

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.



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CHRYSLER 8¼ DIFFERENTIAL

This month we had a 2005 KJ CRD in for a rear differential inspection. The KJ runs a Chrysler 8¼" rear differential. The rear cover was removed for an inspection and we found the spider gears have been losing metal and unfortunately only a full replacement LSD hemisphere was available. We then discovered there are two different crown wheel bolt sizes, with a 0.4mm thread difference in diameter. You should always replace crown wheel bolts whenever replacing a crown wheel/hemisphere. This held a simple job up for three days waiting to locate the correct bolts and turned what would be a simple cheap repair in say a TJ, to a very expensive drawn out affair in a KJ.



CJ7 BRAKES

This 83 CJ7 needed some attention to the front disc brake callipers. The slide bushes and sleeves had perished since 1983 and the callipers were rattling around. Fresh rubber boots were sourced and new plastic slides fitted, new brake rotors and pads went on and she'll go for another 28 years. Note the 15 year old Rancho RS9000 shock absorbers. While they look old, they still work like brand new with the in cab controller.



BENT CONTROL ARM

This TJ went on the Melbourne Jeep Owners club trip to Robe S.A. They all had a lot of fun in the sand dunes, only this TJ got a little too much air time and has bent the front upper passenger side control arm. They're the same part number as an XJ or ZJ and are not real strong, but they are OK so long as you don't go jumping your Jeep or ramming your Jeep through a bog hole with a sharp exit. I consider them the fusible link in the front end and if you manage to bend one or even both it's not the end of the world, you'll get home if you're careful. Stronger aftermarket arms are available but if you're going to drive hard they won't bend and something else will, like a control arm mount on the differential or chassis. Either way this Jeep was fitted with a new arm and ready to go.



CONTROL ARM MOUNT

Another jumping victim. The front driver's side upper control arm mount on the TJ, XJ or ZJ can buckle like this one has and the bush in that mount can elongate the hole a little and become rather loose. Prying the mount back to shape and welding a gusset in there will help. You will also need to remove the bush then peen the hole back closer to its original size.

We even see these bushes welded in place from time to time, I guess that's a fair enough repair so long as you don't cook the rubber bush.

Alternatively a new axle housing is required, an expensive alternative and no one seems to make upper replacement mounts to my knowledge. They do lowers but not this one. The other side is part of the differential pumpkin and it's never an issue.



DROP PITMAN ARM

The drop pitman arm fitted to this Jeep has lowered the drag link and now the front panhard rod is not parallel to the drag link. This Jeep will torque steer to left on the gas and brake torque steer to the right under heavy braking, a horrible affect some Jeeps seem happy to live with, but not us. Any 5 link front end like a TJ, JK, XJ or ZJ will do the same thing if fitted with a drop pitman arm and the panhard rod hasn't been moved to match it's plane/angle. Lowering panhard rods up front have their own set of dramas attached as they tend to break the chassis mount over time once they're made lower. Raising these front ends over 75mm requires proper steering and tie rod end geometry correction or you can risk breaking a tie rod end, panhard rod or ball joint, with serious consequences.

Here is the drop pitman arm, it should be around 1.5" (the standard one is that) but its a 3" drop and been there for donkeys ages steering like a horror show...the owner is used to it by now but is still not good.

