



**Feature**

# FEWER FLATS

The puncture-sealing benefits of tubeless tyre setups can also be enjoyed with tubes. Technical editor **Richard Hallett** explains how

**N**ever mind reduced rolling resistance or improved ride comfort, for many cyclists the real attraction of tubeless tyre technology is that when you get a puncture, you generally don't get a puncture. At no time of year is this more welcome than winter, when roadside maintenance is a miserable business – as a flat tyre on a recent wet ride forcibly reminded me.

For the last five years, I've almost exclusively ridden tubeless tyres. But not that day. While getting my hands filthy replacing the tube and removing the offending flint from the tyre, I had a thought, which I'll call 'faux tubeless'.

## GETTING STUCK IN

A tubeless tyre is not proof against punctures but resists subsequent air loss either by retaining the offending sharp object, which then plugs the hole it made, or, should the object fall out, by clogging up the hole with sealant. This doesn't happen with an innertube, which will lose air even if the sharp thing is stuck fast in the tyre.

Simply putting tubeless sealant in an innertube won't fix this. The sealant will have a hard time sealing a hole as the tube wall isn't thick enough to let a plug of sealant granules build up. The usual result is simply a loss of sealant to the gap between tyre and tube.

So the question I asked myself was: why not glue the tube to the inside of the tyre and then add some sealant? This would make the tube an integral part of the tyre. A thorn stuck in the tyre would also



**RICHARD HALLETT**

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be stuck in the tube, while the sealant would be as effective as in a tubeless tyre since it could not escape into the tyre/tube space. Furthermore, a tyre plug would work as intended, since it would plug both tyre and tube simultaneously.

Once home I put the idea into practice. My first efforts resulted in the tube sticking to the tyre unevenly, distorting the tyre on inflation. But after several attempts I found a process that works well and which is described below.

The results, trialled in several pairs of tyres over more than 1,000 miles in rubbish conditions, have exceeded expectations. An offending thorn could not be prised from one tyre, which has lost no pressure in four weeks. There's no discernible loss of performance or ride quality compared to the same tyre and tube run conventionally. And, since the tube shrinks back into the tyre when deflated, a faux tubeless tyre can be removed easily from the rim – without sealant loss, of course.

## WHY BOTHER?

Why go to such lengths when a tubeless system proper does the job without the bother?

### • Wider tyre and rim availability

Faux tubeless can be used with any tyre and rim combo. I was riding tubed because the tyre concerned – the excellent Grand Bois Hetre – is not available tubeless. When you ride with tubes you also don't need to worry about the limited availability of tubeless-ready, rim brake-compatible 650B/27.5in rims; the same goes for 26in (559mm) tyres and rims and, to a lesser extent, 700C.

### • Less mess, uncertainty and difficulty

Tubeless tyres come with their own problems. Even a straightforward installation can result in spilled sealant, and removal or refitting means going through the whole process again. Once installed, a tubeless tyre may not stay up for as long as hoped – sealant slowly dries out, resulting in air leakage, while a softening tubeless tyre may lose enough air to completely deflate overnight. Most tubeless tyres are a very tight fit on the rim to provide an effective seal, which makes fitting and removal more difficult, and often demands a high-flow pump or gas canister to seat the tyre.

### • Convenience

Once 'made', a faux tubeless tyre can be put on a rim and inflated easily with a regular hand pump. It will retain air as well as a standard tubed tyre, and can be removed or swapped between wheels as often as required without mess or loss of sealant. There are other minor benefits: the system will hold a higher pressure than tubeless as the innertube helps lock the tyre bead to the rim hook; it won't burp air if it hits a bump; and only half the usual amount of sealant is needed because it doesn't