

# VULCAN DRIFTER RIDERS



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## Removal of Swing Arm on Your Vulcan

Created by Robert Mayes & Gadget  
Photos Courtesy of David (Spok) Hardy

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**Caution !** You are going to be removing a lot of heavy items from the rear of your bike. Be sure to place something under your front tire while the bike is on the lift to prevent the bike from falling forward off the lift. This could really mess up your day. Review the procedure on rear tire removal [on this page](#) and execute that procedure first. Once the rear tire is off the bike you're halfway to the swingarm bearings.

### What You'll Need

- 1- Roll of paper towels. This can get messy.
- 1- New Exhaust header gasket either OEM Kawasaki or Harley # 17048-98
- 22 mm socket for swingarm bolt
- 14 mm socket or box wrench for gearcase cap nuts
- 17 mm socket or box wrench for shock mount nut
- 12 mm socket for rear header cap nuts for exhaust pipe removal if necessary
- Torque Wrench (check your neighbors if you don't have one)
- Good quality grease for bearings and driveshaft splines

The Kawasaki Service Manual at this point says to remove the passenger footboards, rear case guards and saddle bag supports, if you have not removed them already. If you're a believer in removing anything and everything that might get scratched, get in the way or put your eye out by all means remove all that. If you want you can leave the passenger floorboards left side cover and right saddle bag support in place. You only *need* to remove the left bag support (if you're working on a Nomad) to get the rear axle out and right side cover to prevent scratching it when you remove the rear exhaust pipe]

You do not have to drain the oil if your not going to repair the final drive but if you are, keep it in mind before you get it installed and everything is in your way. There is an upper vent on the inside of the case so support the case in an upright position if you do not want to lose the oil.



Remove the lower single acorn nut from the left rear shock absorber to the final drive and pull it off the stud.

As you are removing the 4 acorn nuts from the swing arm to final drive you will notice the gear case moves towards the rear of the bike.



This is caused by a thrust spring between the drive shaft and final gear shaft, so don't be alarmed. At this point in time have a firm grip on the gear case and pull it towards the rear of the bike (to disengage from the rear drive shaft spline) and keep an eye out for the spring which will come out with the final drive..



The spring will be reinstalled, in the reassembly process, with the small end towards the final gear case.



With the case removed you'll have the drive shaft peeking out the rear of the swingarm as shown at right. If you have a very healthy seal on the gearcase there shouldn't be any gear oil in the swingarm or driveshaft. A very small amount of oil (mixed with grease) as shown isn't harmful but keep an eye on that gearcase seal.

Slide the rubber boot between the transmission and swing arm back off of the swing arm. You can now remove the right side lower acorn nut on the right shock absorber and let the swing arm gently hang. I don't know if there would be any damage to the u-joints, but treat them with TLC.

If you have aftermarket exhaust pipes there's a chance you can skip this entire paragraph. Take a look at the chrome plastic cap that covers the shock pivot bolt. If you can pull that cap out easily without interference from exhaust pipes you're home free, move to the next paragraph. If you haven't removed the rear exhaust pipe heat shields on your stock exhaust system now is the time. Remove the lower rear cylinder exhaust clamp to the catalytic converter (goat's bladder). Remove the two acorn nuts from the rear cylinder exhaust pipe upper flange and remove the flange clamp. Your choice as to taking the rear exhaust pipe completely off or just pull it back far enough as to get the swing arm axle bolt out. No matter what you do in this case there will be a crush gasket that will probably fall out of the rear cylinder exhaust port. You must replace this gasket with a new one. You can use an OEM Kawasaki gasket or a Harley Davidson exhaust gasket part # 17048-98.



Take a look at the right side (viewed from the rear) of the swingarm and you'll see a couple of hoops capturing the brake line. On the 1600 those hoops are already split for you. Just pry one side away and slip the hose out. The 1500 needs a little surgery. Using a Dremel cutting wheel or other tool (a hacksaw will work) make a single cut in each of the hoops (careful, don't cut the brake line or a finger) and bend the hoops out of the way to free the brake line.

Now you can remove the chrome cover on the right side pivot point of the swing arm and loosen the swing arm bolt. When the bolt is loose, support the swing arm and remove the bolt towards the right side of the bike.



Gently pull the swing arm towards the rear of the bike and the drive shaft will stay attached to the transmission as shown at left.

Again, take care as not to jar the u-joints. There will be three spacers for the swing arm One (1) long one, in the middle and two (2) short ones, in the needle bearings. Pull the short ones out to expose the bearings.



Apply a high quality grease to the bearings and re-insert the spacers. Note the left side has a rubber/plastic cap that fits over the outer edge of the spacer. If you want to check and lube the pilot shaft, or splines, now is the time to remove the drive shaft.



To remove the drive shaft turn the drive shaft until there is a little hole facing you. Take an awl or drill bit that will fit into the hole and press it down until the drive shaft slides freely towards the rear of the bike. There will be a little pin that will shoot out of the inner spline and if you are not careful it will be lost on the floor of the work area. This will ruin your day nearly as much as letting the bike fall off the lift. Block the pin from shooting out with your left hand, you will need to reinstall it when reinstalling the drive shaft. Remove the rubber boot completely from the transmission and check for rips, tears, etc.

The three (3) parts that need to be replaced (per Kawasaki) are the exhaust flange crush gasket and the two (2) brake banjo plug crush gaskets (if you removed the brake line from the caliper as opposed to just hanging the caliper from the frame as suggested on the 'tire removal' page). This also is the time to do any modifications, i.e. polishing the final gear case? What about a grease fitting in the swingarm so that you will not have to disassemble the swingarm again for lubrication.

A few things to keep in mind when reassembling the swingarm:

- Assemble in reverse order of disassembly.
- Clean and inspect everything before reassembly!!
- Check to be sure the drive shaft U-joint moves freely in all directions. If there are any notches they could become the source of a vibration. Either replace the entire driveshaft or the U-Joint from a Kawasaki Prarie part #400 49050-1002.
- Check the splines for excessive wear.
- Check bearings for wear and replace if necessary.
- Check the seals.

I think you get the drift, check everything and replace them because your life and others lives will depend on it.

You might have to hook the two ends of the drive shaft rubber boot retainer spring together for reinstallation. It fits into a recess or rabbit fit in the boot and the boot fits into a rabbit fit on the transmission. Don't forget to reinstall the upper drive shaft lock pin. The lock pin tension spring is inside the transmission spline so you will not have to worry about it.

Lubricate, antiseize, or if the application calls for it locktite all threads. Use a quality grease for the needle bearings in the swing arm and the splines on the drive shaft, transmission and final gear case.

Lubricate the swingarm bolt and threads and gently insert the bolt as to not harm the grease seals or most importantly the needle bearings. Don't force the bolt in with a hammer you should be able to push it in by hand. Torque properly.

**Torque Specs: (Ensure you look at the manual to verify torque specs.)**

- **Final Gear to Swing Arm Nuts 25 Ft Lbs**
- **Swing Arm Pivot Shaft 79.6 Ft Lbs**
- **Shock Absorber Acorn Nuts 25 Ft Lbs**
- **Rear Caliper Socket Head Cap Screws 24 Ft Lbs**
- **Rear Caliper Holder Bolt 47 Ft Lbs**
- **Rear Passenger Foot Board Socket Head Cap Screws 14.5 Ft Lbs**

