

Topolino CarbonCore™ WX2.5

Wheelchair Wheel Owner's Manual

For Models:

WX2.5-540 (24"/540 size)

WX2.5-559 (25"/559 size)

Serial Number Wheel 1: _ _ _ _ _

Serial Number Wheel 2: _ _ _ _ _

Please record the serial number for each of your Topolino wheels. The number is located on a white UPC label on the tire bed of the rim, near the valve hole of each wheel.

Note: This owner's manual is compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased.

Welcome to the Topolino family, and thank you for purchasing Topolino wheels. You now own the most advanced pair of wheelchair wheels on Earth.

Owner's manuals have become rife with warning sections and disclaimers. Please don't let these dissuade you from reading each one carefully (your life may literally depend on it). You will find that we have gone to great lengths to provide many bits of information that you will find useful and interesting, and that can also help improve your rolling experience.

Topolino Technology prides itself on designing and delivering quality products based on genuine innovation in materials and engineering. Our company is made up of individuals who have many years of experience in developing technologically advanced wheels and carbon composites. We take pride in what we do, and care dearly about our customers.

If you have any questions about the information in this owner's manual or about the wheels themselves, please contact us. We value your input! If our products improve your rolling experience, we've achieved our goal.

Good health, and keep them spinning!



Raphael Schlanger
President, Topolino Technology





WARNING: This document contains information important to your safety. Read, understand and follow the warnings and instructions in this owner's manual and keep this manual for future reference. If you have any questions, call or email us any time.



WARNING: If you do not follow these instructions and warnings, there is a risk of an accident, resulting in the possibility of injury or death.



WARNING: Read, understand and follow the warnings and instructions of the owner's manual that came with your wheelchair.



WARNING: Operating your wheelchair with an improperly adjusted axle and/or with an axle that is not properly secured to wheelchair frame can permit the wheel to loosen or become disengaged from the wheelchair frame and cause you to fall. For this reason, you must:

1. Read, understand and follow the instructions that came with your wheelchair.
2. Insist that your wheelchair retailer show you the how to properly install your wheels and adjust your axles.
3. Before each use check that your wheels and axles are securely assembled and locked to the axle receiver of your wheelchair.



WARNING: Use the right tool for the job: These wheels were designed, intended and tested for wheelchair use on firm smooth surfaces. Do not use them for offroad, jumping, dropoffs, etc. These uses are not covered by our warranty, and more importantly, could lead to wheel failure, which could result in serious injury.



Topolino wheelchair wheels have a weight limit of 250 pounds (113.6 kilograms). This weight limitation applies to the combined weight of the user, the wheelchair and any items carried by the user. **DO NOT** exceed this weight limit. If you exceed the limit, you may damage the wheels and seriously injure yourself or others.

HANDRIMS

Your Topolino wheelchair wheels are designed for use with 4-tab (Q-tab type) handrims. Appropriate handrims are available from Topolino as well as from other suppliers. Please contact Topolino if you have difficulty sourcing the proper handrim for your wheels. Do not attempt to modify the rim to accept handrims of any other configuration.

Handrims should be installed by a professional mechanic using appropriate hardware. Mounting hardware (each handrim) includes:

- 4 pcs stainless steel socket head cap screws, 10-32 or M5x0.8 thread, 0.50" (13mm) shank length (for 1/8" thick tabs, thicker tabs may require a longer shank).
- 4 pcs stainless steel flat washer, sized for 10-32 or M5x0.8 screws.
- 4 pcs stainless steel hex nut, , 10-32 or M5x0.8 thread (corresponding to above screw), with nylon thread locking insert.

During installation, the holes of the 4 tabs are first aligned with the corresponding holes in the Topolino rim. Next, a stainless steel socket head cap screw is passed through the tab hole of the rim and then inboard through the hole in the tab. The washer is placed over the exposed screw threads and the hex nut is threaded (finger tight) onto these threads to clamp and sandwich the handrim tab and the washer. Repeat this process for all 4 tabs. Finally, tighten all 4 screws against each other to clamp the tabs to the rim.

RIM STRIP

Before mounting a tire and tube on your wheels, you must first install a quality rim strip of proper size that is made specifically for this purpose. This is a small but important item. If all holes on your rim are not fully covered over with this rim strip (see figure 1), your inner tube may rupture and your tire will flat. Never use inexpensive rubber rim bands.

We highly recommend Velox fabric rim tape. Recommended rim tape width is 16mm to 17mm. Narrower tape can migrate, exposing inner tubes to the rim openings.

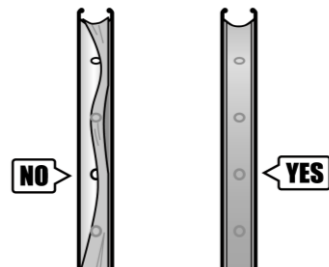


figure 1



WARNING: Failure to use a properly installed, high-quality rim strip of proper width could result in puncture of the inner tube, causing you to tip over or lose control of the wheelchair and seriously injure yourself or others or damage the wheelchair.

A WORD ON TIRES AND TUBES

Your rims are drilled for Schrader (car type) valve inner tubes. The ETRTO size of your Topolino rim is 540 x 17 (for 24" size), 559 x 17 (for 25" size) or 590 x 17 (for 26" size). Use only tires designed for this corresponding ETRTO designation. Do not exceed the recommended tire pressure guidelines labeled on the sidewall of your tire, but also do not exceed a maximum tire pressure listed below for Topolino wheelchair wheels. Also, be sure to heed the warning below regarding elevated temperatures.

Tire Width	Maximum Tire Pressure*
1.0 " (25mm)	110 psi (7.5 bar)
1-1/8" (29mm)	100 psi (6.9 bar)
1-1/4" (32mm)	80 psi (5.5 bar)
1-3/8" (35mm)	75 psi (5.1 bar)
1-1/2" (38mm)	70 psi (4.8 bar)
1-3/4" (44mm) & larger	60 psi (4.1 bar)
<i>* Never exceed the tire pressure listed on the sidewall of the tire</i>	

When mounting your tire, it is always better if you can pull the last bit of tire onto the rim with your bare hands, rather than using a tire lever. It may seem tough at first, but it is usually possible with a bit of practice. To insure that you do not mar the rim, use only a high quality plastic tire lever when installing and/or removing your tire.



CAUTION: Increased temperatures will cause the air in your tires to dramatically expand, in some cases causing damage to the tire, tube and rim. When storing any wheel in excessive heat (such as a car trunk, which can exceed 200°F (95°C) on a hot day), reduce the air pressure in the tire to less than 60 p.s.i. (4.0 bar).



WARNING: Improper tire mounting or air pressure could result in tire failure, resulting in loss of control of the wheelchair, with risk of possible injury or death. If you are unsure how to properly mount a tire, consult a professional wheelchair or bicycle retailer.

FITTING THE WHEEL TO YOUR WHEELCHAIR

Follow all warning and instructions for your wheelchair and axle. If you are at all unsure about how to properly assemble the wheel and axle to your wheelchair, insist that your retailer show you the proper method. It is recommended that you apply a very thin coating of grease or "dry" silicone spray to your axle before installing in your wheel and receiver. This will minimize any corrosion that might occur and will help insure the axle slides easily within the wheel and receiver when the wheel is removed and installed.

Topolino wheels are designed to accept an industry-standard 1/2" diameter quick-release axle with a pushbutton head. The standard bearing spacing for Topolino wheels is 2.3" (58.5mm) outside-to-outside. However, Topolino does offer alternate bearing spacing options. The proper axle length corresponds to the wheelchair's receiver and the wheel's bearing spacing, so the appropriate axle length will vary between different wheelchair brands and models. Consult your retailer for help in determining the proper axle length for mounting the wheels onto your chair.

Your axle has provisions for making fine adjustments to its effective length. These adjustments should only be made by an experienced mechanic. The purpose of this adjustment is to minimize lateral free-play of the wheel, while at the same time insuring proper locked engagement with the wheelchair's receiver.

When installing the wheel, always make sure that the axle is fully inserted in the receiver and the locking ball of the axle is fully extended and engaged to the receiver. As an initial indication, you can tell when the axle is locked into place because the quick-release button in the center of the axle will pop out fully.



CAUTION: Follow this basic but critical procedure whenever installing a wheel: Pick up the wheelchair and attempt to pull the wheel out of the receiver. The wheel should not move, shift or fall out of the receiver. If it fails this test, reinstall your wheel. If your axle will not lock in the receiver, you may need to adjust the axle length until it does.



WARNING: Never use your chair unless you are sure that both axles are securely locked in the receiver of the wheelchair. Failure to properly install and secure your wheels may cause the you to fall and injure yourself or others and to damage your equipment.

TRUING WHEELS

A professional bicycle or wheelchair mechanic has the skills and tools to true your Topolino wheels. Customers who are confident and experienced at truing wheels may touch-up or true Topolino wheels (<1.0mm side-to-side runout). Truing of wheels is a highly specialized skill - if you do not have the utmost confidence in your ability, there is the possibility that you can do more harm than good. Your professional mechanic, with technical information provided by Topolino, must perform any truing that is beyond a minor touch-up (>1.0mm).

Your wheels can be trued in a similar fashion to standard bicycle or wheelchair wheels. For all Topolino wheel models, the spoke may be adjusted with a 5.5mm hex nut driver (the Wiha brand is recommended for proper clearance). Alternatively, a Park Tool spoke wrench (use only the "black" handle - Park model #SW-OC) may be substituted (see figure 2).



figure 2

The spoke will likely twist with the nipple. Simply rotate the black termination back into place by hand to effect the adjustment (see figure 3). **Do not allow the spoke to twist more than 1/4 of a turn at a time!** If the spoke seems frozen with the nipple, do not attempt to force it and please contact Topolino for further instruction.

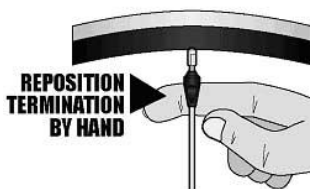


figure 3



CAUTION: Never let a spoke twist more than 90 degrees (1/4 turn) before repositioning the termination. The spoke can become damaged due to excessive twist.



WARNING: If you are at all unsure how to true a wheel, bring it to a professional wheelchair or bicycle retailer who has the special tools, knowledge and experience to do the job correctly. An improperly adjusted or trued wheel could be unsafe, with the risk of serious injury.

INSPECTIONS

Make it a habit to look carefully for the following before each use:

- Cracks in any part of the wheel
- Abrasion or kinks in the spokes
- Bent or deformed parts, including the rim.
- Insure spokes are uniformly tight
- Insure that the axles are properly adjusted and that both axles are securely locked into place in the axle receiver .
- Lift the wheelchair and spin the wheels. They should run straight and true.

Have your wheelchair retailer inspect your wheels regularly. If you are involved in a crash or if you run over an object or obstruction, or if you have any reason to suspect you may have damaged the wheel, be sure to inspect your wheel immediately.



WARNING: If you find or suspect the existence of cracks or damage, do not use the wheel and have the wheel inspected by your professional mechanic or retailer. A damaged wheel could fail without notice, leading to an accident with the risk of possible injury.

STORAGE

Always store your wheels at room temperature in a clean, dry location. Excessive dirt can cause moving parts to become damaged or fail while excessive moisture can corrode the metallic components of your wheels.

It is also very important to avoid exposing your wheels to excessive heat, such as the trunk of a car on a hot and/or sunny day. Increased temperatures will cause the air in your tires to dramatically expand, which can cause damage to the tire, tube and wheel. When storing any wheel at temperatures in excess of room temperature, such as a car trunk, which can exceed 200°F (95°C) on a hot day, be sure to reduce the air pressure in the tire by at least 40 p.s.i. (5.0 bar) and also minimize the duration of any excessive heat exposure.



CAUTION: Storage of wheels at temperatures in excess of room temperature can cause damage to your tire, tube and/or wheel.

MAINTAINING AND SERVICING BEARINGS/AXLES/FREEHUBS

Your wheel is supplied with high-quality sealed cartridge type bearings (see specifications at end of manual). These bearings are maintenance and adjustment free. Keeping the hubs clean will prolong the life of the bearings. Submerging in water or spraying water directly at the wheels will shorten the life of the bearings. If there is ever a problem with a bearing, it can be removed and replaced by a professional wheelchair mechanic.

NOTE: If hub disassembly is ever required, have your mechanic contact Topolino Technology for specific instructions.

BROKEN/DAMAGED SPOKES AND HUBS

Our CarbonCore™ spokes are made from high-strength carbon fiber with a thermoplastic resin outer coating. In addition, our spokes cannot squirm at the hub as conventional spokes do and are therefore not prone to failure the way conventional spokes do. These amazing spokes start at the rim, pass through the hub, and go all the way to the other side of the wheel. Due to this unique construction a spoke failure is highly unlikely. However, thanks to the modular nature of the Topolino design, a broken or damaged hub/spoke assembly can be replaced at relatively low cost by Topolino or a qualified professional mechanic. Have your mechanic contact us to determine which hub/spoke assembly you need.

CLEANING, SOLVENTS ETC.

If you need to clean your wheels, we recommend you use a damp cloth and mild soap. Never spray high-pressure water at the wheels (or any other bearings on your chair), nor use solvents of any kind, either of which can penetrate the seals and ruin the bearings.

COMPONENT SUBSTITUTIONS

Never substitute, or let anyone else substitute, any different components on your wheels. Any change or modification to the system will void the warranty and may be potentially dangerous. Use only Topolino original equipment rims, hubs, spokes, nipples, etc. Your Topolino wheels are designed to work as a complete system, and any alteration to the system will void your warranty, and is potentially dangerous.



WARNING: The use of anything but original equipment on Topolino wheel systems can result in a catastrophic product failure, with risk of serious injury.

CRASH REPLACEMENT

If you crash and damage your wheel, don't despair. All parts on your Topolino wheels are repairable and replaceable. If your wheels serviced or repaired, we will work with you to get you back rolling as quickly and efficiently as possible. Please contact your retailer or Topolino for details.

RETURNING WHEELS

If you need to send us a wheel for repair, please contact your retailer or contact us directly. We will service your wheel with a Return Authorization (RA) number. To process an RA we need your contact information (name, address, telephone number, email, etc), payment information, and the serial number(s) of the wheel(s) in question. Once we have this information we will issue an RA number, which **MUST** be marked clearly on the outside of the package. You should also keep a copy of the RA number for your own records and safekeeping.

If there is no RA# on the outside of the package, the wheel will unfortunately be refused and automatically returned, as we need a reference identification.

The wheel should be packaged and shipped back to Topolino Technology:

Topolino Technology
Attn: SERVICE DEPARTMENT / RA# _____
21 Diamond Avenue
Bethel, CT 06801 USA
Phone: 203-778-4711

LIMITED WARRANTY

Topolino Technology warrants that a new wheel will be free from manufacturing defects in materials and workmanship for a period of one year from the date of consumer purchase (proof of purchase is required), provided the wheel is used within the guidelines set forth in this owner's manual, and under normal conditions. This warranty is expressly limited to the repair or replacement of a defective wheel and is the sole remedy of the warranty. Topolino Technology shall repair or replace (at its sole option) any parts found by Topolino Technology to be defective and subject to this Limited Warranty. The original owner shall pay all labor charges related to the repair or replacement of the wheel. This warranty covers only the original purchaser of this wheel, and is not transferable. This warranty does not apply to normal wear and tear (scratches, etc.) nor to failures that arise from neglect, abuse, improper maintenance, alterations, modifications, accidents, crashes, misuse (including without limitation stunt riding, offroad riding, etc.), or neglect. This warranty does not cover damage due to shipment, improper assembly or assembly with non-compatible components. This warrantee does not cover any product whose serial number has been damaged, modified, or erased. Any implied warranties, including warrants of merchantability and fitness for a particular purpose shall be limited in scope and duration in accordance with this Limited Warranty. Topolino Technology shall not be responsible for any direct, incidental, consequential, or exemplary damages suffered by any party. The foregoing statements of warranty are exclusive and in lieu of all other remedies. This Limited Warranty gives you specific legal rights; you may also have other legal rights, which vary from state to state. Some states do not allow limitations on the duration of implied warranties, or the limitations or exclusion of incidental or consequential damages; therefore, the some of the limitations and exclusions set forth in this Limited Warranty may not apply to you. The Limited Warranty set forth herein may not be extended, enlarged or otherwise modified by any Topolino Technology retailer, agent or employee, and Topolino Technology does not assume any liability or make any warranty except as stated in this Limited Warranty.

SPECIFICATIONS

Wheelset

Weight Limit: 250 lbs / 113.6 kgs

Wheel size: ETRTO 540 x 17 (24"/540 size); 559 x 17 (25"/540 size);
590 x 17 (26"/590 size)

Axle Diameter Accepts 1/2" Nominal axles with pushbutton quick-release

Nipples: 14 ga. (2.0mm), cold forged 7075-T6 aluminum

Rim: Heat treated AL6061-T6, welded seam, anodized
Proprietary double walled design

Bearings: High performance sealed cartridge bearings
#R8-2RS

Spacing: 2.3" / 58.5mm (outside-to-outside). Alternate
bearing spacing options available.

If you have any questions about any of the information in this
owner's manual, please contact us:

Topolino Technology, LLC
21 Diamond Avenue
Bethel, CT 06801 USA
Phone: 203-778-4711
Fax: 203-798-8240

Website: www.topolinotech.com
Email: web@topolinotech.com