97-98 Crono Owner Information

Introduction and Description

The Cane Creek Crono wheels are a thoroughly engineered wheel system designed for maximum cycling efficiency without sacrificing strength or reliability. Although the Crono wheels are somewhat similar to conventional spoked bicycle wheels, please read these instructions completely so that you can safely maximize the performance benefits of these wheels for many years. The primary feature of the Crono wheel is a straight pull spoke with the spoke nipple at the hub. Straight spokes can be assembled to a higher tension than J-bend spokes, resulting in a strong, stiff wheel with reduced spoke count. The wheel will remain true since there is no distortion over time at the spoke bend or spoke hole in the hub. Relocating the spoke nipples to the hub reduces the rotating mass at the rim (reduced polar moment of inertia), so less energy is required to accelerate the wheel. Another benefit of spoke nipple relocation is that the spoke holes in the rim are a much smaller diameter, resulting in higher rim strength and stiffness. Unlike composite wheels, Crono wheels can be re-trued (if necessary) by conventional means. They can also be repaired if damaged or worn out. Crono wheels can be maintained and serviced at any bicycle shop with common tools, no special equipment is required. All Cane Creek Crono wheels are hand built in the U.S., and inspected before shipment. Each wheel carries a serial number for manufacturing traceability. Over 70 years of wheel building experience goes into every Crono wheel.

Use

Cane Creek Crono wheels are intended for single-rider 2-wheel road or mountain bicycles, with conventional rim brakes. Use on tandems, or with hub-mounted braking systems is not recommended. Always observe safe cycling practices.

Installation of cassette

The Cane Creek Crono mountain and road rear wheels will accept all Shimano® HG or compatible cassettes, including 9-speed Shimano® cassettes. Please refer to the cassette manufacturer for installation instructions. Torque the cassette locking ring to 40 N-m.

Installation of rim strips

It is necessary to install rim protective strips before mounting tires and tubes. Use a high-quality rim strip that is wide enough to cover the spoke access holes completely. For adhesive-backed rim strips, we recommend a minimum width of 15mm for road wheels, and a minimum width of 17mm for mountain wheels. For nonadhesive “stretch-on” poly rim strips, widths of 17mm (road) and 19mm (mountain) are recommended. Rim strips are not required for tubular wheels.

Installation of tubes and tires

There are no special requirements for mounting tires on Crono wheels. All road and mountain rims are drilled for Presta valves. As always with clinchers, don’t use any sharp metal tools that can damage the tire, tube or rim. Check to be sure the tire and tube are properly seated before inflating to maximum pressure. For tubular wheels, please consult with a professional bicycle shop for proper gluing and tire mounting procedures.

Valve extenders for Deep-V rims

After the tires are installed, unscrew the knurled Presta valve locknut all the way. The locknut remains unscrewed while the extender is in use. A layer of Teflon® plumbers tape on the valve threads will assure a good seal. Screw the extender down finger-tight over the valve threads. To release air push a small wire such as a paper clip into the extender to open the valve.

Quick-release skewers

Use a high quality, strong and reliable quick release with Crono wheels. This is not the place to sacrifice functional integrity just to save a few grams. Install and tighten the quick-release skewer according to the manufacturer’s instructions. Please contact your local bicycle shop if you have any questions, concerns or confusion about the operation of the quick-release. And always check that the quick-release skewer is firmly attached before every ride.

Wheel truing

Crono wheels are designed to stay straight, due to the unique configuration and high spoke tension. Should the wheels ever require truing, a 3/16" open-end wrench is provided for turning the spoke nipples. The truing procedure is basically the same as for a conventional spoked wheel, except that the nipples are at the hub instead or the rim. The cassette cogs will have to be removed to provide access to the drive-side spoke nipples (road or mtn. wheel). If significant truing or spoke replacement is required, it is necessary to maintain the target spoke tensions as closely as possible. Please use the following spoke tensions as a guide (listed below). We recommend that any truing of Cane Creek Crono wheels be performed by an experienced bicycle shop mechanic/wheel builder.

Spoke information

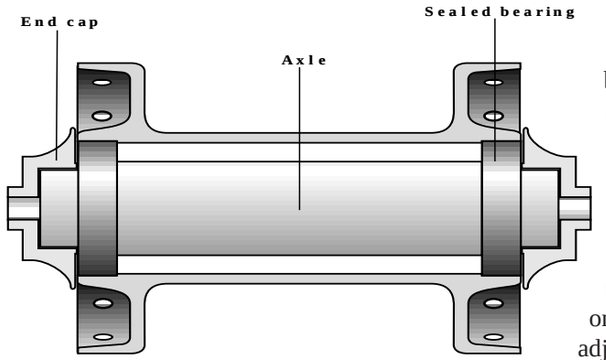
Crono wheels that use 2.0mm (14ga) straight-pull spokes include the following: Deep-V mtn. wheels. The WAM, RC and RT, Standard Aero (road and Mtn.), Cross and Elite wheel sets wheels use a 2.0/1.7mm spoke. All Ti spokes are 2.0mm. This is a “standard” spoke configuration, but may not be readily available. Replacement spokes and nipples are available from Cane Creek, or proper spokes can be cut to length at a suitably-equipped bicycle shop. Never use a J-bend spoke in a Crono wheel. Never try to straighten a J-bend spoke as a substitute for a straight-pull spoke. We recommend that you have spokes replaced at your local bicycle shop.

Spoke Lengths/Tension

Rim	Road(700C) Front	Road(700C) Rear drive/non	Road(650C) Front	Road(650C) rear drive/non	MTN Front	MTN rear drive/non
Aero	285	263/280	261	239/257	248	232/248
Deep-V	277	254/272	250	226/245	239	223/239
Elite	277	254/272	250	226/245		
WAM					253	235/251
Cross	277	254/272				
RC	276	254/271	250	232/245		
RT	278	256/273	252	234/247		
Spoke Tension	Front wheel (all) 120kg		Rear (drive side) 120-130kg		Rear (non-drive) 85-100kg	

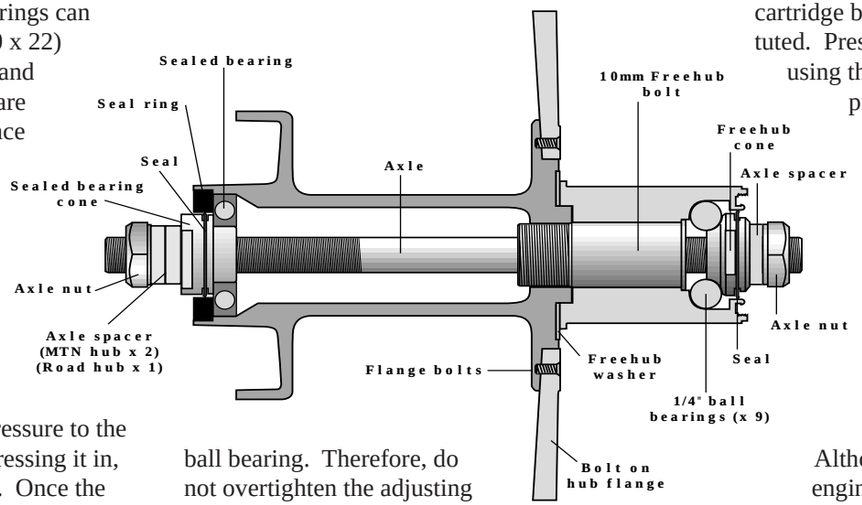
Front hub bearing replacement

The Cane Creek Crono front wheels use sealed cartridge bearings, which should provide long, maintenance-free life. Eventually, the bearings may need replacing due to wear or contamination. We recommend using replacement bearings from Cane Creek, which have an optimum seal configuration, grease type and grease quantity. If these are not available, standard replacement cartridge bearings can be substituted. Type 6900-2RS (10 x 22) bearings are used on the road hub, and type 6903-2RS (17 x 30) bearings are used in the mountain hub. To replace the bearings, first remove the quick release skewer and hub end caps. Then, using a soft mallet or hammer, with a block of wood, lightly tap one end of the axle until one bearing and the axle come out of the opposite side of the hub. Press one new bearing in place, using an old bearing as a drift. Always apply pressure to the outside race of the bearing while pressing it in, never press on the inner race alone. Once the first bearing is positioned, slide the axle in place. Now press the other bearing over the axle and into the hub, again using an old bearing as a drift. Reinstall the hubcaps and quick release. We recommend having this procedure carried out by a professional bicycle mechanic.



Rear hub adjustment and servicing

The Cane Creek Crono road and mountain rear hubs are similar in design and construction. A standard Shimano® HG freehub body is used, along with loose ball "cup & cone" bearings on the drive side. A cartridge bearing is used on the left side. Bearing adjustment is similar to a standard Shimano® rear hub; the left side locknut should be loosened and the left side cone turned for bearing adjustment. Then tighten the left locknut against the cone and spacer(s). Note: Due to the combination of cartridge and "cup & cone" bearings on the same axle, correct bearing preload adjustment is critical for long bearing life. An angular contact cup and cone bearing can generally withstand greater axial preload than a radial contact cartridge ball bearing. Therefore, do not overtighten the adjusting cone when adjusting the rear hub bearings. The optimum adjustment is to have just a trace of side-to-side play at the rim of an unmounted wheel. This side-to-side play should be eliminated when the wheel is mounted and the quick release is properly tightened. Excessive bearing preload will shorten the functional life of the cartridge bearing. Should the bearings or freehub body require servicing or replacement, first remove the wheel, quick release and cassette. Remove the hub axle by removing the locknut, spacer(s) and adjusting cone from the left (non-drive) side. Then withdraw the axle and ball bearings from the right side. Freehub body removal is the same as a Shimano® hub, using a 10mm hex key. Remember to keep track of the freehub washer, making sure it is in place when the freehub body is reinstalled. For replacement of the freehub body, use Shimano® part #30R98010. It will be necessary to remove the freehub body in order to remove the left side cartridge bearing. With the freehub body removed, the left side bearing and sealing ring can be lightly tapped out using a suitable drift. Again, a replacement bearing from Cane Creek is recommended. If this is not available, then a cartridge bearing type 6902-2RS may be substituted. Press the new bearing into the hub shell, using the old bearing as a drift. Always apply pressure to the outside race of the bearing while pressing it in, never press on the inner race alone. Press in the sealing ring until it is flush with the edge of the hub shell. Reassemble the freehub body (include the washer) and axle, and set the bearing preload as described above. We recommend having the rear hub serviced at your local bicycle shop.



Safety and maintenance

Although a Cane Creek Crono wheel is engineered for strength and durability, it is in fact a high- performance lightweight bicycle component and not designed to withstand constant abuse. A little care and attention will extend the life of your wheels and your safety. Periodically inspect the rims for dings, cracks or excessive wear. Inspect the hub shells for cracks near the spoke holes, or on the flanges. If any cracks are present, do not ride the wheels, take them to a bicycle shop for service. Be sure all of the spoke nipples are secure. Check your quick release for proper function. Check the performance of the axle bearings, and the rear freehub. Clean the wheels with water and a household, automotive or bicycle detergent. Do not use solvents or abrasives for cleaning.

Warranty

Cane Creek Crono wheels are warranted for one year from date of purchase against defects in materials and workmanship. Cane Creek will repair or replace, at our option, the defective part at no charge. This warranty does not cover damage occurring during shipment, storage, failure to follow instructions, misuse, accidents or crashes, neglect or poor maintenance, improper assembly, installation or assembly with incompatible products, normal wear, or modification. Warranty claims should be made through the original dealer, when possible. A dated proof of purchase is required. Cane Creek offers a damaged wheel repair service, including rim and spoke replacement, for a set cost (depending on wheel configuration). Please contact your dealer, or a Cane Creek technical representative. (rev. 9 April, 1999)

Cane Creek Cycling Components
355 Cane Creek Rd. P.O. Box 798
Fletcher, NC 28732
Phone: 828.684.3551
800.234.2725
Fax: 828.684.1057
Web: www.canecreek.com
E-mail: info@canecreek.com