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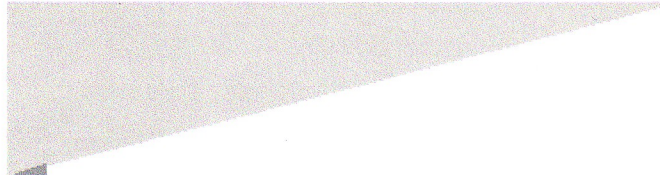
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Dana 35c axle wheel bearing change goes bad

Written by: John Lundqvist

**Please feel free to drop me a line if you have any comments
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Disclaimer

I am not a professional mechanic and I urge you not to consider this up to be fool proof. This is just me sharing my experiences with jeep driving friends.

Always be careful when jacking up and supporting cars. Always use jackstands!!!

Keep your workplace in good order and try to be patient, that is. Rushing things will only result in mistakes and possibly injuries.

Please be aware that there will be no changing of bearings in this article. You will benefit from reading since I go through all the steps you need to go through to come to the part where you pull and replace the bearings.

This was supposed to be a write-up about changing the wheel bearings on a Dana 35 on a Jeep Grand Cherokee 5.2 Ltd -94, but it didn't turn out that way...

I have had the Jeep for about two months and I have been hearing an annoying noise while driving (especially when making wide left turns) and I have narrowed it down to the rear wheel bearing. It's not a loud sound but when you know it is there you hear it all the time.

I shopped around for new bearings and oil seals for both sides and I got them from a Swedish Kronor, about \$135) incl. shipping.



This is it

I work at a computer company as a server consultant and I think it is nice to fiddle with cars and other machines in my spare time. My dad is an auto mechanic so I took my interest from him. I have learned a lot from him and I do most of my own auto work (brakes, service and other stuff). I get along pretty fine as long as there is no electrical work. Then it gets to be complicated for me. When it comes to auto repair work I prefer to solve the problems you can solve by getting a larger hammer.

So this is how I spent my Saturday...

I started by putting two bricks in front of the front wheel to stop the car from going down the driveway. The driveway is level, but I like to play it safe. I then jacked the car up and placed it on jack stands. BTW, I really hate lowering the car down on jack stands. I just know I'll need the car some day...



Up, up and away!

I had a hard time getting the wheel off. I loosened the lug nuts and then I tried to pull them with my fingers and the wheel block swinging to the left and the wheel came back the wheel had come off and I could jack it up again and repeat the procedure again, don't

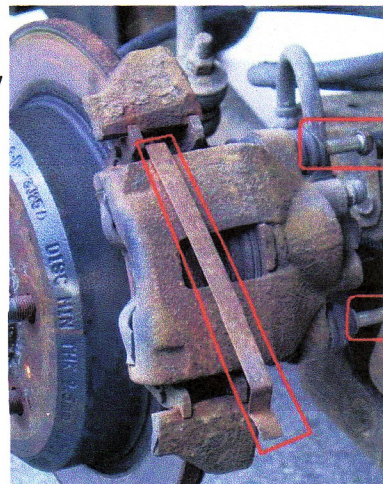
Loosening the wheel the way I did should be considered dangerous, but I went on anyway. The play between the 5 or 6 lug nuts is 1mm or less. It's like that around the block and it's going to hurt the car.

Removing the brakes

When the wheel is off you just have to

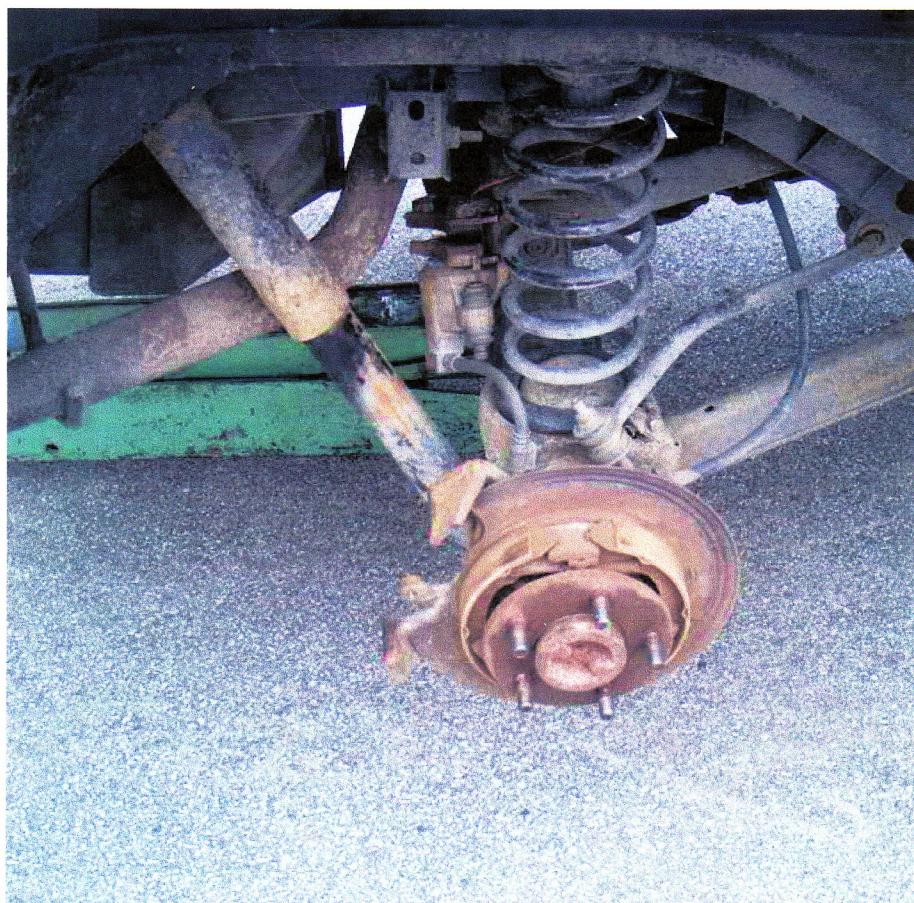
remove the two bolts on the back of the caliper (you can see them in the clip-picture, I have pulled them out a few centimeters. They are 1/2" and very easy access) and then flip off the clip (just flip it off with a screwdriver or something).

With the clip off and the bolts removed you can pry the caliper away from the disc with a screwdriver. Once it is off place it out of the way with the help of a piece of wire. I put one end of the wire on the spring and the other end through a hole in the unibody. Just make sure the hose is not bent or stressed.

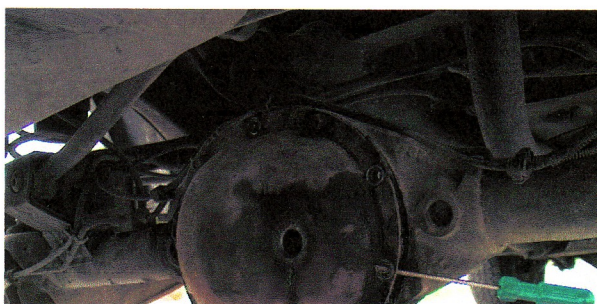


Flipable clip and bolts (pu

When the caliper is off there is nothing holding the disc to the hub but rust and reluctant e-brake pads. Use a small sledge hammer and give the disk a few gc between the wheel bolts. The disc will move around and a lot of dust and rust I suggest you place something under the disc to pick it up. When you have ham a while you can pull/pry it off. Be sure to have loosened the e-brake or else yo and hammer it forever...



Disc removed and caliper out of the way



Draining the diff

The easiest part of it all. Ju: the bolts (1/2" here too) exc at the top (to keep the cover in the drained oil later on). sharp edged screwdriver ar the cover and pull it away fr Take it easy and let the oil c Be sure to cover the ground newspapers. I used a plasti

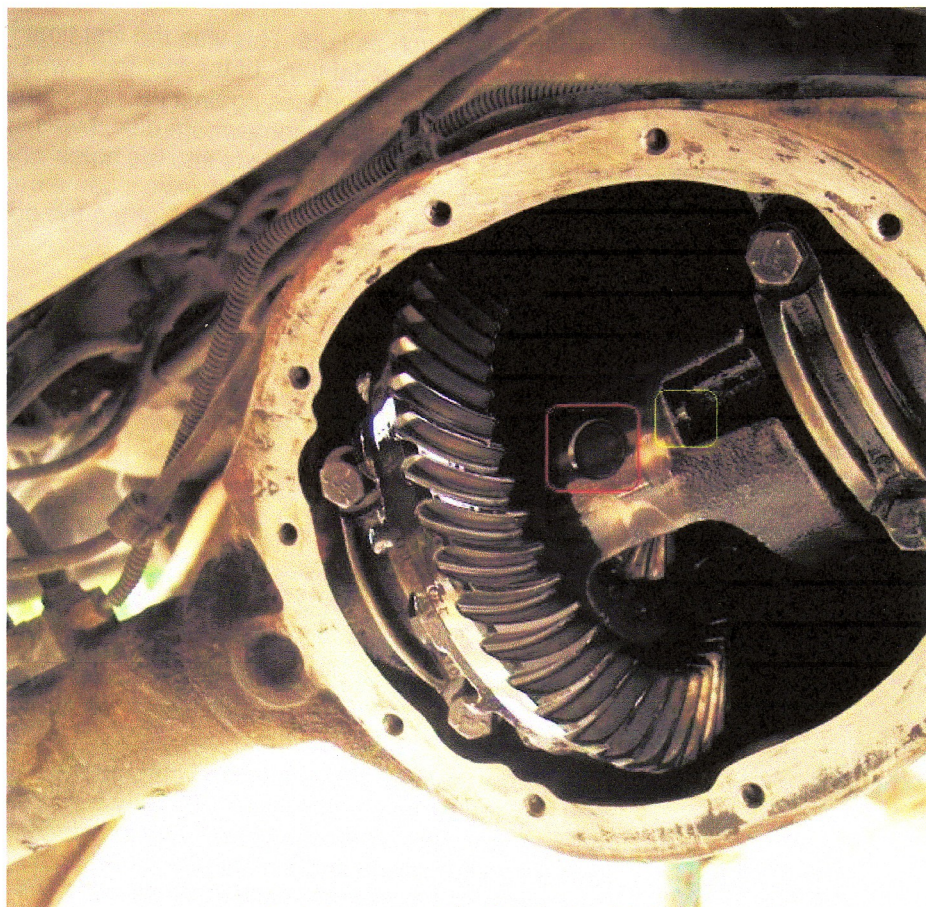
house the smelly and pitch came out. There is less than two litres of oil so it doesn't take a long time to get of the cover and peel of the remaining pieces of gasket.

Go clean the cover and let the oil run out, it will drip for a few minutes

Clean out as much old oil as you can. Use paper or rags and scrape it down in

Now it is time to remove the bolt (marked in yellow) that holds the "carrier pin" what I think it is called, anyway I marked it in red). The bolt is a 1/4" 12-corner laws of nature guarantee that you will have the carrier in the wrong position to

Put the transfer cases in neutral and get under the car. Rotate the drive shaft to position.



Carrier in wrong position. The pin should be facing more downwards.

Removing the bolt holding the carrier pin

Remove the bolt, there is not much room and I was very happy to find a small nyckel) just the right size. There is no room to use a socket (hylsa). The Hayne that this bolt should be fastened with Loc-tite, but I could get it out without prob

Once the little bolt is out use your fingers to get the pin out. If it is stuck just give punches with whatever you have laying around. I will come out pretty easy, I ju with the back of a screwdriver.

Getting the c-clips out

The only thing except for the brake calipers holding the drive axle left in the axle housing is the c-clip. If you push/pull the hub gently you will notice that you can actually move the shaft almost 3-4 mm in and out. This is normal and if you push the axle in and feel inside the carrier, at the end of the drive axle

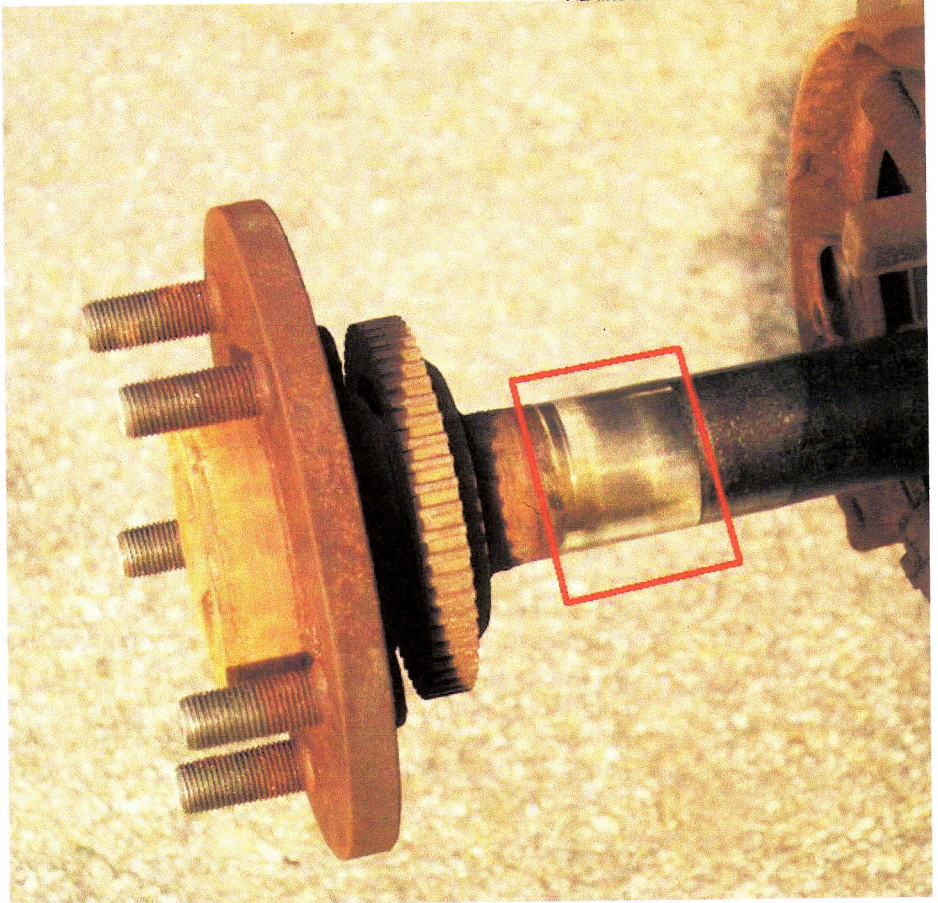
you will feel the c-clip. You should be able to remove it by hand. If not just pull the axle out and push in again a little harder. Do notice that the edges of the track where the clip is can be pretty sharp.

Pulling the axles

With the clips removed you can gently pull out the axles. I started by pulling out the left one. I had no suspicions about the left side, I was just going to change the bearing on that side for convenience; A new bearing is always a new bearing. As you can see the surface where the bearing rides was very smooth and nice.



C-clips and carrier pin out (pin is under t



Nice and smooth

I then went on pulling the right axle. I was suspecting the bearing to be bad, probably ball or two, but I was proven wrong.

I was not happy with what I saw when I pulled the axle out. The surface where the bearing rides was very rough and I realised what had been causing the rumbling noise in my



When good surfaces go bad :-)

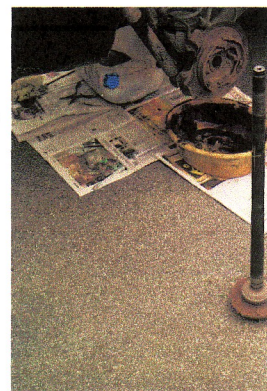
The verdict

I had to conference with my dad about what to do and we decided that I have to get a new axle shaft. There was no use changing the wheel bearings on either side since that would make no difference. Instead I had to put it all back together and I will try to find a new axle as soon as possible. I will change the bearings when I put in the new axle.

I was not too happy about this, but now I know what is causing the noise and I don't have to worry about if it is the carrier bearings or anything else.

So I started putting everything back together:

- Axles in
- C-clips on
- Carrier pin back
- Carrier pin bolt back (the Haynes manual says that the bolt should be tightened with a wrench but I wonder how you find one small enough to fit in there. I just used a wrench to tighten it to my own liking)
- Brakes put back



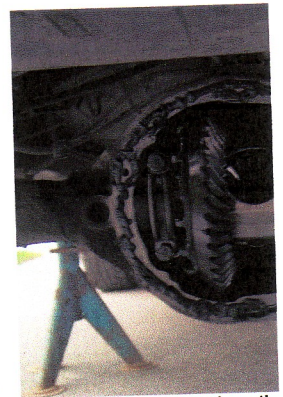
No gor



Instead of a rusty diff cover, I now have a black diff cover.

Make your own gasket

Do not use as much as I did! This was the first time I used this stuff and I didnt think of the fact that I was going to push two flat surfaces against eachother and that the overflow has to go somewhere else. I was really messy trying to get the bolts into the holes when everything is black and sticky. Well, well, it came out alright and I cleaned the overflow off. Tighten the bolts in a criss-cross pattern to even the load.



Use less th



Oil and Oil

Refilling

I dont have a hitch on my car so I bought 80W/90 oil. I also bou Limited slip additive. 2 litres oil (only and the additive cost me 321 kr (about time to shop around).

I was pleased to see that inside the c oil there was a hose which you could the lid to be able to pour it into the dif

I will reuse the new oil since when I change the axle and bearings. The old oil looked very dirty but I could not find any metal shavings or anything in it. I even tried with a strong magnet and it didnt pick up anything noticeable so I guess the damage on the axle has come gradually and what ever has come off the axle has been very finely pulverized.



Old o

Conclusion

I did not remove the annoying sound but I found out what was causing it. I will try to find a reasonably priced axle shaft and replace the worn out axle as soon as possible. I will also change outer seals at that time. I will get back with pictures when that time comes.