351

Product description:
Electric step for Sprinter front doors all-wheel drive

Type: ETB

Vehicle type:
ETB Sprinter 906/907 all-wheel drive

New article no:
100483
102102

Old article no.:
ETB 0550MS-FT
ETB 0550-MS-4x4

Status: January 2023 | Revision: 06

Assembly instructions

AlphaDynamik
Ihr dynamischer Partner

Load capacity:
240 kg

Wheelbase:
all

Note: Driver & passenger side front door (also with Webasto parking heater ex works)

- Basic equipment: integrated obstacle detection (Autostop), 2 holders, cable set, control unit, vehicle-specific mounting material
- Option: LED lighting
- Barely visible when retracted
- Ideal access height thanks to swivelling mechanism
- Timeless design
- Immediately ready for use thanks to automatic and fast extension
- Tested for more than 100,000 folding and unfolding operations
- Developed for temperatures from -30°C to +80°C

- Installation may only be carried out by qualified personnel.
- Work on electrical components may only be carried out by qualified electricians.

Steps | Protection | Ramps | Safety | Roof rack

FOREWORD

Dear r e a d e r ,

These operating instructions provide all the information required for safe operation of the electric step. The electric step has been designed and built in accordance with the current state of the art and recognised safety regulations. Nevertheless, dangers to persons or property can arise because not all danger points can be avoided if the functionality is to be maintained. However, you can prevent accidents due to these hazards by observing these operating instructions.

These operating instructions only apply to the step specified on the cover page and in the footers. Keep these operating instructions in a safe place for the entire service life of the electric step after you have worked through them for the first time. If you sell the step, pass the operating instructions on to the next owner. All information, illustrations and dimensions in these operating instructions are non-binding. No claims of any kind can be derived from them. Reprinting and reproduction of any kind, including extracts, require the written authorisation of the manufacturer. Modifications or alterations to the electric step are only permitted with the written authorisation of the manufacturer.

Unauthorised modifications will invalidate the manufacturer's liability and warranty. Only use original spare parts and accessories approved by the manufacturer. Otherwise, the design characteristics of the electric step, its functionality or safety may be impaired. The use of other parts therefore cancels any liability for the resulting consequences.

CONTENTS

FOREWORD 2

1. NOTES 4
   1.1 HAZARD WARNINGS 4
   1.2 USE IN ACCORDANCE WITH INSTRUCTIONS 4
   1.3 LIMITATIONS 4
   1.4 SAFETY REGULATIONS 4

2. TECHNICAL PROPERTIES 5

3. PARTS LIST OF THE COMPONENTS 5

4. STRUCTURE OF THE STEP 6

5. MOUNTING BRACKET ON MOTOR JOINT 7
   5.1 OVERVIEW OF PRE-ASSEMBLED MOTOR/JOINT 7

6. MOUNTING THE MOTOR JOINTS ON THE DRIVER'S DOOR 7

7. MOUNTING THE ENGINE JOINTS ON THE PASSENGER DOOR 11
   7.1 MOUNTING THE FOOTBOARD 12

8. MOUNTING THE BLIND BOLTS AND ANCHOR NUTS 9

9. ELECTRICAL INSTALLATION 13
   9.1 OVERVIEW ELECTRICAL COMPONENTS until 05/21 13
   9.2 OVERVIEW ELECTRICAL COMPONENTS as of 05/21 13
   9.3 OVERVIEW WIRING 14
   9.4 EMERGENCY SWITCH 15
   9.5 DOOR CONTACT 16
   9.6 ELECTRICAL CONNECTION DOOR CONTACT 17
   9.7 LED LIGHTING (ALPHADYNAMIK ARTICLE: LED-LUX) 18

10. USE OF THE STEP 19

11. MAINTENANCE AND TROUBLESHOOTING 19

12. DISPOSAL 20

13. CUSTOMER SERVICE 20

1. NOTES

1.1 HAZARD WARNINGS

There are various risks of injury and damage to property when installing, operating and maintaining the electric step. Therefore, please read these operating instructions carefully before installation and operation. In addition to the safety instructions in this manual, observe the legal regulations, in particular the safety and accident prevention regulations.

1.2 INTENDED USE

The electric step is used to make it easier for people to get in and out of a vehicle.

1.3 RESTRICTIONS

The step has been developed to be functional and reliable. The product has been designed to be as simple and reliable as possible. It has been taken into account that the step may be installed under a vehicle that is operated under extreme environmental conditions.

1.4 SAFETY REGULATIONS

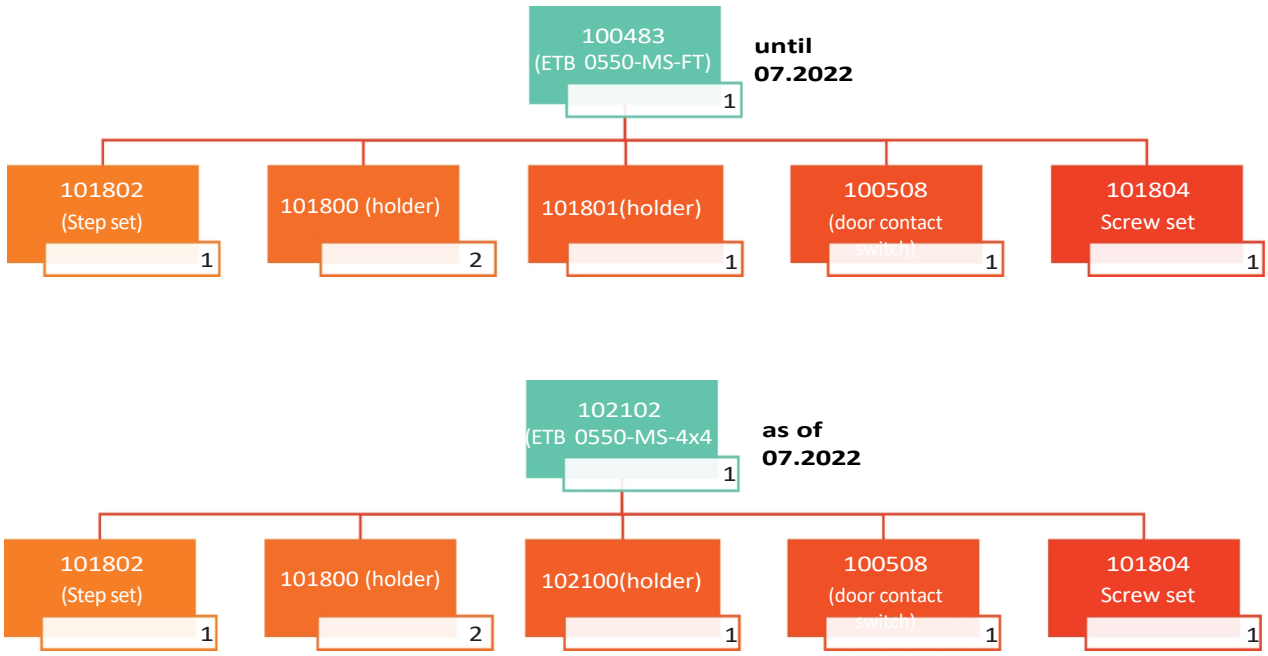
These safety instructions must always be kept with the step. The operator must be made aware of them before operating the step. Read these safety instructions carefully and observe them. The step is designed as an extra step for accessing the vehicle. The weight of the passenger must not exceed the maximum load.

1. The vehicle must be stationary before operating the step. Make sure that the handbrake is applied or the parking brake is engaged.
2. Regularly check the step for external damage and tight fit.
3. Before operating the step, make sure that there are no persons or obstacles in the vicinity of the step. Ensure that there are no persons or obstacles outside the vehicle in the direction of movement of the step.
4. It is recommended that the step is only operated by the driver or another qualified operator.
5. The driver or operator must have an unobstructed view of the step when operating it.
6. It is recommended to step on the centre of the step.
7. The step must be kept clean and free of oil and other slippery substances.
8. If you have any doubts about the safety of a passenger entering the step, help them.
9. Never use the step for any purpose other than that described here.
10. If you have any questions about the safe operation of the step, please contact the person responsible directly.
11. Never overload the step
12. The step must always be operated until it is fully retracted or extended.
13. Repair and maintenance work may only be carried out by qualified and trained personnel.
14. Only use original spare parts if parts of the step need to be replaced.
15. Report any sources of danger that you discover in relation to the step or during its operation to the step supplier.
16. Check that the step is retracted before every journey.
17. When extending and retracting the step, there must be nobody on it.

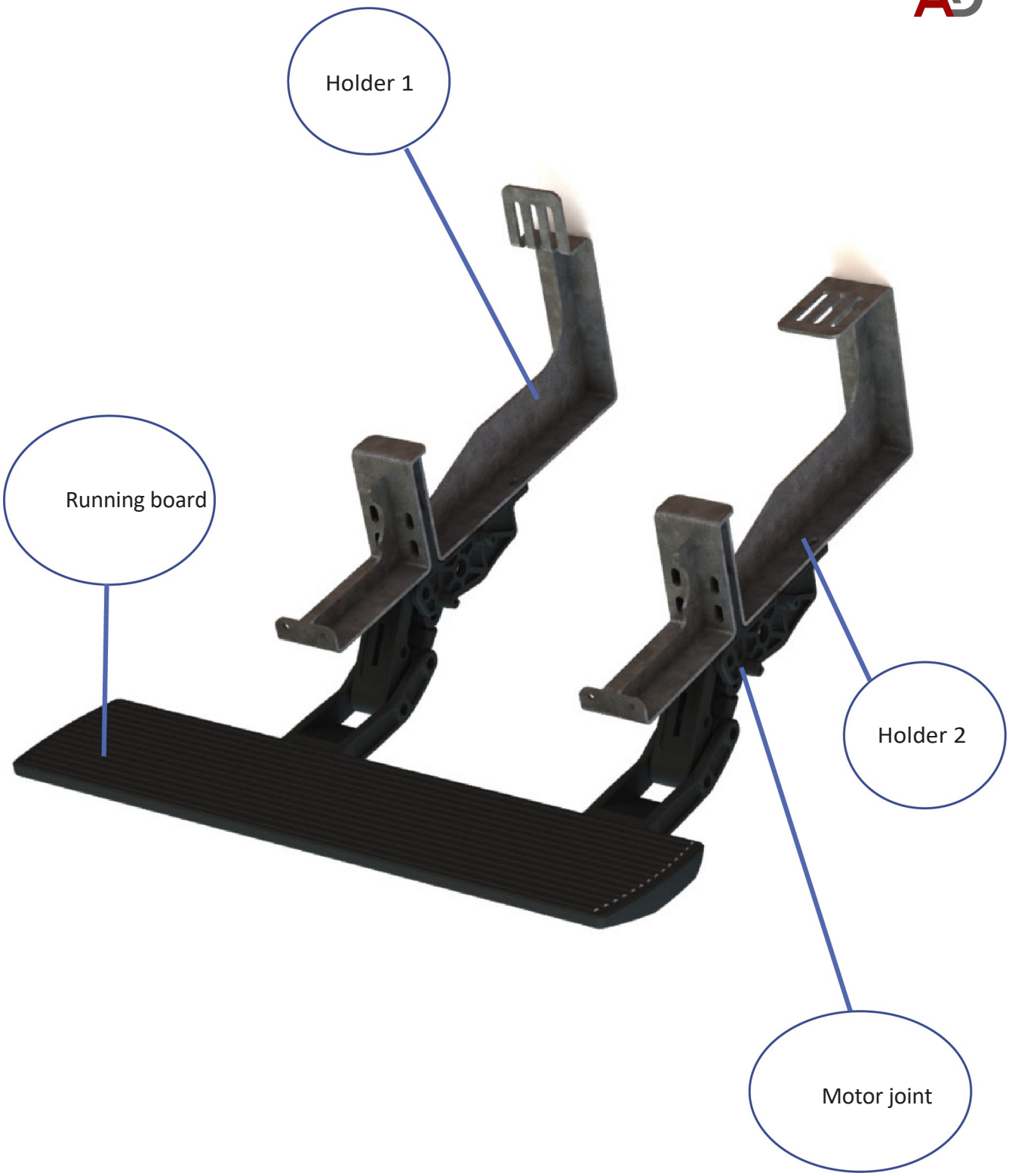
2. TECHNICAL PROPERTIES

Operating voltage	12V
Running board length	550 mm
Maximum load capacity	<=150 kg

3. PARTS LIST OF THE COMPONENTS



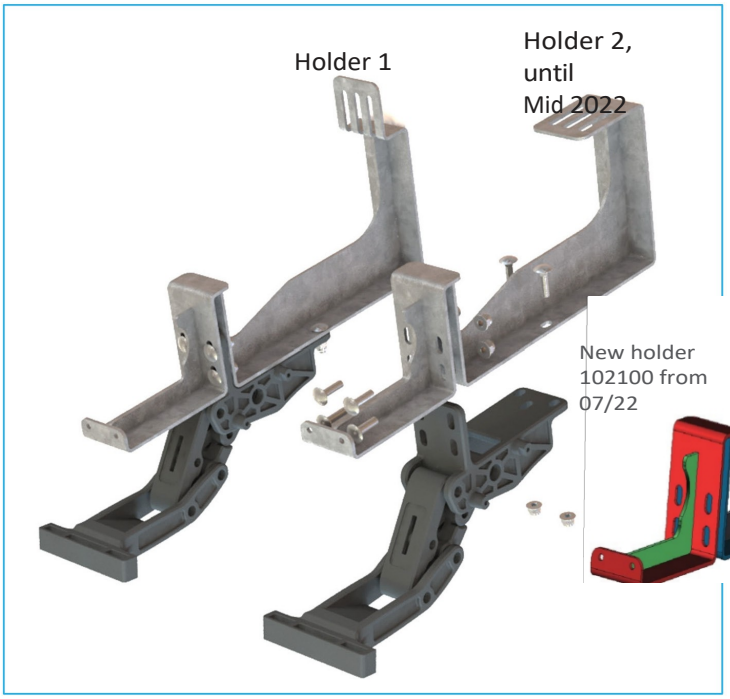
4. STRUCTURE OF THE STEP



5. MOUNTING BRACKET ON MOTOR JOINT

5.1 OVERVIEW OF PRE-ASSEMBLED MOTOR/JOINT

The aluminium articulated arm and base bracket are screwed together tightly in advance.



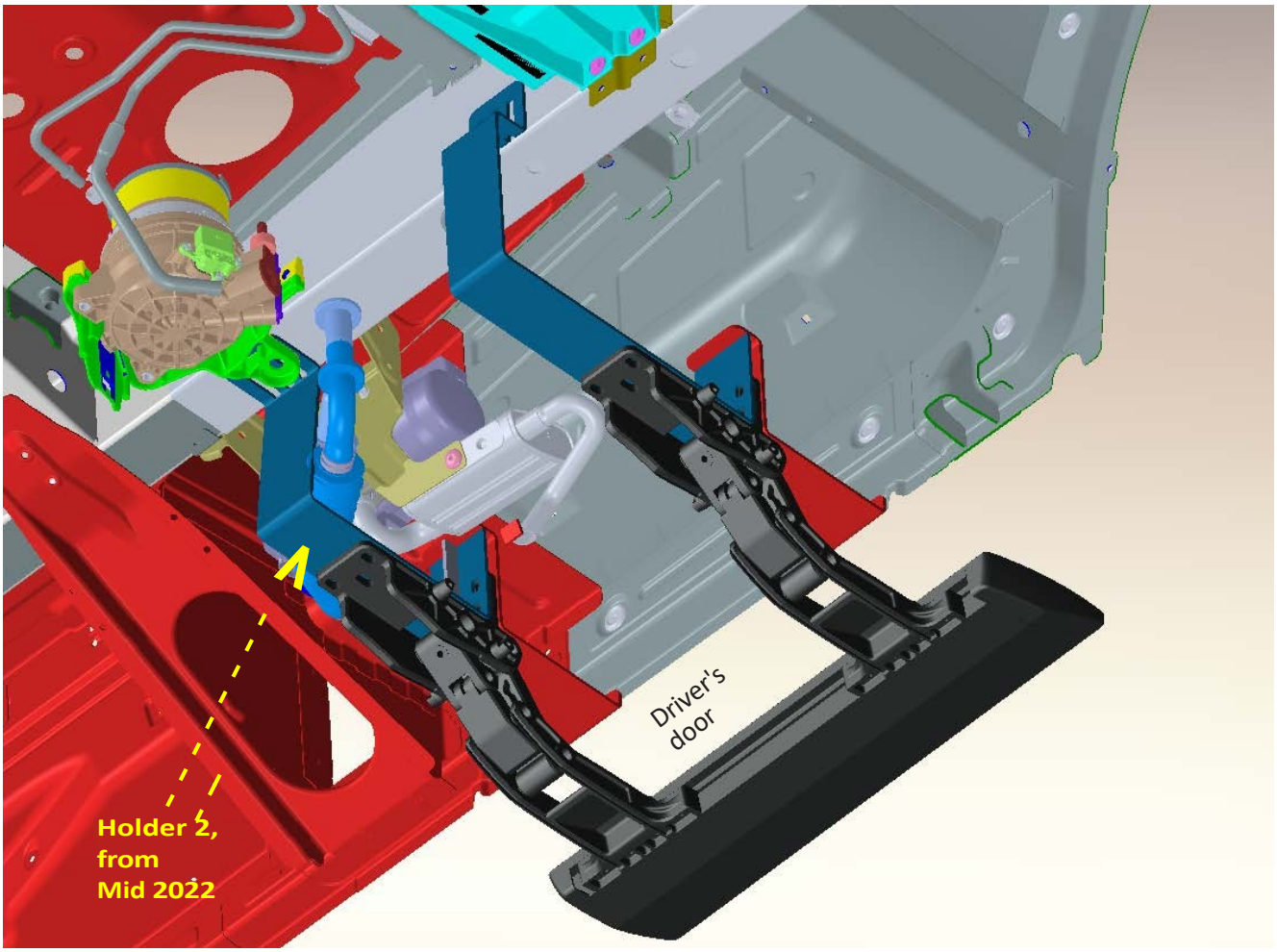
6x flat head screw with small square ISO 8678 M8x30-24.5-C

6x nut with locking teeth DIN 6923 M8-N

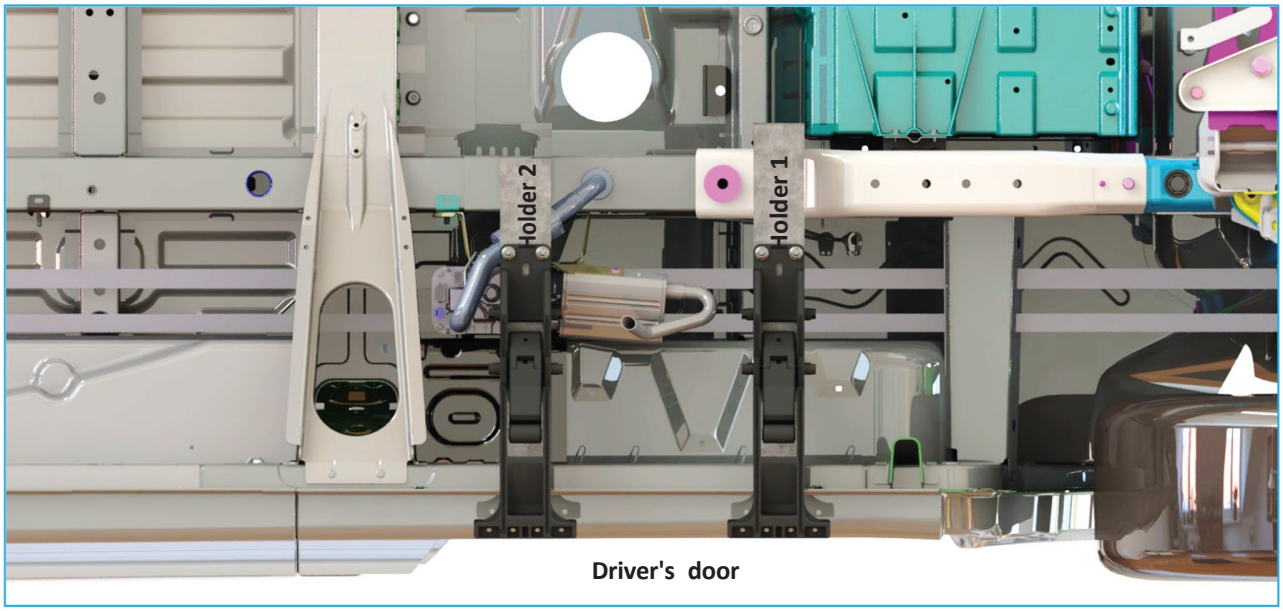
Holder 1 = 101800 since 2018
Holder 2 = 101801 until mid-2022
Holder 2 = 102100 from mid-2022

2x

6. MOUNTING THE MOTOR JOINTS ON THE DRIVER'S DOOR



6. MOUNTING THE MOTOR JOINTS ON THE DRIVER'S DOOR

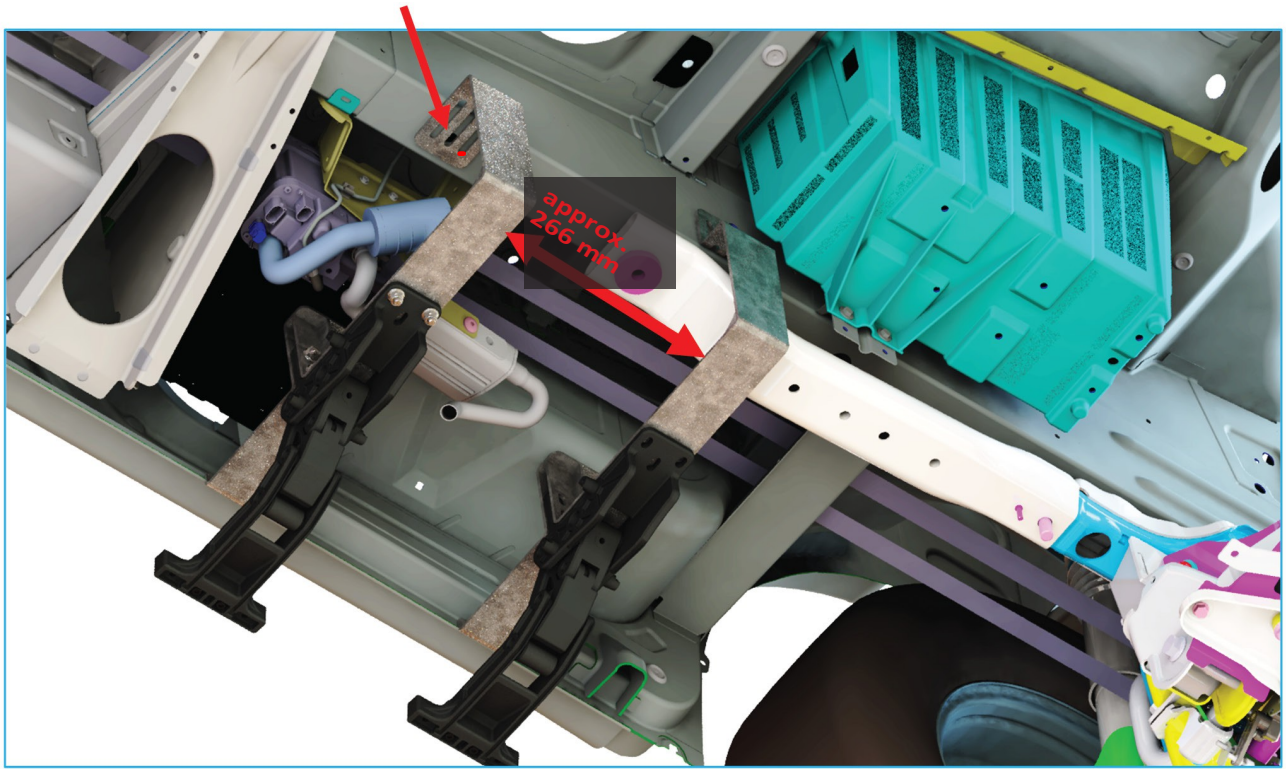


Driver's door

First place bracket 2 on the 16 mm hole in the longitudinal rail and position it at right angles to the sill edge and longitudinal rail. The aluminium base of the fuel filter has also been installed here since mid-2022. Unscrew it loosely, slide the holder underneath and then screw it tight again. Remove any interfering mounting bolts from the plastic lower panelling. Then mark the 2 holes on the sill edge. Insert an M8 anchor nut into the existing "16 mm" hole in the side rail if there is no filter housing and thread. Drill 6.5 mm holes at the marked mounting points on the sill edge.

Please ensure that drilled holes are sealed again with suitable rust protection means

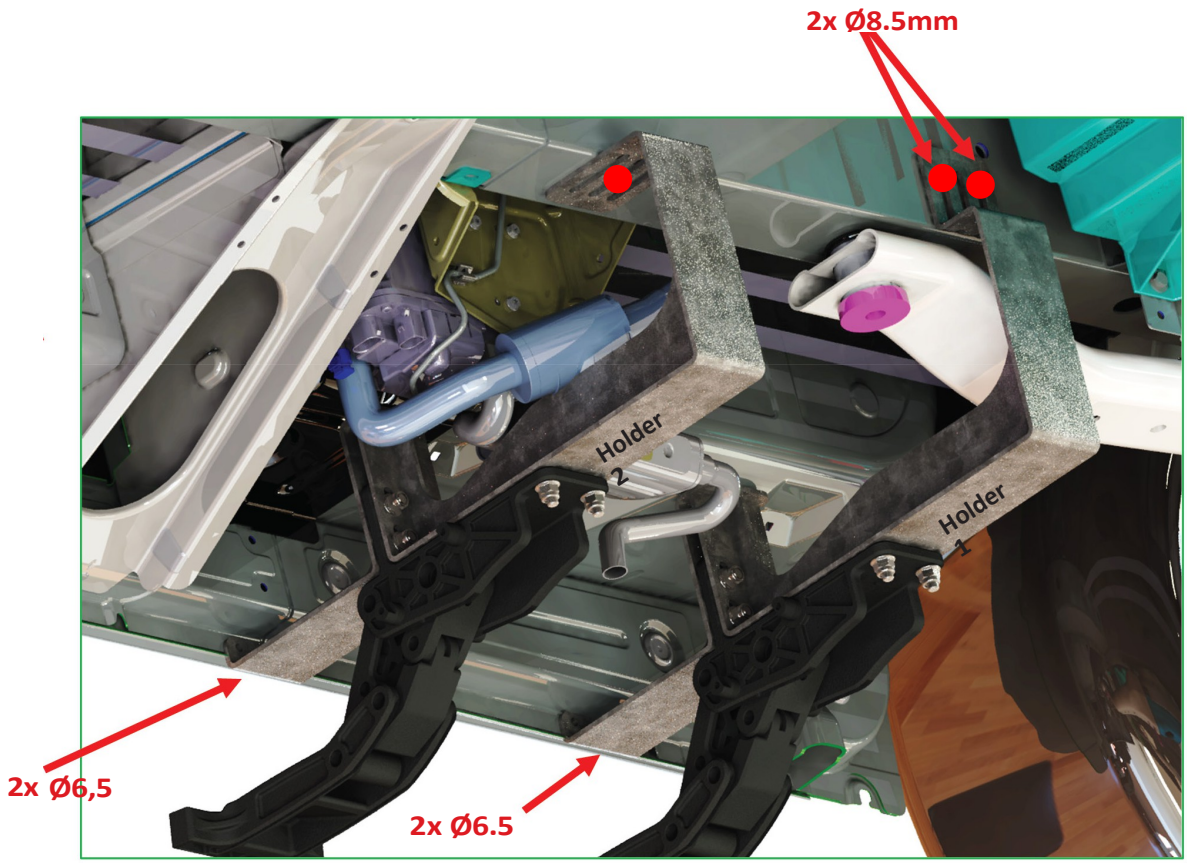
For kits before 07.2022, insert a 16 mm anchor nut into the existing hole and align the bracket on the right-hand side. Ensure right angle to the sill edge and side member.

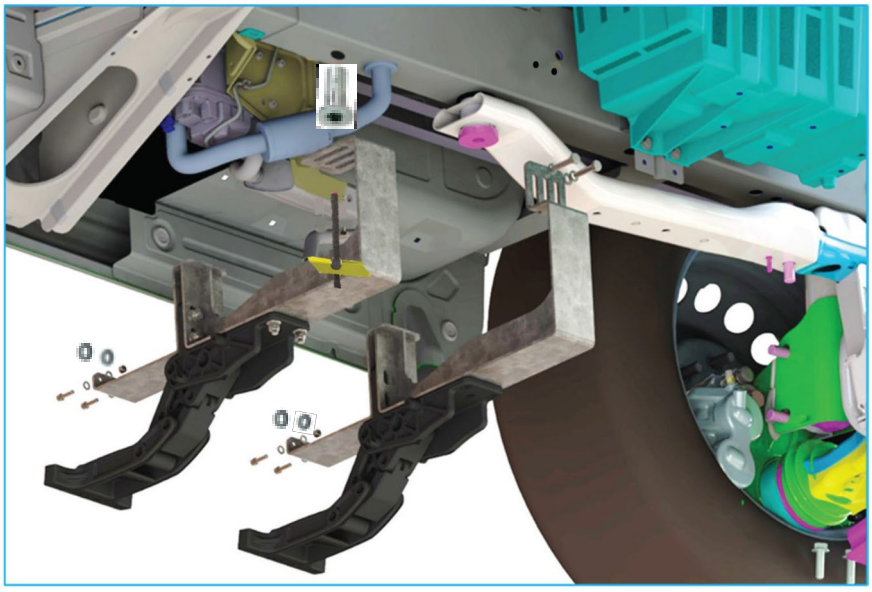


Align bracket 1 parallel to the other bracket at a distance of approx. 266 mm and mark and drill 2 8.0 mm holes in the side member and 2 6.5 mm holes in the sill edge.

Please ensure that drilled holes are resealed with suitable means

6. MOUNTING THE MOTOR JOINTS ON THE DRIVER'S DOOR





4x ISK screw V2A 6x20 DIN912 4x	1x M8 anchor nut
washer 6 V2A DIN9021	1x hexagon head screw M8x20 DIN933
4x spacer disc 8 V2A DIN 7349 4x nut	2x blind bolts M8
w. clamping part 6 V2A DIN985	3x washer 8.5 vz DIN9021 (Tilt anchor M8)

Insert M6 bolt and body washer from the outside, place M8 spacer washer between sill edge and bracket, slide on bracket and screw on nut with clamping part hand-tight.

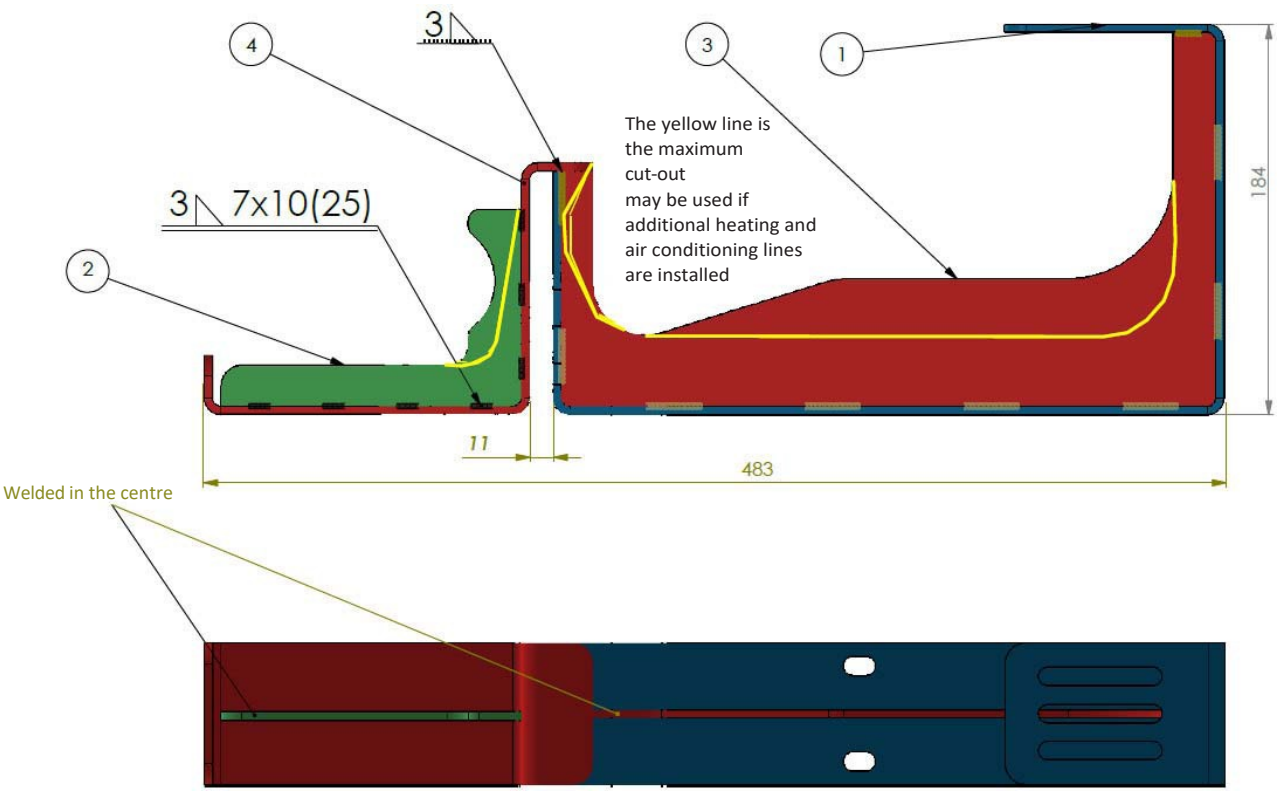
First screw bracket 1 loosely to the sill edge and then mount it in the side member using 2 M8 blind bolts, see page 10. Loosely screw bracket 2 to the sill edge and then mount it to the side member using the M8 bolt on the inserted anchor nut (alternatively under the filter housing base).

6. MOUNTING THE ENGINE JOINTS ON THE PASSENGER DOOR

VIEW OF THE POSSIBLY INSTALLED AIR CONDITIONING LINES RIGHT SIDE

VIEW ADJUSTMENTS TO THE HOLDER

If necessary, the holder can be adapted as follows due to unknown installation situations. Cut points must be protected with suitable means.



7. MOUNTING THE ENGINE JOINTS ON THE PASSENGER DOOR

As with the driver's door, insert the anchor nut into the16 mm **1** hole in the longitudinal rail (alternatively, the hole can be drilled out and the bracket fitted with a tilt plug).

Fasten "Holder 2" to this with an M8x20 screw (alternatively tilt dowel) and position at right angles to the sill edge and longitudinal rail.

Remove the bolts for the lower panelling. Then mark the two 6.5 mm holes on the sill edge **2** Mark the mounting points on the sill edge and drill 6.5 mm holes.

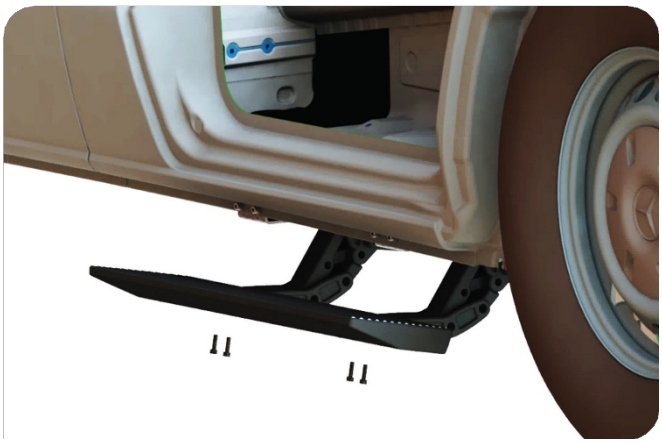
The air conditioning pipe must be **fitted** with a protective hose **3** so that it does not m a k e any noise or rub against the bracket while driving.

Then align bracket 1 parallel to the other bracket at a distance of 266 mm and mark and drill 2 8.0 mm holes in the side member as well as the 2 6.5 mm holes on the sill edge.

The front bracket is mounted in the same way with 2 blind bolts. **4**

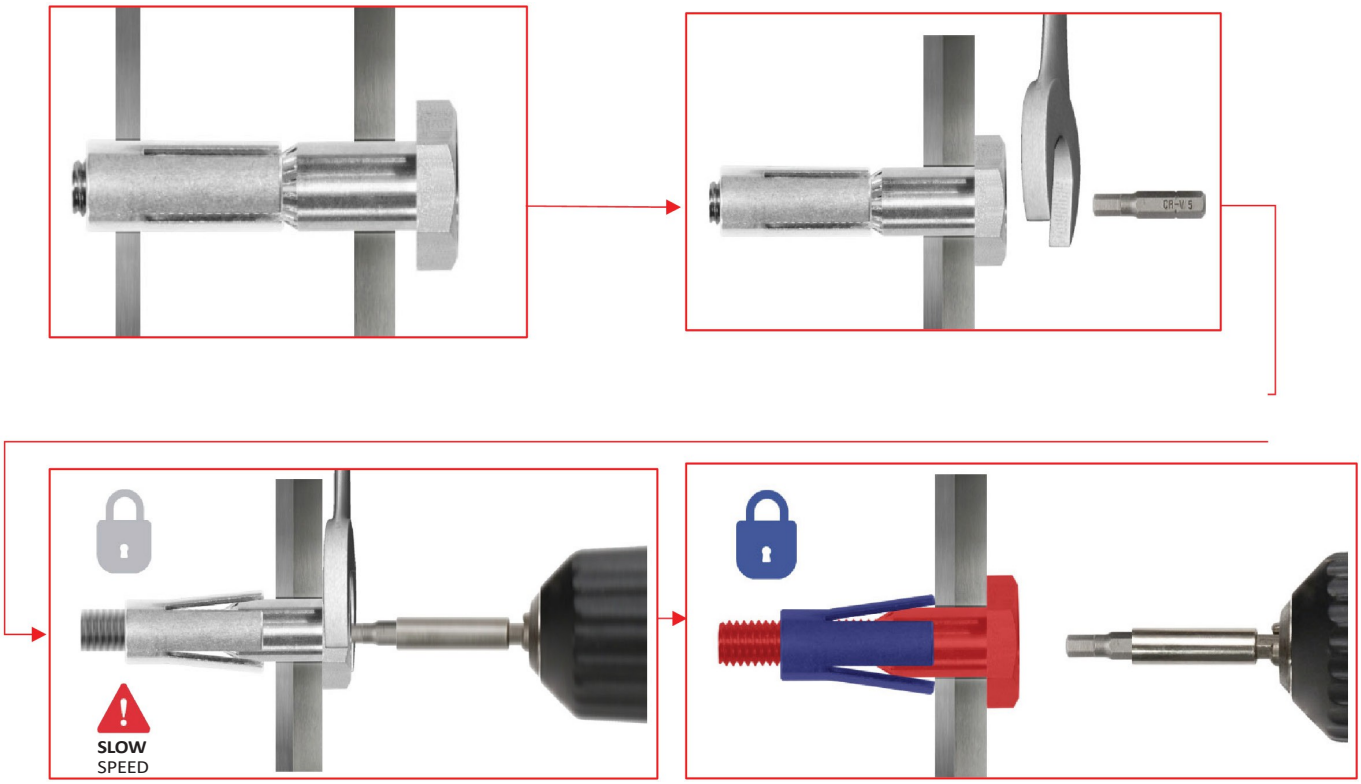
7.1 MOUNTING THE FOOTBOARD

4x ISK screw 6x20 DIN912



8. FITTING THE BLINTBOLTS AND ANCHOR NUTS

PROCEDURE FOR EXPANDING BOLTS



Tightening should be done slowly so that the expanding bolt can settle properly. Only tighten the bolt hand-tight. The load of the step is distributed later and the bracket is supported on the wall.

PROCEDURE FOR ANCHOR MOTHER

The drill hole for the M8 anchor nut must be approx. 15 mm. The cut edges of the drill holes should be protected against rust using suitable means. Screw the anchor nut onto the tool, then align it in the hole and spread it out. The anchor nut is correctly fitted as soon as there is increased resistance.

9. ELECTRICAL INSTALLATION

9.1 OVERVIEW OF ELECTRICAL COMPONENTS until May 2021

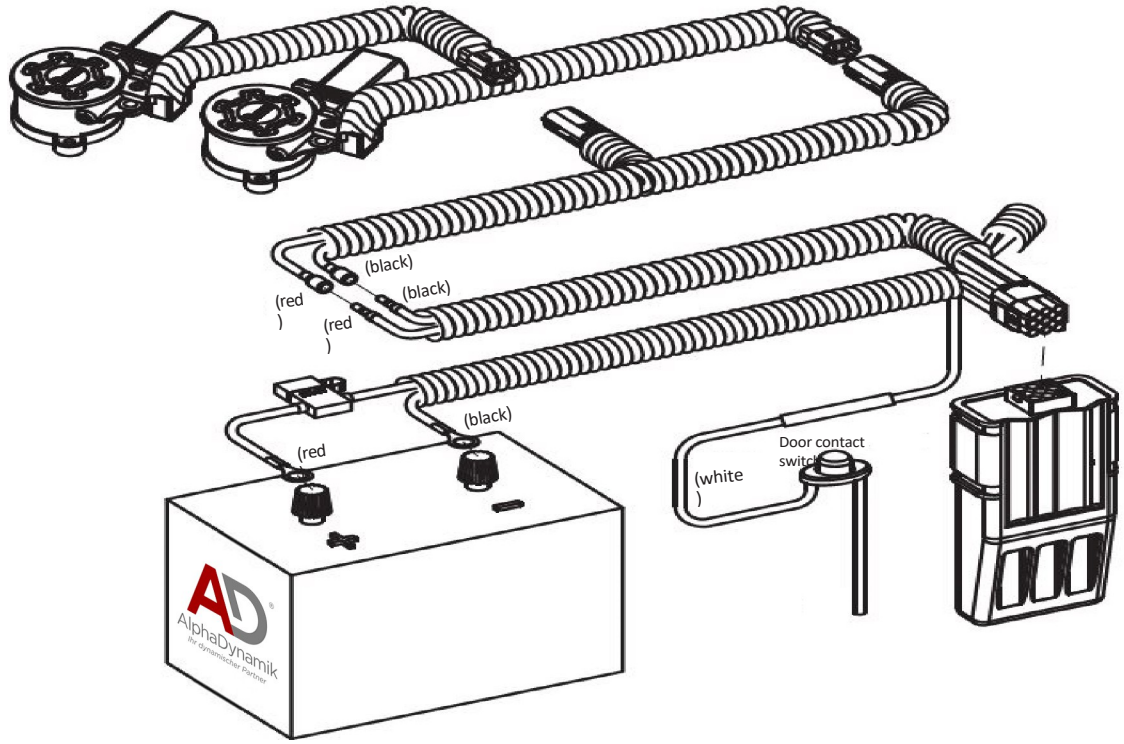


Figure: Electrical components ***until May 2021***

9.2 OVERVIEW OF ELECTRICAL COMPONENTS as of May 2021

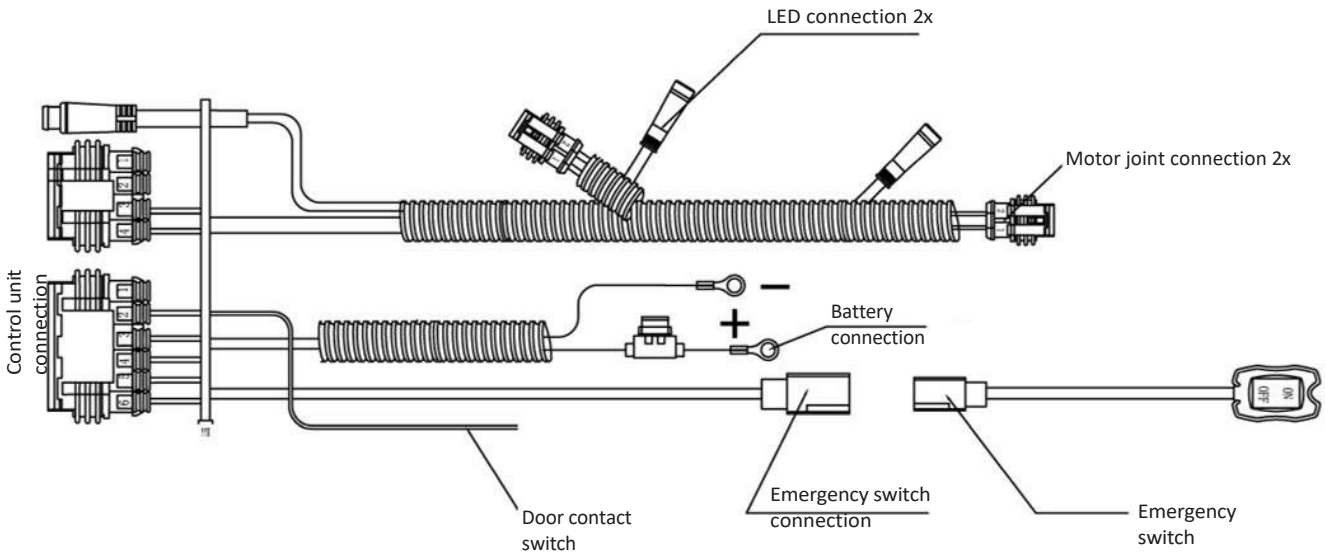
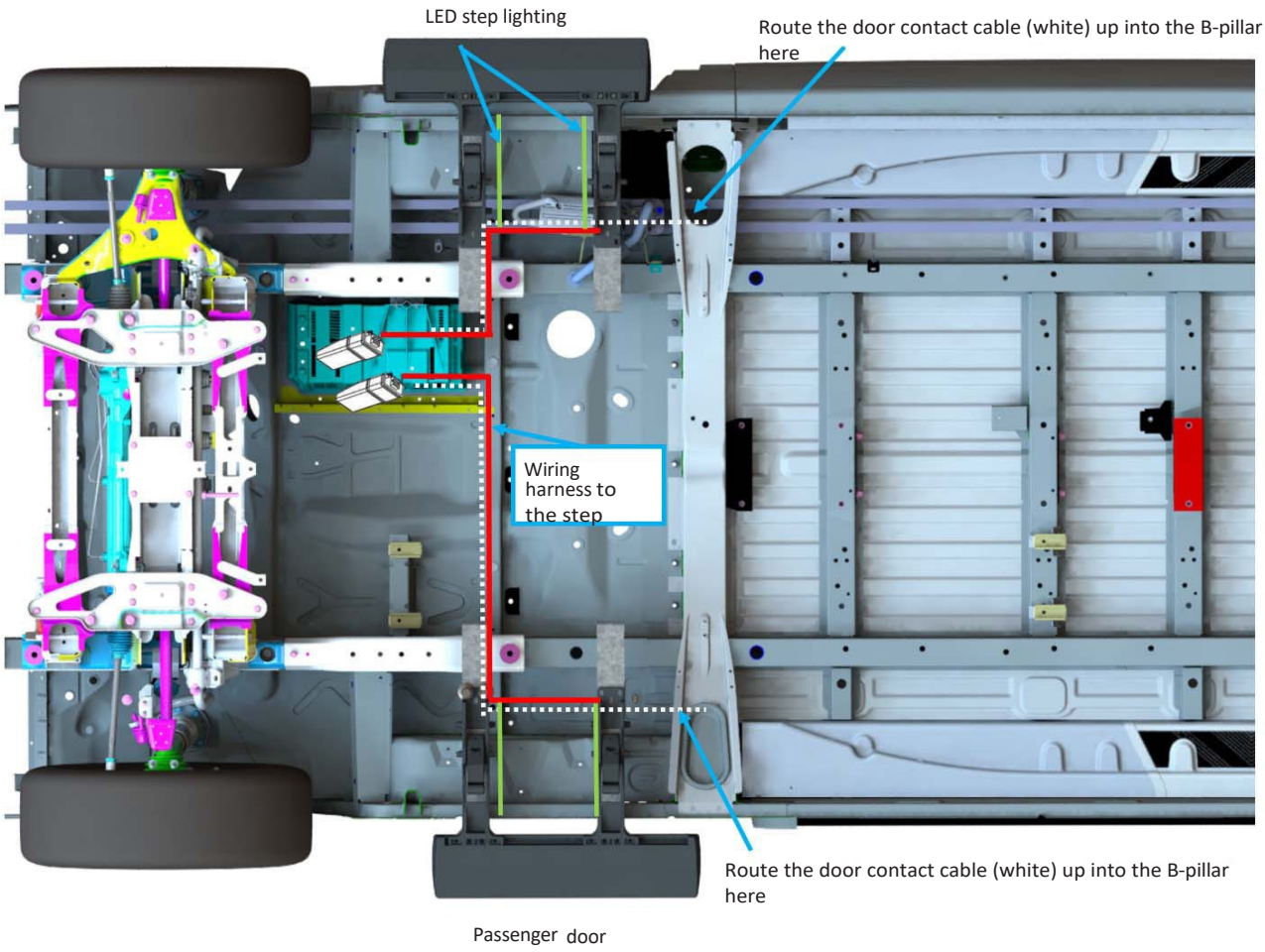
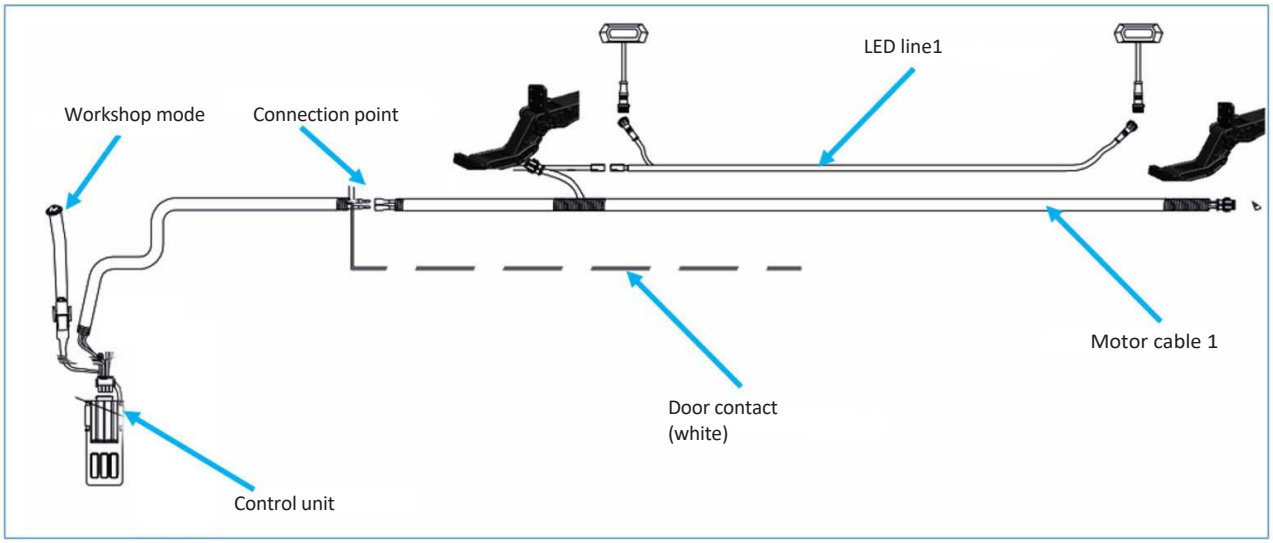


Figure: Electrical components ***from May 2021***

9.3 OVERVIEW OF ELECTRICAL WIRING



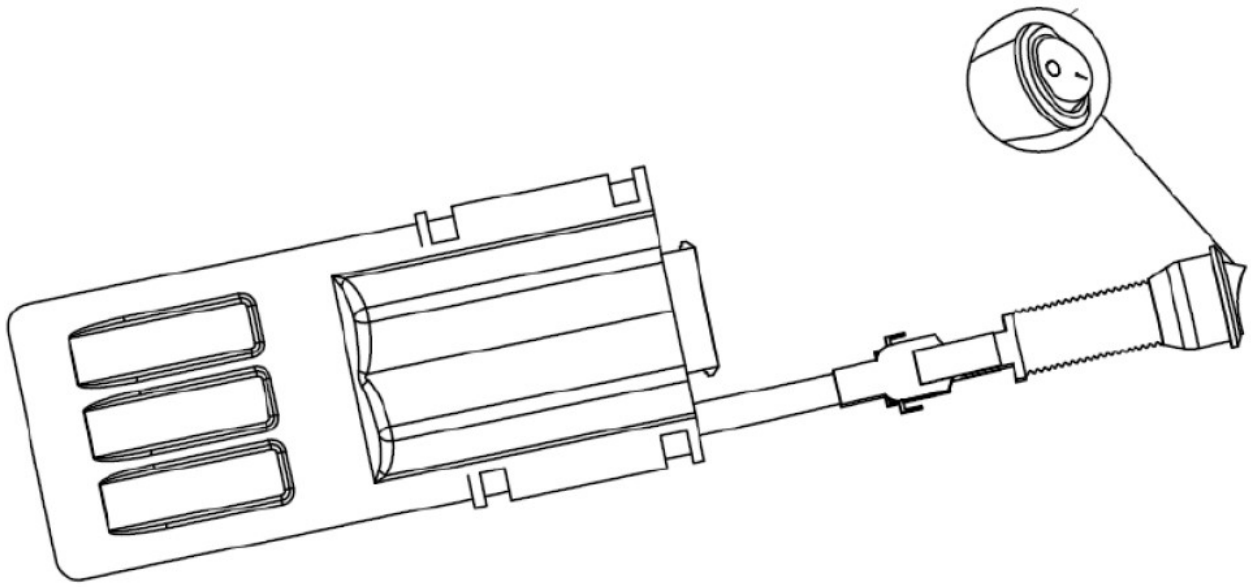


9. ELECTRICAL INSTALLATION

9.4 Emergency switch

There is a switch on the control unit. This can be operated to deactivate the step in an emergency or in the workshop. As soon as the switch is set to "ON", the step moves automatically and remains in this position. To deactivate the emergency mode, the switch must be set to "OFF". Here the step returns to its normal operating mode.

By default, the switch must be set to "OFF/0".



9. ELECTRICAL INSTALLATION

9.5 DOOR CONTACT

The electrical connection should be made by a specialised company depending on the installation situation.
The scope of delivery includes a universal door contact switch (TK1000.1), which can be fitted universally in the door area.

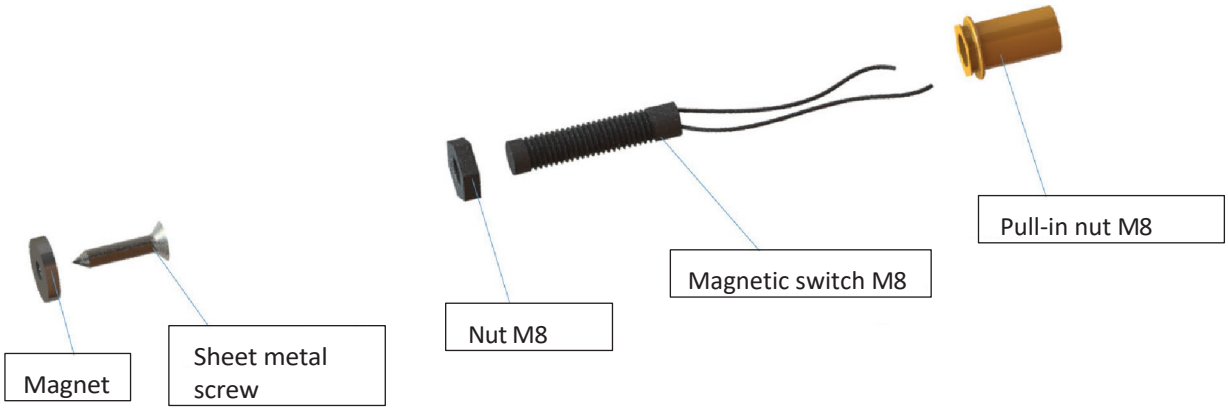


Figure 2: Structure of universal door contact

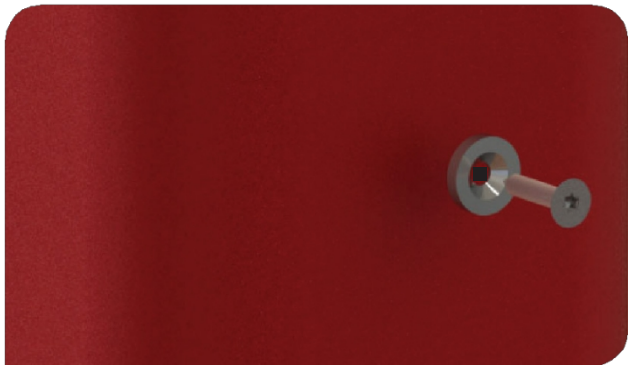
Scope of delivery:

POS	Description of the	Quantity	Picture
10	Neodymium disc magnet 15x3 mm with 3.5 mm hole	1	
20	Magnetic switch 0.3 A 10 W	1	
30	Countersunk head drilling screw 3.9x22	1	
40	Pull-in nut M8 with knurling	1	

The electrical connection should be made by a specialised company depending on the installation situation.
Electrical connection elements are therefore not included in the scope of delivery.

9. ELECTRICAL INSTALLATION

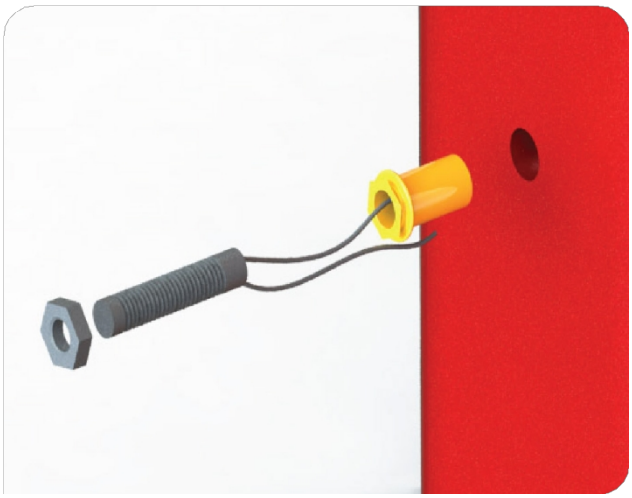
MOUNTING MAGNET ON DOOR SIDE



The NEODYM magnet can be attached to the door using the self-tapping screw. Only tighten lightly by hand. Do not screw on with pop rivets or by machine. The magnet is very brittle and would break. Alternatively, it can also be glued with a suitable vehicle assembly adhesive.

Please make sure to reseal drilled holes with suitable anti-rust agents!

MOUNTING MAGNETIC SWITCH ON BODY SIDE



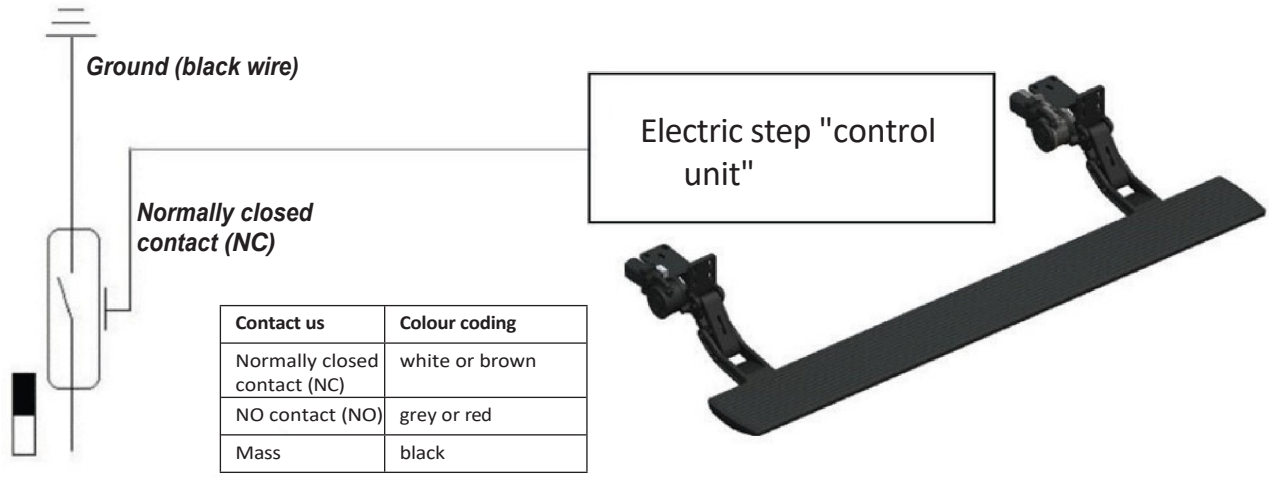
The pull-in nut should be positioned so that it is concentric to the magnet. Then drill a Ø11 mm hole and seal the drill hole. The pull-in nut can then be fastened using a suitable tool.

Then screw in the magnetic switch and secure with the locknut. The length of the magnetic switch can be adjusted according to the user situation by screwing it in or out.

Please make sure to reseal drilled holes with suitable agents!

9.6 ELECTRICAL CONNECTION DOOR CONTACT

The electrical connection should be made by a specialised company depending on the installation situation. Electrical connecting elements are therefore not included in the scope of delivery. The door contact switch should be The door contact switch must be checked before installation using a continuity tester or similar. The door contact switch is a changeover contact. The earth connection and the normally closed contact (NC) are required. The normally open contact (NO) is not required and can be insulated.



Contact us	Colour coding
Normally closed contact (NC)	white or brown
NO contact (NO)	grey or red
Mass	black

When the door is open, earth must be switched!

9. ELECTRICAL INSTALLATION

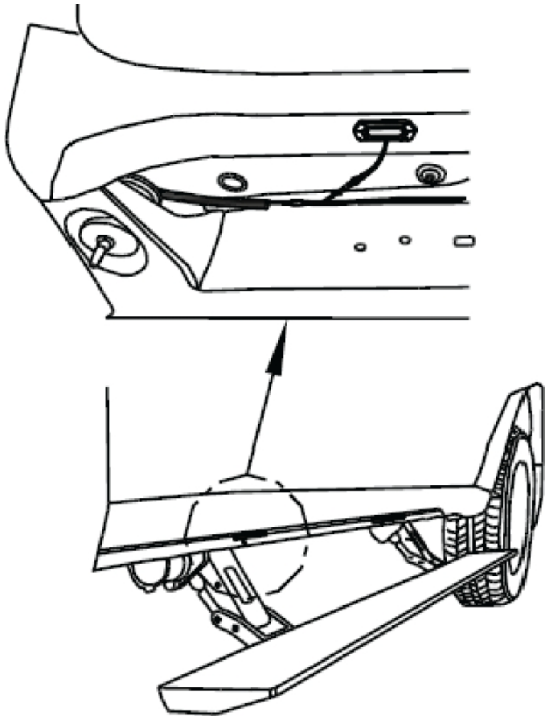
The fuse can then b e plugged back in and the function of the step checked. If the step does not work, all steps should be checked again.

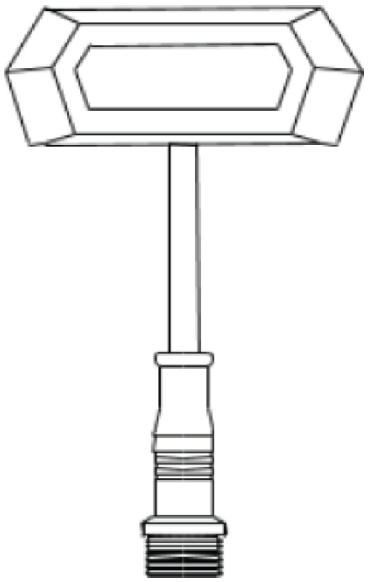
A switch is installed on the control unit. This should be set to "0" in normal operation. Switch to position "1" is the so-called *"workshop mode" to* prevent unintentional extension in repair or maintenance mode.

9.7 LED LIGHTING (ALPHADYNAMIK ARTICLE: LED-LUX)

The step can be fitted with LED lighting, which is very easy and universal to integrate. The LEDs are mounted to the underbody of the car body using a strongly adhesive double-sided adhesive tape. Please clean the areas beforehand using a suitable cleaner so that they are absolutely free of dirt and grease.

Wiring to the existing electrical system is very simple.





10. USE OF THE STEP

The stage should be tested after installation. To do this, follow the instructions below:

1. **Visual inspection**
   Check that all screws are in the correct positions and tightened.

2. **Function**
   Extend and retract the step several times. Check whether there are any unusual noises or irregular movements.

3. If you have any concerns, please contact our customer service. Contact details can be found in the last chapter.

11. MAINTENANCE AND TROUBLESHOOTING

Maintenance		
Every 3 months	Check the function of the joints	
	Check all electrical plug connections	
	Check screws for tightness	
If required	Remove icing from the running board and joints before use	
	Thoroughly remove heavy soiling before use	
Cause of error		
Step does not move as soon as door is opened or closed	Electrical fault	Battery cable not connected
		Door contact not connected correctly
		Control unit error
		Motor cable - plug connections interrupted
		Control unit switch to "1" Workshop mode
		Swapped cables - check all connections
	Mechanical fault	Something blocked (stone, etc.)
		Running board not mounted symmetrically

If you have any further questions, please do not hesitate to contact us.

12. DISPOSAL

Only allow qualified specialists to dispose of the step at the end of its service life. The manufacturer accepts no liability for damage caused by improper disposal.

13. CUSTOMER SERVICE

The AlphaDynamik GmbH & Co KG customer service team is available to help you order spare parts, carry out maintenance and repair work and to answer any problems or questions you may have.

The address is:

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51588 Nümbrecht
Phone: +49 2293 / 81652-0
E-mail: info@alphadynamik.de
www.alphadynamik.de