Upper side trim
- 2 Mount the connection piece of the air outlet in the wall feed-through of premounted hot air line **D**.

► Mount upper side trim.

- 1 Mount outlet grille.

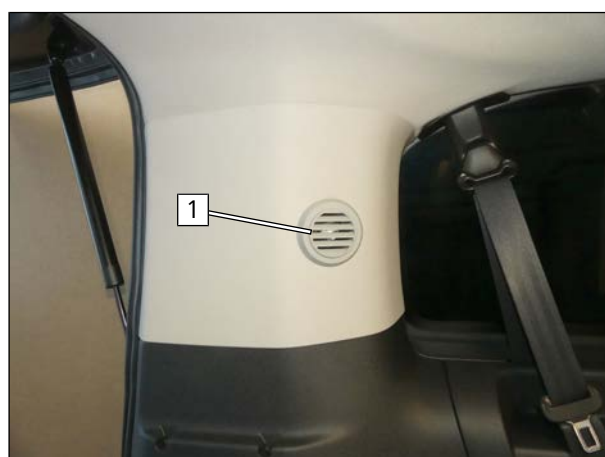


Fig. 144



17 Hot air outlet and electrical system of passenger compartment - light commercial vehicle

Installation proposal for hot air outlet - light commercial vehicle variant

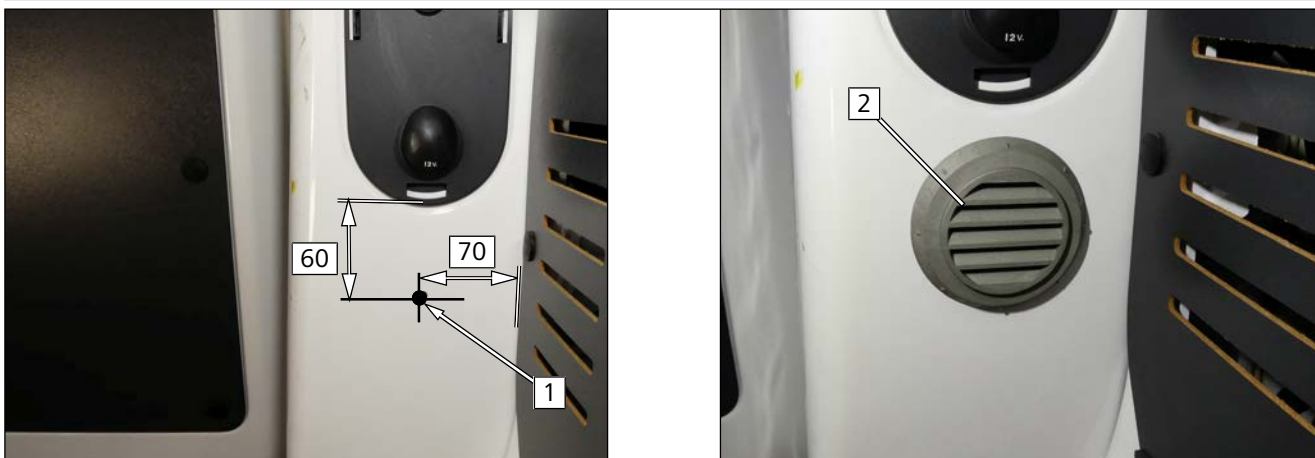


Fig. 145

1 Copy hole pattern, drill $\varnothing 60$ hole.

2 Guide the hot air line according to the installation conditions, cut it to length, fasten it and mount it with the outlet grille.

Mounting retaining plate of SH2

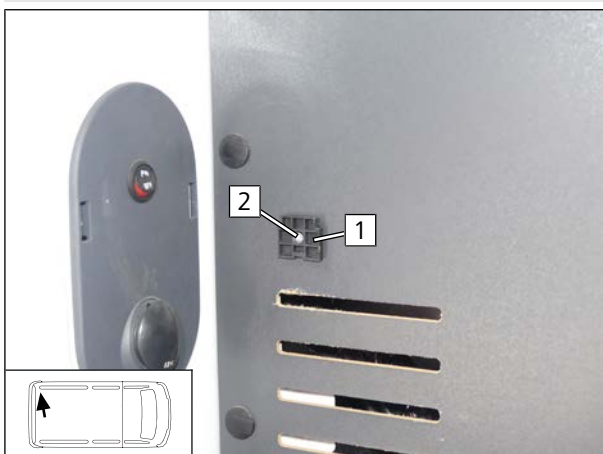


Fig. 146

► Mount retaining plate SH2 **1** with self-tapping screw in side trim as shown.

Installing SH2 lines

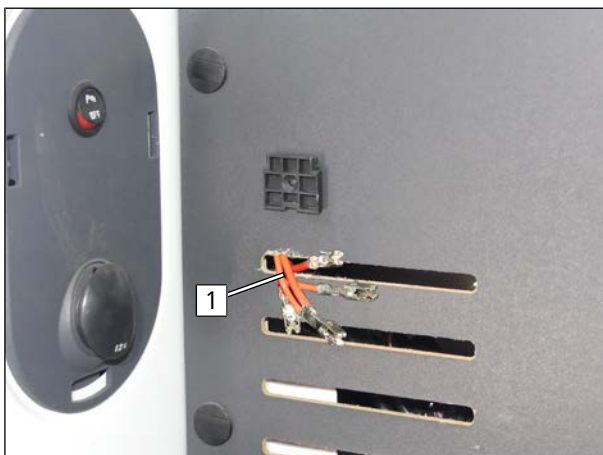


Fig. 147

► Guide the SH2 lines from the heater wiring harness from the rear through the existing ventilation slots in the side trim.



Completing SH2 in passenger compartment

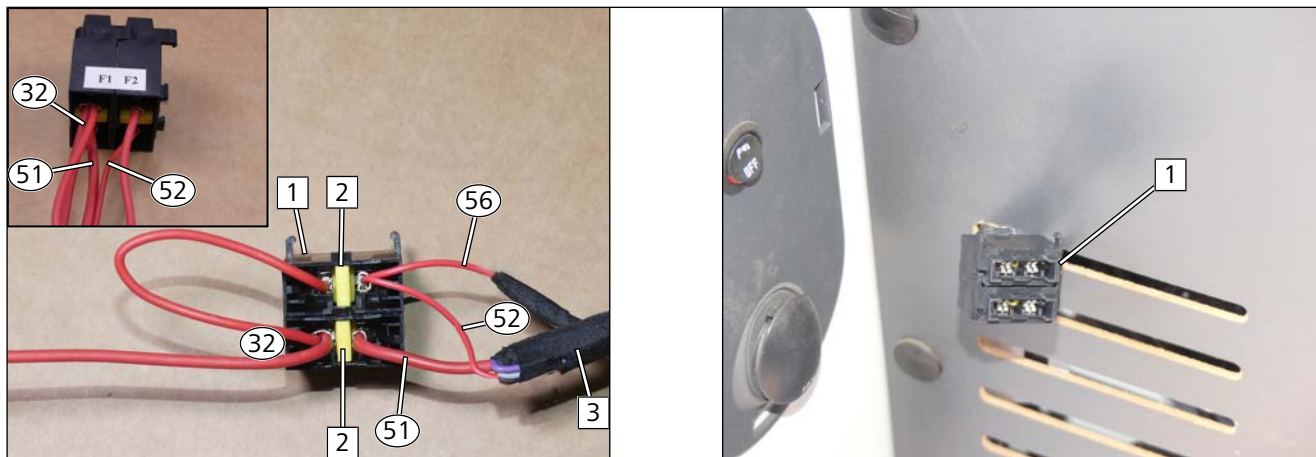


Fig. 148

- 1 SH2
- 2 Secondary lock
- 3 HG wiring harnesses and fuel sensor

- 1 View of heater wiring harness at SH2

Installing SH2



Fig. 149

- 1 1A fuse F20
- 2 1A fuse F2
- 3 Attach SH2 onto retaining plate.



18 Final work for vehicle

Mounting tank lid trim piece

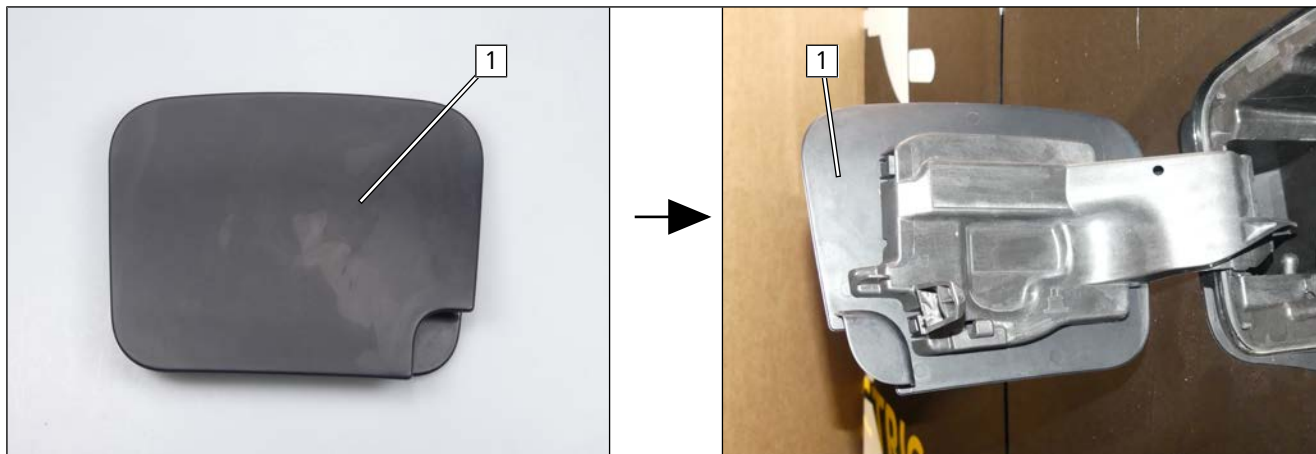


Fig. 150

- 1 Paint the tank flap trim piece according to the customer's requests.

- 1 Mount tank lid trim piece.

Mounting tank lock, attaching sticker



Fig. 151

- 1 Attach the sticker 'Switch Off Heater Before Refueling'.
- 2 Mount filler tube cover.
- 3 Fasten the retaining line in the existing hole.



Applying sticker to tank lid

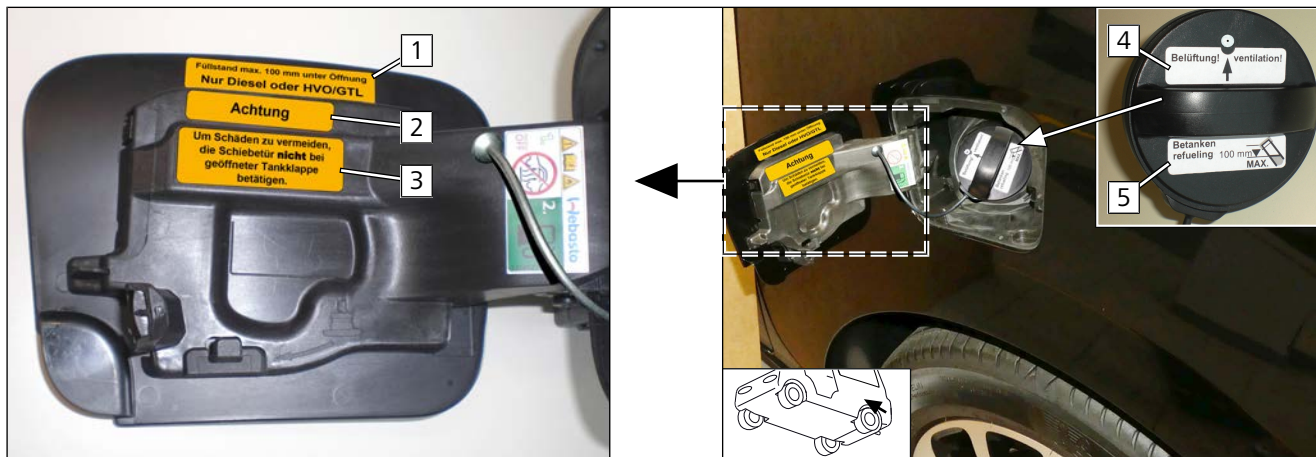


Fig. 152

Attach to tank lid:

- 1 Fill level max. 100 mm below opening
Only diesel or HVO/GTL
- 2 Attention
- 3 To avoid damage,
do not operate the sliding door with
the tank flap open.

Attach to tank lock:

- 4 Ventilation
- 5 Fuelling

Attaching sticker in passenger compartment to B-pillar on driver's side



Fig. 153

- 1 Attention
To avoid damage,
do not operate the sliding door
with the tank flap open.



19 Final work



Further information can be found in the vehicle manufacturer's technical documentation.

- ▶ Mount removed parts in reverse order



▶ Check all hoses, clamps and all electrical connections for firm seating

▶ Insulate and tie back loose lines

▶ Spray heater and electrical components with anti-corrosion wax (Tectyl 100K)



Activation of the high-voltage system according to the manufacturer's instructions

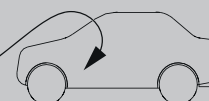
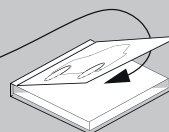
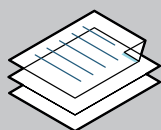
Reactivate the high-voltage system before connecting the 12V vehicle battery:

1. Activate the high-voltage system.
2. Connect the battery (12V).



Further information can be found in the general installation and operating instructions of the Webasto components.

- ▶ Program MultiControl HD
- ▶ Initial start-up and function check



This is a translation from the original German installation instructions.
To request this Installation Documentation in another language, please locate and contact your local Webasto dealer.
You can find your nearest dealer at: <https://dealerlocator.webasto.com/en-int>.

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Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany

Company address:
Friedrichshafener Str. 9
82205 Gilching
Germany

Technical Extranet: <https://dealers.webasto.com>



WWW.WEBASTO.COM

20 Operating instructions

Introduction

Additional heat energy is introduced into the vehicle system using the fuel-fired air heater. This relieves the load on the vehicle battery and ensures that its full capacity is available to maximise the electric vehicle's range. The heating time is approx. 40 hours when the tank is full.

Energy-efficient use

- ▶ Increased comfort without reducing the range
 - ⇒ When the vehicle is parked, the passenger compartment is preheated.
 - ⇒ The air heater can be used for maintenance heating while driving.
 - The load on the vehicle's heating system is reduced and the electric vehicle's range is optimised.
 - ⇒ The vehicle's climate control system is only needed for dehumidification.

General notes



Intended use

The air heater works independently of the vehicle heating system and is integrated in the electrical system of the vehicle.



Operating instructions for the air heater

Read and observe the provided operating instructions for the air heater and the control element prior to operation.



Danger of poisoning and suffocation

The air heater must not be operated in closed rooms (e.g. garage).



Hazardous substance transportation

The air heater is not approved for heating a transport compartment for dangerous goods. The requirements of directive ECE-R 122 must also be fulfilled in order to install the AT2000STC diesel air heater in vehicles used for transporting dangerous goods.



Danger of damage to components

To avoid damage, do not operate the sliding door with the tank flap open.



Vehicles with passenger compartment monitoring

Further information can be found in the vehicle operating instructions.

- ▶ Deactivate passenger compartment monitoring for the heating operation.

20.1 Fuelling



Fig. 154



DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

Due to the risk of explosion, the heater must be switched off at filling stations and facilities.

To prevent fuel from leaking, refuelling must be carried out carefully.

Technical data:

Fuel type	Diesel DIN EN 590 or HVO/GTLK
Filling capacity / reserve contents	8 l / approx. 3.5 l
Fuel consumption	0.12 – 0.24 l/h
Fill level	max. 100 mm below opening

Information about fuel tank cap

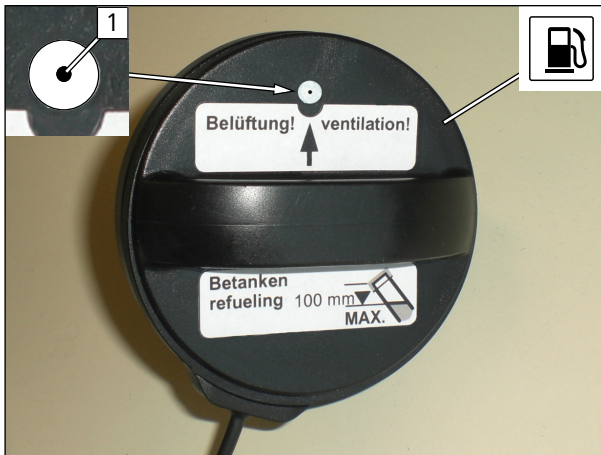


Fig. 155

1 Opening in the fuel tank cap



DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

The fuel tank cap is provided with a ventilation opening of 0.5 mm **1**.

If there is detectable overpressure or underpressure when opening, it must be cleaned according to the following instructions:

- ▶ Loosen and remove the cover.
- ▶ Clean the opening with compressed air.
- ▶ **The following is not permitted:**
 - ⇒ Mechanical cleaning, e.g. using wire
 - ⇒ Enlarging the opening, e.g. by drilling
 - ⇒ Replacing with a fuel tank cap without ventilation

20.2 Fuel level indicator

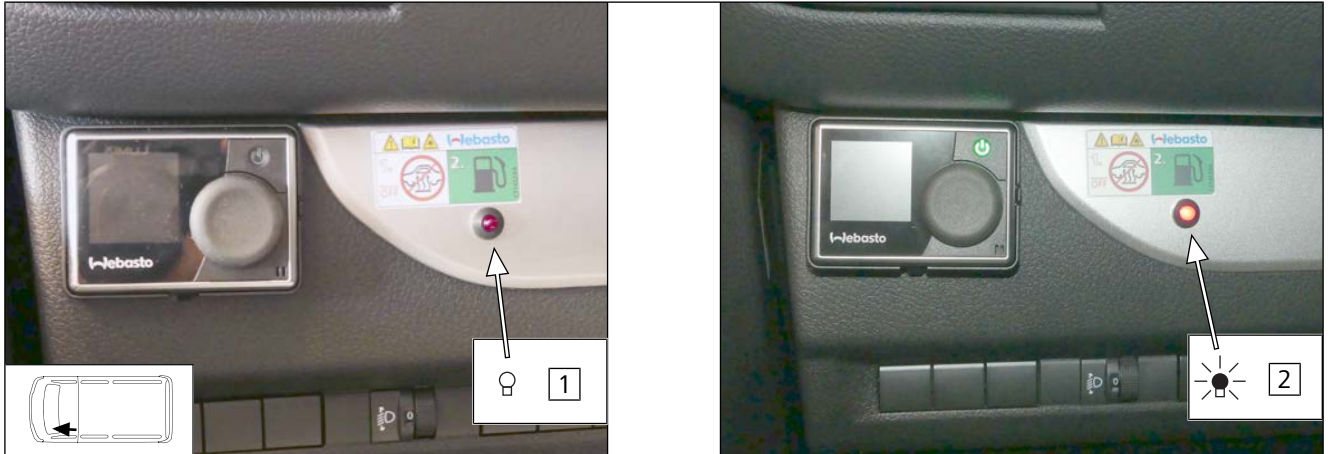


Fig. 156


1 Fuel level indicator
Indicator lamp 'off' = tank content > 3.5 l


2 Fuel level indicator
Indicator lamp 'on' = tank content < 3.5 l

20.3 Hot air



Fig. 157

 Keep heating air inlet opening **1** free.

 Keep hot air outlet opening **2** free. The outflow direction can be changed by turning.

20.4 Temperature sensor option




 Make sure there is no space around temperature sensor **1**.

Fig. 158

20.5 Main fuse

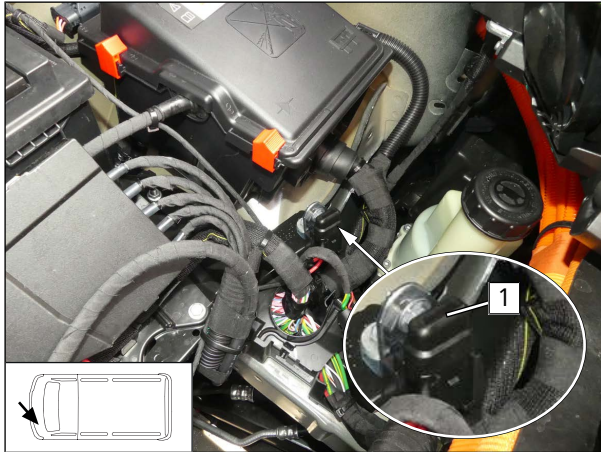


Fig. 159

- 1 30A main fuse F0

20.6 Secondary fuses - passenger car/bus

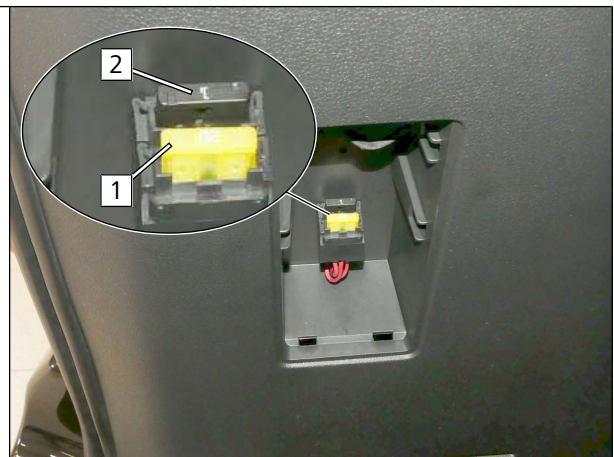
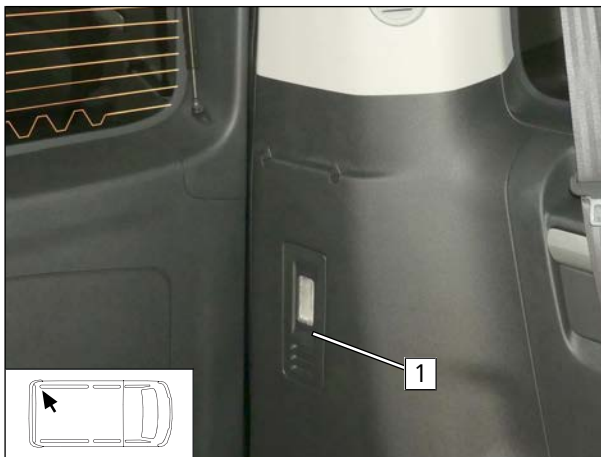


Fig. 160

The installation location of the secondary fuses is behind the cover at the rear on the driver's side **1**.

- 1 F1 20 A - Air heater fuse
- 2 F2 1 A - Control element fuse and fuel level indicator

20.7 Secondary fuses - light commercial vehicle

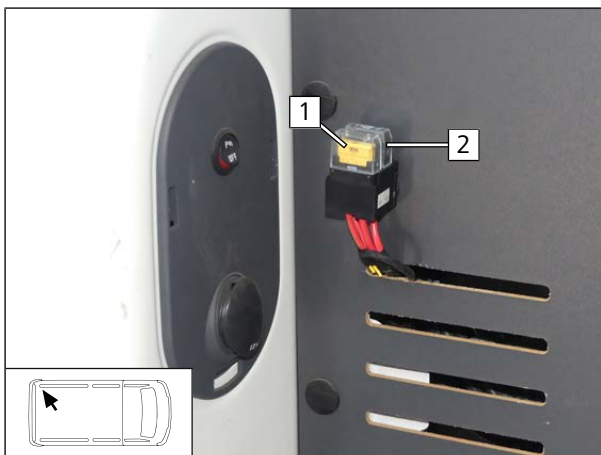


Fig. 161

- 1 F1 20 A - Air heater fuse
- 2 F2 1 A - Control element fuse and fuel level indicator

20.8 Overview of the indicators and control elements as well as settings on the A/C control panel



Fig. 162

- 1 'Heater on' indicator lamp on the MultiControl control element
- 2 Fuel level indicator lamp



The settings on the A/C control panel are only required when using the air heater at the same time while driving.



Fig. 163

Settings on the A/C control panel for manual A/C

- 1 The temperature presettings on the A/C control panel and on the control element of the air heater must be identical.

Settings on A/C control panel with automatic A/C

- 1 The temperature presettings on the A/C control panel and on the control element of the air heater must be identical.
- 2 Temperature setting on 'Auto'
- 3 Rear ventilation nozzles set to 'off'



Hand these operating instructions on to the following owner or user of the Air heater AT2000STC.

21 Annex - fuel tank test report



After the fuel tank has been installed, an individual approval according to §21 StVZO (installation of additional tank) must be carried out in connection with the following test report (Dekra no.: D062135000281).

See also

DEKRA Prüfprotokoll Kraftstoffbehälter [► 80]

Technische Prüfstelle für den Kraftfahrzeugverkehr beim DEKRA e.V. Dresden

Dienststelle:

Birnenstr. 2

17033 Neubrandenburg

Prüfprotokoll

Nr.: D062135000281

über die Kipp-Prüfung eines Kraftstoffbehälters gem. Anhang I Nr. 5.9 in Verbindung mit Nr. 6.2 der Richtlinie 70/221/EWG, zuletzt geändert durch die Richtlinie 2000/8/EG und ECE-Regelung 34 Rev.2 Nr. 6.2

Auftraggeber:

Webasto Thermo & Comfort SE

Werk Neubrandenburg

Werner-Baier-Straße 1

17033 Neubrandenburg

1. Verwendungsbereich

Fahrzeughersteller	Fahrzeugtyp	Marke	Handelsbezeichnung	EG-TG-Nr.
Toyota Europe	V	Toyota	Proace Electric	e2*2007/46*0538*
Toyota Europe	V	Toyota	Proace Verso Electric	e2*2007/46*0537*
Peugeot	V	Opel	Vivaro-e Cargo	e2*2007/46*0532*
Peugeot	V	Opel	Zafira-e Life	e2*2007/46*0532*

Peugeot	V	Fiat	E-Scudo	e2*2007/46*0533*
Peugeot	V	Fiat	E-Ulysse	e2*2007/46*0532*
Peugeot	V	Citroen	E-Jumpy Electric	e2*2007/46*0531*
Peugeot	V	Citroen	E-Spacetourer Electric	e2*2007/46*0530*
Peugeot	V	Peugeot	e-Expert	e2*2007/46*0533*
Peugeot	V	Peugeot	e-Traveller	e2*2007/46*0532*

Die Einheit aus Tank und Einfüllstutzen samt Verschluss ist zum Einbau in rein elektrisch angetriebene Fahrzeuge vorgesehen, die herstellerseitig nicht mit einem Kraftstoffvorratsbehälter ausgerüstet sind.

2. Beschreibung der Baugruppen

Kraftstoffbehälter	Hersteller:	WEBASTO
	Art.-Nr.:	1329219A
	Material:	Stahl, lackiert
	zuläss. Füllvolumen:	7,8l
Adapter	Hersteller:	WEBASTO
	Art.-Nr.:	1329220A
Einfüllstutzen	Hersteller:	ja nach Fahrzeug Peugeot od. Toyota
	Art.-Nr.:	Peugeot: 9819332980 Toyota: SU001-A5604
Tankverschluss	Hersteller:	WEBASTO
	Art.-Nr.:	1329406A

Der Kraftstoffbehälter und der Einfüllstutzen werden über zwei faserverstärkte Kraftstoffschläuche und einen Adapter aus Stahl miteinander verbunden.

Prüfprotokoll Nr.: D062135000281

Antragsteller : Webasto Thermo & Comfort SE

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Datum: 17.04.2023

Der Tankverschlussdeckel ist mit einer Belüftungsbohrung von 0,5mm Durchmesser versehen. Ein entsprechender Hinweis ist dauerhaft am Verschlussdeckel angebracht.

3. Gegenstand der Prüfung / Prüfgrundlage

Es wurde geprüft, ob die Einheit aus Kraftstoffbehälter, Einfüllstutzen und Tankverschluss den Anforderungen der Kipp-Prüfung gem. Anhang I Nr. 5.9 in Verbindung mit Nr. 6.2 der Richtlinie 70/221/EWG, zuletzt geändert durch die Richtlinie 2000/8/EG bzw. ECE-Regelung 34 Rev. 2 Nr. 6.2 genügt.

4. Beschreibung des Versuchsaufbaus

Die Einheit aus Kraftstoffbehälter, Einfüllstutzen und Tankverschluss wurde entsprechend seinem Einbau in das Fahrzeug auf einer Prüfvorrichtung befestigt. Anschließend wurde der Kraftstoffbehälter gemäß der Prüfgrundlage mit Dieselmotorkraftstoff befüllt, in die vorgeschriebenen Lagen gedreht und die Mengen an austretendem Kraftstoff gemessen.

5. Versuchsergebnisse

Die Anforderungen der Prüfgrundlage wurden erfüllt. Die Menge an ausgelaufenem Kraftstoff lag bei allen vorgeschriebenen Füllmengen und allen vorgeschriebenen Kipp-Winkeln unter 30 g/min.

Prüfprotokoll Nr.: D062135000281

Antragsteller : Webasto Thermo & Comfort SE

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6. Anlagen

Anlage I – Foto des Versuchsaufbaus

Anlage II – tabellarische Darstellung der Prüfergebnisse

7. Schlussbescheinigung

Es wird bescheinigt, dass die Vorschriften der Prüfgrundlage in der vorgegebenen Einbaulage eingehalten werden.

Das Prüfprotokoll umfasst die Blätter 1 – 6 einschließlich der unter 6. aufgeführten Anlagen und darf nur im vollen Wortlaut vervielfältigt und weitergegeben werden.

Das Prüfprotokoll verliert seine Gültigkeit bei technischen Änderungen an den Baugruppen oder wenn vorgenommene Änderungen an dem beschriebenen Fahrzeugtyp die Verwendung der Teile beeinflussen.



Neubrandenburg, 17.04.2023

Andreas Illner

Amtlich anerkannter Sachverständiger für den
Kraftfahrzeugverkehr

Prüfprotokoll Nr.: D062135000281

Antragsteller : Webasto Thermo & Comfort SE

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Anlage I



Kraftstoffbehälter mit Einfüllstutzen und Verschluss in Prüfeinrichtung

Anlage II

Kippstellung	Mist – Austrittsmasse nach 5 min [g]	Ist – Austrittsmasse [g/min]	Grenzwert [g/min]	Grenzwert eingehalten
30% Fassungsvermögen (2,34l)				
+ 90° rechts	0	0	30	ja
+ 180° rechts	6,7	1,34	30	ja
+ 90° links	0,0	0,0	30	ja
+ 180° links	4,0	0,8	30	ja
90% Fassungsvermögen (7,02l)				
+ 90° rechts	0	0	30	ja
+ 180° rechts	6,7	1,34	30	ja
+ 90° links	8,3	1,66	30	ja
+ 180° links	8,3	1,66	30	ja

Tabellarische Darstellung der Prüfergebnisse