



## V10 PRESS FIT OVERHAUL INSTRUCTIONS

The V10 is a complex machine that requires a high level of mechanical aptitude and specialized tools to overhaul. This type of overhaul is best performed by an SCB dealer. Before beginning this process, one should obtain the required replacement parts. These parts can be ordered from your dealer or SCB directly via the website [www.santacruz bicycles.com](http://www.santacruz bicycles.com) or call 831.459.7560

### The V10 PivotPack includes:

- 2 Upper Pivot Axles (long)
- 2 Lower Pivot Axles (short)
- 8 Pivot Bolts (button head with flange)
- 1 Front Shock Axle (long)
- 1 Rear Shock Axle (short)
- 4 M5 Shock Mount Bolts and washers
- 1 Sample size Loctite #609
- 1 Sample size Loctite #242

### The V10 ProPack includes:

- (In addition to all PivotPack hardware)
- 4 Float Rod Bearings
  - 2 Floating Caliper Bearings
  - Upper Link Stop and Bolt
  - 4 Dropout Bolts
  - 1 Thru Axle Dropout Clamp Bolt



**You'll also need to have the V10 Bearing Press tool, which can be ordered separately from the parts kits.**

### Other tools you'll need:

Allen wrenches, 4, 5, 6 and 8mm 17mm wrench

Brass punch (sometimes an 8mm allen works)

V10 bearing press tool (*can be ordered from SCB*)

*While you're at it, you may want to source and replace the shock eyelet bushing and reducers. These can be had from the manufacturer of the shock (i.e. Progressive Suspension, Fox, etc.)*

Grease

Acetone

Soft blow and steel hammers

Your favorite beverage

Bench vise (maybe)

### Step 1 – Get Ready

**Read through all of the directions** first to understand what you're about to encounter. It's the right thing to do, so just go ahead and do it. If your bike isn't completely disassembled already, remove wheels, cranks, rear derailleur and brake caliper as a minimum. Cut the zip-ties to remove housing from the swingarm. Clean off some of the dirt. Take a sip of your beverage. Mmmm.

### Step2 – Remove the Shock



Use a 6mm allen wrench to remove the link stop bolt behind the right side upper link. Preload the shock by pushing up on the swingarm so the link doesn't push the bolt and trash threads as you're unscrewing it.

After removing the link stop, use two 4mm allen wrenches to turn the bolts on the front of the shock in opposing directions. Remove one bolt. Using a punch (or 6mm allen wrench if necessary) tap the shock axle out. This should happen without major hammering. If it seems really seized up, don't bash it or you risk damaging the frame. If it really won't move, try removing the opposite bolt and tapping the other direction, or you can always give us a call or email Scott for more suggestions – the contact info is at the bottom of the page.

**Remember, if you screw up your frame, it's your fault, so it's better to make sure you take the time to do it right now.**

Repeat the process at the back of the shock on the lower link. When you've removed the shock axles, pull the swingarm back (as shown on the left) and extract the shock from the frame. Sip.

Problems? Email [scott@santacruz bicycles.com](mailto:scott@santacruz bicycles.com) or call us at 831-459-7560

### Step 3 – Remove Upper Links



Using two 4mm allen wrenches, remove the four bolts from the two upper pivots. The bolts have low heads, so be sure you are using sharp allen wrenches, clean the dirt out of the bolt heads and have the wrench seated securely before turning. When the bolts have been removed, loosen the bearing clamp bolts on the links, and gently tap the links from the end of the axles. Tap the frame axle with a mallet to slide it out of the frame. If it seems stuck, thread one of the bolts you just removed into the end to have a steel surface to tap with the hammer to avoid mushrooming the axle end. Use a punch (an 8mm allen wrench works too) to slide the axle out of the frame. Sometimes a steel hammer is needed with the punch if it's really stuck. Just be sure to hit the punch and not the frame. Repeat to remove the swingarm pivot axle.

### Step 4 – Removing the Lower Link



This operation is very similar to removing the upper links. Take out the pivot bolts and remove the axles. After riding the bike for a while it may be difficult to remove the lower link. Be patient, it's possible to damage the link if you're not careful. If it seems stuck, try wiggling the link back and forth using the swingarm as a lever, or shaking it from side to side (the link, not you) while pulling it out. If you can move it a small amount but then it stops, it's possible to slide a punch through the link and tap one of the bearings out from the inside. If you can move the bearing a bit, the link should come right out. Damaging the bearings at this point is OK; you're about to replace them.

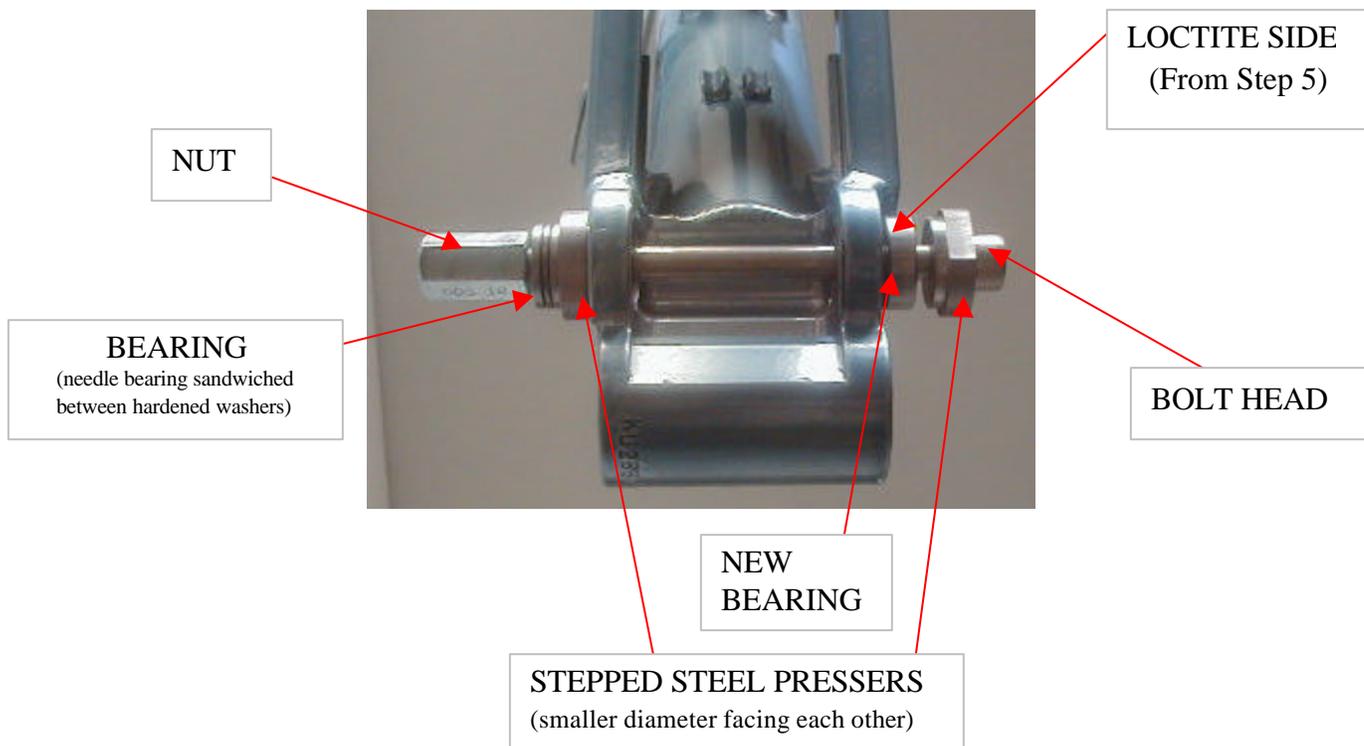
### Step 5 – Preparing for Bearing Replacement

Here comes the tricky part, so you might want to take a little break now. Aaaaah. Count to 15 slowly. OK, ready? Wait, finish your beverage. Oh yeah. Wipe all of the replacement bearing outer races off with acetone to clean off the thin film of grease. Wipe off the area around the bearing that is in the frame also. If these are not clean the Loctite won't cure. Open the #609 Loctite and put a small bead around the edge of the bearing in the frame (as shown in picture). This will get pressed into the bearing bore when you insert the new bearing. **Loctite one bearing only for right now.**



## Step 6 – Pressing Bearing into Front Triangle

This is where the V10 bearing press tool comes in. Arrange the tool and new bearing as shown in the picture. Only press one bearing at a time. Using the bearing will make turning the nut easier and prolong the life of the tool. **ONLY PRESS ONE BEARING AT A TIME**



Once you have the tool arranged correctly, and a new bearing in place, hold the head of the bolt with an 8mm allen wrench and turn the hex nut with a 17mm wrench or socket. As the new bearing presses into the frame, the old bearing presses out. You shouldn't have to exert too much force here, if it seems excessively difficult examine the set-up to make sure it is arranged correctly.

**ONLY PRESS THE NEW BEARING IN UNTIL THE OLD BEARING COMES FREE.**

Take the tool out and repeat Step 5 and Step 6 on the other bearing. Don't forget to clean the bearings and use Loctite #609. **DON'T BOTTOM OUT THE TOOL PRESSING THE BEARINGS IN UNTIL THE LOWER LINK IS IN PLACE (SEE STEP 8).**

## Step 7 – Replace Swingarm Bearings

Repeat the bearing replacement process on the swingarm bearings. You must orient the pressing tools so the step lines up with the counter-bore around the bearings as you press them in. Don't forget the cleaning and Loctite either.

**AGAIN – ONLY PRESS IN UNTIL THE OLD BEARING COMES FREE – NO FURTHER.**

Now move on to Step 8.

## Step 8 – Re-install Lower Link



At first this may seem trivial, but there's a twist, so read this paragraph. Place the lower link into the swingarm chain-stay bridge between the two bearings. Make sure you've got the right end in place. Now slide the V10 bearing press tool through the link, similar to the pressing operation, but without a new bearing in place. See the picture for some clarity. Turn the nut, pressing the bearings further. There are stops on the pressing tools, but due to variances in paint thickness and manufacturing tolerances you may not have to press all the way in. Try to move the link back and forth between the bearings. The key is to get the bearings pressed in far enough to eliminate link motion, but not so far that it will be difficult to remove the link again. Take your time and get it right now. You'll love yourself for it later.

After you slide the bolt out, grease the hole in the link and insert one of the new pivot axles that came with the parts kit. (short axles are used on the lower pivots). Apply Loctite #242 (blue) to two of the pivot bolts (M6 flange button head screws) and snug them into the pivot axle. Finger tight is good for now. Repeat this process to put the lower link and swingarm back onto the front triangle.

Nice job, the tough part is over!

## Step 9 – Changing the Upper Link Bearings

The upper link bearings are held in place with a bearing clamp. While the bearings may not fall out when you loosen the clamp bolts, they should be easily removed by tapping on them from the inside of the link. After removing each bearing, press in four new ones using a vice if necessary. Don't tighten the clamp bolts until after the links have been replaced.

## Step 10 – Re-install Upper Links

Grease the upper pivot hole in the swingarm and the front triangle. Get four pivot bolts (the M6 button head flange bolts) ready by putting Loctite #242 on the threads. Now slide the two new pivot axles (the long ones) through, leaving about 1/4" of axle protruding on each end. Take the left upper link (the one with two tapped holes for the floating brake rod) and line up the axles with the bearing holes. You'll have to move the swingarm around to get the holes lined up correctly. When you've got it on the axles, thread in two of the bolts to keep the link from falling off again. Now attach the right link in the same method. Snug down the four upper link axle bolts.



## Step 11 – Re-install the Shock

If you're replacing the reducers and/or DU bushings on your shock, do that now. Beware that you get no grease on the DU bushings, but you should put a dab of grease in the hole of the reducers (steel shaft on Progressive, aluminum on Fox) before putting the frame hardware back in. Greasing the reducers will help you get the bolt and axle out of your frame when you do this again.

Position the shock with the piggyback chamber up and toward the front of the bike and then thread it between the uprights. Put the front eyelet between the shock tabs and slide your new shock axle (the long one) through the frame and shock. Grease the little M5 bolts (and use the washers) to secure the front of the shock. Repeat for the back of the shock on the lower link.

Take a look at the position of the swingarm. If the upper link is further back than the hole for the link stop, push the swingarm up. It will shift position to the "static" or topped-out position.

Yee-haw, it's starting to look like a bike again.

## Step 12 – Re-install the Link Stop

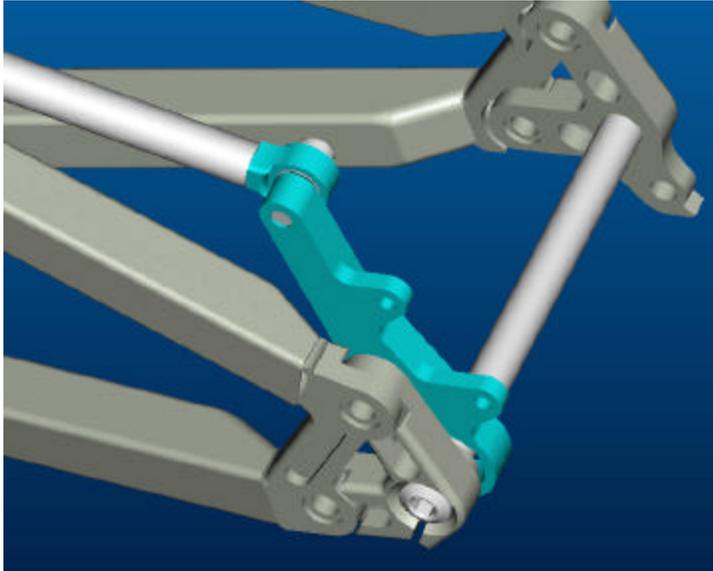
This is so important it got its own step. Loctite #242 goes on the threads of the bolt. Insert the bolt in the plastic stop before threading into frame. Be careful that you don't cross-thread the bolt on the way in. Try to compress the suspension a bit to be sure that the upper link isn't forcing the bolt in sideways. Tighten this bolt to 80 inch-lbs. of torque.

## Step 13 – Changing Float Rod and Caliper Mount Bearings (for ProPack only)

You'll need a vice for this operation. Open the vice jaws to a distance of about 1 1/8" to 1 1/4" (29 - 32mm). Place the floating caliper mount on top of the vice, with the bearing centered over the gap between the jaws. Slide the V10 bearing press bolt through the bearing, and hammer the head of the bolt to remove the bearings. Be careful not to mash the aluminum while you're doing this. Putting a rag over the vice jaws can help.

Take your new bearings and press them into the caliper using the vice. Just press one at a time, and watch out that they go into the bore straight. Repeat this process at both ends of the float rod also. You're ready to reinstall the float rod and caliper now. Be sure to orient the float rod correctly when re-installing (see pictures on next page).





This picture shows the correct orientation of both the floating caliper mount and the float rod. Be sure that you have them installed in the correct orientation before installing the bolts (with Loctite #242)

You're probably feeling pretty good about yourself now, and you have every right to be, but don't get too cocky yet. Torque is now the key. Don't have a torque wrench? Why not buy one, if you're into working on your bike it's an invaluable tool and will help ensure that you are doing it correctly. Either way, make sure everything is tight now, using the torque spec chart below.

Fastener Description	Prep	Torque (in-lbs)
Pivot Bolts (M6 X 1.0 X 12 button head w/ flange allen cap screws)	Loctite 242	60
Shock axle bolts (M5 X .8 X 8 allen head cap screws with washers)	Grease	60
Float Rod mounting bolts (M8 X 1.25 X 25 allen head cap screws)	Loctite 242	120
Link Stop bolt (M8 X 1.25 X 12 allen head cap screw)	Loctite 242	60
Dropout chain-ring bolts	Loctite 242	80
Thru Axle pinch bolt and upper link bearing clamp bolts (M6 X 1.0)	Loctite 242	40

Bearing Specifications				
Bearing #	Inside Diameter	Outside Diameter	Width	Location on Frame
6000	10mm	26mm	8mm	Pivots, upper and lower (8)
688	8mm	16mm	5mm	Float Rod (4)
6902	15mm	28mm	7mm	Float Caliper mount (2)

**Congratulations, the frame re-build is complete. You, my friend, are a champion.**