

# CYCLOPEDIA

Questions answered, subjects explained – Cyclopedia is your bimonthly cycling reference guide

Police can issue a fixed-penalty notice to drivers doing 24mph or more in a 20mph zone



Left: Alamy

do so, given the cuts many have to make, is another matter.

In terms of the police enforcing 20mph zones, guidance was previously published by the Association of Chief Police Officers (ACPO, now the National Police Chiefs' Council) which summarised that in a 20mph zone if a driver is driving 10% plus 2mph over the limit (i.e. 24mph), then the police can issue a fixed-penalty notice. If the driver is going over 35mph, then they can be summoned to court. Bear in mind that these are guidelines only; an officer has the discretion to act outside of them.

**Richard Gaffney**

Q & A

## Legal

### 20's flaunted

**Q** I'm fortunate to live in and cycle commute through a London borough that has implemented a 20mph limit on almost all of its roads to protect pedestrians and cyclists. It turns out, unfortunately, that it has had little to no effect on driver behaviour, and the council tells me that there is nothing they can do about this. They say it's meant to be self-enforcing. Is there anything that can be done to oblige the local authority to enforce the limits they have set?

**Nick de Bunsen**

**A** A 20mph speed limit is only regarded as being 'self-enforcing' where it has 20mph signs coupled with traffic calming measures such as speed bumps, road narrowing, and an uneven road surface. The principle is that traffic calming measures slow vehicles down to speeds below the limit, so the zone becomes self-enforcing.

As to whether local authorities can be obliged to enforce 20mph zones, the generally held view is that only the police have the power to enforce the law. The campaign group '20's plenty for us' hold the view that local authorities, with the approval of their police force, can institute public prosecutions. However, whether authorities would

## Your Experts



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Continental's Top Contact II would be a better-rolling option

## Technical

### Better e-bike tyres

**Q** I find my Raleigh e-bike's ride very harsh and uncomfortable. I think the tyres are to blame. They are 42-622 CST Classic Zeppelin. Can you recommend some more comfortable tyres?

**M Starkey**

**A** The CST Classic Zeppelin weighs a quoted 800g in the size you have, which suggests that there is a lot of material in it, whether rubber, carcass fabric, or the anti-puncture belt shown in product literature. Such tyres often suffer from a harsh ride, which must be considered a trade-off against the likelihood of a flat. One exception is Continental's top-end Top Contact II, which is 100g lighter in 700x42 format. Made in Germany, and expensive at £55 per tyre, it rolls very well and is exceptionally durable and puncture resistant. It is also said to be suitable for e-bikes up to 50km/h, although there's no legal requirement for e-bike tyres.

**Richard Hallett**

## Cycling UK Forum

Need an answer to a question right now? Try our forum: [forum.cyclinguk.org](http://forum.cyclinguk.org)



Fit a washer or two if a bolt is slightly too long

## Technical

### Mech it work!

**Q** I have just fitted a new rear mech (Alivio, Shadow version) to my Genesis Tour de Fer. The bolt protrudes from the back of the hanger and fouls the chain when in the smallest sprocket. This is a bit annoying, although I don't use the smallest sprocket often so I have just decided to adjust the mech so I can't use it. What can I do to fix this?

**Hamish, via the forum**

**A** The bolt thread is 10x1mm, so you can fit a 10mm washer between the mech and hanger. This will move the mech outwards and reduce the amount of protrusion by the thickness of the washer. If necessary, you can use more than one washer. You might also decide to file off the end of the bolt to get it flush with the inside of the hanger. Note that you'll have to adjust the mech's throw screws and control cable to work with the mech's new spacing.

**Richard Hallett**

## Health

### Asthma advice

**Q** After being diagnosed with late-onset asthma, I had my first asthma exacerbation in March, ending up in intensive care on a ventilator. Prior to this I cycled 150 miles per week. I'd like to return to that. Any advice?

**Collin Glassford**

**A** Developing asthma in later life is surprisingly common: one in 12 adults are treated for it. The increased number of cases may be due to air pollution. Most people are able to control their symptoms with regular use of inhaled medicine (commonly called a preventer) and can use a quick-acting inhaler (called a reliever) if they get an attack.

It is recognised that cold air and exercise can be a trigger for symptoms of asthma, such as coughing, wheezing, a tight chest, and shortness of breath. Anxiety can also be a trigger. For most people exercise is a good idea but you might consider avoiding going out if the air is freezing, or very polluted, or the pollen count is very high. Wearing a scarf or Buff over your mouth might help warm the air before it hits your lungs.

As with all exercise, the only way to improve is to get out there. Always take a blue inhaler with you in case an attack develops while riding. If you are consistently getting a drop in peak flow the day after riding, it might be worth seeing your doctor to discuss increasing your preventative medication.

**Dr Kate Hattersley**



A spoke tension meter enables you to check for loose or over-tight spokes

## Technical

### Winding me up

**Q** On my audax bike, some of the rear wheel spokes (non-drive side) unwind. The wheel has 32 spokes, employing double-butted on the NDS and plain gauge on the drive side. The rims are Mavic Open Pros. The wheel has lots of tension; I added more and it pringled. Any suggestions? Loctite? fatboy, via the forum

**A** If you're heavier than about 90kg, you may find that your particular rim and spoke count combination lacking in radial rigidity. Spokes slacken because the rim is pushed inwards at the contact point with the ground as the wheel rolls. Hitting a bump pushes the rim inwards even more. As the rim deflects inwards, the spoke nearest the deflection point loses tension; this tension is what keeps the nipple pressed against the rim, generating friction. If the rim deflects enough to reduce spoke tension to nil, the nipple can then turn and will tend to loosen – with the result you describe.

Wheel-builders use various tricks to combat this, including some sort of threadlock such as Sapim Nipple Freeze. Alternatives include the time-honoured application of linseed oil. Excessive tension (greater than that for which the rim is designed) will tend to pull the nipple through the spoke hole or eyelet; a spoke tension meter is a useful way to avoid this.

**Richard Hallett**

## Get in touch

**EMAIL** your technical, health, or legal questions to [cycle@jamespembroke.com](mailto:cycle@jamespembroke.com) 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**.



Always take a blue inhaler with you on your rides if you suffer from asthma

Left: Alamy

# CYCLOPEDIA

# Knowhow



**DAN JOYCE**  
Cycle Editor

Making sense of commonly misunderstood cycling subjects

## Finance

### Can you explain the Cycle to Work scheme?

**I**t's a government initiative to encourage cycle commuting. Your employer buys you a bike (and/or equipment, but I'll just write 'bike' from now on), and you pay them back in monthly instalments deducted from your gross salary. This is called salary sacrifice. Because the bike's purchase price comes out of your gross earnings, it's exempt from income tax and national insurance. This is where the savings come from.

#### Am I eligible?

Your employer needs to sign up with a Cycle to Work provider such as Cyclescheme or Halfords, or else sort the logistics themselves.

You must earn more than the minimum wage because salary sacrifice deductions cannot reduce your take-home pay below the minimum wage. If you're self-employed, you can take part if you pay yourself through PAYE.

#### On the money

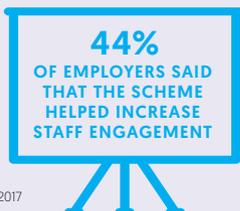
Here's an example of the savings on a bike with an RRP of £1,000

	Basic rate taxpayer	Higher rate taxpayer
12 monthly payments @	£56.67	£43.33
End of hire payment*	£70	£70
Total payment	£750	£650
Percentage saving	25%	35%
Amount saved	£250	£350

\* Assumes extended hire.



**ON AVERAGE, SCHEME USERS SAVE £64.70 A MONTH COMPARED TO OTHER MODES OF COMMUTING**



Source: Cycle to Work Alliance annual survey, July 2017



Cycle to Work enables employees to buy bikes and kit at a substantial discount

Left: Joolize Dymond

#### How you pay

Your employer reviews and (hopefully) approves your Cycle to Work application, then pays for the bike. You receive a voucher that you exchange for your bike in store or online.

For the next 12 months, a twelfth of the bike's purchase price is deducted from your gross salary. During this period, the bike belongs to your employer. You're 'hiring' it from them.

After a year you stop making payments. You then have a choice: return the bike to the Cycle to Work provider; make an immediate payment to transfer ownership of the bike to you; or continue to 'hire' the bike from your employer for three more years at zero cost, finally making a smaller transfer of ownership payment.

#### What you save

You save what you would have paid in tax and national insurance had you received the bike's purchase price as salary. That's 32% if you're a standard rate taxpayer and 42% if you're a higher rate taxpayer. So a £1,000 bike would cost you £680 or £580 respectively.

On top of this there's that transfer of ownership fee. Pay that immediately and it's 18% of the price for bikes under £500 and 25% for bikes £500 and over. But if you take out an extended hire agreement, the transfer of ownership fee is much smaller: 3% for bikes under £500 and 7% for those over. Why? The bike has depreciated in value. ●

#### What you can get

A bike, two bikes, a bike plus equipment, just equipment... Equipment is things like lights, luggage, locks, mudguards, and cycle clothing. Some items are prohibited: GPS devices; bike racks for cars; cameras; turbo trainers or rollers; gift cards; nutrition products.

The default price limit for Cycle to Work purchases was £1,000. However, the Department for Transport has just scrapped this for providers who register with the Financial Conduct Authority. All likely will if they haven't already.

#### Did you know?

The Cycle to Work scheme was refreshed in June 2019 – with e-bikes in mind – to make it easier to buy bikes over £1,000