

Velo Vision Sample Article

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peter@velovision.com

I hope you enjoy the read.



Peter Eland
Editor and Publisher,
Velo Vision

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VELO VISION AND VELO-VISION
We weren't first with the name. *Velo-Vision* is a bike shop in Körten, near Bergisch-Gladbach, Germany. *Velo Vision* magazine exists in friendly harmony with *Velo-Vision* in Germany.

Velo Vision is printed on paper produced from sustainable forests to Nordic Swan standards.



COVER: Paul on the Challenge. We'd shortened the boom, but not the chain, hence the rear derailleur position. Photo: Peter Eland

OPPOSITE: Great placenames on the way to Ilkley. Photo: Debz Butterworth

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ALL ABOARD!

It was great to meet such a varied bunch of readers for the *Velo Vision* coach trip over to the SPEZI show at the end of April. The coach is already booked for next year, and we'll open up for bookings soon – watch the website for details.

And talking of long, multi-seat vehicles, you may have noticed a bit of an upswing in the amount of tandem-related content of late. I'll try to keep it in check, but it has been fun discovering the ins and outs of

a new way of riding. It's almost like back when I first came across recumbents: new technology to read about, frame layouts to debate, tyre choices to ponder... and yes, a recumbent tandem has crossed my mind. It's just finding somewhere to put it...

Finally, with apologies for the advert, I should mention our new *VeloVisionary* T-shirts! All the details are on page 53, and we should have them in stock by the time you read this. I hope you like them!

Peter Eland

DUAL DELIGHT

We review the Santos Dual Travel Rohloff, a relative newcomer to the UK tandem market. How does a Dutch tandem handle the hilly Yorkshire Dales?

BACKGROUND

Santos Bikes, makers of the SUB town bike reviewed last issue, are an established Netherlands company now making inroads into the UK. They're at the medium-high end of the market, and offer their bikes with a high degree of customisation – online or via their dealer network.

The Santos tandem is currently available via two dealers in the UK: JD Cycles in Ilkley (in the Yorkshire Dales) and MSG Bikes of Lancing on the south coast. Both of these dealers offer 'Discover Tandeming' days where you can try out a range of tandems across the price spectrum – well worth it for any couple contemplating what could be a major purchase. A similar service is offered by Tandem Experience, with locations in Ironbridge and Oxford: see www.tandeming.co.uk.

The Dual Travel fits into the UK tandem market at the top of the mid-range. With prices from around £2500 (for the XT derailleur version) or £2850 (for the Rohloff version as tested) it's not necessarily a beginner's machine – it's perhaps one you'd upgrade to after having caught the bug but reached the limits of a first, more budget tandem.

We borrowed our test tandem from JD Cycles in Ilkley, who stock demo bikes in all three sizes – among their total of 30 or so demo tandems! Their location, an easy train-ride from Leeds, is ideal for tandem testing, with the hills of the Yorkshire Dales to the north, and flatter riding off to the east. We took the Santos off for a day in the Dales, stayed overnight, then pedalled it back to York the following day. A few weeks later we cycled it back to Ilkley to return it.

I was curious to try out the Rohloff

hub on a tandem – so we chose that version over the derailleur system. Otherwise, the specification was largely as chosen by JD for their demo purposes: generally a touring-friendly set-up with rack, mudguards and 'comfort' components for the contact points. We rode the large frame size (56/49 cm); medium (51/44 cm) and small (46/39 cm) are also available, as are bare framesets.

FIRST IMPRESSIONS

Like the SUB frame, the Dual Travel is neatly welded from massively oversized aluminium tubing – a good thing on a tandem, where the length of the beast means stiffness is always at a premium. The sturdy black frame and matching components give the machine a smart if subdued look: more extrovert colours are of course available.

One notable aspect of the frame design is the very long headtube, giving plenty of room to join all of the frame tubes which meet at that point. The fork has a massively long steerer tube to match, and is supported by a Chris King headset – among the best around, and a good choice: headsets are heavily loaded on tandems. The high head tube means that the bars are fairly high-set for a relatively upright touring posture: if you want them significantly lower than the saddle for a very leaned-over riding position this may not be the tandem for you. Nor is it the tandem to choose should you wish to add S&S couplings (so that you can split the frame into sections for transport) – they're not available for retrofitting to aluminium frames.

The fork itself is a beefy unicrown design, with bosses for a low-rider



rack on the outside of the blades only (so you'll need to use a rack with a loop over the front wheel – not a problem). There's no disk brake mount: adding one would mean building the forks extra-heavy to withstand the asymmetric loads disks can impose. Santos do make a suitable disk-specific tandem fork, but give the Maguras a chance first!

Moving back along the frame, note that cables are routed neatly under the top tube, so you won't catch them as you get on board. There are also spare cable guides on the lateral tube, presumably in case you want

to route the rear hub brake cable to the front rider's handlebars, and even more guides for a front derailleur cable. All of the cable runs fitted were continuous: Santos say that this reduces maintenance (at the cost of a little extra weight) because there are fewer points where dirt or moisture can get inside the cables. Rohloff and rear brake cables were neatly bundled together where they run down to the back wheel. The Rohloff has the quick-release 'cable box' for easy wheel removal.

No fewer than six sets of bottle cage bosses are fitted.

As this frame is designed to be used with the Rohloff hub gear, both of the bottom brackets are held in adjustable eccentrics. That means that the rear wheel can be supported in the more secure vertical type of dropouts, while still allowing both chains to be adjusted independently for tension. The eccentric shells are of the pinch bolt type, simple and effective. If you ever want to go back to derailleurs, the removable right-hand rear dropout plate can be replaced by one with a derailleur hanger. The frame's dropout spacing is 135 mm,

the mountain-bike standard.

The Rohloff fitted uses the 'OEM2' mounting system with the Speedbone disk brake adaptor to provide the anchor point for its reaction arm – a tidy system which doesn't introduce complications for rear wheel removal.

Our bike had the Rohloff hub built into a 26" wheel using the 32-spoke Rigida rim drilled specifically for Rohloff use. It's matched by a 36-spoke front wheel with a strong double-walled and eyeletted rim on a Shimano XT hub – there are hub dynamo options too, if required.

Both wheels were fitted with Schwalbe Marathon Racer tyres.

The timing chain runs on solid 40T Middleburn singlespeed chainrings, with a Shimano LX tandem crankset looking smart in black. Final drive to the Rohloff is 52-17 (via a real Rohloff chain), giving ratios of around 22" to 116". The lowest ratio permitted by Rohloff for tandem use is 42-17, so there's clearly scope to lower the gearing further if required.

Some builders advocate 'straight through' gearing for singlespeed and hub-g geared tandems, with both chains on the same side of the bike: this allows you to use solo cranksets instead of the more expensive tandem models, and reduces stress on the rear bottom bracket. But the benefits are probably fairly marginal, and the traditional arrangement is arguably neater. It's also much easier to revert to derailleurs from this system than it would be from 'straight through'.

The main brakes are Magura HS33 hydraulics on both front and rear rims, my favourite rim brakes and ideal for tandems, as the hydraulic hoses don't suffer at all with the extra length to the back brake. I've found them super-reliable and excellent performers in terms of power and modulation. The levers on these ones were apparently designed by Santos for extra braking power: a bit longer than standard ones, and comfortable in use..

Reserve braking comes from the well-regarded Avid BB7 mechanical disk brake, acting on the largest available disk for the Rohloff's four-bolt fitting. While riders in flat countries may get away with just rim brakes on a tandem, in the hills I'd say a reserve brake is almost essential. This one was set up to be controlled by the rear rider (stoker).

On to the controls, and both riders are fitted with flat bars complete with the splendid Ergon grips and the excellent Cane Creek Ergo bar ends, which provide a very comfy grip on the end of the bars. The only slight drawback is that you can't then fit most mirrors easily.

The stoker stem is a solid black (of course) adjustable alloy model, and of good length. My stoker preferred a slightly higher position for the



ABOVE: The handlebar setup is the same for both riders: Ergon grips and Ergo bar ends. The stoker stem is solid and adjusts for length.

BELOW: The Thudbuster internals are concealed within its neoprene cover. It's an excellent suspension seatpost for any hardtail bike, tandem or solo.



ABOVE LEFT: A Chris King headset and long headtube make for a stable steering set-up.

ABOVE CENTRE: The forks have low-rider bosses ready for touring luggage.

LEFT: Both bottom brackets are in eccentrics for chain tensioning. Note the nice solid singlespeed chainrings for the timing chain.

ABOVE: The cables are routed neatly to the Rohloff hub – and note also the drag brake anchor point on the left chainstay.

PREVIOUS PAGE: The tandem took us from Ilkley over Barden Moor to Embsay, where we stopped for a cup of tea at the excellent Embsay & Bolton Abbey Steam Railway and watched steam trains go by!



bars, though, so JD fitted the Satori stem raiser – see review elsewhere this issue. With this in place we both achieved comfortable riding positions.

As tandems can be harsh on the rear rider, who sits right over the rear wheel and who can't anticipate bumps, the Santos was fitted with a suspension seatpost. The Cane Creek Thudbuster is unusual in that it's not telescopic like most, but instead uses a parallel linkage to offer a stiction-free action. There are two models, the LT (long travel) and the shorter ST with reduced travel and no preload adjustment. The ST is often used when, as here, there's not quite enough room between frame and seat rails to fit the LT. Both models come with a selection of elastomers to fine-tune them to rider weight, and a cover to protect the mechanism.

Finally, good quality, wide SKS mudguards were neatly fitted along with a Tubus Logo carrier rack, which provides a low-level attachment rail for panniers. A good touring choice and rock solid even with two full panniers. As with the SUB, attention to detail in the rack, mudguard and other fittings was excellent.





THE RIDE

I should probably establish my benchmark here first – we usually ride an elderly Cannondale tandem, also with 26" wheels and fitted, like the Santos, with flat bars, Ergon grips, and an (LT) Thudbuster seatpost for Debz the stoker. The frame is, however, a bit small for us, and it has derailleur gears rather than the Rohloff. Cannondale tandems are known for their uncompromising rigidity, so the Santos had a tough act to follow.

First impressions were excellent – it handles very securely at low speed, and altogether felt solid and stable. Confidence-inspiring, perhaps. And zooming downhill it also offered no surprises either, just predictable, safe handling.

We're not a super-light team, probably around 150 kg in total, but I got the impression that the Santos would comfortably have handled more weight if necessary. We can apply a fair bit of power, though, and again it seemed to have reserves of rigidity in hand. The tandem itself weighed a creditable 20.5 kg as tested: you can certainly find lighter tandems, but shaving grams doesn't make much sense for any tourer, and even less so on a tandem.

I noticed that starting and stopping on the Santos seemed noticeably easier than with our usual Cannondale (which has some MTB heritage) – and it turned out that indeed, the bottom brackets were about an inch lower on the Santos. Better for touring, and easier in town, as you're less on tip-toe when you put a foot down.

The trips to and from Ilkley involved a fair few hills, giving plenty of scope to test both brakes and gears. First the brakes: most of the time it was no problem just using air-braking and a few alternating dabs on the Maguras to keep speed reasonable. But on a few of the hills I was very glad indeed to have the third brake: the rims get hot on a tandem alarmingly quickly if you use too much rim brake on a big descent. When stoker Debz applied the big disk at the back the bike really did slow – almost like being hauled backwards! Certainly capable of bringing the bike to a stop for

a pause to let the rims cool off, if necessary on a long hill.

We didn't really get on with her operating the third brake, though. We managed, with a certain amount of shouting, but it was hard for her to hear when exactly I wanted it on, and how hard, and when to take it off again. The wind whistling past your ears as you scream down a hill makes communication tricky – of course that's just when you might need to call for a bit of brake. Were it my bike I'd operate the disk via a twist grip gear changer or possibly a bar end shifter mounted off a stub of handlebar somehow, so that all of the controls are available to the captain without moving hands from the bars.

On to the gears, and the Rohloff offers a degree of delightful simplicity. Just turn the grip and you change gear. There's no fiddly adjustments, narrow chains to keep clean or protruding derailleurs to get knocked.

But it's not all good. In the low range it is noisy, with a harsh gear buzz, and also perhaps a bit more friction (but that could be psychological). You have to ease off slightly to shift – as you would also on a derailleur, if you have any mechanical sympathy. The Rohloff will shift under a degree of load, but it gets harder to change the more load you're applying. After the first few miles, easing off became automatic: the stoker can sense through the timing chain when the captain eases off, and does the same ready for the shift. Just a few times when shifting late on hills would I need to 'call' the change. But basically the Rohloff shifted easily and reliably and with very little fuss.

I've occasionally heard it said that the Rohloff's 526% range isn't sufficient for tandems. Our rides on the Santos tend to refute that: we seemed to have plenty of range, but for us it was just a bit high-g geared as set up. Maybe we should work on our fitness, but we very rarely troubled top gear. Bottom gear, on the

other hand, was employed with some regularity. Were it our tandem we'd immediately drop the gearing to the lowest possible ratio. This would have the pleasant side-effect of minimising the time spent in the noisy lower gear range.

The Rohloff or derailleur decision is a tricky one. The hub gear system performed very well, and its simplicity and low maintenance are seriously attractive advantages. But that low range noise can irritate, and if you jump onto a derailleur bike straight after it feels just so smooth and easy-running, especially in (silent!) low gear. Maybe derailleurs for the weekend bike, but a Rohloff for touring or commuting...

Debz reported that stoker comfort was good, although she favours our own longer-travel Thudbuster over the ST model fitted. The stable handling and solid feel to the bike made her ride more pleasant, too, as it helped me keep the whole bike steady and relaxed.

CONCLUSIONS

The Dual Travel from Santos isn't a cheap tandem, and at approaching the £3000-level you expect a bike which delivers in performance and comfort. On the basis of our test, it does just that, with a stable, solid feel which suggested that even the Dales descents hadn't really reached its limits. The few niggles or wished-for changes which we came up with are more matters of personal preference than criticisms. Overall, it's both well designed and well equipped.

To an extent, this reveals the limits of a magazine review. At this level of bike, almost any model you might buy will be competent and more – and even in the niche world of tandems there's a fair degree of choice around this price level. Any decision will largely come down to personal preference and 'feel': so I can really only recommend again a visit to JD Cycles or one of the other outfits mentioned at the start of this report to try out a selection

of tandems for yourself, to benefit from their advice and experience, and to specify any custom options you require.

But on its own merits the Santos is up there with the best of them. While many models at this price level seem oriented more towards racing, speed and ultimate light weight, the Dual Travel is clearly a tourer from the ground up, and well suited to that role. It's great that it offers the choice of Rohloff and derailleur, too – another tough decision for anyone lucky enough to be in the position to buy one!

Peter Eland

AVAILABILITY

Manufacturer: Santos Bikes – www.santosbikes.com
 UK dealers: JD Cycles, Ilkley: Tel 01943 816101 or see www.jdcycles.co.uk
 MSG Bikes, Lancing: Tel 01903 752308 or see www.msgbikes.com



The view into Wharfedale from Kirby Lane, near Netherby.