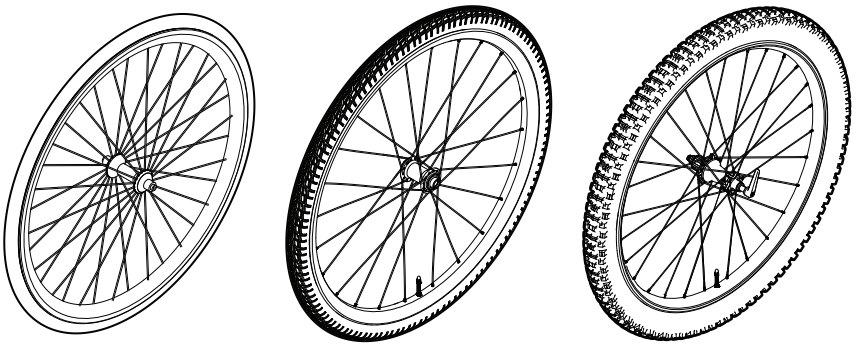
BONTRAGER



Wheel • Hub • Tire
Owner's Manual

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About this manual

Scope

This manual applies to Bontrager wheelsets and tires. Due to the variety of models and equipment, some instructions or illustrations may not apply to your specific setup. This is not intended to be a complete service or repair guide. It will provide essential information for safe and general use, care, and basic maintenance.

For additional information

- Trek Bicycle Owner's Manual: trekbikes.com/manuals
- See specification sheets on specific wheel product pages online

Warranty

Bontrager limited warranty

Bontrager tires, wheels and hubs are covered by our limited warranty.
Bontrager rims are warranted to be free of defects in materials and workmanship. This warranty applies only to this rim, not to the wheel. It does not cover damage resulting from wheel building.

For details, visit trekbikes.com or a retailer near you.

Safety

⚠ WARNING: *Do not make changes to the wheelset. Non-approved alterations or components can lead to failure of the wheel, loss of control, and potential serious injury or death. Only install Bontrager-approved components.*

If you make a change to the wheelset, you will void the manufacturer's warranty.

Replacement parts

Trek recommends using only Trek OEM (original manufacturer) replacement parts.

Wheel basics

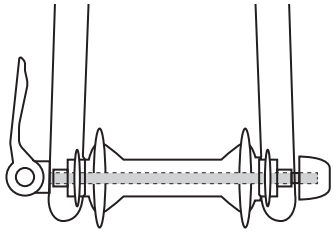
Axles

Types of axles

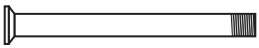
There are a variety of axles. Here are the main kinds:

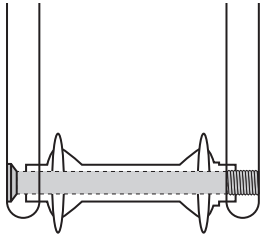
Skewers/quick-release axles



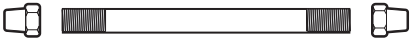


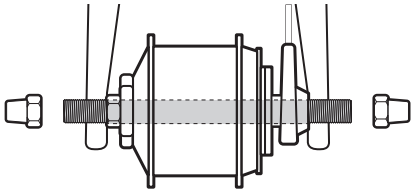
Thru-axles





Bolt-on axles





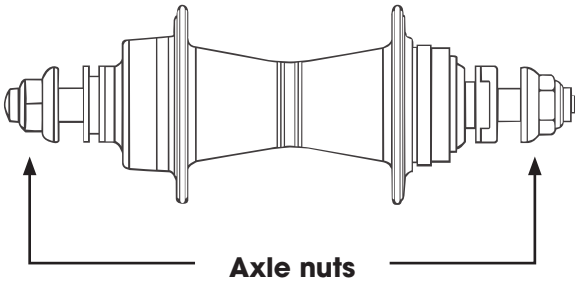
Fixed-gear bikes

⚠ WARNING: *A sudden stop in pedaling motion on a fixed-gear bicycle can cause the rear wheel to skid and lose traction or the cranks to lift the rider up and forward over the handlebar, which can cause you to lose control and fall. Do not ride a fixed-gear bicycle at speed or in traffic until you have mastered fixed-gear riding technique and learned the reflexes necessary to control the bicycle.*

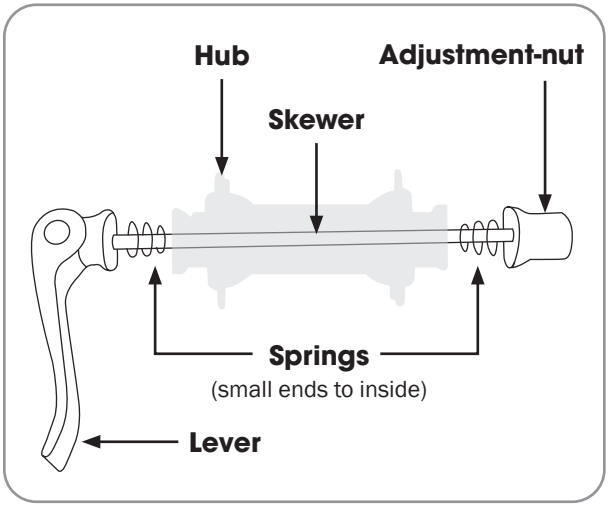
Before every ride, make sure your wheels are correctly attached.

Tighten front and rear axle nuts to recommended torque.

Fixed-gear rear hub

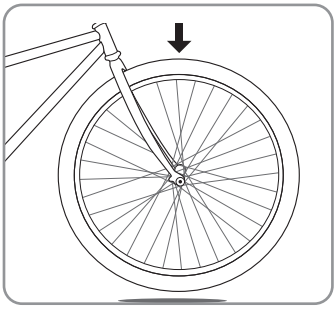


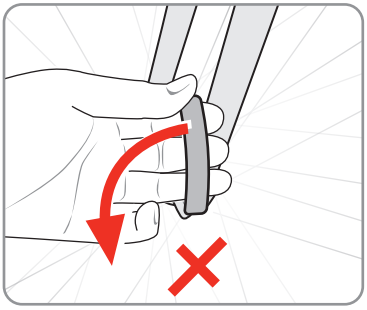
Quick-release



Pre-ride check

Before each ride, test the attachment of your wheels. If a quick-release does not pass the tests below, either do the adjustment procedures (and tests) again or have your Trek bike shop repair your bicycle.





Test A

Lift the front of the bike off the ground and hit the top of the tire with your hand. The wheel must not come off, be loose, or move from side to side.

Test B

With the lever in the closed position, make sure the lever does not turn.

⚠ WARNING: *A quick-release that is not correctly closed can allow the wheel to become loose or come off, which can cause you to lose control and fall. Close the quick-release correctly before you ride the bicycle.*

Quick-release adjustment and operation

Open the lever

Move the quick-release lever to the OPEN position. Position the wheel so it fully contacts the inner surfaces of the fork ends.

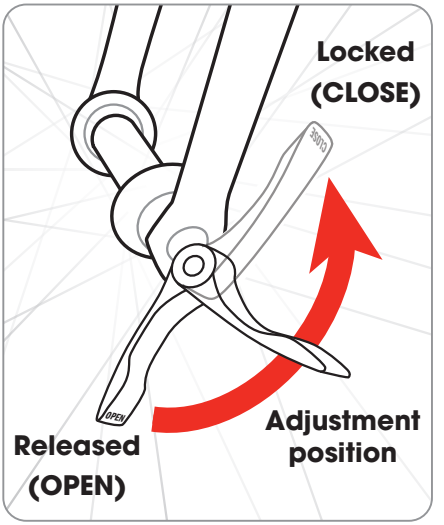
Adjust the nut

With the lever in the adjustment position, tighten the adjustment nut until it feels snug. **NOTICE:** Do not overtighten.

Close the lever

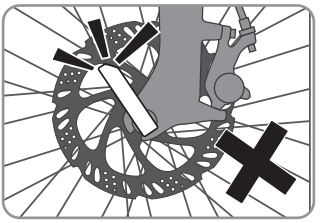
Place the lever in your palm and move it to the CLOSE position. It should require firm pressure—enough to leave an imprint on your palm.

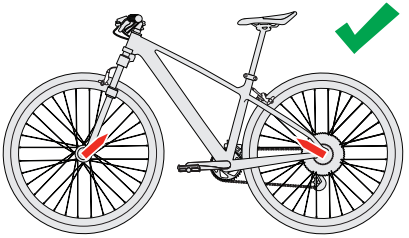
IMPORTANT: Rotate only the adjustment nut to increase tension. Do not rotate the lever.



Quick-release lever alignment

Position the quick-release levers so they do not touch the frame, accessories (like racks or fenders), or anything that could catch on obstacles. If the lever cannot close properly without interference, consult your dealer for a suitable replacement. Perform the Pre-ride check to confirm the quick-release is correctly adjusted and locked.





Bikes with rim brakes

- Front lever should face towards rear of fork.
- Rear lever should line up evenly between the chain and seatstay.



Bikes with disc brakes

- Front lever should face along front of the fork.
- Rear lever should face below chainstay.

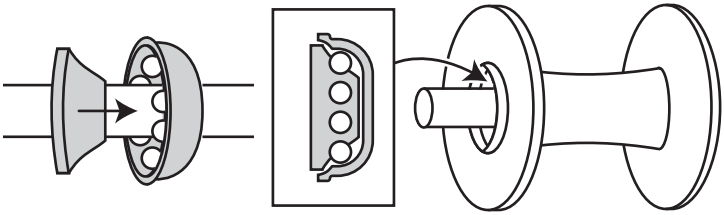
Hubs

Hubs should only be serviced by a qualified dealer or professional technician. Special tools and expertise are required to prevent damage, maintain warranty coverage, and ensure rider safety.

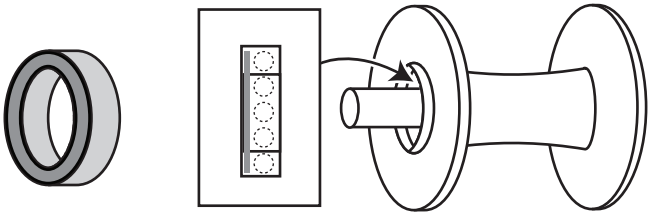
⚠ WARNING: *Incorrect hub assembly or maintenance can cause severe injury or death. Improper hub installation may cause the wheel to loosen or detach while riding, causing loss of control, injury or death.*

Hub bearing examples

Cup and cone (loose-ball bearings)

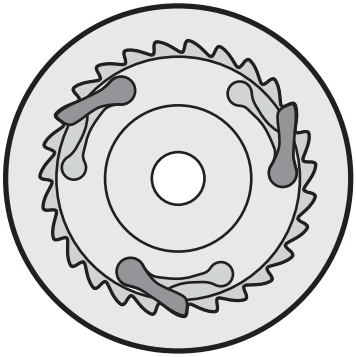


Sealed cartridge bearings

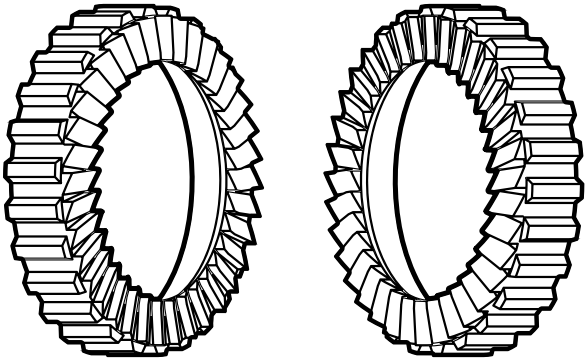


Engagement mechanism examples

Pawl based hubs



Ratchet system



Rims/Spokes

Conventional truing

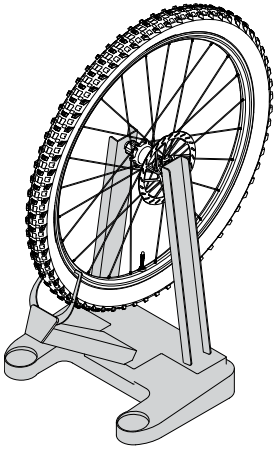
Wheel truing is the process of adjusting the tension of the spokes in a bicycle wheel to ensure the rim spins straight and evenly. A properly trued wheel:

- Improves ride quality, safety, and component longevity
- Corrects side-to-side wobbles
- Fixes up-and-down hops
- Ensures even spoke tension, which helps prevent broken spokes and rim damage.

Signs you might need wheel truing

- The wheel wobbles when spinning.
- You hear rubbing or scraping from the brake pads.
- The bike feels unstable or vibrates.
- You notice uneven spoke tension or loose spokes.
- The wheel may need truing after a crash or hard impact, even if it looks fine.

TIP: If you suspect your wheel is out of true, have it checked by a qualified bike technician. Attempting to true a wheel without proper tools or experience can worsen the issue or damage the rim.



Qualified technicians may use special tools such as a truing stand.

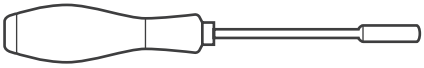
Carbon spokes - tension & true process

Only a professional wheel builder or a bike shop should perform this process. The process differs from traditional steel spokes and requires a different set of tools. If you have questions or need support, please contact Trek Customer Care.

NOTICE: On the Bontrager carbon spokes, the `nipple` is bonded as part of the spoke. Do not attempt to twist the nipple as you would with a conventional wheel. This could lead to spoke damage or failure.

Tools required:

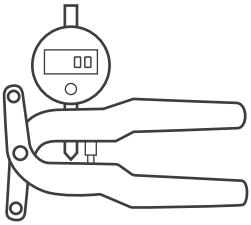
- 5.5 mm hex nipple wrench



- 3.4 mm spoke key



- Spoke tension meter (meters will vary by market, price, and availability)



Preparation

1. Remove the tire and rim tape from the wheel.

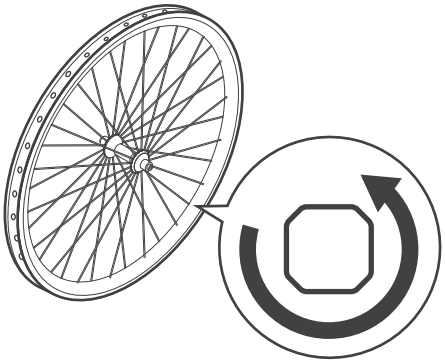
NOTE: Also remove the rotor and cassette if necessary to increase access to the hub.

2. Visually check the rim and spokes for fraying and/or cracks. Replace the spoke or rim if you find cracks.

Replace a spoke

NOTE: If you replace a spoke, you must replace the nipple. The nipple has threadlocker.

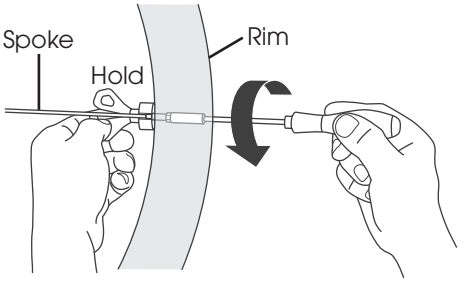
1. To release the tension in the spoke, use the spoke key to hold the spoke (steel end) at the rim.
Use the hex nipple wrench to hold the nipple inside the rim. Rotate the nipple counterclockwise to remove the tension.



2. Thread the new spoke through the hub flange and then into the rim through the spoke hole.

3. With the hex nipple wrench, thread the nipple on the spoke head inside the rim.

4. Using the spoke key to hold the spoke and the hex nipple wrench inside, slowly tighten the nipple counterclockwise with the nipple wrench only.



True and tension

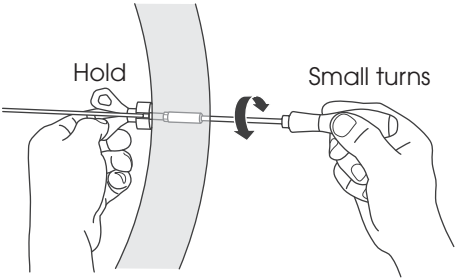
NOTE: Use the spoke key to hold the spoke at the rim (steel end). Use the hex nipple wrench to adjust the tension only.

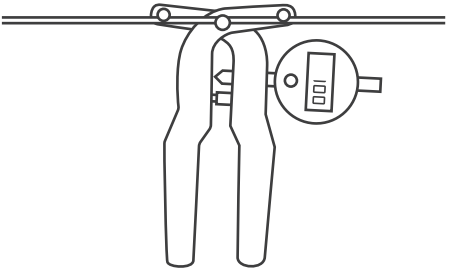
1. With the wheel in a trueing stand, use the spoke key to hold the spoke straight at the rim.

2. Use the hex nipple wrench inside the rim to make small adjustments until the spokes are at an even tension and the wheel is spinning true.

IMPORTANT: You must use only small adjustments at each spoke for optimum trueing and tensioning.

3. Check the wheel is properly dished and tension is within tolerance.





Carbon spoke tension chart

Park tool TM-1	kgf	lb f
19.0	90.8	200
19.4	95.3	210
19.7	99.9	220
20.0	104.4	230
20.4	109.0	240
20.7	113.5	250
21.0	118.0	260
21.2	122.6	270
21.3	127.1	280
21.5	131.7	290
22.0	136.2	300
22.1	140.7	310
22.3	145.3	320
22.6	149.8	330
22.6	154.4	340
23.0	158.9	350
23.0	163.4	360

*Grey field indicates the range for build specifications.

Front disc side tension: 220 lbf - 290 lbf

Rear drive side tension: 250 lbf - 340 lbf

Carbon rims – care and safety

Carbon rims are lightweight and strong but require specific care and compatible components.

⚠ WARNING: *Damaged carbon parts can fail suddenly. If your bike has experienced a crash or impact, stop riding and have it professionally inspected.*

Carbon can be damaged by impact, crash, or mishandling. Unlike metal, damaged carbon may not show visible signs.

Inspect rims before and after each ride, especially after impacts or crashes. If you see damage or suspect hidden damage, stop riding immediately and have the rim inspected by a qualified retailer.

Rim brakes

Rim brakes may shudder at low speeds and perform differently on carbon rims, especially when wet or hot. Use only Bontrager Carbon Stop cork pads. Other pads may reduce braking performance and risk overheating, which can cause rim damage (delamination).

Inner tubes

On wheels with rim brakes, use only butyl rubber inner tubes. Do not use latex or TPU (thermoplastic polyurethane) tubes. Heat from braking can cause latex or TPU tubes to fail suddenly.

Handling

When transporting, carrying, or shipping, avoid applying force to the sides or tops of carbon rims or disc wheels. Do not clamp or hang the bike by its rims, as this can cause damage due to improper support.

Cleaning

Use water and mild detergent (or Bontrager liquid detergent). If needed, use a soft cloth with a small amount of acetone. Avoid solvents, harsh chemicals, or abrasives.

Rim tape or liners

For clincher wheels, use Bontrager or Velox® rim tape. For tubeless ready wheels, use specified rim liner or tubeless tape.

Inflation max limits:

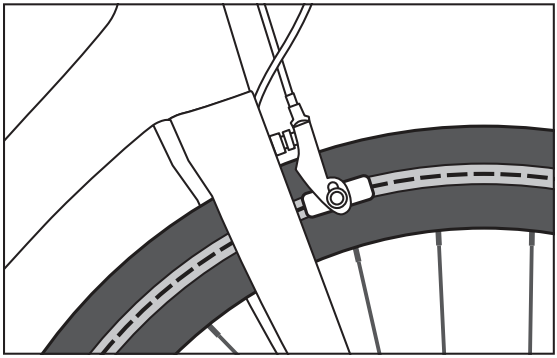
Always use whichever maximum pressure rating is lower: tire or rim.

Brake interface

Rim brakes

The braking surface is the wheel rim itself.

- Ensure the rim sidewalls are clean, smooth, and free of oil, dirt, or debris.
- Brake pads must align with the rim's braking track.



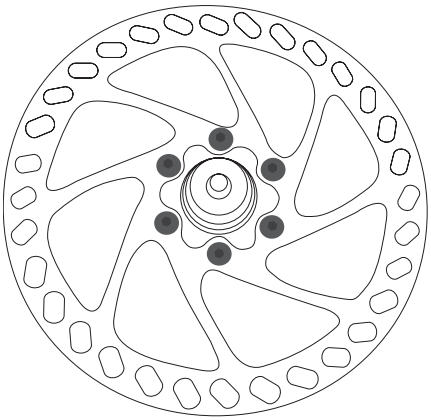
Disc brakes

The braking surface is the rotor attached to the hub.

- Ensure rotors are not warped and free of oil or contaminants.
- Calipers should center over the rotor without rubbing.
- Only use rotors compatible with your hub and brake system.
- Make sure the rotor attachment is tight.

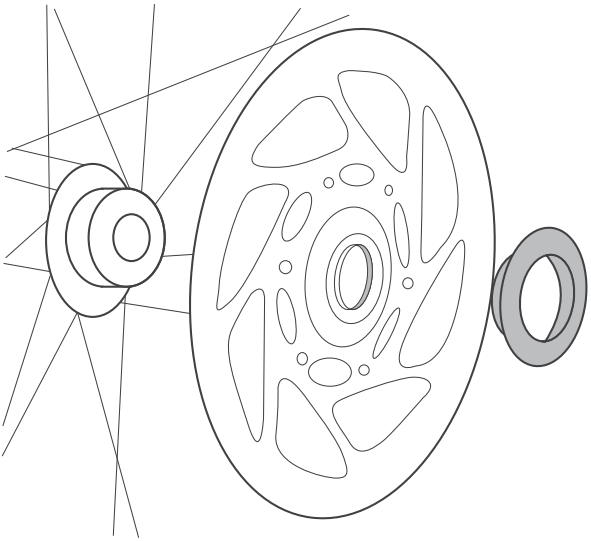
If you have rotor bolts

Tighten the rotor bolts to the value etched on the rotor or ask an authorized Trek dealer for assistance.



If you have a centerlock rotor lockring

Make sure it is tightened to the correct torque. If you're unsure, contact a Trek dealer for assistance.



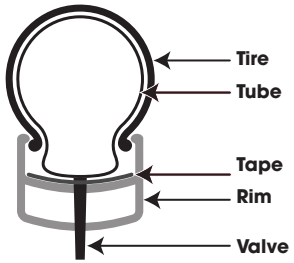
Tires/Tubes

Tire types

There are three main types of bike tire construction.

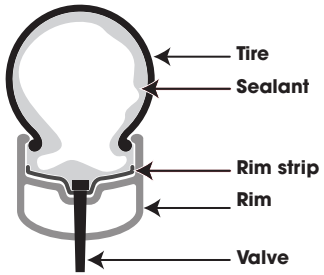
Clincher

- Most common type
- Tire hooks onto the rim with a bead and uses an inner tube.
- Easy to install and repair



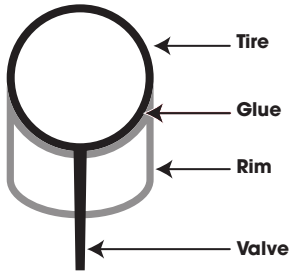
Tubeless

- No inner tube; seals directly to the rim
- Requires airtight rim and sealant.
- Lower pressure, better puncture resistance



Tubular (sew-up)

- Tire and tube sewn together and glued to a special rim
- Used in racing for weight and performance
- Requires more skill and time to install or repair



Tire pressure

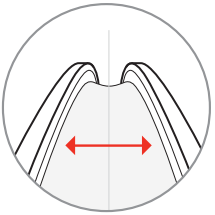
Inflate the tire to the pressure recommended on the tire sidewall. Do not under-inflate or over-inflate the tire. If the tire loses pressure, it probably has a hole in the tube or tubeless tire casing. See "Basic repairs".

However, do not inflate a tire on a carbon rim beyond the rim's specified pressure. Always use whichever maximum pressure rating is lower: tire or rim.

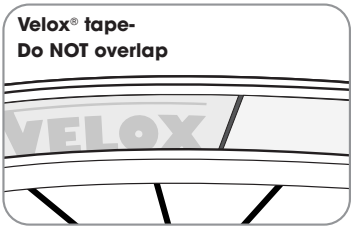
Tire installation

Clincher wheel set-up

Install traditional rim tape or TLR tape



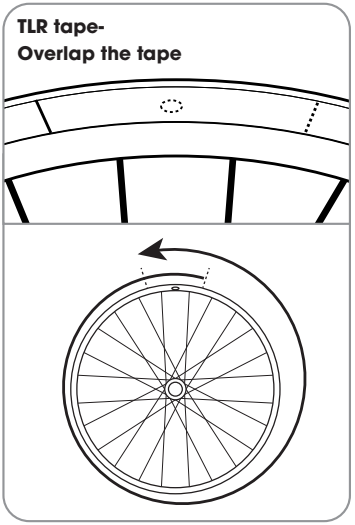
The following steps will prepare a Bontrager rim for the installation of a traditional clincher tire and tube or a TLR (tubeless ready) tire. We recommend either Bontrager or Velox® rim tape. Choose rim tape that matches the inner rim width.



1. Orient the tape so that as you unroll it, the tape will cross the valve hole and cover the hole.

2. Attach the initial end of the tape so that it is centered between two spokes but not at the valve hole.

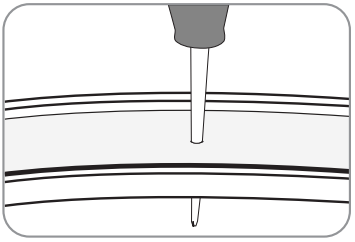
3. As you apply the tape, center it in the bottom of the well of the rim. If the tape is centered correctly, the spoke holes will be completely covered. If a hole is not covered, it could puncture the inner tube.



Velox® rim tape- Cut the tape so that it does not overlap itself. If there is tape overlap, the effective diameter of the rim will increase, so installing the tire will be more difficult.

TLR tape- Start the tape between 1 and 2 spoke holes before the valve hole. Wrap around the rim so the tape covers the valve hole twice. Cut the tape between 1 and 2 spoke holes past the valve hole.

4. With a Phillips screwdriver or similar tool, create a valve hole through the rim tape by pushing firmly into the rim valve hole.



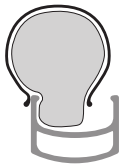
Next, follow the procedure to install the tire.

Clincher tire installation



Rim tape must be installed before starting.
See “Install traditional rim tape or TLR tape”.

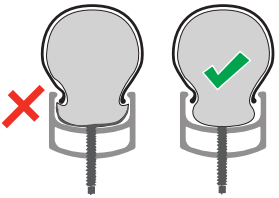
1. Inflate the inner tube until it begins to take shape.
   NOTICE: Be careful with a TPU tube as they are very sensitive to inflation when not installed inside a tire.
2. Place the inner tube inside the tire.



3. Insert the valve stem through the hole in the rim.
4. Install the first bead onto the rim. Start at the valve stem.
5. Push the inner tube fully inside the rim.
6. Push the second bead into the rim. Start at the valve stem. Be careful not to pinch the inner tube between the rim and the tire.

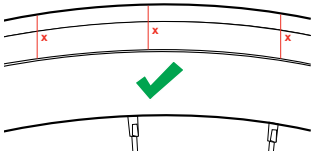


7. At the tire, push the base of the valve stem up so that it is properly positioned in the rim.
8. Inflate the tire to 20–30 psi (1.5–2 atm , 1.4–2.1 bar).
9. Visually check the tire bead and mold line all the way around the rim—on both sides—to make sure the inner tube is inside the tire and that the bead is engaged equally and evenly (see figure below). If the tube is pinched or the bead is not equal, deflate the tire and repeat steps 1-8.

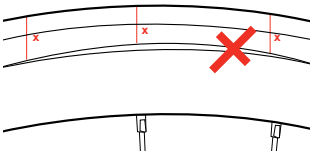


10. Inflate the tire to the pressure indicated on the side of the tire. Do not exceed the maximum inflation rate on carbon clincher rims.
11. Push the valve stem down into the rim and allow it to spring back into proper position.
12. Check for correct tire bead engagement again.

Bead engagement in the rim



Correct
Make sure the mold line of the tire is equal (X distance) with the rim all the way around.



Incorrect
The mold line of the tire is not equal all the way around.

Tubeless wheel set-up

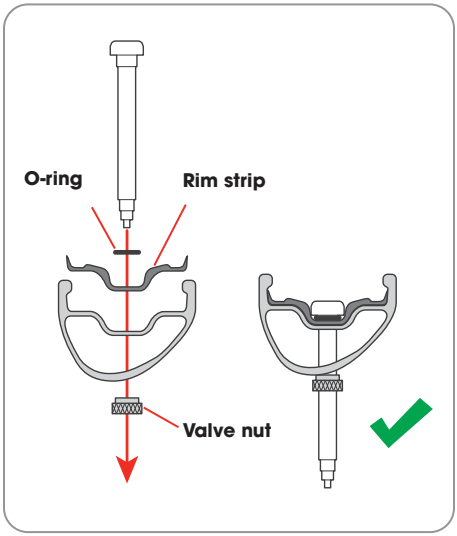
⚠ WARNING: *Tubeless systems require specific parts and proper installation. Incorrect assembly can cause sudden air loss, leading to loss of control and serious injury. If you are not sure your tire system is installed correctly, take your bicycle to your dealer for service.*

Install a TLR strip and valve

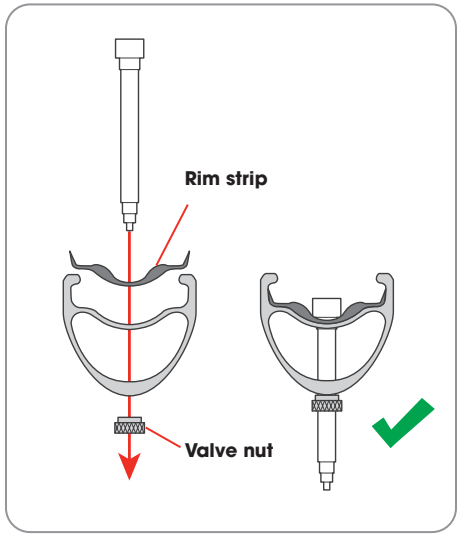
Use the following steps to prepare a Bontrager TLR rim for the installation of a tubeless tire.

1. Check the tubeless ready rim strip for tears, holes or deformed areas near the valve hole or along its edges. Only use an undamaged tubeless ready rim strip.
2. Align the rim valve hole and the valve hole of the rim strip. The U shape of the rim strip should face toward the center of the rim and offset rim strips should match the offset in the rim.
3. Place the tubeless ready valve through the rim strip's valve hole and then through the rim. If the valve has a rubber o-ring, make sure that the o-ring is on the valve before dropping it into rim.

O-ring



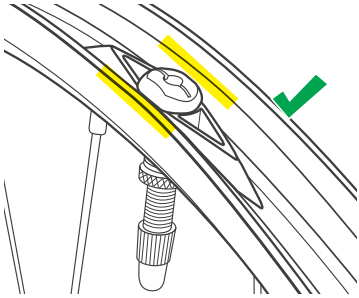
No o-ring



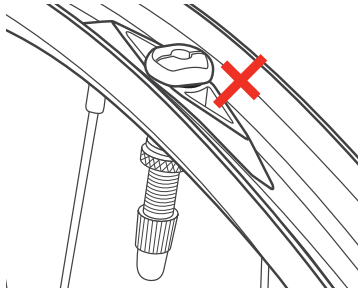
4. Be sure the rim strip snaps into place under both beads.

1.

Round valve base

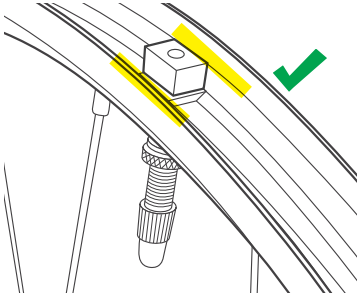


Correct alignment. Flat sides of valve are aligned with rim wall.

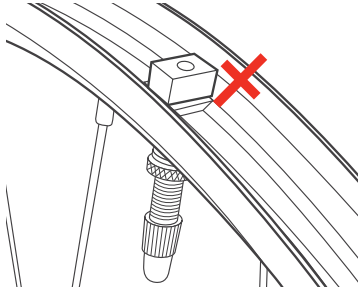


Incorrect alignment. Flat sides of valve not aligned with rim.

Rectangular valve base



Correct alignment. Flat sides of valve are aligned with rim wall.



Incorrect alignment. Flat sides of valve not aligned with rim.

2. Align the flat sides of the valve base with the walls of the rim.

3. Tighten the valve nut over the threads of the valve until finger tight. Do not tighten with a tool.

4. Work the rim strip into the rim, moving away from the valve stem in both directions using only your thumbs. Do not use tools because they can damage the rim strip.

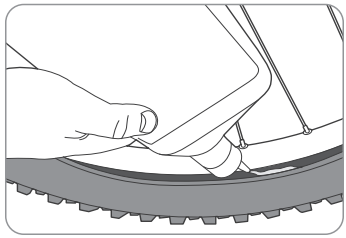
Install a TLR tire on a TLR mountain wheel

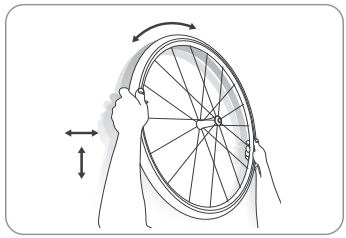
Before you begin, "Install a TLR strip and valve".

1. Starting opposite the valve, push the first bead of the tire entirely into the rim well.
2. Starting opposite the valve, push the second bead into the rim, leaving approximately three inches (75 mm) open.
3. Pour the sealant into the open section of tire. See the sealant container for the recommended amount.
4. Carefully finish pushing the second bead into the rim.
5. Rock and spin the wheel to spread the sealant around the inside of the tire.
6. Inflate the tire to the pressure indicated on the side of the tire.
7. Check bead engagement: the mold line should be evenly spaced from the rim edge. If not, deflate and repeat steps 6–7.
8. Bounce and spin the wheel to spread the sealant fully.
9. Re-check the tire inflation and bead engagement.
10. Check the tire sealant every 3 to 4 months. Add more as needed.

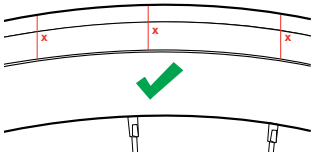
For a video overview of how to set up tubeless tires, please visit:

https://youtu.be/fu-MItrK-jUk?si=-8oLLDousq2lylQd

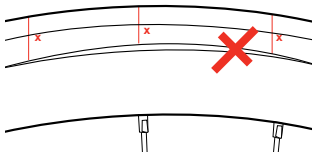




Bead engagement in the rim



Correct
Make sure the mold line of the tire is equal (X distance) with the rim all the way around.



Incorrect
The mold line of the tire is not equal all the way around.

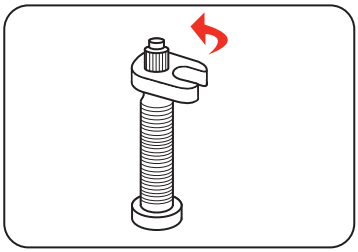
Install a TLR tire on a TLR road wheel

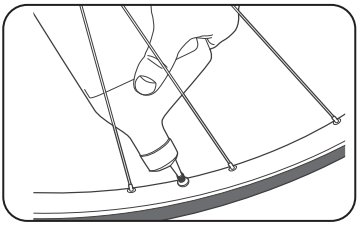
Before you begin, “Install a TLR strip and valve”.

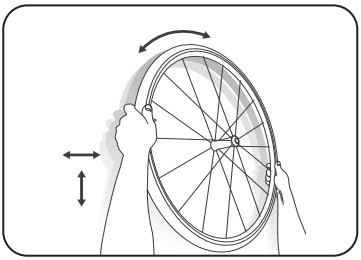
1. Starting opposite the valve, push the first bead of the tire entirely into the rim well.
2. Starting opposite the valve, push the second bead into the rim well.
3. Remove the valve core.
4. Pour the sealant through the valve. See the sealant container for the recommended amount.
5. Replace the valve core.
6. Rock and spin the wheel to spread the sealant around the inside of the tire.
7. Inflate the tire to the pressure indicated on the side of the tire.
8. Check bead engagement: the mold line should be evenly spaced from the rim edge. If not, deflate and repeat steps 7–8.
9. Bounce and spin the wheel to spread the sealant fully.
10. Re-check the tire inflation and bead engagement.
11. Check the tire sealant every 3 to 4 months. Add more as needed.

For a video overview of how to set up tubeless tires, please visit:

https://youtu.be/fu-MItrK-jUk?si=-8oLLDousq2lylQd

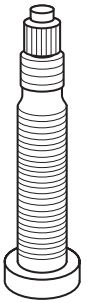




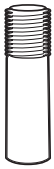


Valves and extenders

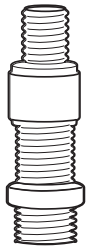
Types of tire valves:



Presta



Schrader



Dunlop

NOTE: Schrader and Dunlop valves do not have extenders.

Presta Valve:

Slim, lightweight, and typically found on road bikes.

Schrader Valve:

Common on mountain and hybrid bikes; similar to automotive valves.

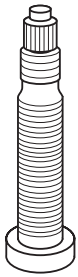
Dunlop (Woods) Valve:

Less common; used in some European and Asian markets.

Each valve type requires a compatible pump head or an adapter for inflation.

Valve extenders for Presta valves

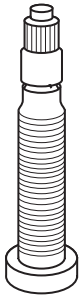
Does your wheel have deep rims?
A valve extender can help you access the valve more easily.



Presta
without removable valve core



External valve extender
screws onto end of valve



Presta
with removable valve core



Requires Bontrager
Valve Key



Inline valve extender
fits between valve core and valve body

Measurements and terminology explained

Rim and tire dimensions

Common names vs. ISO sizes

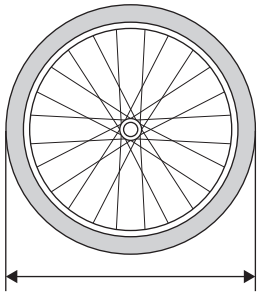
Wheels and tires use two primary naming systems.

Common names

Common names are general terms used in marketing and conversation. These names refer to the approximate outer tire diameter, not the rim.

Inch-based: Names like 26-inch, 27-inch, and 29-inch refer to the approximate outer diameter in inches, including the tire.

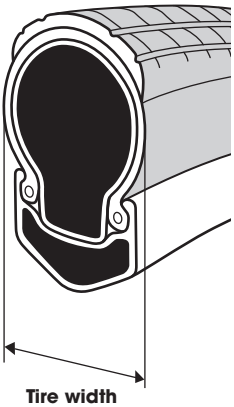
Metric-based (French system): Names like 700C, 650B, and 650C come from this system. The number (e.g., 700) is the approximate outer tire diameter in millimeters (including the tire). The letter (A, B, C, D) indicates the tire width category.



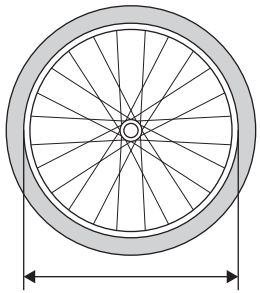
Common names refer to the outer tire dimension

ISO sizes

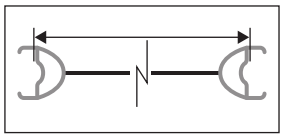
ISO tire sizes use a two-number system (e.g., 50-584) to specify a tire's width and bead seat diameter in millimeters. The first number is the tire's nominal width in millimeters, and the second number is the diameter of the wheel rim where the tire's bead sits, in millimeters. This system is designed to avoid confusion with older, inconsistent inch-based sizes, which often varied for the same stated measurement.



Tire width



Bead seat diameter (BSD)



Examples of corresponding wheel size terms

Common name	ISO size (mm)	Typical use
29-inch or 700c	622	Road, gravel, hybrid or mountain bikes
27.5-inch or 650b	584	Mountain or gravel bikes
26-inch	559	Older mountain or kids bikes
24-inch	507	Youth bikes
16-inch	305	Kids bikes

Rim to tire compatibility

Rims are marked with their ISO bead seat diameter (e.g., 622 mm) and width. Tires show size as width × diameter (e.g., 40-622 means 40 mm wide, 622 mm BSD).

Maintenance and care

Useful life of wheels

Wheel strength and integrity are critical for safety. All wheels wear over time from stress and fatigue. Aggressive riding, heavy loads, harsh terrain, and poor maintenance shorten their lifespan.

Because conditions vary, there is no fixed replacement schedule. Inspect regularly and replace parts as needed. If you are unsure, consult your Trek dealer.

Lightweight, high-performance wheels require more frequent checks and careful handling. Riding on worn or damaged wheels is unsafe and can lead to failure and serious injury.

Proper tire disposal

You can drop them off at a bike shop with a recycling program, such as Trek or participating shops that partner with recycle services. If a take-back program isn't available, check local government or waste management sites, search online for drop-off locations, or consider repurposing the tires for creative projects.

Storage

When wheels are not mounted on a bike, make sure the rim and spokes are not damaged by contact with the cassette, disc rotor, or hub.

Cleaning

Use mild soap, a soft brush and a towel. Never spray your wheels with pressurized water, and never spray directly onto bearing points or electrical parts on e-bikes. Never use harsh chemicals or alcohol wipes to clean your wheelset or tires.

Tubular tires

Clean tires with a weak, soapy solution. Do not use cleaners that contain hydrocarbons, dilutants, or corrosives. Store tubular tires, on or off a rim, in a dry location, and away from light.

Carbon rims

Clean the rim with a soft, moist cloth and bicycle cleaner or a solution of dish soap and water. If a solution of water and dish detergent does not clean the rims, use a clean soft cloth and a small quantity of acetone. Do not clean the rims with solvents, harsh chemicals, or abrasives, which can damage the rims.

Rim brakes

Make sure your rims are clean. Dirty or greasy rims make your brakes less powerful. Clean your rims with a clean rag, or clean them with soap and water, rinse, and let them air dry.

Basic repairs

How to remove a wheel

1. For rear wheel, shift to the smallest gear for easier removal.
2. Release the brake (if rim brakes) and open the quick-release lever or remove the thru-axle.
3. Take the wheel off the bike.

How to replace a wheel

1. For disc brakes, align the rotor with wheel.
2. For rear wheel, guide the cassette into the chain and pull the derailleur back.
3. Align the axle in the dropouts.
4. Close the quick-release or tighten the thru-axle to specified torque.
5. Reengage the rim brakes and perform pre-ride checks.

For a video overview of how to remove and install tires, please visit:

https://youtu.be/XPc9Zp7vQ-o?si=Y-Qr_AhBJTpG7U9Iv

How to fix a flat tire (clincher wheels)

First, remove the wheel.

1. **Remove the tire and tube**
   Deflate the tire completely by pressing the valve. Use tire levers to pry one side of the tire bead off the rim. Be careful not to damage the rim with the levers. Pull out the inner tube.
2. **Find the cause of the flat**
   Inflate the tube slightly and listen/feel for air escaping. Check the tire and rim for sharp objects (glass, thorns, metal). Remove any debris to prevent future flats.
3. **Patch or replace the tube**
   If patching:
   Roughen the area around the hole with sandpaper. Apply glue and let it get tacky.
   Press the patch firmly and let it set.
   If replacing:
   Use a new tube of the correct size.
4. **Reinstall tube and tire and inflate**
   Refer to steps for “Clincher tire installation”.

For a video overview of how to fix a flat tire, please visit:

https://www.youtube.com/watch?v=gYZtywJ3Vzk

Troubleshooting and tips

TIP: Always carry a spare tube or tubeless plug, tire levers, and an inflator: mini pump, CO_2 inflator and cartridges, or Trek Air Rush electric pump.

Clicking noise

Check your spokes.

Wheel not spinning freely

Check that the axle is seated correctly in the dropouts. Ensure quick-release or thru-axle is tightened properly. Inspect brake pads for rubbing; adjust calipers if needed.

Wheel feels loose

Verify quick-release lever is fully closed. For thru-axle, tighten to manufacturer torque specification. Check hub bearings for play; service or replace if worn.

Wheel wobbles (out of true)

Inspect spokes for tension and damage. Minor wobbles can be fixed with a spoke wrench. Major issues need a truing stand or dealer service.

Frequent flats

Check tire for embedded debris. Inspect rim tape for gaps or sharp edges. Ensure correct tire pressure (avoid pinch flats). A loose valve core can cause a slow leak. Use a valve core tool to tighten it.

Tire won't seat in rim

Lubricate the bead with soapy water. Check rim compatibility and bead alignment. Check the rim and tire size for compatibility.

Tubeless losing air

Shake and spin wheel to distribute sealant. Add fresh sealant if dried out. Inspect rim tape for leaks or damage.

Bulge or uneven tire

Deflate and re-seat the bead evenly. Check for damaged casing or bead.

Wheel and tire maintenance schedule

If you are unsure of any of these tasks, check with your dealer or other professionals.

	Before every ride	Every month	Every 6 months	Every year
All tires	**Check tire pressure.** *Inflate if needed, but do not exceed pressure marked on sidewall (For carbon rims, do not exceed pressure noted* on rims.) **Inspect tire for wear or damage.** *Replace or repair* if needed.			
Tubeless tires		**Every 3-4 months (depending on use and climate)** **Refresh your tubeless tire sealant on a regular basis according to the miles ridden or your last refresh date.** *All tubeless tire sealants dry out and lose effectiveness over time. Inspect rim tape for gaps or lifting. Check tires for cuts and leaks. Top off the sealant. Remove and clean valve cores to prevent clogs. Check that the valve nut is finger-tight to prevent rattling or leaks. If needed, repair or replace tape* and tires.	**If tire is not holding air:** *Inspect rim strip or rim tape for gaps* or lifting. *Inspect valve stem. If air is leaking from valve stem, tighten valve core or replace if necessary.*	
Tubular tires		**Inspect glue or tape bond to rim.** *Re-glue* if loose.		Replace worn tubular tires.
All rims	**Check that rims are clean.** *Do not pressure wash. If dirty, clean with gentle soap and water. Rim brakes: especially along rim* brake strip.	**Inspect for cracks or wear.** *If worn or damaged,* replace rims.	**Check that rims are true (laterally aligned).** *If not, see* "Troubleshooting and tips" *or take it to* your dealer.	
Carbon rims	**Inspect for any cracks or damage.**	**Inspect for cracks or wear. Carbon rims have a scrim layer on the brake surface covering straight, parallel carbon fibers.** *If straight fibers are visible through the scrim, stop riding and have the rim replaced by a dealer.*		
Spokes	**Spin the wheels to make sure they do not wobble.** *If they do,see* ""Troubleshooting and tips"".	**Check that spokes are not loose, bent, worn or broken.** *Repair or replace* if needed.	***Have a professional true your wheels.***	
All axles	**Check that wheels are correctly attached to your bike.**			
Thru-axle	**Verify that the axle is torqued to the value marked on the axle.**			*Lubricate the* thru-axle
Quick-release	**Check that quick-release skewers are fully closed and secure.**			*Lubricate the* quick release.
Bolt-on wheels	**Check that bolts are tightened to correct torque value.**		**Check bolt torques.** *Tighten if needed. The torque value is listed on the bolt or in the* bike's manual.	
Hubs			**Check the bearings- Lift each wheel and move the rim side to side to feel for play and listen for noise. Spin the wheel and listen for grinding.** *If bearings are loose or noisy, have your dealer* adjust them.	
		Every 100 hours or 6 months *Have your hubs serviced by an authorized Trek/Bontrager dealer. Heavy use may require more* frequent service.		

