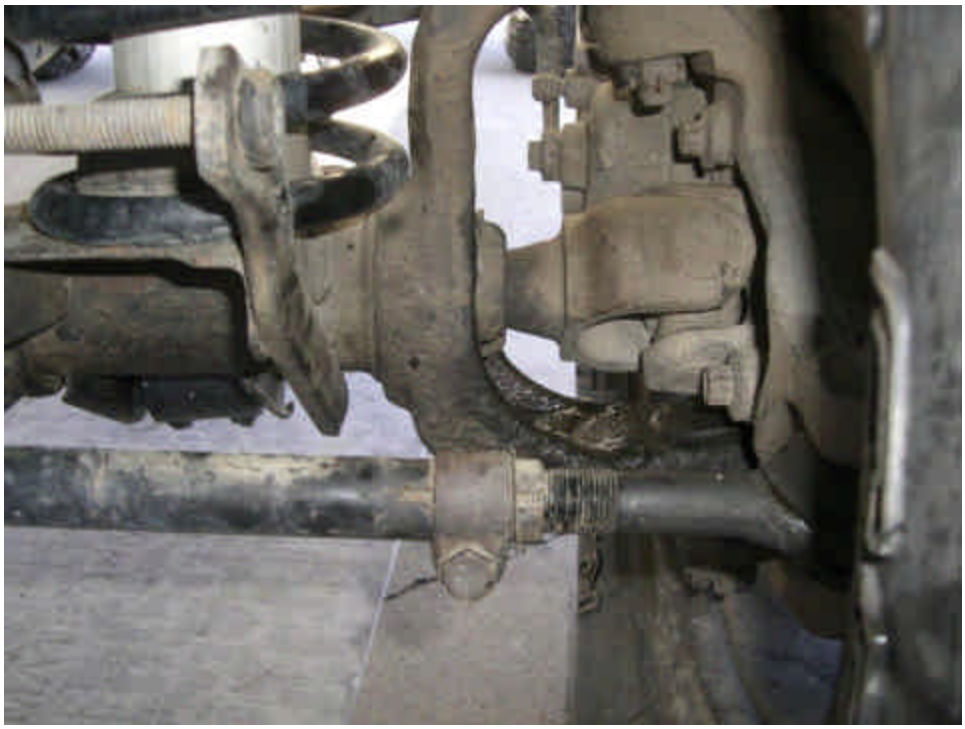
Originally Posted by **GrimmJeeper**

This is why I decided to tear into this job:



I noticed this leak about a year ago, just seeping a little bit. I never really thought much of it, just kept the fluid topped off. All of a sudden one day it started leaking heavily, so I know it was time I had to do something about it. The hardest part about this job was the fact that the seals are located inside the axle housing... so the whole front end needed to come apart. (Hooray).

Here is what I started with:



A tube of silicone to make the gasket for the diff cover, a couple quarts of gear oil (it takes just under 2 quarts to fill the D30), some brake cleaner to clean out the housing once it was all apart, and the carrier bearings (just in case they were bad. Napa part number BR72.) Also, not pictured, the seals, Napa part #11899 (both sides take the same seal.

First, get the front axle up on jack stands, and remove the front driveshaft.



Then remove the brake calipers, and support them somehow so they aren't hanging from brake hoses I set mine on the lower control arms, but sometimes you need to use a coat hanger or bailing wire to hang them up. Pull off the rotors and set them aside. Now is a good time to check your brakes and see if they need replacing. Mine were fine.

Now remove the bolts holding the diff cover on:



Be sure to look extra cool by smoking while you do this:



Use a screwdriver to pry the bottom edge of the cover away from the housing and drain the oil, or what's left of it. My leak was bad, less than half a quart came out. It's helpful to leave the top cover bolt in just a few threads so the whole thing doesn't fall off and spill your oil drip pan when you pry it loose.

Now that you have the cover off the easiest way to check your carrier bearings is to place a large pry bar under the ring gear and try to move the carrier.



Mine had no play at all. That's a good sign, I get to take the bearings back, and save some money

The next step is to remove the axle shafts so we can get the carrier out. Sounds easy right? This was the hardest part of the job and took us the better part of 2 hours. My jeep is 13 years old and it spent most of its life in Ohio. That's right, you guessed it, and the rust monster had a long time to work on my unit bearings.



Start off by spraying all the bolts with PB Blaster. If you are a smart guy like me you will forget to do this the night before to make it easier on yourself. Remove the 3 bolts holding the unit bearing on and give it a few good whacks with a dead blow hammer (the kind with the lead shot inside, NOT a solid hammer). If you are extremely lucky, or if your unit bearings have been off before, they will pop right out and this point and you can skip ahead. I was very much not lucky.



We even had a hard time turning the bolts loose.



Sometimes tapping the ratchet with a hammer helps when pure buffness fails.



Once all the bolts were out the unit bearings still would not move at all. Ok, on to plan B. plan B consists of putting all the bolts back in about half way, and putting a cheapo socket on the head of the bolt that you don't want anymore. Hit the socket with the hammer a few times good and hard and see of the unit bearing breaks loose at all. If not keep going from bolt to bolt, hitting the socket with the hammer until it starts to move.



This takes awhile but it works. Make sure you hit the socket NOT the bolt itself. If you try to cheat and just tap the bolts you are going to ruin the threads on the bolts and possibly the threads inside the knuckle.

Make sure your friends stand around and play air guitar and talk about how bad the cheap beer you brought is:



Man, that was some good carne asada, now back to work.

Clean the housing out as good as you can. Get the brake cleaner and wash it out completely. Don't forget to clean the axle tubes out. we did this by shoving a rag into the tube from the inside, then using the broom stick from before to push it all the way to the outside of the tube. Do this a few times, shaking the rag off each time and shooting some brake cleaner in there. Once you've got it all cleaned out wipe out the surfaces where the seals sit and it should look like this:



Make sure to clean all the old silicone off the diff cover and the housing, I used a scraper and an abrasive disk mounted to a drill, the kind you clean old gaskets off with. A wire wheel on a grinder works very well too. Make sure you clean all the little pieces of silicone out of the housing after this step.

Rub a small amount of fresh gear oil all over the seal to make it slide in easier, and to pre lube the rubber seal surface so the axles don't tear the rubber when you put them back in. put the seal in from the inside with the horn shaped side facing towards the outside.



This part will take two people, but hey, that's why you bought so much beer right? Place a 36MM socket against the seal, and slide your broomstick in from the outside of the axle tube. Line the stick up on the socket...



Hit it with the hammer to seat the seal. It will take awhile of tapping and repositioning the broomstick against the socket to get it to seat completely. Once you get one side in move to the other one and do the same thing. Make sure the stick you are using is small enough in

diameter to fit through the seal for when you need to do the other side. We had to switch to a piece of conduit pipe to get to the second side.





Once you get the seals seated make sure to knock over the bottle of gear oil just past the edge of the drip board, then use brake cleaner to make the stain bigger.



Clean the bearings and races for the carrier off with brake cleaner to make sure you didn't get dirt on them when you were checking the bearings, then put it back together and pop the carrier in. put the caps back on and get out the torque wrench. Torque the cap bolts to 60ft/lbs. you really need to use the torque wrench here, you can't get away with just making them as tight as you think they need to be. Improper torque settings on these bolts will cause uneven wear on the bearings, and more problems for you down the road. Do it right the first time.



Slide the axle shafts back in slowly, making sure you don't tear those nice new seals you just spent all day putting in. Line up the bolt holes in the rotor backing plates and the unit bearings. Make sure you are putting the backing plates back on facing the correct way. If you don't get them on right the calipers won't go back on and you will have to tear it all back apart.



Place a nice even bead of silicone on the diff cover and let it sit for about 30 seconds to get tacky, then pop it on and tighten it up.



Put the calipers and rotors back on, put the tie rod back on the knuckle, and tighten the nut to pull it back into place, put a new cotter pin in it, and you're done!



Refill the axle housing until oil just starts to come out of the hole, and put the plug back in. put the tires on, take it for a drive, and enjoy your leak free housing.