Q&A

Cycling answers

Your technical, legal and health questions answered by CTC's experts

THE EXPERTS

CHRIS JUDEN
CTC Technical Officer and qualified engineer

PAUL KITSON
Partner at CTC's solicitors, Russell, Jones & Walker

DR MATT BROOKS
Cycling GP

MAINTENANCE

WOT NO CHAIN TOOL?

Q I'm preparing for a bit of lightweight touring, so the Travelling Light article was well timed, but I was puzzled by your suggestion to omit a chain tool in favour of Sram Powerlinks. Surely I'd still need the chain tool?

Clive Andrews, Brighton

A Chains break by one end of one outer link plate losing grip on one end of a rivet. Often the adjacent plate snaps under the bending load, or the rivet tears out of it. To entirely dispose of the failed link all you have to do is tear one of its outer plates off the end of the intact rivet. When I wrote that I reckoned it shouldn't be too difficult to dispose of a broken outer link (it's invariably an outer link that breaks, due to losing grip on one end of a rivet) using pliers and screwdrivers to lever and prise the fractured plate off the end of the remaining rivet etc. But to be honest: every time I've been on a ride where a chain has broken, somebody has had a chain tool.

There was one time, years ago, before Powerlinks existed even, when I watched someone mend a chain using a nail, a brick and the corner of a dumped refrigerator. But refrigerators get recycled nowadays, so here's a photo of me amputating an outer link using 4in mini-Vise-Grip pliers.

I have to admit that ordinary pliers weren't up to the job. They slip, and I found it was important to clamp hard onto the plate, as close to the rivet as possible and shift the grip in closer as the plate bends – or else the plate just snaps across its waist. But this is the second link I successfully disposed of with the Vise-Grips, in 8-speed and 9-speed chain (notoriously fragile 10-speed should be even easier).

So instead of a chain tool you'll have to buy and carry a mini Vise-Grip, but this tool mends a whole lot more things than chain. In fact, this has inspired me to give it a review – see page 65.

Chris Juden

COMPONENTS

CHAINRING GUARDS

Q In the recent review of the XT chainset you said you removed the plastic chainring guard 'because others in this country think they look naff'. Do you think they look naff? Do you care?

I once impaled my right calf on a chainring and I am convinced the plastic rings are a safety feature. However, I have been unable to buy replacements.

Chris Burrows, Colwall, W Mids

A The missing part of that quote 'not because I have any prejudice against guards' explains that I don't think they look naff. As for whether I care: yes, I do. It's the reason I mentioned this at all: to administer a mild rebuke against those who, by their aesthetic aversions, deny their customers the protection you sensibly seek.

A bit of history. There wasn't any problem when most bikes had a single chainwheel. Then if your foot slipped off the pedal all you got was a bruised and oily leg. In those days only racers and tourists had multiple chainrings and they nearly all used toeclips, which stopped a foot slipping forwards in the first place. Then along came the mountain bike and a whole rash of accidents like yours, with chainrings slicing calf muscles even down to the bone. The danger was promptly addressed by mandating guards on all new sales of multiple chainring bikes without foot retention devices. Since then clipless pedals have become more popular than toeclips ever were and allowed the sporty types (who dominate bike-related trade and internet) to deny the need for chainring guards. I naturally equipped this chainset with SPDs, so I wasn't too worried on my own account, but I agree with you all the way. There's still a lot of people on plain pedals and they deserve this protection (plus those using multi-

"There wasn't any problem when most bikes had a single chainwheel. If your foot slipped, you only got a bruised and oily leg"

release cleats, in case they pull up too hard).

Chainring guards should at least be available separately and are listed on the importer's website – but without enough clues to be sure of which to order.

And at 99p, I guess it's not worth the dealer finding out…

Chris Juden

■ HEALTH

SLIPPED DISC

Q About 18 months ago I suffered a slipped disc in my lower back. A recent MRI scan showed that the herniated nucleus pulposus material had gone but that the material remaining between the vertebrae was thinner than the other discs. I am 46.

For the past year I have been riding my 10-mile each way commute on a full suspension mountain bike with fat tyres and a very short and high stem. I would like to go back to riding hard tail bikes but am concerned about the effect that the constant jarring would have on the remaining disc material and its ability to absorb shock. Do you have any advice?

Stephen Brownlow, by email

A Discs of rubber-like material between vertebrae cushion the spine and allow it to bend. A slipped (prolapsed) disc occurs when the softer nucleus pulposus in the middle bulges out (herniates) through a weakness in the tougher outer part. It may press on nearby structures, such as a nerve coming from the spinal cord, causing back pain or nerve root pain such as 'sciatica'.

Most prolapsed discs occur in the lower (lumbar) part of the spine and, in many cases, the symptoms improve over several weeks with the prolapsed portion of the disc tending to regress over time.

Whilst cycling is not a good idea immediately after a back injury such as a slipped disc, many people find that it can actually help long-term rehabilitation. As each case is different, it is always a good idea to seek specific medical advice to suit your own particular condition.

Cycling generally transmits fewer high-impact forces to the spine than activities such as running. An upright riding position with the back in its straighter 'neutral' position is likely to be preferable. Try a lower seat position and raised handlebar stem to achieve this. It is easier to adopt this riding position on some bikes than others, with the 'sit up and beg' being a good example. Consider also using a sprung saddle or suspension seat post and try to use lower gears.

If you're going to do any significant amount of riding on bumpy surfaces then full suspension would seem sensible to reduce the forces travelling up through the seat post to your spine, though a hardtail should be fine on smoother surfaces. You may need to experiment to see what works best for you. If you experience further problems, including back or leg

A high rise stem can help if you're suffering from lower back problems

■ PUNCTURES

CHALK OR TALC?

Q For 50 years I've been using this satisfactorily after mending punctures. Many present day puncture outfits, however, do not include the traditional lump of French chalk; or if they do, it's so small there's only enough for one or two dustings. So: do you know of any alternative dusting media? What about ordinary bathroom talc?

Mr D Drinkwater, Radcliffe, Notts

A Ordinary bathroom talc is fine for dusting inner tubes. In fact, any fine dust will do. I can say this for sure, since the last time I used the French chalk in a puncture kit was probably about 30 years ago.

My usual practice, out on the road, is to dip a finger in the dirt at the edge of that road and rub it over the sticky bit of tube. I have done this in enough different places to believe that I must thus have subjected my inner tubes not only to chalk (mostly good old English rather than French) but also a representative cross section of the entire geological series! None of the sampled dusts and grits have apparently caused my tubes any harm. No matter how sharp, the particles are always too small to do any damage.

And when at home, fitting tyres in the garage/bikeshed, I use ordinary bathroom talc.

Chris Juden

Q&A

pain, I would advise you to consult your GP.

Dr Matt Brooks

■ TOURING

TRAVELLING HEAVY

What weight can safely be supported by a touring bicycle? I know there are lots of factors but would like to know the maximum weight:
1. To be attached to the rear carrier, in panniers as well as a simple bag.
2. The amount expected to be supported by front forks with small panniers as well as a bar bag.

Steve Carpenter, Jersey

I think this is the wrong question (see Travelling Light, last issue), and it's right that many factors have to be considered – too many for any simple answer, even in the broadest of terms. Refer to the owner's manual that came with the bike. With a racing bike it may stipulate no luggage at all. With a tourer it may say something, but often the manual is silent on this matter.

I should think about the heaviest person who might ride this bike. Compare your weight and halve the difference, since luggage is dead weight and has less springiness than the human body, so it produces greater impact forces when you ride over a bump – which is what does the damage.

I represented the UK on the committee that wrote the international safety standard for luggage carriers. (Don't laugh. We had to do that because child seats are often attached to carriers.) We divided carriers into load classes: 10kg, 18kg and 25kg, the last two to correspond with the two common sizes of child seat. And besides, we reckoned that 25kg was the most that should be carried on the rear of a general-purpose bicycle.

However, we recognised that a special-purpose bicycle might be designed to carry more and accordingly added a 'special' load class, where all the tests are scaled up in proportion to whatever load the manufacturer claims.

In compliance with this standard, better quality luggage carriers are always marked with their capacity in kg, typically 25kg, but you'll see some much higher figures. But for good handling and durability on rough roads I'd aim to carry not more than half of that maximum rating. I don't think I ever have carried more than 20kg in back and that felt extremely heavy to me!

In front we set a limit of 18kg in the case of low-load carriers and 10kg for those with an above-wheel platform, having determined that exceeding those limits interfered excessively with steering control and forward stability.

Handlebar bags are outwith the scope of that standard, but I wouldn't carry more than 5kg there.

Chris Juden

"Better quality luggage carriers are always marked with their capacity in kilograms, typically 25kg for rear ones"

OVER TO YOU

SHORTENING SRAM I-9 CABLE

Further to your review of Sram's 9-speed hub and comment that the cable is 'factory sealed': it isn't. The cable is quite easy to dismantle using a small allen key to release a grub screw anchoring the inner cable to the twist-grip control. So there are no problems shortening the cable and passing it through guides.

John Fawcett, Forfar, Angus

COLD SETTING WORKS!

Thank you for introducing me to Sheldon Brown's frame bending website. Because of this help and encouragement I have been able to convert my much loved 1980s 531 Raleigh Clubman from a 27-inch 6-speed bike to 700C 8-speed, which will see this bike forward for many years ahead.

The cold setting took most of an afternoon. I found it very difficult to make small changes of 1mm or less. For example during one attempt I put in the lumber, leant on it and made no measurable difference.

I repeated this two more times with slightly more pressure but again making no measurable difference, until the fourth attempt when the stays moved a whopping 4mm. After numerous attempts I had to conclude with my rear stays 1mm out of true, but my bike runs well enough and I can now fit any variety of 700C touring tyres. In gratitude, I enclose a cheque for £20 for the Cyclists' Defence Fund.

Brian Haines, London

Thanks, Brian. Glad to help. Don't worry about the odd mm or two, that's well within the usual tolerance for tracking of bicycles. Anyone else who wishes to do this should see **www.sheldonbrown.com/frame-spacing.html**.

Chris Juden

CONTACTING THE EXPERTS

Each issue, Cycling Answers addresses a selection of questions that we receive. We regret that Cycle magazine cannot answer all unpublished queries. Please note, however, that general and technical enquiries can also be made via the CTC Information Office, tel: 0844 736 8450, cycling@ctc.org.uk. And don't forget that CTC operates a free-to-members advice line for personal injury claims, tel: 0844 736 8452.

Enquiries for possible publication should be sent to the Editor (see p80). Technical enquiries will get there quicker if they go direct to Technical Officer Chris Juden (same address as the Information Office).