



JEEP HOSPITAL

Each month Dr Jeep (Tony Whitehead) takes us through the trials and tribulations at his "Jeep Hospital", USA 4X4 Jeep Specialist in Melbourne, Victoria. Over 20 Jeeps are admitted weekly for servicing and suspension work through to differential, transmission and engine rebuilds. Dr Jeep explains the diagnosis, the corrective surgery and future care of these vehicles.

TJ/XJ/ZJ FRONT UPPER BUSHES

Ever wondered how those upper bushes come out of the axle housing? This is the full set up by Miller tools. You could improvise with some appropriately sized pieces of tube and a length of all thread but the right tools obviously make the job easier.



TJ/XJ/ZJ FRONT BRAKES

This is becoming more and more of an issue as these Jeeps get older. The front disc brake pads sit on these steering knuckles and wear a divot into the surface where the backing plate of the pad sits. This means the pads don't move evenly and you can get a pull to either side. The only way to repair it was to replace them with

some good second hand ones. After seeing this I looked at a few old front ends I had here and they are all showing the same wear pattern, but some much worse than others. If you change a set of pads over have a look how the steering knuckle is faring.

TJ REAR END LOWER ARM BUSH MOUNT

On the out back TJ tourer there were a lot of flogged out control arm bushes. This is the rear axle housing lower arm mount. It has worn so badly I just about wrote it off. There was enough metal left to keep working but only just. If you hear a clanging and a rattle get onto it sooner rather than later – another few weeks and this was a goner. That would mean either another axle housing or re-welding another bracket on in the right spot which would be tricky.



4.0L REAR MAIN SEAL

The old 4.0L Chrysler motor is renowned for three things; guzzling juice, lasting for ever and dripping oil from the rear main seal. It's not a massive job to sort out. The sump comes off and the rear main cap is removed to access the two piece rubber rear main seal. Loosen off all the main bearings to allow a pin punch to pike the old one out and new one in. We also have a set of install studs that centre the gasket on the block with dabs of grease to hold the one piece gasket in place. Then the sump can be pushed back up and bolted on after the main bearings are all torqued up. Inspect your rear main bearing condition too while you're there and take a look up the bores as well, you might find some other surprises as you inspect those two things.



ONE HOT KJ

We ended up buying a 2003 KJ recently from the owner that had cooked the 3.7L petrol motor on the freeway. The initial problem was a leaking radiator. When it got hot on the freeway the driver refused to stop and consequently cooked the number one cylinder to the point of destruction. The motor was a total write off. We replaced the engine with a low kilometre replacement unit, a new radiator and went through the Jeep from one end to the other for a new owner to take care of.



KJ CRD TIMING BELT

Once again having the right tools for the job are imperative especially when changing timing belts. The 2.8 CRD motor requires a replacement of the timing belt as well as both idlers and the tensioner every 100,000 kms or three years. I see them last much longer than three years but we try to stick to the Jeep service

book schedule. There is a crank locking pin that goes in down near the starter motor. There is an inlet and exhaust cam locking pin that comes in from each side of the rocker covers and this tool locks the cam drive wheels too. It is imperative nothing moves while you're changing the belt.

XJ A/C COMPRESSOR

While doing a service on this 99 XJ we replaced the air conditioner pulley bearing. With the clutch assembly off we found the electromagnetic coil insulation deteriorating, it won't last much longer. Lots of Jeeps seem to leave their A/C permanently on, this will shorten the service life of your compressor. Wind down your window!



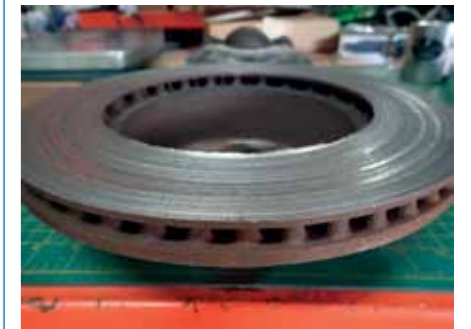
OUTBACK JOHN

We had the mammoth job of refitting a squillion flogged out parts on this 2003 TJ that tour operator John Cantrell uses for his tag-along tour and driver training business out of Sydney. John brought it down to Melbourne and left it with us for a month while we got the air lockers going, brakes replaced, all suspension arms and all steering tie rod ends replaced. We added new coils and shocks, internal coil air bags, a SYE kit, new front and rear drive shafts, a 45L auxiliary fuel tank and fully serviced everything else. The Jeep got a new set of ball joints too that ended

up causing us all a bit of bother. One US brand of ball joint we sell must have had a different manufacturer perhaps, as when they were torqued up to spec they were too tight, causing the Jeep to wander badly. After going through a series of tests we deduced they were the issue and changed them to a local brand, and the Jeep steered so much better. It also received a set of Mickey Thompson ATZ P3's after this photo was taken. Ideally a TJ isn't a brilliant out back tourer, they're too short and small and adding weight to the roof rack has its disadvantages. But John insists the little Jeep does the job and has minimal electronics on it that can fail and where he goes a broken down Jeep is not an option.

BRAKES!

Most modern brake pads have a little indicator tab on them that will start to make a noise to tell you its time for new pads and rotor machine. This 2005 TJ owner must have had the stereo up too loud and didn't realize it was time. This one went on so long that the piston has also seized in the caliper, rendering them written off, so instead of a set of pads and a rotor machine job worth around \$250 it was change over calipers, rotors AND pads, adding up to more like \$800. Regular servicing will avoid nasty surprises like that.



5 & 6 SPEED MANUAL TRANSMISSIONS

If your rig has the later model NV3550 5 speed or the NSG370 6 speed (both identifiable by a central bottom sump plug) you need to keep on top of the synthetic oil changes. I basically change the transmission oil every service for my customers, both of these boxes seem to self destruct and sump plugs like this are a regular occurrence. It's cheaper to change the oil than rebuild the gearbox.