Advice

CYCLOPEDIA

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A disc rotor can crack, overheat, and collapse when it wears too thin

Q&A

Technical

Disintegrating disc

Q This rear brake disc disintegrated whilst cycling! I was lucky: the 10 second warning I got was just enough time to make a controlled stop. Do brake discs normally disintegrate in this way? A locked rear wheel is very dangerous.
John Duncum

A It is unusual, to say the least, for a cycle disc brake rotor to fail in this manner if subject to routine inspection. Without checking the disc first-hand, it is impossible to say for sure why it happened, but the picture suggests that the brake pad tracks – the section of disc on which the pads press during braking – are well worn due to the inevitable abrasion, perhaps to below the minimum permissible disc thickness.

This is marked on the disc and is typically around 1.5mm. Once the pad track wears to this at its thinnest point, the disc must be replaced. Failure to do so leaves the disc prone to cracking and/or rapid overheating and, ultimately, to physical deformation once the stainless steel material becomes too thin to support the forces imposed by braking, at which point it may catch on the calliper or pads with results much as shown.
Richard Hallett

Coronavirus
For up-to-date cyclists' advice regarding Covid-19, visit: **cyclinguk.org/coronavirus**

Your Experts

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Health

Hamstring pain

Q I've noticed that, when pushing reasonably hard on my road bike, my right hamstring feels tight and uncomfortable. It's like cramp. Sometimes after the ride, I do cramp up. Am I just pushing beyond my body's ability (it doesn't feel like it), or is there something I can do to stop this happening?
Peter F, via the Cycling UK forum

A Your hamstrings are crucial as part of the leg muscle group that provides the power turning the bike pedals. The top of the muscle is in your buttock and is important in pushing the pedal down. The lower end, behind the knee, helps the upstroke. Your position on the bike will predispose the top end to get loose while the lower end gets tight and contracted.

Cramp may be due to a tight muscle or a lack of adequate hydration. If you have been training hard and pushed your limits, the muscle damage will be painful before you get the subsequent gains and increased power. You may just need to rest up a little.

You say you don't think you have overdone it, so perhaps you need some good stretches or massage to break down any scarring in the muscle fibres. There is lots of useful information online or you could consult a sports physiotherapist. A regular stretching routine before and after cycling might sort out the problem.
Dr Kate Hattersley

Cramp can be caused by lack of hydration or by exercising beyond your normal levels

Left: Alamy

Panaracer's Gravelking Slick TLC is available in 27.5×1.5 (38-584) as well as 27.5×1.9

Technical

Tyres conundrum

Q I bought a Cannondale Slate, which came with 42mm Cannondale tyres. They punctured on the first ride and regularly thereafter, so I replaced them with WTB Horizon 47mm tyres that proved very robust but slow uphill. I wish to replace these with 35mm tyres but find it difficult to understand tyre manufacturers' codes, i.e. which are tubeless.
Michael Weaver

A The first point to make is that the increase in tyre size goes some way to explaining the loss of climbing performance with the new tyres. It's a difference of some 160g per tyre, for example, between the two comparable versions of Panaracer's Gravel King TLC. Secondly, tubeless 650×35B tyres are hard, if not impossible, to find; a good starting point would be a slightly wider 650×38B model (27.5×1.5in) such as Panaracer's Gravelking Slick TLC (pictured above).

As so often in the cycling industry, there's no real consensus on nomenclature, with various designations used to indicate that a tyre can be used without an innertube on a tubeless-type rim. Usually printed as part of the tyre's label on its sidewall, these include TLC (TubeLessCompatible), TLR (TubeLessReady), TC and TL. If in doubt, check the manufacturer's website. Schwalbe's G-One Allround *(schwalbe.com/en/tour-reader/schwalbe-g-one-allround)* is shown in a wide range of sizes, some of which are listed as TLE (TubeLessEasy).
Richard Hallett

Technical

Pressure point

Q My new road bike tyres have, the sidewalls say, a max weight of 70kg. I've seen weight limits on wheels but not tyres. At 86kg, I'm unlikely to get within the limit. Should I worry?
Jon Asbridge

A While motor vehicle tyres are marked with legally-enforceable maximum weight and speed limits, as excessive weight and speed may lead to overheating and catastrophic tyre failure, cycle tyres are generally marked with an advisory maximum inflation pressure. If exceeded, this may lead to the tyre's bead blowing off the rim.

Rider and cycle weight is shared between the tyres, around 35% on the front, 65% the rear. A 108kg rider plus cycle would be close to a 70kg limit for a rear tyre, and would need it inflated to 130psi to provide the same contact patch as a 75kg rider on a 90psi rear tyre. So the weight limit here offers guidance similar to a maximum inflation pressure.
Richard Hallett

Inflation pressure is simpler. To work out tyre weight loads, assume 35% on the front, 65% on the rear

Legal

Who has priority?

Q We have a network of cycle tracks locally, many of which cross T-junctions at side roads that lead onto the main road. There are no markings or signs to indicate who has right of way at such junctions. Is it a case of first come, first served? And if it led to an accident, who would likely be adjudged to be in the wrong?
Norman Crossley

A When crossing a road along a designated cycle route, there is an argument to be had that it should be 'first come, first served'. The Highway Code says little on this matter. Rule 170 requires that motorists watch out for pedestrians crossing a road into which they are turning. If a pedestrian has started to cross, they have priority and motorists are to give way. This protection extends to cyclists, as they are also vulnerable road users.

In the absence of clear guidance, we then turn to case law and the use of good judgement. When a motorist is proceeding towards an unregulated cyclist crossing (no lights or crossing sign), the motorist holds right of way and cyclists must wait until the road is sufficiently clear to cross safely. When waiting to cross, you must ensure your own safety. The case of Lee v Williams [2001] found a cyclist 40% liable because he was waiting to cross at a junction, astride his bike on the pavement, with his wheel overhanging the road (which is what the defendant collided with, throwing the claimant from his bike). However, once a cyclist is crossing, they then hold right of way.

When attempting to determine liability, it is seldom cut and dried. If you were in the middle of the road when it had been safe to cross, on a bright and sunny day, and a driver came speeding around the corner, failed to brake and collided with you, the majority of blame would rest with the motorist. However, cases are rarely so clear cut. If you are involved in a road traffic accident, contact a trusted solicitor to help guide you through the legal issues.
Richard Gaffney

The give way markings indicate that the cyclists have right of way over side-road traffic

Left: Robby Spanring, **Centre:** Alamy

Get in touch

EMAIL your technical, health, or legal questions to *cycle@jamespembrokemedia.co.uk* or write to Cyclopedia, Cycle, PO Box 313, Scarborough, YO12 6WZ. We regret that Cycle magazine cannot answer unpublished queries. But don't forget that Cycling UK operates a free-to-members advice line for personal injury claims, **TEL:** *0844 736 8452*.