



User's Manual

Racebike & Antaras



English



MD

Wolturnus A/S recommends that you read this manual before using the bike.

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1 Introduction

1.1 Foreword

This user's manual provides users and helpers with essential information about the design, functions, use and maintenance of the Wolturnus Racebike and Antaras for children and adults. The manual contains the information necessary to ensure safe use of any of these bikes. It contains troubleshooting information with solutions (where/if applicable). The bikes are all easy-propulsion active sport bikes made with high-strength aluminum. The bikes are ideal for users who want to have an active life, outdoors on and off roads (depending on the model and its wheels).

The instructions in this manual are essential for safe and correct use of the bike. Before using the bike, read these instructions carefully - pay special attention to the safety instructions. Furthermore, The information provided ensures that the user gets the optimum advantage of the bikes features and functions. Keep this user's manual throughout the lifetime of the bike: it contains information for future questions and it contains guidelines for adjusting and adapting the bike.

This user's manual has been produced in accordance with DS EN82079-1 'Preparation of instructions for use - Structuring, content and presentation'. It is divided into sections. The heading on each page contains the title of the overall section. The footer of each page displays the page number, year, and site of origin of the user's manual. It also includes the wheelchair's model.

1.2. Intended Use

The Wolturnus Race- and Antaras bikes are designed for individual mobility outdoors. It is only suitable for persons who are unable to walk or have a mobility problem. Only equipment specified in this user's manual may be used with the bikes, and vice versa.

Wolturnus A/S does not guarantee this product if it is used with accessories or products from manufacturers other than those specified as part of the modular system.

Use of the bikes for any purpose other than the aforementioned will be considered incorrect. In the event of incorrect use, the user - i.e. not the manufacturer - is liable for resulting damage to persons or property.

These bikes may only be used by experienced users. For personal protection and in order to ensure that the bikes are used safely and correctly, it is a requirement that the user and helpers receive training and instructions prior to use of the bikes.

To ensure that the bikes are used correctly it has to be operated exclusively as described in this user's manual. The user bears final responsibility for accident-free use.

WARNING!**Risk of injury with incorrect use**

To avoid the risk of fingers getting caught in the wheel spokes or wheel locks, and to avoid the risk of the handbike tipping, children should not play with the wheelchair.

1.3 Usage

The bikes are of modular design and versatility makes it suitable for users who have difficulties walking or who have a mobility handicap as a result of:

- Paralysis
- Loss of limbs (leg amputation)
- Limb defects or deformities
- Damaged or defective limbs
- Other illnesses

When adapting the bike for the user, the following should be taken into account:

- Body, height and weight (max. load 120 kg.)
- Physical and mental constitution
- Age
- Residential circumstances
- Surroundings

1.4 Service**INFORMATION**

Service and repairs to the Wolturnus handbike must only be carried out by authorised personnel trained by Wolturnus A/S. In the event of problems, please contact the dealer that you bought the wheelchair from.

In the event of questions or problems that cannot be solved using this user manual, please contact Wolturnus A/S customer service at (+45) 9671 7170.

Wolturnus A/S strives to provide full assistance to its customers in every respect. For Wolturnus A/S contact information and a list of service locations - go to section 12 in this manual.

If the handbike has to be returned for repairs we offer to loan you a temporary handbike. For further information, please contact Wolturnus A/S.

1.5 CE Compliance

This product is a medical device with CE marking in accordance with the Medical Device Regulation (MDR), EU 2017/745. This product has been classified as a class I medical device according to the classification criteria outlined in Annex VIII of the MDR. Wolturnus A/S has therefore, as manufacturer with sole liability, made a declaration of conformity in accordance with Annex IV of the MDR.

1.6 Warranty

Wolturnus provides a two-year warranty for manufacturing defects from date of purchase if the device is used in accordance with this user manual.

The warranty does not apply to normal wear and tear, nor to defects, malfunctions or failures that result from the abuse, neglect, shocks or crashes, improper maintenance, alteration, modification, accident, or misuse, nor damage occurring during shipment, improper assembly, or assembly with non-compatible products. This include, but is not limited to, overload of the product (check product label for maximum user weight), lack of maintenance and/or service as described in the instructions of use, use of unoriginal accessories and parts, changes to the product which deviate from Wolturnus' specifications, and repairs that have been carried out before our Customer Service has been informed.

1.7 Liability

Wolturnus A/S' warranty only applies if the product is used in accordance with the specified circumstances, purpose and instructions. The frame is covered by a 2-year warranty. Other parts manufactured by Wolturnus are covered by a 2-year warranty. Parts that are designed and manufactured by a third-party manufacturer and mounted on a Wolturnus wheelchair are covered by a Wolturnus A/S warranty that is equal to the warranty provided to Wolturnus A/S by the third-party manufacturer.

Wolturnus A/S is not liable for injury or damage caused by:

- Components and parts that are not authorised by Wolturnus A/S.
- Alteration to the original surface treatment.
- Repairs or alterations to the bike that are not carried out by Wolturnus A/S. All warranty repairs has to be carried out by Wolturnus A/S.
- Incorrect use of the bike, or loads that exceed the construction or specified maximum for the bike (in accordance with directive 93/42/EEC for medical devices).
- Circumstances in which the handbike is used by any party other than the original owner/user.
- Circumstances involving bad weather or dangerous situations, or in general all types of predictable negligence.
- Lack of maintenance.
- Cleaning with agents that contain acid or alkaline products, with high-pressure equipment or similar.

To keep updated about this product e.g. regarding new features, safety notice, product recalls

check www.wolturnus.dk. Contact information and overview concerning all of Wolturnus's products are available at the website - or by contacting Wolturnus A/S customer service at (+45) 9671 7170.

1.8 Returns

In the event that the bike has to be returned to the supplier or to Wolturnus A/S, e.g. for repairs, it must be transported in its original packaging for optimum protection. It follows that Wolturnus A/S recommends that the original packaging is retained throughout the lifetime of the bike.

1.9 Serious incident

Wolturnus shall be informed (see contact details on the last page) of all serious incidents which are defined as any incident that directly or indirectly led, might have led or might lead to any of the following:

- the death of a patient, user or other person
- the temporary or permanent serious deterioration of a patient's, user's or other person's state of health
- a serious public health threat

2 Safety

2.1 Symbols

WARNING!

Warning concerning danger of serious accident or injury

CAUTION!

Warning concerning danger of accident or injury

NOTICE

Warning concerning danger of technical damage

INFORMATION

Operational and service information

2.2 Standards and Directives

All safety information in this user's manual is based on applicable national laws and regulations in the EU. For other countries, a declaration of conformity with applicable laws and national regulations is required.

In addition to the safety instructions contained in this user's manual, the user must be familiar with and must comply with applicable regulations from professional associations, concerning accident prevention and regarding environmental protection. All information contained in this user's manual must be complied at all times without limitations. The bikes are constructed in accordance with applicable regulations. The bikes safety level is approved by CE certification and a declaration of conformity.

2.3 General Safety Instructions

- The bike may tip over.
- The bike must only be used according to instruction in this manual.
- The bike must only be used by trained users and must not be used by any other person than the user.
- The bike must only be used to transport one person at a time.
- All safety instructions in this user's manual and all other relevant documentation must be kept and complied with throughout the lifetime of the bike. The user's manual must always be available to the user.
- The back and seat upholstery is fire-resistant, but can be ignited. Therefore extreme care must be taken when in vicinity of flammable items and fire i.e. lit cigarettes.
- To avoid discomfort when using the bike, damaged back or seat upholstery should be replaced as soon as possible.
- Do not force the bike over obstacles when using it on slopes.
- The bike must not be used on stairs.
- Avoid getting in or out of the bike while on slopes.
- Do not park on slopes that exceed 7°, even when the brake pads are activated.

2.4 Safety Requirements for Transport, Assembly and Storage

- Only suitable lifting mechanisms must be used when transporting the wheelchair.
- When adjusting and adapting the bike, all attachment features - such as screws and nuts - must be fastened according to the instructions in this manual.
- The bike is not intended to be used as a seat when in a motor vehicle.

2.5 Safety Requirements in Usage

- The user and helpers must always ensure that the bike and its safety features are in a proper and safe condition before using the bike.
- The bike must be inspected by a Wolturnus-authorized specialist at least once a year in order to ensure that the bike is in proper working order and safe to use.
- The bike must immediately cease to be used if any feature is defective or not operational or if any other circumstance arises which could lead to injury.
- Before starting to use the bike, all mechanical adjustments (positioning the seat, accessories, etc.) must be carried out in accordance with the user's individual preferences, pre-requirements and abilities. These adjustments may only be carried out by specialists authorized by Wolturnus.
- 120 kg is the maximum load for the bike. It must not be exceeded.
- The bike tires must be inspected visually before use to ensure that there is sufficient tread depth and correct tire pressure. The correct pressure is printed on the tire.

- When used on public roads, the user must obey applicable traffic rules.
- The bike should not be used on slippery surfaces (e.g. ice) or on very rough terrain (e.g. on gravel or small stones).
- When getting in and out of the bike, the user's full weight should not be placed on the steering wheel. These cannot bear full body weight.
- Change direction at reduced speed only.
- The bike must only be lifted by gripping the frame parts. Do not grip the steering components or gears to lift the bike.
- The bike must not be exposed to extreme temperatures, to high humidity or to environments with chlorine (e.g. in saunas or at swimming pools).
- The bike's surface temperature can raise if it is exposed to extreme heat, e.g. in strong sunlight for an extended period of time. There is also a risk of very low surface temperature in the event of extremely cold weather.
- Never place fingers between the wheel spokes or between the rear wheel and the wheel locks. Caution is advised when travelling through narrow passages.

2.6 User requirements

- Before starting to use the bike, the user and any helpers must read the user's manual thoroughly and be familiar with its contents.
- The bike must only be used by trained users. To ensure this, the user and any helpers has to receive instruction in use of the chair from Wolturnus-authorized specialists.

2.7 Type Labels

A type label is attached to the wheelchair. The type label includes the following information:

	Manufacturer
	Serial number
	Year and month of manufacture
	Read the user's manual before using the wheelchair
	Caution
	Medical Device
	Declaration of conformity, Medical Device Regulation (MDR), EU 2017/745
	Unique Device Identifier (UDI)

The type label is placed on the cross tube under the seat facing forward. See the manual for fixation of wheelchair in motorvehicles for information about car fixation and safety.

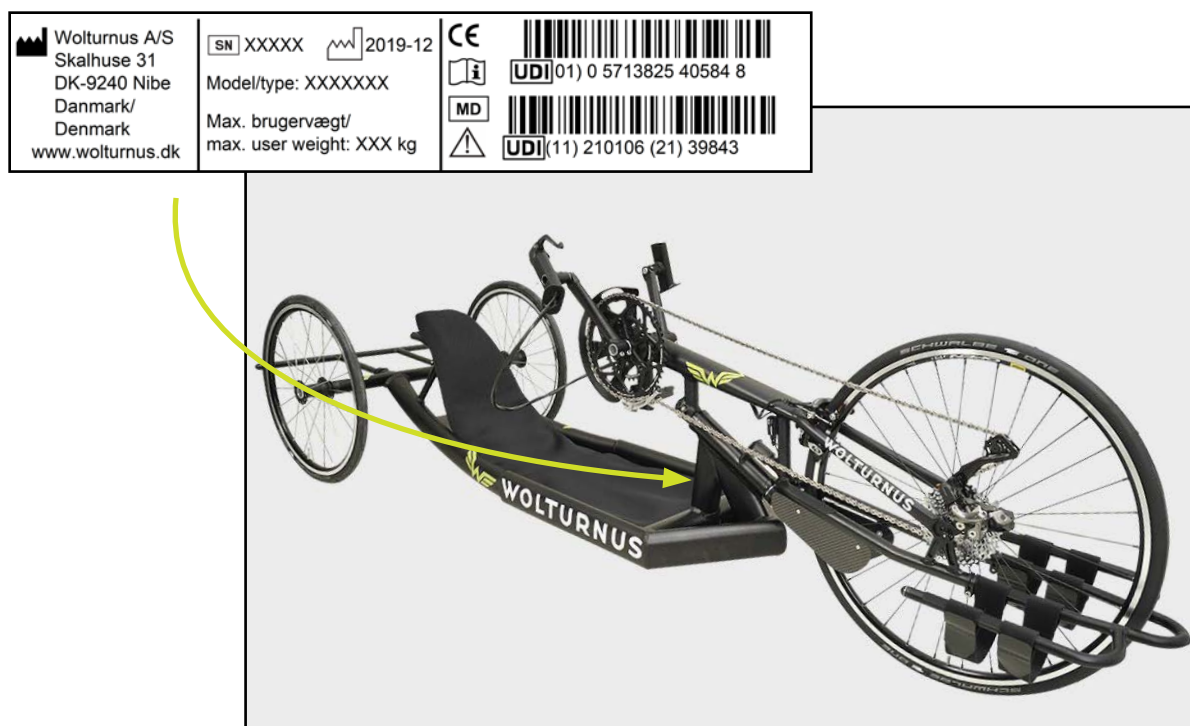


Fig. 1 Location of the Type Label

3 Product Description

The Racebikes comes with a starting weight of 9 kg (time trial version), the 2017 edition custom-made handbike breaks all weight records. Just as the original Racebike model, the Racebike 2017 Edition combines low weight and stability with perfect tuning and aerodynamic design. The design of the racebikes focuses on optimal rigidity between the crank and back. This ensures that all your strength is transferred into speed. However, the 2017 Edition has even more to offer: it is 400g lighter than previous models, the frame is in general 10% stiffer and the frame tubes are slimmer and lighter. The overall design has been optimized to improve the bike's aerodynamics even further.

As every single Racebike is fully adapted to its user, the gear shifter and brakes can be positioned individually. The heat-treated 7020 aluminium frame is anodised in order to guarantee maximum durability. The frame construction and 25 mm axles without play, ensure fantastic road grip and handling.

Antaras is the handbike of the exerciseist who cycles for the sake of exercise and pleasure. The handbike has adjustable seat depth and back angle and is therefore suitable for users in need of continuous adjustment of the seat position. Antaras A can be used for both lying or seated driving positions.

Antaras Off-Road has MTB 559 wheels and tires and can drive on land and gravel. In addition, the Antaras Off Road is equipped with two powerful brakes, a lightweight 27-speed gearbox and a special brake system with both disc and rim brakes, ensuring maximum control under all conditions.

Wolturnus offers several upgrade options, which will be mentioned in section 7. Accessories and Equipment

Wolturnus design and produce the devices in Wolturnus' facilities in Nibe, Denmark. The devices are made by hand, and therefore minor differences in shape, size, or color can occur. This is a result of the handmade process, which is what makes Wolturnus unique and possible to produce devices that fit the user's needs and wishes, and it will not affect the overall aesthetic of the device or its ability to be used as intended. Welds are not removed.

3.1 Unique Device Identifier (UDI)

For electric wheelchairs manufactured by Wolturnus A/S, the Basic UDI-DI is 57138250017G.

The UDI-DI is the Global Trade Item Number (GTIN) identified by the prefix (01) on the type label, see Image 1.

The UDI-PI is composed of date of manufacture, identified by the prefix (11), and the serial number which is identified by the prefix (21), both on the type label, see Image 1.



Fig. 2 Handbikes

4 Delivery and Preparations before Usage

4.1 Delivery

The delivery covers:

- The bike with main components
- The user's manual
- Selected accessories (Accessories range. Go to section 7 in this manual)

INFORMATION

The range of accessories are determined by the product configuration that the user chooses when ordering the wheelchair.

WARNING!

The bike may tip over during corners.

Wolturnus A/S delivers the Hawk wheelchair ready for use. All configurations that are part of the order have been made or will be set up upon delivery by the supplier or a consultant. The Hawk wheelchair is adapted to meet the user's personal preferences and requirements.

The wheelchair's functions can be tested by following the instructions in section 6 in this manual.

Troubleshooting: see section 9.

4.2 Preparation before Usage

Before starting to use the bike, it must be inspected to ensure that it is complete (Fig. 3) and that all functions and features are in proper working order. Wolturnus A/S delivers the bike ready for use.

Main Components (Fig. 3):

1. Frame + Front Fork
2. Seat + Back
3. 2 Working Brakes
4. 3 - Wheels (1 front, 2 rear)
5. Working Gears
6. Cranks and Handles
7. Bumper
8. Footrest

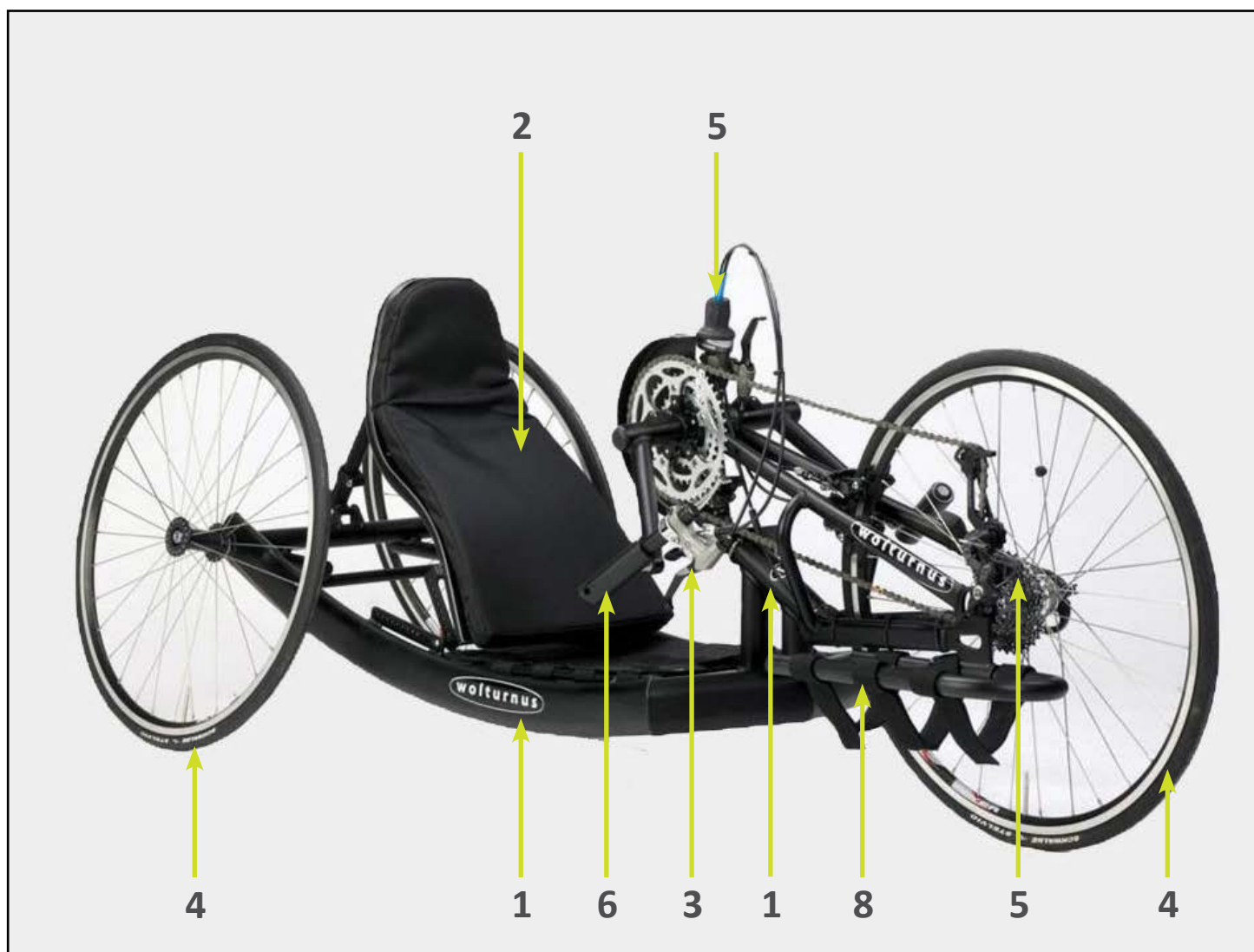


Fig. 3 Main Components

5 Transport and Storage

5.1 Transport

For transport or storage, the rear wheels can be removed. This makes it easy to handle and saves space. While in storage keep the bike in a clean and dry environment.

5.2 Transfer

The method of transfer between chair and bike is individually selected reflecting the preferences of the user. The most common method is transferring from the side.

The following description is based on transfer without third-party help and from one wheelchair to the bike.

Getting into the bike (Fig. 4-5)

- Park the wheelchair next to the bike in a slight angle.
- Tip one leg over the bikes seating area, while keeping your balance. Use the bike frame and wheelchair as support for the transfer.
- slowly slide down into the bike seat, and place leg(s) into the footrest(s).

Getting out of the bike (Fig. 4-5)

- Park the wheelchair next to the bike, with the wheelchairs front towards the side of the bike.
- Take your leg(s) out of the footrest, and place them in an angle.
- Pull yourself towards an upright position in the bike.
- Use the bike frame and the wheelchair to lift yourself up onto the wheelchair.



Fig. 4 Lift legs over the bike



Fig. 5 Slide down into bike

CAUTION!

Risk of damage due to overload.

When getting in and out of the chair, the user must neither place full body weight on the footrest nor the armrests.

CAUTION!

The wheel locks must be applied during transfer.

5.3 Storage

When disassembling the racebike for either storage or transport do the following procedure.

Disassembling front- wheel and fork (Note this may change depending on model)(Fig. 6):

- Unscrew steering rubber.
- Unscrew top clamp.
- Remove steering tube
- Now take off front fork (make sure frame and fork are completely disconnect before disassembling the handbike)

Reassembling the front- wheel and fork (Fig. 7):

- Tighten bottom clamp.
- carefully tighten the top clamp, so isn't too tight.
- Screw top bolt, so that the fork is fitted perfectly on the frame.
- Tighten all bolts and nut.

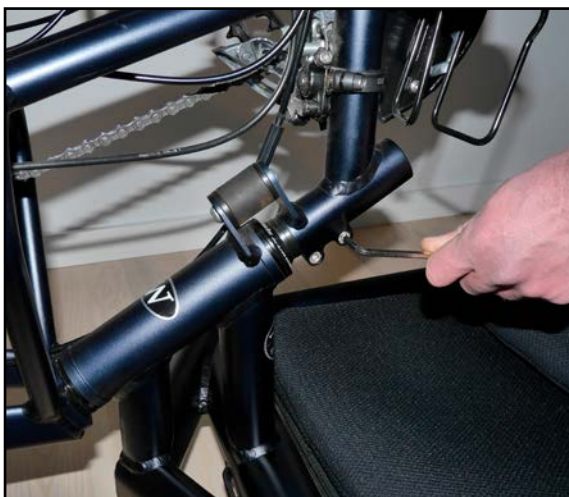


Fig. 6 Location of clamps



Fig. 7 Location of top nut/bolt

6 Adjustments and Setup

6.1 Adjustable Features

CAUTION!

Risk of accident due to loose screws

After loosening any threaded screws, they must be replaced with new screws or secured once more with a medium-strength thread paste (e.g. EuroLock A24.20). After making adjustments to the handbike, all screws and all nuts must be tightened correctly.

The handbike can be adjusted in various ways.

When delivered, the height, width and angle of the seat and the back have been positioned in accordance with the customer's order as received by Wolturnus A/S.

The Following is Adjustable By the User:

- The back angle.
- The seat depth.
- The footrest's length.

6.2 Tools

The following tools (Fig. 8) are necessary for adjustments and settings described in this section:

- A 4 mm Allen key
- A 5 mm Allen key
- 8 mm Allen key
- A 10 mm single-head wrench
- A 13 mm single-head wrench
- A torque wrench
- A measuring tape, a foot rule or a ruler
- A bubble level



Fig. 8 Tools

NOTICE

Damaged tools or incorrect use of tools can result in injury or in damage to the chair.

6.3 Adjustment of the Footrest

The footrest is adjusted by loosening the clamp, after loosening the clamp, adjust the footrest forward or backwards, depending the customers requirements. Depending on model, you can also adjust angle or remove a footrest (Fig. 9).

The straps ensure the leg(s) won't come out of the footrest while biking. Wolturnus always suggests strapping down the legs, for a more safe ride (Fig. 10).



Fig. 9 Clamp on footrest



Fig. 10 Straps for footrest

6.4 Adjustment of Seat (Only for Antaras)

The seat is adjusted by tightening or loosening the straps (Fig. 11). Depending of personal preferences straps can also be used to strap down the lower part of the body. This can give a better feeling with the bike, but is up to personal preferences.



Fig. 11 Adjust seat straps

CAUTION!

Wolturnus recommends strapping down both legs and lower body, in order to ensure the user stays in place during the whole bike ride.

6.5 Adjustment of Back

The backrest can be adjusted to fit the users current needs or wishes. These adjustments can be done as the user pleases, though not while biking.

- Unscrew bolt at the bottom of the back rest (Fig. 12).
- Reapply the bolt into another set of holes, while making sure these holes align. This will change angle and length of the seating position.
- Loosen the clamp on the pole behind the backrest (Fig. 13).
- Change the length of the pole, to change the angle of the seat.
- Retighten all screws and bolts.



Fig. 12 Bolts at the bottom of backrest



Fig. 13 Backrest pole clamp

WARNING!

Ensure that the back angle is adjusted equally on both sides and that, after adjustment, the back locks correctly into place both when upright position and folded position.

6.6 Adjustment of Headrest

The headrest can be adjusted by changing the position of the bolts on the back of the headrest. This does only work for the non-welded headrest.

6.7 Adjustment of Compensator

The compensator help realigning the bikes direction after making a corner or change of direction. The compensator can be adjusted to fit the needs of the user. The compensator can help users who have more strenght in one side or another. Adjust the compensator by during following:

- Loosen the bolt on top of the compensator (Fig. 14).
- Slide the bolt into the needed position.
- Tighten the bolt.



Fig. 14 Compensator

WARNING!

Make sure after all types of adjustments, that all screws and bolts are tighten and in place, to avoid any type of accident.

7 Accessories and Equipment

A wide range of accessories and equipment are available for Wolturnus active wheelchairs. The most popular accessories are described in this section. To see the full range of accessories and order information go to www.wolturnus.com.

7.1 Bumper

The bumper protects the front wheel from direct blows from the front (Fig. 15). It is optional to have a front bumper, but can be retrofitted as desired. Racing bicycles may also be fitted with a rear bumper (Fig. 16). If you have a bumper but later choose to remove it, it is important to dismount the clamps as well so that they do not fall off during a ride.



Fig. 15 Rear bumper



Fig 16: Back bumper

NOTICE

If you have a rear bumper but decides to remove it for any reason, make sure to dismount the clamps, since the clamps can fall off if not tighten correctly.

7.2 Wireless computer

All the Wolturnus bikes can be delivered with bike computers, to monitor time, speed, watts etc. Contact Wolturnus A/S customer service for more information.

7.3 Bottlecage

The bottle cage is mounted on the frame, next to or behind the seat. It is easy accessible while in a seated position, and can hold different types of bottles (Fig. 17).



Fig. 17 Bottlecage and neck support

7.4 Neck support

The neck support ensure a comfortable experience for the user while driving around on the roads. This option does not work while seated on the knees. (Fig. 17)

7.5 Cushion for seat

The bike can be delivered with a 30 mm thick cushion for extra comfort.

7.6 Flag

Getting a flag for your bikes ensure visibility and thereby increases your safety while on public road, as this will help both motor vehicles, pedestrians and other bikes to spot you in the traffic.

7.7 Mirror

The mirror enables the rider to keep himself informed about the surrounds with little to no help.

8 Cleaning and Maintenance

8.1 Maintenance

Each time the wheelchair is used, operational parts, and particularly wheel locks, should be checked to ensure that they are in proper working order. After being loosened 2-3 times when making adjustments or changing parts, self-locking nuts should be replaced.

The following table gives an overview of how to maintain the wheelchair.

Component	Functions and Inspection	daily	month	1/4 year
Tires	Tires undamaged	X		
	Test/adjust tire pressure (see side of tire)		X	
	Check thread depth (min. 1 mm)		X	
Rear wheel	Directional stability during use	X		
	Wheels rotate freely without misalignment		X	
Front wheel	No front fork obstruction		X	
	Wheels rotate freely without misalignment		X	
	Axle bolts correctly tightened		X	
Footrest	All locking mechanisms are in working order		X	
	No obstructions or damage		X	
Upholstery	No damage or wear to upholstery		X	
	Securing straps function		X	
	Seat and back upholstery correctly positioned		X	
Wheel brakes & Gear	Wheel brakes in working order	X		
	Cables	X		
	Shifters in working order	X		
Screws	All nuts and screws are tightened			X

In the event of faults or missing parts, contact the supplier or Wolturnus A/S. Contact information, go to section 12.

Wolturnus A/S recommends that the handbike is serviced at least once a year by the supplier or Wolturnus A/S.

8.2 Cleaning and Disinfection

The bike should be cleaned regularly according to how often it is used and how dirty it is.

Clean the frame, plastic parts and wheels with a mild cleaning agent. After cleaning, dry all parts with a dry cloth.

Clean cushions and upholstery with warm water and washing-up liquid. Remove stains with a sponge or a soft brush. Rinse afterwards with clean water and allow the parts to dry before mounting and using.

To disinfect, use water-based agents and follow the manufacturer's instructions.

NOTICE

The bike must not be used in salt water. Avoid getting salt, sand and other dirt that can cause damage to the wheel bearings, the caster mounting bracket or the rear wheels. Should this occur, the bearings must be replaced.

NOTICE

Do not use corrosive cleaning agents, solvents or hard brushes.

NOTICE

Do not wet-wash. Do not use high-pressure equipment or a water jet. The handbike components must not be put in a washing machine.

NOTICE

Clean the seat and back upholstery, cushions, handles and armrest before disinfecting.

8.3 Changing a Tire

If a tire is punctured, the user or a helper may be able to change it without assistance. The procedure requires having strong hands, practical ability and suitable tools. It is advisable to have a puncture repair kit and an air pump for emergencies (excluding situations with puncture proof tires). Suitable air pumps, puncture repair kits or puncture sprays that fill the tire with expanding foam can be purchased at most bicycle shops.

Removing tires and tubes

- Gently pull the tire edge over the edge of the rim with a tire lever (or two, if it is sitting very tightly). Take care not to damage the rim or the tube (Fig. 19).
- Screw off the valve nut and pull the valve out from the rim and the rim tape.
- Pull out the tube from between the tire and the rim (Fig. 20).

Repair and check-ups

- Repair the tube according to the instructions in the repair kit or replace it with a new tube.
- Before remounting the tire and tube, make sure that no foreign objects that may have caused the puncture are caught in the rim or tire.
- Ensure that the rim tape is intact. It protects the tube against damage from the spokes.
- Push the tube into place between the tire and the rim.

Mounting tires

- Gently pull the clear tire edge over the edge of the rim. Starting with the valve.
- Check that there are no twists at all in the tube, otherwise air can get out.
- Work the whole way around until the last section of the tire edge is taut and can be edged into place with one or two levers.

Pumping tires

- Check on both sides that the tube is not caught between the tire edge and rim.
- Push the valve lightly in and pull it out again to make sure that it is not caught on the tire edge.
- Fill the tire with air to the point where it is still possible to press it in with a thumb. If the control lines on both sides of the tire indicate the same distance to the rim edge, the tire is centred. If the tire is not centred, let some air out and adjust the tire until it is centred. Now pump up the tire to its maximum working pressure (see the side of tire) or at least 3.5 bars (350 kPa). Then screw the dust cap on, tightly.



Fig. 19 Pull the tire edge over the rim



Fig. 20 Pull out the tube

8.4 Maintenance of gears

The gears need regular cleaning, and depending on weather, temperatures, climate and etc. they will need adjustments as well in order to function properly. How to adjust and maintain your gear will be described below.

Front shifter:

- Make sure your derailleur is straight and is aligned with your front wheel.
- Make sure the cable is clean.
- Put your gear to top gear, this is done using the shifter handle. (So the chain is located on the smallest sprocket).
- *If necessary undo cable clamp.
- Adjust the high screw on the gear, so it will fall down easily without the chain jumping off the cassette.
- Repeat previous step, just for lowest gear setting. Shift into lowest gear and adjust the lower screw.
- *if the cable clamp were undone, tighten the cable on the cable clamp in highest setting.
- *Tighten cable tension if need, so all gears run smoothly.
- *Do these steps collectively if necessary.

Rear shifter:

- Make sure the derailleur is clear from the chainring.
- Make sure the derailleur is aligned with the chainring.
- Take the shifter into first gear (front shifter should be in largest sprocket)
- Adjust low limit screw, so the chain only just clears the limit plate.
- Fit the cable in the clamp (if cable isn't already in place) make sure the cable is tight.
- Fit the gears into opposite the position, if the chain is touching the derailleur, tighten the cable on the gear shifter handle.
- If the chain still touches the derailleur, adjust upper limit screw.

9 Troubleshooting

During routine maintenance, it may be necessary to make adjustments or repair faults. In most cases, the solution to the problem can be found on the following list:

Problem	Solution	Reference
The rear wheel makes a loud clicking noise	Check and tighten the spokes and the push rim mounting screws. Only to be done by professionals! Check that nothing is pushing against the rear wheel or the rear wheel's spokes.	
Rear wheel resistance	Check if the rear wheel is misaligned. Check tire pressure Check if the rear wheel bearings are worn down and need replacement.	
Loud clicking noise	Check and tighten the screws around gears and wheels. Check lubrication of chain	Section 8.4
The wheel locks do not work properly	Check that both wheel locks are correctly positioned. Inspect the front wheel or brake pads for wear and tear as these might need changing Check cables and tight, adjust the brakes handles or shorten the cable.	
Gear not shifting	Check allignment of gear Cheack cables, making sure the cable is tight, yet allows for shifting through all gear. Chech for wear and tear on derailleurs and chain-rings.	

If the problem cannot be solved with the aid of the troubleshooting section, contact the supplier or Wolturnus A/S. Contact information, go to section 12.

10 Instructions for Reuse

10.1 Instructions for Reuse

The bikes are suitable for reuse by a subsequent new owner. It is essential that the handbike measurements and equipment are tailored to suit the new user. It follows that it is important to ensure that the bike's functions and features have not been altered to a degree that could create a safety risk for the new user or any third parties during the lifetime of the chair.

Based on market studies and on its knowledge of contemporary technology, Wolturnus A/S has calculated that the bike, when used, serviced and maintained in accordance with the original instructions, has a lifetime of 5 years (excluding time kept in storage by an authorised dealership or the user). Note that with careful care and proper use, the bike can be used for a longer period than the defined lifetime.

Prior to reuse, the handbike must be carefully cleaned and disinfected. Then the product must be inspected by an authorised specialist to assess its condition, wear and tear, and damage. All worn or damaged parts and components that do not suit or are not designed for the new user must be replaced. This user's manual includes a service plan (see maintenance chart section 8) and detailed information about the bike.

10.2 Disposal

If the bike is delivered in a brown cardboard box, that can be handed into to recycling centres or cardboard collection points. The protective bubble wrap on the frame must be disposed of as combustible waste. The aluminum frame must be disposed of as metal. The upholstery and side panels must be disposed of as combustible waste.

11 Environment

Wolturnus A/S strives to respect the environment as far as possible. An assessment has been done to determine the bike's effect on the environment during its life cycle. During development, materials and forms are chosen that minimise waste of energy and material during production.

Wolturnus A/S has a unique approach to individual user's measurement and to the subsequent special design of the chair to meet the user's needs, preferences and requirements. Combined with the bike's mechanical quality, this ensures that the user can use the wheelchair for many years. The bike lifetime is calculated to be approximately 5 years if maintained according to the instructions in this user's manual. The long lifetime limits the wheelchair's effect on the environment.

Furthermore, meticulous quality control throughout the production process ensures that faults are rare, which limits the need to use superfluous resources on repairs or replacement products.

Generally, all functions, working processes and labor at Wolturnus A/S are carried out with respect for the environment. Aluminum residue after the production process is collected in containers and delivered for recycling. During the mounting process, the usage of hazardous agents is kept to a minimum. Furthermore all work processes meet occupational safety requirements (APV). The usage of all materials is continually optimized to ensure minimum waste.

12 Manufacturer and Service Locations

Service Locations

Visit the following webpage to find authorized distributors representing Wolturnus A/S in other countries: <http://wolturnus.dk/en/partners/>

After-sales spare parts are available for all Wolturnus products.

Please contact the respective distributor in your country.

Manufacturer

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Wolturnus A/S active wheelchairs are CE approved in accordance with the Medical Device Regulation (MDR), EU 2017/745 as a class I medical device.

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