Neuvation Cycling

R & C Series Hub Maintenance and Repair

R series hubs are found on R 28 Aero2 and 3 and SL 2 and 3 and C series wheels.

FRONT HUBS

Front hubs for the R, C, and M series are all the sale. They require essentially no maintenance. Below are instructions to remove and replace the sealed cartridge bearings.

Step 1: Slide off the end caps. They are a slip fit and sometimes are snug but hold the end of the axle as you slide them off.

Step 2: Knock the axle out using a rubber mallet. If you don't have one a block of wood will also do the job.

Step 3: Knock the other bearing out the same way. This will complete disassembly of the hub.

Step 4: To assemble it, slide the bearings over the end of the axle while the axle is in the hub. Using two nuts or other spacers (which come with the bearing press) squeeze the bearings in with the quick release lever. If the axle is too tight knock it a bit with the rubber mallet. If it's too loose squeeze it some more with the skewer.

The parts at left are all the parts for the front hub. There are two end caps, the axle and two R6 bearings. If you need these please send me an e-mail pricing is on the spare parts page linked on the wheel pages.

Step 1: To disassemble the rear hub put two 5 mm allen keys in the two threaded axle end caps and unscrew. Don't stick the allen keys in too far or they can go into the end of the broached axle. If they don't unscrew pretty easily this is probably what is happening.

Step 2: After you have removed one end cap, unscrew the other one. The ends of the axle are broached to accept a 5 mm allen key.

Step 3: Slide the axle and cassette body out of the hub. You may need to tap the end of the axle with a rubber mallet. Both side out the drive side.

Step 4: Remove the pawls by putting a small flat bladed screw driver under one pawl and pry it up. This will loosen the pawls and springs. Clean them off making sure there is no degreaser left on them before reassembly.

Step 5: To reassemble the pawls make sure the spring indents with the tiny pin that is in the spring groove. This is critical or the pawls won't work.

Step 6: Slide the pawls under the spring by holding the spring up with the same small flat bladed screw driver. The pawls should spring up like the photo at left.

NOTE: You can also do step 5 and 6 after you have replaced the cassette bearings if you are going to replace the bearings. In most cases you will not need to replace the bearings.

Step 7: To remove the hub cartridge bearings, knock the drive side bearing out with a drift punch trying to make sure you hit the innder race of the bearing.

Step 8: Knock the non drive side bearing out by sliding the axle in and hit it with a rubber mallet.

Step 9: To remove the cartridge bearins from the cassette body, look in the cassette body and notice the sleeve that is in between the two bearings. Push it over to one side so you can access the outboard bearing with a drift punch.

Step 10: Knock the ouboard bearing out with the drift punch. Use a glove to hold onto the cassette body to make it easier on your hands.

Step 11: Step 10 will dislodge the bearing and the spacer. You will need need to use a snap ring plier to remove the snap ring holding the other bearing in the cassette body.

Step 12: Use the bearing drift to pull the inboard bearing out of the cassette body

Step 13: To replace the bearings, use the bearing drifts to put the bearing back in. The photo at left show the way the drifts are stacked to complete step 14. It is imperative that the drift that holds the bearing on the inner diameter is used to slide the bearing in.

Step 14: Press the bearing in until snug. You are going through two press fits here. There is no need for a lot of pressure on the bearing after it seats.

Step 15: The photo at left shows the stack to press fit the bearing in step 16. Note the sleeve in the center.

Step 16: Press the bearings in only until they are just barely snug. Too tight and the sleeve won't slide and it will be hard to slide in the axle. Too loose and it will cause the hub and cassette body to be out of adjustment. This is the only hub adjustment that requires any type of feel. You won't know if it's right until the hub is assembled.

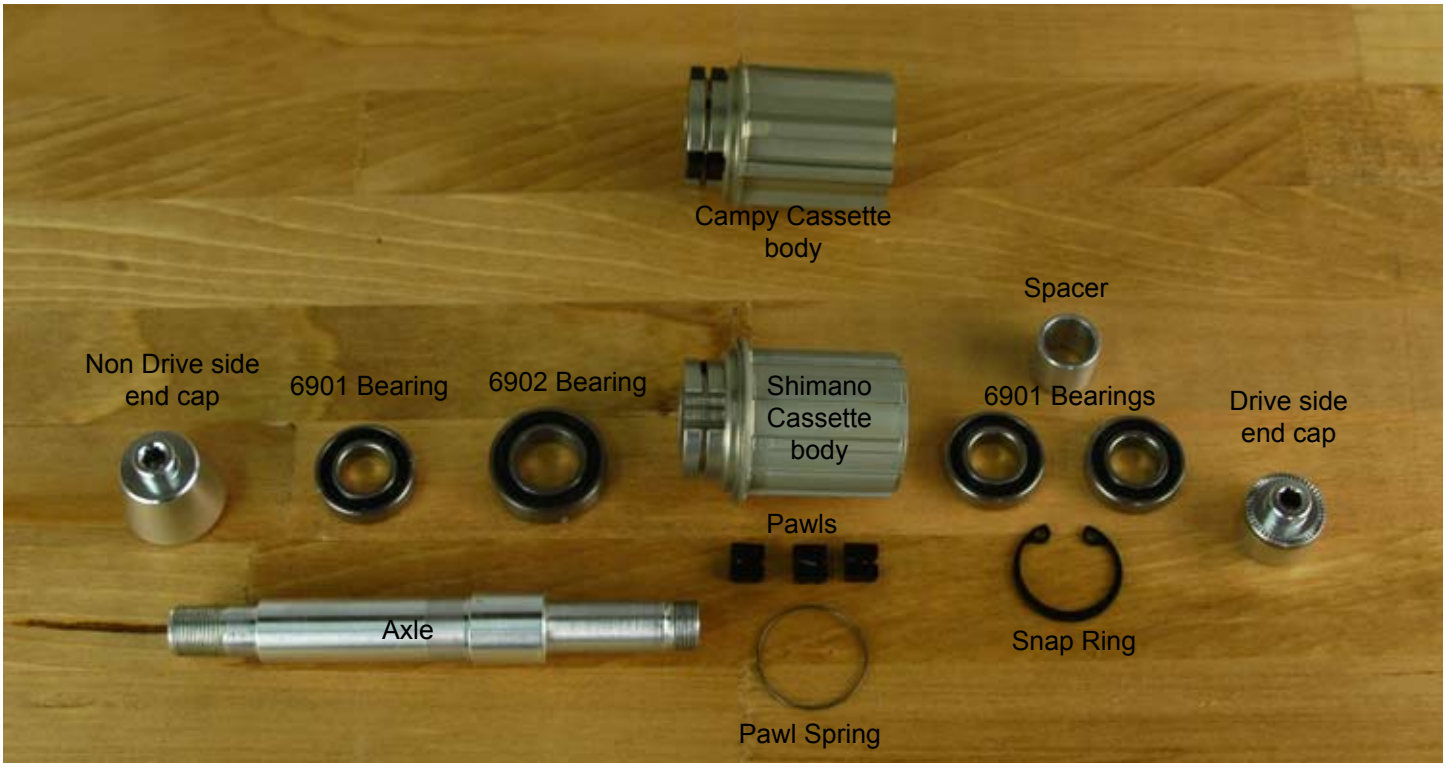
Step 17: The photo at left shows the correct stack for the press on step 18. It should be obvious which press to use with each bearing as they are different sizes. The OD of the press should match the OD of the bearing.

Step 17: Press the bearings in until snug. No need to over-tighten.

Step 18: Slide the cassette body onto the axle and install the threaded drive side axle end cap finger tight. Oil the pawls (or use a very light grease)

Step 19: Use a thick grease in the drive ring pictured at left. NOTE: Don't use a grease that will freeze in the winter if you ride in cold climates. I use the Morningstar grease for maintenance. It's really expensive but it's the best.

Step 20: Slide the axle assembly through the hub and thread on the non drive side end cap until you take up all of the play. The cassette body may slide right into the drive ring or it may not. If it doesn't, rotate the cassette body counter clockwise as you push the pawls down with a small screw driver. That should index them so the cassette body slide in. Tighten the two end caps very snug with 5 mm allen keys.



Pricing on spare parts and tools and grease is on the NeuvationCycling.com web site spare parts page.