Assembly Instructions - Dahl docking system

Appendix to User Manual

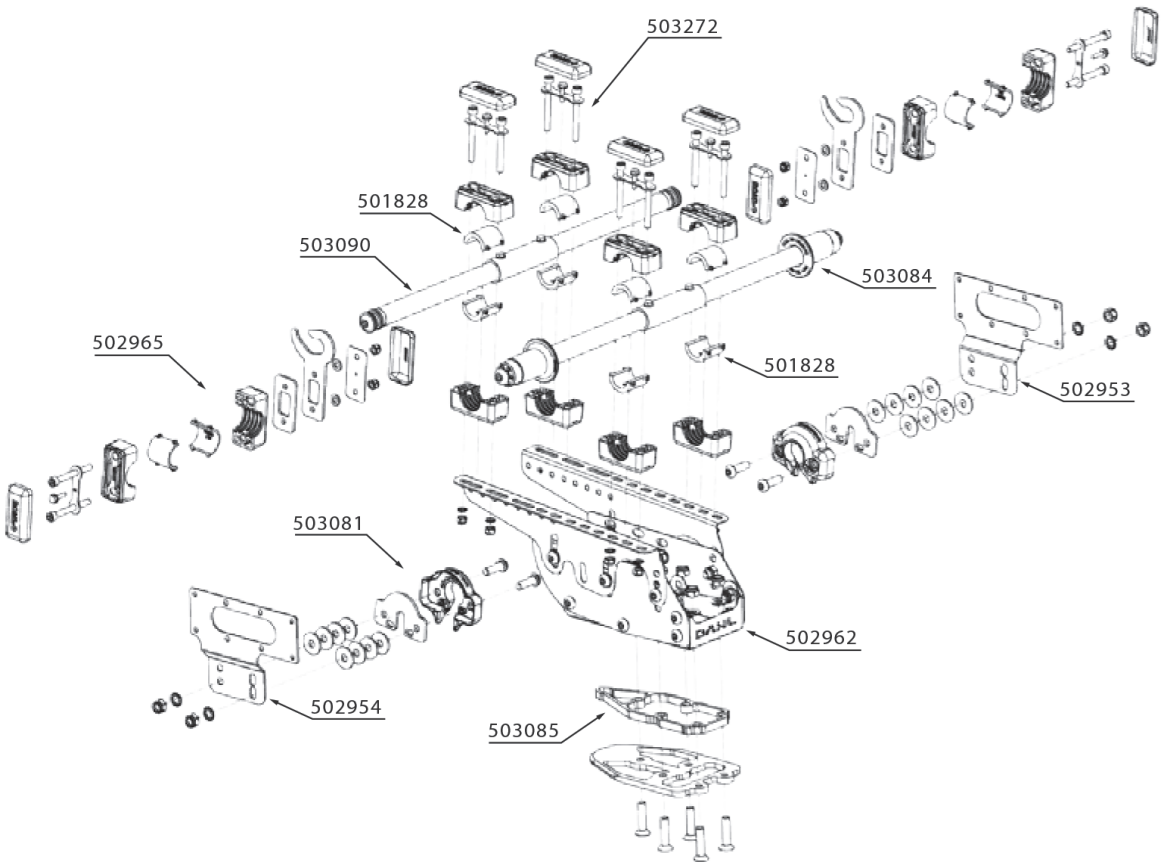
Dahl MADS adaptation kit #503043

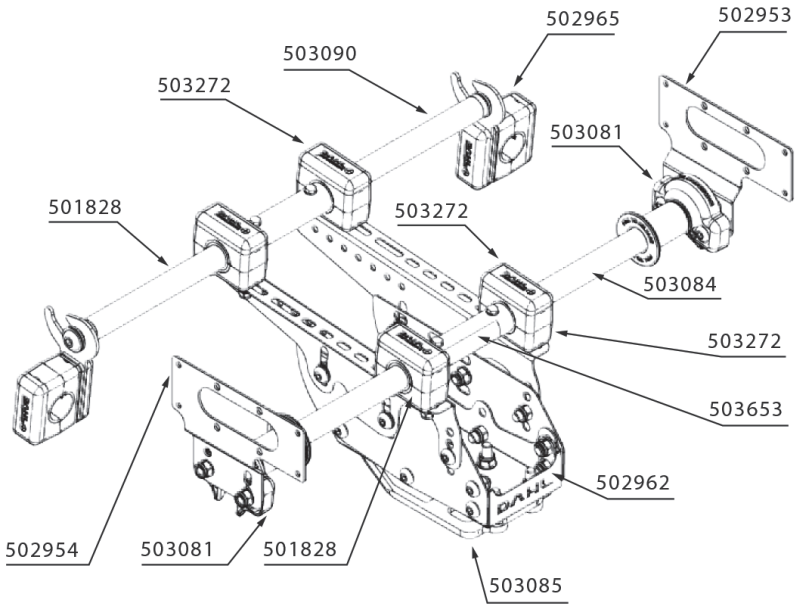
Doc. nr. 97702-1 Rev A 2026-11-02

Intended use

The Dahl docking system allows HD Force to be used as a seat in a motor vehicle that has been equipped with a Dahl docking station.

Parts included

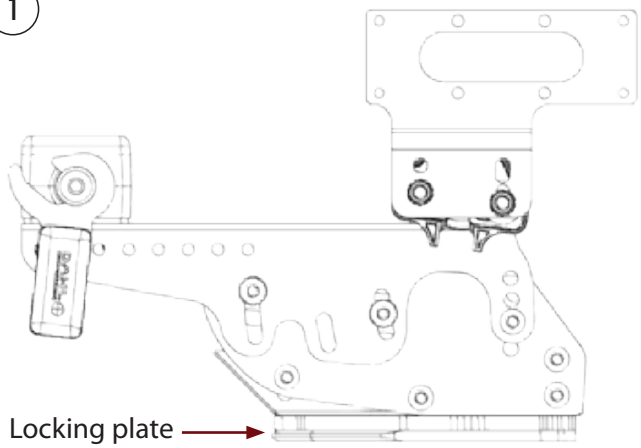




Overview

The locking plate must be mounted horizontally for the docking station to function properly (see Figure 1).

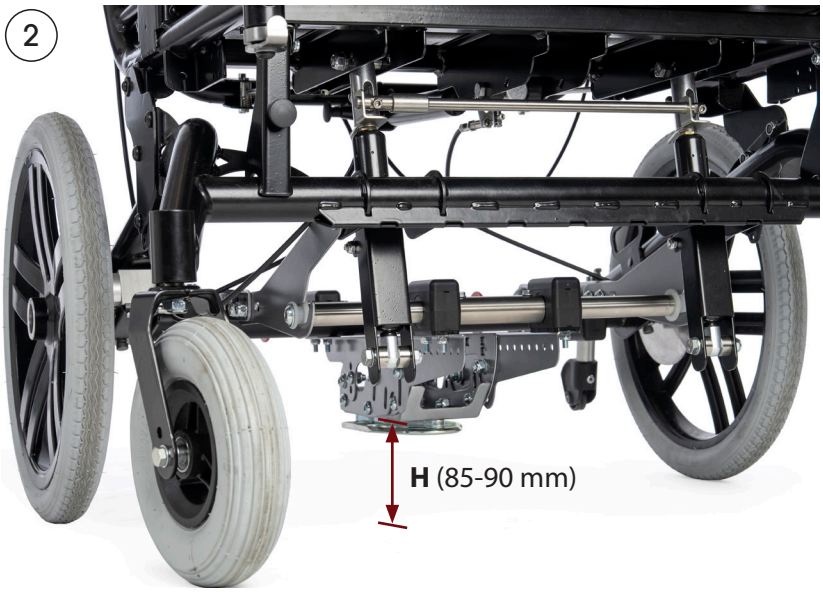
1



When the assembly process is completed, measure the height **H** as seen in Figure 2 with the user sitting in the wheelchair.

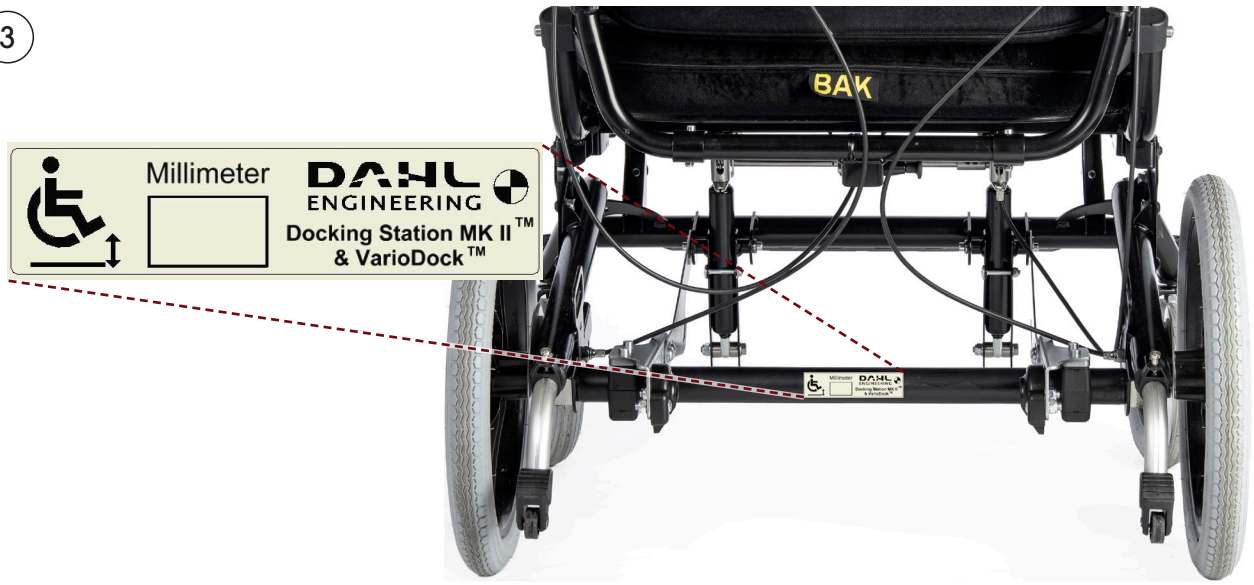
Be sure that the tire pressure is correct before measuring.

2



Record the measured height **H minus 2 mm** on the supplied sticker 503653 and place as shown in Figure 3.

3

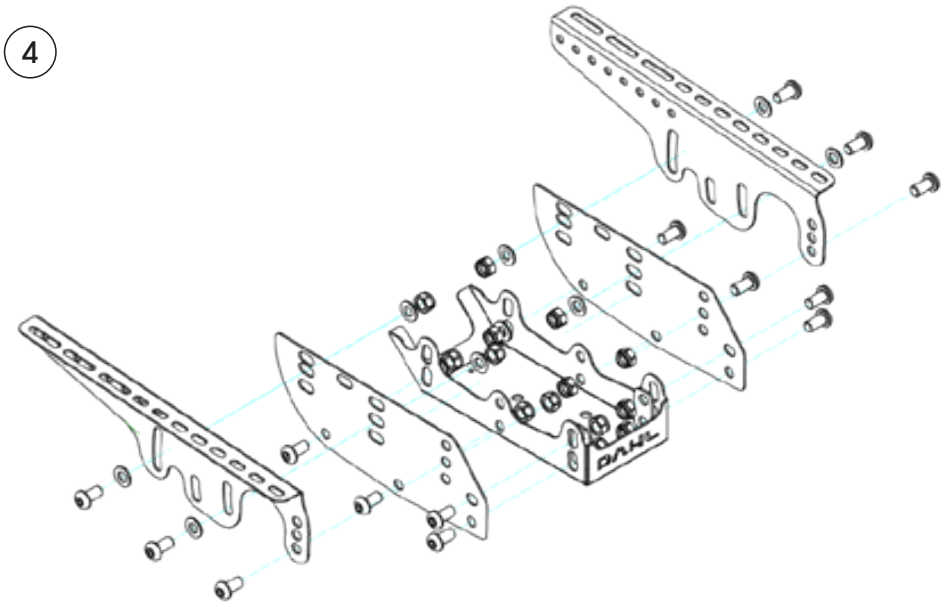


Assembly

Note: A qualified and experienced technician must carry out the installation of the Dahl MADS™ adaptation system.

④ Considering the wheelchair's configuration and the resulting ground clearance of the locking plate, assemble 502962. Do not completely tighten the screws before the final adjustment has been determined.

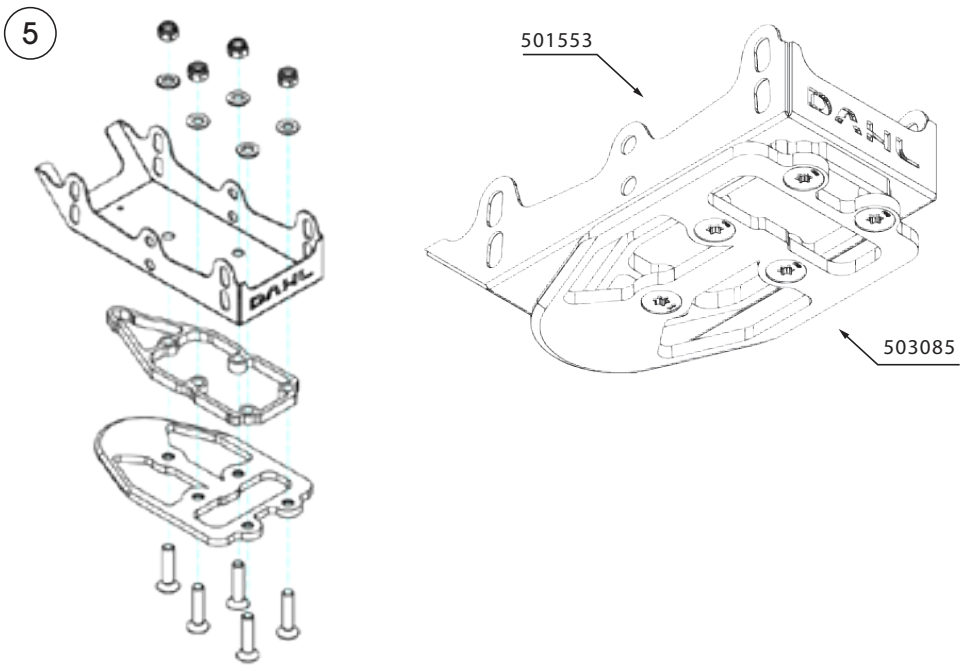
Tightening Torque 20-25 Nm.



⑤ Assemble 501553. Do not completely tighten the screws before the final adjustment has been determined.

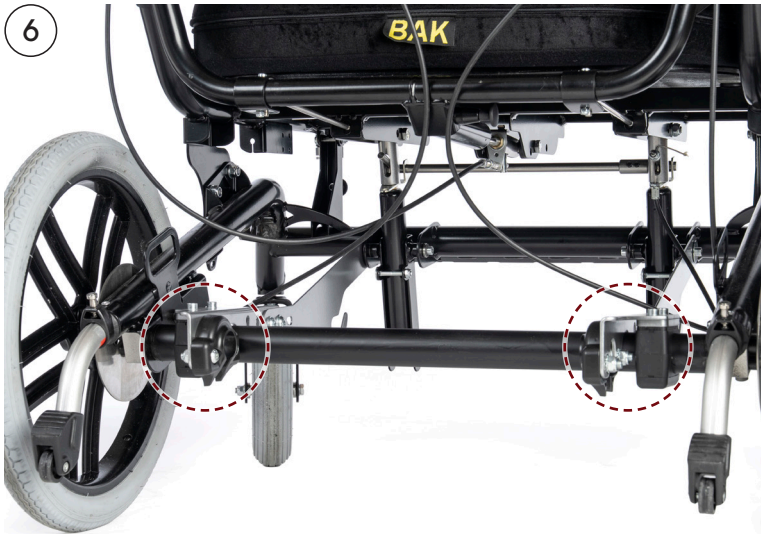
Tightening Torque 16-18 Nm.

WARNING: Do not use any other bolts for the locking plate than those supplied from Dahl Engineering (part no. 502800, quality 14.9, torx key size 27). Standard countersunk M8 bolts will not be strong enough in the event of a collision.



⑥ 503081 are assembled with brackets 502953 and 502954. Tightening Torque 5 Nm.
The parts are mounted symetrically opposite on each side.

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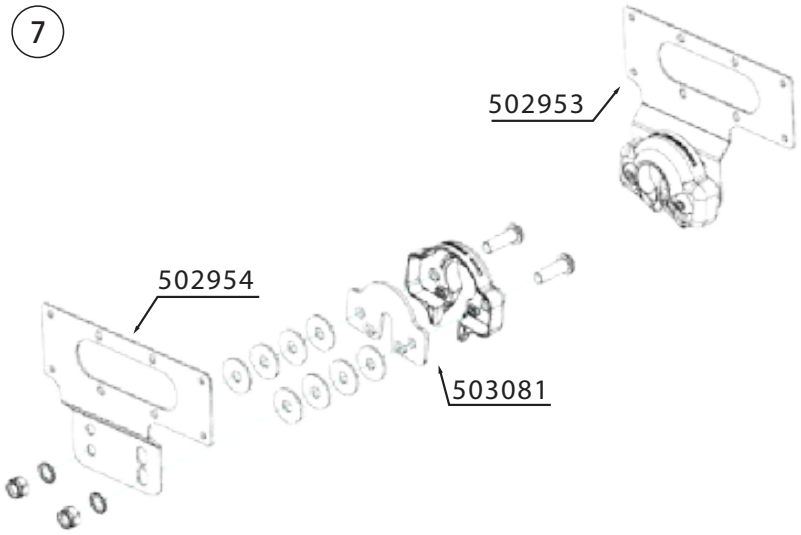




⑦ The slotted holes on brackets 502953 and 502954 are used for fine-adjustment of bracket 503081.

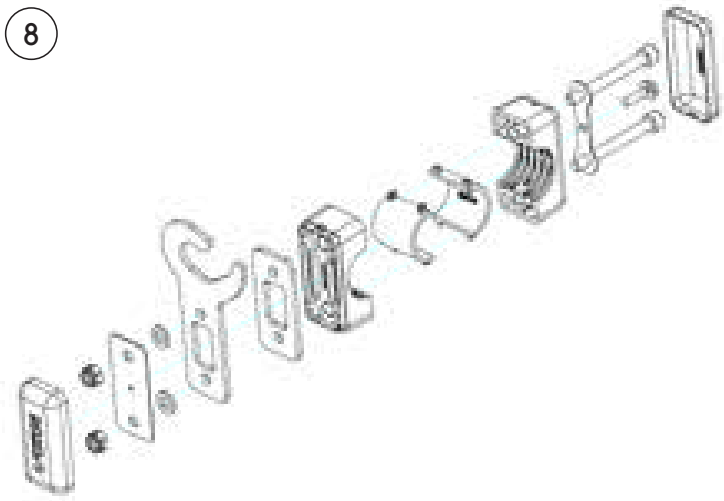
This is important to ensure that the red plungers and bolts of the pipe lock will glide smoothly in and out of the bracket 502953 and 502954. Tighten screws with 5 Nm.

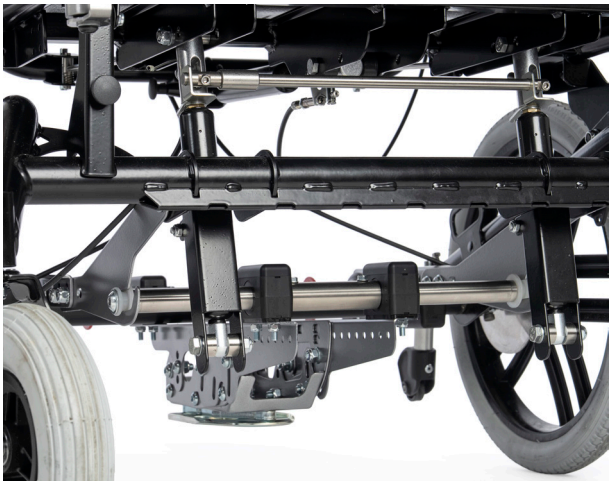
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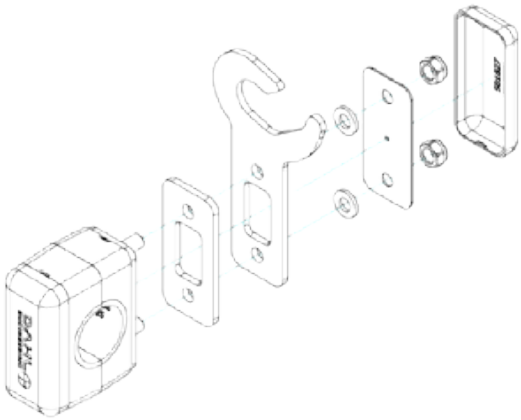


⑧ The thread forming screws 502729 (M5x16 mm) must be installed as locks against rotation.

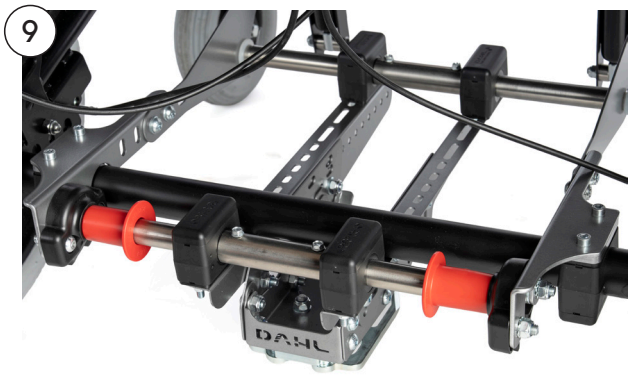
After all elements have been assembled and adjusted, carry out a final functional test. Next, Ø4 mm holes must be drilled through the plastic clamps and the wheelchair metal tube. Tighten screws with 4 Nm.

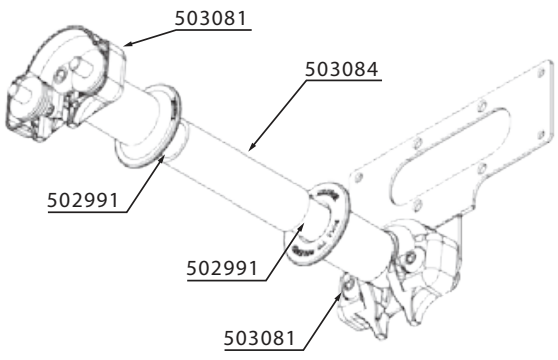






⑨ Cut the tubes 502991 to fit with the locking sockets 503081 - see 503084.





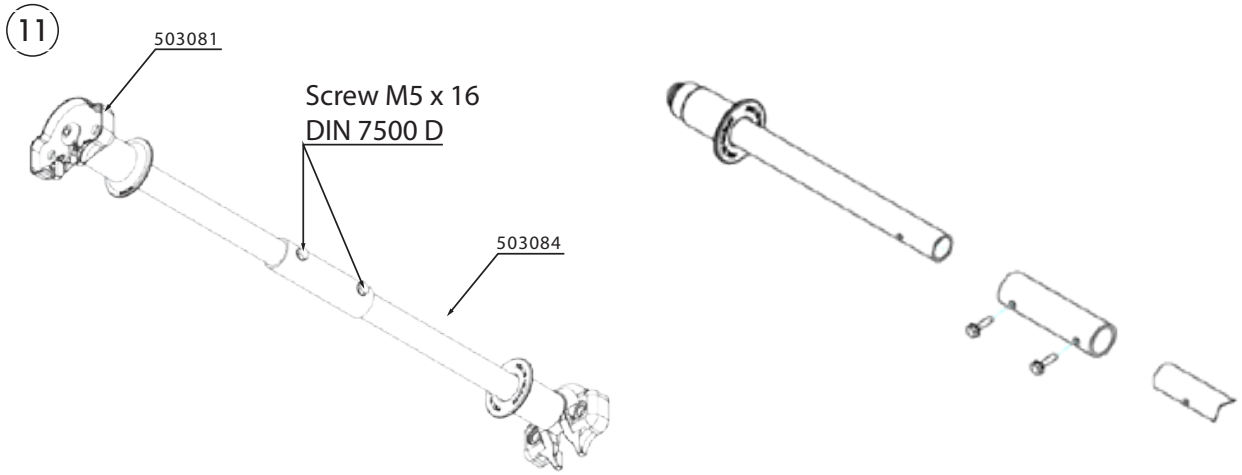
⑩ Cut tubes 502991 to fit the specific wheelchair, so the screws that are mounted in both ends of 503084 fit to the total outer measurement between brackets 501834, after those have been installed on the wheelchair.

Add 2 mm to the measured total outer distance between brackets 501384 to ensure that the screws can glide easily into the brackets.



⑪ After cutting the tubes, drill Ø4mm holes into them, so that they will fit with the positions of the fixation holes in the connecting tube 503083.

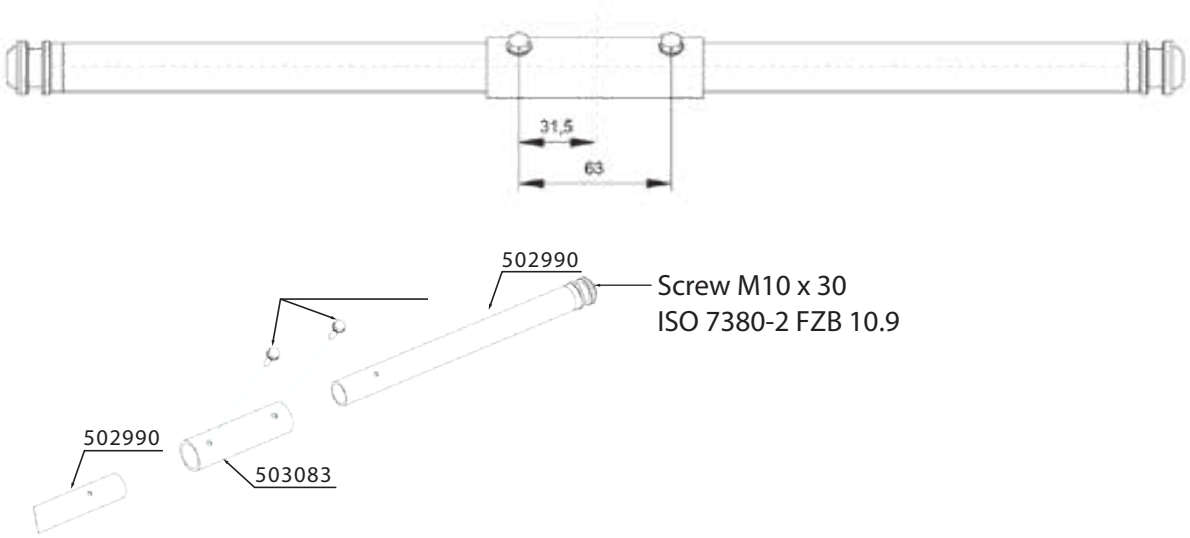
Fit self-tapping screws 502729 (M5 x 16 mm DIN 7500 D) and tighten these with tightening torque 4 Nm.



⑫ After cutting the tubes, drill Ø4mm holes into them, so that they will fit with the positions of the fixation holes in the connecting tube 503083.

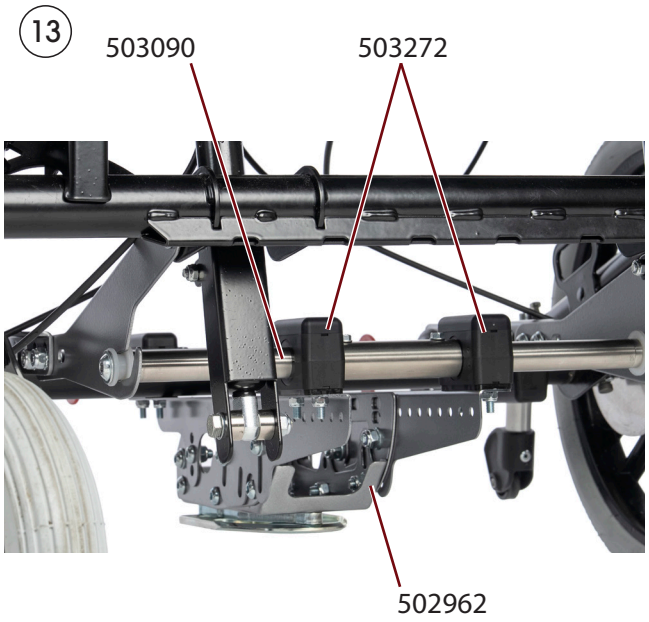
Fit self-tapping screws 502729 (M5 x 16 mm DIN 7500 D) and tighten these with tightening torque 4 Nm.

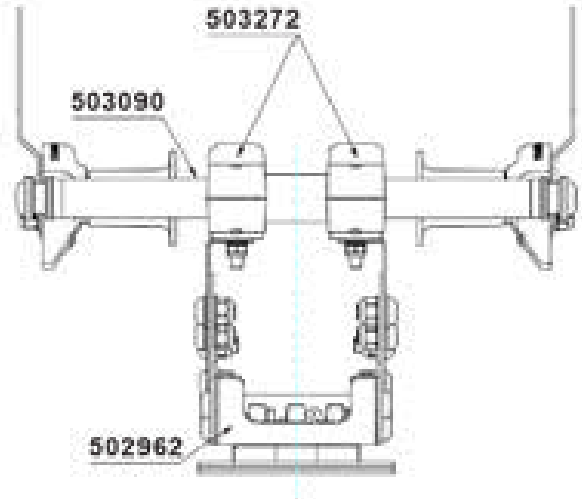
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⑬ Mount cross tube 503090 centered on console 502962 using the clamps 503272.

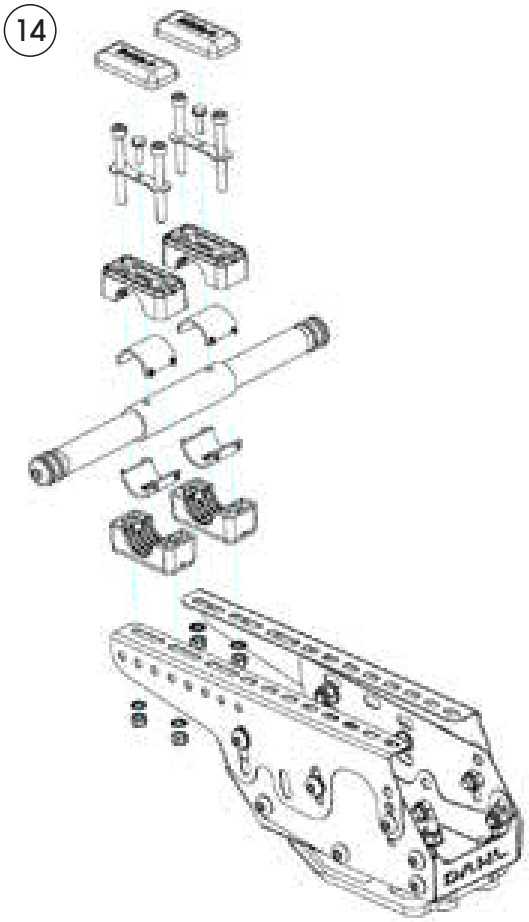
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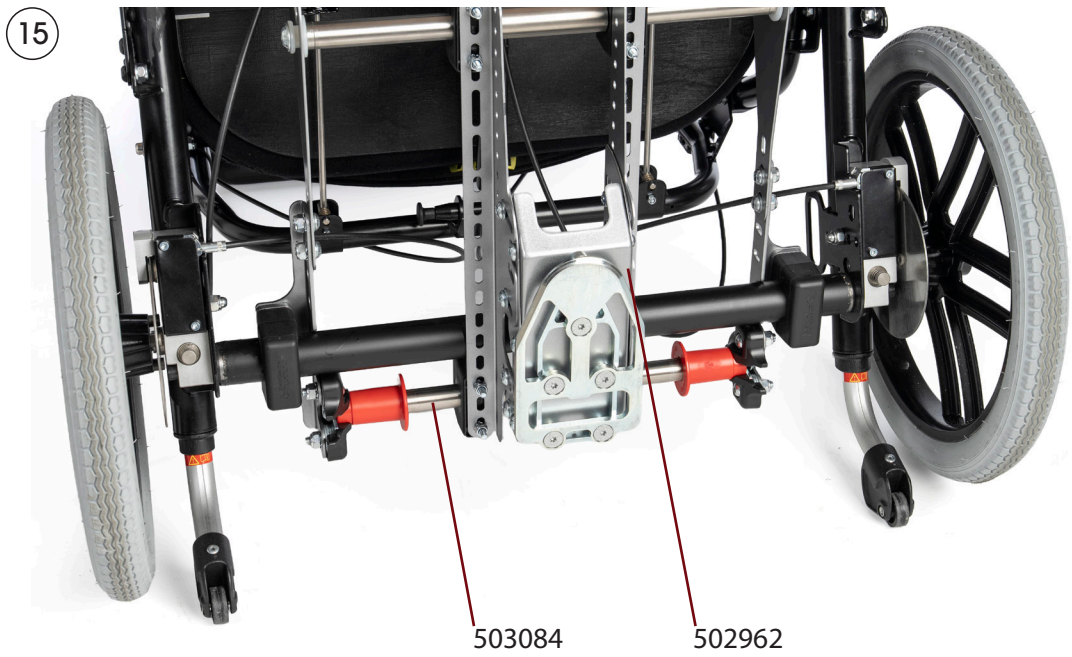


⑭ The thread forming screws 502729 (M5x16) must be installed as locks against rotation.

After all elements have been assembled and adjusted, carry out a final functional test, whereafter Ø4 mm holes must be drilled through the plastic clamps and the wheelchair metal tube. Tighten screws with 4 Nm.



⑮ Mount cross tube with locks 503084 centered on console 502962 using the clamps 503272.



⚠ Incorrect installation of the Mads adaptation kit on the wheelchair could cause serious injury or death in a crash. Always check the specific wheelchair manufacturer's user and installation guides to assure the correct parts are properly installed on your specific wheelchair for use with the Dahl Docking Station. Do not drive the vehicle until wheelchair and user are correctly secured.

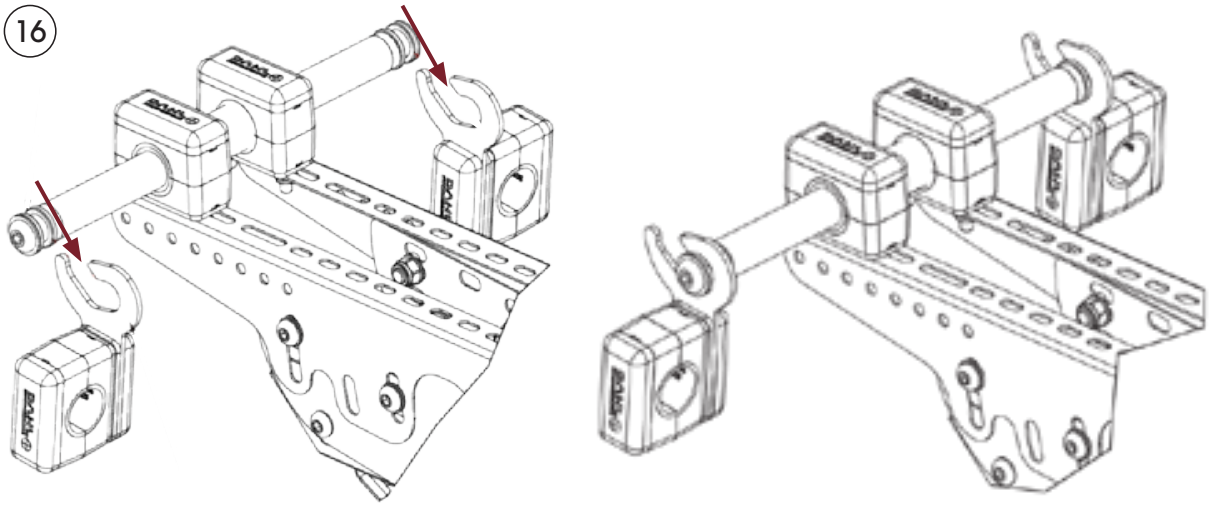
Use

Attach the Dahl docking console to the wheelchair as follows:

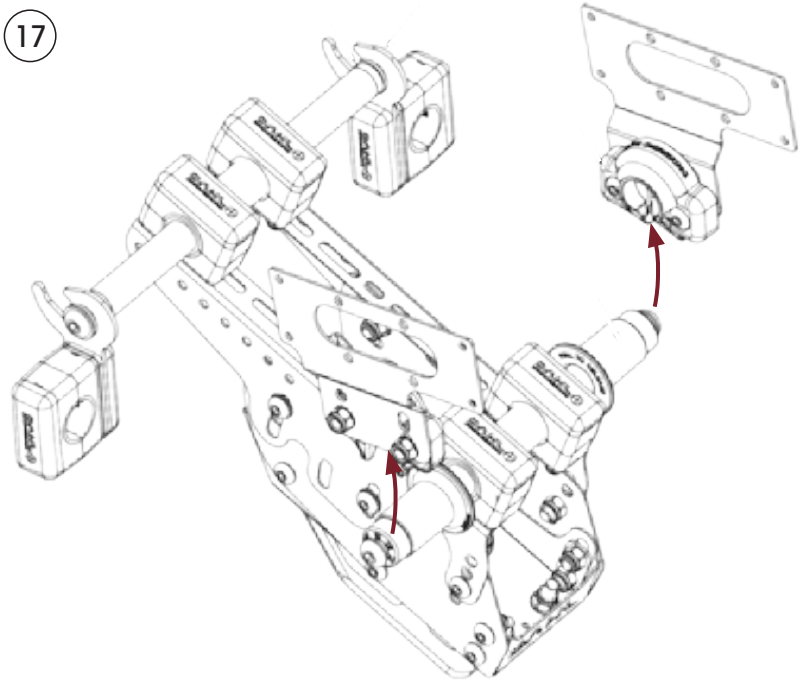
- Place the plastic rolls into the hook openings on both sides and pull the console back until the plastic rolls glide into the bottom of the hooks on both sides as seen in Figure (16).
- When the plastic rolls are sitting correctly in the hooks, swing up the console with the two red tube locks into the locking brackets on both sides per Figure (17).
- When the screw heads (in the ends of the red locking plungers) are positioned correctly, the spring-loaded red locking mechanisms must plunge into the sockets of the locking brackets (Figure (18)).

NOTE: The locking tube is not secure until the ends of the red locking plungers are fully inserted into the sockets of the locking brackets. When locked the ends will no longer be visible. Check that it has been completely locked by pushing the red locking plungers completely out towards the sockets (Figure (18)).

(16)

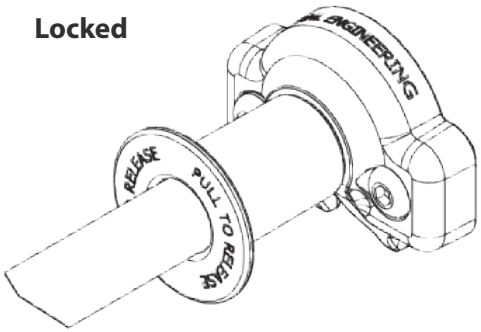


(17)

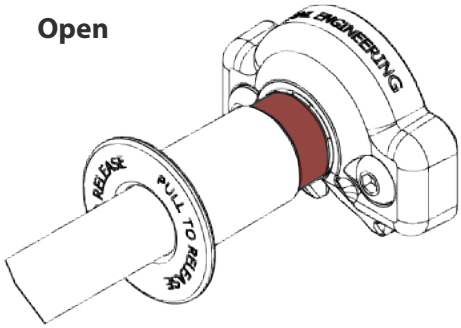


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Locked

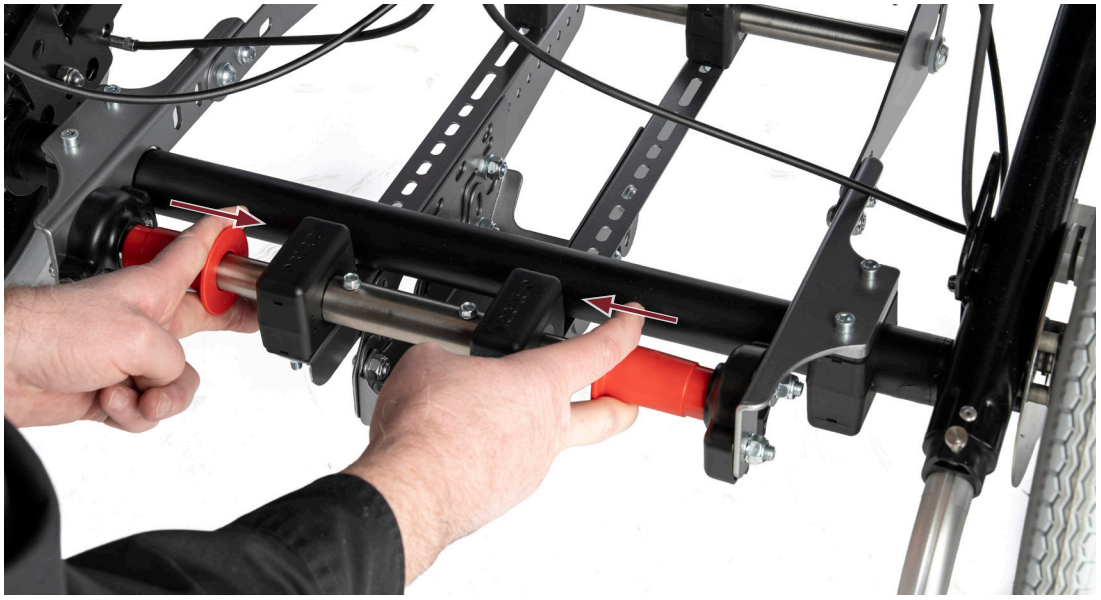


Open



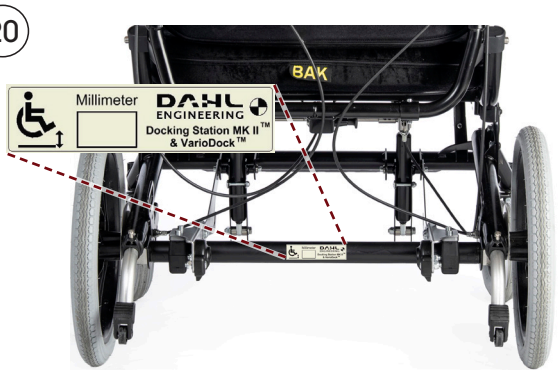
To release the console carry out the same steps in reverse, after the red springloaded locking plungers have been unlocked by sliding them inwards towards each other (Figure 19).

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Refer to the label on the rear cross tube of the wheel frame, see Figure 20. The height noted on the label indicates the value that the docking unit must be set to. Failure to set/install the docking unit to the correct height might impede the locking plate from sliding smoothly into the docking unit or prevent the docking station and wheelchair from connecting.

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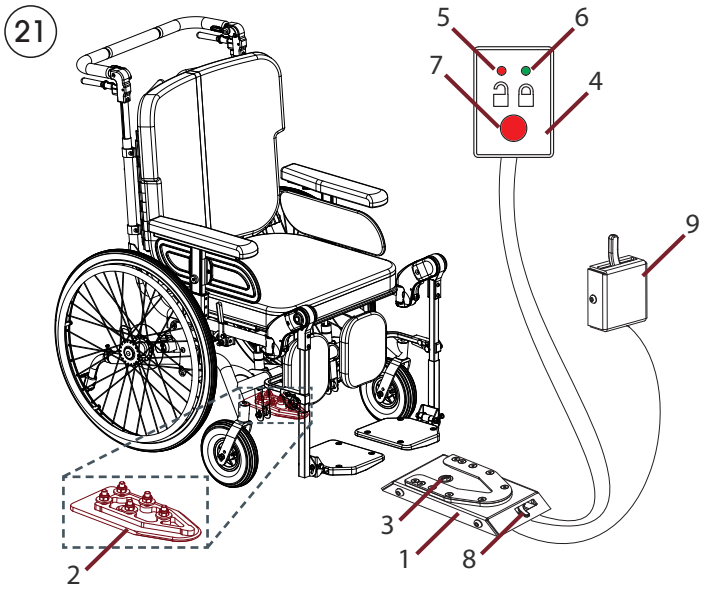
COMPONENTS OF THE DAHL MK II DOCKING STATION

The Dahl MK II docking station is installed in the vehicle with a fixed height.

Components, see Figure 21:

1 Docking station
2 Lock plate
3 Lock pin
4 Control panel
5 Red indicator LED
6 Green indicator LED
7 Release button
8 Emergency release lever
9 Manual operating lever

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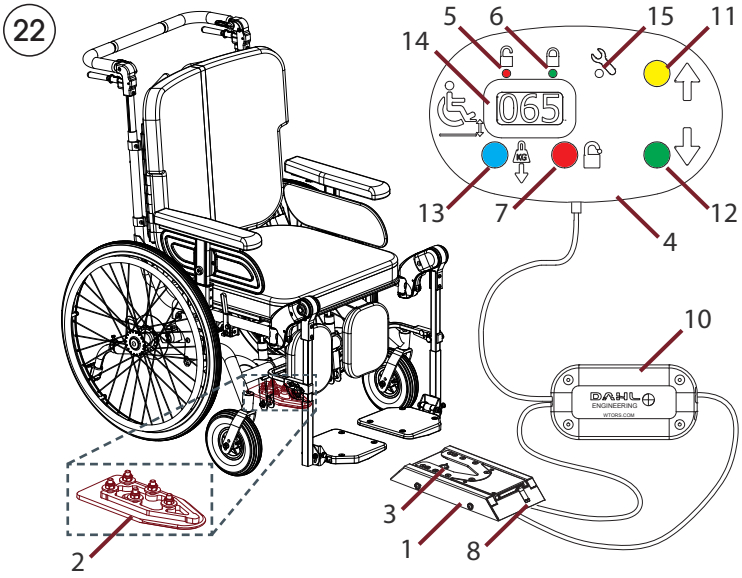
COMPONENTS OF THE DAHL VARIODOCK DOCKING STATION

The Dahl VarioDock docking station can be adjusted to the appropriate height for the wheelchair being transported.

Components, see Figure 22:

1 Docking station
2 Lock plate
3 Lock pin
4 Control panel
5 Red indicator LED
6 Green indicator LED
7 Release button
8 Emergency release lever
10 Control module
11 Upwards adjustment (yellow)
12 Downwards adjustment (green)
13 Pull down to remove slack (blue)
14 Current height measurement
15 Maintenance required LED

22



SECURING THE WHEELCHAIR IN THE DOCKING STATION

- Centre the wheel chair in line with the docking station and slowly push forward, straight over the docking station. The lock plate (2 in Figures 21 and 22) helps to guide the wheelchair into place.
- As soon as the locking plate comes into contact with the lock pin (3), a warning tone will sound and the red indicator LED (5) in the control panel will light up.
- When the lock plate is fully engaged in the docking station, the lock pin (3) automatically secures the lock plate. The warning tone will stop, the red indicator LED (5) will turn off, and the green indicator LED (6) will light up.

⚠ Always check if the lock plate is properly engaged in the docking station by trying to reverse the wheelchair out of the docking station before moving the vehicle.

RELEASING THE WHEELCHAIR FROM THE DOCKING STATION

- Press forward on the wheelchair to release pressure on the lock pin (3 in Figures 21 and 22)
- Press the red release button (7) in the control panel and reverse the wheelchair out of the docking station. Do not attempt to reverse out of the docking station until the red indicator LED (5) on the control panel has been illuminated.

In the event of electrical failure the emergency release lever (8 in Figures 21 and 22) is located at the front edge of the docking station. Push the wheelchair forward to release pressure on the lock pin and push the red release arm, holding it while the wheelchair is reversed out of the docking station.

A cable-activated manual operating lever (9 in Figure 21) may also be fitted (optional). The red release arm must be pushed and held while the wheelchair is reversed out of the docking station.

If the described manual release procedures fail, a red emergency release tool comes with each docking unit. First push the wheelchair forward to remove the pressure on the lock pin. Then place the emergency release tool in the gap between the locking plate and the docking station, see Figure 23. Push the release tool and wheelchair forward until the locking pin has been forced down, after which the wheelchair can reverse out of the docking station.

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