



## ATV Swingarm Bearings

**SAFETY FIRST: Protective gloves and eyewear are recommended at this point.**

Note: These instructions are very general, and you should have a service manual for your particular vehicle to get a better understanding of your particular setup and have factory recommended torque levels and specifications on hand.

This guide shows instructions for replacing the swingarm bearings for a shaft drive ATV. For some chain drive models the Motorcycle Swingarm Bearing Installation Guide may be more applicable.

### Prep

Thoroughly clean the vehicle to make the job easier and prevent contamination of the new components during installation.



Get your swingarm bearing rebuild kit from [ALL BALLS RACING](http://www.allballs.com).



Remove the contents of your ALL BALLS RACING swingarm rebuild kit. Layout the components in an organized manner for easy installation. Note: wait to do this until the old parts are removed and you are ready to begin installing the new components.

### Removal



Remove the swingarm pivot caps.



Support the back of the frame so the weight of the vehicle is not being supported by the swingarm.



Remove the rear axle and final drive unit. Free the swingarm from the lower shock mount or linkage.





Remove the pivot lock nut with the special lock nut wrench.



Remove the swingarm pivot bolts. Free the drive shaft joint boot and remove the swingarm.



Remove the dust seals.





Remove the bearings with a suitable bearing puller.



Remove the bearing grease holder.



Clean away all of the old grease, grime, and rust from the bearing bores.



Inspect the bearing bores for wear and damage. Make sure the bores are free of damage or burrs that may cause the new bearings to hang during installation.



## Bearing Replacement



Install the bearing grease holder.



Install the bearing race.



Drive in the bearing race with a suitable driver that only contacts the race on its outside diameter. Do not contact the angled section of the bearing race.



Lubricate the new bearing with grease.





Install the swingarm bearings into the races.



Apply grease to the lips of the dust seals.



Install the dust seals into the swingarm.







Use a driver that matches the outside diameter of the dust seal to push it into place if needed.

#### Installation

Take care to properly support the vehicles frame and swingarm so the vehicles weight is not applied to the swingarm until its fasteners are installed.



Apply a light coat of grease to the swingarm pivot bolts. Install the swingarm to the frame. Tighten the pivot bolts to specification.



Hold the pivot bolt and tighten the locknut to specification with the special locknut wrench.



Install the swingarm pivot caps.





Assemble the vehicle and tighten the fasteners to specification.

To make your bearings last longer- avoid pressure washing around the bearing seals for extended periods of time. Pressure washers will push water right around seals causing premature rusting of the bearings.



INSTALL ALL BALLS RACING STICKER!



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### Prep

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Remove the plastic wrapper from needle bearings and push it into the inside of the bearing to retain the needles.

## Removal



Support the back of the frame so the weight of the vehicle is not being supported by the swingarm.  
Free the swingarm from the frame and linkage.





Inspect the frame, linkage, swingarm, and pivot bolts for wear and damage. Pay specific attention to the condition of the chain slider or your swingarm could look like this. Check the swingarm-to-frame and swingarm-to-engine case fitment for excessive play.

### Bearing Replacement

Note the component location to aid in reassembly.



Remove the side collars.



Remove the pivot collars.



Remove the outer dust seals.





Remove the thrust washers and radial needle bearings.



Remove the inner dust seals.



Note the location and depth when removing the bearings to help with installation. Press the inner and outer bearings out of the swingarm. Allow room for the bearings to exit the far side of the swingarm.



Heating the swingarm around the bearing bores will expand the metal and make removal and installation easier.





Clean away all of the old grease, grime, and rust from the bearing bores.



Inspect the bearing bores for wear and damage. Make sure the bores are free of damage or burrs that may cause the new bearings to hang during installation.



Lubricate the bearings with grease.



Apply a light coat of grease to the outside of the outer bearing race for smooth installation.



Press the bearings into the swingarm. Install the bearings rounded end first. Use a suitable driver that is slightly smaller than the outside diameter as the bearing.



To install the inner bearings it may be necessary to install the head on the driver after the driver has been inserted through the opposite side bearings.





Position the bearings at the proper depth inside the swingarm. In the case of our example, a 2010 Yamaha YZ450F, the outer bearings are required to flush with the outer edge of the bore, and the inner bearings should be 6.5 mm below the inner edge of the swingarm.



Make sure the bearings are properly greased.



Lubricate the new pivot collar with grease and insert it into the bearings.



Lubricate the lips of the dust seals with grease.



Install the inner dust seals. Install the dust seals with the markings facing out. Often the dust seals can be gently pressed in by hand. If needed use a suitable driver with the same outside diameter as the seal to press the seal into the bore.



Position the seal as indicated in the service manual. The seals should be flush with the edge of our 2010 Yamaha YZ450F.





If the bike is equipped with thrust bearings (radial needle bearings) these are replaced by special PTFE washers. Sandwich the PTFE washer between the steel washers. When reassembling the swing arm place the thrust washer assembly so that the PTFE surface faces the outside of the motorcycle.



Install the outer dust seals.



Install the side collars.



Secure the bearing components with zip ties if the rear suspension is not going to be installed to the vehicle right away.

## Installation



Apply a light coat of grease to the swingarm and linkage pivot bolts. Install the swingarm to the frame. Take care to properly support the vehicles frame and swingarm so the vehicles weight is not applied to the swingarm until its fasteners are installed.

Return the vehicle to the ground so that its weight is supported by the rear suspension, and tighten the fasteners to the correct torque specifications. Follow any specific instructions in the vehicle's service manual.

To make your bearings last longer- avoid pressure washing around the bearing seals for extended periods of time. Pressure washers will push water right around seals causing premature rusting of the bearings.





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