

# Cycling answers

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

## THE EXPERTS



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## TECHNICAL 10-SPEED WITH A 9-SPEED MECH

In the last issue of *Cycle* I explained how Shimano's new 'Dyna-Sys' 10-speed mountain bike mechs won't work with road shifters. That's a surprise for those of us who have always reduced the bottom gears of road bikes by fitting the corresponding MTB cassette and rear mech. It worked fine with 7-, 8- and 9-speed, but Dyna-Sys puts an end to that, just as it's needed more than ever. For sales of road bikes are booming, especially to mamils (middle-aged men in Lycra!), many of whom really need a lower bottom gear.

All but the cheapest road bikes are 10-speed, with so-called compact doubles increasingly replacing triples even though they don't provide such a low gear (apart from Sram Apex). And whereas it may be possible further to reduce the gearing of a triple by swapping its 30T inner for as little as 24T, the 'compact' double's 34T is as small as those cranks will accept. How to gear down 10-speed is a very common question. Here's the answer.

Thanks to Sram, there are plenty of mountain-sized 10-speed cassettes that take the same chain as road stuff. And although Shimano claim their similar Dyna-Sys cassettes won't work with any other 10-speed chain, apparently they will.

**Q:** What about the rear mech?  
**A:** Simply use a 9-speed mountain mech. The ratio between cable pull and shift is the same as all Shimano's road mechs, including 10-speed, and a high quality model should be precise enough even though it's 'only' 9-speed. The cage may be fractionally wide for the 10-speed chain, so the shifting might not be quite as prompt, but several people who've tried this say they can't tell the difference.

I tried it by fitting a Sram PG1050 12-36T cassette and Shimano XT-Shadow mech, so as to get a 25in bottom gear out of a 50/34T chainset. This mixture of components was shifted perfectly by Shimano 105 dual control (STI) levers and tested hard by my daughter at Easter in the Peak District, on rides that involved much use of low gears and frequent shifting under pressure. It worked fine, better than some of our

companions' bikes – of which, the less said the better!

Fortunately this audax bike's chainstays were short enough (420mm) to wrap 50×36 with the meagre 112 links you get in a KMC X10 chain. Many bikes are longer, for which you'll need the 120 link version of Sram's PC1071 chain. Not that you should ever use big-and-big, but you must be able to engage that combination without breakages.

*Chris Juden*

## TECHNICAL 'KNEELING' CARRIERS SUIT CARBON

What's the current wisdom on mounting a bike with carbon forks on a carrier in which the fork clamps? My carrier sits inside the car, but most will be roof mounted. I've always thought that it was a pretty secure way to carry a bike, but a friend today suggested that the car motion (sideways?) might damage the fork.

*Mick Simmons, Reading*



Right: www.thule.com

The current wisdom is that the 'kneeling' type of carrier, where the front wheel is removed and the bike held upright by clamping its forks, is the best way to carry a lightweight bike, which will generally have a carbon fork. That's because thin-walled frame tubes (especially carbon frames), whilst very strong lengthways, are not designed to withstand crushing forces and may be damaged by the

■ LEGAL  
**TWO-BY-TWO**

**Q** I wonder if you could advise on the legality of cyclists riding two, three or four abreast on public roads?

*Jon Jewitt, Glasgow*

**A** Highway Code rule 66 says: 'You should... never ride more than two abreast, and ride in single file on narrow or busy roads and when riding round bends.' This is advice from the Highway Code and not a reiteration of the Road Traffic Act 1988. Such advice doesn't carry the force of law, but can be used in cases against you if you're in breach of it.

So I would advise against riding *more* than two abreast. On busy roads I would advise against riding even two abreast. Under Section 29 of the Road Traffic Act 1988, 'If a person rides a cycle on a road without due care and attention, or without reasonable consideration for other persons using the road, he is guilty of an offence.'

This legislation was used in a much publicised

case against Daniel Cadden. He was stopped by the police when he was accused of holding up traffic by not cycling along the cycle path that ran alongside the other side of the road. With CTC support, Daniel had this decision overturned at a re-trial. But the case does illustrate the potential for the police/CPS to prosecute cyclists should they hold up traffic through what they deem 'inconsiderate cycling'.

There is a greater likelihood of cyclists being prosecuted for an offence under Section 29 of the Act if they cycle two or three abreast on a very busy road.

*Paul Kitson*



down-tube clamps of other styles of bike carrier.

Forks, on the other hand, are designed to withstand huge forces applied to their ends. Driving your car around a sharp corner with bike in-situ will impose some sideways bending stress, but far less than when a sprinter stands on the pedals and rocks a bike from side to side.

*Chris Juden*

■ TECHNICAL & MEDICAL  
**STEP-THROUGH FRAMES**

**Q** I am 68 years old and a regular cyclist, as is my wife. We cycle every week, up to 80 miles, and are training for a trip of several weeks touring in the Loire Valley. As I have got older, I am having difficulty getting my right leg over the saddle. Before long I will end up falling over and injuring myself. Have you any advice about, for example, exercises I can do to stretch my leg? I anticipate eventually having to change my touring bike for a 'ladies' bike so I can step through instead of throwing my leg over the saddle. I do not want to do this unless absolutely necessary. Can you help?

*Kenneth Rhodes*

**A** Some simple hip stretches may help. However, it's difficult for me to advise you on a specific exercise regime as this will depend on many personal factors. Exercises are available online (type 'hip flexibility exercises cyclists' or similar into Google). If there is significant pain, or the restriction in mobility is more severe, then it would be sensible to see your doctor or a physio to assess the problem – osteoarthritis is a common cause. You probably already do this (in which case it will seem obvious), but a simpler way to lower the height of the bike for mounting is to lean the saddle towards you before swinging your leg over. Nevertheless, you may ultimately find it easier to switch to a different design of bike.

Bicycles with a step-through frame were known as 'women's' because of their advantage to cyclists wearing skirts or dresses. In a mixte frame, the top tube of a diamond frame is halfway lowered (and is usually but not necessarily substituted by a pair of lateral stays, with or without additional stays to the rear ends). This design also provides a lower step-over height. Again, these are usually sold as

Riding two abreast is legal and endorsed by the Highway Code

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women's but there's no reason why men shouldn't ride them – and some do.

Even though mobility restrictions affect both sexes, there is certainly a limited range of bikes for men that have a step-through frame. There are some small-wheeled bicycles – 'demountables' such as the Moulton, and folders such as the Dahon and Airnimal ranges – plus some utility bikes and electric bikes. There are also a few hybrid bikes with a step-through frame (e.g. Specialized Expedition Low Entry) that are not only aimed at women.

*Dr Matt Brooks*

**Q** We are seeking to purchase a step-through/ladies' frame, on which our local bike shop can build a lightweight touring bike for my wife. The expense of having a frame custom built would be too much for the cycling we do, so we're looking for a small, ready-made, step-through touring frame, preferably of steel, or failing that good aluminium.

*Peter Guy, Carnforth*

**A** It's also almost impossible to find a light enough, good enough ready-made ladies' bike in this country, which is no doubt your reason for getting one built from parts. But it's not absolutely impossible. The Cannondale Tesoro Light reviewed last year does also come in a 'mixte' frame version. And whilst that might not exactly meet your requirements (and still be quite hard to find in the shops), the retail prices of bicycle parts are so much higher than factory prices that it'll be cheaper to replace quite a bit of that ready-made bike than to build one entirely from parts. Plus that's probably the only way to buy a ladies' touring/trekking frame of

such quality in Britain.

Fortunately, there's a much bigger demand for practical bikes on the Continent, and several German mail-order firms will also ship to the UK. If you put 'trekking rahmen damen' into google.de you'll turn up several possibilities: nothing steel, but some light alloy. The Drössiger TR-Classic-Lady looks good and is available from several suppliers for €59. I also found a Kinesis Cross-STD-Damen, and that brand is sold in Britain. But only frames for some kind of racing can be seen at kinesisbikes.co.uk – and nothing step-through.

*Chris Juden*

## ■ TECHNICAL OBSOLETE ALREADY?

**Q** Do you know why it is not possible to buy handlebar Ahead stems to take 26.1mm diameter bars? I've tried Wiggle, Chain Reaction, SJS, Spa, Evans, Merlin... Should I buy 25.4mm and close my eyes when I tighten the bolts up? Why are both flat bars and drops now all 31.5mm diameter centres? Why are all matching stems and bars so expensive?

*Michael Griffiths, Maidstone*

**A** Unless you actually mean the old Cinelli diameter of 26.4mm (briefly adopted by a few other upmarket brands but so long gone that only quill stems were ever made in that size) the diameters in question are 26.0 (also known as 25.8) and 31.8mm.

Having wanted and easily bought a short 26.0mm stem last year, I didn't realise there was any problem, but you're right: to go by what's left in the shops, it looks like they're pulling the rug from under that size. Given that it was standard for new road bikes as little as one year ago, this seems premature. The



Modern bars and stems are mostly 31.8mm diameter at the stem clamp

easy (but ugly) workaround is to shim the handlebar, cost about £7.

Now that it's the standard, however, not all 31.8 bars and stems are silly prices.

*Chris Juden*

## ■ TECHNICAL OIL CAUSING PUNCTURES

**Q** I have a pair of handbuilt wheels on my new custom-built audax bike. Within two months an inner tube gave out with a hissssss while the bike was parked. The cause seems to be deterioration of the tube by oil that has leaked through the rim tape. Have you heard of anything like this before?

*David Friend*

**A** Yes, it's happened to me. I had a bike to test ride with a hub that leaked oil along the spokes. This found it's way into the rim and onto the innertube, which blistered and punctured like yours.

Rubber has a well-known tendency to absorb mineral oil, which makes it swell and also acts as a plasticiser, actually lubricating the slippage between adjacent rubber molecules. The affected area stretches more easily than surrounding rubber, which pulls upon the weak spot, stretching and thinning it until a hole is formed.

For the same reason, you must not get lubricants onto your tyres, or put mineral oil in a hydraulic system designed for dot-type fluid, or vice-versa – since each will damage the other's seals.

This problem can be solved by removing the rim tape and de-greasing it and the rim, but I reckon the wheel-builder owes you an inner tube or two!

*Chris Juden*

## CONTACTING THE EXPERTS

Send health and legal questions to the Editor (details on p80). We regret that Cycle magazine cannot answer unpublished health and legal queries. Technical and general enquiries, however, are a CTC membership service. Contact the CTC Information Office, tel: 0844 736 8450, [cycling@ctc.org.uk](mailto:cycling@ctc.org.uk) (general enquiries) or Chris Juden, [technical@ctc.org.uk](mailto:technical@ctc.org.uk) (technical enquiries). You can also write to: **CTC, Parklands, Railton Road, Guildford, GU2 9JX**. And don't forget that CTC operates a free-to-members advice line for personal injury claims, tel: 0844 736 8452.