TRANSITION
TECHNICAL DOCUMENT

SCOUT/ SENTINEL CARBON

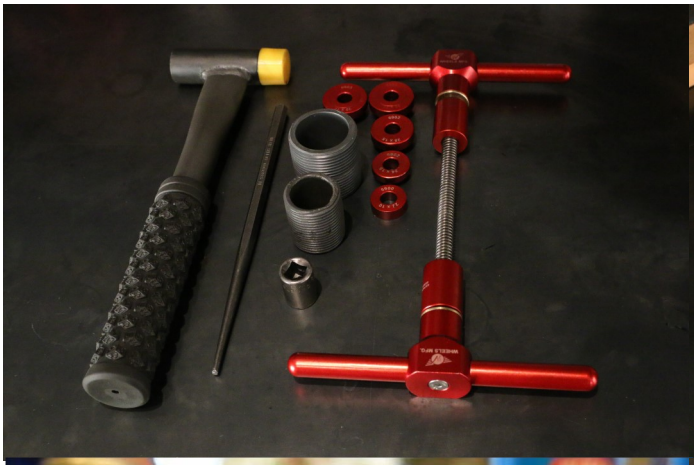
Pivot & Bearing Service Guide

Below are the tools we recommend for removing and installing the pivots:

- 8mm allen wrench x 2
- 6mm allen wrench
- 5mm allen wrench x 2
- Torque wrench with a 8mm, 6mm, and 5mm allen attachment, with the ability to go from 10Nm-19Nm
- Blue compound Loctite
- All purpose bicycle grease *(Important to note if you live in a wet climate similar to the PNW you can use the grease liberally. If you live in a drier climate we suggest using the grease a bit more sparingly, as it will collect dust)*

If you have any issues or questions please email us at info@transitionbikes.com or call us at 360.366.4960 x 4.

Below are the tools we recommend for removing and installing the bearings:



- Hammer
- Punch
- Bearing press with drifts
- Miscellaneous sized sockets
- 1” and 1 1/2” piece of PVC
- All purpose bicycle grease
- Snap ring pliers
- Slide hammer
- Correct sized box wrenches for slide hammer or two crescent wrenches
- Vise
- The following bearings, 6903 x 2, 6902 x 2, 6802 x 4, 6900 x 2, 3802 x 2

If you don’t have these tools or you’re not comfortable removing/installing your own bearings, we strongly recommend bringing your bike to a local bike shop. It’s possible to damage your bike beyond repair if you improperly remove/install your bearings. Such damage would not be covered under our warranty policy.

Step 1: Remove the seat stay / chain stay junction pivot , you'll need a 5mm and 6mm allen wrench.

Step 2: Slowly and carefully push up on the chain stay, placing your fingers over the bearing spacers to help from losing them. Once detached remove the spacers.

Step 3: Repeat the above steps for the seat stay / rocker pivots. Be careful, the seat stay might want to fall out.

Step 4: Repeat step two for the seat stay / rocker junction. Be careful to be mindful with the bearing spacers.

Step 5: Remove the cable guide from the main pivot by lightly pulling on it.

Step 6: Remove the main pivot screw with a 5mm allen wrench, make sure you have the washer. Then remove pivot taper nut. If it doesn't come out you can use a 6mm allen wrench to back it out. See photo for orientation.

Step 7: Remove the pain pivot from the frame by using an 8mm allen wrench.

Step 8: Remove main pivot bearing shields, make note of orientation of the cover. The smooth side faces away from the bearing and the ridged side faces the bearing.

Step 9: Remove the upper shock bolts and washers. On the inside of the rocker there will be a small tapered trunion spacer on each side, make sure to remove them as well.

Step 9 continued: See small trunion spacers below. The rocker is a two piece rocker, allowing you to remove one side at a time if you'd like.

Step 10: Remove the lower shock bolt and shock from the frame. You'll need 2, 5mm allen wrenches.

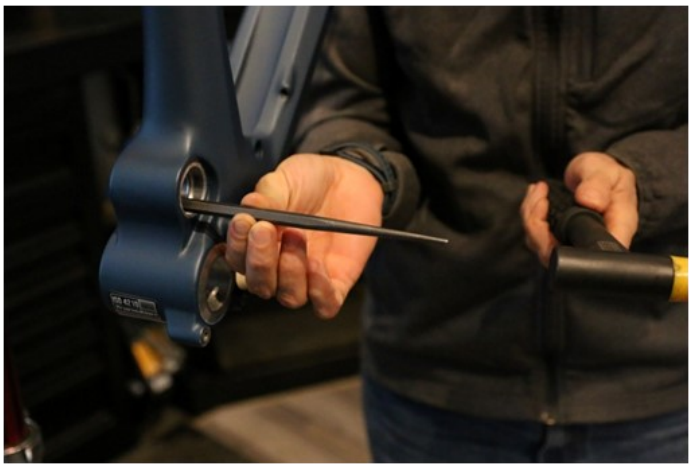
Step 11: Remove the upper pivot and then the rocker. You'll need 2, 8mm allen wrenches. Watch for the bearings spacers located on the inside of the rocker.

Step 11 continued: Below you can see the rocker is two pieces, make sure to account for the spacers located on the inside of the rocker where it mounts to the frame. Now that you have all the pivot hardware removed and accounted for it's time to start removing the bearings.

Photo of the main pivot spacer below for reference.

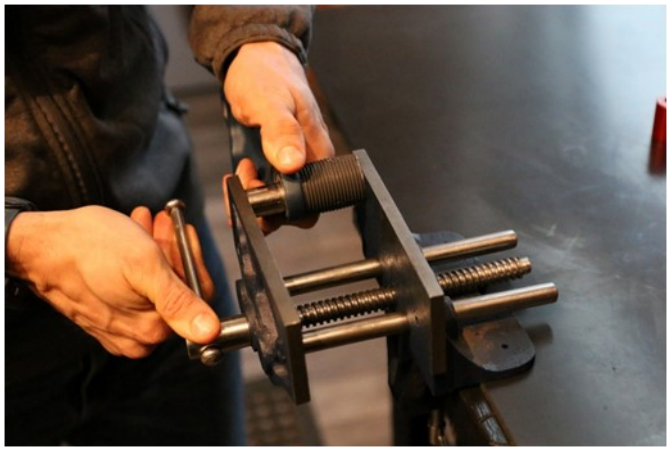
Step 12: Remove the main pivot bearings. In order to do this the main pivot spacers has too small notches cut out allowing you to contact the bearing with a punch. Alternate between the two notches to ensure you remove the bearing as straight as possible.

Step 13: Remove the spacer and tap the remaining main pivot bearing out of the frame. Making sure to alternate where you're placing the punch to ensure a straight and smooth removal.



Step 14: Grab the rocker and begin to remove the lock rings with your lock ring pliers. There are three different sizes, make sure to make a note of their orientation.

Step 15: Remove the rocker bearings. Here you can see the use of the PVC pipe. It allows us to push the bearings out of the rocker. Repeat this procedure for the remaining 5 rocker bearings.



Step 15 continued: Make a note of the bearings and snap rings orientation, there are three different sizes.

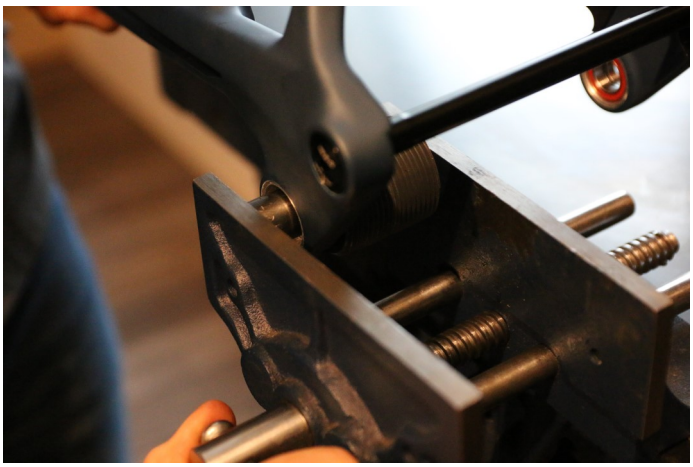
Step 16: You'll need the slide hammer for this step. Start with the outside bearing. You'll want to get the attachment to sit right in between the two bearings. Once you're happy with the position go ahead and tighten it.

Step 16 continued: Connect the slide hammer and move the slide away from the bearing while doing your best to stabilize the seat stay.

In the photo below, you'll see I also got the bearing spacer, that doesn't always happen. Make sure to look for the spacer if you don't end up grabbing it when removing the bearings.

Step 17: Now that you've removed the outer bearing, you can push the inner bearing out. Then repeat steps 15-17 on the other side of the seat stay.

Step 18: Install the inside seat stay bearing (6802), making sure to grease the bearing seat.



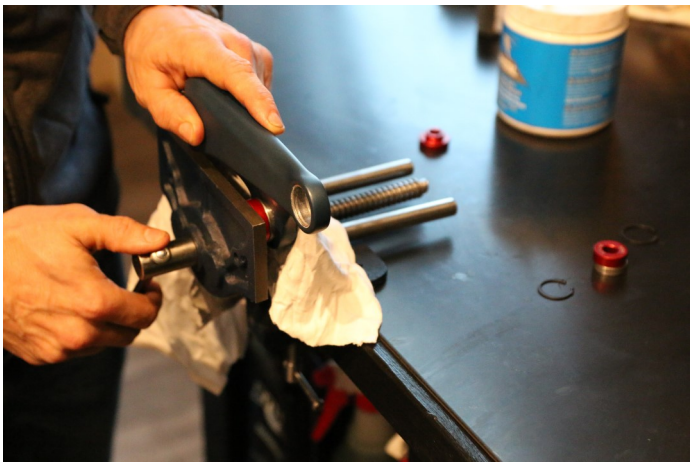
Step 18 continued: Use a rag or towel to protect the frame while in the vise.

Step 19: Insert the bearing spacer and add grease to the bearing seat.

Step 19 continued:

Step 20: Press the outer seat stay bearing (6802) into the seat stay. Repeat steps 19-20 on the other side of the seat stay.

Step 21: Install the rocker bearings (3802x2, 6900x2, 6902x2), make sure to grease all bearing seats before installing the bearings. When placing the rocker in the vise be careful to not scratch it.



Step 22: After you've installed the bearings go ahead and install the snap rings using your snap ring pliers. Make sure to take note of the different sizes and orientation.

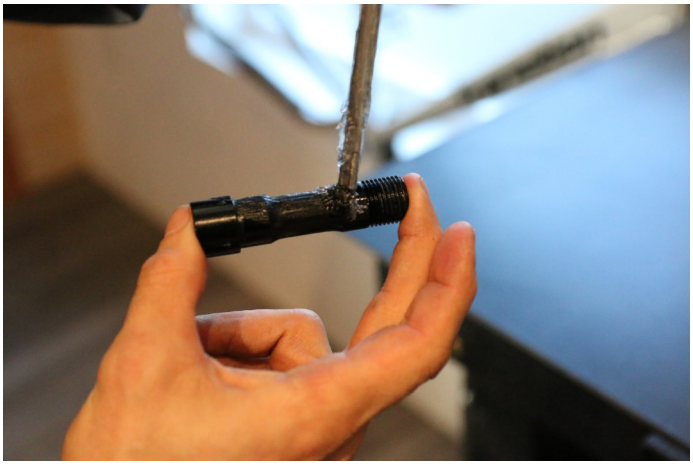
Step 23: Grease the main pivot bearing seats and install the main pivot bearings (6903). Install one at a time and make sure to put in the bearing spacer before installing the second bearing.

Step 23 continued:

Step 24: Place a dab of grease on the main pivot bearings to help hold the bearing shields. Notice the orientation, the ridged side faces the bearings, leaving the smooth side facing outward.

Step 25: Place a few drops of blue Loctite on the threads of the chain stay where you the main pivot threads into.

Step 26: Grease the shaft of the main pivot, carefully attach the chain stay to the bike. It's helpful to hold onto the bearing shields when re-installing the chain stay.



Step 26 continued: Slide the main pivot through the chain stay and front triangle and begin to tighten it down with an 8mm allen wrench.

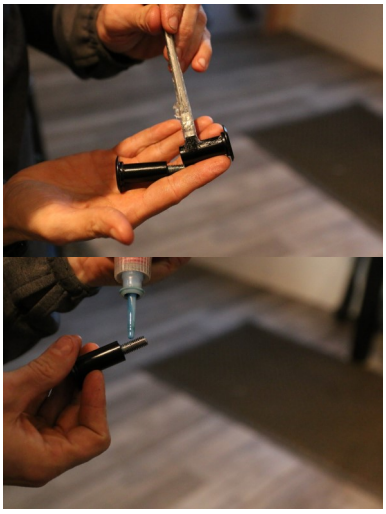
Step 26 continued: Snug the main pivot with an 8mm allen wrench. Then use a torque wrench and tighten to 19Nm.

Step 27: Install the main pivot screw, spacer, and taper nut. Apply grease to the main pivot taper nut, and blue Loctite on the threads of the main screw after the taper nut is installed.

Step 27 continued: Snug down the main pivot screw with a 5mm allen wrench. Once snug use a torque wrench to tighten to 10Nm.

Step 28: Install the rocker and rocker pivot, but first add dab of grease to the inside of the center bearing to help hold the bearing spacer in place during installation.

Step 28 continued: Grease the shafts of the rocker pivot and place blue Loctite on the threads of the rocker pivot.



Step 28 continued: Use two 8mm allen wrenched to snug the rocker pivot. Once snug, use a torque wrench and a standard 8mm allen to tight to 15Nm.

Step 29: Install the shock, installing the lower shock bolt first. Make sure to grease the shaft and add blue Loctite to the inside of the female end. You'll need two 5mm allen wrenches to snug the bolt down. Torque to spec (10Nm) after the upper shock bolts are installed.

Step 30: Install the upper shock bolts. First add a dab of grease to the inside and outside of both forward rocker bearings.

Step 30 continued: Add a touch of Loctite to the threads located on the trunion mount.

Step 30 continued: Attach trunnion shock bolt, washer, and tapered spacers. The grease should help hold the spacers in place. It's helpful to insert the shock bolt just far enough to make contact with the spacer.

Step 30 continued: Snug down the shock bolts using a 5mm allen wrench. Once snug use a torque wrench and tighten to 12Nm. Now you can torque the lower shock bolt to 10Nm.

Step 31: Attach the seat stay to the rocker, but first lightly grease the seat stay / rocker junction bearings and attach bearing spacers.

Step 31 continued: It's helpful to pinch the bearing spacers when sliding the seat stay onto the rocker.

Step 31 continued: Slide the seat stay / rocker pivot axles into place. Make sure to add a little grease to the axle body.

Step 31 continued: Add a small amount of grease to the outsides of all four bearings located towards the rear of the seat stay to help keep the bearing shields stay in place. Then carefully slide the chain stay over the seat stay. Be mindful to not pull up on the seat stay as it will potentially damage the seat stay / rocker junction.

Step 31 continued: Grease all the pivot axles and install them. The shorter axles are for the rocker/seat stay junction and the longer ones are for the seat stay/chain stay junction.

Step 31 continued: Add a little bit of Loctite to the female ends of the upper seat stay pivots. Use a 5mm and a 6mm allen wrench to snug them down. Then use a torque wrench and tighten to 12Nm.

Step 32: Attach the seat stay and chain stay. You should already have the pivot axles greased and installed. Add a little blue Loctite to the threads on the inside of the pivot axle and tighten down the chain stay pivot axle screws. You'll need a 5mm and 6mm allen wrench. Once snug use a torque wrench and tighten the pivot screw to 10Nm.

You're finished, nice work, now go ride your bike!