

Knowhow

Making sense of commonly misunderstood cycling subjects



DAN JOYCE
Cycle Editor

Tyres

What are the pros and cons of tubeless tyres?

Tubeless tyres look like normal tyres: U-shape in section, with wire or synthetic 'beads' embedded at the edges. When the tyre is inflated, air pressure forces the beads up to the lipped edges of the wheel rim, holding the tyre in place. As the name says, tubeless tyres dispense with the innertube. The tyre itself forms an airtight seal with the rim.

A tubeless rim 'locks' the tyre beads in place; the fit between tyre and rim is tight by design. (As it's harder to remove the tyre, it's thus a bad idea to run a tyre with a tube on a tubeless rim.) A tubeless valve has a rubber plug at its base to seal the valve hole, and is held in place by its knurled nut.

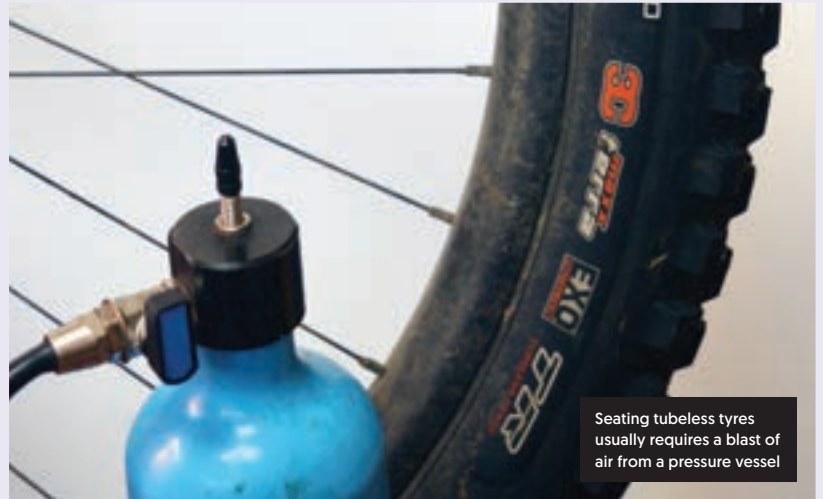
Some tubeless rims have no spoke holes, so air can't escape there. Most do. You cover these with one or two wraps of tubeless rim tape, then put tubeless sealant in the tyre.

Tubeless pros

- The tyres can be ridden at lower pressures, improving traction off-road, without the risk of pinch-punctures.

Tubeless shopping list

Along with tubeless tyres and wheels, plus regular tools like tyre levers and a track pump, you'll need:



Seating tubeless tyres usually requires a blast of air from a pressure vessel

- Lower pressures mean improved comfort and rolling performance on rough surfaces (see cyclinguk.org/cycle/tyre-pressure).
- Rolling resistance should be lower even on smooth surfaces. Since there's no innertube, there's no friction between tyre and tube.
- Many punctures will self seal.
- Most punctures that don't seal are easy to fix with a tyre plug (cyclinguk.org/cycle-magazine/review-tubeless-repair-kits).

Tubeless cons

- More expensive. Tubeless tyres cost more, you may need new rims, and you *will* need more paraphernalia.
- Fitting is messier and more time consuming.
- Removal often requires good grip strength.
- If a tear or hole is too big for a tyre plug, you'll still need a spare tube to get home.
- Air and sealant can escape ('burping') if the tyre bead comes away from the rim due to a sudden impact or extreme cornering force.
- Sealants that coagulate need topping up every six months. Valve cores clog up too.

Is tubeless for me?

It depends. You're trading money and workshop time for an improvement in traction and rolling performance, and (usually) automatic puncture repair. This will most benefit cyclists who ride off-road or those who prefer to use lighter weight, more fragile tyres on road. For touring or transport use, tougher conventional tyres with tubes are currently more practical. ●

Ghetto tubeless

This is a DIY option for non-tubeless rims and tyres. It can work well enough for low-pressure mountain bike tyres, particularly fat bike tyres. It's not recommended for high-pressure road tyres, where burping even a small volume of air could have catastrophic consequences.

You'll need tubeless sealant and one 24in (ISO 507) tube per wheel, ideally with a removable valve core. Stretch the tube onto the rim, then slice it down the centre and peel over the sides of the rim. Put the tyre on the rim, making sure the tube fringes extend beyond the beads. Add sealant and inflate as per a standard tubeless setup.

The tube acts as a rim strip and forces a tighter seal between tyre bead and rim. When the tyre is inflated, trim the fringes.

Fitting tubeless tyres

Watch our video demonstrating how to do it. Visit: cyclinguk.org/tubesstyes