



Wheel Systems
Owner's Manual

Congratulations!

Congratulations and thank you for purchasing the worlds' best high performance wheel system.

Because different Rolf Prima Wheel system models are available this manual may contain information which does not apply to your wheel system. Some illustrations may show details which vary from your wheel system. If you have any questions after reading this manual, please consult our web site or your Rolf Prima Wheel Systems dealer.

It is important that you read this manual thoroughly before riding to ensure that your wheel system works properly and safely. This manual explains the recommended care, inspection, and maintenance of your Rolf Prima Wheel System model. With proper care and maintenance, your wheel system will provide the highest performance riding experience for years to come.

If you sell or loan your wheel system, please provide the new rider with this manual.

Installation and maintenance instructions can be found below. If your wheelset was installed by your dealer, you should still read this manual thoroughly.

Some maintenance and repair should only be performed by your Rolf Prima Wheel System dealer. Any such service will be indicated in this manual. If you have a question or issue which your Rolf Prima Wheel System dealer cannot address, please contact us:

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General Information

Wheels are the most important component on your bicycle. They have the greatest influence on the performance and ride quality of your bicycle. Your Rolf Prima Wheel System will deliver years of trouble free performance provided they are inspected and maintained regularly. The structural condition of your wheels and the performance of your brakes are crucial to your safety. Please be aware of things that can go wrong and inspect your wheels and brakes regularly to prevent accidents!

Inspection – Before Every Ride

Before each ride be sure to inspect each item on this list to ensure your Rolf Prima Wheel system is in top condition and is properly installed to your bicycle.

CHECK THAT THE WHEELS RUN TRUE

Spin each wheel and watch the rim where it passes the brake pads. If the rim moves up and down [radially] or side to side [laterally] excessively, or does not spin evenly, have the wheel inspected and trued by your Rolf Prima Wheel System dealer.

CHECK THAT THE RIMS ARE CLEAN

Dirty or greasy rims greatly reduce braking effectiveness. Particularly dirty rims can present a significant safety risk. Clean the rim braking surface with a clean shop rag or wash them with soap and water and let them air dry.

CHECK THAT THE TIRES ARE PROPERLY INFLATED

Inflate tires with a bicycle pump and pressure gauge only to the inflation pressure indicated on the tire sidewall. Inspect the tires for damage or excessive wear. If you have any questions about the condition of your tires, have them inspected by your Rolf Prima Wheel System dealer.

CHECK THAT THE QUICK RELEASE MECHANISMS ARE PROPERLY CLOSED

Your wheels are equipped with quick release wheel retention mechanisms. The quick release allows the wheel to be removed and installed with no tools. For proper and safe operation, read these instructions carefully.

i WARNING !

Failure to have wheel quick release retention mechanisms properly adjusted and closed may cause loss of control resulting in personal injury. If you have any questions about the operation of this system, consult your dealer.

Operation of Quick Release Mechanisms:

1. Check both wheels before every ride.
2. Move the quick release lever to the OPEN position and set the wheel so it seats firmly at the end of the frame or fork tips. [fig. 1].



fig. 1

Operation of Quick Release Mechanisms: [continued]

3. With the lever about halfway between the OPEN and CLOSED position [fig. 2], tighten the quick release adjusting nut on the opposite end of the quick release axle until finger tight.



fig. 2

4. Place the quick release lever in the palm of your hand and move the lever fully into the CLOSED position. [figure 3 for front wheels, figure 4 for rear wheels]. At the half way closed position you should feel resistance to this motion.



fig. 3



fig. 4

5. If the quick release lever is able to be moved to the CLOSED position with little or no resistance, clamping strength is insufficient. Return the lever to the OPEN position and tighten the nut further. Close the lever, testing again for resistance. When the quick release mechanism is properly tightened and clamped in the closed position, the clamping force is adequate to cause metal into metal engagement [embossing] of the fork or frame tips.
 - DO NOT TIGHTEN THE QUICK RELEASE MECHANISM BY USING THE QUICK RELEASE LEVER LIKE A WING NUT [fig 5]. FOR FURTHER INFORMATION ON CORRECT ADJUSTMENT OF THE QUICK RELEASE TENSION, SEE ADDITIONAL INFORMATION BELOW:

ADDITIONAL INFORMATION: To properly close the quick release mechanism requires between 15 and 45 pounds of force. [55 to 200 Newton]. If the required closing force is greater than 45 pounds, open the lever and loosen the quick release mechanism adjusting nut. Close the lever again. If it requires less than 15 pounds of force to close the quick release lever, open the lever and tighten the adjusting nut. Repeat adjustment as needed.

6. Orient the quick release levers so they do not interfere with any other part or accessory, such as rack or fenders. Be sure to orient the quick release levers in such a way that they will not become accidentally snagged by obstacles in the path of the bicycle. [fig 3, 4].
7. Perform these two tests to ensure that the quick release mechanisms are properly closed:
 - a. Lift the front of the bicycle and give the top of the tire a sharp downward blow with a closed fist. The wheel should not come out of the fork, be loose, or move from side to side. If uncertain, repeat the tightening process, as shown in steps 2-6, above.
 - b. With the quick release lever properly adjusted and closed, it will not be possible to rotate the quick release lever in a circular motion parallel to the wheel as pictured in figure 5 [as opposed to the motion used to open or close the quick release lever].

Operation of Quick Release Mechanisms: [continued]



fig. 5

INSPECTION – WEEKLY

Check to be sure there are no loose, damaged, or broken spokes. If a wheel is not in good condition, the strength of the wheel and the effectiveness of the brakes will be greatly diminished. If you suspect spokes are loose or damaged the wheel must be removed from service immediately and NOT RIDDEN. Take the wheel to your Rolf Prima Wheel Systems dealer for tensioning and truing.

Check to be sure there are no cracks in both rims. Rims are considered a 'consumable' component, just like tires. Rims are highly stressed components and as a result have a finite fatigue life. As a rim nears the end of its fatigue life, cracks will develop. It is very important that if cracks are found the wheels are removed from service immediately and NOT RIDDEN. The wheels should be inspected by your Rolf Prima Wheel Systems dealer and rebuilt with new rims and spokes.

INSPECTION – MONTHLY

Check to ensure there is not excessive looseness in hub bearings in both wheels. Lift the bicycle and attempt to move the rim laterally, left to right. Look, feel, and listen for looseness in the hub bearings. Spin the wheel and listen for any grinding or other unusual noises. If the hub runs noisy or is loose, take the wheel to your Rolf Prima Wheel Systems dealer for adjustment or service.

i WARNING !

If there is movement between the axle and the hub, or you suspect the hub may need adjustment, do not ride your bicycle. Take the bicycle to your dealer for service.

Check both rims for wear. Bicycle rims will wear from the friction of braking and will eventually require replacement. Inspect the rim sidewalls and braking surface for heavy grooving or cracks. If you see or suspect excessive wear on the rims, take the wheels to your Rolf Prima Wheel Systems dealer for inspection.

Installation

Before attempting any installation of components onto this wheelset, make sure the parts are compatible. Tires, tire valves, gear cluster, brakes and the bike frame spacing must be correct. If you are unsure of the compatibility of any part, consult your dealer.

PROPER BRAKE ADJUSTMENT

Proper brake pad selection and adjustment is very important to your safety and the performance and longevity of your wheels.

Pads should be adjusted so that they sit 1mm to 2mm away from the rim when the brakes are released. Brakes should be properly centered over the rim. When brakes are properly centered, each pad will be the same distance from the rim when the brakes are released.

Brake pads should be aligned properly with the braking surface of the rim. Some brake pads may be too tall to fit your wheels properly. Improper or misaligned pads can cause premature rim wear or a sudden tire blowout.

Check to be sure the brake pads are adjusted so that when the brakes are applied there is adequate clearance between the top of the brake pad and the tire. Check to be sure also that the bottom of the brake pad contacts the braking surface of the rim when the brake is applied.

i WARNING !

Proper brake pad selection and brake adjustment is crucial to your safety. If you suspect your brakes are not working properly, or your brake pads do not properly fit your wheels, **DO NOT RIDE YOUR BICYCLE**. Take your bicycle to a qualified technician at a professional bicycle shop for inspection and service.

IMPORTANT INFORMATION ABOUT RIM TAPE

Before installing tires, make sure an appropriate rim tape is in place which completely covers the rim tire well so that all spoke holes are completely covered. The tire well is the inner wall of the rim, visible when the tire, tube, and rim tape are removed. If the spoke holes in the tire well wall are not completely covered with a high strength rim tape, a sudden blowout could occur.

i WARNING !

Failure to use a good quality rim tape properly positioned and covering all spoke holes in the rim tire well wall can lead to a loss of control resulting in personal injury.

CASSETTE COG INSTALLATION

Follow normal tire and gear cluster installation procedures using only the appropriate tools. If you are not familiar with those procedures or tools, read your bicycle owner's manual or consult your dealer.

Note that many Rolf Prima wheel system models use an aluminum alloy freehub body. Do not use steel cogs placed individually on the freehub body, as they may damage it and become difficult or impossible to remove. [fig. 6] With alloy freehub bodies, use only cassettes with a majority of cogs mounted on an aluminum alloy spider, such as Shimano Ultegra® or Dura Ace®. [fig. 7]. If you are unsure which type of cassette you have, consult your dealer.



figure 6



figure 7

Many Rolf Prima Shimano® compatible freehub bodies have cassette splines with uniform width. This design is purposeful, and creates the lightest possible freehub body. This design requires special attention as it permits improper cassette cluster installation. It is essential that each cassette cog is installed on the freehub body with the same INDEX key orientation. Be sure that ALL cogs are installed on the freehub body with the stamped tooth count number facing outward.

Some Rolf Prima rear hubs are shipped with a cassette spacer to compensate for cassette tolerance variances. To determine if this spacer is required, first install the cassette on the freehub body without the spacer and check for the following conditions:

1. Check to see if any axial play exists by looking for side to side movement in the cassette. If axial play exists, the cassette is narrow, and the spacer should be used.
2. Check also to be sure the cassette does not contact the hub shell. If the cassette touches the hub shell when installed, the spacer must be used.

If required, install the spacer on the freehub body before installing the cassette.

Maintenance

LUBRICATION & OVERHAUL INSTRUCTIONS

Hub bearings may require lubrication or replacement once a year or more often if the bike is ridden more than average, in inclement weather, or off road. This requires special tools and knowledge and should only be performed by a qualified technician at your Rolf Prima dealer. Quick release mechanisms should be lubricated once a year. Apply a few drops of oil where the quick release lever slides on the washer and where it rotates on the quick release axle.

i CAUTION !

The following hub overhaul information is provided as a guide for the professional mechanic. These instructions are written with the assumption that the mechanic is familiar with bicycle repair principles and has suitable and appropriate tools.

REPAIR & OVERHAUL INSTRUCTIONS FOR 2003 ROLF PRIMA FRONT HUBS

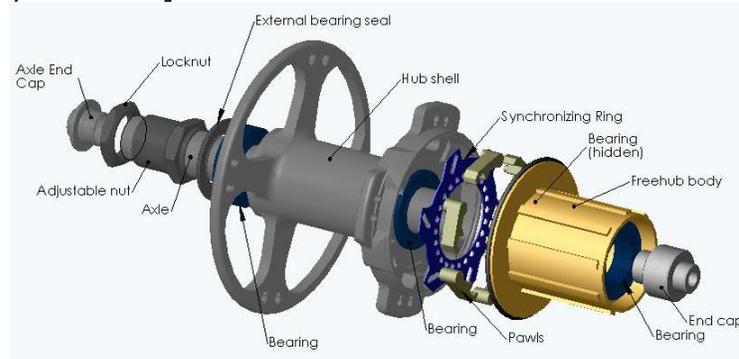
1. Remove the skewer and pull the end caps out of the hub.
2. Note that dirt or sand trapped between the end caps and the bearing seals can create drag, and the impression of a contaminated bearing.
3. Using a small screwdriver, push the large diameter floating axle aside until the axle end is visible through the bearing. Carefully drive out one bearing with a blow to the exposed axle end with a drift punch. Remove the other bearing in the same manner.
4. Replace bearings as needed.
5. Bearings should be firmly pressed into their bores. If bearings can be removed with no tools, replacements should be reinstalled with a gap-filling retainer compound.
6. Press the bearings into place with a suitable drift after first carefully supporting the hub shell to prevent damage. Cartridge bearings must never be pressed via the inner bearing race – damage to the bearing will result. Select a drift which acts on the outer bearing race only. A large socket or short length of tubing works well for this job.

REPAIR AND OVERHAUL INSTRUCTIONS FOR 2003 ROLF PRIMA FRONT HUBS [CONTINUED]

7. If the bearing fit is loose, clean the bearing bore and outer race of the bearing with a solvent and apply a retaining compound [such as Loctite® RC/609 cylindrical part bonding agent] to the outside of the bearing race. Be careful to prevent the retaining compound from entering the cartridge bearing. Allow the bonding agent to fully cure before completing assembly.
8. Clean the end caps and the bearing seal, and apply a small amount of synthetic, rust-inhibiting grease between these two parts.

REPAIR & OVERHAUL INSTRUCTIONS FOR 2003 ROLF PRIMA CASSETTE REAR HUBS

[Refer to exploded assembly view below]



1. Place the hub into an axle vise drive side down. DO NOT OVERTIGHTEN the vise. Axle damage could occur.
2. Loosen the axle lock nut and adjustable nut. Loosen the locknut until it contacts the axle end cap. Continue turning the locknut against the axle end cap, forcing it out of the axle end. Thread the locknut back onto the axle just until the locknut threads are fully engaged. Pry the axle end cap out of the axle using a screwdriver or other suitable prying tool. Remove the lock nut and adjustable nut.
3. Remove the entire hub and cassette body assembly from the hub axle. Observe the location of axle spacers and seals for proper reassembly.
4. Remove the cassette body by gently pulling it away from the hub shell. Note the location of the washer between the cassette body and hub bearing for proper reassembly.
5. Carefully remove the rubber ring seal from the hub shell.
6. Remove the pawls and synchronizing ring with a needle or knife blade.
7. Determine the condition of the hub and cassette bearings by turning the inner races with your fingers. Note any rough turning or 'gritty' feel. Bearing removal is accomplished with a blow from a blunt drift punch.
8. Replace bearings and seals as necessary.
9. Bearings should be firmly pressed into their bores. If bearings can be removed with no tools, replacements should be reinstalled with a gap-filling retainer compound.
10. Press the bearings into place with a suitable drift after first carefully supporting the hub shell to prevent damage. Cartridge bearings must never be pressed via the inner bearing race – damage to the bearing will result. Select a drift which acts on the outer bearing race only. A large socket or short length of tubing works well for this job.

REPAIR & OVERHAUL INSTRUCTIONS FOR 2003 ROLF PRIMA CASSETTE REAR HUBS [CONTINUED]

11. If the bearing fit is loose, clean the bearing bore and outer race of the bearing with a solvent and apply a retaining compound [such as Loctite RC/609 cylindrical part bonding agent] to the outside of the bearing race. Be careful to prevent the retaining compound from entering the cartridge bearing. Allow the bonding agent to fully cure before completing assembly.
12. Reassemble the hub. Apply water proof grease to the inner portion of the hub shell and axle. Replace the synchronizing ring and pawls.
13. Apply water proof grease to the inner diameter of the circle of pawls and the synchronizing ring. Replace the freehub washer centered on the inner bearing of the hub shell. Place the cassette body back in place on top of the hub body.
14. Turn the cassette body to engage the pawls and cassette body engagement teeth.
15. Install the axle by pushing the treaded end through the cassette body.
16. Ensure that the rubber seal is installed properly on the adjustable nut and thread the adjustable nut on the axle finger tight.
17. Replace the lock nut, also finger tight. Using the two 19mm wrenches as before, hold the lock nut while turning the adjustable nut tightly up against it.
18. Carefully replace the axle end cap by tapping it back into place with a soft faced hammer.
19. Replace the rubber freehub seal, ensuring the inner and outer diameter of the seal seats properly in the seal channels in the hub shell and cassette body. [Shimano® compatible freehub bodies only].

ROLF PRIMA LIMITED WARRANTY

Rolf Prima Incorporated ("RPI") warrants, but only to an original purchaser who purchased the wheel from a licensed Rolf Prima dealer or distributor, that for a period of 12 months from original purchase the new Rolf Prima wheel (the "Product") shall be free from material defects in workmanship and material. If the purchaser discovers within this period a material defect in Product workmanship or materials, the purchaser must promptly so notify RPI in writing, through an authorized dealer or distributor, accompanied by proof of purchase of the Product. In no event shall such notification be received or effective later than 13 months after the original purchase. In the event that a Product does contain a material defect in workmanship or materials and proper notification is provided as required this limited warranty, then within a reasonable time after such notification, RPI will correct any material defect in workmanship or materials, or provide replacement parts or products. If RPI is unable to repair the Product to conform to this limited warranty, RPI, within its sole discretion, will provide a replacement product, or a full refund of the purchase price. Labor charges for parts changeovers are not covered by the warranty. RPI does not warrant (a) any product, components or parts not manufactured by RPI, (b) defects caused by failure to provide proper and suitable Product installation and maintenance, (c) damage caused by use of the Product for purposes other than those for which it was designed, including use on unsuitable surfaces or at unsafe speeds, and including use of the Product without a helmet and other appropriate protective clothing or gear, (d) damage caused by misuse, abuse, neglect or natural elements, or normal wear and tear, and (e) damage resulting from or relating to use with unauthorized components, modifications or attachments. No employee, distributor, dealer or agent of RPI is authorized to make any warranty in addition to or different from the foregoing limited warranty. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

LIMITATION OF LIABILITY

The sole remedy for breach of the limited warranty set forth herein is RPI's repair, replacement or refund, as described herein. In no event shall RPI be liable for any other damages or liability, including special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory, and including damages arising from or related to any physical injury to person or property. Some states do not allow the exclusion of incidental or consequential damages, so the above exception may not apply to you. This warranty, and statutory law, gives the consumer specific legal rights, and those rights may vary from place to place.

ROLF PRIMA WHEEL SERVICE

Rolf Prima wheels require special parts. Do not attempt substituting weaker conventional spokes, hubs, or rims for replacement. Rolf Prima wheels are serviceable by most professional bicycle shops. See you Rolf Prima dealer for authorized replacement parts and service. If necessary, your wheels can be serviced by Rolf Prima Incorporated directly. This service must be arranged through an authorized Rolf Prima dealer.



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