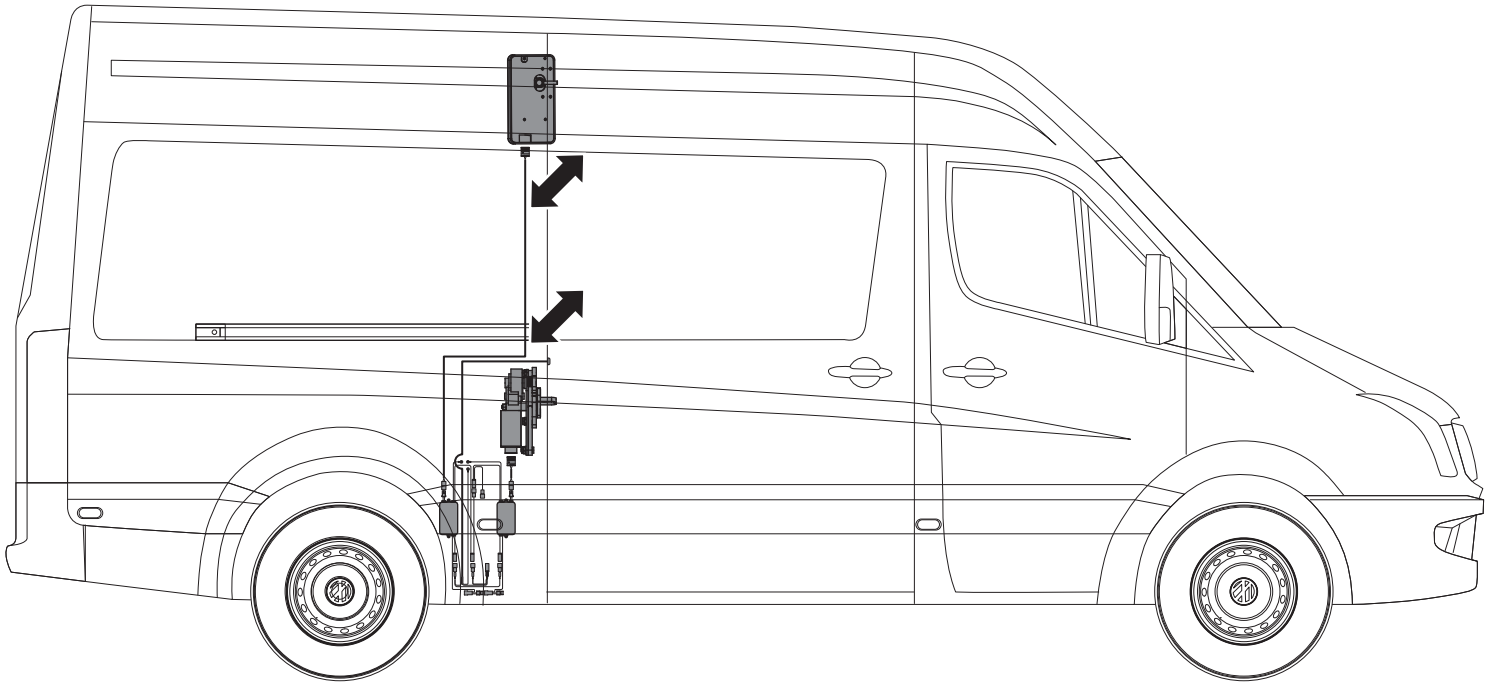
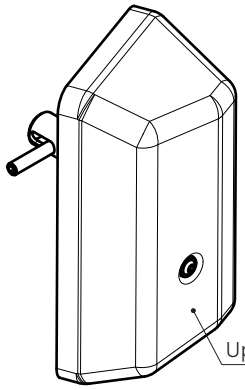
DOOR CLOSERS

INSTALLATION MANUAL

MERCEDES SPRINTER (906, 907) / VOLKSWAGEN CRAFTER



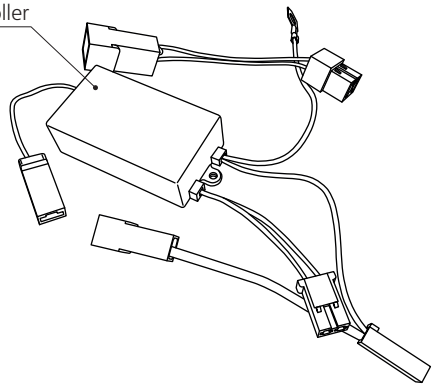
1.1 SUPPLY PACKAGE OF THE UPPER DOOR CLOSER



Upper door closer

Disk magnet

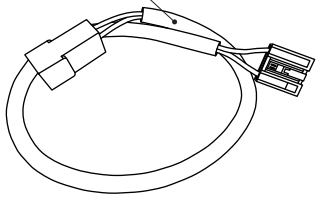
Upper door closer controller



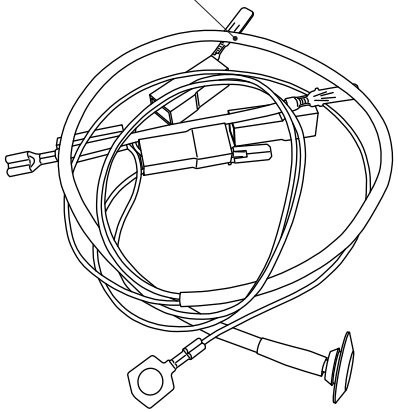
Flat washer 6x18x1,5 - 8 pcs.

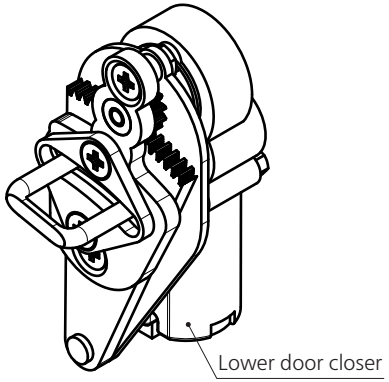
Exhaust rivet 4,8x12 - 4 pcs.

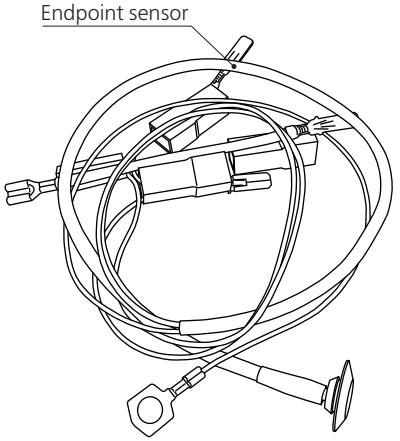
Upper door closer harness

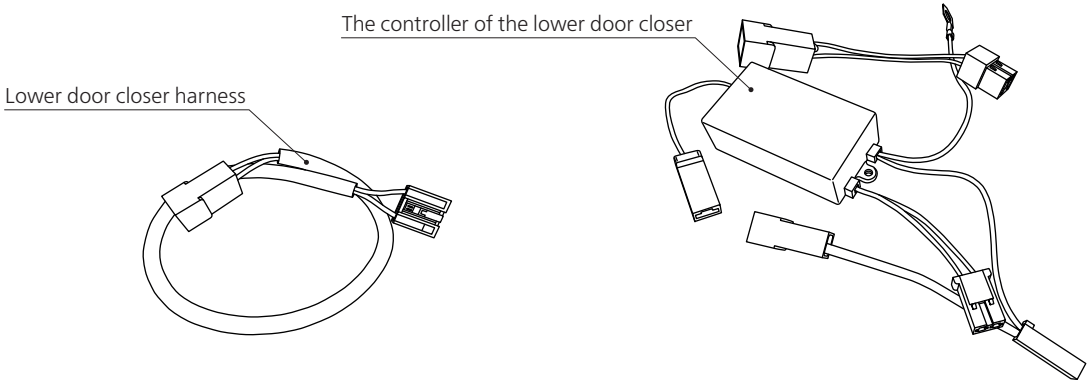


Endpoint sensor

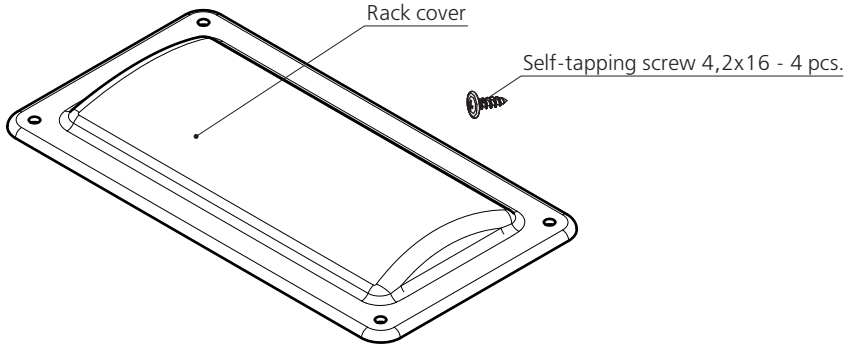




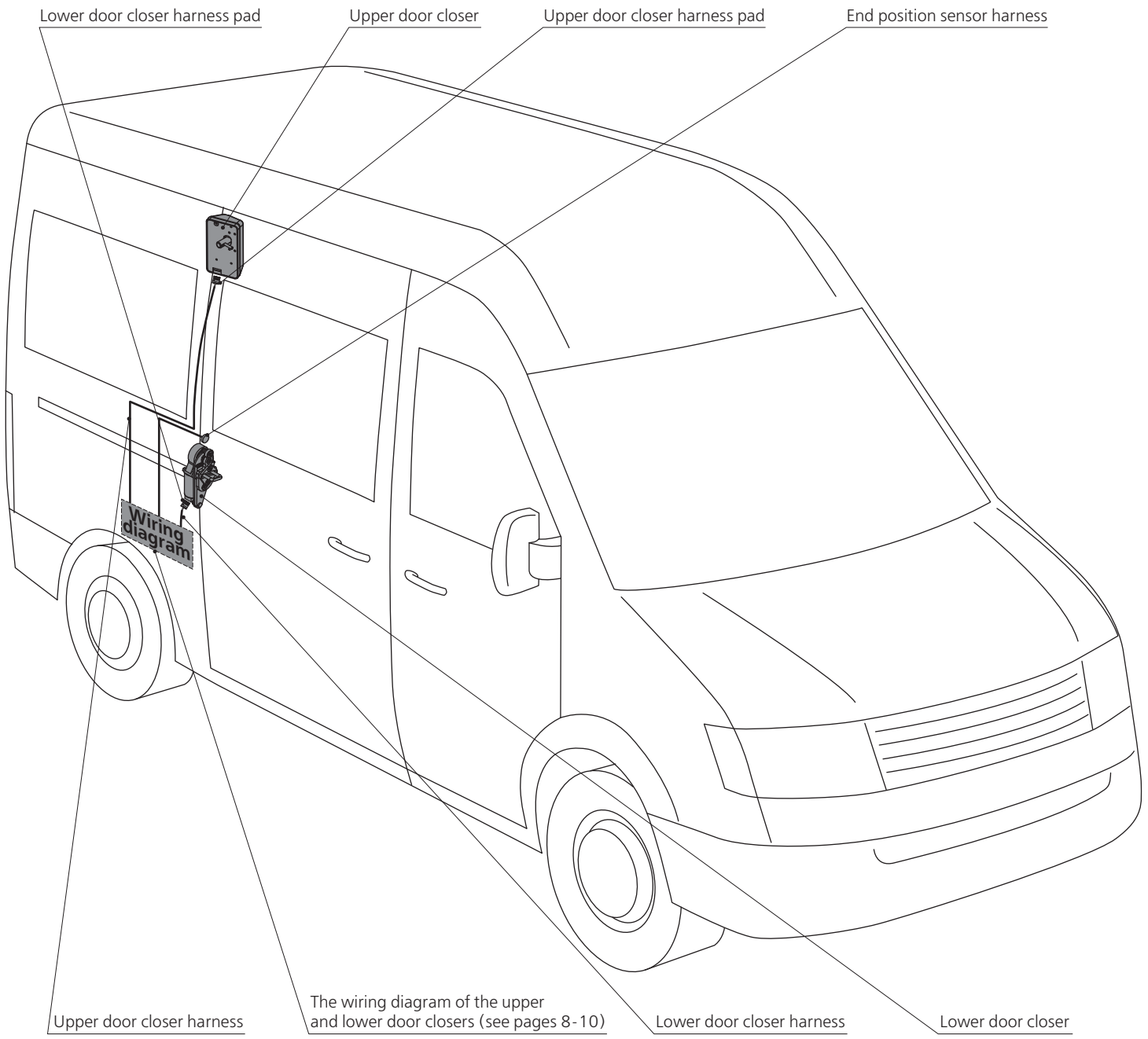




RACK COVER (COMPLEMENTARY OPTION NOT INCLUDED)



1.3 GENERAL INFORMATION, THE PLACEMENT OF THE UPPER AND LOWER CLOSERS



This door closer model is designed for unlocking and tightening the right sliding door on minibuses VOLKSWAGEN CRAFTER 2006-2018, MERCEDES SPRINTER (906, 907) 2006- present.

MAIN TECHNICAL CHARACTERISTICS

Power consumption (maximum)	240 W
Power consumption (nominal)	150 W
Unlocking/tightening time of the door	~2 sec.
Temperature of the surrounding environment	from -25 up to +40 °C
Work capacity (maximum)	up to 1000 cycles per day
The resource of the lower and upper closers	min 300,000 cycles

PLACEMENT OF THE UPPER AND LOWER CLOSERS

PThe placement of the wiring harnesses and closers is shown in the figure.
To run the main wiring harness of the upper door closer in hidden cavities, use steel wire.
When running the main wiring harness, be careful as damage of the insulation coating of the wires is unacceptable.

CAUTION

All wires must be securely protected and firmly attached to exclude the possibility of their breakage, chafing or wear.

NOTE

The durability and reliability of the door closers directly depend on the quality of the installation.

PRECAUTIONS

The installation of the door closer is connected with the modification of the existing body elements of the minibus. Since all the elements being refined are made of sheet metal, there is a great risk of injury on the sharp edges formed after processing, or on the moving cutting parts of a manual mechanized tool. During the installation of the door closer, observe the safety precautions of working with a manual mechanized tool, blunt the sharp edges of the holes made. Use only a proper tool. During work, keep the work area clean and tidy, especially in the interior of the minibus. Before starting the work, prepare all the necessary tools and parts, remove all unnecessary stuff.

Fail-free performance, reliability and lifetime of the door closer depends on the accurate following all the requirements specified in the instructions as well as on the accurate placement of door closer parts and components. Before drilling the mounting holes, carefully mark up them, check the correct placement of a particular part or assembly, and only then make the holes. After fastening, check that the part or assembly is fixed and in its place.

Since the closer is an electromechanical device, along with plumbing work, there are also works related to laying electrical wiring and connecting it to a power source. Therefore, it is necessary to adhere to the rules of electrical safety. Before starting work related to wiring, it is necessary to completely de-energize the on-board power supply system of the minibus. During the connection of the contacts, keep clean, as the reliability of the connection and the fail-free performance of the drive generally depend on this.

LIST OF TOOLS

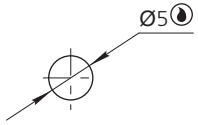
Side cutters ..... 1 pc.
Dremel tool ..... 1 pc.
Driving punch ..... 1 pc.
Electric drill ..... 1 pc.
Rivet gun ..... 1 pc.
Insulation tape ..... 1 pc.
Centre punch ..... 1 pc.
Metal ruler ..... 1 pc.
Hammer ..... 1 pc.
Multimeter ..... 1 pc.
Set of heads from 10 to 17 ..... 1 pc.
Set of Torex stars ..... 1 pc.
A set of combined keys ..... 1 pc.
A set of hexagons ..... 1 pc.
Round file ..... 1 pc.
Flat file ..... 1 pc.
Knife ..... 1 pc.
Terminal crimper ..... 1 pc.
Flat screwdriver ..... 1 pc.
Phillips screwdriver ..... 1 pc.
Pliers ..... 1 pc.
Drills 5; 6.5 ..... 1 pc.
Step drill bit from 4 to 20 mm ..... 1 pc.
Clip Puller ..... 1 pc.
Electric extension cord ..... 1 pc.
Flashlight ..... 1 pc.
Metal corner milling cutter ..... 1 pc.
Angle grinder ..... 1 pc.
Caliper ..... 1 pc.

GENERAL INFORMATION

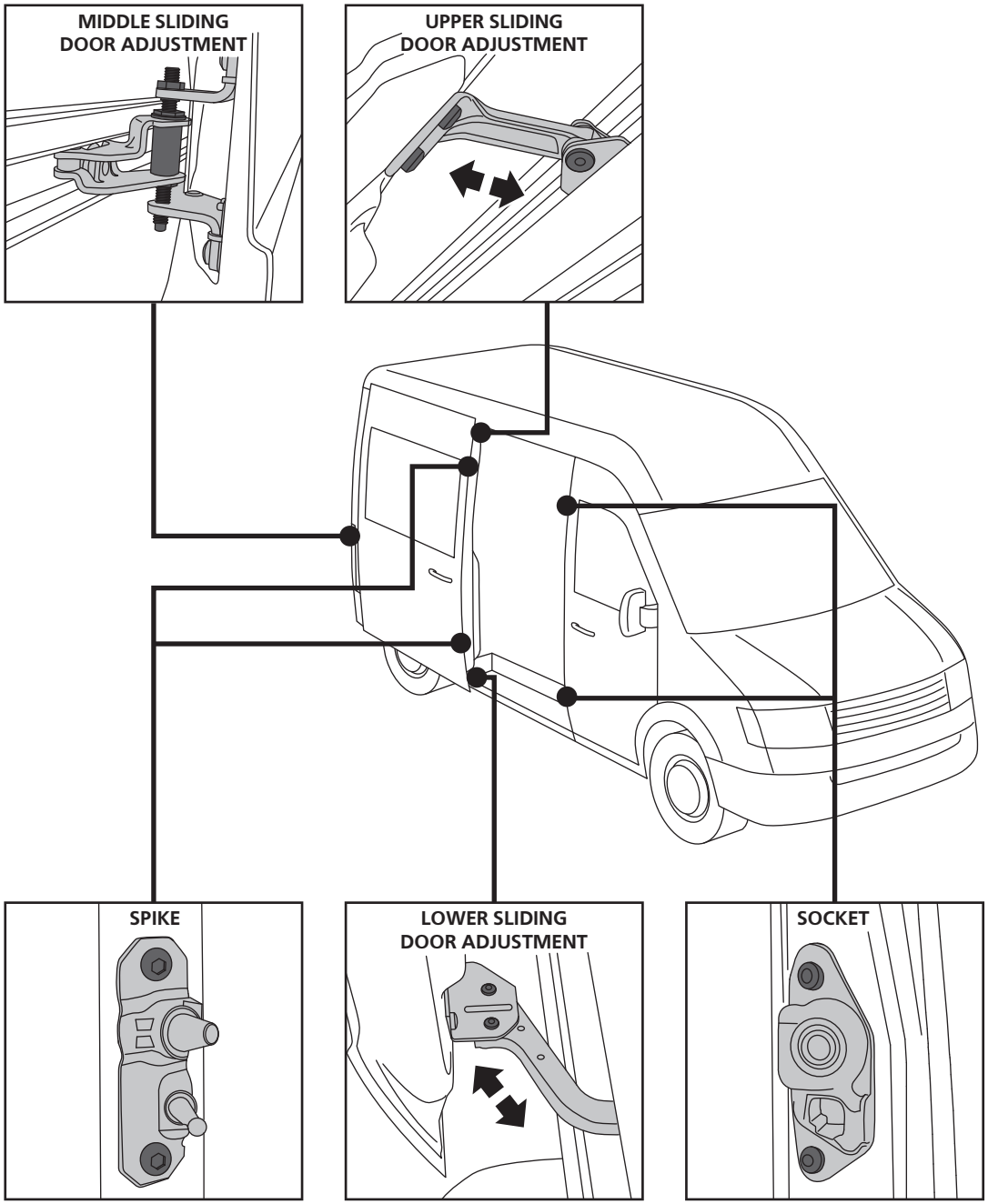
After making holes in the body, some burrs remain on the edges and the paint of the body is inevitably damaged; in those places where additional processing is necessary, the following symbols are indicated:

– Remove the burrs from the edges;
– Blunt the sharp edges;
– Face the edge with an acid-free rust-preventing liquid.

Example: these holes should be treated with an acid-free rust- preventing liquid.



2.1 DOOR ADJUSTMENT



1. Before installing the door closer, it is necessary to adjust the door of the minibus because its adjustment affects the operation of the door closer.

2. Before installing the door closer, it is necessary to adjust the door of the minibus because its adjustment affects the operation of the door closer.

3. Wash the door lock mechanism with gasoline, after drying, apply WD-40.

4. Remove the door spikes.

5. Adjust the position of the door relative to its opening (adjustable by carriages). The door in the closed position should not sag, or be excessively recessed inside the minibus.

6. Check the doorway seals with the door closed. The seal must not be excessively compressed. Otherwise, remove the seal and in the clamped places, bend its edge.

7. Install the door spikes, adjust their position.

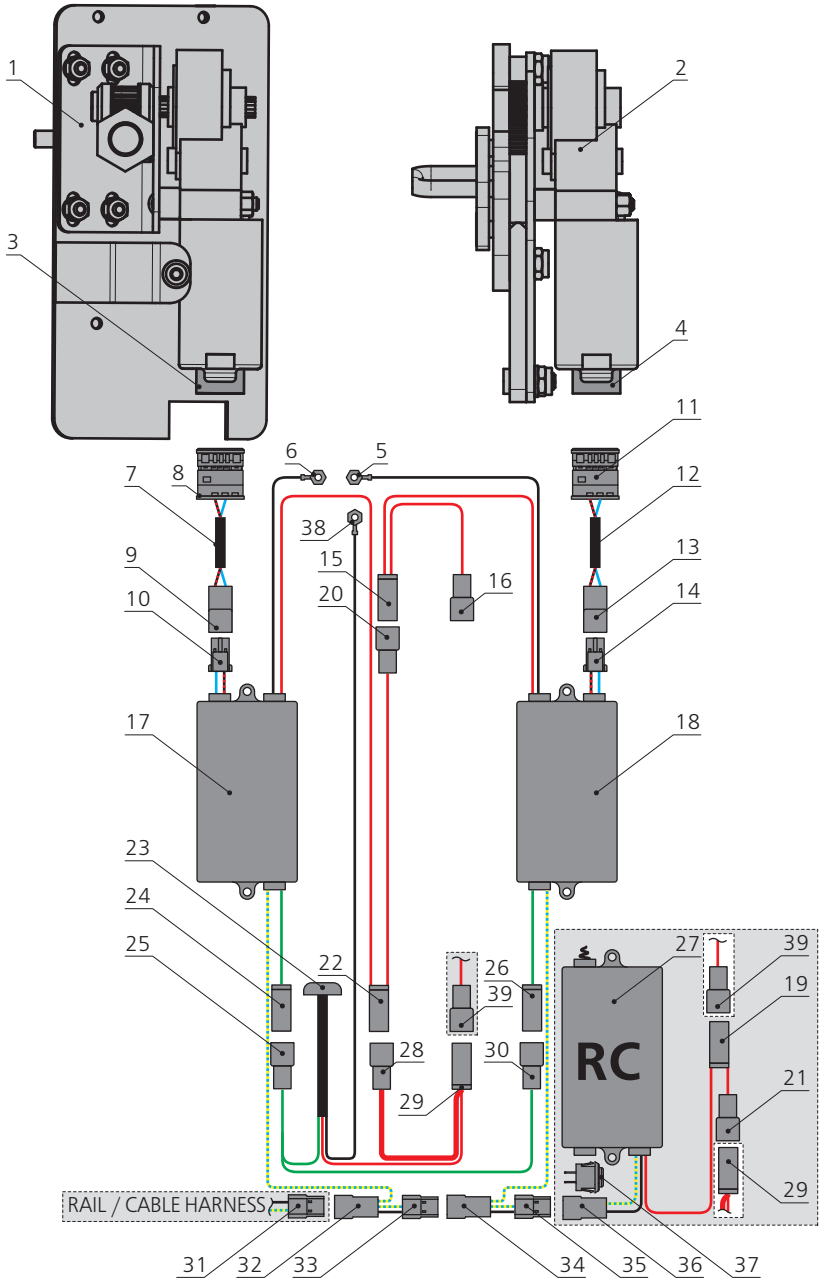
8. Open and close the door when the minibus is completely stationary.

9. Make sure that the latches of the sliding door are installed in their places and do not have visible damage and wear. Do not operate the minibus without latches and with faulty sliding door latches.

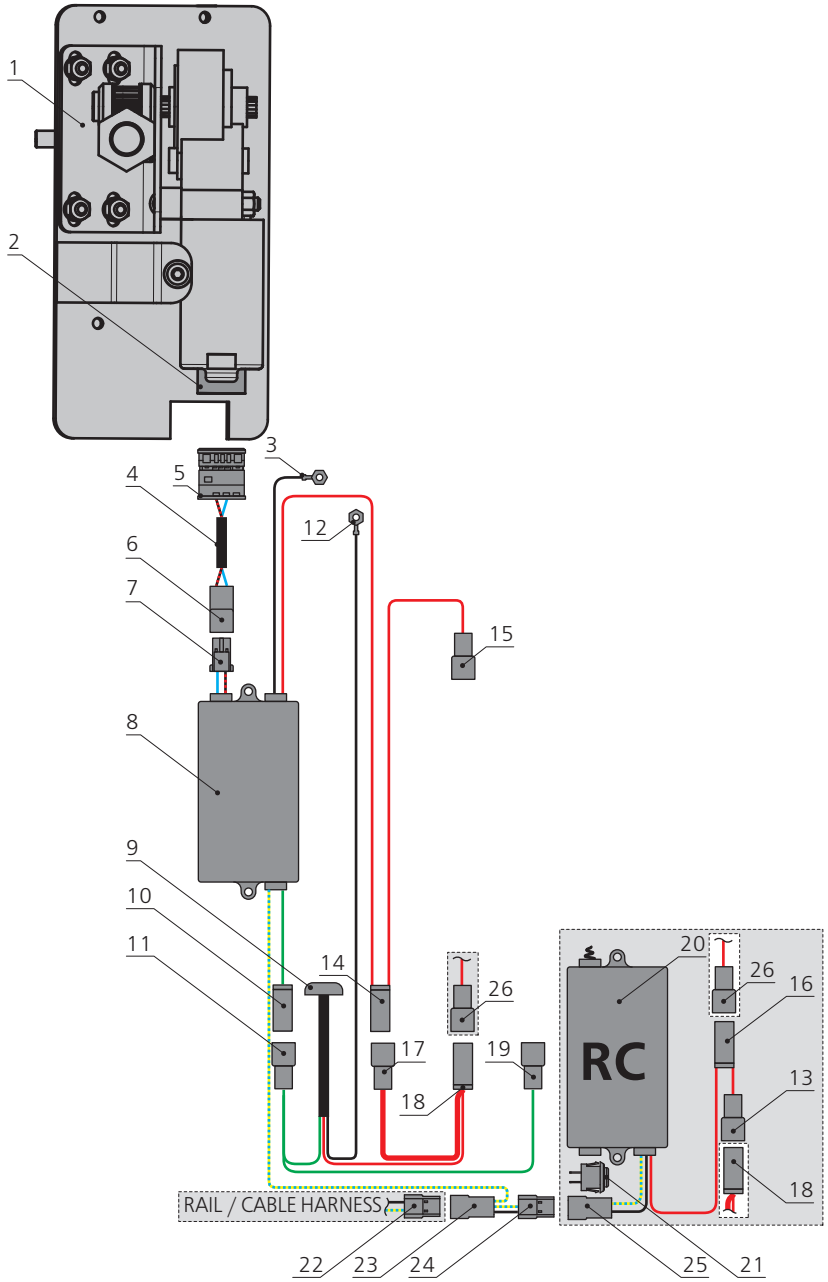
10. Check the upper, middle and lower door carriages. The door should move freely along the guide door without jerks and knocks, open and close freely. A properly adjusted door in the closed state should fit equally tightly to the seal, and the gaps should be the same.

2.2 THE WIRING DIAGRAM OF THE UPPER AND LOWER DOOR CLOSERS

1. Upper door closer
2. Lower door closer
3. Upper door closer pad
4. Lower door closer pad
5. Terminal of the wire of the controller of the door closer of the lower mass "-" to the body of the minibus (black)
6. Terminal of the wire of the controller of the door closer of the upper (black) mass "-" to the body of the minibus
7. Upper door closer harness
8. Upper door closer harness pad (red-black, blue)
9. Upper door closer harness pad (red-black, blue)
10. Upper door closer harness pad (red-black, blue)
11. Lower door closer harness pad (red-black, blue)
12. Lower door closer harness
13. Lower door closer harness pad (red-black, blue)
14. Lower door closer controller Harness pad(red-black, blue)
15. Lower door closer Controller Harness Pad (Red)
16. The wiring harness of the controller of the lower door closer (red) to +12V wiring harness of the main drives CROCO, CAYMAN, CABLE; "+" BATTERY
17. Upper door closer controller
18. The controller of the lower door closer
19. The pad of the RC harness (red) to +12V harness of the main drives CROCO, CAYMAN, CABLE; "+" battery
20. Upper Door Closer Controller Harness Pad (Red)
21. Remote Control Harness Pad (red)
22. Upper Door Closer Controller Harness Pad (Red)
23. Endpoint sensor
24. Upper Door Closer Controller Harness Pad (Green)
25. Endpoint sensor harness pad (green, green)
26. Lower door closer Controller Harness pad (Green)
27. Remote control (RC)
28. Endpoint sensor Harness Pad (red (thick))
29. Endpoint sensor harness pad (red (thick), red (thin))
30. Endpoint sensor Harness pad (green)
31. Main drive harness pad CABLE, CROCO, CAIMAN (black, yellow-blue)
32. Upper door closer Controller Harness pad (black, yellow-blue, yellow-blue)
33. Upper door Closer Controller Harness pad (black, yellow-blue)
34. Lower door closer Controller Harness pad (black, yellow-blue, yellow-blue)
35. Lower door Closer Controller Harness pad (black, yellow-blue)
36. Remote control harness pad (black, yellow-blue)
37. Additional button
38. Terminal of the endpoint sensor harness (black) of the mass "-" to the body of the minibus
39. The pad of the plus wire+12V of the main harness (red)



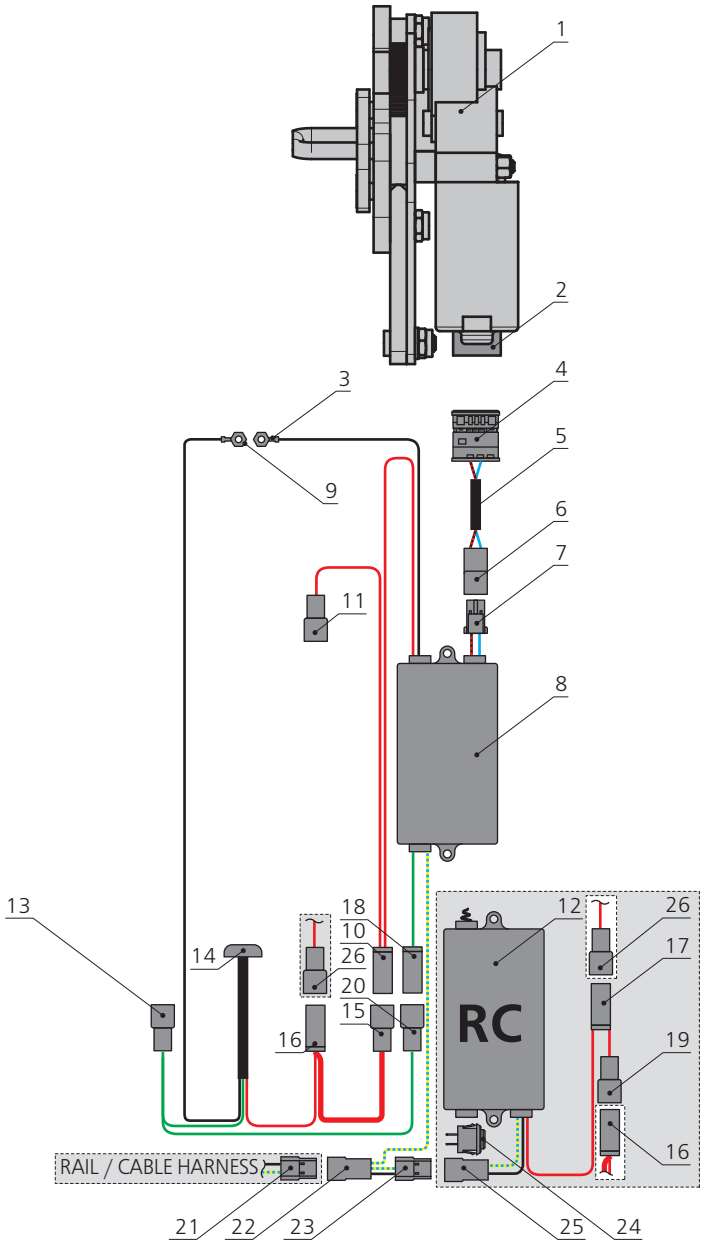
2.3 THE WIRING DIAGRAM OF THE UPPER DOOR CLOSER



1. Upper door closer
2. Upper door closer pad
3. Terminal of the wire of the controller of the door closer of the upper (black) mass "-" to the body of the minibus
4. Upper door closer harness
5. Upper door closer harness pad (red-black, blue)
6. Upper door closer harness pad (red-black, blue)
7. Upper door closer harness pad (red-black, blue)
8. Upper door closer controller
9. Endpoint sensor
10. Upper Door Closer Controller Harness Pad (Green)
11. Endpoint sensor harness pad (green, green)
12. Terminal of the endpoint sensor harness (black) of the mass "-" to the body of the minibus
13. Remote Control Harness Pad (red)
14. Upper Door Closer Controller Harness Pad (Red)
15. The wiring harness of the controller of the lower door closer (red) to +12V wiring harness of the main drives CROCO, CAYMAN, CABLE; "+" BATTERY
16. Remote Control Harness Pad (red) to +12V harness of the main drives CROCO, CAYMAN, CABLE; "+" BATTERY
17. Endpoint sensor Harness Pad (red (thick))
18. Endpoint sensor harness pad (red (thick), red (thin))
19. Endpoint sensor harness pad (green) to the lower door closer controller harness (green)
20. Remote control (RC)
21. Additional button
22. Main drive harness pad CABLE, CROCO, CAIMAN (black, yellow-blue)
23. Upper door closer Controller Harness pad (black, yellow-blue, yellow-blue)
24. Upper door Closer Controller Harness pad (black, yellow-blue)
25. Remote control harness block (black, yellow-blue)
26. The pad of the plus wire+12V of the main harness (red)

2.4 THE WIRING DIAGRAM OF THE LOWER DOOR CLOSER

1. Lower door closer
2. Lower door closer pad
3. Terminal of the wire of the controller of the door closer of the lower mass "-" to the body of the minibus (black)
4. Lower door closer harness pad (red-black, blue)
5. Lower door closer harness
6. Lower door closer harness pad (red-black, blue)
7. Lower door closer controller Harness pad(red-black, blue)
8. The controller of the lower door closer
9. Terminal of the endpoint sensor harness (black) of the mass "-" to the body of the minibus
10. Lower door closer Controller Harness Pad (Red)
11. The wiring harness of the controller of the lower door closer (red) to +12V wiring harness of the main drives CROCO, CAYMAN, CABLE; "+" BATTERY
12. Remote control (RC)
13. Endpoint sensor harness pad (green, green) to the upper door closer controller harness pad (green)
14. Endpoint sensor
15. Endpoint sensor Harness Pad (red (thick))
16. Endpoint sensor harness pad (red (thick), red (thin))
17. The pad of the RC harness (red) to +12V harness of the main drives CROCO, CAYMAN, CABLE; "+" battery
18. Lower door closer Controller Harness pad (Green)
19. Remote Control Harness Pad (red)
20. Endpoint sensor Harness pad (green)
21. Main harness pad of the drives CABLE, CROCO, CAIMAN (black, yellow-blue)
22. Lower door closer Controller Harness pad (black, yellow-blue, yellow-blue)
23. 23. Lower door closer controller harness pad (black, yellow-blue)
24. Additional button
25. Remote control harness block (black, yellow-blue)
26. The pad of the plus wire+12V of the main harness (red)



3.1 INSTALLATION OF THE UPPER DOOR CLOSER

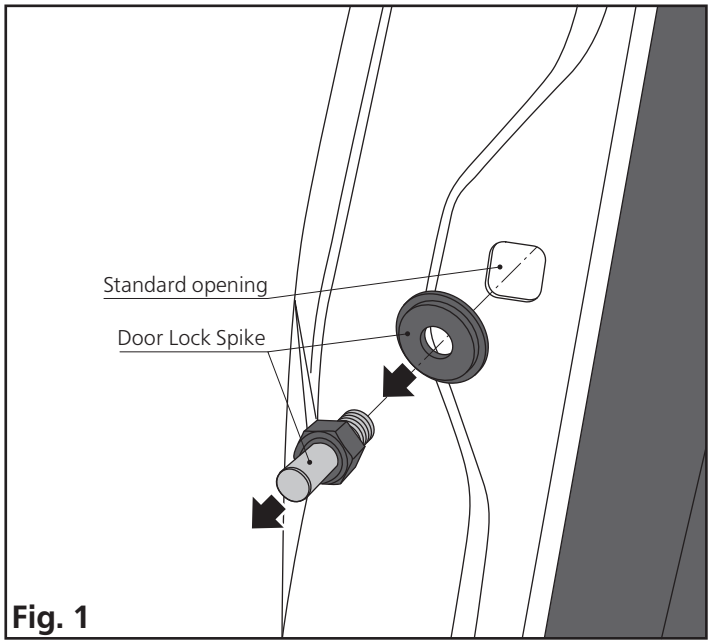


Fig. 1

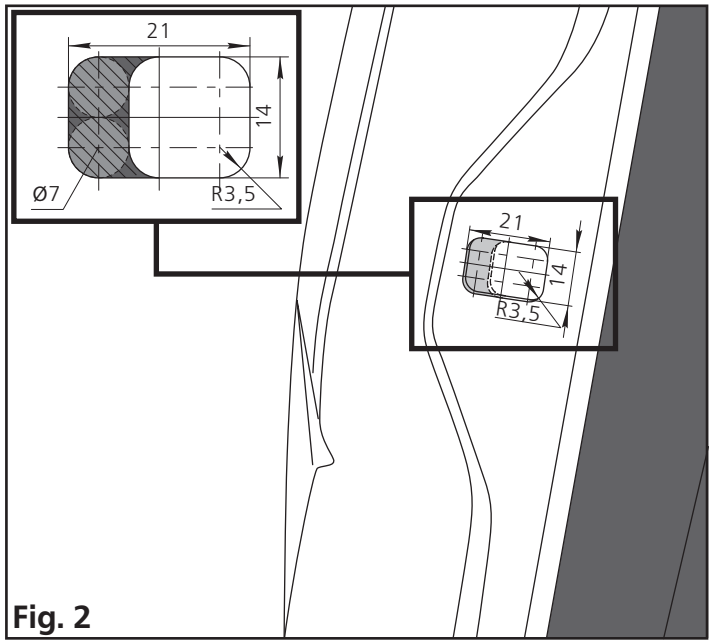


Fig. 2

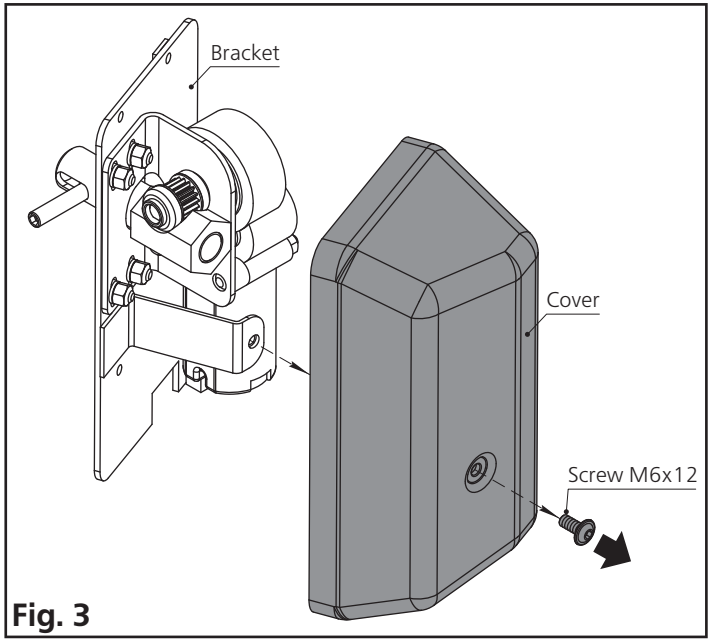


Fig. 3

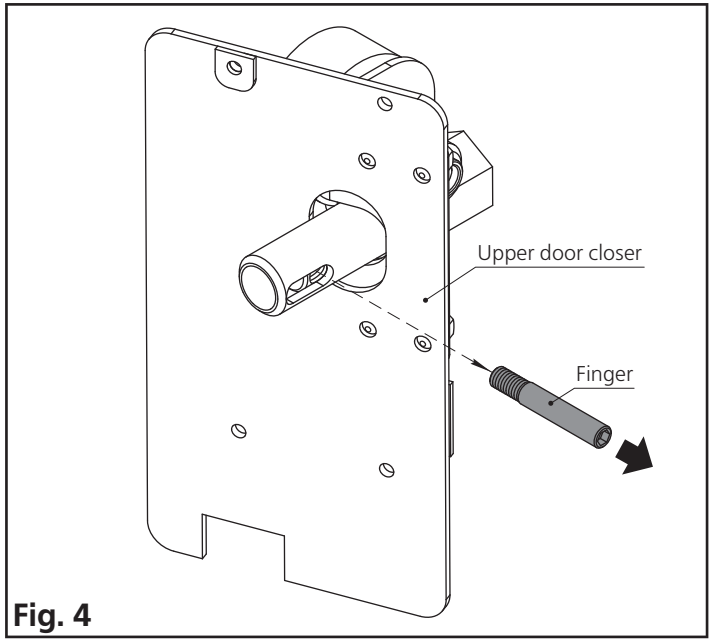


Fig. 4

1. Remove the standard spike of the upper lock on the rear pillar of the door opening (Fig. 1).

2. Modify the standard hole for the movable finger of the upper door closer (Fig. 2).

NOTE

Before installing the upper door closer, it is necessary to remove the protective cover from the bracket by first unscrewing the M6x12 screw (Fig. 3).

3. Unscrew the finger of the upper door closer (Fig. 4).

1. Mark the center of the hole with a marker (Fig. 5). Drill a hole Ø30 mm.

2. BInsert the door closer body into the hole made and attach the upper door closer to the door opening post, mark with a marker the centers of the fixing holes for rivets 4.8x12 for fixing the upper door closer bracket (Fig. 6).

3. To lay the upper door closer harness, mark with a marker the center of the technological hole in the dedicated area (Fig. 6).

4. Remove the upper door closer (Fig. 6).

5. Drill holes Ø5 mm for the 4.8x12 rivets and one hole Ø10 mm for the upper door closer harness.

6. Disconnect the gear motor from the upper door closer bracket by unscrewing the nuts M6 (Fig. 7 and fig. 8).

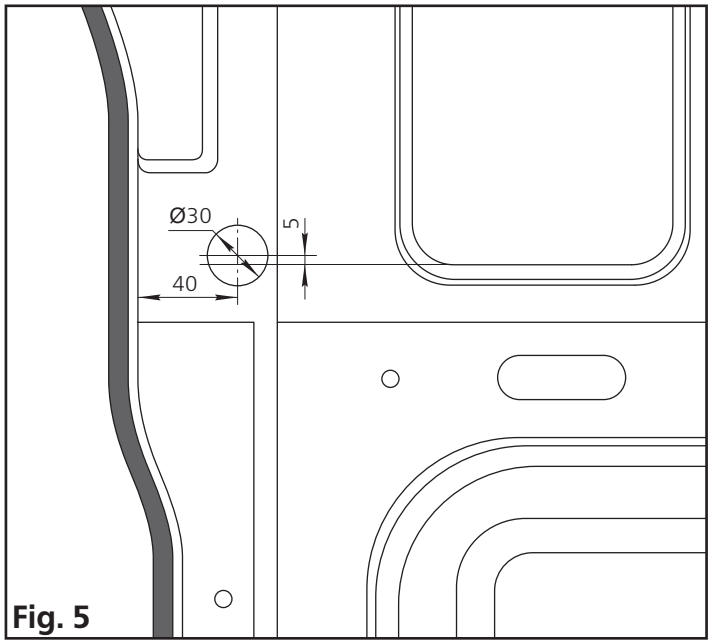


Fig. 5

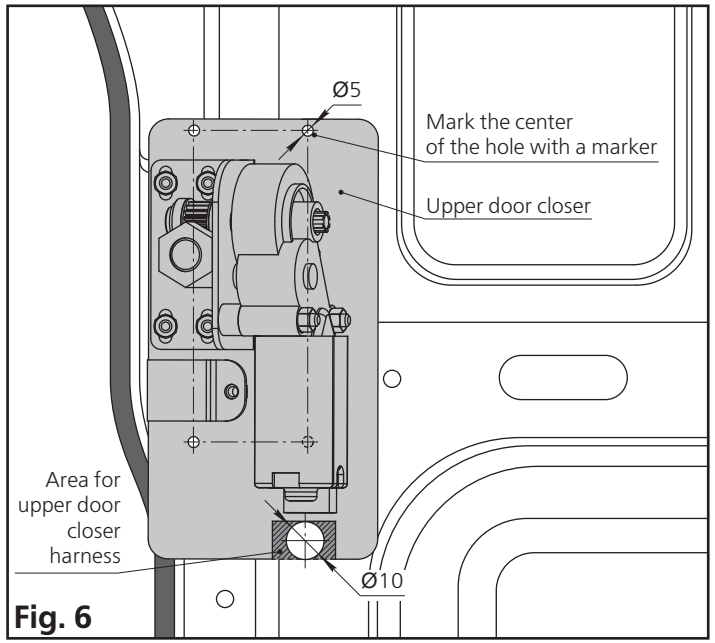


Fig. 6

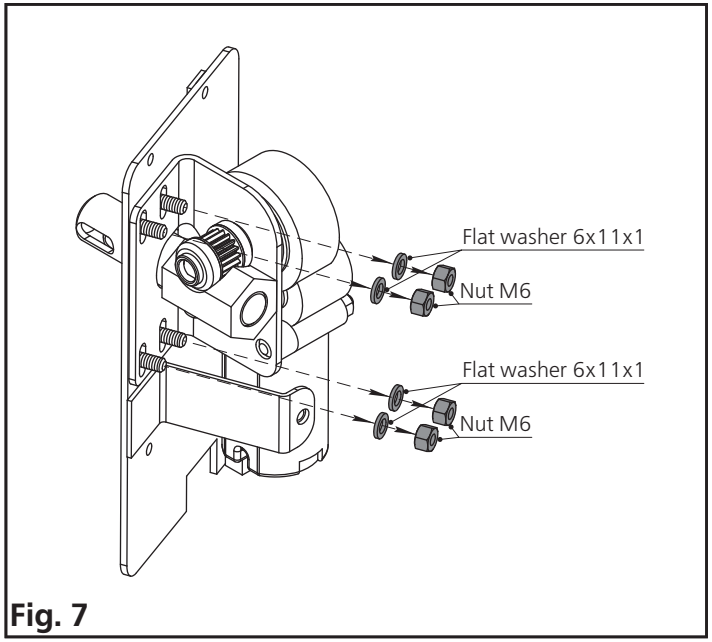


Fig. 7

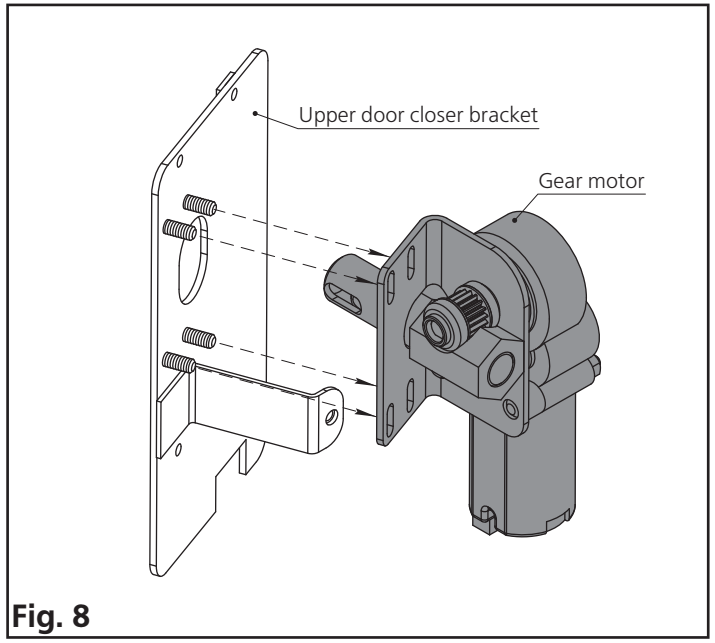


Fig. 8

3.2 INSTALLATION AND CONNECTION OF THE UPPER DOOR CLOSER

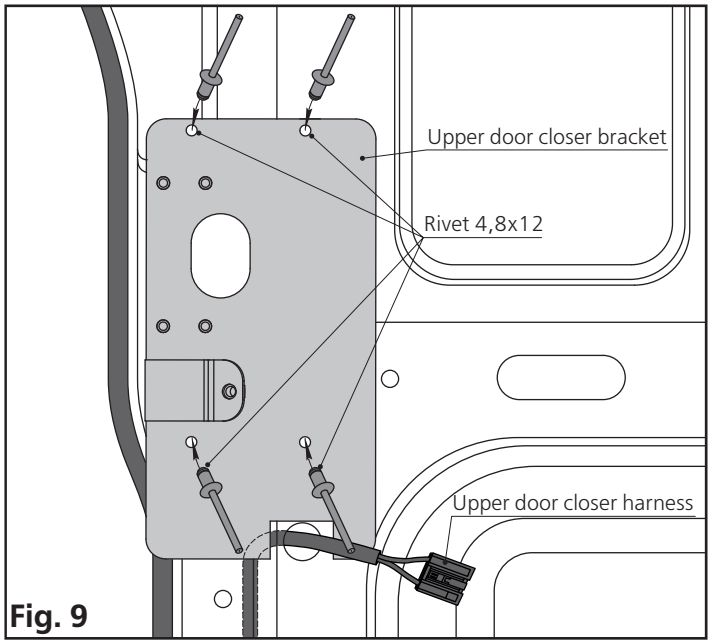


Fig. 9

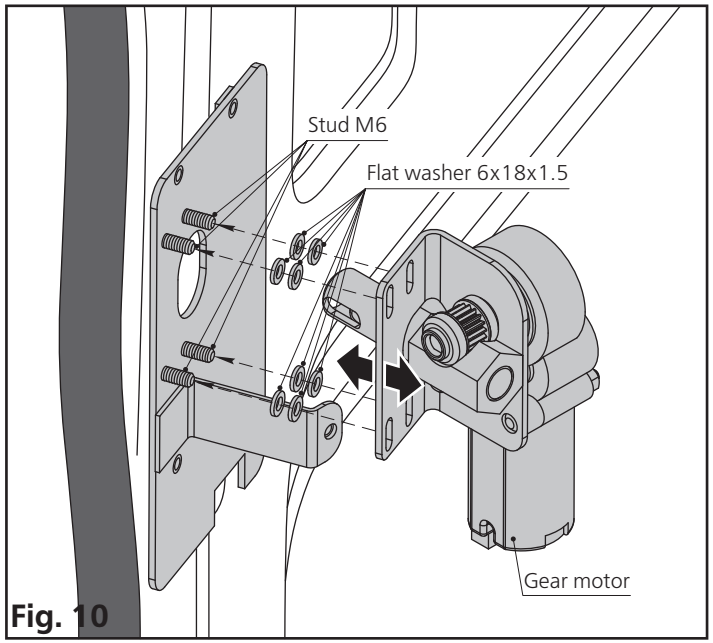


Fig. 10

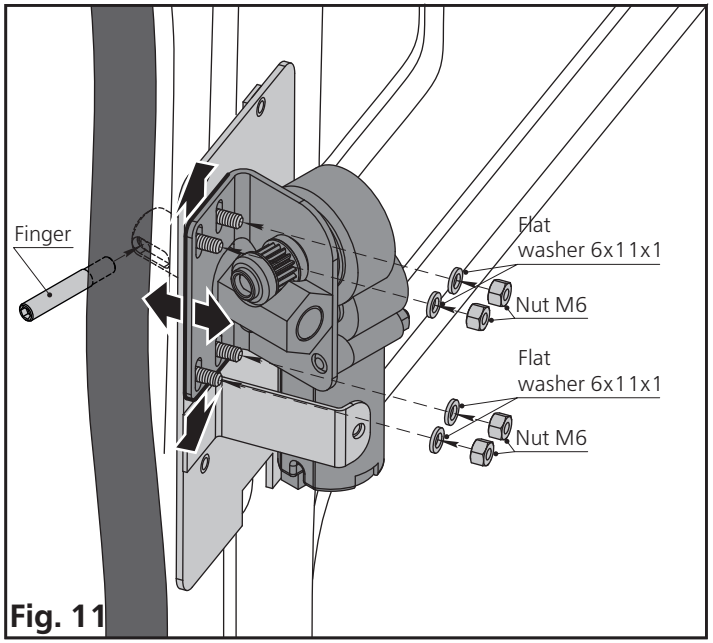


Fig. 11

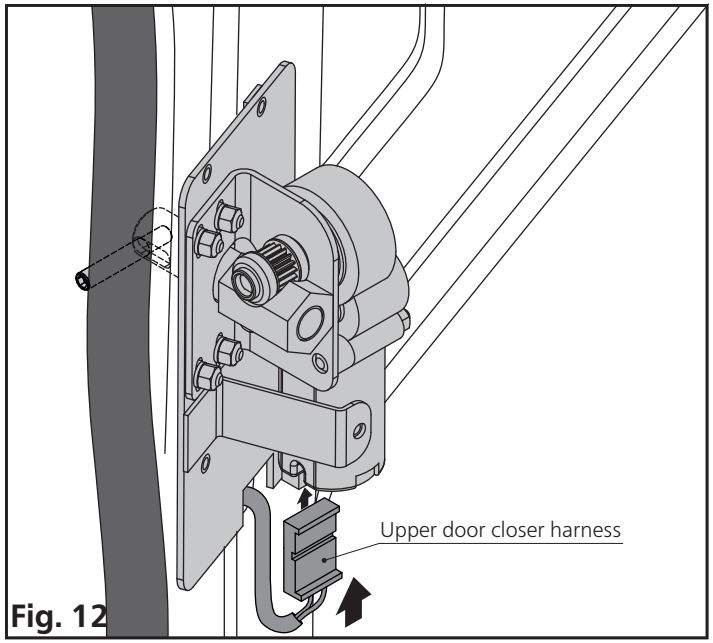
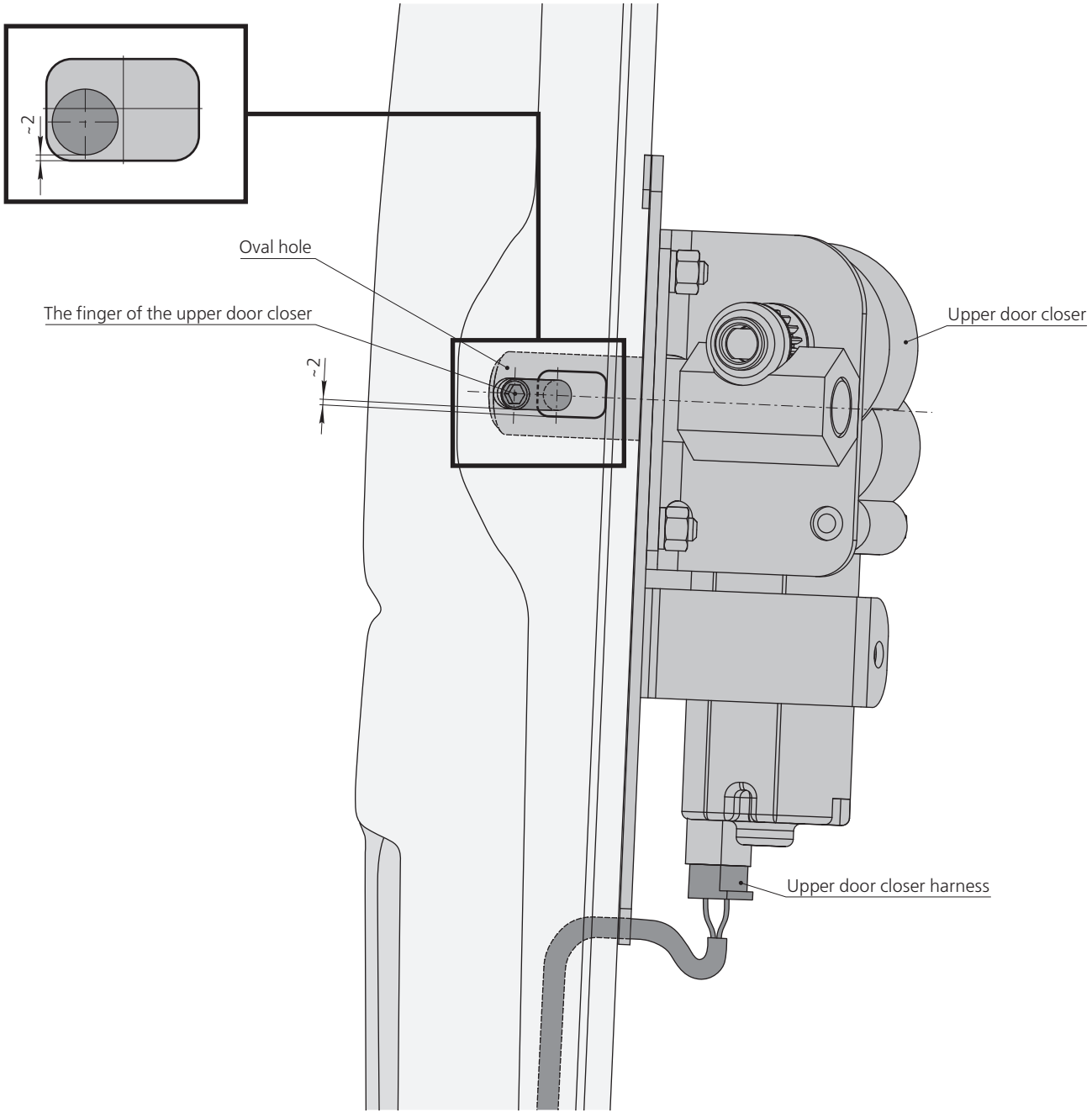


Fig. 12

1. Rivet the door closer bracket to the door opening post with M4.8x12 rivets (Fig. 9).
2. Put the gear motor on the studs M6 of the bracket (Fig. 10) and fasten the finger to the door closer through the oval hole on the body rack (Fig. 11).
3. Fasten the gear motor to the upper door closer bracket using 6x18 distance washers and adjusting holes so that the finger is closer to the left edge of the hole (Fig. 10, 11, 12).
4. It is also necessary to observe the technological gap between the finger and the lower edge of the oval hole ~2 mm (fig. on page 15).
5. Pull the harness of the door closer of the upper body post through the technical hole Ø10 mm (Fig. 9) and make the connection (connection) of the pads (fig. on page 15).


~2
Oval hole
The finger of the upper door closer
~2
Upper door closer
Upper door closer harness

3.3 INSTALLATION OF THE LOWER DOOR CLOSER

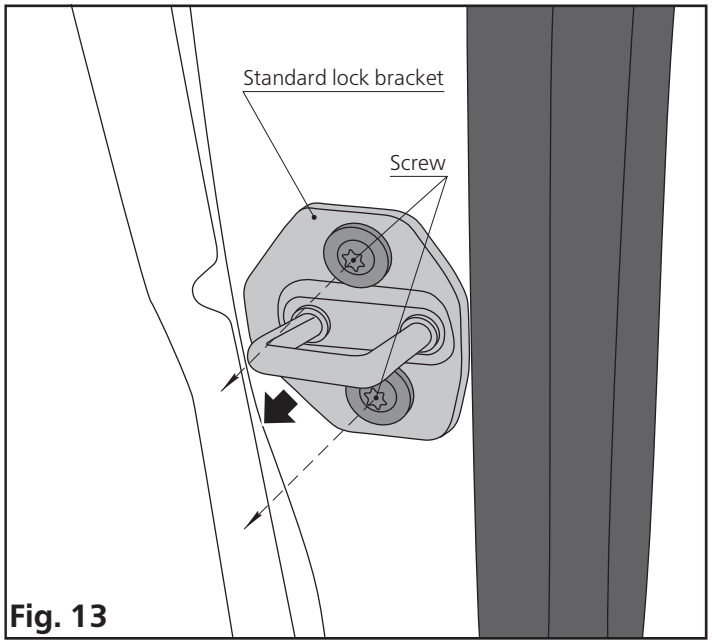


Fig. 13

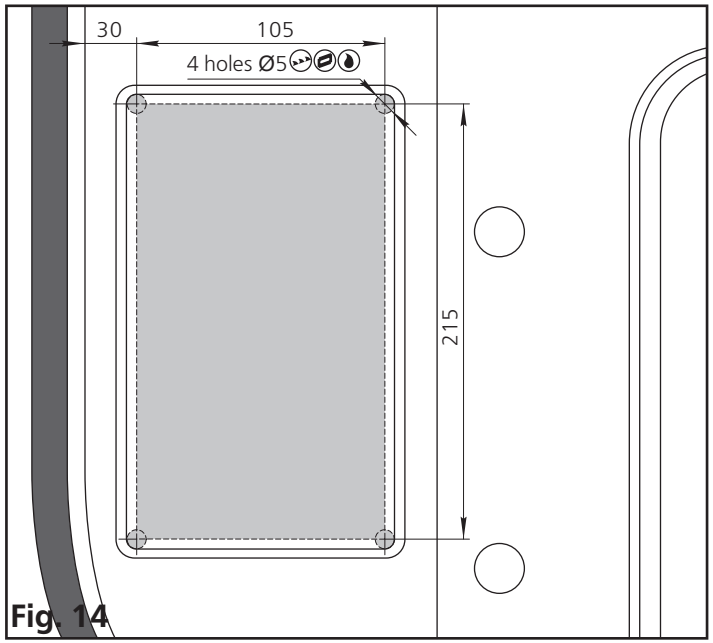


Fig. 14

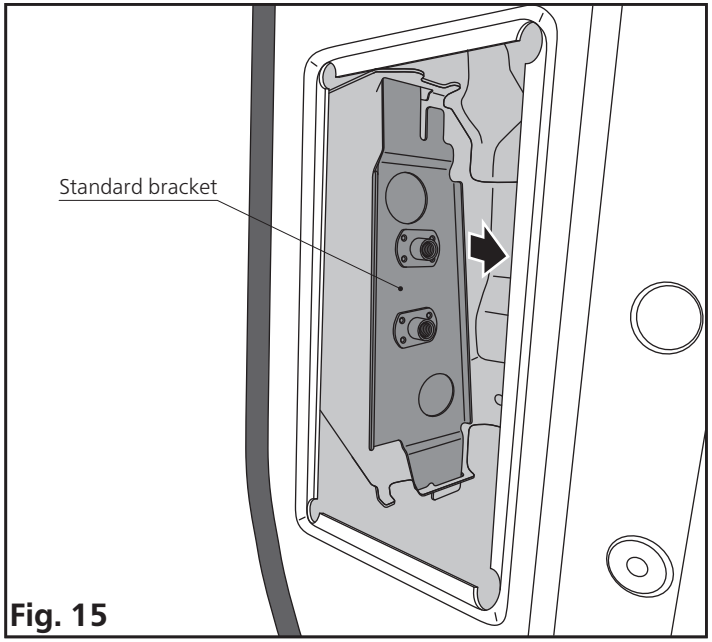


Fig. 15

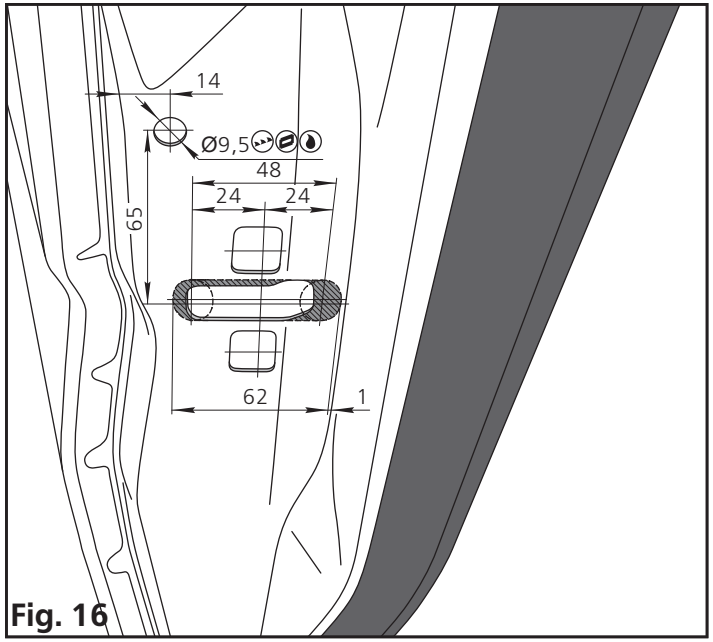


Fig. 16

1. Remove the standard lock bracket by unscrewing the two standard bracket mounting screws (Fig. 13).
2. Make a rectangular cutout with an angle grinder in the body rack (Fig. 14).
3. Dismantle the standard bracket (Fig. 15 and Fig. 17, page 17).
4. Modify one hole in the body rack (Fig. 16).
5. Drill a hole Ø9.5 mm on the body post according to the specified dimensions (Fig. 16).

1. Fix the end position sensor (Fig. 17, 18).
2. Remove the pressure plate on the lower door closer by unscrewing the two screws M8x16 (Fig. 19).

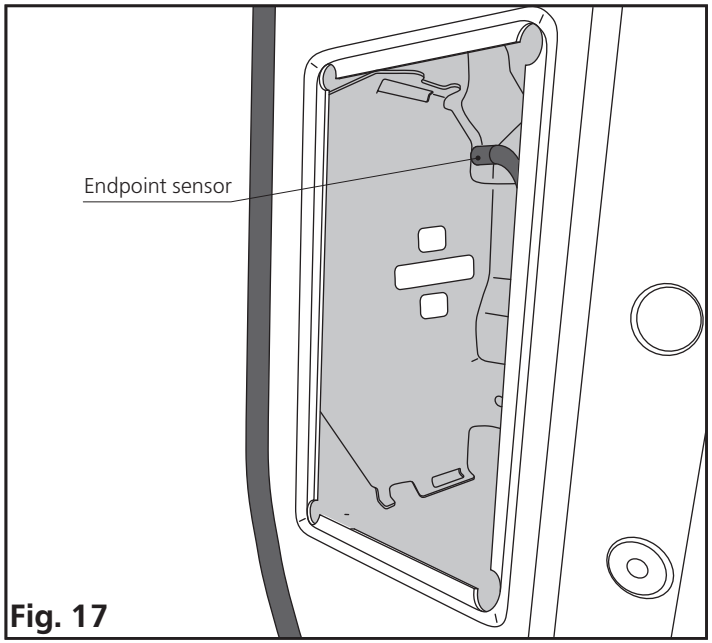


Fig. 17

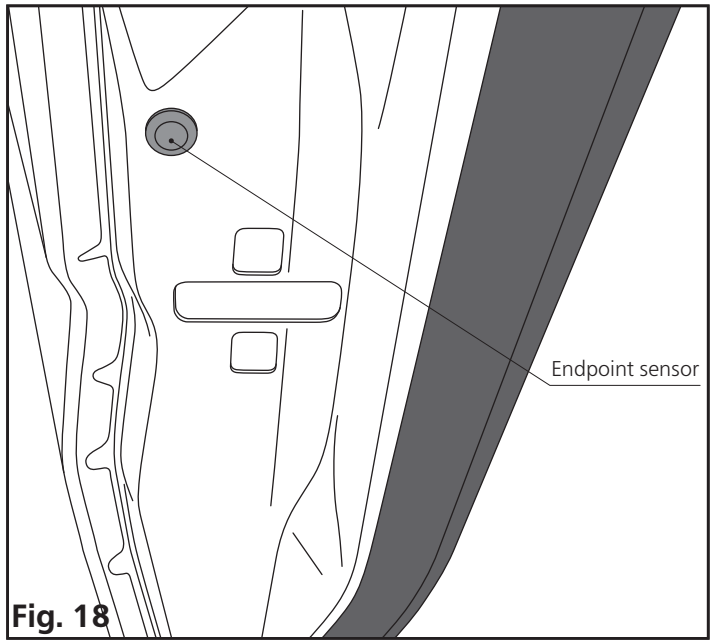


Fig. 18

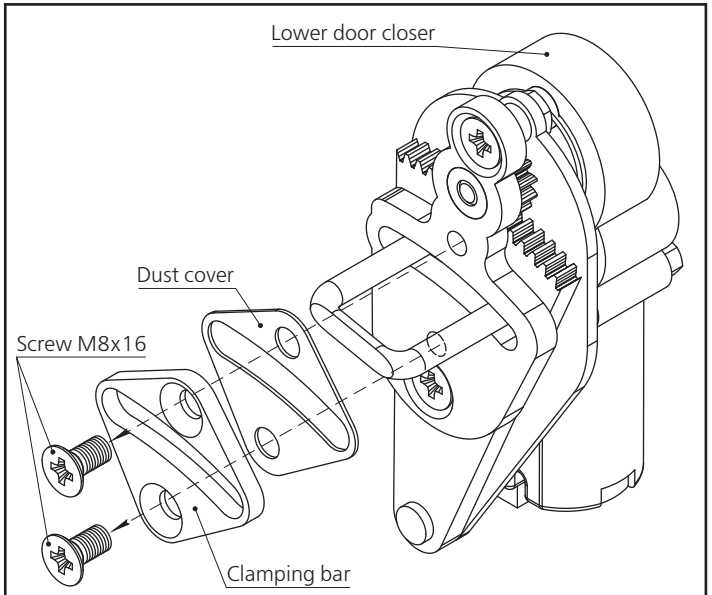


Fig. 19

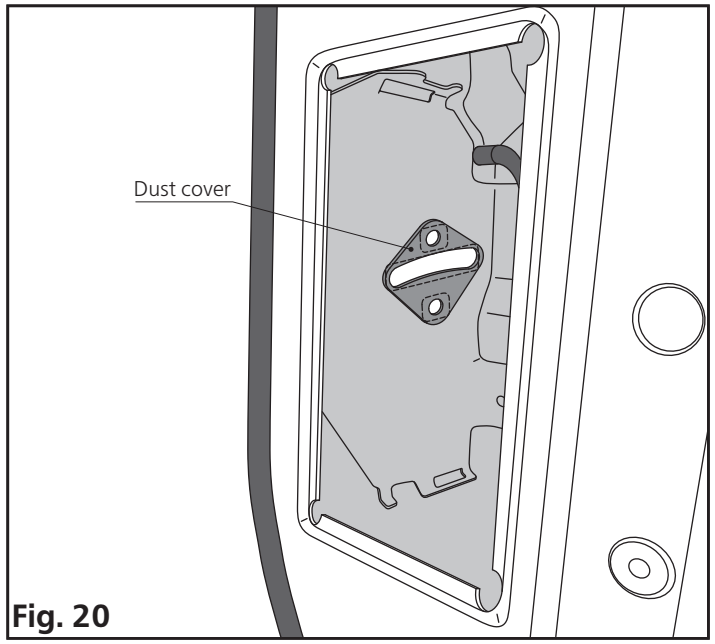


Fig. 20

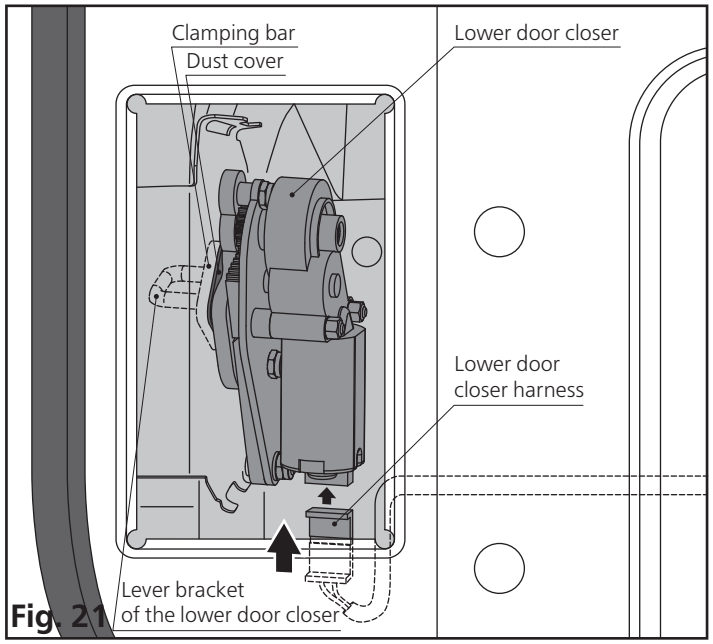


Fig. 21

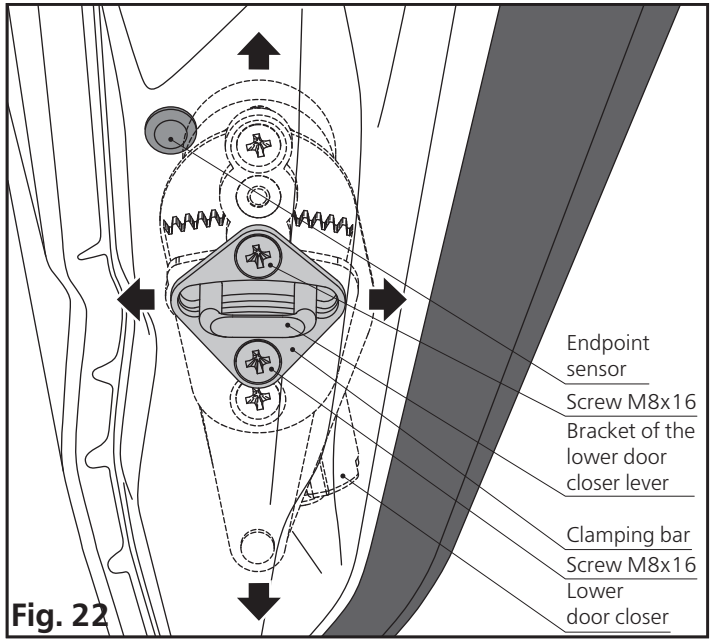


Fig. 22

NOTE

When installing the lower door closer, the dust cover must be placed on the inside of the body pillar (Fig. 20).

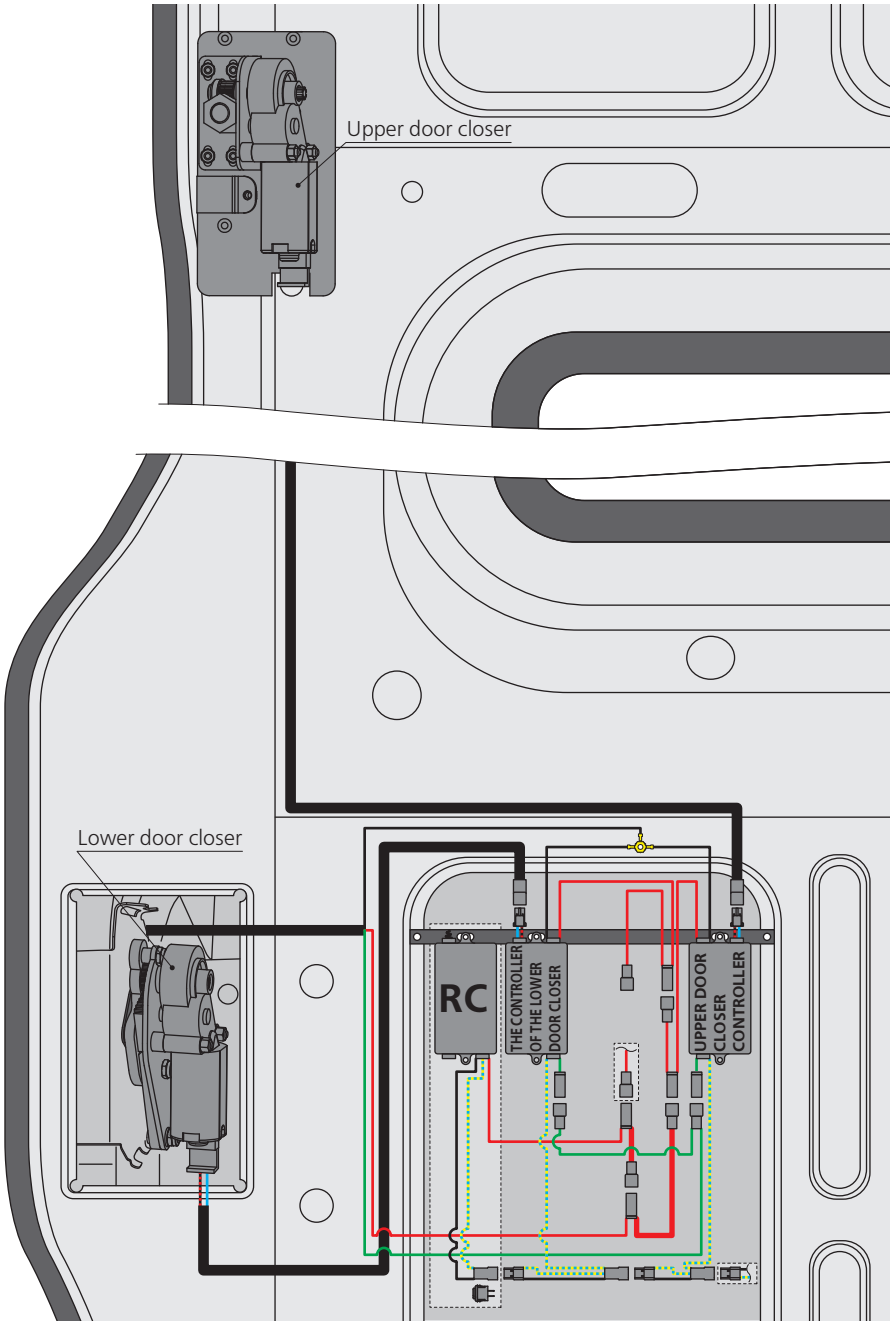
Insert the lower door closer into the opening of the body pillar and fix it with two M8x16 screws (Fig. 21, 22).

NOTE

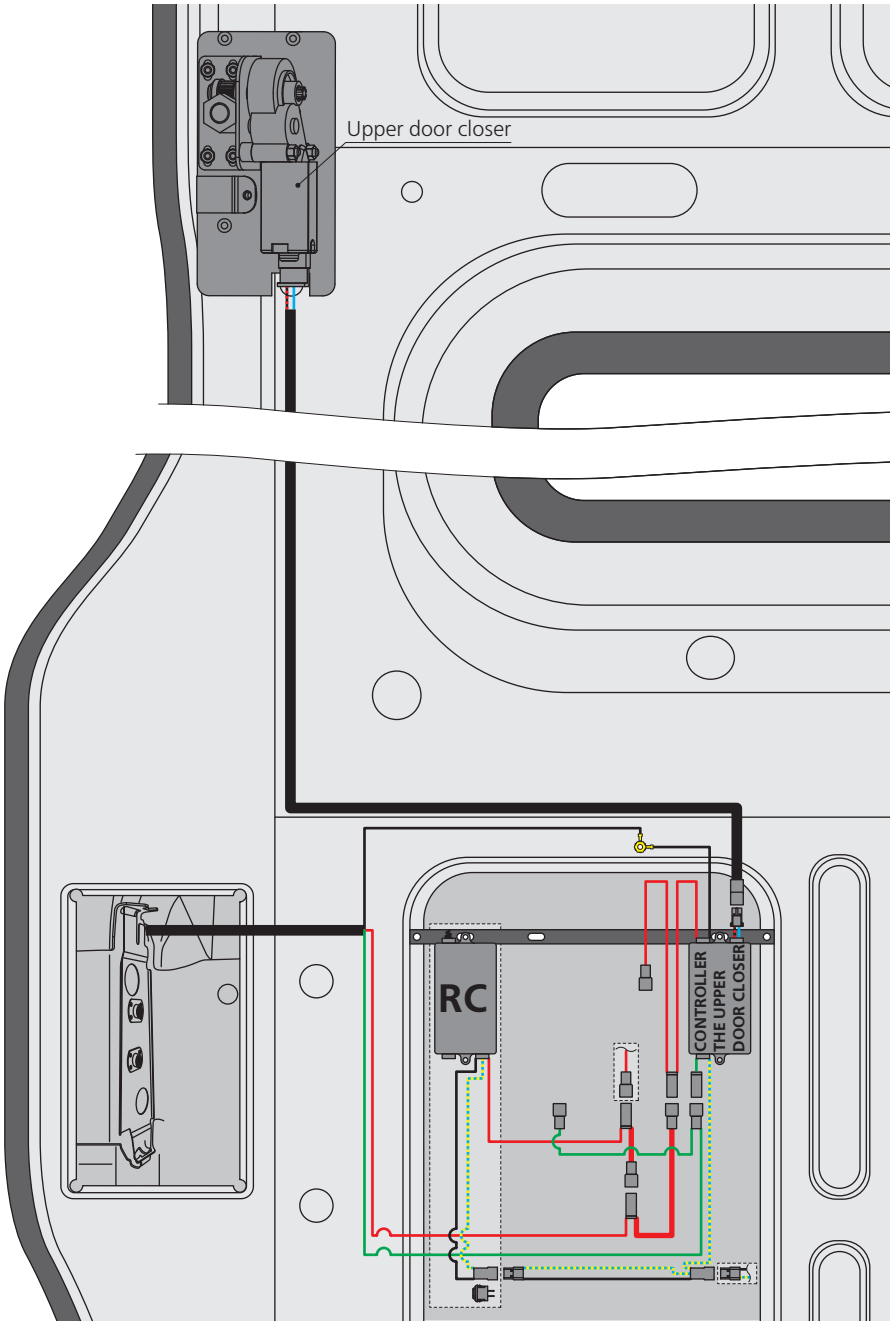
If necessary, adjust the position of the door closer by loosening the screws (Fig. 22).

1. The recommended placement of the controllers of the upper and lower closers is shown in the figure.

2. Connect the upper and lower closers according to the wiring diagram on page 9.



4.2 CONNECTING THE UPPER DOOR CLOSER



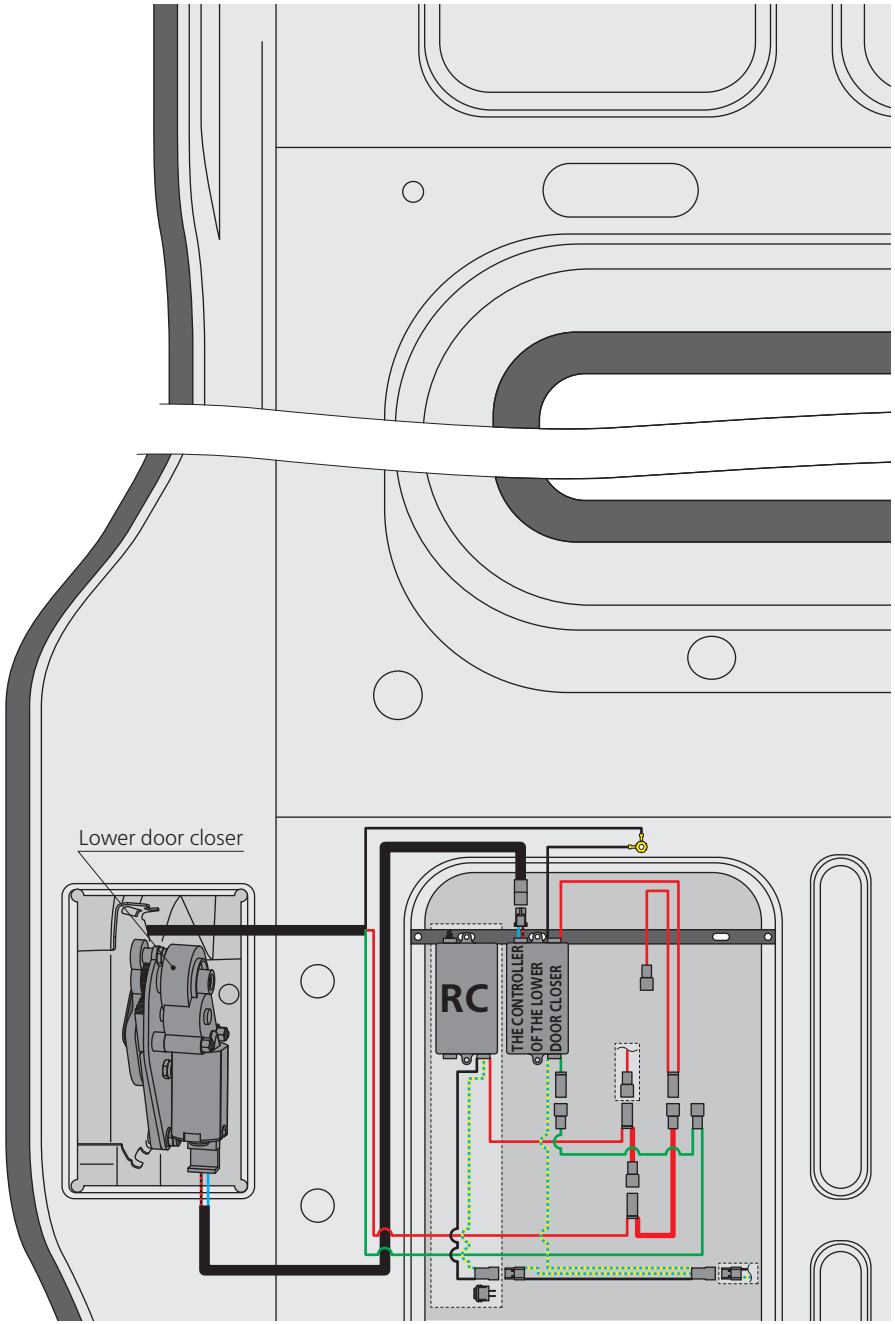
1. The recommended placement of the upper door closer controller is shown in the figure.

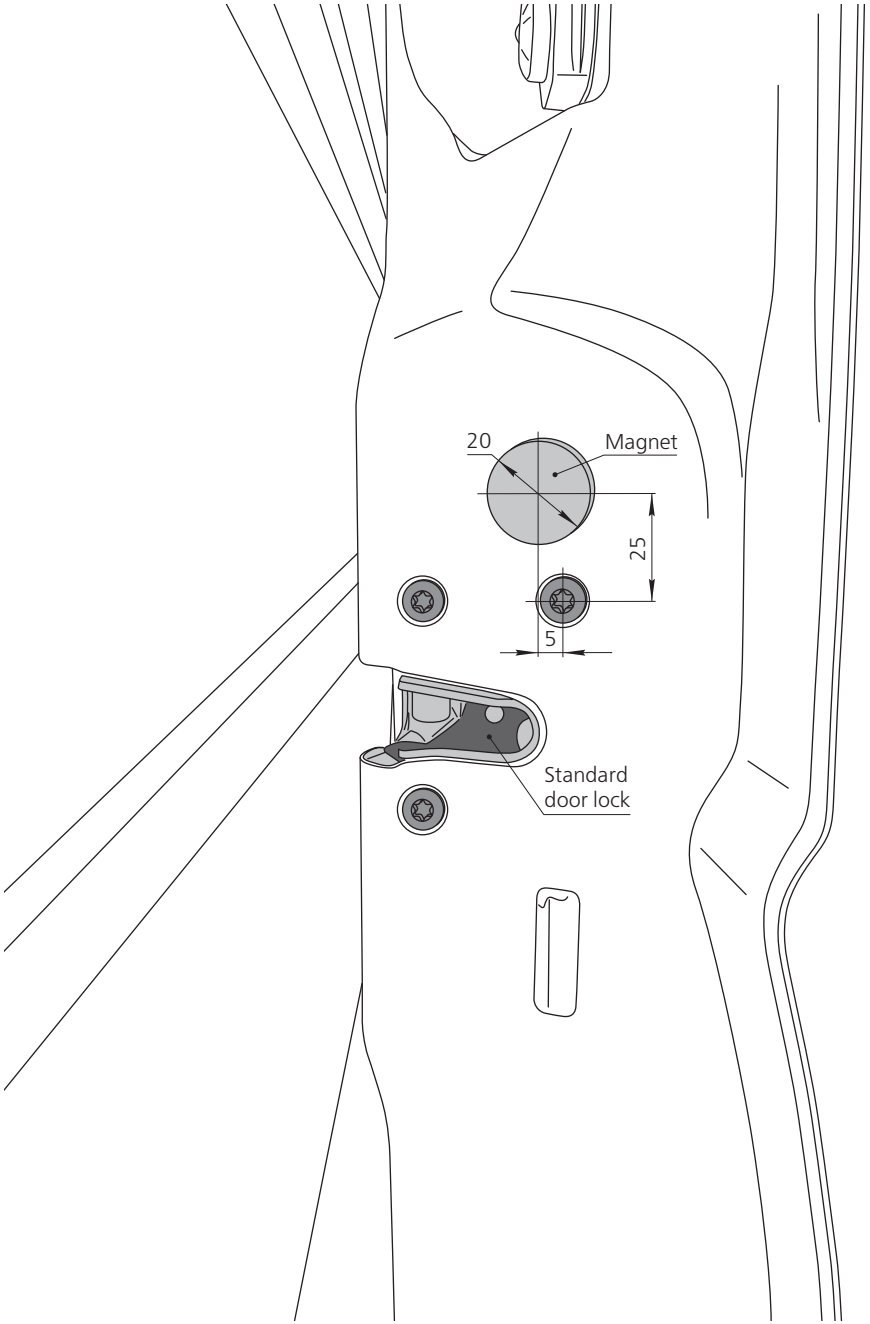
2. Connect the upper door closer according to the connection diagram on page 10.

4.3 CONNECTION OF THE LOWER DOOR CLOSER

1. The recommended placement of the lower door closer controller is shown in the figure.

2. Connect the lower door closer according to the wiring diagram on page 11.





CAUTION

Adjust the position of the magnet so that the door closer begins to tighten the door with the lock fully closed (by 2 clicks) and tightens the door completely in the opening.

Place the magnet according to the recommended dimensions on the back of the door and glue the magnet to glue 88, as shown in the figure.

FIRST START

Supply +12V power. At the same time, the closers should slide in and tighten the door into the opening.

Close the sliding door. At the same time, the closers should slide in and tighten the door into the opening.

Open the sliding door. At the same time, the closers should slide.

CAUTION

If the sliding door is not sufficiently tightened into the doorway or, conversely, excessively retracted into the doorway, it is necessary to adjust the position of the upper door closers (fig. 11, page 14) and lower (fig. 22, page 18)

1. Fix the cover of the upper door closer using the M6x12 screw (Fig. 23).

2. If necessary, fix the lid of the lower door closer to the specified place using four screws 4,2x16 (Fig. 24).

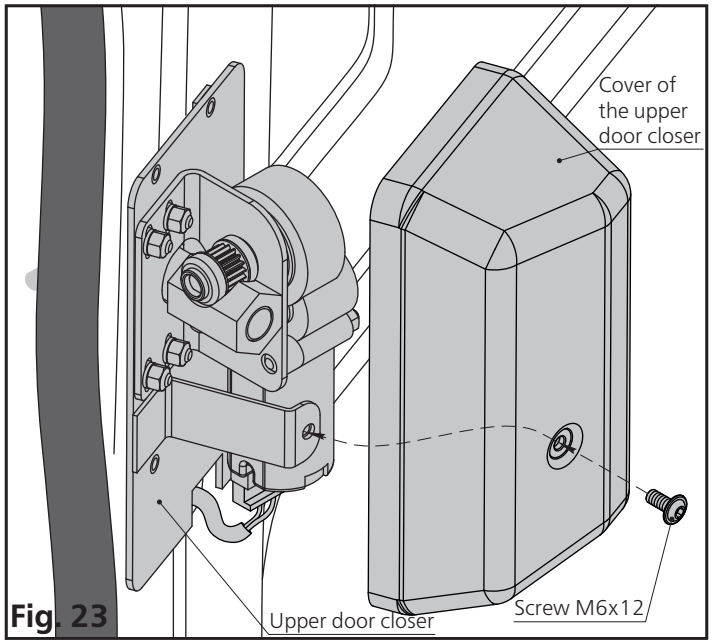


Fig. 23

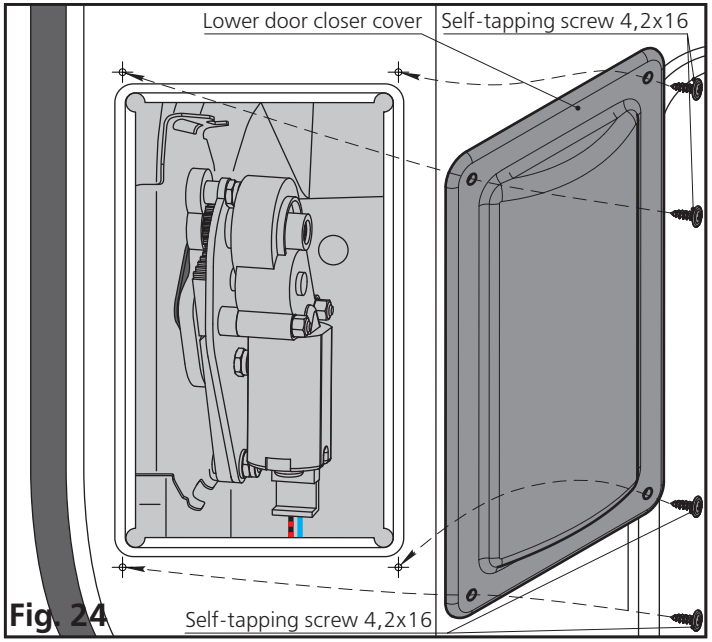


Fig. 24

https://busautodoor.com