Ask Dr. Spoke

Dear Dr. Spoke: *Should I go to tubeless bike tires?*

Tubeless tires are increasingly popular. Most new mountain bikes, in fact, will be tubeless. Road bikes as well. So, likely as not if one's bike is new they will have tubeless tires. But this trend is only in the past several years, and many still have the tubed tires.

I will offer my experience and pull from some online material from the REI webpage. Any discussion begins with the dough-re-me—how much does it cost? Tubeless tires are more expensive. However, one should consider the benefits.

- There is no inner tube and there are fewer flats.
- Tire pressures are lower (for me on road bike, about 10-15 psi less), smoother ride.
- They weigh less than a traditional tire and tube.

As the saying goes, there are no free lunches. A tubeless tire also has its drawbacks.

- There is an initial cost for the rims, and recurrent tire replacement costs are higher.
- They are harder to mount.
- They require sealant.
- One should still carry a spare tube.

Let me start with wheel set. It is possible to reconfigure a tubed wheel rim to tubeless, but I don't recommend it. A tubeless tire requires setting the tire's bead into the rim. Now even a tubed tire rim has a bead; however, a tubed rim is different from a tubeless rim. One may install a conversion kit to a tubed rim. But tubeless tires do not set as fully on a tubed rim wheel as one specifically designed for a tubeless tire. Additionally, when purchasing a tubeless rim one should know the range of tire sizes the rim will support. The issue is a tubeless tire on a tubed rim design or mismatched size may slip off the rim if under-inflated or in an aggressive turn.

Mounting the tubeless takes work. So, here are some thoughts. First, I direct your attention to many excellent You Tube videos. From my experience, one should first set the back bead, the one away from the side one is mounting the tire. This is just a matter of pushing the bead into the tire rim. Not fully seated, but near. Once the tire is fully over the rim, try pushing the leading-edge bead into the rim. Don't give up, it takes some effort and experience. Once mounted, fully inflate the tire to set the bead. One might get it with a floor stand pump and pumping vigorously, loudly, and away from one's spouse and children as the non-stop stream of invectives emanate. The best choice is an air compressor. And failing that a CO_2 cartridge (use the larger for mountain bikes). An audible pop will follow when the bead sets.

We come to sealant. In the land of goatheads, even inner tubes often have Slime-like sealant. In the tubeless world, it isn't an option. After the initial inflation, deflate and de-core the inflation stem. As an aside, tubeless tires use inflator stems that seat within the rim. Always be sure to properly seat it and use the nut on the stem to hold it in place. Very frustrating when a stem isn't seated properly! Now one puts in the sealant. A syringe with tube to inflation stem is a nice tool. While it varies, I find 2 ounces is a good start for a road tire. Re-core the stem, and re-inflate. I have done it without de-coring. It can be messy, and much harder. Get the de-core tool.

Tire removal is work too. One MUST break the bead on both sides. Following deflation, one should first break the bead by pushing inward where the tire and rim meet. It takes work! Once broken, continue around the rim, then repeat on the opposite side. It can be messy. Remember the sealant? My suggestion is keeping the rim near vertical once the initial bead breaks, then carefully removing the tire from rim so as not spill the sealant. The sealant is water soluble.

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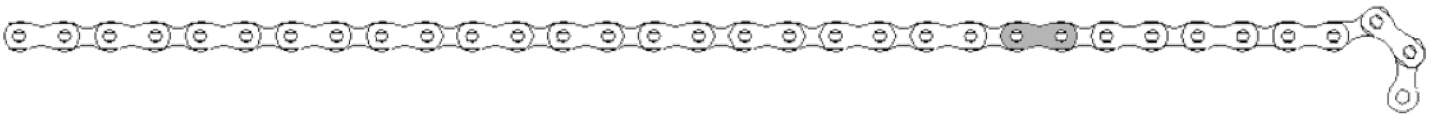

Ask Dr. Spoke, Continued

A quick note on sealant. Over time, the sealant coagulates within the tire. Maybe once a year, taking off the tire and removing the coagulated sealant is a good idea. As a minimum, one should recharge the sealant after a leak or long period of time.

The good news and a strong argument about tubeless is fewer flats and a smoother ride. First, the tire material is relatively more resistant to puncture. And when punctures occur, the sealant will often coagulate and reseal the tire. Hint: Spin the tire to get sealant to leak, then put finger over leak (like pressure to a wound). Second, the lower tire pressure allows a smoother ride by conforming to the roadbed; and, the tires ability to absorb shocks is much better. No tubes avoids pinch flats.

Flats do occur. One approach with an observable puncture is using a plug. Same as used on a car tire, but smaller for bike tire. One may find the plug kit at most bike shops. Still, there are times when neither sealant nor plug kits will do the job. In this case, remove the tire and put in the spare tube you brought with you. I have done it, and it works just fine.

We come now to the question, should I get tubeless tires? My recommendation with one caveat is a full yes. They run better and are very robust. Do they lose air? Yes. My experience on my road bike is about a 20-psi loss over the week. The mountain bike (much lower fill pressure) is less. In any event, one should always check pressures before a ride. My caveat: if one has tubed rim design, they should factor in the cost of tubeless rims. If a new bike, go tubeless.

Good luck and wishing you many happy miles.

If you have a question for Dr. Spoke, send an email to “DrSpoke@nmts.org” and watch for a response in a future newsletter.

An archive of this and prior “Ask Dr. Spoke” articles is available on the NMTS web site at https://www.nmts.org/spoke.php.