

Rear Wheel installation on a track bike

When you install the rear wheel, there are a few simple things you need to do:

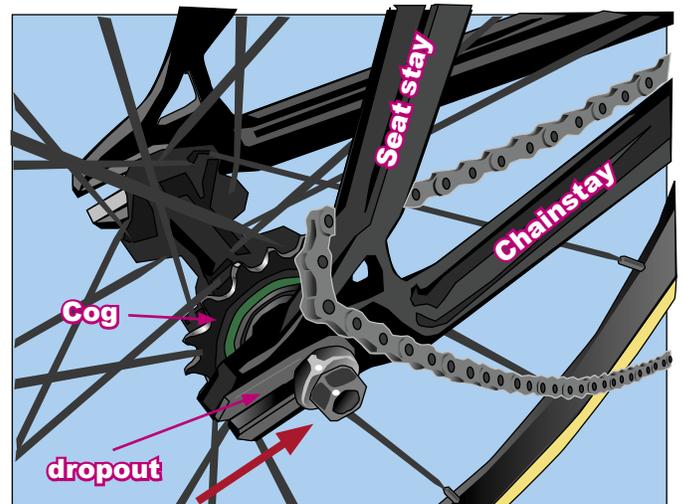
- 1.** Be organized, starting with having your gears, wheels & wrenches needed, all within easy reach.

Please note: if you are installing both wheels, it can be easiest to put the rear on first. Doing this allows the blades of the fork will help balance the bike for you as they gently rest on the ground.

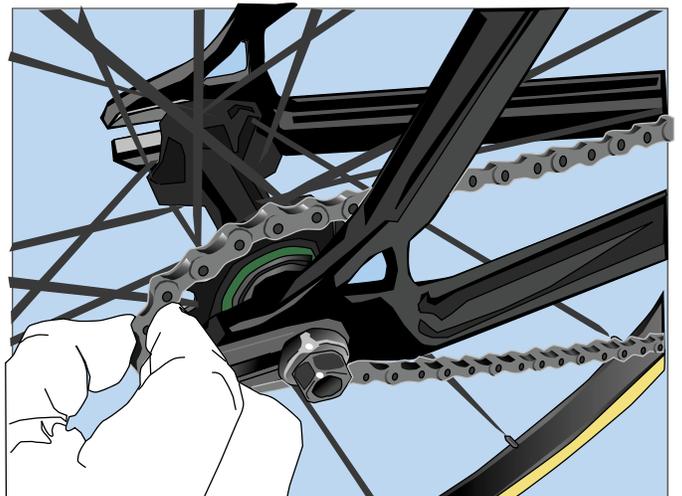
- 2.** Like USA Olympian & World Keirin Champ, Jennie Reed in the first photo, work from behind your bike. This allows easy access and better lines of sight for what you're doing.



- 3.** Place the chain on the seat stay, above the dropout, to allow the wheel axle to freely slide inward. Push the wheel to the front of the dropout. This will give the most slack to install the chain.

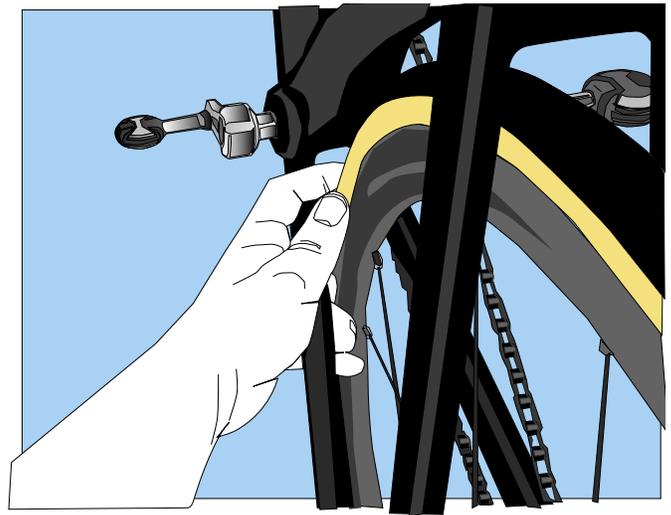


- 4.** Bring the chain from its resting point, down over the cog. Allow the chain to settle and engage the teeth. Then place the chain on the top of the chainring, to ease it going all the way around. You can raise the rear wheel slightly off the ground and can turn the cranks to help pull the chain on.



- 5.** Use your (shown using left hand) fingers to both push the wheel back towards you and help align it within the frame. Apply enough pressure to

the wheel so that the chain tension is such that it is not sagging towards the ground. Use your rearward vantage point to reference between the seat and chain stays.



7. The chain tension needs to be correct. Not too loose, but not too tight.
8. Next, evenly tighten the axle nuts. Tighten enough on one side to hold the wheel in place, then tighten some on the opposite side. Tighten back and forth until you have the wheel locked in place. Check **twice** to make sure the wheel is secured -- especially at races.

Those who are used to bikes with derailleurs may find it frustrating to get this set right, especially with track hub that does not have a quick release skewer. To best perfect this task, practice. You can do this prior to training/racing to get the hang of it. A low stress practice session will usually pay off big with little time wasted, when at the track.

ANOTHER OPTION:

“Walking” the wheel tight

1. Check the chain tension by lifting the bike and getting rear wheel off the ground to allow the wheel to slowly turn. Use the “table shake” method if unsure of the chain being too loose.
2. Use your wrench to tap the chain on top between the cog and chainring. (AVOID using fingers that can get caught between chain & gears!!!) Often, the chain tension will be imperfect.
3. Loosen one of the axle nuts. Push the tire to one side so that the loosened side of the wheel axle moves to the rear. Tighten this nut.

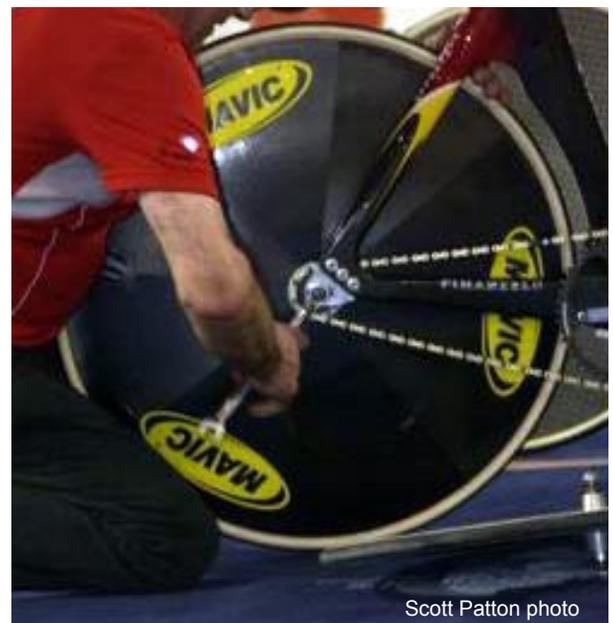
Now the chain tension should be better, but the wheel is no longer centered between the chain stays. Loosen the other axle nut and repeat what you just did and center the wheel in the frame. If you “walked” the wheel backwards slightly, the chain should have tightened a little bit more.

The key is to keep one or the other of the axle nuts tight at all times, and “walk” the wheel forward and back. The more you practice this process the better you’ll become at getting it right on the first try.



Scott Patton photo

The Spanish Team Mechanic participates in a “Fastest Wheel Change” competition between races at the L.A. World Cup



Scott Patton photo

OTHER CONSIDERATIONS:

Chainline

This refers to how straight the chain runs between the front chainring and rear cog. Ideally, both should be in the same plane, so that there is no sideward motion or stress to the chain. This constitutes “perfect chainline”.

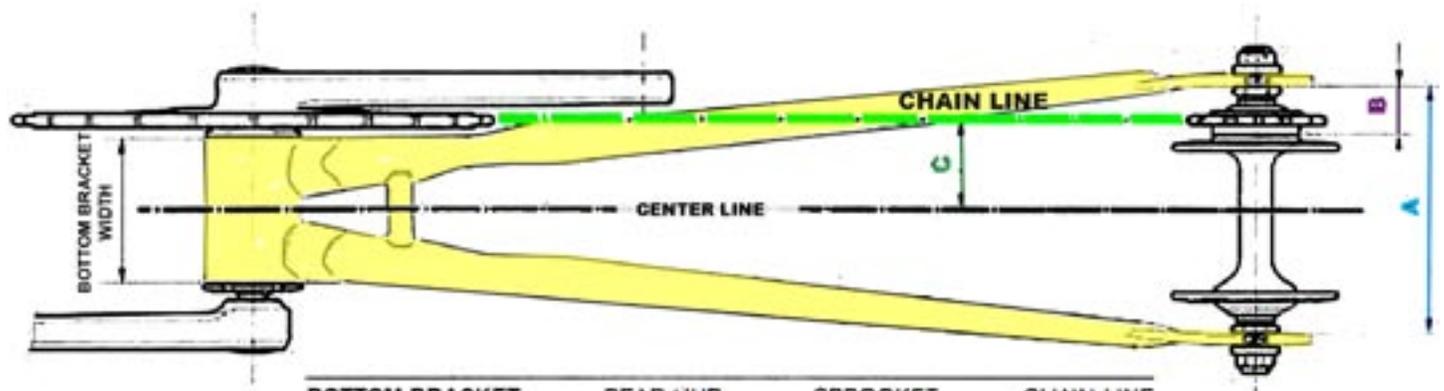


illustration
from www.businesscycles.com

BOTTOM BRACKET WIDTH	REAR HUB WIDTH - A -	SPROCKET WIDTH - B -	CHAIN LINE - C -
65	110	21.5	40
68	110	21.5	40
68	120	24	42.5
70	120	24	42.5



BBC photo

Roundness

Chainrings and cogs are not always perfectly round, and it is common for the chain tension to be looser in some parts of the revolution and tighter in others. Chain tension should be adjusted to avoid binding in the tightest part of the revolution. If the chain is excessively loose in other parts of the revolution, inspect the chainring and cog for damage or manufacturing defects and replace the components with parts that have acceptable roundness.



Pezcyclingnews.com

SAFETY FIRST!

Correct **chainline** & proper **chain tension** with a fixed gear are extremely important for both safety & wear of the parts. Incorrect alignment of the front chainring & rear cog will not only increase wear of the chain and gears, it can also contribute to derailment of the chain during riding. If the chain comes off it can become caught in the wheel potentially causing a crash of yourself & others!