



## Drive Shaft Universal Joint Replacement

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One day while driving my truck, I noticed a faint squeaking noise coming from the rear of the truck. Initial inspection shows no damage or defects of any kind so I kept driving it. After a week or so, the squeaking got louder. To troubleshoot the problem, I decided to pull the rear driveshaft and check the universal joints. I discovered that the rear u-joint in the driveshaft had nearly seized. So, it was time to replace it.

It's always a good idea to replace both driveshaft universal joints at the same time. The reasoning is simple, they are both the same joint, they both have the same drive time, they've both been through the same abuse, and they're both out of the truck after you remove the driveshaft. If one is already bad, the other one is usually not far behind. If you have a long wheel base truck then there will be two halves of the drive shaft with a center carrier bearing in the middle. You will need to replace all three u-joints as well as the carrier bearing. Since my truck does not have the center bearing or third u-joint, this article will only cover what I had to do. The procedures are similar between both styles.

I started this project by removing the rear driveshaft from the truck. Start by placing the transmission in neutral to remove driveline stress (set the parking brake first) and mark the rear yolk so you can reinstall it in the same orientation. The marking helps for possible vibration issues when you reinstall the driveshaft. There are 4 bolts that hold the rear yolk to the rear axle. The front one is a slip-yolk that slides into the back of the transfer case after the rear is disconnected.



After the driveshaft is removed, it's time to look into changing the universal joints. You'll notice that the OEM u-joints do not have any snap rings holding the caps in place. Instead, they have injected nylon rings that go through the yolk. This adds another degree of complication to the project.



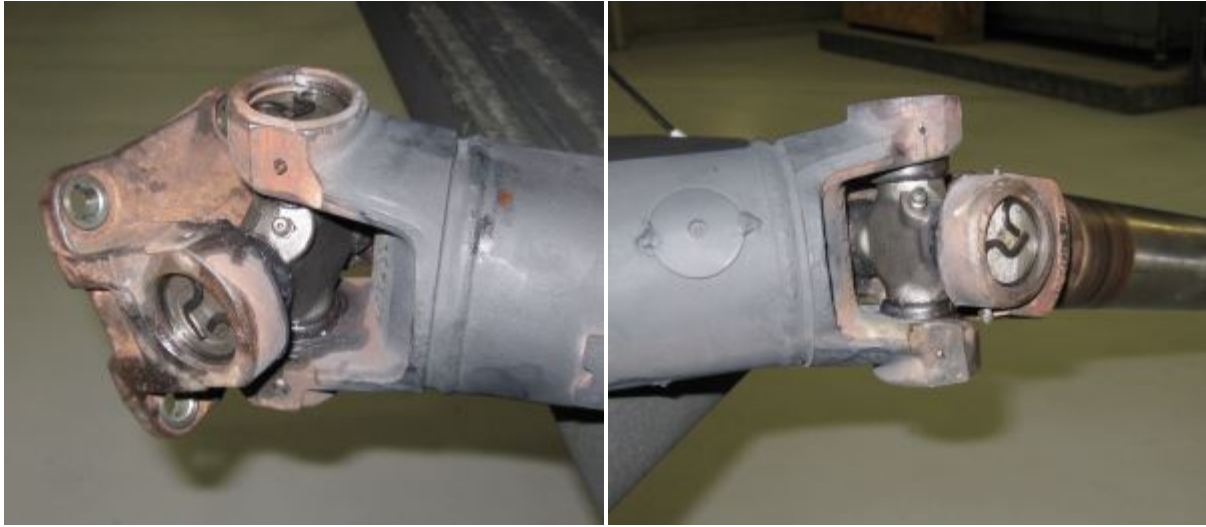
Note: It is mandatory that you have the driveshaft rebalanced when replacing the OEM u-joints. This has to do with the nylon rings. The rings cause an imbalance due to their design and the driveshaft was originally balanced with those u-joints already installed. Replacing them with a standard u-joint will cause vibration issues.

Before I changed the u-joints, I called a local driveshaft shop to check on the cost of having my driveshaft rebalanced. While speaking with them, I was informed that since they are balancing the shaft they will also change the u-joints for free if I brought them down with me. I figured that was a pretty good price and there was no need to change the joints myself. The next few sections are for informational purposes only since I didn't actually change the u-joints myself and don't have any pictures of the process.

On a normal u-joint, you'll remove the snap rings and then press the caps out. Since this doesn't have snap rings, it is required to heat the yolk with a torch and melt the nylon injection rings. While the nylon is still hot (too hot to hold the yolk), you have to press the caps out. Once you have the caps out, you can remove the center cross and scrape out the remaining nylon from the inside of the yolk.

The new u-joints install in the exact same way that any other average u-joint would. Insert the center cross into the yolk, and then press the caps in one at a time. After all the caps are pressed into place, insert the snap rings. All of the yolks already have an outside snap ring groove milled into them from the factory, so a standard u-joint will fit right in. Just do a web search for a u-joint install video to see some general installation procedures. After you tackle the u-joints yourself, take the completed driveshaft to a driveline shop for balancing.

I got my driveshaft back from the shop the same day with two new u-joints and a nice fresh coat of paint. So I took it back home and started to reinstall it.



First, inspect the seal on the back of the transmission to ensure you didn't damage it. If it's damaged, replace it. My seal looked great so I left it alone. Slide the forward slip yolk into the transfer case tail shaft and then rotate the drive shaft (transmission should be in neutral) to line up the marks you made earlier on the rear yolk. Re-install the 4 bolts that hold the rear yolk to the axle and torque to 85 ft lbs.

Normally, this procedure would now be complete. However, I noticed after driving my truck around for a few days the seal on the back of the transfer case was seeping fluid around the driveshaft. I took the drive shaft back out of the truck to re-inspect the seal and found no defects. There were also no defects on the front slip-yolk. I went down to the local dealership and bought a new rear seal for the truck. It was around \$25 and they had it in stock.



To change the seal, you simply tap out the old one and tap in a new one. You do not have to disassemble anything other than removing the drive shaft. On the each side of the transfer case tail shaft, there is a notch where you can get a punch under the seal. Use your punch and tap it out. Rub a little transmission fluid on the part of the new seal that contacts the transfer case and tap the new one back into place. Be very careful not to distort or damage the new seal while you tap it back in. After the seal is installed, rub some transmission fluid on the inside of the seal that contacts the drive shaft.



Since there was no visible damage to the old seal, I was unable to determine exactly what caused the leak. I decided to polish the slip yolk with a red Scotch-Brite pad to ensure it was perfectly smooth prior to re-installation. After the drive shaft is polished, rub some transmission fluid on the slip yolk. All of this fluid rubbing is to ensure everything goes back together smoothly and doesn't damage the seal. Re-install the drive shaft like you did before and check the transfer case to make sure it's still full. This fixed the leak on my truck and it hasn't leaked since.

