



Scout Mobility BV

X10 Wheelchair with Dahl Docking Station

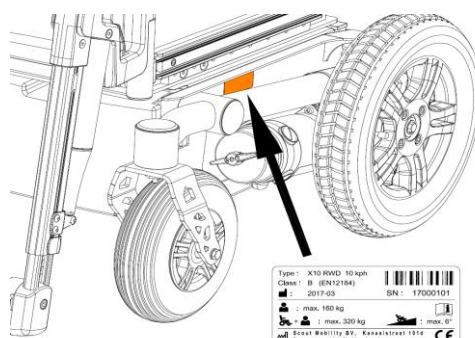


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General Information

- The Scout X10 is successfully crash tested according to ISO 7176-19:2008. Even so, a wheelchair is not designed as a car seat and cannot offer the same degree of safety that is offered by standard car seats. Scout Mobility B.V. recommends that wheelchair users transfer to a regular car seat if possible.
- The wheelchair is designed to be forward facing when used as a seat in a motor vehicle.
- This manual only describes the use of the specific Dahl Docking Station with Scout Mobility X10 wheelchairs. Only use Dahl parts as described in this manual. In case of doubt contact Dahl at www.dahlengineering.dk
- Alterations or substitutions should not be made to the wheelchair securement points or to structural and frame parts or components without consulting the manufacturer.
- Postural supports mounted on the wheelchair should not be relied on for occupant restraint in a moving vehicle, unless they are labelled as being in accordance with the requirements specified in ISO7176-19:2008
- Always remove “temporarily” loads (such as shopping bags) or other auxiliary wheelchair equipment from the wheelchair before using the wheelchair as a seat in a vehicle. In case of a collision these could break free and cause injury to vehicle occupants.
- The wheelchair must be inspected by a manufacturer’s representative before reuse following the involvement in any type of vehicle collision.
- In order to reduce the potential injury to vehicle occupants, wheelchair mounted trays that are not specifically designed for crash test safety should be removed and secured separately in the car. If this is not possible the tray should be positioned away from the occupant with energy-absorbing padding placed between tray and the occupant.
- Only use ‘gelled electrolyte’ batteries on powered wheelchairs when used in a car.
- In case any questions or remarks come up during mounting or use of the Dahl Docking Station please contact Scout Mobility in the Netherlands. Always use the wheelchair serial number for reference, the serial number can be found on the serial plate on the frame (battery box) of the wheelchair (see picture below).



1.1 Transportation using Dahl Docking Station

All Scout Mobility X10 models (FWD, RWD and MWD) have been crash tested both with 4-point tie-down system and with Dahl Docking Station according to 7176-19:2008 and 10542-1:2012 SWM, where the wheelchair is facing forward in driving direction (driving direction like the driver seat)

The locking of the wheelchair into the Dahl Docking station makes it possible for the occupant to lock down the wheelchair him/herself for occupied transportation. It can therefore be used for wheelchair users who want to drive the car by themselves. The system is self-locking and can be released by pushing a button. The locking device will open up for a certain time to make the undocking possible.

WARNING

The Dahl Docking station is only allowed to build into a (crash tested and certified) vehicle by trained and authorized staff of a registered car adaptation company. For ordering the Dahl Docking and its accessories, please contact Dahl Engineering in Denmark for further details. You can find Dahl at www.dahlengineering.dk

1.2 Mounting of the Dahl Adaption kit onto the X10 wheelchair

The X10 chassis can be equipped with a Dahl docking plate underneath the battery box frame of the chassis. For detail information about the Dahl Docking system, please visit the homepage: www.dahlengineering.dk

To fit de Dahl docking plate, Dahl has created a special kit for all X10 chassis which included the special Dahl nut plates and the spacers for the battery box to level the batteries. This kit is available under Dahl part no: **503366**

WARNING

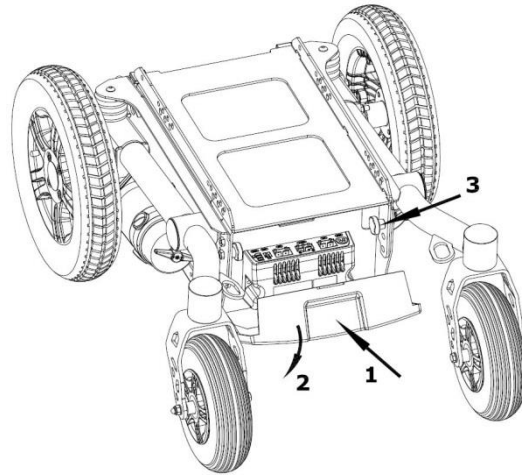
The Dahl Docking station is only allowed to build in to a vehicle by trained and authorized staff of a registered car adaptation company. For ordering the Dahl Docking and its accessories (see picture below), please contact Dahl Engineering in Denmark for further details. You can find Dahl at www.dahlengineering.dk



Picture 1 Dahl Docking System Kit

The X10 chassis has dedicated holes in the chassis where the Dahl Docking plate can be mounted on.

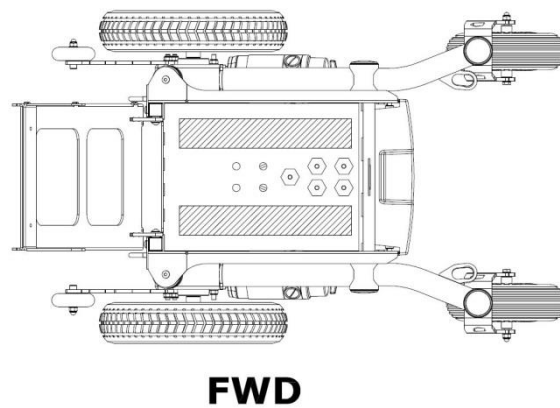
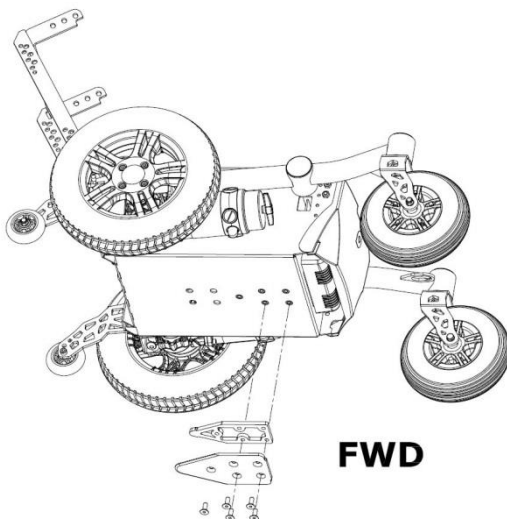
1. Unlock (1) and remove (2) the PM cover. Remove the knurl bolts (3) and flip open the interface. Support the interface secure when working on the wheelchair.



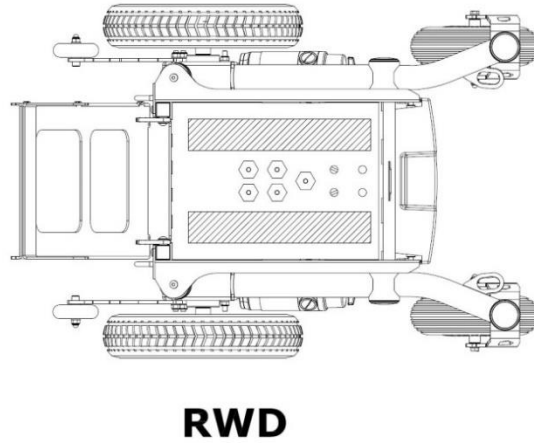
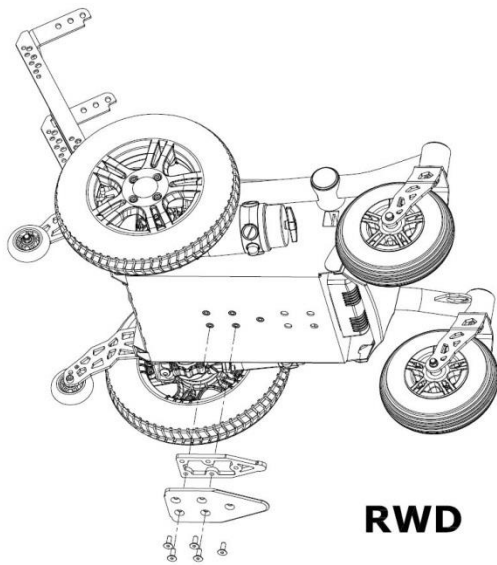
Remove the main fuse, remove the battery cover and battery strap. Disconnect all battery harnesses and remove the batteries.

2. Put the 5 special Dahl nuts into the dedicated mounting holes from the inside of the battery box. The pictures below show the holes to be used for mounting the Locking plate on FWD, RWD and MWD.

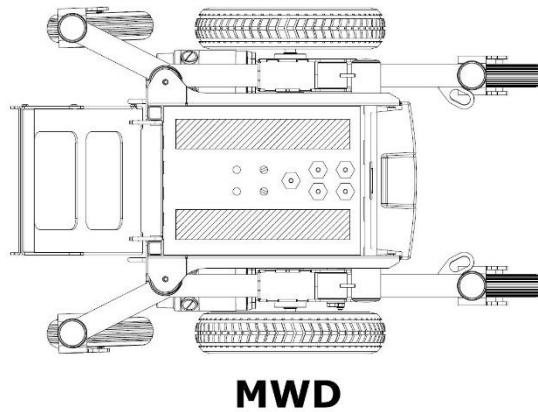
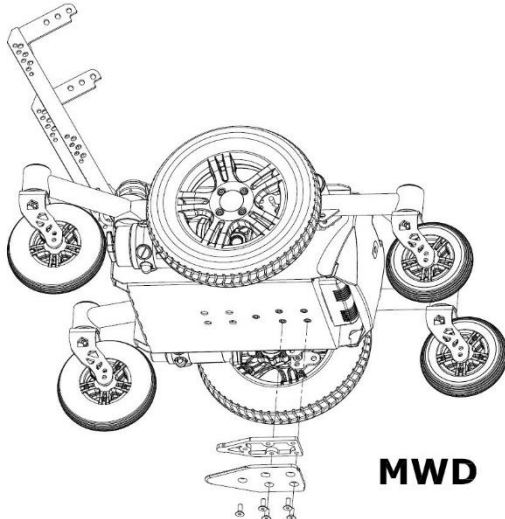
Front Wheel Drive mounting positions



Rear Wheel Drive mounting positions



Mid Wheel Drive mounting positions



3. Two plastic spacers are to be placed on the inside of the battery box to level the batteries. Best is to fix them with some double sided tape. The spacers are shown in the top views of pictures above (hatched rectangles)

4. Now take the Dahl spacer (Dahl part no: 500673, docking plate (Dahl part no: 500561 and 5 special Dahl high grade steel (14.9) Torx bolts (Dahl part no: 502800) to mount the Dahl docking plate on to the bottom side of the X10 chassis.

NOTE

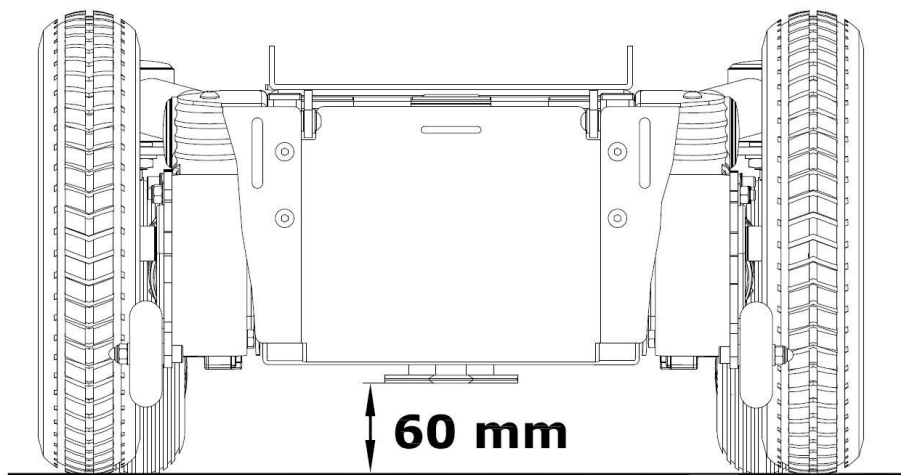
The special Dahl high grade Torx bolts (Dahl part no: 502800) only come in one length which is often too long. They need to be cut into the right length by the authorized engineer to fit the locking plate properly without damaging the batteries.

5. After cutting the bolts to the right length, Loctite 222 needs to be added onto the thread to secure the bolts.

6. The five Torx bolts (T27 key) shall be tightened with a torque wrench to the preset torque of 16-18 Nm.

7. Place the batteries back into the chassis and re-connect them to the electronics.

Note : Only use the 8 mm Dahl Spacer between locking plate and wheelchair battery box. This ensures sufficient (60 mm) of ground clearance under the wheelchair for safe daily use. See picture below.



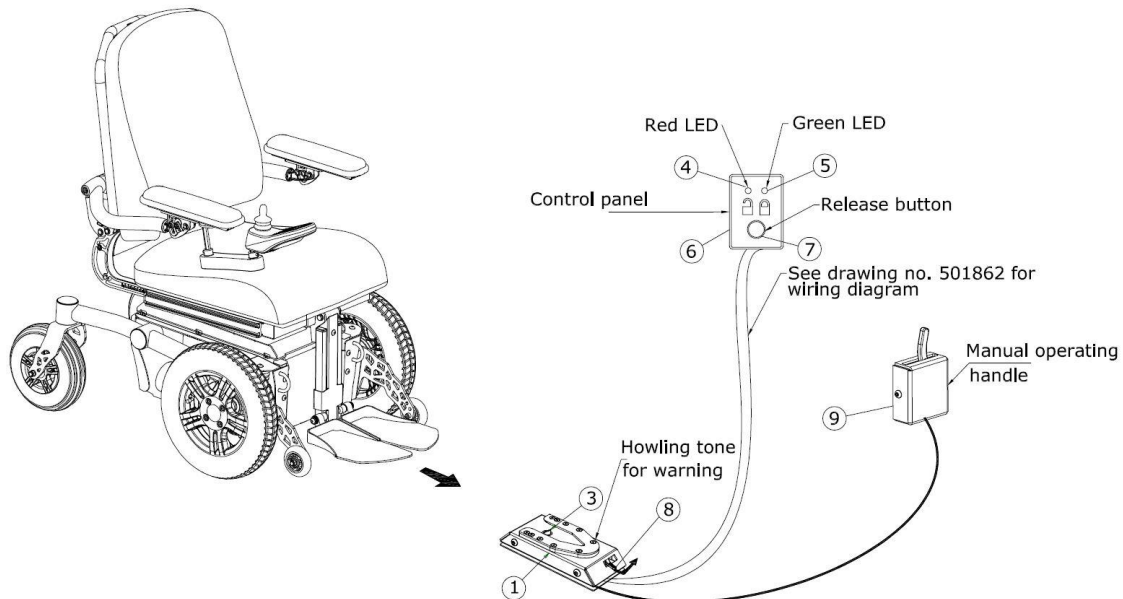
Now the X10 wheelchair is ready to be docked into the Dahl Docking station. The mounting of the Dahl Docking station into your vehicle shall only be executed by an authorized car adaptation company. They will get the right support and information from Dahl Engineering on how to mount the docking station into the designated vehicle.

WARNING

The Dahl Docking station is only allowed to build in to a vehicle by trained and authorized staff of a registered car adaptation company. For ordering the Dahl Docking and its accessories, please contact Dahl Engineering in Denmark for further details. You can find Dahl at www.dahlengineering.dk

1.3 Locking procedure

Drive the wheelchair slowly into the vehicle using a lift or a ramp and make sure you centre your wheelchair in the middle of the docking module. If well positioned the locking system will also guide the wheelchair into the docking station. Keep on slowly driving until you feel the wheelchair is hitting the end position in the docking station. At the same time you will hear a clicking sound. The wheelchair is now locked into the docking station. The light on the control panel will light up the LED showing the wheelchair is locked in correctly. Now switch the wheelchair off.



WARNING

If the wheelchair is not centered correctly, it might not be possible to lock in top the docking station. In that case, retry by driving a bit backwards and re-center the wheelchair. Try once more until you hear the clicking sound and you see the locked sign LED on.

WARNING

Do not forget to put the car safety belt on before driving or being driven in a vehicle.

Remove any temporarily weight, such as shopping bags, from the backrest of the wheelchair while seated in a car.

Make sure the headrest is correctly positioned and fixed onto the wheelchair

This in order to avoid dangerous situations and personal- or wheelchair damage.

1.4 Unlocking procedure

To unlock the wheelchair, first open up the car safety belt. Then switch on the wheelchair and switch to drive mode. Now push the release button of the Dahl Docking station. You will hear a firm click. The locking bolt is now retracted and the wheelchair can drive in reverse direction out of the Docking station.

NOTE

After pushing the release button of the Dahl Docking station, the locking bolt is retracted for a certain period of time. After that time, the bolt will lift up again and lock the Docking station. Make sure you drive your wheelchair out of the Docking station in this time frame of the unlocked position. If not, you have to push the release button one more time.

1.5 Manually unlocking in case of electric failure or accident

The Dahl Docking station can be unlocked manually in case of an emergency or if the electric unlocking is failing. To unlock the docking station manually, the red lever needs to be pulled to the right. This retracts the locking bolt manually so the wheelchair can be released out of the docking station.

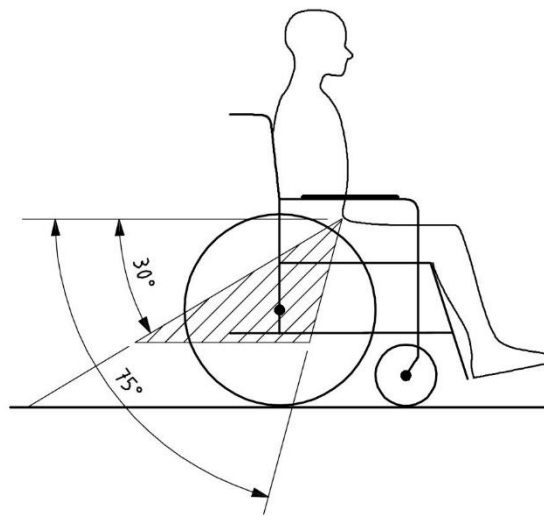


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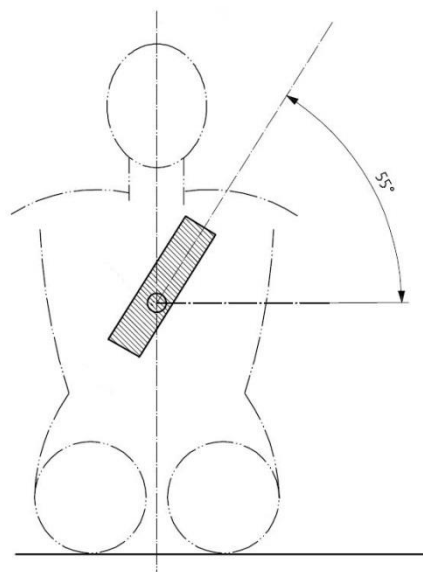
In case of a failure of the docking station, contact your local car adaptation company who has built in the device into your vehicle. Only authorized and trained staff is allowed to work on the docking device.

1.6 Safety belt

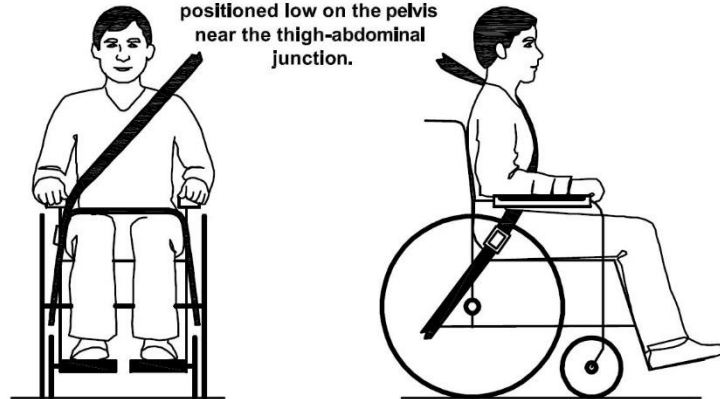
If the user is transported in his/her wheelchair, it is necessary to use a car safety belt to secure the wheelchair user. The wheelchair has been crash tested using a Dahl 3-point occupant safety belt, model 500984. We advise you to use a similar system or a system that is equally specified. It is very important to use the safety belt in the right angles according to the wheelchair user. The angle for the pelvis part of the safety belt must be in angle of 30-75° with the horizontal plane (see picture below). Also, the side angle should stay between the vertical plane to maximum of 15° angle with the vertical plane.



The shoulder part of the safety belt should be positioned according to the figure below, around 55° with the horizontal plane.



Belt 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.



NOTE

Please obtain the following points for an optimal personal safety of the wheelchair user:

- the pelvic belt should be worn low across the front of the pelvis, so that the angle of the pelvic belt is within the preferred zone of 30° to 75° to the horizontal, as shown in figure above
- a steeper (greater) angle within the preferred zone is desirable
- belt restraints should not be held away from the body by wheelchair components or parts, such as the wheelchair armrests or wheels, as shown in the figure below.



- upper torso belts should fit over the shoulder and across the chest, as illustrated in figure of the shoulder safety belt positioning
- belt restraints should be adjusted as tightly as possible, consistent with user comfort
- belt webbing should not be twisted when in use

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