



4ZA WHEELS OWNERS MANUAL

FORZA

INTRODUCTION

First of all, on behalf of everyone at 4ZA, we would like to thank you for putting your trust in us. We are proud of the 4ZA wheels and are confident that using them will give you enormous satisfaction. Your 4ZA wheels stand for racing performance, durability and design, thereby resulting in an excellent performance-security ratio. However, it is your safety that is the most important aspect for us. Therefore, we recommend that you carefully read this manual, the purpose of which is to illustrate the safe use of your bicycle and, in particular, of its vital component, i.e. the new 4ZA wheels. Apart from actions to be followed, there are also actions and situations to be avoided, as they can cause serious damage both to you and your 4ZA wheels.

Special attention should be paid to this symbol:

WARNING!

This symbol indicates warnings of extreme importance regarding your safety and/or 4ZA's liability limits. Read them all with utmost attention.

Be very careful when cycling, respect nature and, above all, ALWAYS wear properly fastened helmet.

WARNING!

Before using your new 4ZA wheels, read all the instructions in this manual carefully and follow them exactly!

WARNING!

Please note that cycling, both at a competitive and an amateur level, can be dangerous. The poor quality of road surface, adverse weather conditions, your health, speed, weight as well as the level of your cycling skills are just some of the most important contributing factors that can cause accidents, some of which are foreseeable. Despite the state-of-the-art design and structure of the 4ZA wheels, i.e. implementing the best manufacturing technologies and the finest materials available today, the impact energy in case of an accident can seriously damage or even break the wheels.

Keep this booklet, together with all the accompanying documentation, as it contains important information regarding your 4ZA wheels.

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GENERAL SAFETY WARNINGS

⚠ WARNING!

4ZA cannot be held responsible for any damage resulting from unreasonable, unpredictable and improper use and/or application of the 4ZA wheels.

⚠ WARNING!

It should be remembered at all times that 4ZA is the designer and manufacturer of your 4ZA wheels only, and is therefore only responsible for the wheels. All the remaining parts of your bicycle have been constructed by other manufacturers, for which they are responsible. Therefore, we strongly recommend that you also consult the respective manuals regarding the frame and all the other components. If you have not been given all the manuals, ask your trusted dealer to provide them to you. Read them carefully BEFORE using your new bicycle.

⚠ WARNING!

All warnings and/or practical suggestions in this manual regarding your bicycle as a whole and/or any single component thereof, except for the 4ZA wheels, have been provided in your best interest, but cannot be construed as an implicit or explicit assumption of liability on the part of 4ZA regarding the above components.

⚠ WARNING!

4ZA wheels are not supplied with reflectors required by law in some countries. Additional requirements for reflectors and lighting may exist and vary by location. Your dealer should install proper reflectors and lighting systems to meet all applicable legal requirements. Always use front and rear lights in addition to reflectors if riding at night or in reduced visibility.

⚠ WARNING!

Never make any changes to your 4ZA wheels.

⚠ WARNING!

The LIFE-CYCLE of your 4ZA wheels can be drastically reduced if you fail to follow to the rules listed below in this manual.

⚠ WARNING!

It is crucial that not only your 4ZA wheels but the entire bicycle, including the tires, frame, fork, stem and the handlebar, be examined regularly so as to identify any signs of wear or aging.

⚠ WARNING!

Make sure tire pressures are correct, and carefully inspect the tires before each ride. Replace the tire or tube before riding if either is worn or damaged. Incorrect tire pressure, excess tire wear, or cuts or damage to the tread, sidewall, casing or inner tube can cause component failure.

⚠ WARNING!

Use your 4ZA wheels on the type of bicycle it was designed to be used on.

⚠ WARNING!

When riding, avoid rim damage from impact on the road or trail by using correct tire pressure and paying attention while riding. Serious rim damage could result in the tire coming off the rim, or in tire failure. Damaged rims must be replaced to prevent component failure.

⚠ WARNING!

If the rim states “disc brake only” do not use the wheel on a bicycle with rim brakes. This will cause damage to the rims and lead to component failure.

⚠ WARNING!

4ZA wheels should only be used in forks with wheel retention safety tabs on the dropouts to prevent accidental loss of the wheel.

⚠ WARNING!

Do not use any tubeless products with 4ZA clincher wheels unless mentioned otherwise for the specific wheetype.

ACTIONS / OMISSIONS THAT MAY REDUCE THE LIFE-CYCLE OF YOUR 4ZA WHEELS

⚠ WARNING!

4ZA cannot be held responsible for any damage resulting from unreasonable, unforeseeable and improper use and/or application of the 4ZA wheels. Some of the most obvious examples of improper use include but are not limited to:

1. Painting, repainting and/or glazing the 4ZA wheels;
2. Lack of regular maintenance and inspection of your 4ZA wheels by your trusted mechanic, as specified in this manual;
3. The use of aggressive detergents, such as gas oil, traditionally used to clean mechanical parts; when stagnating, they can dissolve the epoxy glue or bearing grease. We recommend that you wash your 4ZA wheels by hand, using a sponge, warm water and a mild detergent. The use of high-pressure water cleaners is to be avoided;
4. Parking your car in full sun, with the 4ZA wheels onboard, could seriously affect their structural integrity;
5. In cases of collisions, falls or blows, even if seemingly insignificant, you should have your 4ZA wheels examined immediately by your trusted mechanic before using them again;

Modification and/or repair of the 4ZA wheels by yourself.

6. Only 4ZA alone can modify your wheels in answer to your request or that of your trusted mechanic, to whom you must deliver your 4ZA wheels, should the necessity arise;
7. The use of your 4ZA wheels on any surface other than the normal surface for which it was designed and constructed;
8. An increase in your body weight over 10kg as compared with your current body weight of less than 95kg;
9. Use of stationary bicycle rollers. Obviously, we do not recommend using your 4ZA wheels on stationary rollers. However, should you want to do so, pay utmost attention and remember that your bicycle is fixed and put under far more stress than during road use;
10. Transport on car roof rack: be careful when placing your bicycle and your 4ZA wheels on a roof top bicycle rack. During transport the bicycle is subjected to wind stress. In correct positioning of your bicycle can cause damage and therefore reduce the LIFE CYCLE of your 4ZA wheels;

Application of load, overload and/or other additional elements to your bicycle;

11. The use of the 4ZA wheels by anyone who is not in the appropriate psycho-physical state to do so, or use in dangerous traffic or weather conditions;
12. In general, any use of your 4ZA wheels which is not consistent with the canons of normal or reasonable use.

BEFORE EACH USE OF YOUR 4ZA WHEELS

⚠ WARNING!

For each of the following activities, remember to read carefully and follow strictly the manual and/or the instructions provided by the manufacturer of the component in question. The manual and/or instructions should be given to you at the moment of purchasing your 4ZA wheels or the complete bicycle. If this is not the case, ask your trusted mechanic to provide them for you before using your new 4ZA wheels or your new bicycle.

1. Make sure that the quick release on both of your 4ZA wheels has been adjusted correctly, in compliance with the attached instructions provided by the manufacturer . Bounce the bicycle on the ground to check for any loose parts;
2. After a careful reading of the manuals, make sure your clincher tires or tubular have been inflated to the correct pressure and that there is no damage to the tread or sidewall. Excessive pressure can cause rim failure or loss in spoke tension;
3. Aluminum rims: check the wear indicators on each side of the rim. If one of the wear indicators is completely worn or missing, immediately stop using the wheel.
4. Make sure your 4ZA wheels are perfectly centered. Spin the wheels so as to ensure that they do not wobble up and down or from side to side and that they do not touch the brake pads while rotating;
5. Make sure that the brake cables and brake pads are in good condition;
6. Verify the correct functioning of the brakes.

COMPATIBILITY

Check the 4ZA wheel ID for tire compatibility (both clincher and tubular).
4ZA wheels are compatible with SRAM, Shimano® and Campagnolo® cassettes.
4ZA wheels are designed for use with Presta valve tubes.
4ZA wheels are ETRTO compliant.

⚠ WARNING!

It is mandatory to use the correct brake pad according to the rim specification. The use of improper or contaminated brake pads will cause premature rim wear and/or failure which can lead to serious injuries or death.

4ZA supplies carbon specific brake pads with its wheels. Under no circumstance re-use brake pads used on aluminum rims for carbon rims.

The brake pad might be contaminated with aluminum particles that will damage the carbon brake track surface.

PREPARATION

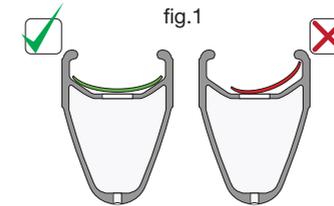
Before installing your clincher or tubular tires make sure that the valve length corresponds to the depth of the rim.

4ZA carbon and alloy-carbon wheels are supplied with valve extensions that correspond to the rim depth.

INSTALLING THE CLINCHER TIRE (APPLICABLE ON SOME MODELS)

Make sure that the rim of your 4ZA wheel, the clincher and the inner tube are compatible and the correct size. If in doubt, seek advice of your trusted authorized 4ZA dealer.

1. Install a good quality rim tape of correct measurements so as to cover the spoke nipple holes completely (see fig.1).

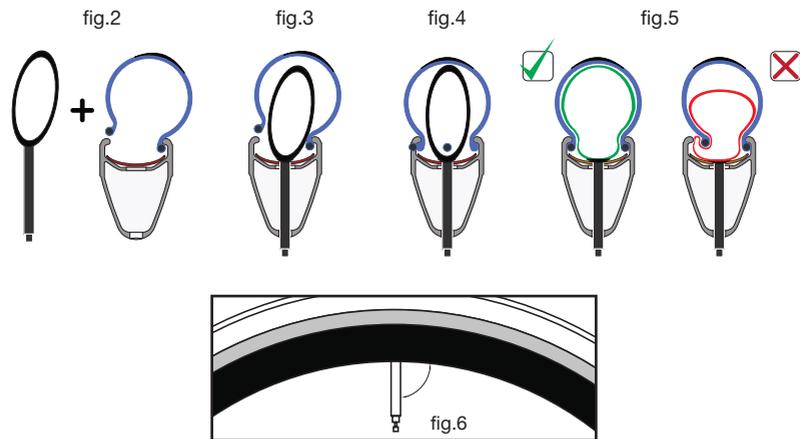


Exposed nipple holes will cause the inner tube to fail. If in doubt, seek advice of your trusted authorized 4ZA dealer! The rim tape must be centered on the tire bed over the full length of the rim.

2. Insert the tire bead inside the rim (see fig.2). Inflate the inner tube slightly and insert its valve into the rim valve hole. Starting from the valve, place the inner tube inside the tire (fig.3).
Note: Follow the arrows indicating the tire rotation instructed by the tire manufacturer.
3. Push the valve about half way back into the valve hole on the rim. If you have trouble getting it in, lift up the rim tape first, push the valve through the rim tape, then into the rim. Starting from the valve, use your hands to insert the second tire bead inside the rim (see fig.4). Finish installing the clincher on the opposite side of the valve; if it is too difficult to insert the clincher in the rim, deflate the inner tube, if necessary. With this method, it is possible to install the clincher without the use of any tools.
4. Should you fail to place the last piece of the tire in the rim, deflate the inner tube further, push both the circles into the rim bed along the entire circumference and try again. If you are still unsuccessful, use a plastic tire lever for the last stretch. Be very careful not to pinch the inner tube or damage the rim.



5. Make sure the inner tube is not trapped between the rim and the tire (see fig.5), and that the valve is perpendicular to the rim (see fig.6). Inflate the tire slightly (1 bar/15 psi) and verify the correct positioning of the valve by pressing it gently upwards. Spin the wheel and check the perfect alignment of the clincher and the correct fit of the tire bead.



6. Inflate the clincher using a pump with gauge to the pressure recommended on the sidewall.

INSTALLING THE TUBULAR TIRE (APPLICABLE ON SOME MODELS)

⚠ WARNING!

Failure to install the tubular tire correctly can cause its sudden deflation, blow-out, or detachment, resulting in an accident, serious injury and even death. Be careful not to damage your 4ZA wheels when installing the tubular tire and follow strictly the instructions provided, on the understanding that you should always consult with your trusted mechanic.

⚠ WARNING!

Only use tubular tire glue known not to damage carbon rims. Keep in mind that aggressive glue can damage the tubular tires during their removal. Solvents such as alcohol or acetone are particularly suitable for the removal of nearly all types of glue.

Prepare your 4ZA wheels for gluing

If your 4ZA wheels are new, clean them with alcohol or another solvent. Your 4ZA wheels can be cleaned with any solvent that does not damage the epoxy resin of the carbon wheels. At this point, your 4ZA wheels are ready for use and do not require further preparation.

Note: Keep solvents away from the decals/stickers as it might damage decal or dissolve the glue from the sticker.

Glue your 4ZA wheels and the tubular tire

First, cover your 4ZA wheels with a thin, uniform layer of glue applied over the rim tire bed. It is recommended that the amount of glue used should not be too generous. Apply a drop of glue around the center of the tire bed, avoiding, if possible, the spoke holes. Use a plastic bag on your fingers or an acid brush to spread the glue uniformly from one side of the groove to the other, all around the rim.

⚠ WARNING!

Let the glue dry as long as possible, no less than a couple of hours.

Most tubular tires overturn when inflated over the rim. Inflate the tubular tire until it turns the base tape upwards, and then put the tubular tire on a flat surface so as to apply a layer of glue. Spread a drop of glue in the center of the base tape of the tubular tire. Spread the glue evenly over the entire base tape. Put your 4ZA wheel aside to dry for a couple of hours. Clean all the glue drips with a solvent. Cover your 4ZA wheel and the tubular tire with a second thin layer of glue, applying the same procedure as

before. Remember that the layers of glue must be THIN and uniform.

Leave the second layer to dry for several hours until it is only slightly sticky. Once the glue on the 4ZA wheel and the tubular tire has dried, apply yet another thin layer to the 4ZA wheel only and leave to dry for about 15 minutes.

When installing a tubular tire on a 4ZA wheel that has already been glued in the past, it is usually sufficient to apply a single uniform layer of new glue to the 4ZA wheel and the tubular tire. After 15 minutes, or when the glue becomes tacky, mount the tubular tire following the method described in the instructions.

Install the tubular tire

Make sure to push the area around the valve firmly before starting to lay the tubular tire on your 4ZA wheel. It will be easier to push the last section of the tubular tire onto the 4ZA wheel if you maintain firm pressure from the very start of the assembly process. Make sure that the tubular tire is centered and that the amount of tape base that protrudes on both sides of the 4ZA wheel is uniform. At this point you can still move the tubular tire a little on the 4ZA wheel pulling and pushing it until complete assembly.

Inflate the tubular tire up to about 4 bar (58psi). Spin the 4ZA wheel making sure that the tubular tire is positioned centrally in the groove of the 4ZA wheel. A uniform amount of the base tape should be visible on both sides of the 4ZA wheel.

You may find that the tread moves back and forth as the 4ZA wheel spins, or that the tubular tire is off-center. Deflate the tubular tire and push or turn it to the required position. Inflate it again and check again, repeating the process as many times as necessary.

Using a solvent, carefully remove excess glue residue from the side of the rim. Keep the solvent away from fire!

Inflate the tubular tire to up to 8,5 bar (123psi) and leave it overnight so that it can adhere firmly.

Control the pressure of the tubular tire before each use. From time to time check the gluing. When necessary, remove the tubular tire and glue it again, at least once per season.

⚠ WARNING!

Carefully check the maximum inflation pressure recommended by the manufacturer of your tubular tire in reference to maximum inflation pressure of your 4ZA wheelset. Excessive pressure reduces tire grip on the road, increases the risk of a sudden blow-out and decreases the spoke tension.

Furthermore, pressure that is too low may cause damage and premature wear of the rim.

INFLATING AND DEFLATING THE TIRE

⚠ WARNING!

Verify that the side of the rim does not show signs of wear, damage or deformation of the braking surface. A damaged rim can break suddenly and cause an accident, injury or death.

To inflate the tire, remove the cap; unscrew the valve and inflate it using a compressor or a pump with a pressure gauge to obtain the desired pressure; screw the valve on and then reposition the cap; To deflate the tire, remove the cap; unscrew the valve a little, then press it until the desired pressure has been reached; screw the valve on and then reposition the cap.

⚠ WARNING!

Carefully check the maximum inflation pressure recommended by the manufacturer of your tires in reference to the maximum inflation pressure of your 4ZA wheelset. The lowest stated pressure is valid. Excessive pressure reduces tire grip on the road, increases the risk of a sudden blow-out and decreases the spoke tension.

Conversely, pressure that is too low may cause damage and premature wear of the rim.

INSTALLING THE CASSETTE

Slightly grease the freehub splines before installing the cassette.
Assemble the correct spacer according to the type of cassette used.
Grease the lock ring threads before assembly.

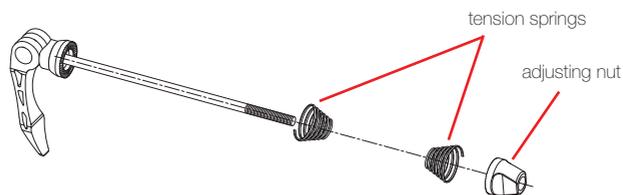
INSTALLING THE DISC BRAKE ROTOR

When installing disc brake rotors follow the instructions of the disc brake rotor manufacturer.

WHEEL INSTALLATION

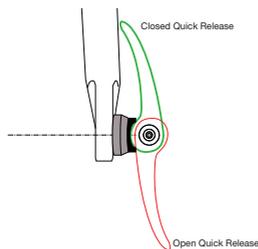
Installation of the Quick release

Unthread the adjusting nut of the quick release skewer and remove the tension spring closest to the adjusting nut.
Slide the quick release skewer through the hub axle from the non-drive side. Reinstall the tension spring and thread the adjusting nut onto the skewer (minimum three threads develop the full strength of the bolt).



Wheel installation

Open the quick release mechanism of the front and rear brake. (This facilitates wheel assembly).
Check that the quick release skewers are in the open position.



Front wheel

Install the front wheel between the fork drop-outs with the quick release lever positioned on the non-drive side of the bike. Make sure that the hub axle is full seated in the fork drop-outs. Close the quick release halfway.

Now tighten the adjusting nut until it makes contact with the fork dropout.

Position the quick release lever behind the non-drive side fork leg.

Now flip the quick release into the fully closed position. You should feel tension when closing the quick release. If this is not the case, repeat the previous steps.

Rear wheel

Shift the rear derailleur to the highest gear (smallest cog). Pull back the derailleur, position the cassette between the upper and lower part of the chain. Push the rear wheel in between the drop-outs. Make sure that the hub axle is full seated in the drop-outs. Close the quick release halfway. Now tighten the adjusting nut until it makes contact with the dropout.

Now flip the quick release into the fully closed position. You should feel tension when closing the quick release. If this is not the case, repeat the previous steps.

PERIODIC MAINTENANCE OF YOUR 4ZA WHEELS

⚠ WARNING!

After the first use check the centering of your 4ZA wheels. The use of wheels that are not properly centered can cause an accident, injury or death.

1. After each use, check the condition and pressure of the tires;
2. Periodically have the hubs checked by a qualified mechanic; together with your trusted mechanic identify the maintenance interval that best suits your needs; (approximately every 2.000-5.000 km);
3. Have all the parts subject to wear (rims, hub bearings, brake pads) checked regularly and, when necessary, have them replaced. Only use 4ZA replacement parts. The list of replacement parts can be found on the 4ZA website;
4. Have wheel centering and camber checked periodically by a qualified mechanic.
Rear wheels are subject to higher loads than front wheels and might require more regular centering and tensioning.

⚠ WARNING!

A deformed clincher rim can cause a sudden release of the clincher tire out of its seat and cause an accident, injury or death.

⚠ WARNING!

The intervals and mileage are purely indicative and need to be modified, even substantially, depending on the conditions and intensity of use (e.g.: competitive racing, rain, salted roads, the user's weight, etc.). Contact us or consult your qualified mechanic to select intervals most suitable for your needs.

CLEANING YOUR 4ZA WHEELS

The use of aggressive detergents, such as gas oil, traditionally used to clean mechanical parts, should be avoided as they can dissolve the epoxy glue.

We recommend that you wash your 4ZA wheels by hand, using a sponge, warm water and a mild detergent. The use of high-pressure water cleaners is to be avoided.

TRANSPORTING AND SAFEKEEPING YOUR 4ZA WHEELS

When transporting your 4ZA wheels separately from the bicycle, or when a long period of non-use is expected, put the wheels in the wheel bag to protect them from damage and dirt.

INFORMATION

Please note: 4ZA reserves the right to modify this owner's manual. Such possible modifications will be listed on 4ZA's internet site (<http://www.4za.com>) and/or are available by contacting us at 4ZA and/or your authorized 4ZA retailer. Make sure you periodically check any one of these three sources of information for possible modifications to this owner's manual.



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