

Pajero front diff lock installation



My new locker note the little bag of pins and springs



After removing the wheels remove the cap on the front hubs remove the circlip and shim



Remove the steering control arm completely



Remove the knuckles on both sides. I could not get the lower ball joints to separate even with my 600Nm air gun on it this was the first time ever that my gun was not able to remove something, I eventually removed the four bolts holding the lower ball joint to the control arm



Finally the knuckle removed now you need to give a strong pull to release the drive shaft be careful if your vehicle is on a jack, do not let the splines of the shafts damage the seals



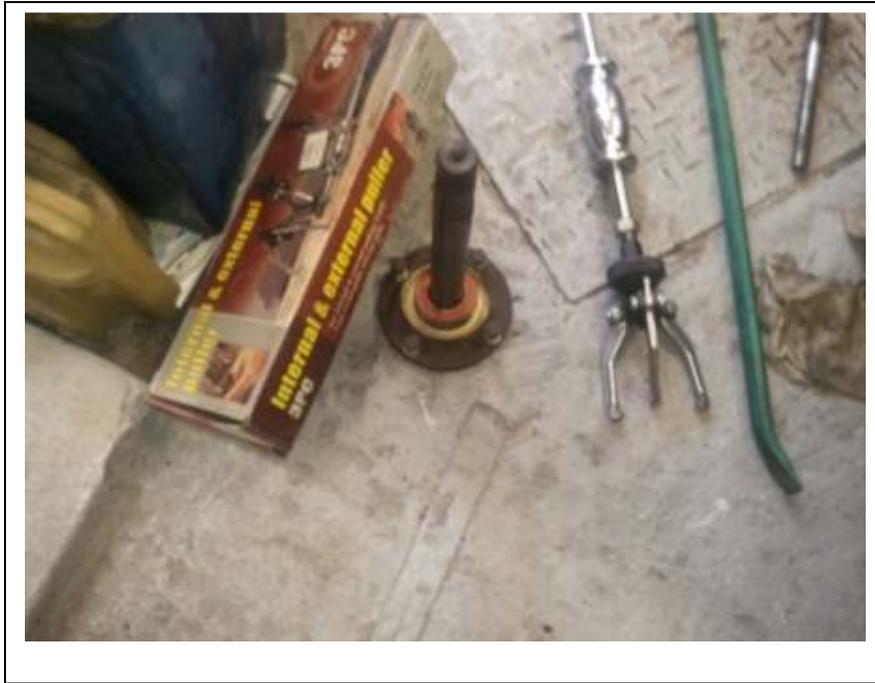
Knuckle removed I separated the ball joint at this point with my air gun and hammer I could not believe how seized on they were.



Note this washer will fall out when you separate the shaft and knuckle the pattern side faces towards the shaft



This is the second drive shaft on the RHS I could not remove it by pulling I used a crow bar from the rear side. I also removed the bolts on the bracket to lower the diff



Second shaft removed



Both outer drive shafts and steering arm removed



Remove the four bolts on the LHS of the diff in order to pull the diff forward this will give you access to the rear bolts on the front drive clutch



Separating the front drive clutch in order to remove the small third drive shaft on the RHS yes three drive shafts and a clutch???



The ring gear will fall out of this shift fork as you separate the clutch



Set the clutch housing to one side



Inside of clutch

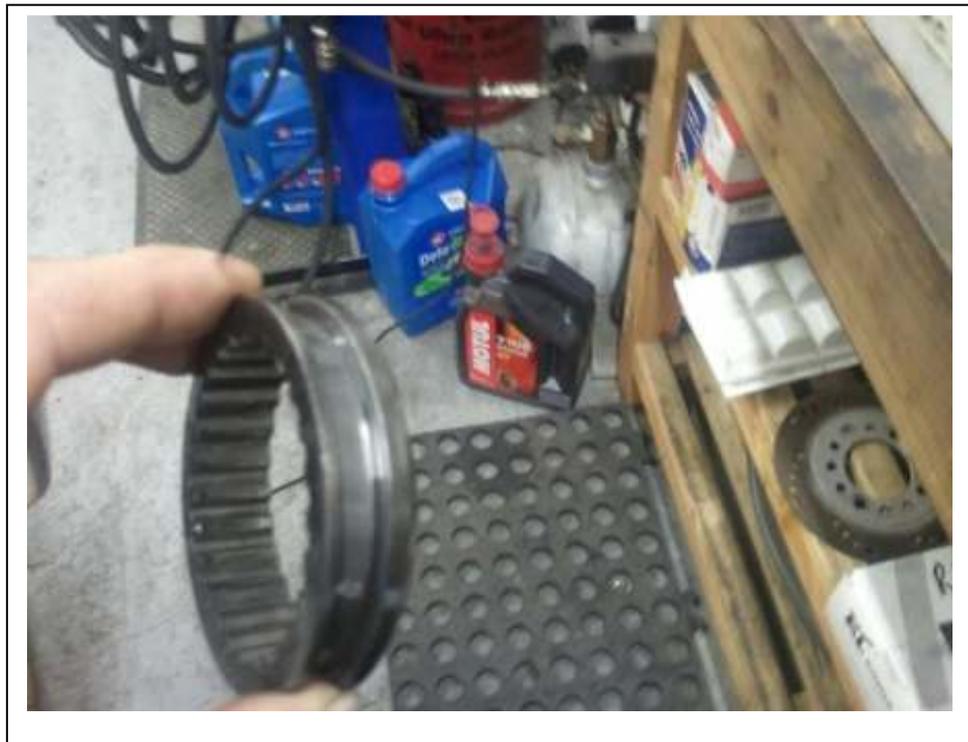


Now this little shaft and small bearing surprised me in my opinion I'm not sure if it can be that robust. But I've since investigated and satisfied the lokker will not break it

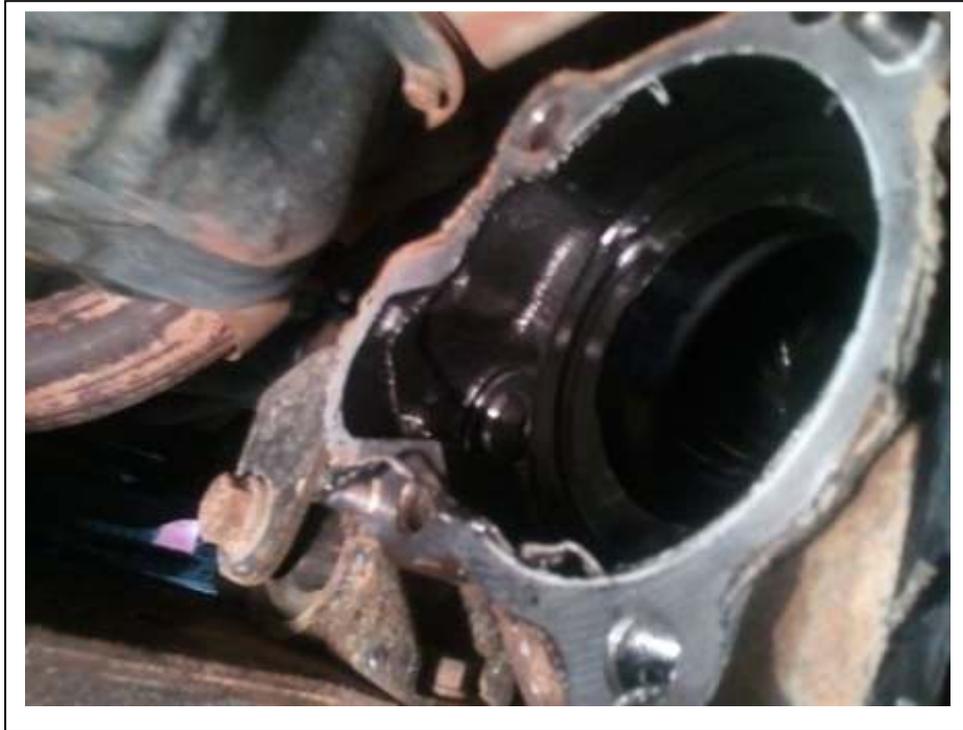


Note the ring gear's narrow side goes towards the shaft





This ring gear engages the RHS front wheel



The small shaft fits into this cavity and locates into the diff on the RHS



Now after removing the cover on the diff remove the four bolts



Bolts and bearing retainers removed keep all parts from each side separate so they go back on the correct side. I had to pull and jiggle the crown wheel to release it, be careful not to break the shims on the sides. If you are laying under the vehicle do not let it drop on your head it is rather heavy



Empty carrier I now cleaned the seals and greased them



Once the crown wheel is removed you will need to remove all the bolts



Remember to keep the LHS and RHS bearing races and shims separate



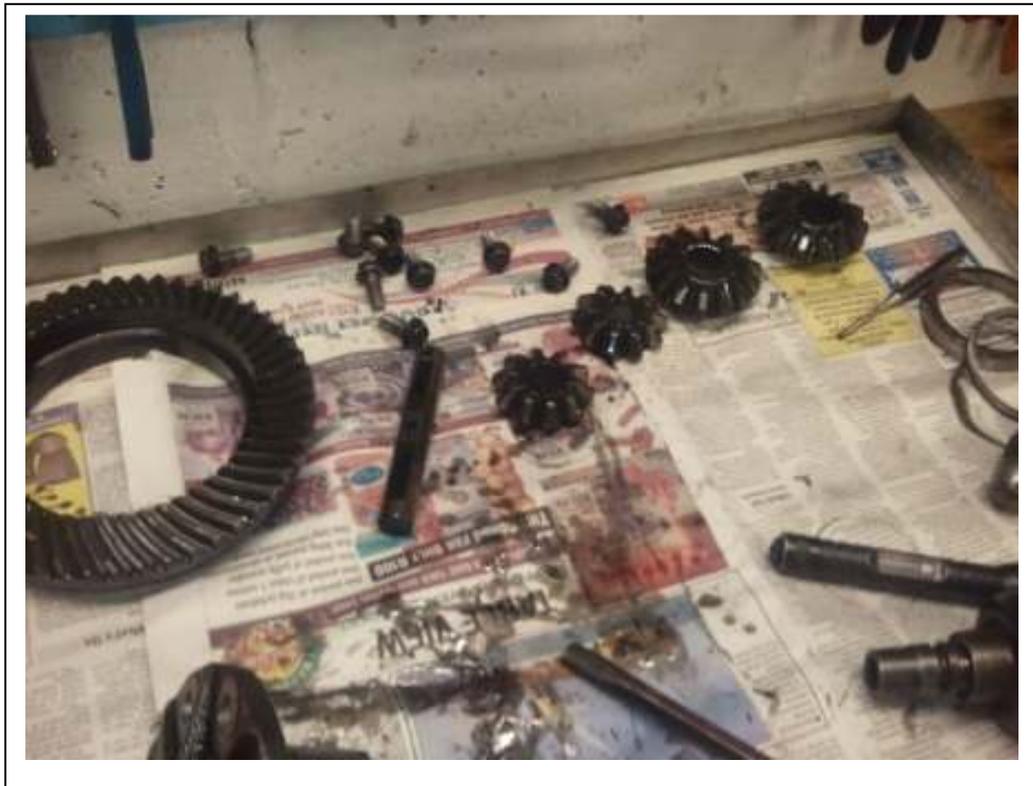
This is the spider gears we will be removing



After removing the crown wheel knock out the pin do not remove the pin completely



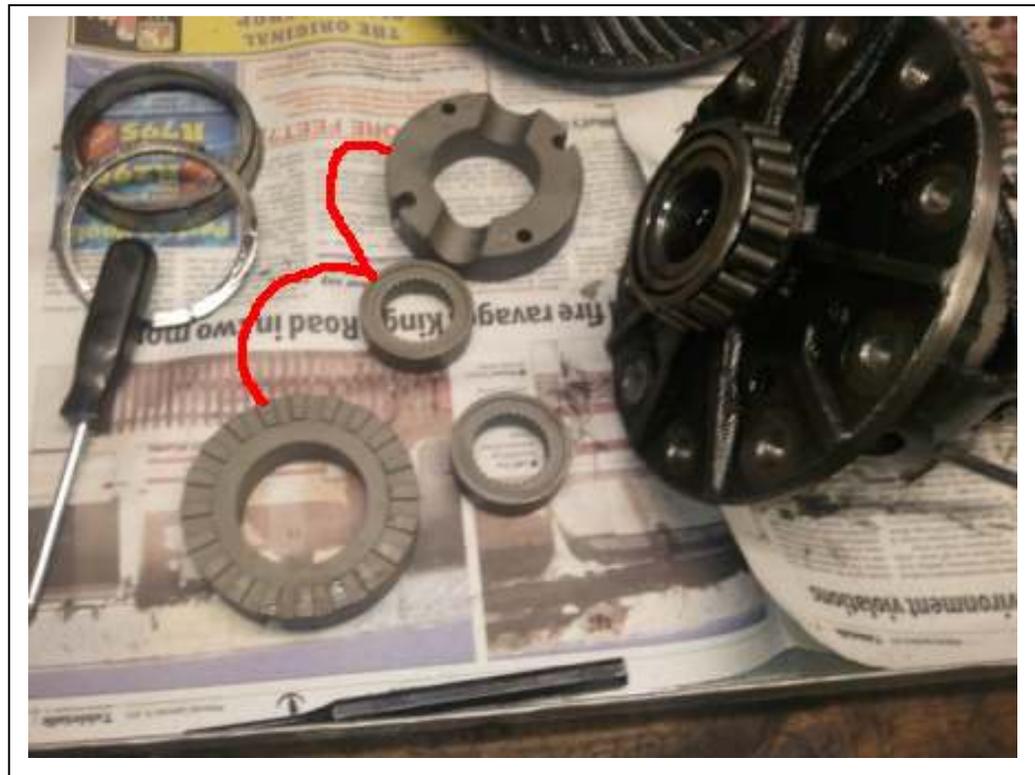
Now you can remove the shaft in order to remove the spider gears



Spider gears removed



Empty Carrier keep the original shims from the spider gears to use with lokker



These three components make up one side of the lokker



I was a bit confused as to the way this collar went in as the instructions were very vague , once installed you will need to line up the spines with the second part of the lokker in order to slide the drive shaft all the way home



Checking to see if the locker cleared the carrier sometimes one needs to grind a small amount



Grease all components before installation



Sides now in carrier



Pins and springs go in here, in my trooper this set up never bothered me at all but in the pajero one can not release the hubs I also noticed the LHS shaft is constantly engaged turning the diff. My concern is at say a 140KM/H the centrifugal force on the springs and pins might throw them out, My second concern is that the default position for the front wheels is to engage if there is a problem this happened to me on a previous occasion the lights on the dash started to flash and the pajero tried to engage four wheel drive while at speed this might be dangerous with a front locker . (OK forget the concerns traction is more important)



Locker now in the carrier is it just me or does she look good





This gap must be correct and sent to the supplier or your warranty will be void



We looking for between 3.68 and 4.19mm mine is perfect at 3.90



Torque all the bolts to 78-88Nm and apply lock tight



Diff carrier mating surface now clean and ready to install



There she is all snug. Now torque the bolts to 54-64Nm and apply sealer



Clutch ready to be bolted together



Use a long thin screw driver to line up the splines from outside the diff



Diff cover clean and sealer applied ready to close her up



When I removed this tube from the diff it was full of sand inside



Ready to be cleaned



I gave it a quick spray and checked the seals



Clip all hoses back



This is the bump stop from the top control arm I removed them as I did this job on my own and was not able to get the bottom and top control arms to connect, with the bump stops removed I could manipulate the two together after loosening the torsion bars this took a huge effort and I battled for ages on this part I never knew I could swear so much, note the arrow on the bump stop it faces towards the engine



Torsion bar adjuster on LHS



Torsion bar adjuster on RHS make sure you measure each side before you release them they must be returned to there original setting



I used this little sliding ruler as there is very little space

And there you have it. I have this same set up on my trooper lokker front and LSD rear in my opinion this is the best combo for sand. Traction is vastly improved on all terrain five years of absolute abuse and the lokker on my trooper is still perfect hope I get the same on the pajero.

Regards

Colin Kensley