

# Q & A

Your technical, legal, health and policy questions answered. **This issue:** 650B wheels, relieving a rash, friction shifting, leaves on the cycle path, and more



**TECHNICAL**

## 650B CONVERSION

**Q** I'm considering fitting 650B wheels to my disc-brake equipped Planet X Kaffenback, as its 41cm chainstays mean that there isn't room to fit a mudguard over anything other than a very narrow 700C tyre. All the 650B rims and tyres I have seen seem to be more suitable for trekking or mountain bikes. Are there 650B rims and tyres more appropriate to a road bike, accommodating tyres up to 32mm and withstanding 100psi?

**MICHAEL SHERMAN**

**A** Most (perhaps all) off-the-peg 650B wheelsets currently available in the UK are made for 27.5 mountain bikes. Rim widths vary, but that on Mavic's XM 419 Disc has an internal width of 19mm, which is about the same as a regular 650B road rim. Fitted with a 650x32B tyre such as the Grand Bois Cypres, it should fit the frame in question with clearance to spare.

This would lower the bottom bracket by 10-20 mm depending on the original 700C tyre size, which may cause problems with pedal-to-ground clearance. A better solution would surely be to find the widest 700C tyres that would fit the frameset and forget about trying to shoehorn the mudguard into the same space. Trim the mudguard so it ends just above the chainstays, perhaps leaving a central strip for attachment to the bridge.

Be careful not to over-inflate tyres wider than the familiar 700x23 or 25C. 100psi is too much for a 32mm tyre, whether 650B or 700C. Not only is it too hard for optimal performance (see the tyres article on page

48), there's an elevated risk of tyre blow-off. The stress in the walls of a pressurised tube at a given pressure is proportional to its diameter, so the 'bursting' load on the sidewalls and bead of a 32mm tyre inflated to 100psi is equivalent to a 23mm tyre at 140psi. For a 32mm tyre, around 75psi works well.

**RICHARD HALLETT**

**TECHNICAL**

## FIVE-SPEED TURBO TRAINING

**Q** Can a five-speed hub be mounted in a turbo trainer? The attachment of the gear cable on this bike enters the hub parallel to the chainstay, not axially as in some three-speeds.

Also, I want to repaint the frame of my Nigel Dean as some rust is now appearing after 30 years. Do you know of an affordable way of copying the Nigel Dean decals?

**TIM WATERFIELD**

**A** In answer to the first question: in principle, yes. You do not state the make of the five-speed hub but from the

## MEET THE EXPERTS



**RICHARD HALLETT**  
Cycle's Technical Editor



**DR MATT BROOKS**  
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description all you will need are nuts that fit the jaws of the turbo trainer. They need some sort of cylindrical face shaped similarly to the head and nut of the quick-release skewer supplied with the trainer. If those that come with the hub won't fit, try Tacx Axle Nuts (pictured). They are made with a choice of 10mm or 3/8in thread.

There are several useful sources of old or replica decals, including H Lloyd Cycles of Penrith ([hlloydcycles.com](http://hlloydcycles.com)), who can supply decals for Reynolds tube sets.





● Intertrigo is a rash that typically affects the armpits and groin. Keeping affected areas clean and dry will help

Search for 'Nigel Dean Classic decals' online and you will find a seller in France offering them on eBay for around £20.

**RICHARD HALLETT**

### HEALTH RASH DECISION

**Q** I am a 56-year-old touring cyclist. Although I weigh 17 stone and have type 2 diabetes, I was cycling 40 miles each weekend. I have stopped riding due to worsening intertrigo. It was diagnosed years ago by a skin consultant who prescribed Timodine cream. My current GP has stopped prescribing this. Apparently, the long-term use of steroids damages the skin. I wasn't aware and have been applying Timodine liberally for years, as it is the only substance that relieves intertrigo. My GP said he will only prescribe it if I sign a form stating that I accept its risks. Is there anything else I can do? I am waiting for an appointment to see a skin consultant.

**JOHN OSBORNE**

**A** Intertrigo is a rash that affects skin folds, such as the groin and armpits, and is caused by a combination of friction, heat and moisture. It can affect anybody but is more common in people who are overweight, those with diabetes, and those who have a tendency to sweat more. The rash is usually inflamed and often involves a fungal or bacterial skin infection. If it is recurrent or not responding to initial treatment, a doctor may take a swab or skin scraping to identify any infection.

Treatment usually involves an antifungal and/or antibiotic (either as cream or tablet), and a mild steroid cream for relieving the inflammation and itching. Timodine is one of several combination creams commonly used for short periods to treat intertrigo. Timodine contains a mild steroid (0.5% hydrocortisone), antifungal, antiseptic and barrier component. Intermittent use of mild steroid creams is usually safe if applied thinly for short periods (a week is often enough for less severe cases), although prolonged use

and more potent steroid creams are best avoided due to the risk of them causing skin thinning and ulceration.

The likelihood of further episodes may be reduced by addressing any underlying cause or risk factors. So, in your case, losing weight as you are trying to do is a good idea. Good control of your diabetes should also help. Try to keep affected areas clean and dry; if necessary, you could use standard talcum powder. Cycle clothing that takes the moisture away from your body, followed by a shower after a ride, should go some way to helping.

**DR MATT BROOKS**

### TECHNICAL WEAR'S THE PROBLEM?

**Q** A new cassette and chain were fitted to my bike recently. After less than 300 miles, the 11-tooth sprocket is skipping, particularly under heavy load. My local shop said that it is worn and that I need another new cassette. I expected to get a lot more wear than that! They said that I should spin more in a lower gear but I want to use the highest gears. They have agreed to replace it free of charge, but is such early replacement reasonable?

**DAVE REID**

**A** Er, no. The top gear on your bike should be able to take 'heavy load' without complaint. Top road sprinters such as Mark Cavendish use their highest gears, apply a very heavy load to the transmission, and would not be best pleased to find it skipping midway through the final gallop. Furthermore, the smallest sprocket generally gets little use and should wear slowly. Finally, it is unlikely you have worn out a chain in 300 miles. The most likely culprit for the symptoms you describe is poor rear derailleur adjustment. Look at the outside throw screw first – it's typically marked with an H.

**RICHARD HALLETT**

### TECHNICAL FRICTION SHIFTING

**Q** After the failure of a hub gear on a tour left me stranded, I've decided to go back to derailleurs. I want to keep things simple so I'd like friction shifters. But I have no idea what derailleurs, chain and shifters I need to work together. I have a 68mm BB shell and 135mm spacing at the rear dropouts. I'd like the gearing range to be roughly the same as a Rohloff Speedhub (which isn't what failed).

**ROGER DAVIES**

**A** If you use friction shifters, you can mix and match components



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without having to worry about indexing compatibility. If your bike has a drop handlebar, bar-end shifters are a convenient solution. The front shift lever is always friction operated, while the rear can generally be switched between indexed and friction options.

If your bike has a flat handlebar, friction thumbshifters are available. These are effectively bar-end shifters reconfigured to fit on top of the handlebar instead. For example, Dia-Compe's non-indexed power ratchet shifters are available as bar-ends or thumbshifters (or even as down tube levers). Shimano and Microshift also make bar-end levers that can be found as thumbshifters. While bar-end shifters can be ordered from most bike shops, you may need to use a retailer that specialises in touring cycling (e.g. [sjscycles.co.uk](http://sjscycles.co.uk)) to obtain friction thumbshifters.

One possible limitation is the amount of cable the rear shift lever will pull, which may not be enough to get the rear mech to travel across the entire range of rear sprockets. Check the lever's compatibility when buying.

The rear mech must have enough capacity, or 'wrap', to keep the chain tensioned on all usable chainring and sprocket combinations. Add the difference between largest and smallest rear sprockets to that between largest and smallest chain rings, so 50-34 chain rings with an 11-32 cassette requires a rear mech capacity of 37T. The front mech must be suitable for a double or triple chainset depending on your choice.



A Rohloff Speedhub has an impressive 526% range; that is, top gear is 5.26 times as large as bottom gear. A comparable or even larger range is achievable if you combine a wide-ratio cassette (e.g. 11-34) with either an MTB trekking chainset (e.g. 48-36-26) or an 'Alpine double' (e.g. 42-24). As ever with touring, the key is having a low enough bottom gear.

I'd suggest a Shimano mountain bike rear hub to fit the 135mm rear dropout spacing, a 9-speed mountain bike cassette with 34T largest sprocket, matching chain, a Shimano 9-speed mountain bike rear mech, and either bar-end shifters or friction thumbshifters, as appropriate. Your choice of chainset and front derailleurs will depend on just how low a gear you want. A road triple (e.g. 50-39-30) requires a road derailleurs (such as a Shimano Sora triple); a 42-32-22 mountain bike triple requires a suitable mountain bike front derailleurs (such as a Shimano Alivio triple); and a 48-38-26 mountain bike trekking triple will work with either.

**RICHARD HALLETT**

### LEGAL SLIPPERY CYCLE PATH

**Q** I'm a member of CTC and came off my bike while commuting to work. The bike slipped on moss-covered paving on a bike path as I moved aside for a jogger. I broke my left hip and did £400 worth of damage to the bike. Can I claim against the council? **NAME AND ADDRESS SUPPLIED**

**A** The statutory duty of a highway authority to maintain a highway (which includes cycle paths and pavements) under section 41 of the Highways Act 1980 is restricted to the 'fabric' of the highway. This was made clear by the House of Lords in 2000 in the case of *Goodes v East Sussex County Council*.

Mr Goodes was driving his car on the A267 near Mayfield in Sussex when, as he moved out to overtake on a straight stretch of road, he skidded on a patch of black ice. He lost control and crashed, sustaining serious injuries. It was not alleged that there was anything wrong with the road surface but it was argued that the Council was in breach of its statutory duty under Section 41 to 'maintain the highway'. The Council denied that it had a statutory duty to keep the roads free of ice but said it did make considerable efforts to do so.

It was argued on behalf of Mr Goodes

● You don't have a claim if you fall off due to leaves or moss



Photo: © Simon Hadley / Alamy Stock Photo

that maintenance was a wider concept than merely repairing the fabric of the highway and was capable as a matter of ordinary language of including salting and gritting. Lord Hoffman disagreed. He held that the duty to maintain was to the fabric of the highway and that this duty did not extend to the removal of snow or ice. If this duty were to be extended, it should be extended by Parliament. This then led to an amendment to section 41 in October 2003: '...a highway authority is under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.'

Note that the amendment only related to snow and ice.

The *Goodes* case was considered more recently by the Court of Appeal in *Valentine v (1) Transport for London (2) Hounslow LBC*. The Court of Appeal, applying *Goodes*, decided a highway authority was not obliged to remove loose surface debris (but a local authority might be). The highway authority's failure to remove material such as loose grit was not a breach of its statutory duty under section 41 of the Highways Act 1980.

The duty to maintain the 'fabric of the highway' is only to maintain the actual tarmac or paving blocks that make it up, not anything that has accumulated or grown on top of it. So a highway authority cannot be held to be in breach of its statutory duty under section 41 for failing to clear paths of moss or leaves.

**PAUL KITSON**

**Contact the experts** Email your technical, health, legal or policy questions to [editor@cyclenguk.org](mailto:editor@cyclenguk.org) or write to **Cycle Q&A, 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**.