



Nomad Bearing Overhaul Instructions

Tools required:

- Bench Vice
- (2) 5mm allen wrenches
- 6mm allen wrench
- 8mm allen wrench
- 5/16" allen wrench
- 7/8" wrench
- 3/4" wrench
- 11/16" wrench
- plastic mallet
- VPP Press Tool
- punch set
- 680 loctite
- 242 loctite
- Rock and Roll Super Coat grease
- Q-tip
- acetone

The Nomad Pro-Pack Includes:

- (6) 38802 or 6901SM bearings
- (2) 21531 Bearings or 6804 Bearings
- (2) o-ring seals for 21531 bearing
- (6) inner seals for main pivot bearings
- (3) 63mm Pivot Axle
- (2) Shock Shaft Ti
- (1) Upper Link Through Axle
- (8) Chain Ring Bolt 12.5mm Stainless Steel
- (4) Pivot Axle Washers
- (1) Upper Link Bearing Spacer
- (1) Upper Link Through Axle Cap
- (2) M8x14mm Chainring Bolt stainless steel
- (4) M6 shock shaft bolts
- (2) M6 seatstay end bolts
- (1) Sample Pack Loctite 680

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Step 1: Read the Instructions!

It's the right thing to do, so just go ahead and do it. Understand what you are about to encounter. Remove rear wheel, crankset, BB, rear derailleur, and rear brake caliper from frame. Clean off the major dirt so you don't contaminate grease or loctite later on.

Step 2: Remove the Shock

- Grab your 5mm allen wrenches. Turn the front shock axle bolts counterclockwise until one of the bolts comes out. Re-install the removed bolt 4-5 threads without it's washer, and tap it until it bottoms on the frame. Remove this bolt, and continue tapping the shaft out using a punch, 6mm allen, or long M6 bolt. Place a rag between the front of your shock and the downtube to avoid scratching the paint. Repeat for rear shock axle. (Fig.1)



Fig. 1

Step 3: Separate the Swingarm from the

Upper Link

- Loosen the seatstay end bolts (either M6 or chainring bolts) using your 5mm allen
- Loosen the upper link through axle cap 3-4 turns using your 8mm allen.

(Fig.2)



Fig. 2

- Tap the loosened cap with a mallet to break the through axle free.
- Remove the cap and tap through axle out of the frame. This will allow you to pull the seatstay ends off of the link.

(Fig.3)



Fig. 3

Step 4: Remove the Upper Link

- Grab your 5mm allen wrenches. Turn counterclockwise until one of the bolts comes out. Re-install the removed bolt all the way without its cap, and tap it until it comes out using a punch or long 5mm allen wrench.
- Pull link off front triangle- you may have to rock it laterally a little to get it off
- (Fig. 4)



Fig. 4

Step 5: Remove the Lower Link

- Remove the 2 lower link shafts using the same procedure as the previous shaft. This will separate th

Step 6: Prep for Re-Assembly

- Clean the pivot axles and scrape off dried loctite from the bolts. Coat all of the pivot axles with your high quality, sticky, slick grease.

Step 7: Remove the Lower Link Bearings

- Flip the removal cup around, so that the bolt head is on the flat side. Place the tool on the lower link bearing of either the front triangle or the swingarm. The removal cup should have the raised ridge facing the frame. The cutout portion of the ridge should be aligned to avoid the weld on the swingarm.
- Use the small removal bushing on the inside of the frame, and install the nut after it.
- Make sure that the bushing is centered on the bearing, and tighten the nut until the bearing comes out.
- Repeat for all 4 lower bearings.
- (Fig. 5)



Fig. 5

Step 8: Remove Upper link (21531) Bearings

- Secure the upper link in your bench vice- you will need access to the larger bearings, so clamp accordingly.
- Insert your punch into the slot of the internal bearing spacer and tap it to push the

bearing outward

- Once the bearing has been loosened up, you can tap directly on the bearing inner race to remove the bearing the rest of the way. Make sure you tap on various places on the bearing so it doesn't get too crooked in the bore
- Once the bearing is out, pull the spacer out and tap the opposite bearing out using the same procedure
- (Fig. 6)

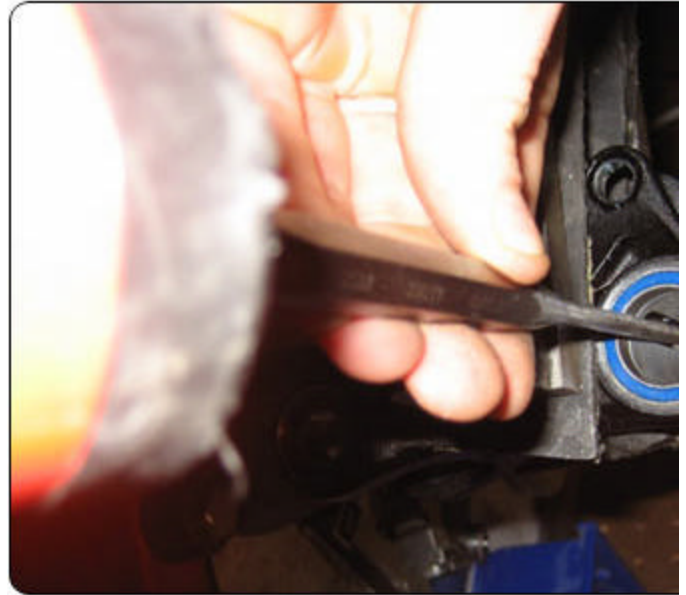


Fig. 6

Step 9: Remove Upper Link (38802) Bearings

- Use the same procedure as for removing lower link bearings (step 7) to remove these bearings.
- (Fig. 7)

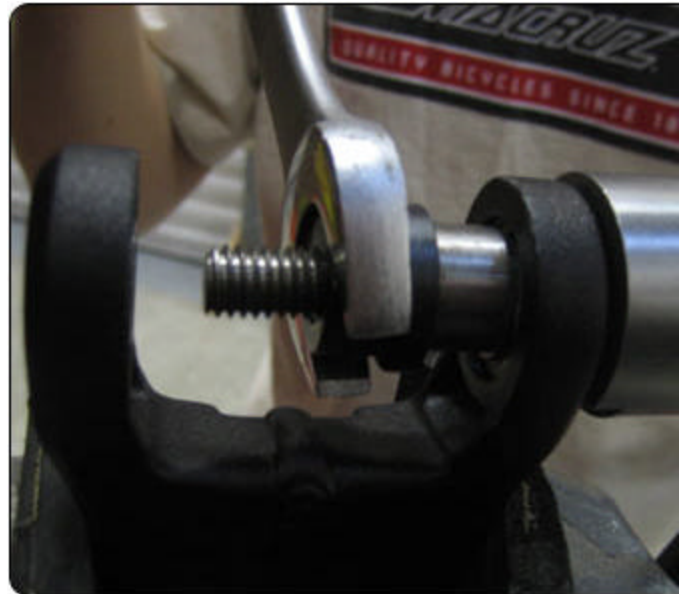


Fig. 7

Step 10: Clean the Bores

- Using a knife or dental pick, carefully scrape dried loctite out of the bores. Try not to remove or gouge any burrs that may have been lifted up in the bore from the installation or removal of bearings. A bit of grease, dirt, or loctite. The loctite requires a very clean surface to cure properly. Acetone the out well.

Step 11: Install Upper Link Bearings (21531)

- Press one of the bearings into the link using your bench vice- make sure that the jaw of the vice is centered on the bearing so it goes in straight.
- Install the bearing spacer and press the other bearing in. You don't have to crank on

the vice to get these in, just press until they stop.

- Use your fingers to center the bearing spacer.
- (Fig. 8)



Fig. 8

Step 12: Install Upper Link Bearings (38802/6901SM)

- Apply a layer of 680 loctite to one of upper bearing bores in the upper link
- You will need the long bearing press tool for this operation.
- One press adaptor with a bearing should be on the outside of the frame, with the large nut outside of it.
- (Fig. 9)



Fig. 9

- If you have the new 6901SM bearings, make sure the thicker inner race is facing the frame.
- The smaller nut from the install tool will need to be between the 2 bearing bores.
- Install the centering tool on the inside of the frame, flat side facing the bearing. To help align everything, install your other press adaptor in the other bore. This will act as a pilot for your threaded rod.
- (Fig. 10)



Fig. 10

- Tighten nuts until bearing hits centering tool.
- Repeat for opposite side.
- Install link on to front triangle and check clearance- you want the frame pivot to be a slightly snug fit at this point between the bearings.
- If you have slop between the bearings and frame, repress each bearing a tiny bit using the above procedure, except this time install the centering tool with the flat side facing away from the bearing. This will allow the bearing to come in slightly further. Work until you get a snug fit.
- (Fig. 11)



Fig. 11

- Install your greased pivot axle to install the link to the front triangle.
- Use Loctite 242 on the threads and torque to 115 in/lbs.
- (Fig. 12)



Fig. 12

Step 13: Install Lower Link Bearings

- Apply a layer of 680 loctite to the lower bearing bores in the front triangle
- Hold the lower link in place between bearing mount “ears” and slide the tool through with both bearings.
(If you are using the 6901SM bearings, make sure the thicker inner race is facing the link.) Do not use the centering tool at this point.
- Tighten the nuts against each other using your 3/4" and 7/8" wrench. Stop immediately if one of them starts going in crooked. If this happens, remove the bearing, scrape out any burrs you might have created, and try again
- Press the bearings until they both bottom on the lower link. The bearings do not need to be pressed fully into the bore- only until they contact the link.
- (Fig. 13)



Fig. 13

Step 14: Centering the Lower Link

- The bearings will probably not press in equally, and if so, will need centering
- Find the side of the lower link that has the most space in between the link and the frame tabs. Slide the centering tool in between the frame tab and the press adaptor on the side with the larger gap.
- Make sure you are looking at the protruding portions of the lower link at this point, which are asymmetrical. Don't center the main portion of the link between the frame tabs- concentrate on the protruding portions of the

link

- Tighten the nuts together until the link is centered.
- Make sure you can remove the link when the tool is taken out. If you cannot remove it, center it more precisely.
- (Fig. 14)

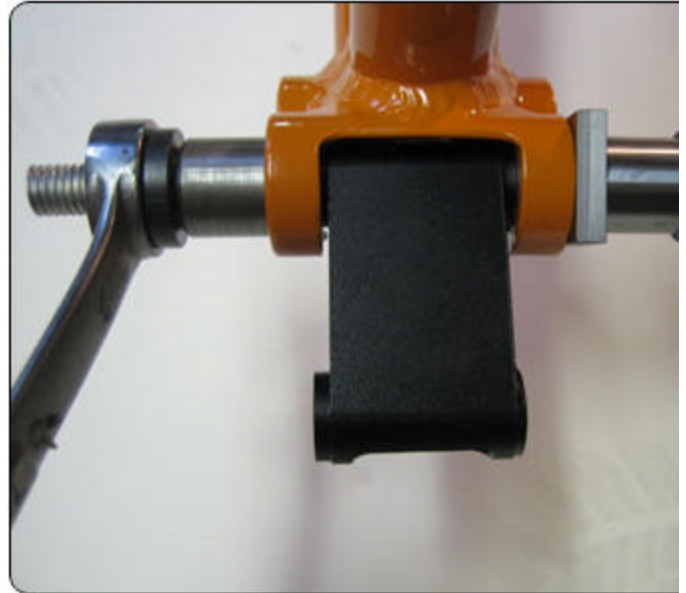


Fig. 14

Step 15: Check Bearing Alignment

- Remove the tool and link from the front triangle, and clean out excess loctite.
- Slide one of your pivot axles through one bearing until it contacts the opposing bearing. Check out how straight the bearing is, then try it from the opposing side.
- If either of the bearings is a LITTLE crooked, you can straighten it by tapping perpendicularly on the pivot axle when it is in the crooked bearing. Take it easy, it doesn't take much to straighten them. If it is significantly crooked, remove it and try again.
- (Fig. 15 a)



Fig. 15 a

- Now that both of your bearings are perfectly aligned with each other, make sure that they are still snug against the link. There should be very little slop between the link and the bearings. If there is a gap re-press without the centering tool (but with the link installed) to close this gap.
- Make sure there is a snug fit between the bearings and the link at this point. If you have a stubborn frame where there always seems to be some slop, try the upper link bearing press procedure above (step 12). That will allow you to draw each bearing in slightly until there are no gaps.

- Now remove the link, and repeat the press process for the swingarm
- Once you are happy with the bearing press, install the rubber bearing seals onto the inside face of the bearing. Try to get the outermost portion of the seal underneath the lip of the bearing bore.
- (Fig. 15 b)



Fig. 15 b

Step 16: Assemble the Lower Pivot

- Install the lower link into the swingarm, and slide a greased pivot axle through.
- Apply loctite 242 to the bolt, and tighten to 115 in/lbs.
- Repeat to install the lower link to the front triangle.
- Once the bolts are properly torqued, check the bearings for smooth operation and side-side play.
- (Fig. 16)



Fig. 16

Step 17: Attach the Seatstay Ends to the Upper Link

- Fit the o-ring seals between the upper link and the seatstay end. They should fit around the protrusion on the seatstay end.
- Make sure the bearing spacer is centered in between the bearings, and install the greased through axle through the link and seatstay ends.
- Grease the aluminum bolt/cap and thread it into the through axle.
- Torque to 40 in/lbs.
- Apply loctite 242 to the pinch bolts in the seatstay ends, and torque to 70 in/lbs.

- (Fig. 17)



Fig. 17

Step 18: Install the shock

- Grease the external surface of the Ti shock shafts, and install them through the shock eyelets and the suspension to install the shock, compressing the rubber bumper on the lower link- this is completed
- Apply loctite 242 to the M6 bolts, and torque to 95in/lbs.

Step 19: Check Pivot Axles for Proper Function

- There is a possibility that your pivot axles may be a little too long for your slightly worn links. This are short enough to properly clamp everything.
- Make sure all the bolts are torqued to spec. using two allen wrenches (one on each side).
- Take one allen wrench and try to turn each of the pivot axles and shock axles clockwise.
- If any of these axles spin, tighten the bolts more and try again. If you have an axle where the bolts are when turned, the bolts are bottomed out on the ends of the axle.
- Remove any spinning pivot axles and shorten 1-2mm using a file or grinder. Install and re-test.

Changing the Nomad Dropout

- Remove the two bolts using a fresh 6mm (or 5mm, depending on vintage) allen wrench.
- Once the bolts are removed, separate the seatstay from the dropout laterally while twisting and pulling.
- You may have to tap the dropout off towards the back of the bike.
- To install the new dropout, apply loctite 242 to the bolts and interface between frame and dropout. To prevent creaking or movement.
- Torque bolts to 110 in/lbs.

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