

## Santa Cruz VP Free

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The Guys at Neezy have always been good to us here at Farkin.net, providing us with a sick Santa Cruz Heckler to test last year and then stepping up big-time this year to drop this totally dripping Santa Cruz VP-Free on the doorstep of the Farkin.net compound. Stoked beyond belief, I endeavoured to give a bike of this caliber a serious workout, racing it at the Kooralbyn round of the National Downhill series, railing berms and hiking out of creekbeds in Toowoomba (hey, don't ask me...it's a Toowoomba thing), dirt jumping at a few sets of local trails and cross country riding at Bunyaville State Forest.

Hopefully, that counts as an appropriately "freeride" test for a serious freeride bike, a bike that the Santa Cruz marketing department call;

"something long and stout, with not only the ability to be hucked down the ugliest lines and off the lippiest of lips, but also the capability to be pedalled to the high places where that kind of fun really starts."

Would the Santa Cruz be able to combine big-hit downhill performance with the ability to climb back to the top like a bike with half the travel? The answer, would have to be an emphatic, "Hell Yes!", read on to find out why.

### The Frame



When you're dropping \$3500 of your hard earned dollars on a frame, you want to know that you're getting something a bit more "special" than the average, cookie-cutter downhill bike that every man and his dog turn up on at races. In this area, the VP Free does not disappoint, combining a seriously burly frame with some truly trick finishing touches to leave no doubt in the potential owners mind that they are buying a quality piece of machinery.

Starting from the front, the oversized down-tube is mated to the top tube by way of a huge box gusset. Calling this thing a gusset doesn't really do it justice, even if it is "technically" the correct term and the smoothly curved back of the gusset lends an almost organic feel to the front end of the bike. A small plate gusset also resides under the head-tube / down-tube junction and the head-tube itself looks to have been treated to a little external machining.



The seat-tube / top tube junction has also received some serious attention. The 'free utilises a dropped top-tube for increased standover clearance with a big, don't argue piece of bracing connecting the top and seat-tubes to still give a full 17.5" seat-tube length on our medium sized frame.

The seat-tube on the VP-Free is a bit of an anomaly, making use of a not-quite-full-length design, meaning there is a small kink in the seat-tube about 6 inches above the bottom bracket. This means that if you run a super long seat post to get full leg extension on the climbs, you might run into problems with slamming the seat all the way down for the descents. This could of course be easily fixed just by trimming the seat-post, but as our tester came with a Thomson and cutting one of them is sacrilege, I decided against taking this route.

With the front triangle suitably sorted, it's time to focus our attentions on the rear triangle which is, as they say, where the magic happens. The VP-free utilises (not surprisingly) Santa Cruz's patented Virtual Pivot Point (VPP) suspension system in a guise that is more reminiscent of the Blur XC / 4X frameset than the 'Frees big brother, the V10, with the shock actuated by the upper link, rather than the lower.

The magical vagaries of what VPP actually does and how it works could be explained here, but I think it's best if I leave that up to the experts at Santa Cruz.

The triangulated rear swingarm of the VP-Free is attached to two short links that tune the path of the swingarm and give the VPP system its renowned resistance to pedal-induced bob. This swingarm is another obscenely trick piece of work, with the member that binds the seat-stay and chain-stay taking the prize for being one of the fanciest pieces of metal work I've ever seen on a bike. I couldn't find an angle of this piece that actually did justice to its intricacy, but if you ever get a chance to check out a VP-Free in the flesh I highly recommend taking a moment to marvel at this engineers wet dream.

The triangulated rear swingarm and the links run on sealed bearings at every pivot point for minimum hassle and maximum longevity. Having said that, this isn't a simple set, forget and abuse single-pivot Santa Cruz of old.



The rear triangle has a lot of bearings and a lot of places where slop could potentially develop and it will need periodic attention to make sure everything stays running as smoothly as the day you bought. Don't be one of those customers that Greg from Neezy hates so much who ring him and say "But I paid \$3500 for this frame, I shouldn't have to service it". Every bike needs servicing and chances are that unless you're a confident and competent home mechanic, the type of servicing the VP-free requires will mean handing it over to your LBS. For those of us who are confident and competent, Santa Cruz provides detailed servicing instructions on their website in .PDF format.

Progressing to the far rear of the bike you will find a fully replaceable drive-side dropout set-up to take a big-dog 150mm width 12mm axle

rear hub. Needless to say, the combination of precision bearings, a 150mm hub and a triangulated swingarm makes for one very stiff rear end that is incredibly resistant to flex. Confidence inspiring stuff.

Our test bike came dressed in Anodised Orange livery with laser-etched graphics. The full range of Santa Cruz factory colour options are available on the VP-Free so if orange doesn't tickle your fancy, there's sure to be a colour that will. The powder-coated version of the 'Free also allows you to choose separate colours for the front triangle and swingarm, which can be experimented with by using the Santa Cruz colour picker on their website prior to ordering. Play around with the colour picker and see how hideous a colour combo you can up with!

The traditional left and right side down-tube sticker / graphic placement has been abandoned on the 'Free in favour of a single, "Santa Cruz" on the bottom of the down tube. Presumably, this is so when you get snapped busting out a huge table over a gnarly gap, people will still know you're riding a Santa Cruz. Unfortunately, for half the riding population out there, myself included, who throw tables the opposite way, people are going to think you're riding a zurC atnaS...so perhaps Santa Cruz should consider adding this option to their custom paint jobs.

### **The Bits**

Our test bike came built up with a 2004.5 version of the DH build kit offered by Neezy. For 2005 the kit will be essentially the same, but with Avid Juicy 7 brakes taking the place of Hayes.

Realistically, there was not a single component on this bike that I could fault. From the Boxxer World Cup forks, to the Santa Cruz / Hugi hubs, to the Mavic rims, to the Holzfeller cranks and E13 chainguide every component performed flawlessly and never gave me cause for concern.

### **The Ride**

All those trick finishing details and well thought out specs can be exposed as just window dressing if the frame itself doesn't live up to expectations. Luckily, in the case of the VP-Free, it didn't just live up to my expectations, it exceeded them in just about every department.

Lets take a quick detour into geometry land before we get down to the nitty-gritty, "how did she ride" side of things. Anyone who knows me knows I'm a pedantic little bitch when it comes to a bikes geometry, so a first look at the geometry sheet of the 'Free gave me a few surprises. While most companies these days offer a freeride sled that's a shorter, steeper and higher-bottom-bracketed version of their downhill race bike, Santa Cruz look to be bucking the trend.

The VP-Free is somewhat similar in geometry to it's downhill racing big brother, the V10, sharing the V10's chain-stay length (17.5"/444.5mm) and bottom bracket height (14.8"/375mm) and boasting a 0.5" longer wheelbase than the V10 and a half-a-degree slacker head angle. The only significant geometry differences between the two frames are; the VP-Free has a 32.3" standover height as compared to the V10's 30.2" and has a much more trail-friendly seat-tube angle of 69 degrees, whereas the V10 has a super-slack seat-tube angle of 57.5 degrees.

To sum it up, the VP-Free is a slightly longer, slightly slacker version of the V10, with a more trail-oriented seat-tube angle, the same bottom bracket height, less standover clearance and 2 inches less travel, which to my mind at least makes Santa Cruz something of a black sheep in the world of 'freeride' bike manufacturers.

Our Medium sized test bike was the perfect fit for my 175cm frame, with a comfortable effective top tube length of 23.2"/589mm and plenty of standover clearance. I was easily able to get the saddle high enough for full leg extension on cross country rides, but couldn't quite get the saddle as low as would have liked for downhill, due to the kinked seat tube.

No-one ever said that following trends was the way to go when designing a bike and my first few rides on the VP-Free were proof positive of that. Although our test bike was oversprung for my 70kg frame, which was frustrating on my first ride, a little tinkering with the 5th Element rear shock from my factory mechanic Tomac Boy soon had me running a close-to-ideal amount of sag and enjoying the full benefits of the 8.5" of rear travel.



The rear travel of the VP-Free was plush and controlled throughout the stroke, offering confidence inspiring bump-eating performance in just about every situation you could throw at it. Through rock gardens the 'Free showed an incredible ability to neutralise even the biggest of hits, simply line the bike up with the line you want to hit and the VP-Free would mow through it, chewing up and spitting out even the gnarliest of rocks with nary a whimper.

In high speed, sweeping sections of trail the VP-Free chassis truly excelled, with the long wheelbase and slack head angle begging you to push the bike harder and faster. Bury the bike into a corner at high speed and it remained poised and able to hold a line through the roughest of mid-corner bumps. Push beyond the limits of your tyres and the frame would break traction predictably, with first the rear and the front sliding out into big, grin-inducing (and occasionally gravel-tasting) drifts.

In slower, more technical sections these same features meant the VP-Free suffered. With the slack head angle and upright position giving the front-end a tendency to "flop" over in low speed turns and making it difficult to get your weight over the front tyre for traction. The solution to this problem for me was simply to hit technical sections faster than I was used to, allowing the superlative rear-suspension to make up for any shortcomings in my technique.

The VPP design is supposed to deliver unparalleled pedalling performance and the VP-Free did not disappoint when you put the power down, snapping forward purposefully under hard acceleration while still remaining responsive to the trail. Due to the heavy spring on our test bike I ran the lowest possible pressure in the chamber of our 5th Element shock, but even when subjected to my horrible, crank mashing climbing style the rear suspension bobbed very little and transferred power efficiently enough to make climbing this 40+ pound, single chain-ringed beast a lot less of a chore than it should have been.

Now, I'm not going to get all hyperbolic on you and suggest that this bike climbs like a bike that weighs half as much, but the fact is that with a decent dual-ring setup you could quite happily pedal the VP-Free to the top of just about any trail out there, provided your legs could handle it. The VPP suspension design on the 'Free offers efficient power transfer and gobs of traction under power and I see no reason why it couldn't hang with some shorter travel trail-bikes out there in the climbing efficiency stakes.



If you do intend to take a VP-Free on any serious trail riding excursions there would be very little on your average cross country trail that would throw up a serious challenge to the big beast from Santa Cruz, needless to say, this 'aint your daddy's trail-bike. Although our test bike was definitely on the weighty side and only had a single front chain ring, it was more than capable on open fire road climbs although something of a beast to handle on slower, technical ascents due to the slack head angle. Pointed even slightly downhill the bike chewed up single-track and turned features that were challenging on my mid-travel dually into walks in the park.

The rear suspension of the VP-Free definitely suffered from some feedback under brakes, with the suspension squatting slightly when you hauled on the rear anchors. The bike remained a controlled and predictable customer when braking though, with the suspension still sucking up braking bumps and rocks with the same controlled feeling and suffering from only a slight stiffening when you were on the brakes.



## The Verdict

The Santa Cruz marketing department certainly make some bold claims about the VP-Free and it's nice to see that the bike stands up to them. They have, in the VP-Free, produced a bike that will happily handle any downhill race-track in Australia while retaining the ability to pedal the bike just about anywhere your legs could take you.

There are trade offs in achieving this though, the head angle on the VP-Free is probably too slack for someone who wants to do a lot of low-speed, technical climbing and descending just as the seat-tube angle is probably too steep for a serious downhill racer, but for a rider who just wants one bike to take them everywhere, the VP-Free offers a formidable geometry and suspension package that comes as close as I've ever seen to achieving the holy grail of big-hit downhill suspension performance mixed with all-day trail pedalling ability.

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