

Punctures

Punctures seem to be an unsolvable problem that blights so many of our riders, but there is something that can be done to ease the problem.

The following are the areas that can be looked at -

1. Puncture resistant tyres
2. Liquid filled inner tubes
3. Kevlar tapes
4. Tubeless tyres
5. Tyre tread
6. Tyre pressures
7. Tyre ageing

Puncture resistant tyres

Many manufacturers make these, usually a thick layer of rubber or kevlar under the tread and sometimes this may extend to the side walls of the tyre. You may wonder why most tyres are not made like this and the short answer is weight and grip performance. To people that race bikes (road and MTB) weight is more important than long term puncture resistance so the industry is set up to serve this purpose rather than people like us who ride for fun and want to ride free of punctures.

Schwalbe make the biggest range of puncture resistant tyres and come out well on the independent tests run mainly by the MTB magazines. The three mountain bike tyres that do well are Land Cruiser, Marathon Plus and Smart Sam Plus. Speaking to shop owners, the three Schwalbe tyres just mentioned are the ones they say are good and they also have low rolling resistance. Prices are:

Land Cruiser	£14.00
Smart Sam Plus	£22.00
Marathon Plus	£28.00

Continental and Specialised also make reasonable puncture resistant tyres. Look online for best prices.

Tyres are sold by diameter i.e. 26 inch, 29 inch followed by another figure i.e. 1.9, 2.0, 2.1 and so on, which is stamped on the tyre. The second figure denotes the tyre volume or fatness. The bigger the number the more grip you will have and more tyre is in contact with the ground but you will have more rolling resistance so you will work harder.

A good guide is to replace with a similar specification to the one you already have; the normal range for us would be 1.9 to 2.3 with anything in between.

Liquid filled inner tubes

There is no such thing as a puncture resistant inner tube but with a slime filled tube it will reseal the tube and mend the puncture. It does work and combined with puncture resistant tyres you have a very good chance of never getting a puncture.

You can buy tubes with the liquid already in (best) or buy the liquid and fill the tubes yourself. There is a heavy weight inner tube available but they do not stop punctures although

they do hold pressure much better. Some presta valves are not removable so these cannot be post filled, if you have these.

Kevlar tapes

These have a sticky backing and are placed on the inside of the tyre beneath the tread. At £10 per wheel they are not cheap but they do improve puncture resistance if you want to keep the tyres you already have.

Tubeless tyres

Tubeless bike tyres work like car tyres but with the addition of a liquid to seal any penetrations of the tyre. It is a very expensive way of solving the puncture problem. If you want to see a demo of this and also see how well the liquid seals go online to Stan's Tubeless Tyres and watch the video.

Tyre Tread

The deeper the tread and wider the spacing the more grip you will have, but the tyre resistance increases and you will work harder to move the bike. For the type of riding we do a tyre with the centre tread continuous or close together will give much less rolling resistance and improved speed, this also applies to hybrid tyres (700 wheels).

Tyre pressures

Stamped on all tyres is the maximum and minimum pressures for that tyre. If you ride with pressures at the lower end you will have more grip but more rolling resistance so you will work harder - you will also be at greater risk of punctures.

Most 26 inch MTB tyres go from 35psi to 65psi, and 29 inch from 25psi to 55psi. With the type of riding we do a good guide is a pressure midway between max and min as stated on the tyre.

Tyre Aging

Rubber compounds used in tyre manufacture will degrade over time so there is a finite life for any tyre. A lot will depend on tyre quality, use and exposure to sunlight, but even if you never use the tyre it will eventually perish.

If you look at the side walls it is possible to see small cracks which, over time, will increase in number and cause failure. If you pump the tyre to, say, $\frac{3}{4}$ of max pressure there should be no deformation (bulges) of the tyre in the side wall. It is hard to put a life on a tyre but 7 or 8 years could be a guide if the tread is still good. Renew every 5 years if you want good reliability.

I hope this helps.

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