

Land Rover Discovery 3/4 (all variants)

How to change the front hubs (wheel bearings)

I have concentrated on the removal/replacement of the front hub wheel bearing unit, you may find it useful to also read Body's Brake Bible as this covers the pads and discs etc in more detail

A common issue on the Disco 3/4 is the failure of a front wheel bearing usually at the 130 – 150k mark, mine managed 154k before starting to 'rumble'

They are non-service items and require the whole hub unit to be changed, it is a fairly straight forward task, easily carried out by the competent home mechanic

You will require a level firm area to park the vehicle and a willing 'assistant'.

The LR garage will have a number of 'special tools' at their disposal, but these are usually not available to the owner, one such procedure is getting the splined drive shaft out of the hub, which can be 'fun' but I have done this several times now and found a lump hammer and 25mm steel rod approx. 300mm long (an old socket extension bar you don't mind trashing is ideal) the shaft is driven from the hub with the help of your assistant holding the steel rod while you hit with the lump hammer (the rod, not your assistant) !!

Tools and equipment required:

A trolley jack suitable for lifting the vehicle, remember it can weigh almost 2.8 tons!! So a minimum 3 ton lift capacity is recommended.

Pair of axle stands (2 tons rated each)

A good quality socket set with ranges from 8mm to 32mm.

Some spanners (13mm – 17mm)

A break bar (½ " drive 600mm long)

Torque wrench of at least 350nm capacity

Impact driver ½" drive (the type you hit with a hammer)

Set of 'torx' drive bits

Parts required

RFM500010 Front Hub unit should come with a new drive shaft nut

I also replaced the discs and pads, yours may be serviceable

SDB000602 Front Disc up to VIN 6A341769 – (SDB000604 VIN 6A341769 onwards)

Pads LRO19618

Clips LRO19625

Pad wear wiring SEM000024 up to VIN 6A414975) – (SEM500070 VIN 6A414976 onwards)

Miscellaneous

Copper slip grease

Cleaner/degreaser spray

Cable ties

Procedure

1, Start by jacking the front up, and securely supporting on axle stands, remember to chock the rear wheels.



The jack is only supporting the weight of the hub NOT the vehicle, this is firmly sitting on the axle stand.

2, At this point your helpful 'assistant' will pop out with a mug of tea (if you're lucky) ask her (or him) to carefully sit in the vehicle and press the brake pedal hard, then using a break bar release the 32mm drive shaft retaining nut (shown arrowed)

This will be VERY tight at 350Nm and will take some effort, but it can be done !!!

(tip – I used a 1 metre length of scaffold tube on the end of my break bar to provide enough torque to undo the nut)

3, Now remove the calliper unit using a 13mm socket and open ended 17mm spanner



The calliper will hinge outwards allowing access to the pads. Support the whole calliper up out of the way using the cable ties onto the upper suspension arm, being careful not to kink/damage the hoses or cabling to the wheel sensor.

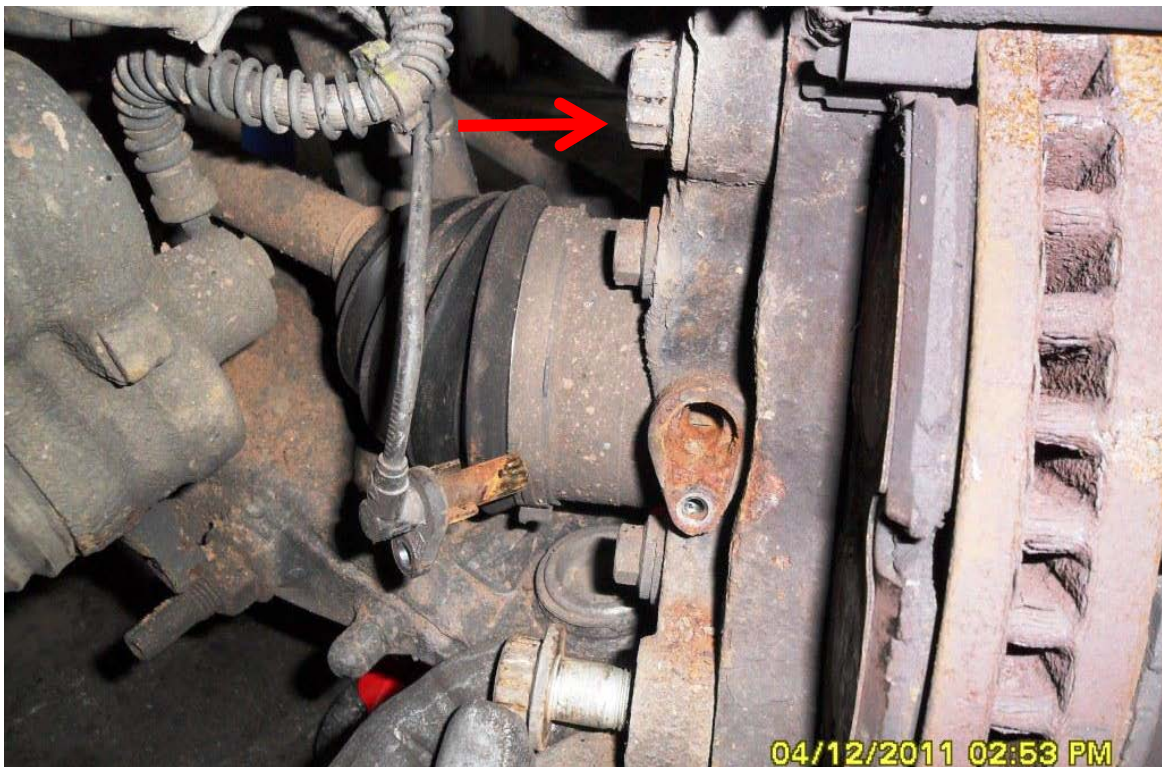


3, Remove the wheel rotation sensor (carefully, as easily breaks) it may be rusted in !!



4, Remove the brake calliper anchor bolts, (the 2nd one is arrowed).

These will be tight at 275Nm use a break bar if required.



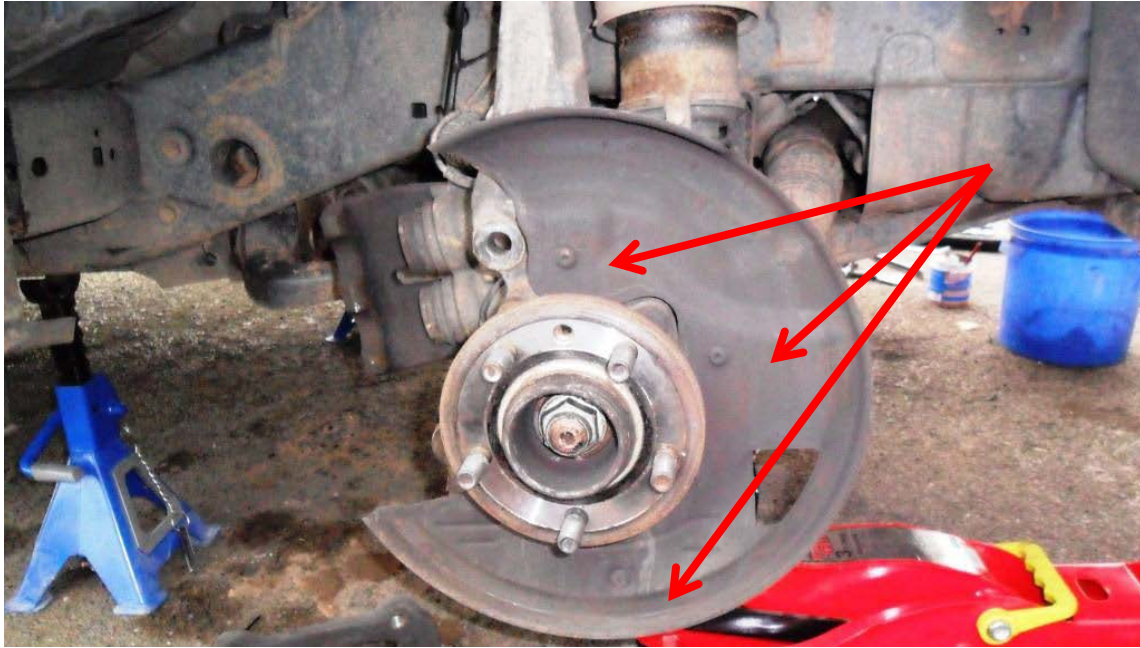
It should now look like this !!



5, The next task is to remove the disc, this is secured by a 'Torx' bolt, which can be difficult to release and can strip easily, I used a hammer impact driver.



Thus far !!!



I then removed the brake back shield, although this isn't absolutely necessary, it helps provide better access.

It is secured by 5 small Torx bolts, 3 are shown here.

6, Remove the 4 No hub retaining bolts (note, the drive shaft is shown pushed back slightly)



You should now have reached this stage !!



I then cleaned up the hub/axle mating faces, the splines on the drive shaft and any other rusty areas as much as I could using a wire brush and cleaning solvent.



7, The new hub simple slides on to the drive shaft splines, I applied some copper slip grease, it is not a must, but will make dismantlement 'next time' a whole lot easier !!



The hub is then secured with the 4 No retaining bolts, tighten to 115Nm, fit the drive shaft retaining nut 'hand tight'

8, Clean the hub front surface to remove any grit that may have stuck to it, then fit the disc (mine was a new one)

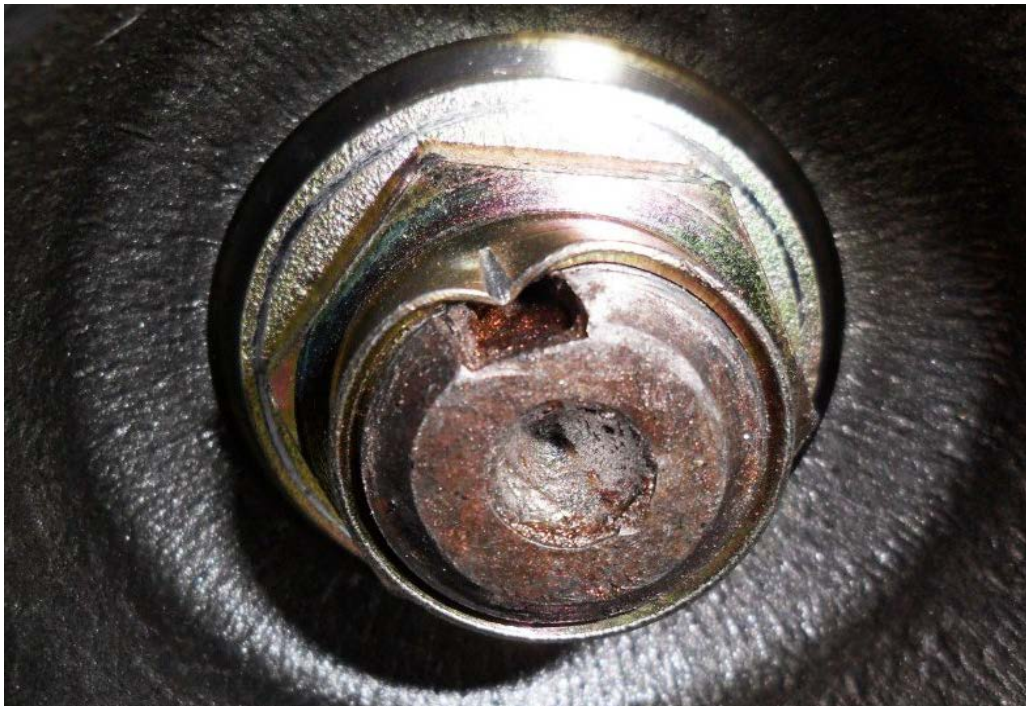


9, Refit the brake calliper anchor, calliper, pads, wheel sensor etc, and apply a smear of copper slip to the disc wheel spigot (this prevents the wheel from becoming 'welded' by corrosion to the hub).



10, Now, with the help of your 'assistant' on the brakes (and another mug of tea?) tighten the drive shaft retaining nut to 350Nm !!

11, Then (and VERY importantly) indent the edge of the drive shaft retaining nut using a small punch, chisel or old screwdriver



12, Refit the road wheel, lower the vehicle to the ground, start the engine and depress the brake pedal a couple of times to reset the pads against the disc.

Remember if you have fitted new discs and/or pads* as well, the brakes will be poor for a few miles while they 'bed in'

*new pads can be fitted to existing discs, however you should not fit old pads (even if serviceable) to new discs !!

Some useful info !!

Torque Settings

Disc Torx screw 35Nm

Calliper anchor plate 275Nm

Brake hose retaining bracket 22Nm

Drive shaft retaining nut 350Nm

Hub unit retaining bolts 115Nm

Road wheel nuts 140Nm