

Bearing Overhaul Instructions for: Tallboy (.1) 2009



Tools Needed:

- [7900 Removal Tool](#)
- [7902 Removal Tool](#)
- 7900/7902/6902 Press Tool
- Grease Gun (included with frame)
- (2) 11/16" or adjustable wrenches
- 9/16" or adjustable wrench
- Loctite 242 or 243
- mallet
- seal pick
- metric Allen wrench set
- torque wrench (Almost all bolts on the frame are titanium and need fresh tools to avoid stripping)

The Tallboy was designed to be serviced very easily, and does not require removal of cranks, bb, rear wheel or brake to service the pivots. Feel free to leave it fully assembled.

Step 1: Remove Upper Link

1. a) Use a 6mm allen wrench to remove the rear end of the shock.



2. b) Using a 4mm allen wrench, remove the two M5 bolts in the upper link.



3. c) Once the bolts are removed, use the same allen wrench to pry the tapered washers out of the axles. Side load them back and forth until they come loose.



4. d) Insert a 5mm allen wrench into the pivot axle where the tapered washers came from. Turn counterclockwise to remove the seatstay end axle.



5. e) Sometimes the collet axles get hung up, especially the lower pivot on the upper link. If the non-drive side seatstay starts bowing out when you unthread this axle, tap it back in once you have unthreaded it about halfway (opening a small gap between the seatstay and link). It should come out easily after you have done this once, but you may need to loosen and tap a couple of times progressively to get this one out.
6. f) Remove the upper pivot axle and remove upper link.

Step 2: Remove Lower Link

1. a) Using a 5mm Allen wrench, remove the two bolts from the non-drive side of the lower link.



2. b) Use the same Allen wrench to remove the tapered washers from the pivot axle. Wedge the Allen wrench into the bolt hole and side load it to pop the tapered washer out.
3. c) Using an 8mm Allen wrench, loosen and remove the pivot axles.



Step 3: Remove Caps and Seals from Lower Link

1. a) You should be able to remove all 4 bearing caps by hand.



2. b) Pull all 4 bearing seals out with a seal pick or awl. A small blade will work in a pinch.



Step 4: Remove Lower Link Bearings

1. a) Assemble the Removal Tool 7902 as shown, with the smaller jaws inside the bearing. The flat face of the tool should sit on the bearing.



2. b) Slide the removal driver in from the opposite side between the two jaws of the removal tool. Push until the flat face on the driver bottoms on the jaws.
3. c) Using a rag or some other sort of padding, hang one half of the link off of a table or vise anvil. Alternatively, clamp in vise as shown- using pivot caps to protect the link.
4. d) Use a mallet or hammer to tap bearings out while holding the link to the table. The bearings are not held in with Loctite like on the 1st generation Blur models, so they should come out pretty easily.



5. e) Repeat for the other 3 bearings. (If you have difficulty removing any of the bearings, see the end of these instructions for an alternate method.)

Step 5: Clean Lower Link

1. a) Once all of the bearings are removed, clean the inside of link to remove old grease and dirt. It is important to have the inside of the link clean, so the loctite on the pivot axle is not contaminated later.

Step 6: Install New Lower Link Bearings

1. a) Assemble the press tool and one of the new bearings onto the link as shown, **with the open side of the bearing facing in.** Tighten the nuts by hand to snug everything up. Make sure the bearing is aligned properly with the link.



2. b) Use a pair of 11/16" or adjustable wrenches to press the bearing in to the bottom of the bore. Stop immediately and try again if the bearing starts going in crooked.



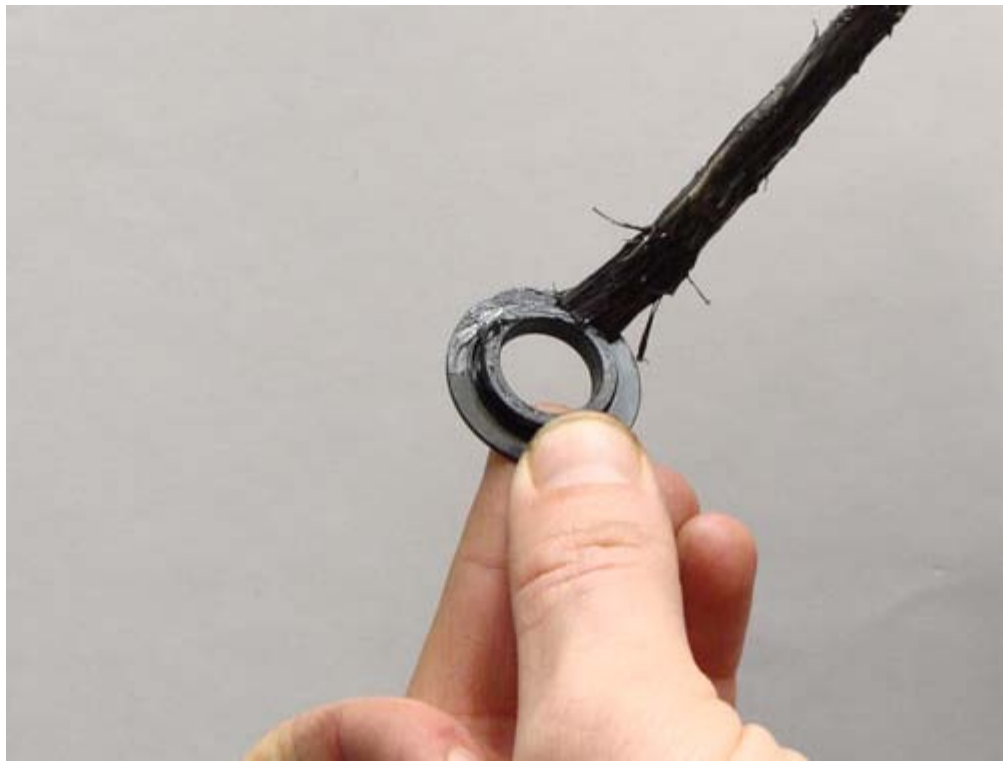
3. c) Press the second bearing in until it bottoms.



4. d) Repeat for other pair of bearings.
5. e) Press the seals on with the smooth side in. It is important to get these seated all the way, so use a blunt object (a 5mm Allen wrench works well) to press the outer diameter of the seal all the way down.

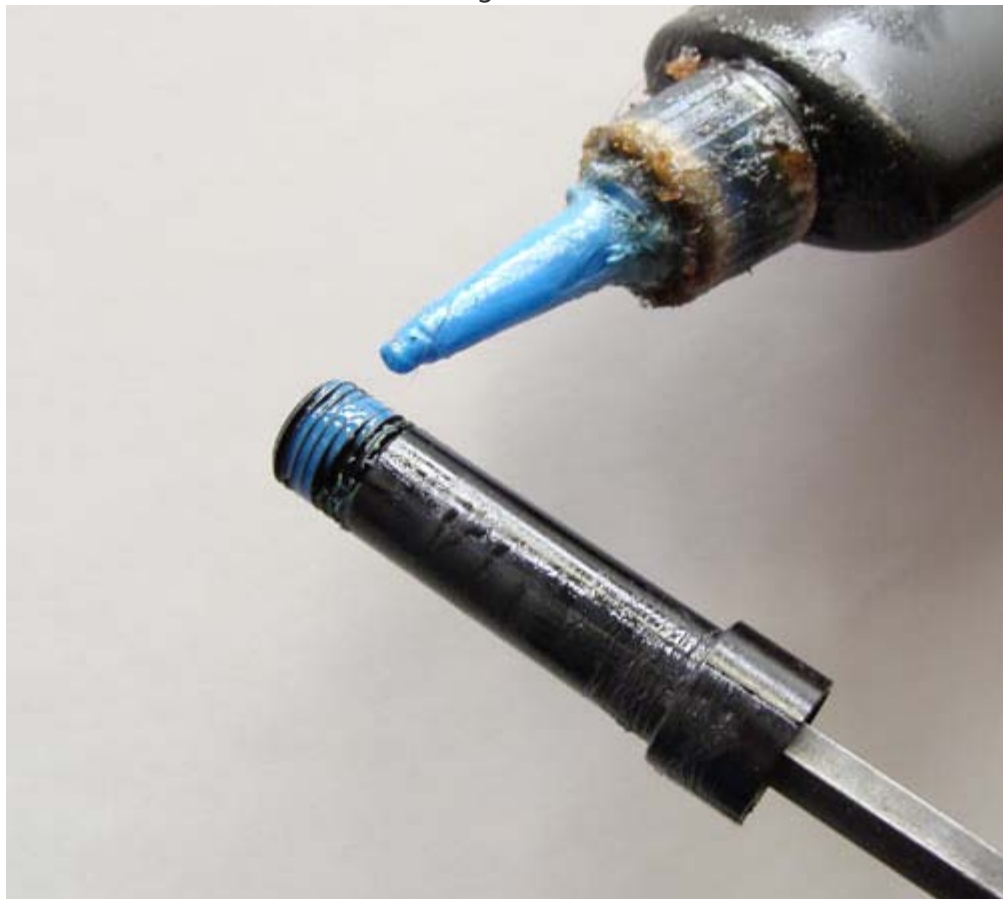


6. f) Apply a small dab of grease to the protruding part of the bearing caps and install all of them into the seals. Rotate them to ensure there is not excessive friction from the seals. If any are rubbing, remove the cap and re-seat the seal.



Step 7: Install Lower Link

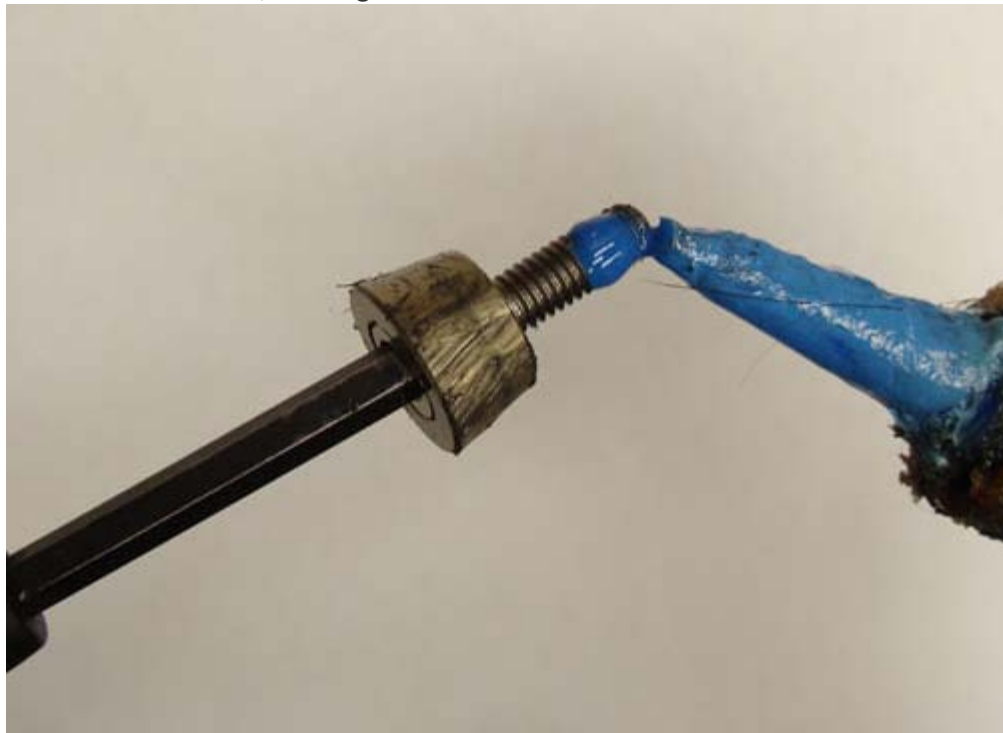
1. a) Clean pivot axles, bolts, and tapered washers of grease and loctite.
2. b) Install lower link assembly onto the swingarm first.
3. c) Apply Loctite 242 to the threads, and coat the external surface of the slotted end of the axle with grease.



4. d) Use an 8mm allen wrench to thread the axle through the link and into the frame. **The axle should be only snug– not tight.** Think of it like adjusting a headset– you want it as loose as possible while still removing any lateral play. It will vary slightly, but tightening it to 35 in/lbs is a pretty safe bet. This is not very tight



5. e) Apply grease to the external surface of one of the tapered washers, and install one of the M6 bolts through it. Apply Loctite 242 to the threads, and tighten to 110 in/lbs.



6. f) Repeat steps c – e for the front pivot.

Step 8: Remove Upper Link Bearings

1. a) Remove all four aluminum caps and remove rubber seals using a seal pick.
2. b) Assemble the Removal Tool 7900 as shown, with the smaller

jaws inside the bearing. The flat face of the tool should sit on the bearing.

3. c) Slide the removal driver in from the opposite side between the two jaws of the removal tool. Push until the flat face on the driver bottoms on the jaws.
4. d) Using a rag or some other sort of padding, hang one half of the link off of a table or vise anvil. Alternatively, clamp in vise as shown- using pivot caps to protect the link.



5. e) Use a mallet or hammer to tap bearings out while holding the link to the table. The bearings are not held in with Loctite like on the 1st generation Blur models, so they should come out pretty easily.
6. f) Repeat for the other 3 bearings. (If you have difficulty removing any of the bearings, see the end of these instructions for an alternate method.)

Step 9: Install New Upper Link Bearings

1. a) First, install the upper bearings (7900). Press one at a time, with the tool assembled as shown. No press inserts are needed for the upper link- the nuts of the press tool sit directly on the bearings. **Press them so that the black seal of the bearings faces out!**



2. b) Use a pair of 11/16" or adjustable wrenches to press the bearing in to the bottom of the bore. Stop immediately and try again if the bearing starts going in crooked.



3. c) Press the seals on with the smooth side in. It is important to get these seated all the way, so use a blunt object (a 5mm Allen wrench works well) to press the outer diameter of the seal all the way down.
4. d) Apply a small dab of grease to the protruding part of the bearing caps and install all of them into the lower seals. Rotate them to ensure there is not excessive friction from the seals. If any are rubbing, remove the cap and re-seat the seal.

Step 10: Install Upper Link

1. a) Clean pivot axles, bolts, and tapered washers of grease and loctite. Apply loctite to the threads, and coat all external non-threaded surfaces of the axle with grease.
2. b) Install rubber seals and caps on all bearings.
3. c) Hold the bearing caps onto the upper bearings and slide the link into its pivot on the front triangle.
4. d) Use a 5mm allen wrench to thread the smaller axle through the link and into the frame. **The axle should be only snug- not tight.** Think of it like adjusting a headset- you want it as loose as possible while still removing any lateral play. It will vary slightly, but tightening this axle to 30 in/lbs is a pretty safe bet (more torque will be required if there is a lot of leftover loctite causing friction-use your best judgement). This is just snug



5. e) Apply grease to the external surface of the tapered washer, and install the M5 bolt through it. Apply loctite 242 to the threads, and tighten to 100 in/lbs.
6. f) Repeat steps a-d for the lower pivot.
7. g) Apply Loctite 242 to the shock bolt and install the shock onto the upper link. Make sure the washer is in place under the bolt head. Torque to 160 in/lbs.

Step 11: -

1. a) Follow the instructions included in the grease gun package to load a grease cartridge into the gun. Squeeze the trigger until you get a consistent flow with no air pockets.
2. b) Use a 9/16" or adjustable wrench and some pliers to loosen the nozzle on the gun. Hold the nut stationary and loosen the knurled cap with pliers. A vice with axle clamps also works to hold the knurled cap.



3. c) Don't loosen the cap too much, just enough where you can press the gun onto the grease fittings on your lower link.
4. d) Once it pops onto the fitting, tighten the knurled cap down so the gun grips the fitting.



5. e) Fill the link until you feel the pressure increase, then stop.

Derailleur Hanger Change

1. a) Use a 2.5mm allen wrench to remove both bolts. Make sure your wrench is in good condition, and be careful not to strip the bolt heads.
2. b) Apply loctite 242 to bolts and install new derailleur hanger. Torque to 25 in/lbs.

One of the bearings exploded when I tried to remove it- what do I do now?

1. Unfortunately angular contact bearings are not very strong when you side load them in the opposite direction they were designed to be loaded in. So, sometimes when removing them, they will come apart, leaving the outer race still in the link.
The Bearing Removal Tool 7900 can be flipped around to remove the stuck bearing race.
Remove all of the seals and balls from the broken bearing, and clean out the grease so you can see what is going on. Use the removal tool as usual, but reverse the orientation of the removal jaws. The larger jaws will grab the bearing race.
Make sure the large flat face in the center of the removal jaws is flush on the bearing race. Once you have the removal driver installed, and all seems flush and flat, give the driver a couple of taps with a hammer. The race will come right out.