

TRAX

Owner's manual



How to contact Permobil

Permobil Inc. USA

6961 Eastgate Blvd.

Lebanon, TN 37090

USA

Phone: 800-736-0925

Fax: 800-231-3256

Email: info@permobilusa.com

Permobil Group Head Office

Permobil AB

Box 120, 861 23 Timrå, Sweden

Tel: +46 60 59 59 00. Fax: +46 60 57 52 50

E-mail: info@permobil.se

Prepared and published by Permobil AB, Sweden.

Edition 3, 2006-01

Order no. 201083-US-0

Contents

General introduction	6
Specially adapted wheelchairs	6
Safety Instructions	7
Design and function	10
General	10
Chassis	10
Seat	11
Seat lift	11
Wheels	12
Lighting/reflectors	12
Electrical system	13
Control panel	15
Joystick menu	20
Accessories	23
Tool wallet	23
Bow, luggage basket, crutch holder etc.	24
Operation	25
General	25
Driving	25
Driving rules	29
Releasing the brakes	32
Charging the batteries	33
Transport	35
Air transport	36
Preventive maintenance	37
General	37
Cleaning	38
Wheels	38
Batteries	38
Repairs	39
Resetting the main fuse/circuit breaker	39
Changing fuses	41
Changing batteries	42
Changing inner tubes	43
Filling with air	44
Labels	45
Specifications	47
Electrical system	48

Contents Trax seat

General introduction .....	.50
Safety Instructions .....	.50
Specially adapted product	50
Design and function .....	.51
General .....	.51
Seat .....	.52
Back rest .....	.52
Arm rests .....	.52
Accessories .....	.52
Adjusting the settings .....	.53
Seat angle .....	.53
Arm rest .....	.54
Maintenance and transport .....	.55
Technical specifications .....	.56
<hr style="border-top: 1px dashed black;"/>	
Important Information (only for the US-market) .....	.58-59

General introduction

In order to get the best possible use from your wheelchair, it is important to use it in the intended way. We therefore advise you to carefully read the operating instructions, especially the safety instructions. Keep the operating instructions with the rest of the things belonging to the chair.

The first thing you should do is to charge the batteries. If you're not sure what to do, read the chapter on Battery charging on pages 33-34. Charging takes about ten hours.

Specially modified wheelchairs

If your wheelchair is marked with a "Specially modified product" sticker, it has been modified to your specific needs and wishes. This means that the design and functions could be different from the text in these operating instructions, or the design and functions of other wheelchairs of the same type.

The seat can also contain parts that are unique to your chair. These aren't available as spare parts, and must be made as required. This can affect the repair time of your seat.

Specifications

All information and specifications given in these operating instructions where applicable when this wheelchair was delivered. As Permobil carries out continual development and improvement, we reserve the right to make changes without prior notice.

Safety instructions

General

A wheelchair is a motor-driven vehicle, so be very careful when using it.

Incorrect use can cause a risk of injury or damage to the chair. To reduce these risks, you should read the operating instructions carefully, especially the safety instructions and warnings.

Any improper modification of the wheelchair and its systems may increase the risk of accident. Follow the recommendations in the section on Operation in order to avoid risks when driving.

All modifications to, and interference with, the key systems of the wheelchair should be done by qualified servicing engineers. Always contact a qualified service engineer in case of doubt.

Warning



WARNING !

Wherever you see this warning symbol, take special care. There could be a risk of personal injury.

Maximum weight of user

The wheelchair is designed for one person with a maximum weight of 298 lbs. If the wheelchair is fitted with a seat lift, the maximum user weight is 220 lbs.

Passengers

It is absolutely forbidden to carry passengers on the wheelchair.

Operation

Do not let children drive the wheelchair without supervision.

Do not drive the wheelchair over any edges higher than 4,5 inches.

When driving downhill, select the slowest speed and take great care.

The wheelchair is not designed for driving down slopes with a gradient greater than 15°.

Do not drive up slopes with a gradient greater than 15°. There is a risk that the wheelchair will not maneuver safely.

Do not drive the wheelchair where the sideways gradient is more than 12°. There is a risk of tipping over.

Operating the seat lift

Make sure nothing gets jammed between the chassis and the seat when you are operating the seat lift. The center of gravity is higher when the seat is raised, increasing the risk of tipping. So use the seat lift only on flat ground and not on uneven surfaces.

Releasing the brakes

Make sure the wheelchair is on a level surface before you release the brakes, so it doesn't roll away.

If the wheelchair is fitted with servo-steering, it will not be possible to steer it electrically once the brakes are released. The wheelchair can be steered manually by turning the front wheels directly by hand.

Charging the batteries

Charging should be done in a well-ventilated area, not in a wardrobe or closet. You should not charge the batteries in a bathroom or wet area. Only use a charger with a maximum charging current of 15A. You should not try to drive the chair when the charger is connected, since this will not work.

Transport

Ensure that the chair is properly secured (see page 35). A chair that is not properly secured can cause injury and damage if it comes loose.

Servicing

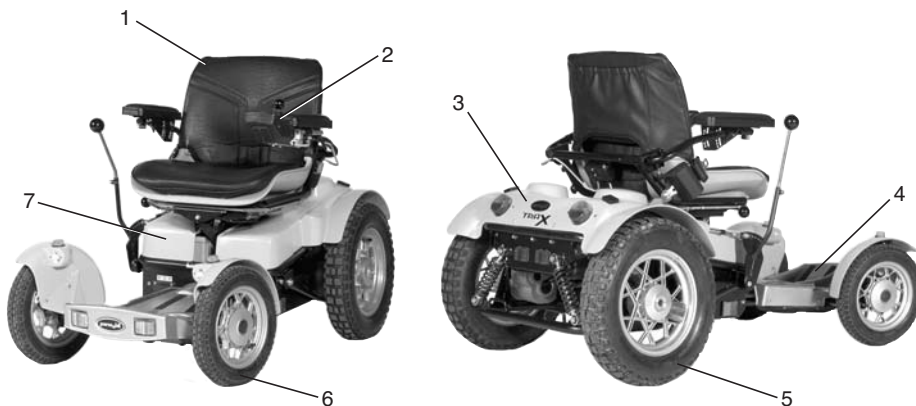
Only attempt the servicing and maintenance that the operating instructions say may be done by the user. All other servicing and maintenance should be done by someone with sufficient knowledge to be able to do it correctly.

Always disconnect the positive terminal of the battery before you work on the electrical system of the wheelchair. Take care when using metal objects while working on the battery. A short circuit could easily cause an explosion. Always use protective gloves and glasses.

The recommended air pressure is 36 psi. The tire could explode if you over-inflate it.

Design and Function

General



1. Seat (Trax seat)

2. Control panel

3. Chassis

4. Foot rest

5. Rear wheel/drive wheel

6. Front wheel

7. Chassis cover

Fig. 1. Electric wheelchair Trax

Seat

See enclosed seat instructions (Trax) or the supplied Owner's Manual for the seat (CorpusII/Miniflex).

Seat lift/seat twist

Trax is fitted with an electrically controlled seat lift or a fixed seating pillar. A position adjuster operated from the control panel allows continuous adjustment of the seat to any height between 20-29 inches, permitting simple matching with table, seat heights etc. Whenever the seat lift is raised from its lowest position the chair's maximum forward speed is lowered to 4 miles/h and the maximum reverse speed to 2,5 miles/h.

The seat lift function is only operative when the wheelchair is stationary.

Both electric seat twist and manual seat twist are possible (not Miniflex). The seat is mounted to twist to the right or the left, see Fig. 2.



WARNING !

Make sure nothing is trapped between the chassis and the seat when operating the seat lift.

Use of the seat twist function must take place only on a level surface.

Release lever for
manual seat twist



Fig. 2. Manual seat twist

Seat angle

The seat angle can be set in three different positions, forward-leaning, neutral and backward-leaning. If the seat is equipped with seat twist, the seat must be in neutral, i.e. level, position.

The seat angle is set by means of the holes under the seat. There are three holes under the seat at the front and three at the back, see fig. 3. A level position is obtained by mounting screws in the equivalent row of holes front and back. For more information, read the user instructions for your seat.

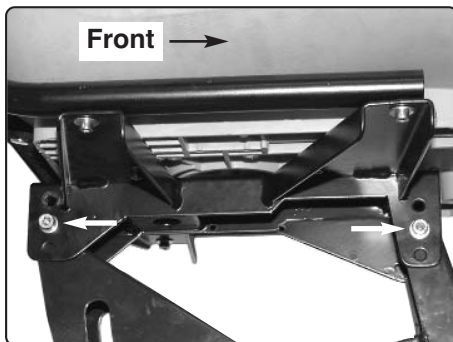


Fig. 3. Trax seat in neutral position (level)

Lengthways adjustment

The wheelchair has electric or manual lengthways adjustment. The length of the wheelchair can be adjusted by up to 8 inches, see page 18, 28.

Wheels

The wheelchair has pneumatic tires.

Lighting and reflectors

In the standard version, the wheelchair is equipped with lights, direction indicators and reflectors back and front. For more information on lighting and blinkers, see pages 16-17.

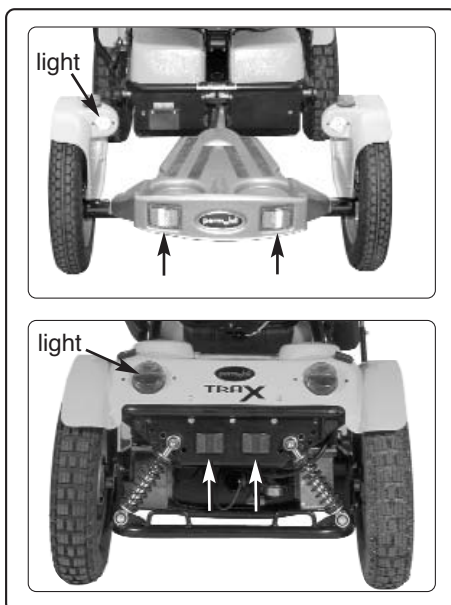


Fig. 4 Lighting and reflectors

Electrical system

The wheelchair batteries are situated under the battery cover in the center of the chassis. The batteries are maintenance-free (gel-type), so there is no need to check fluid levels.

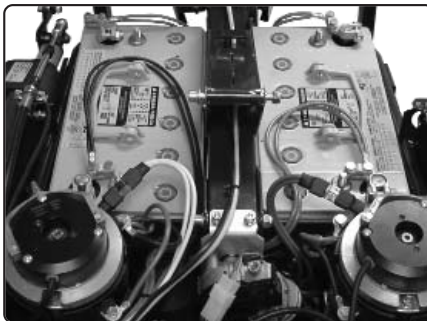


Fig. 5. Batteries

Drive system

The wheelchair has a drive pack for each drive wheel. The motors regulate speed and braking and activate turning. A joystick on the control panel passes signals to the electronic unit situated centrally under the chassis cover at the far rear, and this in turn controls the motors.



Electric motor

Fig. 6. Electric motor

Fuses

The wheelchair has four fuses, the main fuse, the charging fuse, the fuse for the position adjuster and that for lighting/direction indicators. The main fuse is mounted at the right-hand front of the battery box, while the other three are located below the junction box. The fuses are easily accessible between the shock absorbers at the rear of the wheelchair. To change the fuses, see page 41.

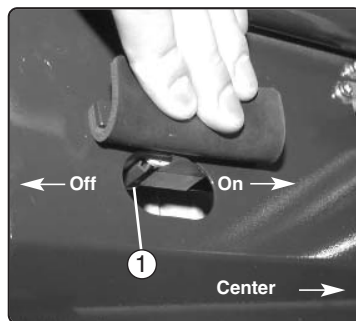
The main fuse is tripped when the toggle switch is turned away from the chassis center, see fig. 7.1. Press the switch back towards the chassis center to reset the main fuse. See "Resetting the main fuse", pages 39-40.

1. Main fuse 100A
2. Charging fuse 20A
3. Position adjuster 15A
4. Lighting/indicators 7,5A

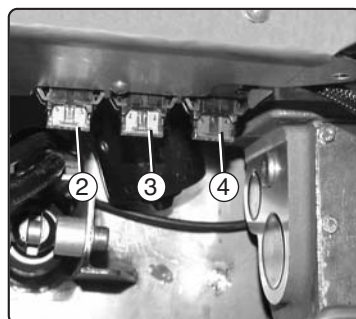
NB! Under very specific circumstances, the fuses in the Safe Gate electronics may cut off the power supply. This will require checking by a service engineer before the fuses are changed.

Safe Gate electronics

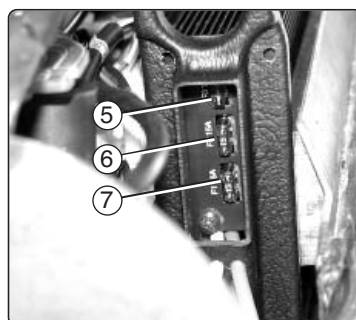
5. Lighting/indicators 30A
6. Position adjuster 30A
7. Charging fuse 30A



Main fuse



Fuses in the junction box



Safe Gate electronics

Fig. 7 . Fuses

Control panel

The wheelchair control panel is fixed to the right or left-hand arm rest, with adjustable location on the panel holder for optimum ease of use. The illustration below shows the different control panel functions.

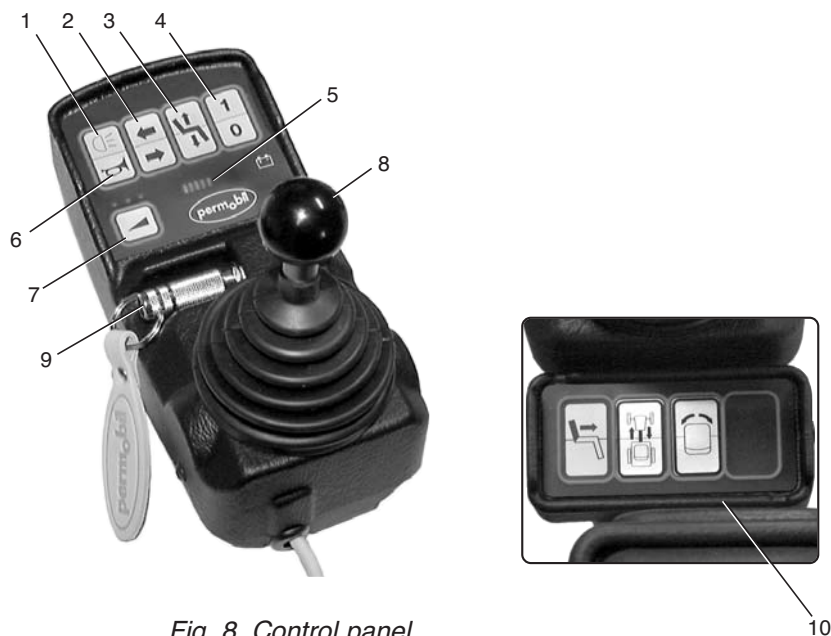


Fig. 8. Control panel

- | | |
|------------------------------|---------------------------------------|
| 1. Lighting | 6. Horn |
| 2. Direction Indicators | 7. Speed selector (low, medium, high) |
| 3. Seat lift | 8. Joystick |
| 4. On/off switch | 9. Start key |
| 5. Battery voltage indicator | 10. Button box |

Start key

The start key is a plug device which is inserted into the control panel. The key must be inserted before the main switch can be activated.



Fig. 9. Start key

Main switch

The main switch acts as an on/off switch for power to the wheelchair and must be set to "on" before the chair will operate.

NB! First switch off the power on the maneuvering panel (switch marked "0") before switching the power off on the main fuse.

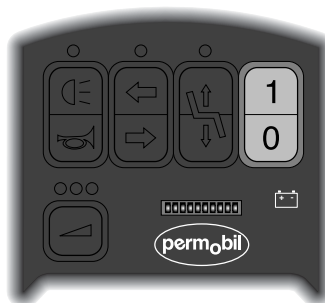


Fig. 10. Main switch

Seat lift

The switch for moving the seat lift up and down. When the seat lift is in operation, the indicator lamp (Fig. 11) lights. Whenever the seat lift is raised from its lowest level, maximum speed is reduced by half (approx. 4,5 miles/h, 7 km/h).

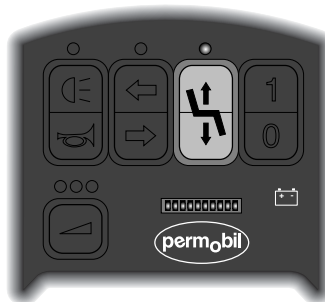


Fig. 11. Seat lift switch

Direction indicators

Pressing the direction indicator symbols will activate the right or left-hand direction indicator.

A second press on the same symbol will stop the indicators flashing.

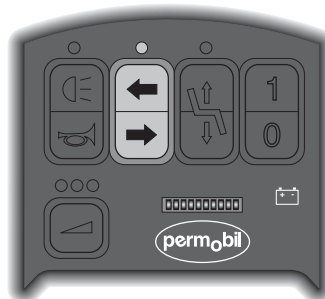


Fig. 12. Direction indicator switch

Lighting

The lights will be turned on when the lighting symbol is pressed. A second press will turn them off again.

Horn

Pressing this switch sounds the horn to attract the attention of other road users.

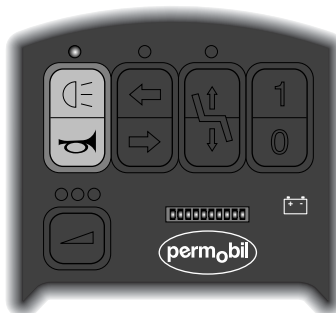


Fig. 13. Horn switch

Battery voltage indicator

The window display on the control panel (Fig. 14) indicates the following (left to right):

Red/yellow/green = Fully charged

Red/yellow = Half charged

Red = Recharge batteries

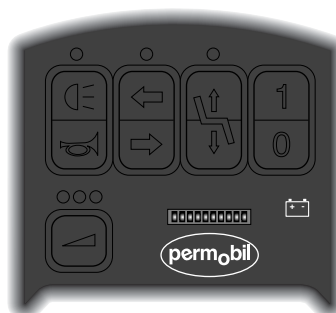


Fig. 14. Battery voltage indicator

Speed selector

The speed can be set at three levels, with one or more of the indicator lamps lighting up, depending on the speed range selected.

1 lamp lit = Low speed

2 lamps lit = Medium speed

3 lamps lit = Maximum speed

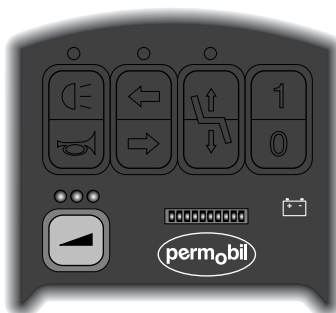


Fig. 15. Speed selector

Small control box

The small control box is attached to the right or left-hand armrest behind the control panel. The small control box contains the various options such as wheelchair lengthways adjustment, seat twist (if equipped) and backrest angle. The pictures below show the different functions of the small control box and its location.

Back rest angle (Corpus II only)

The backrest can be angled back to the user's desired position. Pressing the top part of the switch causes the back to rise up. The back can be lowered by pressing the lower part of the switch.

Back rest slope angle can be continuously adjusted backwards to 130°.

Lengthways adjustment

The distance between the foot rest and the seat can be adjusted. Pressing the upper part of the symbol causes the footrest to move outward, while it moves back again if the lower part is pressed. This makes it easy to adjust the chair to the user's leg length and allows the legs to be stretched during driving. Extending the foot rest completely gives a smoother ride outdoors. Retracting it makes driving round the house more convenient. More information on page 28.

Seat twist

The seat twist enables the seat to be twisted out. This makes it easier to get on and off the seat. When seat twist is activated, a lamp lights above the seat lift symbol on the control panel. The wheelchair is immobilized while this light is on. More information on page 28. The seat can only be twisted in one direction, to the right or to the left, depending on how it is mounted.



WARNING !

Use of the seat twist function must take place only on a level surface.

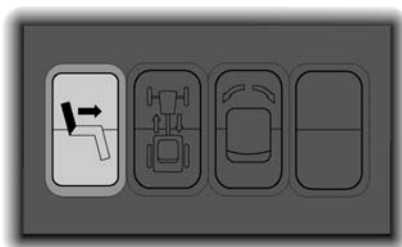


Fig. 16. Back rest angle

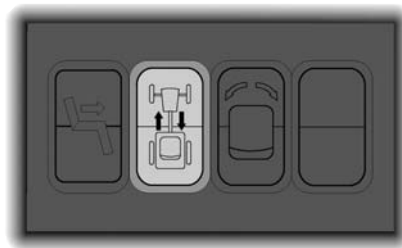


Fig. 17. Lengthways adjustments

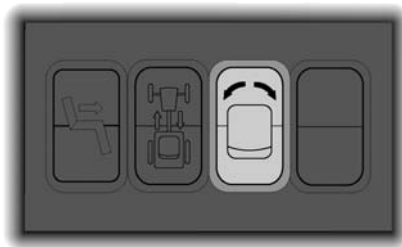


Fig. 18 Seat twist (Optional)

Joystick

The joystick is used for regulating the speed of the wheelchair forwards or backwards, for turning and for braking.

Speed is continuously adjusted by movements of the joystick, either forwards or backwards. The speed is directly proportional to joystick movement (a small movement causes a low speed, a large movement a high speed).

Braking occurs by moving the joystick back to neutral or by letting go of it altogether.

Turning is effected by moving the joystick to one side or the other.



Fig. 19. Joystick

Joystick menu (Leverman)

Switching the joystick menu on and off

You can choose whether you want to be able to use the joystick menu or not. To choose between having the joystick menu switched on/off you hold the light button and the right indicator button down while you switch the wheelchair on, see Fig. 20. Three beeps indicate that the joystick is switched on and two that it is off.

Using the joystick menu

There are two ways to go into joystick menu mode, either by holding the light button in for two seconds or by holding the joystick at the extreme left or right position for two seconds. A short audible signal confirms the action.

NB! To be able to use the joystick to activate the joystick menu, the electronic unit in the wheelchair must have been configured. Contact your service technician for help with this.

The lamp above the lights/horn buttons lights when you have activated the joystick menu. All other lamps are off, including the LED battery voltage indicator, see Fig. 21.

Activating the light and horn

When the lamp above the light and horn lamps is lit you can activate the light by moving the joystick forwards and activate the horn by moving it backwards. So when you move the joystick forwards it has the same function as when you press in the top button. The selected function remains active until you move the joystick back.

Every stage (including "button pressed in") is indicated by a short audible signal.



Fig. 20. Entering joystick menu mode



Fig. 21. Indicating joystick menu mode



Fig. 22. Activating lights/horn

Other functions that you can activate via the joystick menu:

- Indicators – right/left
- Seat lift up/down
- Speed
- Extra button box
- Switch the wheelchair off

Activating the indicators

To activate the indicator function you move the joystick to the right until the lamp over the indicator buttons lights. You then activate the left indicators by moving the joystick forwards, and the right indicators by moving it backwards.

NB! After you have activated one of the indicators, the joystick menu automatically returns to the drive condition. *See also "Closing the joystick menu".*

Activating the seat lift

To activate the seat lift function you move the joystick to the right until the lamp over the seat lift button lights. To raise the seat lift, move the joystick forwards and to lower it move it backwards.

Activating the speed selector

To activate the speed selector you move the joystick to the right until one or more lamps over the speed selector button lights. Move the joystick forwards to increase the speed and backwards to reduce it.

You can set the speed in three fixed ranges, which are indicated by one, two or three lamps being lit.

NB! If you move the joystick left or right without activating a function, the joystick menu automatically cycles through the menu until you release the joystick.



Fig. 23. Activating the indicators

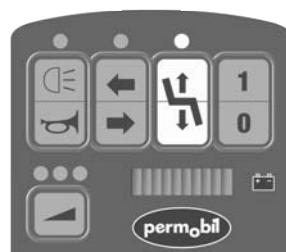


Fig. 24. Activating the seat lift

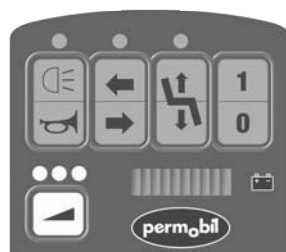


Fig. 25. Activating the speed

Controlling the button box functions

To activate the functions of the button box you move the joystick to the right until the first lamp on the battery voltage indicator lights.

The first lamp corresponds to the button at the left of the button box, the second lamp to the second button from the left and so on. You activate a function by moving the joystick forwards or backwards.

NB! Your wheelchair doesn't need to have an button box for you to be able to use the corresponding functions in the joystick menu.

Closing the joystick menu

There are two ways to come out of joystick menu mode.

1. Go to the last menu position

Move the joystick to the right until all ten lamps on the battery voltage indicator are lit, (3 red, 4 yellow and 3 green). The other indicator lamps on the control panel now lights and you can return to drive mode by moving the joystick forwards. **You can also switch the wheelchair off by moving the joystick backwards and holding it there for at least 3 seconds.**

2. Activate the indicator function

Move the joystick to the right until the lamp over the indicator button lights. Activate the right or left indicators. The joystick menu will then be closed and return to drive mode.



Fig. 26. Activating the button box

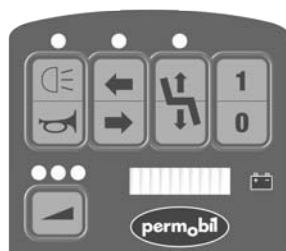


Fig. 27. Closing the joystick menu



Fig. 28. Closing the joystick menu

Accessories

Tool wallet

A tool wallet for the wheel chair is provided, and contains the following tools



Fig. 29. Tool wallet

<i>Tool</i>	<i>Use</i>
Safety goggles	Work on the battery
Allen key set	General maintenance/seat adjustment
12-13 mm spanner	General maintenance, battery replacement
Socket spanner, 19/21 mm	Seat twist/removal of seat
Screwdriver	General maintenance/removal of covers

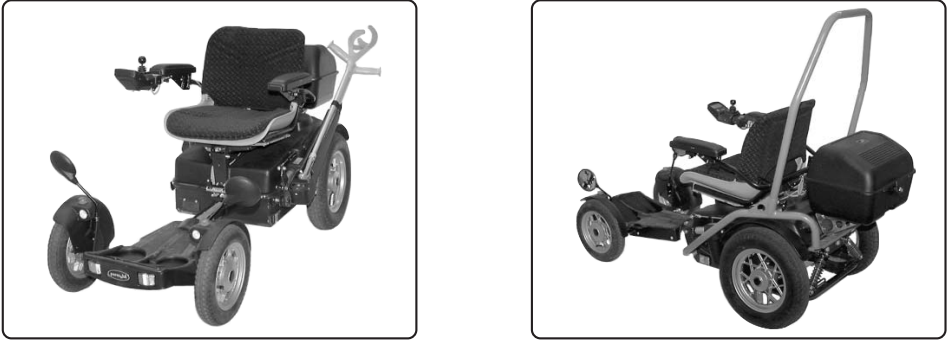


Fig. 30. Accessories

Bow

Trax accessories include a bow for mounting behind the wheelchair. The bow is silver.

NB! The bow can not be mounted in conjunction with a CorpusII/T seat.

Rear-view mirrors

The rear-view mirrors are mounted at the front to facilitate rearwards viewing.

Foot rest insert

The foot rest insert is a support for the feet which is fitted to the foot rest when the rear foot position has to be used.

The foot rest insert gives better support to the whole foot.

Luggage basket/container

Allows transport of luggage in basket or closed container.

The luggage container is lockable. Maximum weight in the basket must not exceed 11 lbs.

Crutch holder

A fastening device allowing crutches, sticks etc. to be strapped to the wheelchair.

Operation

General

This wheelchair is designed for use in and out of doors. To facilitate driving indoors the wheelchair can be contracted in length to make it shorter. Out of doors you must remember to drive very slowly on steep slopes and not to drive over edges more than 4,5 inches high.

Don't go out alone on your first test drive. The test drive is a check of how you and your wheelchair will function together and you may need a helping hand.

Remember that children should not drive an electric wheelchair unsupervised.

Driving

1. Insert the start key into the control panel.
2. Switch on the power by pressing the main switch (1) on the control panel.

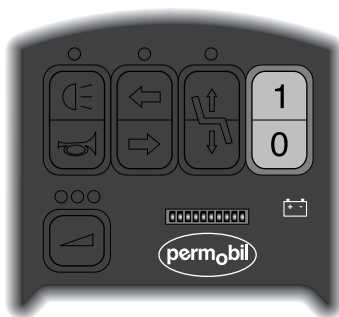


Fig. 31. Main switch

3. Select a suitable speed by pressing the speed selector until the correct indicator lamp lights up for your type of driving. Preferably start with a low speed.

3. Select a suitable speed by pressing the speed selector until the correct indicator lamp lights up for your type of driving. Preferably start with a low speed, see Fig. 32.

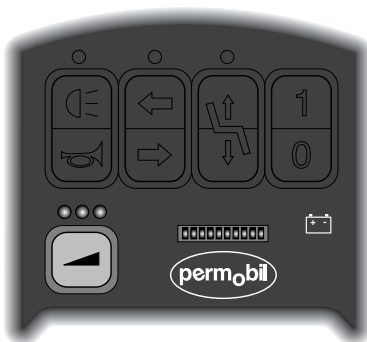


Fig. 32. Speed selector

4. Carefully move the joystick forward to drive forwards or backwards to reverse, see Fig. 33.



Forward drive



Reverse

Fig. 33. Joystick

5. The speed of the wheelchair can be adjusted continuously by moving the joystick different distances forwards or backwards. The Safegate electronics enable you to move at crawl speed over edges. You drive up to the edge and then carefully drive over it. Approach the edge at a slight angle and you will pass over it more easily. When driving down an obstacle or down a steep slope, you must drive slowly and brake gently. The maximum speed should be set to low. You can brake gently by bringing the joystick back to a position within the neutral area. When your speed reduces, you can let go of the joystick completely.

NB! The wheelchair will operate at reduced speed when the seat is raised. You can only use full speed if the seat is in its lowest position.

Steering with joystick

Move the joystick to one side or the other while travelling forwards or backwards to turn the wheelchair in the desired direction.



Steering to the left



Steering to the right

Fig. 34. Steering

Seat twist

Seat twist makes it easier to get on and off the seat. Electric seat twist is controlled from the button box, see page 18. The wheelchair is immobilized while the electrical seat twist is being operated. For manual seat twist, push down the lever at the side of the seat, see Fig. 36. It will then be possible to twist the seat to the desired position. The seat can only be twisted in one direction, to the right or left, depending on how the seat is installed.



Fig. 35. Seat twist



WARNING !

Use of the seat twist function must take place only on a level surface.



Fig. 36. Seat twist lever

Electric lengthways adjustment

The distance between the footrest and the seat is adjustable by up to 8 inches. This function is controlled by a switch on the button box. By pressing the upper part of the symbol the distance between the seat and the front wheel will increase, while it will reduce if the lower part is pressed. This function operates only when the wheelchair is stationary.

Manual lengthways adjustment (initial setting)

Carried out by setting the adjustment rod at the rear of the chair to a suitable position (0-8 inches).

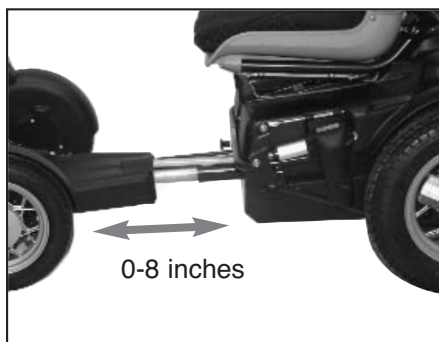


Fig. 37. Lengthways adjustment

Driving rules

High edges



WARNING !

Never drive the wheelchair over edges higher than 4,5 inches.

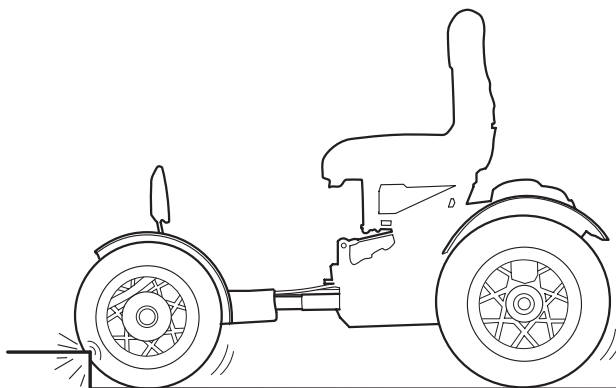


Fig. 38. High edges

Downhill slopes

When driving downhill you must use the lowest speed and take great care.



WARNING !

The wheelchair is not designed for driving down slopes with a gradient greater than 15°

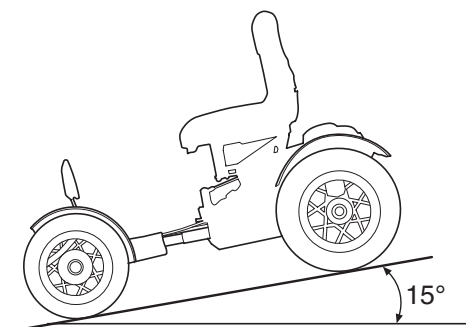


Fig. 39. Driving downhill

Uphill slopes



WARNING !

Do not drive up slopes with a gradient greater than 15°.

On slopes with a higher gradient there is a risk that the wheelchair will not maneuver safely.

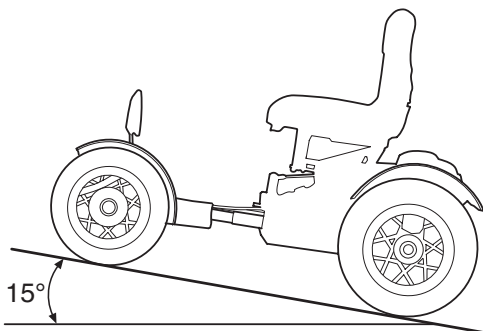


Fig. 40. Driving uphill

Driving on sideways gradients



WARNING !

Risk of tipping over.

Do not drive the wheelchair on sideways gradients greater than 12°.

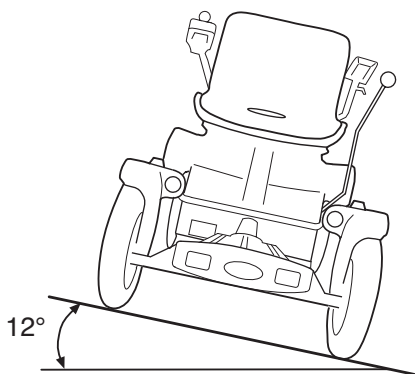


Fig. 41. Driving on sideways gradients

Releasing the brakes



WARNING !

To avoid the wheelchair rolling away, make sure it is on level ground before releasing the brakes.



WARNING !

When the brakes are released, you must turn the front wheels by hand to maneuver the Trax.

The brakes can be released to allow the wheelchair to be moved manually.

1. Switch off the wheelchair by turning the main switch to "off".
2. Pull the brake release lever forwards and up so that it hooks onto the brake lever track. The chair can now be moved manually.

NB After moving the chair, reapply the brakes by pushing down the brake release lever until the brakes engage.



Fig. 42. Releasing the brakes

Battery charging



WARNING !

Only carry out charging in a well-ventilated area, not a wardrobe etc. Do not charge up in a bathroom or other wet room.



WARNING !

Be careful with metal objects when working on the batteries. A short circuit could easily cause an explosion. Always wear safety gloves and goggles.



WARNING !

Only chargers with a max. 15A charging current may be used.



Fig. 43. Lester Electrical's Dual mode charger.

When should the batteries be charged?

As a general rule, you should recharge your batteries as frequently as possible to assure the longest possible life and to minimize the required charging time. Plan to recharge them when you do not anticipate using the chair for a long period of time.

A battery voltage indicator on the control panel indicates when the battery voltage is low. The batteries must then be charged as soon as possible.

If the batteries should become completely discharged, it is important that you recharge them as soon as possible. If you delay before recharging them, the batteries can be damaged.

Charging

1. Connect the mains cable to the power outlet. Turn off charger first, then, after connecting to the wheelchair, turn on charger.

NB! If your charger has an on/off switch, you must ALWAYS ensure the switch is in the OFF position BEFORE plugging your connection plug into the wheelchair and BEFORE unplugging the connection plug.

2. Connect the connection cable from the charger to the charging socket on the wheelchair, which is on top of the right side of the chassis cover.

NB! When the charger is connected, the chair must not and cannot be driven.

NB! The circuit breaker must be in the "ON" position during charging.

Description and Use of Battery Charger, see supplied Instruction Manual.



Fig. 44. Connecting the charger

Transport

We recommend that Permobil wheelchairs are transported on trailers. The Permobil can be locked in place with transport belts attached to the fixing loops marked with yellow labels. The fixing loops are located on the side of the battery box and at the rear side of the bumpers. If the chair has to be transported in an estate car or other vehicle it is vital that the chair is properly fixed and that the fixing points used are well anchored.

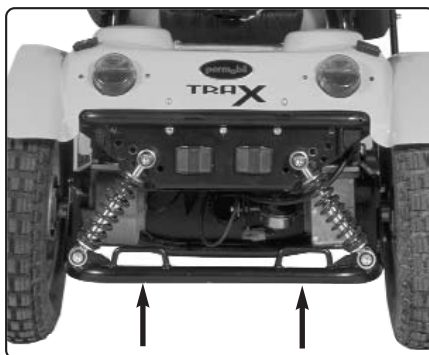


WARNING !

A poorly fixed chair can cause serious injury to passengers if it comes loose, not to mention damage to the vehicle and the wheelchair itself.



Front fixing loops



Rear fixing loops

Fig. 45 .Wheelchair fixing loops

Air transport

In the case of air transport there are three major aspects to consider: the batteries; the wheelchair's dimensions and weight; and the risk of damaging the seat in handling, as it will be sharing space with suitcases and other cargo in a confined space.

Batteries

This wheelchair has maintenance-free gel-type batteries, in some airlines it is not necessary to remove the batteries from the wheelchair during the flight (but you must check with your airline for their rules). However, the batteries must be disconnected. This can be done with the main fuse/battery cut-out.

If a wheelchair is fitted with acid-type batteries, the airline will require them to be taken off the wheelchair and transported in the special boxes they will supply.

Many foreign airlines refuse to take acid batteries altogether, so always check with the airline which rules apply.

For battery removal, see page 42.

If you have to remove the batteries and your wheelchair has a seat lift, this must be lowered manually after removing the batteries for air transport.

See page 42, points 1-7.

Wheelchair's dimension and weight

The importance of the chair's dimensions and weight depends on the type of aircraft used for transporting it. The smaller the plane the smaller the wheelchair must be and the less it must weigh, and vice versa. Always check with the airline for the rules which apply.

Preventing damage

Cover the control panel with soft shock-absorbent material (foam etc.) and bend it in towards the backrest. Other protruding items should be similarly protected. Tape any loose hanging cables to the seat or covers.

NB! To ensure that transport can be safely carried out, without any unpleasant surprises at the last minute, **always contact the airline with which you are travelling beforehand.**

Maintenance and Repairs

General

For optimum performance of your wheelchair it is important to take good care of it. All wheelchairs are subject to wear, partly due to moving parts and partly due to stresses.

What you need to know is how your wheelchair works, how to drive and use it in the best way and how to take regular care of it.

The purpose of preventive maintenance is to prevent problems arising. If you look after your wheelchair it will function well and the risk of faults will be reduced.



WARNING !

Before working on the wheelchair's electrical system the connection to the positive pole of the battery must always be removed or the main fuse/circuit breaker be tripped.



WARNING !

When the brakes are released you must turn the front wheels directly by hand to maneuver the wheelchair.



WARNING !

Be careful with any metal objects when working on the battery. A short circuit could easily cause an explosion. Always wear safety gloves and goggles.



WARNING !

Make sure nothing is trapped between the chassis and the seat when operating the seat lift.



WARNING !

Any inappropriate modifications to the wheelchair and its various systems may entail an increased risk of accidents. Carefully follow the recommendations in the Handling section to prevent the risk of accidents in connection with driving.

All modifications to and interventions in the vital systems of the wheelchair must be performed by a qualified service engineer. Always contact a qualified service engineer in cases of doubt.

Maintenance

Cleaning

Clean the wheelchair often. After use outdoors it should be cleaned extra thoroughly. Use a damp cloth with a mild soap solution to wipe off dirt and dust.

NB! Do not hose down your wheelchair! The electronics may be damaged.

Wheels

Regularly check the wheels for the correct tire pressure. Top up the air if necessary. See page 44.

Batteries

Storage

Note that a battery will run down of its own accord and any battery will be ruined if it freezes in cold weather. If the wheelchair is to be kept unused for a lengthy period, the batteries must always be recharged once a month to prevent damage.

NB! The temperature in the place of storage must not fall below 40°F.

The Permobil Trax has maintenance-free gel-type batteries. This means there is no need to check fluid levels.

Battery life depends entirely on regular charging.

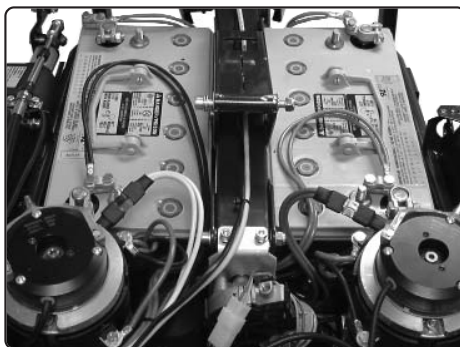


Fig. 46. Batteries

Repairs

Resetting the main fuse/circuit breaker

The main fuse also functions as a circuit breaker but is still referred to as the main fuse in the user instructions.

NB! First switch off the power on the maneuvering panel before switching the power off on the main fuse.

Main fuse

The main fuse should only be changed by persons with a good knowledge of the wheelchair.

NB! A tripped main fuse often indicates a serious electrical fault, so the service engineer should be called.

In case of air transport the batteries must be disconnected. This may be done with the main fuse/circuit breaker, but check with the airline for their rules.

1. Check the label to see which is the "on" and which the "off" position.
Bend up the rubber protector. Press the toggle arm away from the center of the chassis to trip the main fuse, see fig. 47.
2. Press the toggle arm on the fuse to the right, as seen from the front of the chair, to reset the main fuse.



Fig. 47. Location of main fuse



WARNING !

Investigate the cause if the main fuse trips. It could be due to a serious electrical fault, in which case the service engineer should be called.

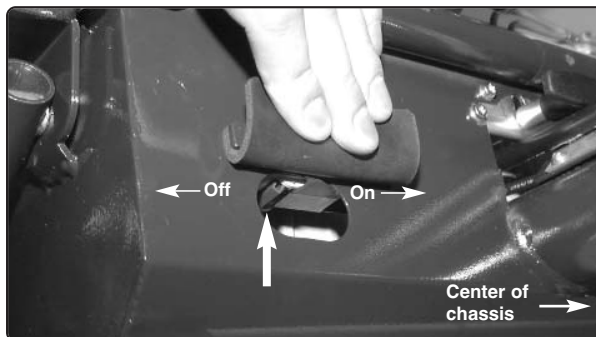


Fig. 48. Main fuse tripped

Changing the fuses for charging, position adjustment and lighting/direction indicators

The fuses for charging (20 A), position adjustment (15 A) and the lighting/direction indicators (7.5 A) are located under the rear edge of the vehicle (junction box). They are easily accessible at the rear of the wheelchair between the shock absorbers, see figs. 49 and 50 to the right.



Fig. 49. Location of Fuses

1. Change the blown fuse.

Safe Gate electronics

NB In very specific circumstances the fuses in the Safe Gate electronics may interrupt the circuit. A check by a service engineer is necessary before the fuses are changed.

See service manual for more information.

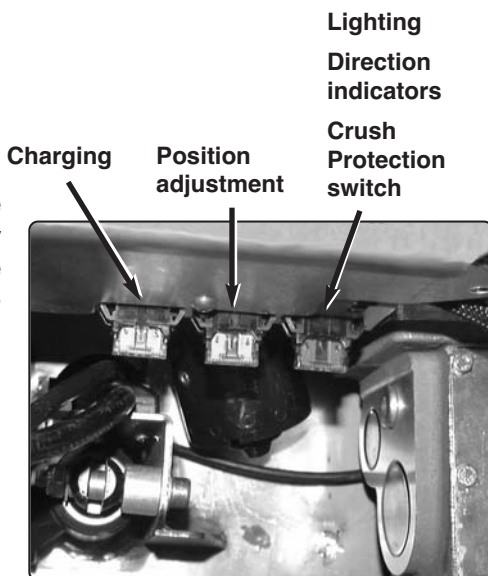


Fig. 50. Fuses in the junction box

Changing batteries

1. Set the wheelchair on an even surface.
2. Raise the seat lift to its full height.

NB If the battery is completely dead, the seat lift can be cranked up using the bolt head under the front edge of the seat, see fig. 52.

NB the screw must not be rapidly turned with a drill attachment. Risk of damage to components.

In the case of a fixed seat attachment/pillar, loosen the rear screw and move the seat forwards, see fig. 53.

3. First switch off the power on the maneuvering panel before switching the power off on the main fuse, see page 14.
4. Remove the battery cover by undoing the four screws.

NB Watch out for the cable to the rear lights. Disconnect the contact in the junction box. If the rear screw on the seat lift is unscrewed, the seat can be moved forward to gain extra space for changing the batteries, see fig. 53.
5. Disconnect the battery connections. First the positive pole, then the negative.

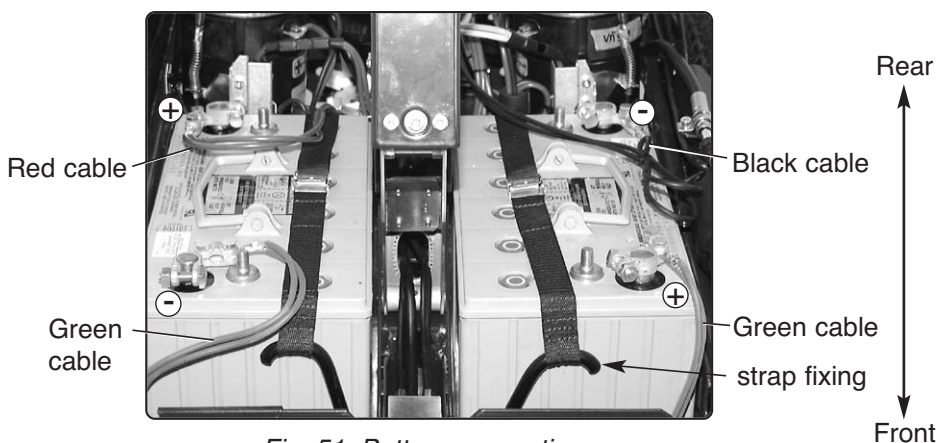


Fig. 51. Battery connections

6. Disconnect the straps which retain the batteries in place. Check that the strap fixing is in the proper position as each strap is disconnected.
7. Lift out the batteries.
8. Set in two new batteries. Place the batteries in the same position as before and fix them with the straps. Tighten the straps well.

9. Connect the battery connections, first the negative pole, then the positive.
10. Replace the chassis cover and connect the contact for the rear lighting in the junction box. Lower the seat lift.
11. Charge the batteries, see Charging pages 33-34.



Fig. 52. Turn counterclockwise to raise the seat lift.

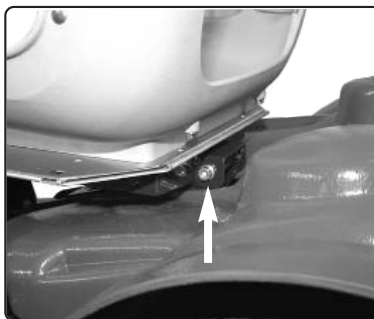


Fig. 53. Undoing the screw to allow the seat to move forward.

NB! An Allen key is used on older wheelchairs.



WARNING !

When cranking up the seat, do not use a drill attachment. Risk of damaging electronic components.

Changing inner tubes

1. Set up the wheelchair on blocks and let out the air.
2. Lever the tire out of the rim.
3. Replace the defective inner tube.
4. Replace the tire on the rim and reinflate, see page 44.

Filling with air



WARNING !

Over-inflation could cause an explosion. Recommended air pressure 36 psi.



Fig. 54. Air valve

Low air pressure in the tire will cause abnormal wear and a shorter travelling range. So, check regularly that the pressure in the front tires and back tires is up to 36 psi.

1. Unscrew the plastic cap on the wheel air valve.
2. Attach a compressed air nozzle to the air valve and adjust the tire pressure to the prescribed level.

Labels

Brake release

When the wheelchair brakes are released, the brake lever must be pulled out and hooked in place with a slight upwards movement.

NB Only release the brake on a level surface.

The brake will engage when the brake lever is pushed down. The brake lever will then return to its initial position.



Fig. 55. Brake release label

Main fuse/circuit breaker

The main fuse is reset when the toggle switch is pressed in the direction of the arrow towards ON.

When the toggle switch is moved towards the OFF position, the fuse will be tripped.

NB! First switch off the power on the maneuvering panel before switching the power off on the main fuse.

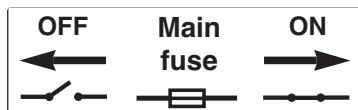


Fig. 56. Main fuse label

Charging current warning

The label shows the maximum current which the battery charger should feed into the wheelchair.

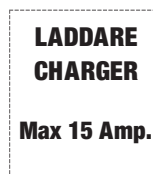


Fig. 57. Charging current label

Fixing hooks

The label shows where the wheelchair should be attached during transport.

A label is placed near each fixing point. The arrow points in the direction of the fixing point.

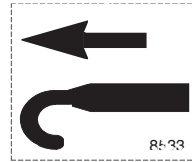


Fig. 58. Fixing hook label

Battery connection

Turn the battery poles away from the center of the chair.

Connect the black cable to the negative pole (-).

Connect the red cable to the positive pole (+).

Connect the green cable in series between the negative and the positive poles on the two batteries. The green cable passes through the main fuse, rated at 100 Amps.

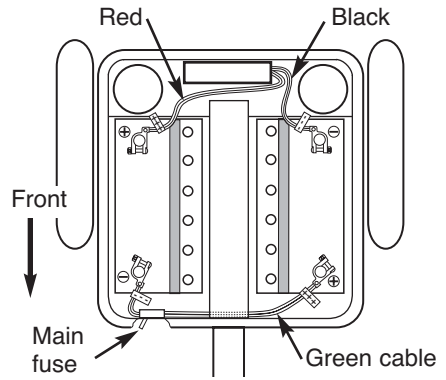


Fig. 59. Battery connection label

Prohibition against passengers on the back cover

It is not permitted to take passengers on the wheelchair.

There is a risk of injury to persons and damage to equipment.



Fig. 60. No passengers label

Specifications

General

Designation..... Trax

Dimensions and weight

Length..... 48,5 - 56,5 inches

Width..... 27,5 - 29 inches¹⁾

Height 34 - 35,5 inches, Trax seat

Height 44,5 - 46 inches, Corpus II/T

Seat height 19,5 - 29 inches²⁾ (50-74 cm)

Transport dimensions L/W/H..... 48,5/27,5¹⁾/25,5 inches (Trax seat, dropped back)

Transport dimensions L/W/H..... 48,5/27,5¹⁾/35,5 inches (CII/T, back removed)

Min. transport height (without seat) 20 inches

Weight inc. batteries 352 lbs, inc. Trax seat

Weight inc. batteries 397 lbs, inc. CorpusII/T seat

Maximum weight of user 298 lbs³⁾

Wheels

Wheel dimensions, front..... 2,50 x 8

Front wheel air pressure..... 36 psi

Wheel size, rear..... 3,00 x 10

Back wheel air pressure 36 psi

Performance

Travelling range 22 - 31 Miles

Max. speed, forward 9 Miles/h (5.5 Miles/h until age 16.)

Turning circle, 180°..... 108 inches

Obstacle limit..... 4,5 inches

Gradient limit 15 degrees

¹⁾ Depending on choice of tire

²⁾ Seat height from 20-21 inches up to 27,5-29 inches depending on adjustment holes under seat.

³⁾ If the wheelchair has a seat lift, maximum user weight is 220 lbs.

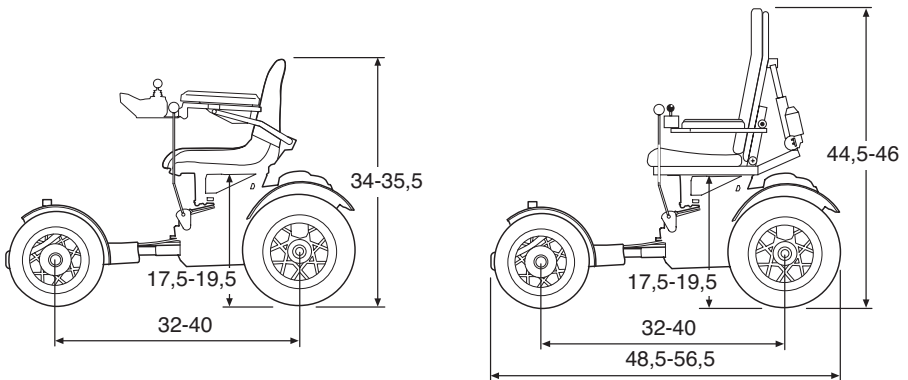
Electrical system

Batteries

- Battery type Maintenance-free gel-type batteries
- Maximum battery dimension L/B/H ... 13,5/ 6,5/ 9,5 inches
- Recommended batteries Group 27
- Battery capacity 2 x 97 Ah
- Charging time 10 hours

Fuses

- Charging fuse 20 A
- Seat lift..... 15 A
- Lighting 7,5 A
- Main fuse 100 A



All dimensions in inches

Trax seat

Owner's manual

General Introduction

The Trax seat is a simple seat designed for users up to max. weight of 298 lbs. The seat is based on a plastic shell which is then fitted with armrests and cushions in different fabrics.

In order to get the best possible use from your seat, it is important to use it in the intended way. We therefore advise you to carefully read the operating instructions, especially the safety instructions. Keep the operating instructions with the rest of the things belonging to the chair.

Specially modified wheelchairs

If your seat is marked with a "Specially modified product" sticker, it has been modified to your specific needs and wishes. This means that the design and functions could be different from the text in these operating instructions, or the design and functions of other seats of the same type.

The seat can also contain parts that are unique to your chair. These aren't available as spare parts, and must be made as required. This can affect the repair time of your seat.

Specifications

All information and specifications given in these operating instructions where applicable when this seat was delivered. As Permobil carries out continual development and improvement, we reserve the right to make changes without prior notice.

Design and function

General

The Trax seat is a simple seat with a forward-folding back rest and adjustable arm rests.



Fig. 1. Trax seat

1. Back cushion
2. Arm rest
3. Seat cushion

Seat

The seat angle can be manually adjusted in three positions, sloping forwards, neutral or sloping backwards, see page 53.

The seat cushions are covered in fabric or imitation leather.

The seat width is 17 inches. The seat depth is 17,5 inches.

Back rest

The back rest can be manually folded down onto the seat cushion.

The cushions are made of foam rubber and covered in fabric or imitation leather.

Arm rests

The distance between arm rest and back rest, arm rest height and arm rest angle are all adjustable. The armrest can be folded up.

Accessories**Belt**

The Trax seat can be fitted with a seat belt with snap-lock.

Setting the seat angle

The seat angle can be set in three position, forward-leaning, neutral and slightly backward-leaning.

NB! If the seat is fitted with seat twist, the seat must be in level position.

The seat angle is set using the holes under the seat. There are three holes under the seat at the front and three at the back, see fig. 2 below.

Level position is obtained if the screws are mounted in the equivalent holes back and front. Maximum slope forwards is obtained when the screws are set in the top hole at the front and the bottom hole at the back. The reverse gives the maximum slope backwards.

The seat slope can be varied from a maximum backwards slope of $+6^\circ$ to a maximum forwards slope of -5° .

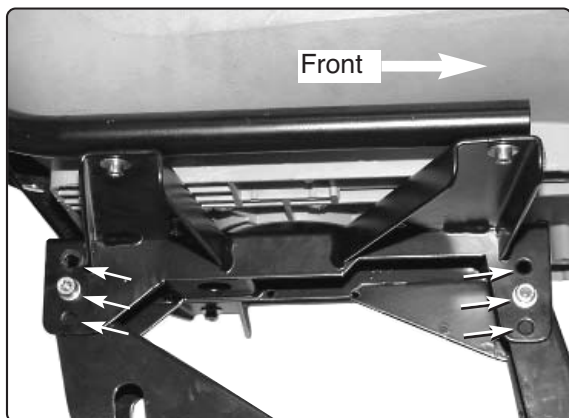


Fig. 2. Seat in neutral position (level)

Setting the arm rests

Height adjustment

Turn the knob, fig. 3.1, clockwise or anticlockwise to the desired height. The arm rests can also be mounted in reverse position, i.e. with the right-hand arm rest joint on the left-hand side and the joint plate reversed, for the sake of gaining extra height.

Arm rest angle

Release the handle, fig. 3.2, and adjust to desired angle. Tighten the handle.

NB! Secure the arm rest at the desired angle.

Use the provided bolt (4A) to further secure the arm rest at the desired angle. This bolt needs to be installed through one of the holes in the arm rest bracket that line up with the tapped hole (4B) in the arm rest bar.

Length adjustment

The arm rest can be adjusted in two positions. Undo the screw, fig. 3.3, remove the arm rest adjustment handle, and move the joint plate backwards or forwards. Remount the handle and tighten the screw.

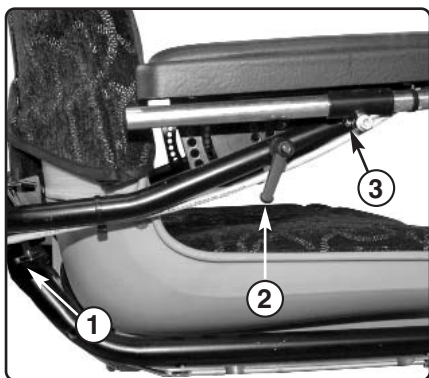


Fig. 3. Arm rest

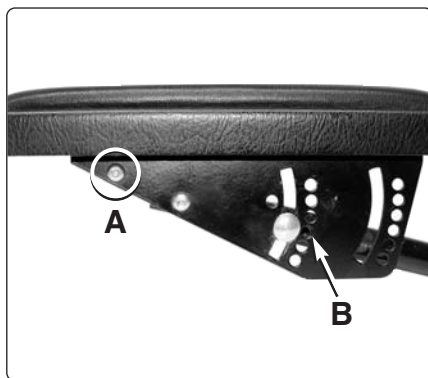


Fig. 4. Secure the arm rest at the desired angle.

Maintenance

The seat can be cleaned with a damp cloth and mild soapy water.

Upholstery washing instructions

Refer to the label on the cushion. The cover may be removed if desired for easier washing.

No other maintenance is required.

Transport

To take up less space during transport, the back rest can be folded down. The armrests can be set to their lowest position or completely removed.



Fig. 5. Back folded down

Removing the seat

If your seat is equipped with seat twist, the seat can easily be removed from the chassis to obtain even lower transport height. This is done by unscrewing the nut located beneath the seat cushion, see fig. 6.

NB! Before the seat can be lifted off, the cables between the seat and chassis must be disconnected. Do this by unscrewing the connection behind the seat back, see fig. 7.



Fig. 6. Seat fixing



Make sure the fixing nut is properly tighten when fitting the seat.

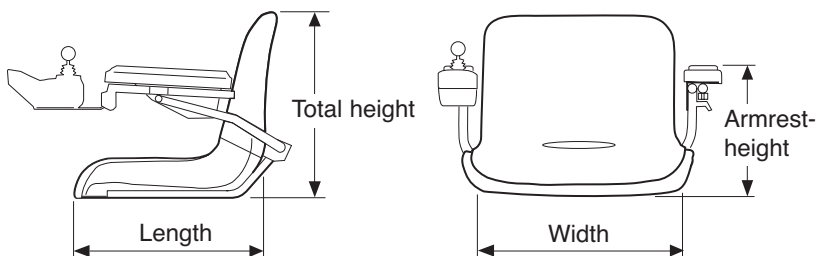


Fig. 7. Disconnecting the cables

Technical data Trax seat

Total length of seat including arm rest	21 inches
Total height of seat	17 inches
Seat width	17 inches
Seat depth	17,5 inches
Back height	14 inches
Arm rest length	10 - 16 inches
Arm rest height*)	10,5 - 14,5 inches
Seat angle, manual	+6° - -5°
Weight inc. arm rests	33 lbs
Transport length, min. inc. chassis	48,5 inches
Transport width, min. inc. chassis	27 inches
Transport height, min. inc. chassis	25,5 inches with folded back rest

* Reversed installation reduces arm rest height



Maximum user weight

Manual seat angle **+6° - -5°** **298 lbs***

*) If the wheelchair is fitted with seat lift, maximum user weight = 220 lbs.

CAUTION! It is very important that you read this information regarding the possible effects of electromagnetic interference on your powered wheelchair.

Electromagnetic Interference (EMI) From Radio Wave Sources

Powered wheelchairs and motorized scooters (in this text, both will be referred to as powered wheelchairs) may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones.

The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered wheelchair's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity. This is called its "immunity level". The higher the immunity level, the greater the protection.

At this time, requested immunity level as per EN 60601-1-2 is 3 V/m. The immunity level of this powered wheelchair model as shipped, with no further modification, is >20V/m in the range of 26 MHz to 950 MHz.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types:

1.

Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie", security, fire, and police transceivers, cellular telephones, and other personal communication devices.

NOTE! Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.

2.

Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle.

3.

Long-range transmitters and transceivers, such as commercial broadcast transmitter (radio and TV broadcast antenna tower) and amateur (HAM) radios.

NOTE! Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, so far we know, are not likely to cause EMI problems to your powered wheelchair.

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the powered wheelchair's control system while using these devices. This can affect powered wheelchair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered wheelchair.

WARNINGS

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs and motorized scooters. Following the warnings listed below should reduced the chance of unintended brake release or powered wheelchair movement which could result in serious injury.

1.

Do not operate hand-held transceivers (transmitters/receivers), such as citizens band (CB) radios, or turn ON personal communications devices, such as cellular phones, while the powered wheelchair is turned ON.

2.

Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them.

3.

If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe.

4.

Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to EMI.

(Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair).

5.

Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby.



Order no. 201083-US-0