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"Leaking" - TD5 Fuel Cooler

16/12/2009

Well It seems yet another TD5 Issue "caught" up with me. Whilst fitting my VSR relay for the twin battery setup, I heard dripping water coming from under the car; now I had literally pulled the car back on the drive to open the garage , then drove the front into the garage and turned it off again before opening the bonnet.

Upon looking underneath I saw what I had feared and that was pink OAT coolant dripping, I had an idea where it was coming from and upon removing the engine acoustic cover from the top, my assumption was confirmed. Below you can see the bottom of the front face of the cooler is wet, and the drip on the pipe below. The engine mount was also full of coolant.



This had literally just happened, as I had checked the water a day or so ago and the level was spot on, and after noticing this leak, I ran the engine up to temp to see how bad it was, but to my surprise it only leaked when the engine was off and cold.

Now if you took this car to a dealer, it is highly likely they would replace the whole unit, which at a cost of £250 + labour etc it would not be a nice bill to get, especially as its most likely just a seal that has gone and caused the leak. So after a little "googling" I found several references to it and it seems its more common than you think.

Now I like to fix things rather than replace if possible, obviously cost is a good reason to, but fixing a serviceable item is far more satisfying in my opinion. So it was time to see what was wrong.

The housing of the cooler simply has 2 plastic ends that are held in by them awful "latching" spring clamps, now they are not easy to do when access is good, let alone down by the cooler. You can if you wish remove the cooler assy from the vehicle and fix it on the bench, but I chose not to disturb the other end and fix it in situ. To remove the clamp I simply used a flat bladed screw driver and tapped one side of the clamp to "unclip" it.....



Below is the clamp, which I'm sure you have had "fun" with this type before!!!



Now to "ease" removal of the end fitting, I left the hose connected for now and used that to "carefully" wiggle and tug the end cap out of the cooler.



The was very little coolant loss when the cap was removed, you can see the "o" ring in place on the end cap.

Next was the hose on the end cap, it's held by a simple spring hose clamp, I removed that and tied the hose back in a vertical position to retain as much coolant as possible and to be honest not a lot came out anyway. Below a view inside the cooler.....



Here below is the end cap, which it looks to me, that it was designed to have 2 "o" rings in place, but in the picture above you can see only the very bottom one would do anything due to the shape of the cooler body, maybe Land Rover changed their mind during design, who knows? but 2 "o" ring seals would have DEF been better.



You can clearly see the "o" ring is VERY flat in cross section, and this is the obvious cause of the leaking end cap. After measuring the end cap "o" ring seat, and reading some of the stuff on the internet I was happy that the correct replacement seal would be BS225, and because of the environment its in, "o" rings made from Viton rubber would be the correct choice.

I ordered a "few" up (always good to have spares) a couple of days before, and also bought some proper "o" ring lube from the same place.



Here below you can see the new "o" ring in place on the end cap, and the old "flat" one next to it !!



I applied a very small amount of "o" ring lube to fit the new seal, and then a light smear around its edge to aid re-fitting the cooler end cap and to try and avoid "snagging" the seal in the process.

The refit is the reverse of the removal, be CAREFUL when fitting the end cap back in, and then its a "fight" with that blasted clamp, what you use to refit that is up to you, But I normally use side cutters and small needle nose pliers to do it. Its fiddly and not easy, but be patient with it!!.

If you wish you could use standard jubilee clips, but you have to make sure they are "narrow" ones so they don't interfere with the "pegs" molded into the end cap. Once your successful with that, reconnect the hose to the end cap, and then top up the coolant as required.

Run the engine up to temp to check for leaks, and also check it when the engine is COLD as well.

To date (about 1 month) mine has been leak free, A nice cheap satisfying fix ;o)