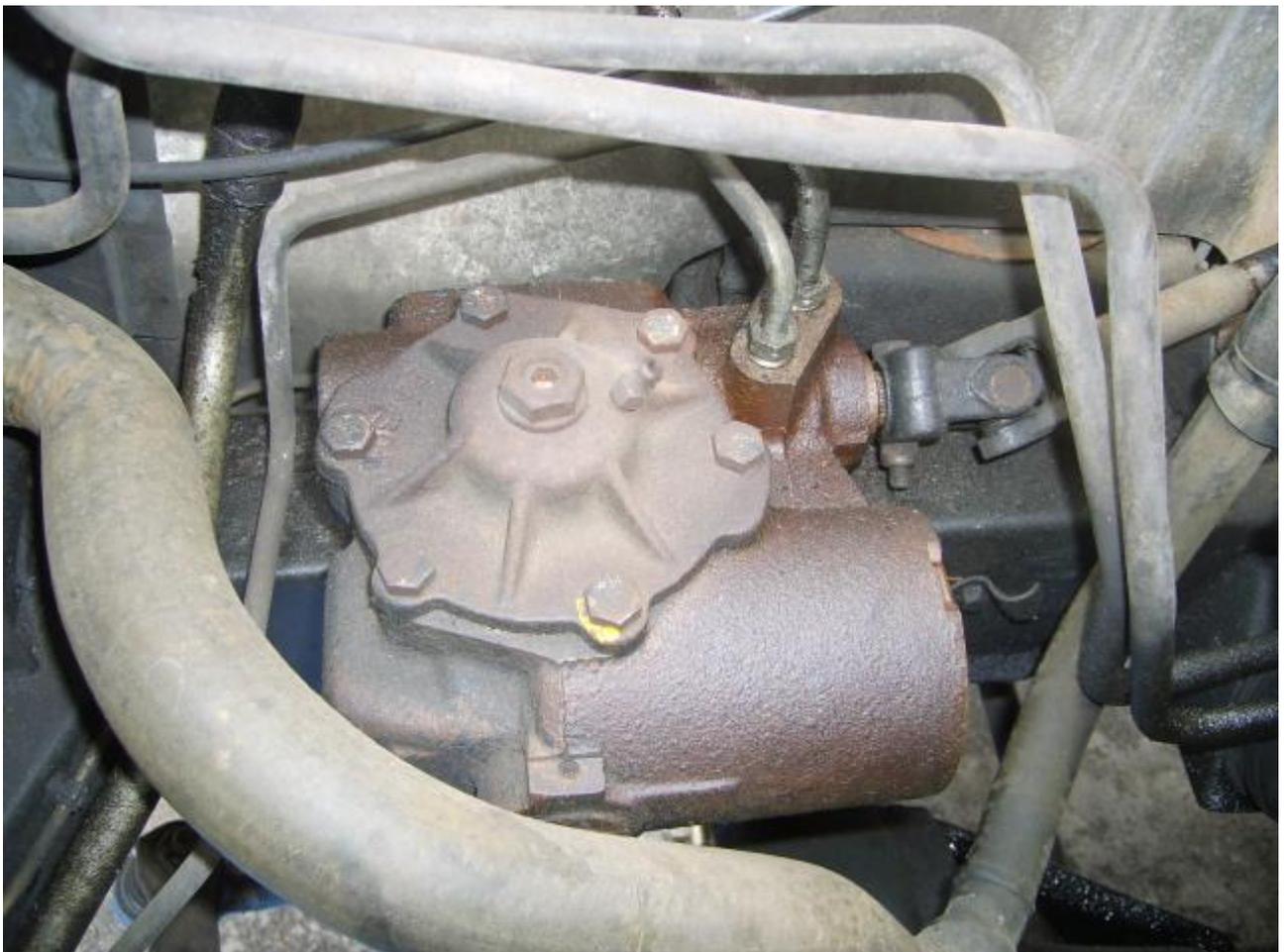


Regardless of what PAS box you have, the method of replacing it is the same. If you have a V8 engine fitted, then there is a small difference to removing it, and this is covered by this thread by a small additon at the bottom.

The most common reason for having to replace the box is because it leaks - normally from the shaft at the bottom and sometimes internal valve failure. There is a seal kit available for the shaft, and it can be replaced with the box still on the vehicle. Vehicle in this thread is an early 90, but the method is the same for a Disco.

Tools required are 34mm socket, breaker bar, 13mm socket, 13mm spanner, 19mm socket, 17mm socket/spanner, 15mm socket/spanner, 14mm spanner, possibly pliers, hammer, and a long blunt chisel or similar item.

From inside the engine bay disconnect the fluid supply pipe from the reservoir (17mm spanner), and the pressure supply from the PAS pump (14mm spanner). Fluid will drain out of the reservoir and pipework - all over the chassis rail, steering link rod and front axle, so use a suitable container to catch it and leave it for a while to drain down. If you turn the steering from lock to lock the steering system will self-drain to a certain extent.

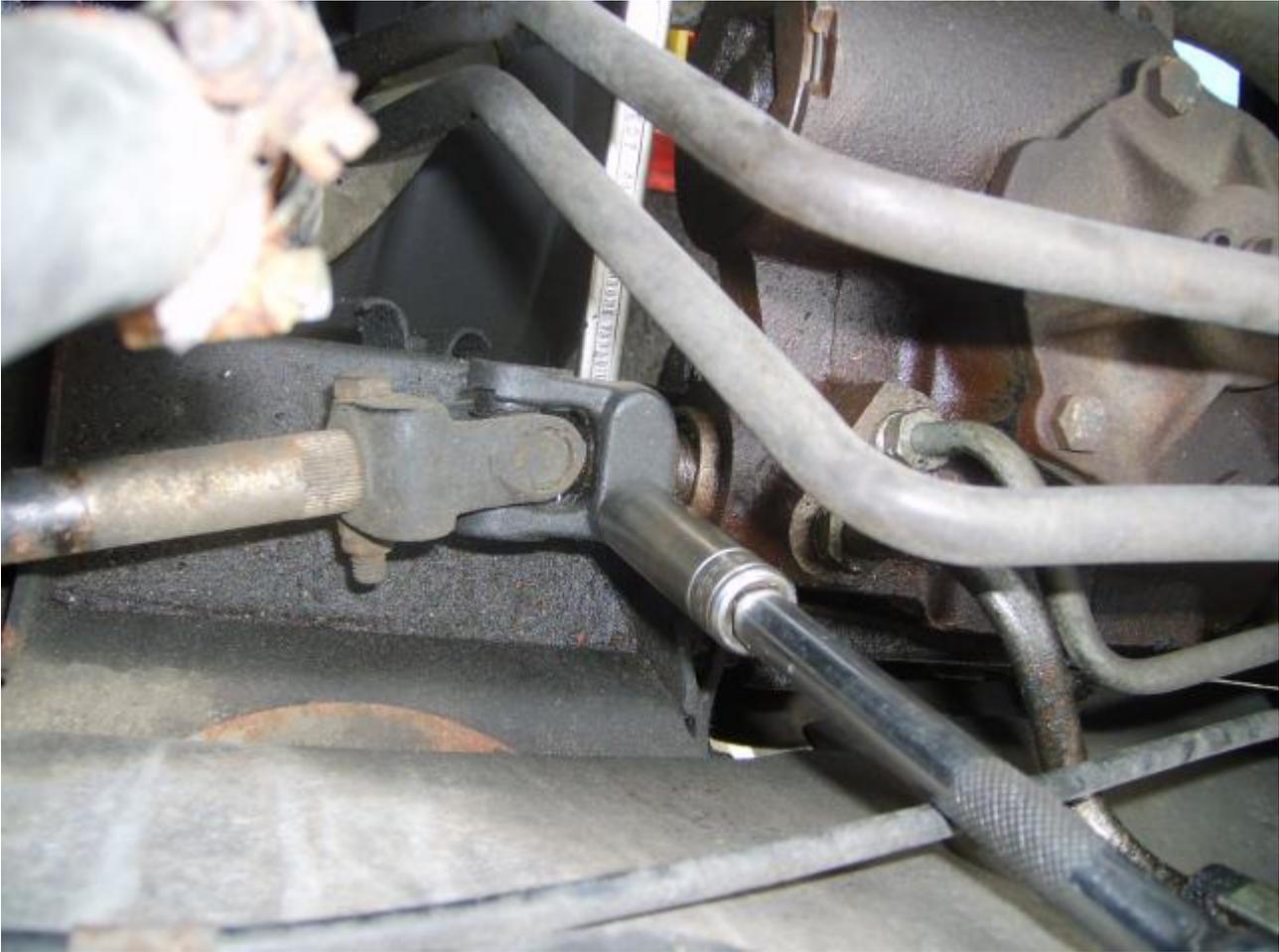


You can either remove the drivers front wheel or turn the steering hard right to gain access to the

inside of the wheel arch. The steering column link rod has two small U/J's at either end - each one has two 13mm nuts/bolts which have to be removed.

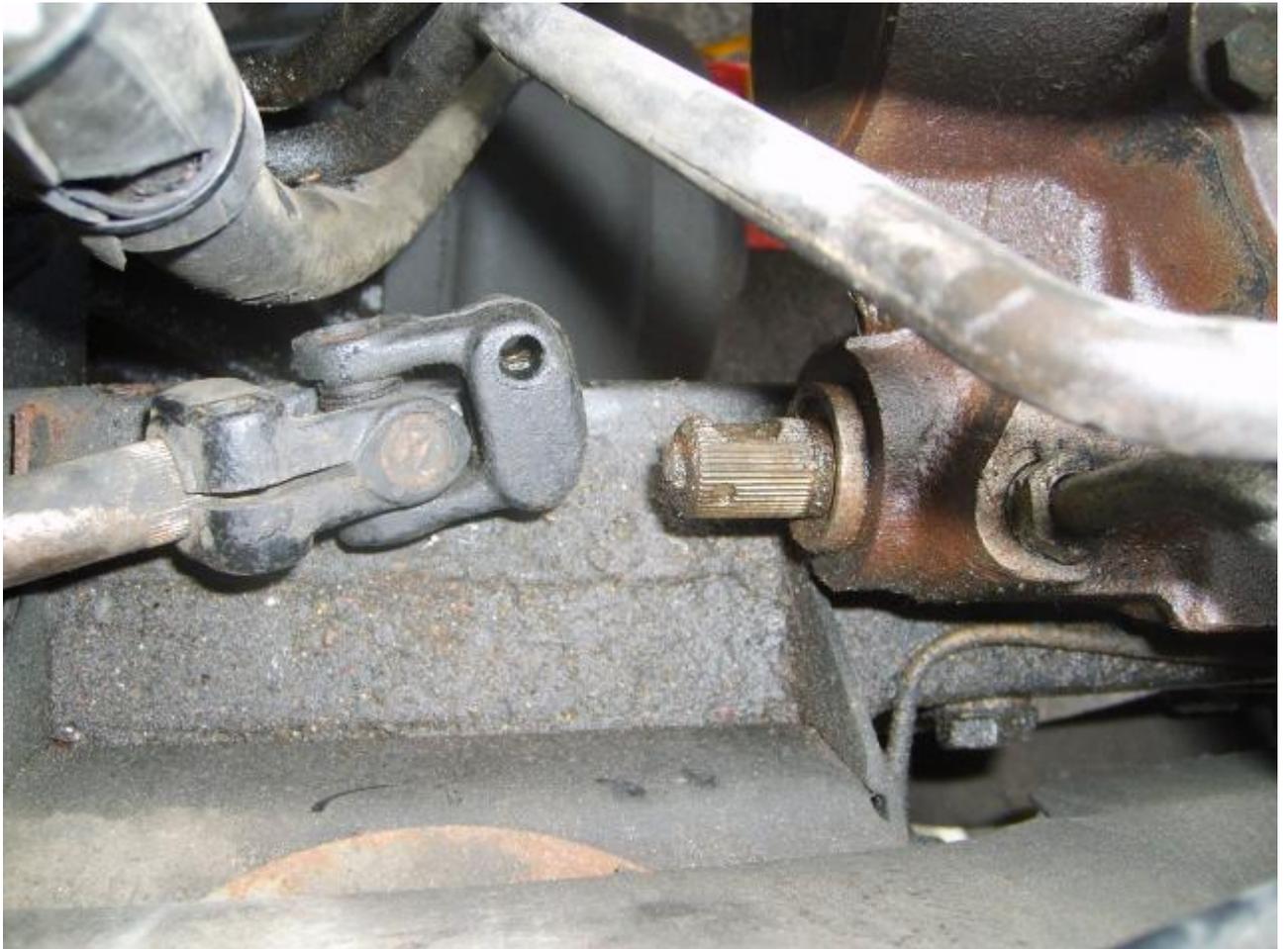






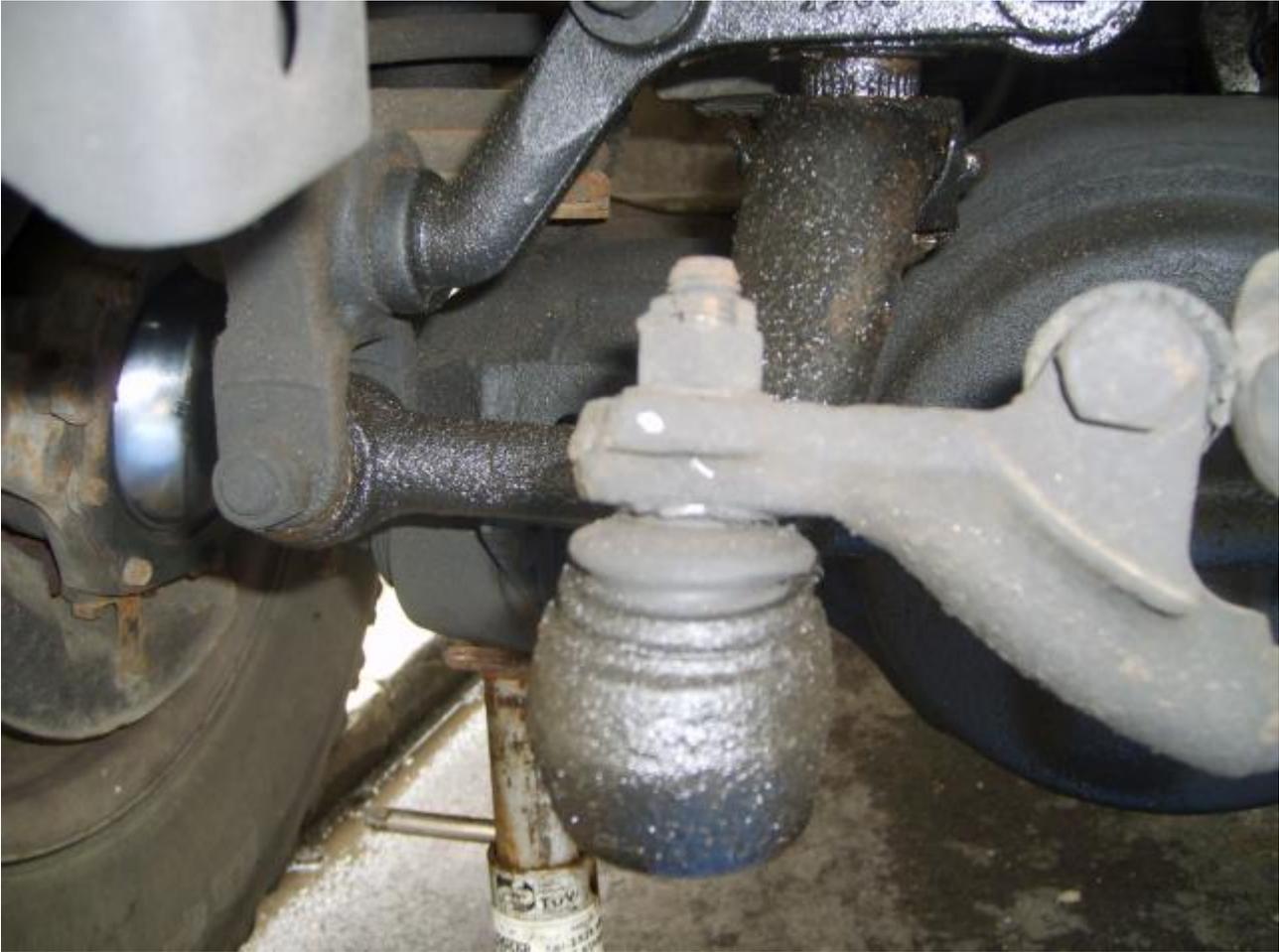


Once the bolts are removed, tap the rod up towards the bulkhead until it comes free of the steering box.



Raise and support the drivers corner of the vehicle.

Drop arm next - the nut is either 19mm nyloc, or 19mm nut and split pin. Remove the nut and strike the bar as shown and the joint will separate. If you have a steering damper fitted, then pull down and towards the front so that the bar is out of the way.







Lower support bracket next - the bolts will either be 17mm or 17mm and 15mm. Remove them both and also the 19mm nut that's on the the other end.





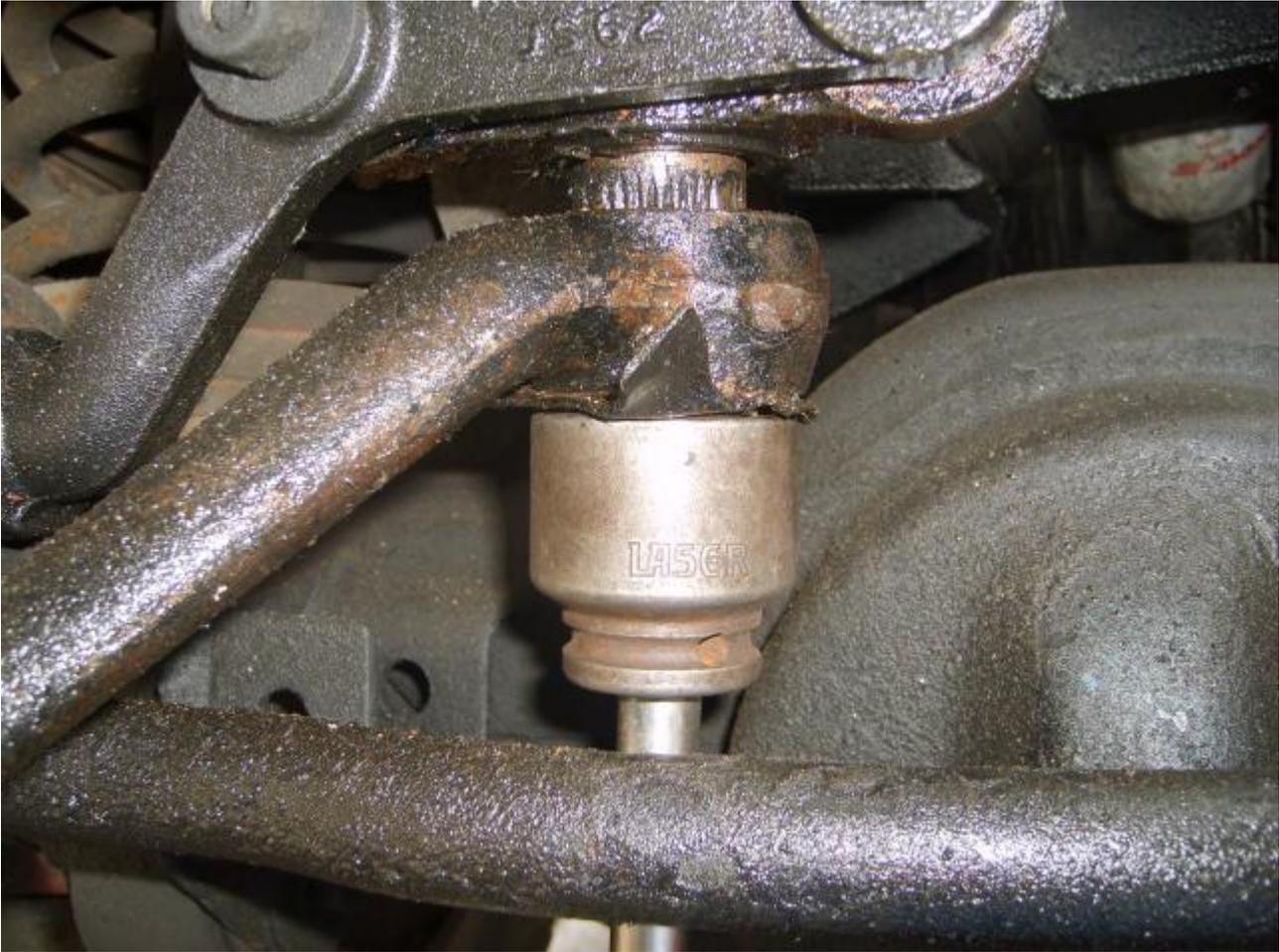






Drop arm nut next, this 34mm and should be very tight. A short extension and breaker bar is needed to undo it. The lock washer can be reformed once it's off.









All that's now holding the steering box in place is 4 x 17mm head bolts that pass through the chassis rail inside the drivers front wheel arch and into the body of the box. Bend back the locking tabs with a chisel or screwdriver.



Remove three bolts and just slacken the 4th. Get under the vehicle and hold the box with one hand and remove the last bolt. The steering box will now lift away.



Lay the steering box on it's side - there are two lugs on the drop arm. Place a bar or long blunt chisel on the lug and belt it very hard a couple of times, then turn the box over and do the same to the opposite side. Do this repeatedly and eventually the drop arm will come loose.





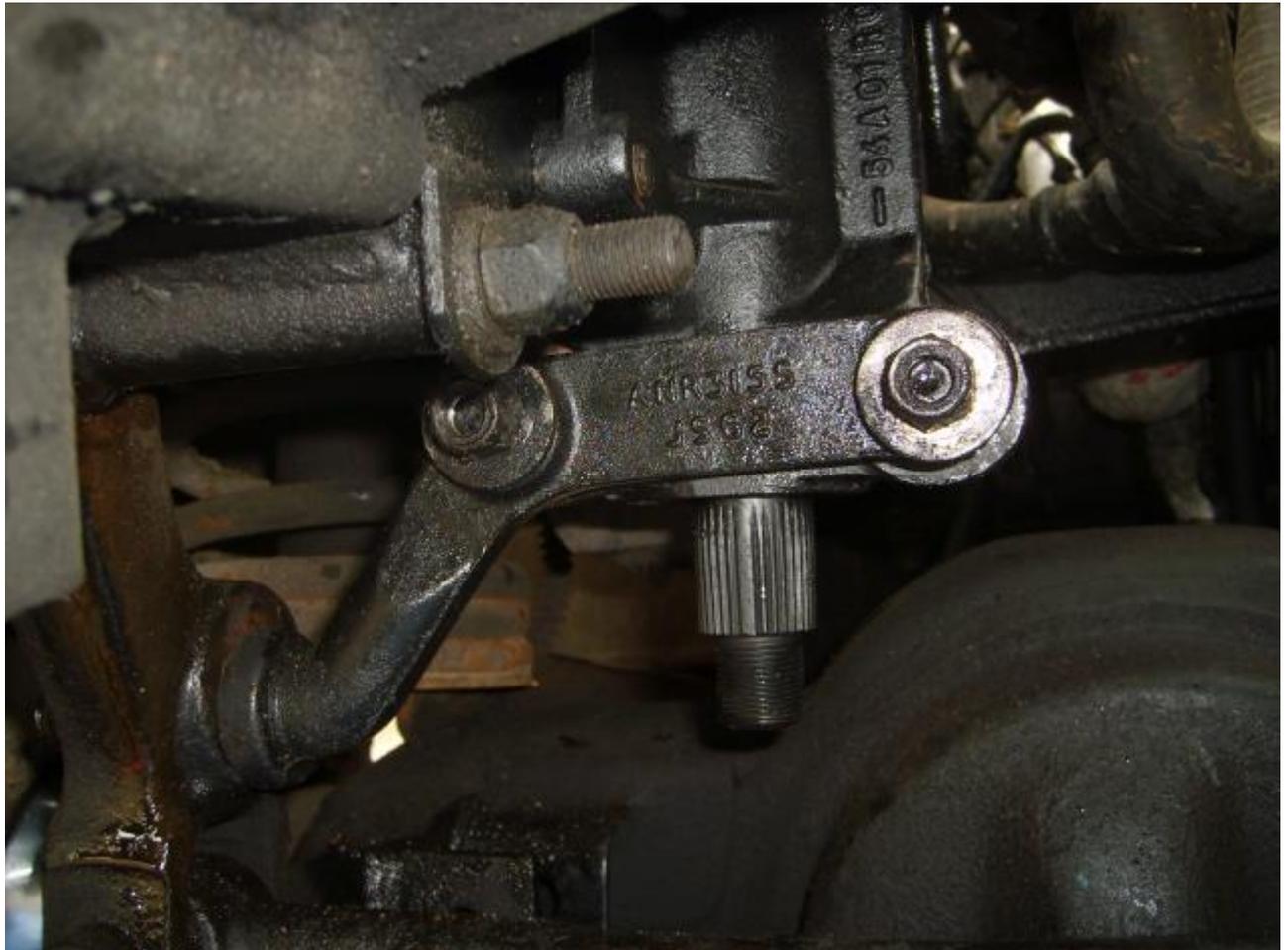
The 'reconditioned' steering box - supplied by National Power Steering.



Put the new box on the chassis rail and secure it with the 4 bolts, then reconnect the steering link rod (it has to line up with cut outs in the shaft, so it only goes on in the one position)

Turn the steering wheel until one of the 4 master splines are pointing forwards and the steering wheel in a central position (you may only get this close)

One of the master splines.



Re-fit the the support bracket and then the drop arm so that it points forwards and hand tighten the nut.

connect the steering and then lower the vehicle to the ground. Using the breaker bar - tighten the drop arm nut as hard as you can and then bend the lockwasher down over one of the flats of the nut. Carefully connect the two pipes - they are different sizes so you can't get it wrong. The threads are very fine, so be careful not to damage them. Refill the reservoir with fresh ATF, start the engine and turn it lock to lock a few times - topping up the reservoir as necessary. There is a bleed nipple on the top of the steering box cover, which is usually 8mm. Slacken this and bleed off any air left in the system. Go for a short drive and then once again check the level in the reservoir/bleed the system. You may find that the steering wheel is not central, and you will have to remove it and put it in the right position.

For V8 engines (from V8Freak)

To remove the steering box from under the vehicle you will have to remove the engine oil filter. To remove it from the top you will have to remove the alternator.