



The purpose of these instructions is to guide providers/technicians through the steps of securing the Dahl Engineering Docking System Lock Plate to the Quantum Q6 Edge 2 or Q6 Edge 3 power base and to instruct end users how to operate the DAHL Engineering Docking System. These instructions must be utilized for both the Dahl Engineering MKII Docking System and the Dahl Engineering VarioDock Docking System.

There are two sections to these instructions:

Section 1: Details the installation instructions for the DAHL Engineering Docking System Lock Plate. These instructions do not apply to the installation of Dahl Engineering Docking Systems into vehicles. Pride Mobility Products and Quantum Rehab will not administer any sales, support or installation of Dahl Engineering Docking Systems into vehicles. Dahl Engineering will distribute the installation kit for Dahl Engineering Docking Systems (including any replacement or auxiliary parts) to Wheelchair Adapted Vehicle (WAV) conversion workshops, who will be directly responsible for installing Dahl Engineering Docking Systems into vehicles according to instructions issued by Dahl Engineering.

Section 2: Instructs the end user how to properly operate the DAHL Engineering Docking System. These instructions have been provided by DAHL and can be found at https://dahleengineering.dk/media/238906/503744-dahl_manual_mkii_uk_420.pdf. Inclusion of these instructions to this document are not an endorsement of this product.

If you have questions or concerns about the installation of a Dahl Engineering Docking System into a vehicle, use, or maintenance, please contact Dahl Engineering directly or visit Dahl Engineering’s website (<https://dahleengineering.dk/>) for additional information.

The Q6 Edge 2 & 3 power wheelchairs have been successfully tested in accordance with the standards of ISO 7176-19:2008 (“Wheeled mobility devices for use as seats in motor vehicles”); however, improper installation of Lock Plates may void the Q6 Edge warranty and cause serious injury, death and/or property damage.

Following the installation instructions and warnings assures the CE-marking of the wheelchair is maintained.


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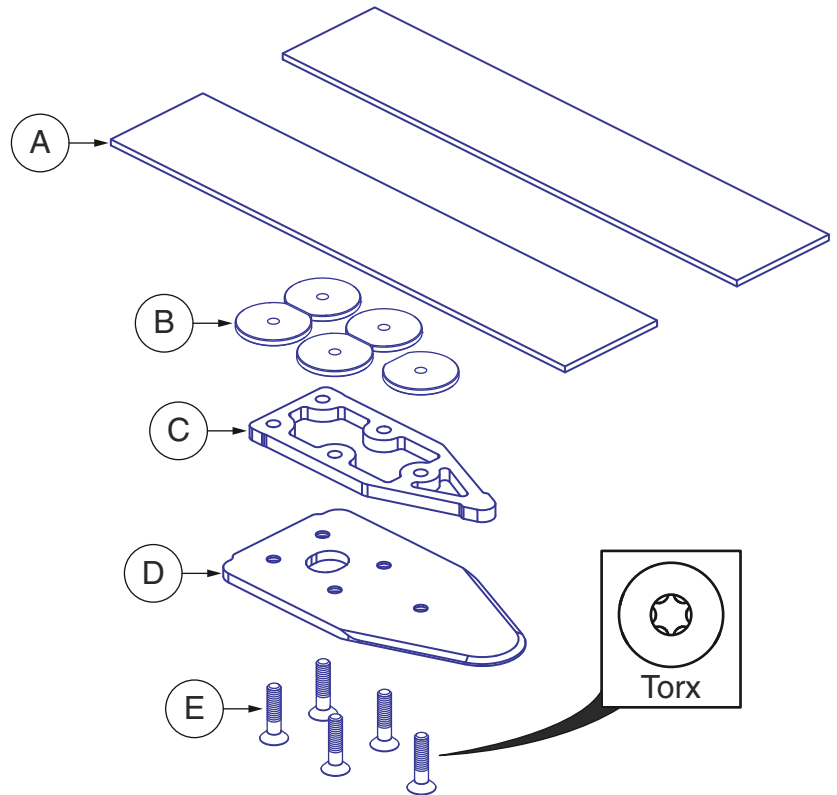


Dahl Docking Systems Lock Plate Kit Contents (provided by Dahl Engineering):

Ref	Part Description	Qty
A	5 mm Thick Spacer Board	2
B	M8 Custom Nut	5
C	8 mm Thick Spacer	1
D	Locking Plate	1
E	M8 Torx Screw, 35 mm	5
n/a	*Dahl #502378	1


 The new hardware provided with the Installation Kit **MUST** be used for installation.

*Dahl #502378 not shown. Visit Dahl Engineering's website at <https://dahleengineering.dk> for additional information.



Tools / Material Requirements per Dahl Engineering (not provided):

- | | | |
|----------------------------|-------------------------------|------------------------------|
| - Safety Glasses | - Heavy Duty Scissors | - Measuring Tape |
| - Metric Hex Key Set | - Ruler / Straight Edge | - Marking Pencil |
| - Calibrated Torque Wrench | - Power Grinder | - Double-sided Adhesive Tape |
| - T27 Torx Socket Bit | - Hack Saw | |
| - Utility Knife | - Loctite 222 (or equivalent) | |

TIP: When the camera icon  is present, take a few pictures before proceeding. These pictures can be used as a reference for reassembly.

WARNINGS! For Installation of Lock Plates



WARNING! Failure to follow these instructions may result in serious injury or death to the power chair user or others passengers in the vehicle, and/or cause property damage.



WARNING! Lock Plates should only be installed by an authorized provider/technician. End users should not attempt to install Lock Plates.



WARNING! The Q6 Edge power base must be unoccupied during removal and installation of Lock Plates.



WARNING! The new hardware provided with the Lock Plate kit must be used for installation.




WARNING! The maximum user weight for the Q6 Edge 2 and Q6 Edge 3 with any Dahl Engineering Docking System is 136 kg / 300 lbs.

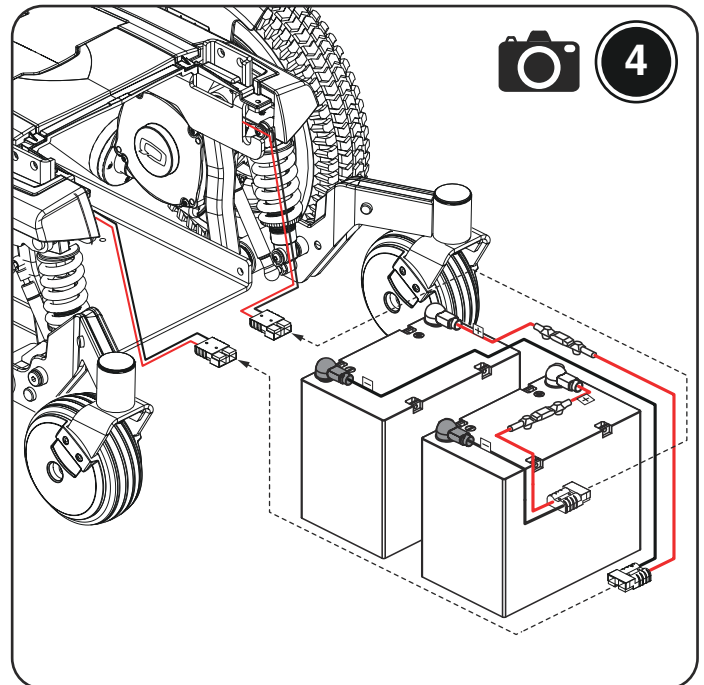
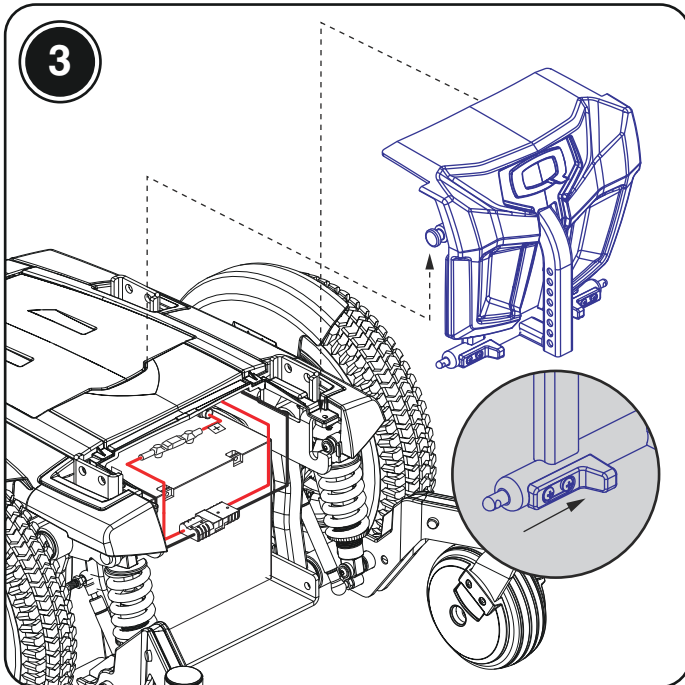


WARNING! Keep hands clear of all pinch points during installation and removal of Lock Plates.

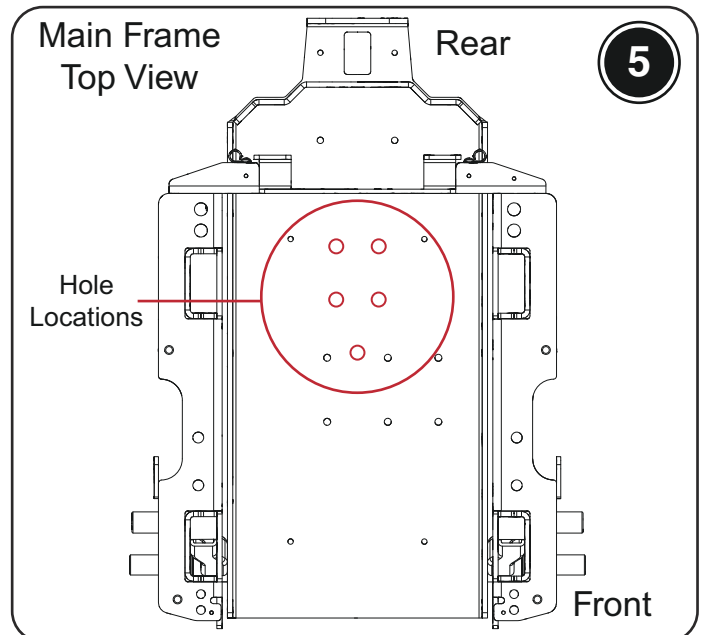


WARNING! It is recommended that a second individual assist in the stabilization and removal of the seating system from the power chair base.

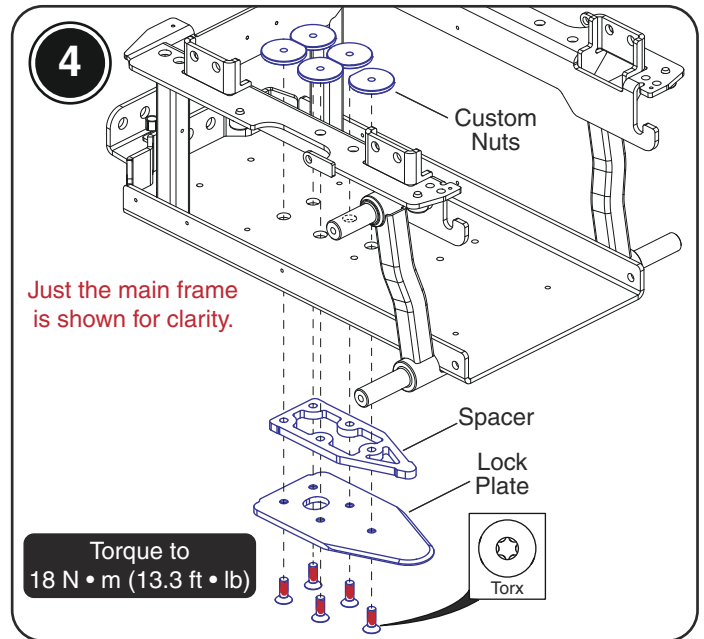
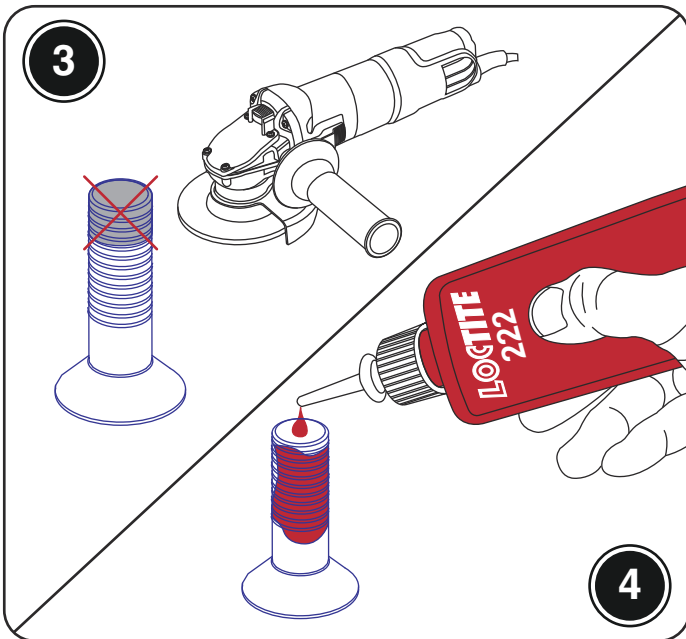
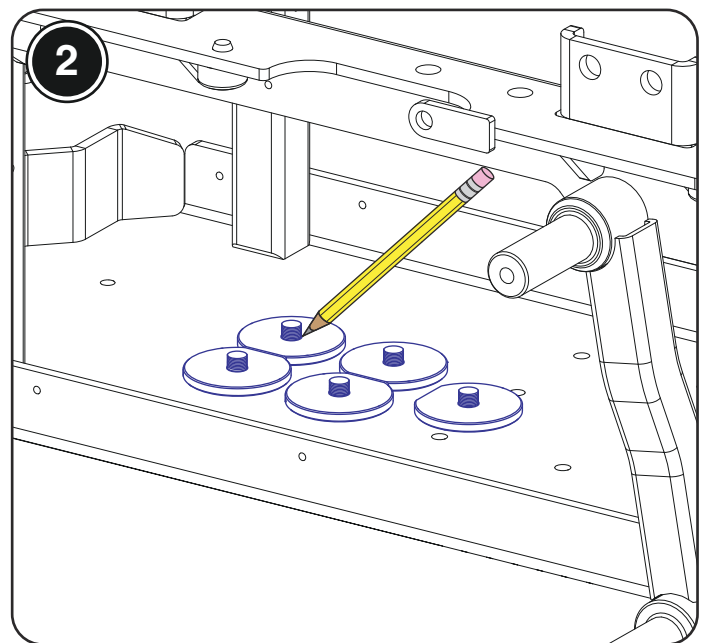
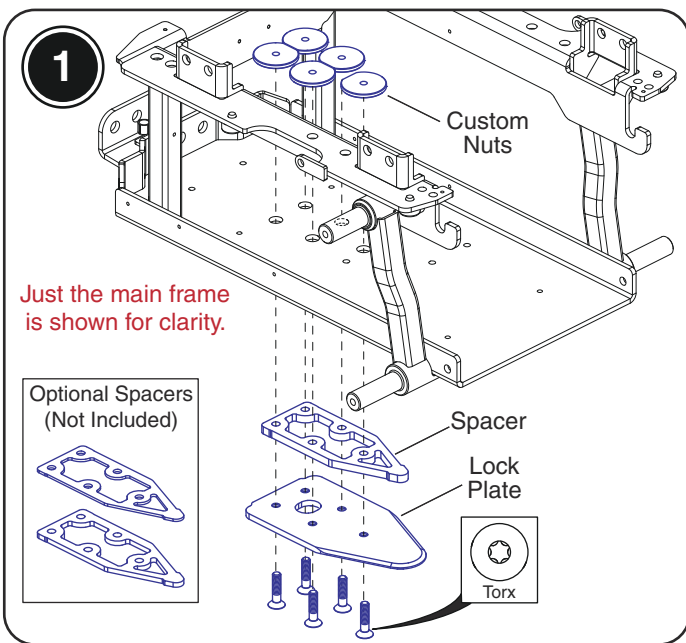
- 1 Ensure the unit is in drive mode. Reference the power chair Owner's Manual. 
- 2 Turn off the power at the joystick. Reference the power chair Owner's Manual.
- 3 Remove the front battery door from the power base. The front riggings may need to be removed to access the release levers.
- 4 Disconnect and remove the batteries. Reference the power chair Owner's Manual.



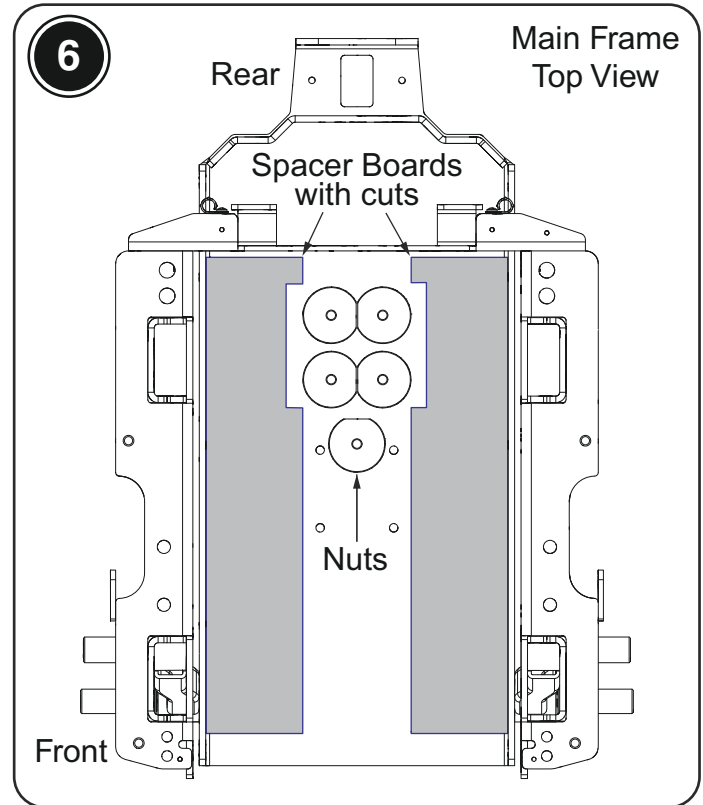
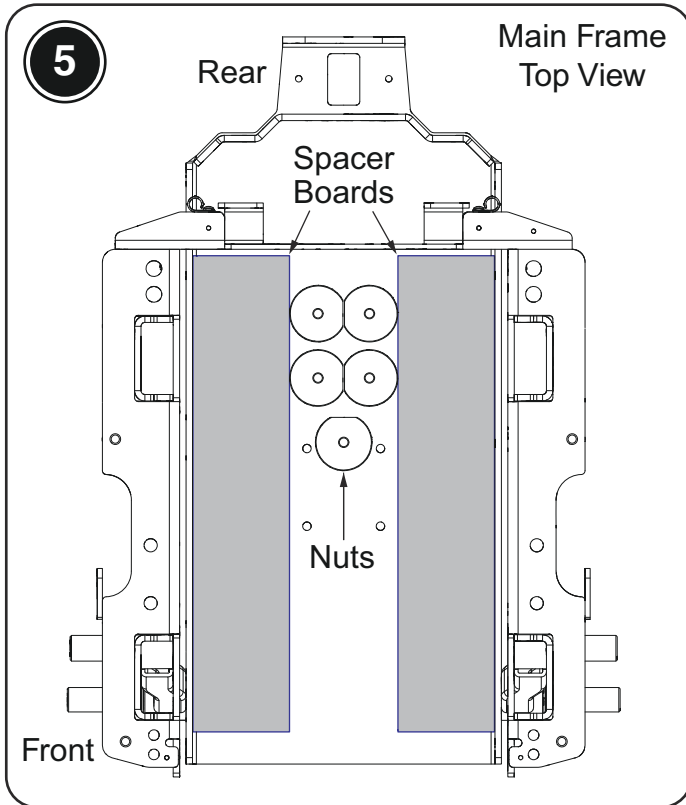
- 5 Situate the unit so the mounting holes (5) can be accessed with adequate clearance from both the inside of the battery cavity and from the underside of the base frame.



- 1 Assemble the Docking System onto the power base. Additional spacers (not included) can be applied if necessary to achieve the desired clearance.
 - ⚠️ *Test that the proper clearance is achieved by connecting to the docking station.*
- 2 If screw threads protrude through the nut, flush mark the screws to the top of the nuts.
 - ⚠️ *Threads protruding through the nut may damage batteries.*
- 3 Disassemble the system and cut the marked screws with a grinder or hacksaw.
 - ⚠️ *Threads protruding through the nut may damage batteries.*
- 4 Apply Loctite 222 (or equivalent) to the screws and reassemble the Docking System onto the power base. Torque the hardware to **18 N • m (13.3 ft • lb)**.
 - ⚠️ *The new hardware provided with the Installation Kit **MUST** be used for installation.*



- 5 Secure the spacer boards with double-sided adhesive tape to the battery cavity on both sides of the custom nuts. Do not overlap on top of the nuts.
- 6 If the spacer boards overlap the nuts, trim the boards with a utility knife or heavy duty scissors to clear the nuts. Secure with double-sided adhesive tape.



- 7 Re-install the batteries and the front battery door.
- 8 Test the unit by connecting to the docking station. Ensure that it is securely locked and that all release methods work as intended. Reference Section 2 of this document and the Dahl Engineering MK II Docking Station user guide for operational instruction.
- 9 Re-install all peripheral items that may have been removed during installation.

WARNINGS! For Operation of the Docking System (From DAHL's User Manual)

- Never begin driving the vehicle whilst a wheelchair is being docked in the docking station or if the user's safety belt is not secured.
- Never begin driving the vehicle if the warning tone sounds and/or the red warning lamp (LED) in the control panel flashes or lights up.
- WTORS may only be used for forward-facing wheelchairs.
- Contact Dahl Engineering or your dealer immediately if there is any doubt concerning the use of the product or if the product has faults or non-conformities.
- Users in wheelchairs should never be transported in the vehicle if certified WTORS are not used.
- The user should not be a passenger or driver of the vehicle if both lap belts and shoulder belts are not used. This is to reduce the risk of the user's head or chest hitting interior vehicle elements and other passengers.
- The docking system, seat belts and components shall be subjected to a check and maintenance inspection at least once a year in accordance with maintenance interval and documentation.
- The user should never try to repair, adjust, or modify the docking station's/WTORS components. Alterations and modifications to the system or replacement with non-original Dahl components are not recommended. If there are questions concerning this matter and the installation of the docking station in the vehicle, it is recommended that Dahl Engineering be contacted for more advice. Any alterations carried out without prior agreement with Dahl Engineering are entirely the responsibility of the fitter and/or the user.
- Do not attach components to weak/non-solid components or materials.
- The fitter is responsible for ensuring that the installed unit satisfies all statutory requirements. Contact local/national authorities if there is any doubt in this regard.
- Incorrect installation of safety belts and the docking station can cause malfunctions which can result in death or serious injury to the user.
- Belt webbing must be protected against contact with sharp edges and corners, contact with solvents, polishing agents, oil and caustic/corrosive fluids or materials (in particular battery acid). Damaged, worn, torn or contaminated belt webbing and components must be replaced. This should be checked daily.
- An airbag should be deactivated if the user is situated less than 300 mm. from the airbag, or as recommended by the vehicle manufacturer. An airbag should also be deactivated, if retrofitted parts block or have an effect on its inflation/expansion. If it is necessary to deactivate or dismount the airbag, one shall, before fitting the docking system, check if the vehicle manufacturer can offer a safety belt, which is approved to be fitted without an airbag.
- A docking station which has been involved in a collision from which the vehicle has had to be towed away, must be sent to DAHL Engineering for inspection and possible repair. Safety belts and components must be replaced, without separating the components, because they can have obtained invisible damages.
- In the event that the instructions and warnings in this guide are not followed, there is a risk of death or serious injury to the wheelchair user and the other passengers in the vehicle.
- It is essential, that wheelchair manufacturers' instructions, references and warnings are followed when installing and using Dahl Docking Systems. The EU medical device directive states that a CE-marked medical device, which has been customized outside the manufacturer's specifications, thereby become a customized medical device and that the CE-marking must be removed. Anyone who customizes a CE-marked medical device outside the manufacturers specifications is responsible for quality, safety and performance of the device and becomes the responsible manufacturer of the customized device. Complying with the wheelchair manufacturers user and installation guide when installing the Dahl Docking System will ensure that the wheelchair manufacturers CE-marking will remain intact. Manufacturers manuals for all CE-marked wheelchairs can be downloaded from our homepage.

Perform a check of the wheelchair

- 1 Perform a final check by connection the wheelchair to the docking station. Check that it is securely locked and make sure that all release methods work as intended. (Figure 1)

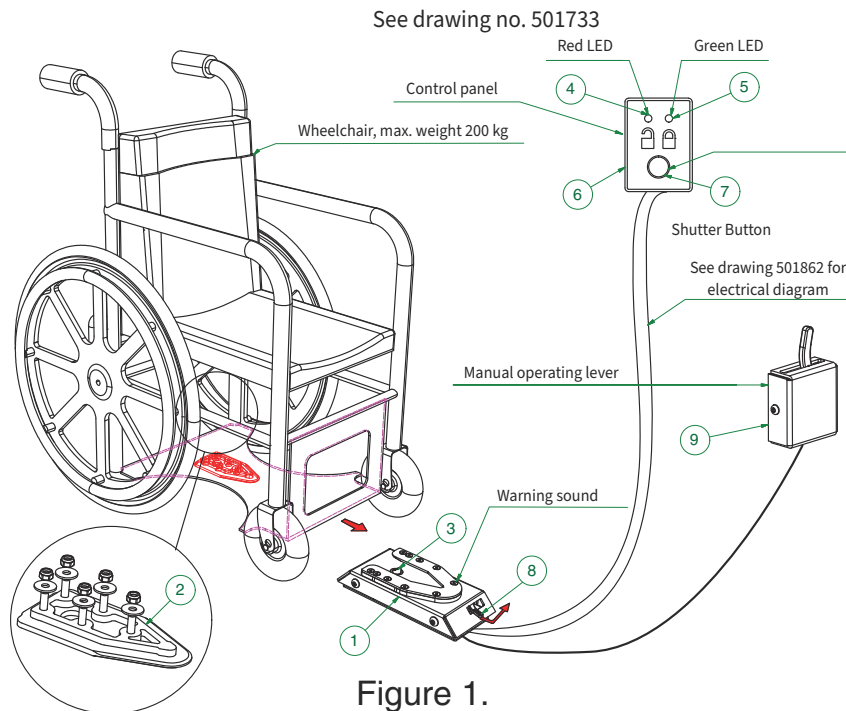


Figure 1.

Securing the wheelchair in the docking station

- 1 To use the system, maneuver the wheelchair slowly and in a uniform direction over the docking station. The lock plate under the wheelchair helps to guide the wheelchair into place in the docking station. When the lock plate is fully engaged in the docking station, a spring-action locking pin automatically secures the lock plate.
- 2 The docking station is equipped with a control switch that indicates whether the lock plate is correctly secured in the docking station. As soon as the lock plate comes into contact with the locking pin, a warning tone will sound (a high-pitched howl), and the red diode/lamp (LED) in the control panel will light up until the lock plate is either fully engaged or else the wheelchair is removed from the docking station.
- 3 As an indication that the wheelchair is properly secured, the warning tone will cease, the red diode in the control panel will go out and the green diode lamp (LED) will light up.
- 4 When the wheelchair is correctly secured, the safety belt should be fitted and adjusted so that it fits the user.

Do not drive the vehicle whilst a wheelchair is being maneuvered into position in the docking station. In general, do not use the vehicle if the wheelchair is not correctly secured, the warning tone sounds and/or the red warning lamp (LED) in the control panel flashes or is lit! Therefore, always check if the lock plate is properly engaged in the docking station by trying to back the wheelchair out of the docking station before moving the vehicle. (It must not be possible to back out of the docking station without pressing the red button in the control panel).

Release from the docking station

- 1** When the vehicle has been brought to a halt, remove the safety belt.
- 2** To unlock commence by driving the wheelchair forward to release pressure on the lock pin and then press the red release button in the control panel. The locking pin will be triggered/ released for approx. 5 or 8 seconds, after which the locking pin is automatically locked/activated again. Do not attempt to reverse out of the docking station until the red LED on the control module, which indicates the unlock position, has been illuminated.
- 3** Move the wheelchair away from the docking station within this 5 or 8 second period.

Warning!

Attempting to reverse the wheelchair before the red LED has been illuminated will result in blocking the docking stations lock mechanism which makes it impossible to reverse. If this happens repeat above unlocking procedure.

If the locking pin is not released when you press the red button in the control panel:

- 1** In the event of electrical failure, a manual emergency release is located at the front edge of the docking station. Push the red release arm to one side and hold it there while the wheelchair moves away.
- 2** A cable-activated manual operating lever can also be fitted (accessory). The red release arm is also pushed to one side and should be held there whilst the wheelchair moves away.
- 3** An emergency release tool in red is delivered with each docking station. This has to be pushed into the docking station, between the lock plate of the wheelchair and the docking station to release the wheelchair.



The docking station, belts and components should be inspected at least once a year in accordance with the maintenance interval and documentation.

Safety belts (Accessory for docking station)

Safety belts must be inspected and cleaned regularly. Replace belts or straps that have faded in the sun, are worn at the edges, have tears or show clear signs of wear. Components that are damaged or worn must also be replaced. Avoid soiling the belts with chemicals, polishing agents, oil or, in particular, battery acid.

Cleaning the belts

Wash by hand with hot water and mild soap. Rinse thoroughly with water and allow to dry in the shade. Do not expose the belts to direct sunlight and never use powerful cleaning agents.

Only moving metal parts that are not in contact with belt webbing should be lubricated with light oil when necessary and if so very carefully. Never lubricate inertia reels or other components that are part of the safety belt. Never let the belt webbing come into contact with oil or grease.

Please also refer to DAHL Engineering's instructions for installation, use, and maintenance for Docking Station MK II, as well as the installation and user guide for the height adjustable VarioDock system.

General occupant restraint instructions

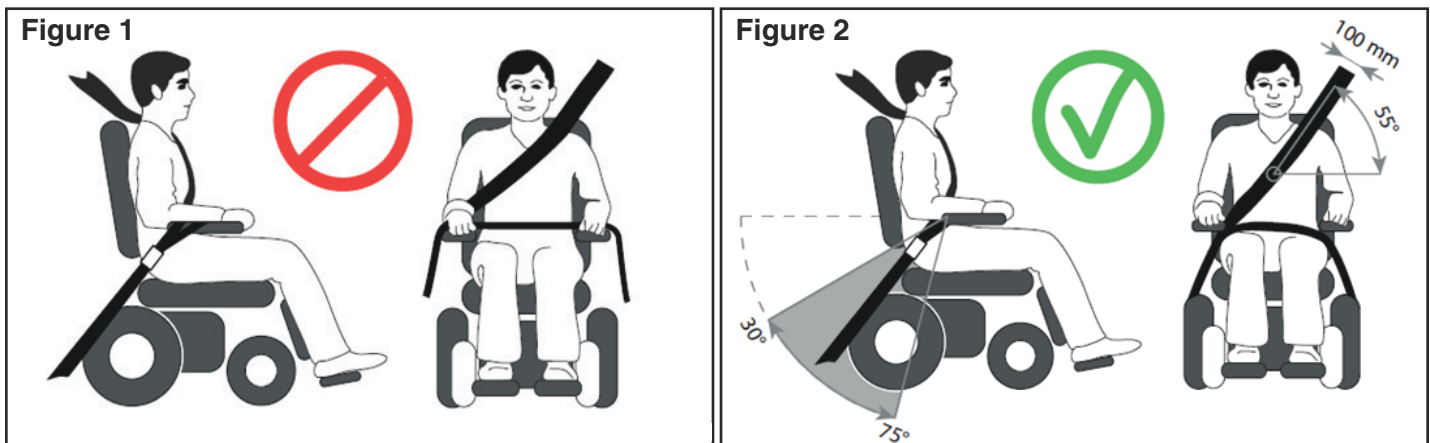
DANGER!

- Use a 3-point occupant restraint system to secure the occupant.
- Both pelvic and upper torso restraint belts must be used to restrain the occupant to reduce the possibility of head and chest impacts with the vehicle components.
- Occupant restraints should be mounted to the appropriate vehicle pillar.
- Use a suitable positioned headrest when being transported in a wheelchair.
- Occupant restraints should make full contact with the shoulder, chest and pelvis and pelvic belts should be positioned low on the pelvis near the thigh-abdominal junction (meeting the requirements specified in ISO 7176-19:2008).
- Any wheelchair anchored postural supports (lap straps, lap belts) should not be used or relied on for occupant restraint in a moving vehicle, regardless if labeled ISO 7176-19 or SAE J2249. Use a vehicle anchored and certified occupant restraint system instead.
- Restraint belt webbing must not be twisted when in use.
- Care should be taken when applying the occupant restraint to position the seatbelt buckle so that the release button will not be contacted by wheelchair components while driving or during a crash.

Cont. →

General occupant restraint instructions (cont.)

- Belt restraints must not be held away from the body by wheelchair components such as armrests or wheels. (Figure 1).
- The pelvic restraint belt must be worn low across the front of the pelvis so that the angle of the pelvic belt is within the optional or preferred zone of 30° to 75° to the horizontal. A steeper (greater) angle within the preferred zone, 45° to 75° is desirable i.e. closer to, but never exceeding 75° degrees. (Figure 2)
- The upper torso restraint belt must fit over the midpoint of shoulder and across the chest as illustrated. (Figure 2)
- Restraint belts must be adjusted as tightly as possible consistent with user comfort.



For use with Dahl Docking system only

- When using wheelchair with Dahl Docking system, the floor anchorage point for occupant restraint should be located 10-60 mm outside wheels, on each side. (Figure 3)

