

twinpair spoke wheel instructions

warranty

Crankbrothers twinpair spoke wheels are warranted against defects in workmanship for 2 years from the date of purchase. This warranty is limited to the repair or replacement of this product. Crankbrothers at its option will either repair or replace any defective parts. This warranty does not cover damage caused by rider errors, misuse, or modification. Contact Crankbrothers for information regarding the crash replacement program, whereby the wheels can be replaced at a reduced price. Your receipt is required for warranty claims. Contact crankbrothers directly for warranties. See contact information at the bottom of this page. These twinpair spoke wheels are only to be used with disc brakes. Do not use with rim brakes. You must use a compatible rotor, rotor screws, and caliper system.

A. rotor installation

Six bolts should be included with the rotor. Tighten these six rotor bolts to 55in-lbs (6.2Nm) or the torque specified by the rotor instructions.

B. split quick release skewer

See the separately included split qr skewer instructions for Installation and proper use of split qr skewers.

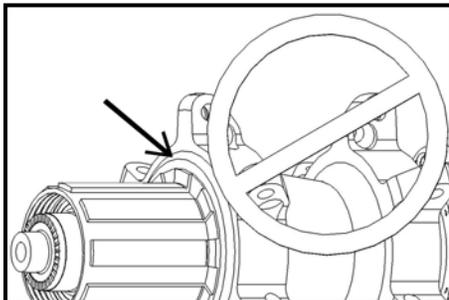
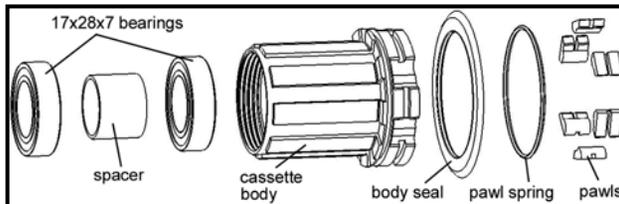
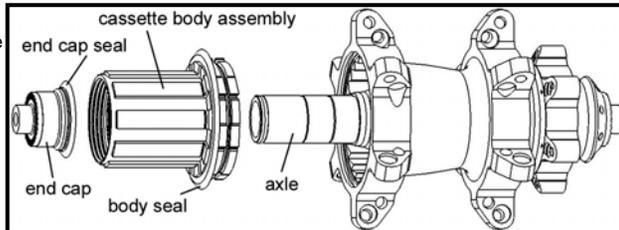
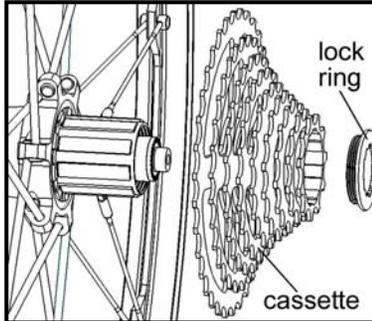
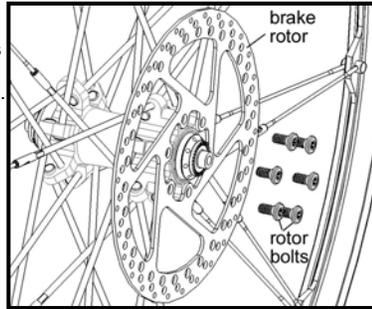
C. cassette installation

Slide the cassette onto the hub, being sure to align the spline correctly. A lock ring and possibly a washer should be included with your cassette. Install the threaded lock ring (and washer if needed) and, using the appropriate adapter tool, torque to 260-434in-lbs (30 to 50Nm), or the torque specified by the cassette instructions. Thin spacers (#21010-30) are available from Crankbrothers if there is interference between the cassette and hub.

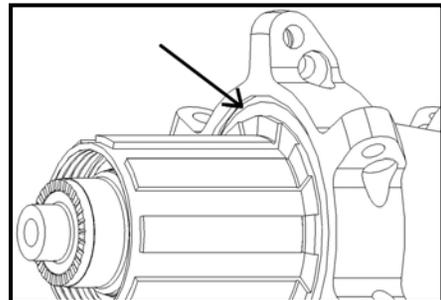
D. replacement/maintenance of cassette body assembly

Pull to remove the small end cap. Remove the cassette body assembly by pulling on the cassette body. For routine maintenance, wipe the old grease off of the pawls, body seal, and the ratchet teeth inside the hub shell. Apply new medium viscosity grease to the pawls and ratchet teeth. Push the cassette body assembly and end cap back over the axle and into position. **Important:** you need to push the body seal lip into the correct position. There is an internal groove inside the hub shell where the body seal lip should fit.

For more extensive maintenance, you can remove the six pawls, pawl spring, and body seal. Additionally, you can push out the two press fit cartridges bearings and spacer. To reassemble, install the pawl spring and then each pawl. Install the body seal. Press fit in the first bearing, then drop in the spacer, then press fit in the second bearing.



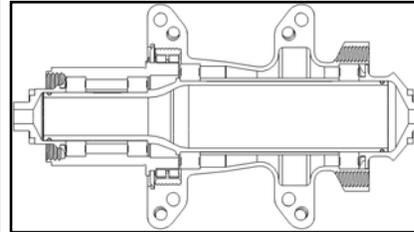
Rear hub incorrect seal position



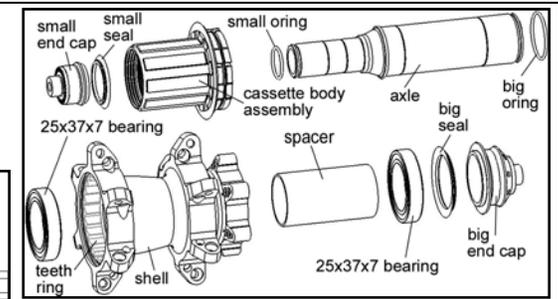
rear hub correct seal position

E. rear hub construction.

To the right is an Exploded view of the rear hub. All rear hubs for twinpair spoke wheels have this same construction, although some of the parts are slightly different for different models. Below is a cross section of the rear hub.



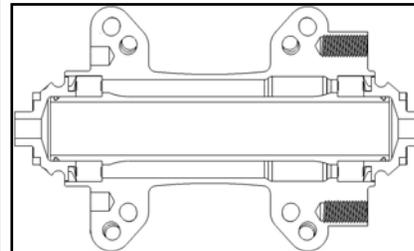
Rear hub cross section



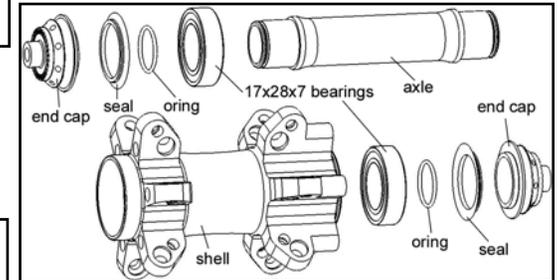
Rear hub exploded view

F. front cobalt hub construction.

To the right is an Exploded view of the Cobalt (XC) front hub. Below is a cross section of this hub.



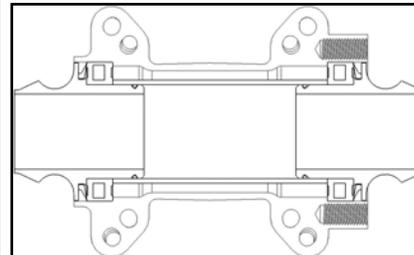
Front Cobalt (XC) hub cross section



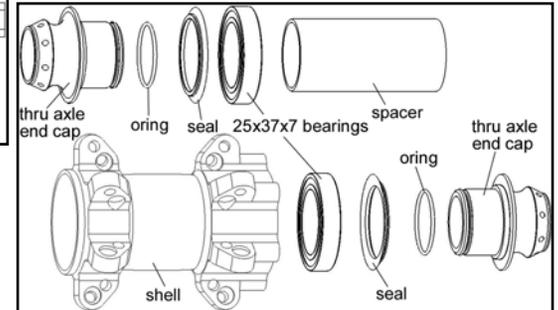
Front Cobalt (XC) hub exploded view

G. front 20mm thru axle hub construction.

To the right is an Exploded view of the Iodine, Opium, and Sage front hub. Below is a cross section of this hub. See "J" on page 3 for more information.



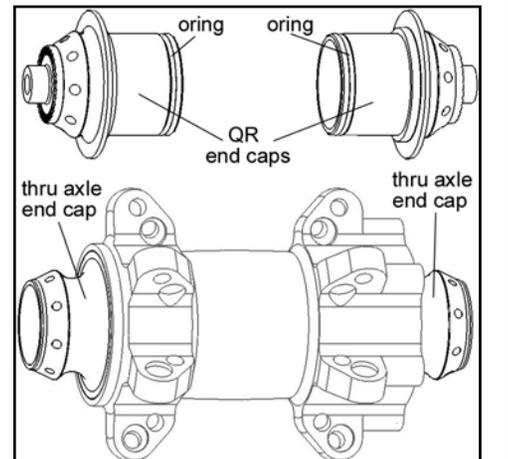
Front iodine, opium, sage hub cross section



Front iodine, opium, sage hub exploded view

H. iodine hub end caps.

To the right shows an Iodine hub assembled with 20mm thru axle end caps. The iodine also comes with end caps to convert the hub into a quick release skewer type of hub. To convert the hub, simply pull out the end caps and push in the other end caps, making sure the seals are installed correctly. Opium and Sage front hubs can similarly be converted to use quick release skewers if QR end caps are purchased separately. See "J" for more information.



Front iodine hub end caps

I. Opium (DH) 150 rear hub.

Many downhill frames are designed with a 150mm wide dropouts (inside of frame dimension), instead of 135mm dropouts. Opium 150 rear hubs are designed to be used with frames with 150mm (inside) wide dropouts that use a 12mm (diameter) thru axle (not included) instead of a quick release skewer. The thru axle should come with your frame. Follow the frame maker's instructions for properly installing the thru axle. Install and torque the thru axle per the frame maker's specification. If there is no such torque specification, contact the frame maker. Confirm compatibility by carefully examining the fit between the frame, hub, and thru axle.

J. Iodine (AM), Opium (DH), and Sage (FR) front thru axle hubs.

The Iodine, Opium, and Sage front hubs require a 20mm (diameter) thru axle (not included) instead of a quick release skewer. The thru axle should come with your fork. Following the fork maker's instructions for properly installing the thru axle. Install and torque the thru axle per the frame maker's specification. If there is no such torque specification, contact the fork maker. Confirm compatibility by carefully examining the fit between the fork, hub, and thru axle.

K. installing a spoke.

Step 1. Note that the spoke head has a flat surface (spoke flat) on each side of the spoke head. When installed, the spoke must be aligned so that a spoke flat is touching the wall of the rim.

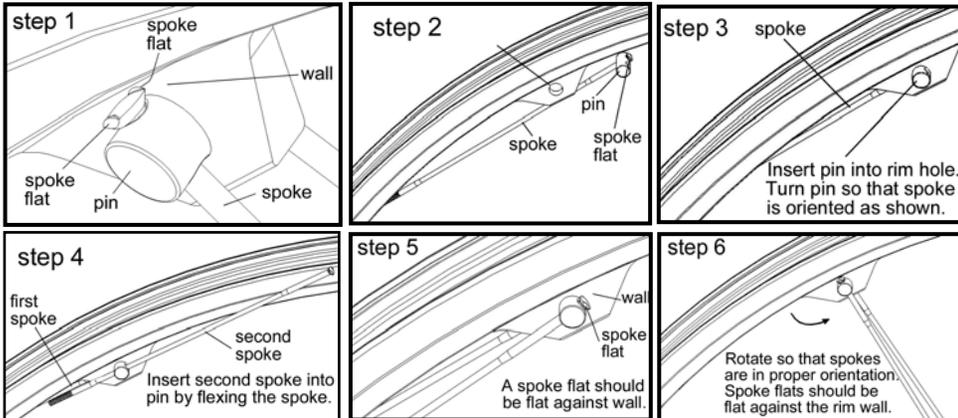
Step 2. Insert a spoke through a hole in the pin.

Step 3. Insert the pin through the rim hole. Make sure the spoke flat is facing the rim wall.

Step 4. Insert second spoke into pin by flexing the spoke slightly. Make sure the spoke flat is facing the rim wall.

Step 5. Make sure the spoke flats of both spokes are flat against the rim wall.

Step 6. Rotate the pin so that the spokes are in the proper orientation. Again, make sure that the spoke flats are against the rim wall. On the nipples, use a spoke wrench size 0 (zero), (3.23mm, 0.127").



L. removing a spoke

To remove one spoke, you must unthread the other spoke as well. To remove a spoke, you must first rotate the pin as pictured in step 5 above, then pull out the spoke as pictured in step 4 above.

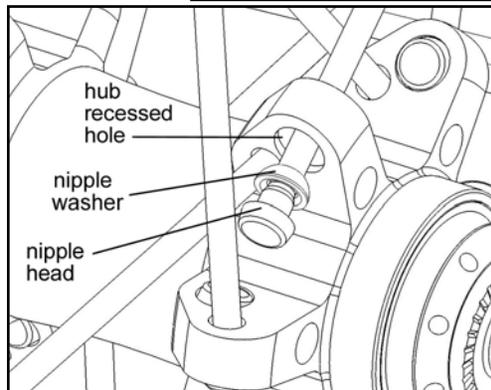
M. replacing a nipple.

Step 1. Unthread the spoke. Use a spoke wrench size 0 (zero), (3.23mm, 0.127").

Step 2. Remove the nipple. Note that there is a small washer under the head of the nipple.

Step 3. Insert the replacement nipple, making sure that there is a washer under the head.

Step 4. re-thread the spoke to the nipple.



N. general maintenance and inspection.

Use only thru axles which are compatible with the wheel dimensions (built-in width and hub axle diameter) as well as frame and fork, respectively.

Contact an experienced specialist for all truing matters. Frequently check the spoke tension and the rotation of the

wheels. Too high or too low spoke tension can cause high operating loads of the wheel components and could lead to an earlier failure. The spoke tension should be as even as possible. If you see any deformation or damage to any of the components, do not ride. Contact an experienced specialist. Check that your wheels rotate smoothly and freely, and that the sound of the rear hub ratcheting is consistent. If not, contact an experienced specialist.

O. Tire Compatibility

width	1.9"	2.0"	2.1"	2.2"	2.3"	2.4"	2.5"	2.6"	2.7"	2.8"
	48.5mm	51mm	53.5mm	56mm	58.5mm	61mm	63.5mm	66mm	68.5mm	71mm
Cobalt 559x19C										
Iodine 559x21C										
Opium 559x24C										
Sage 559x24C										

Wheels have 559mm bead seat diameter & use nominal 26 inch tires. See tires for air pressure recommendations.

warning: please read this before you install or ride twinpair spoke wheels

- The instructions should be read thoroughly before installation. Failure to follow these instructions and warning statements before installing and using twinpair spoke wheels can result in severe injury or death. Improper installation and/or use of this product can result in severe injury. Riding bicycles is inherently dangerous.
- Carefully read the split qr skewer instructions, as improper use can result in a detached wheel, resulting in severe injury or death.
- Before use, be sure that the wheels do not have any bent or loose spokes, dents, or cracks. Do not use damaged twinpair spoke wheels. Never ride with a twinpair spoke wheel is improperly installed, modified, or damaged. Remember to check the twinpair spoke wheels periodically for wear or damage. When parts exhibit damage or are visibly worn, replace or repair them immediately. A loose, over-tightened, damaged, bent, or worn part may cause a malfunction unexpectedly and cause a fall that could result in severe injury or death. Do not use or try to straighten a bent nipple or spoke.
- Always confirm that your brakes are working properly after your wheels are installed. Twinpair spoke wheels must be used with disc brakes. Do not use with rim brakes. You must use a compatible rotor, rotor screws, and caliper system. Be sure to carefully read the installation and service instructions for the disc brakes.
- If you have any doubts about your ability to correctly install the split qr skewer, compatibility, or if you are unsure about the extent of damage to this split qr skewer, please return it to your dealer for proper installation or inspection, or contact crankbrothers. If you have any questions or concerns about issues such as the intended use of the split qr skewer, or the maintenance of this product, contact crankbrothers.
- This split qr skewer is meant to facilitate installation and removal of your wheel. Failure to properly install this split qr skewer onto your bicycle may cause the wheel to become detached from the bicycle while you are riding and result in serious bodily injury or death. This split qr skewer must be used with compatible hubs, forks, and frames. Always check wheels for proper installation before riding your bicycle.
- A correctly adjusted split qr skewer requires regular checking, and may need occasional adjustment. Be especially sure to check that your wheels are properly installed after parking your bicycle in a public location. Failure to do so could result in a detached wheel causing severe injury or death.
- Keep all split qr skewer parts relatively clean of debris. To prevent serious injury while riding, be sure your entire bicycle is adequately maintained and that all components are correctly installed and adjusted.
- For more information regarding the mounting of the split qr skewer, its use, or maintenance, please go to your authorized dealer or contact crankbrothers. Always use a helmet and follow the rules of the road when cycling. Always use proper headlights and taillights when riding at times of reduced visibility.
- Do not use chemicals when wiping the wheel. **Do not pressure wash the wheels.**
- Reflectors spoke protector ring are sold separately. Please ask your bicycle dealer or crankbrothers for details. Do not ride your bike at night without first adding wheel reflectors.
- We recommend that you ask your authorized bicycle dealer or crankbrothers to adjust the spoke tensions if the wheel is out of true after the first 1,000km (621 miles) of riding.
- Use only genuine crankbrothers replacement parts. Do not use for tandem bikes. Do not use rim tape.
- Each crankbrothers wheel has an intended use. Do not use a crankbrothers wheel for riding that is more severe and abusive than its intended use. Specifically (in order of lightest duty to heaviest duty), Cobalt wheels are intended for cross country (XC), Iodine wheels are intended for all mountain (AM), Opium wheels are intended for downhill (DH), and Sage wheels for freeride (FR). Use common sense when choosing the right wheel for you and your application. If you are an unusually heavy person and/or you ride particularly hard for your application, you should choose a wheel that is heavier duty than your intended application.
- Before riding, check your Opium (DH) 150 length rear hub thru axle for cracks or any other unusual condition. If cracks or other abnormalities exist, do not use the bicycle. Before riding your Opium (DH) 150 rear wheel, confirm that the hub thru axle has been tightened properly and the wheel has been secured to the frame. Serious injury or death can result from falling if the wheel comes off. Before riding your Iodine, Opium, or Sage front wheel, confirm that the hub thru axle is not damaged and has been tightened properly and the wheel has been secured to the frame. Serious injury or death can result from falling if the wheel comes off.

Questions or comments?

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