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Faults and Fixes - Gearbox Oil Cooler Pipes

Well, I would probably not be to far wrong if I said that most people who have owned Land Rovers have had at some point a "breakdown", well It seems I'm no different. I have had a LOT of cars since I have been driving, but up until recently have never broken down!!!.....well the Discovery has put pay to that record!!.

No matter how much we look after our cars, we just cannot prepare for a failure of any part that will render the car un drivable....

So on a recent trip to buy some new parts, I was in traffic, the traffic stopped, so did I, the traffic then moved on, I pushed the pedal, the engine revved, but nothing happened!!! doh!!.

Now I had just had the car on ramps and in and out of Difflock and high / low, so I immediately thought it had jumped out of gear, so after messing with the lever still nothing happened. I don't know how, but I managed to crawl the car to the side of the road where I got out and had a look. To my surprise there was a LOT of oil EVERYWHERE under the car, the wheel arches and in the engine bay, a quick "sniff" determined it was ATF oil.

So this coincided with no drive at all as there was no oil left in the box.. It was easy to see what had happened, the Oil cooler pipe that runs to the gearbox oil cooler at the front of the car had failed, so the box basically pumped the oil out over the road etc.



Above is the cooler pipes for the Auto box, there is 2, they run from the gearbox where they are solid rigid pipes, and just in front of the engine they change to flexible pipes that are swaged onto the metal ones.

You can see them here by the gearbox sump.



They then run down the drivers side of the engine in rigid clips and up to the oil cooler. Below is the 2 "quick" release couplings at the oil cooler end....

below is the passenger side (UK car), the Air filter housing is removed for clarity



And the drivers side, there is a small plastic panel in the inner wheel arch behind the ACE actuator which is removed.....



NOTE!!!!.....Also, in this picture below you can also see the gearbox Oil Temp Sensor (circled). These are also known to be a little "iffy", replacement normally involves removal of the intercooler and oil cooler etc to get to this part. I even changed mine this way, that was before I had even noticed this little access panel.



I personally think you could change this sensor in situ through this access panel, that would mean the time and amount of parts you have to remove would be significantly reduced!!!

Ok, back to the pipe failure, well did it split ?? or chafe through on something ? no.....!! the pipe literally come apart at the swage, not an issue I would EVER suspect, but clearly a manufacturing fault and if the vehicle was under warranty I have NO doubt you would have a claim. I did even consider contacting Land Rover to show them how bad this is!!!.....maybe I will.....to see what they say.....

Here's the pipe, the left hand side cooling pipe, you can see what it SHOULD look like, a swage that should last the LIFETIME of the car.....



However, the gear box oil pressure, or a simple tug and this is what happened.....



Not good is it!!!!very disappointing to be honest.....

Anyway, I have not done a full write up on this issue, but I would recommend that at some point you check out the pipes on your vehicle to ensure they are secure / not leaking etc. The new pipes are approx £50 a side, I replaced both to be safe and hopefully they will now last longer than the failed one. Both pipes run together and its pretty straightforward to see where and how they go.

They are a little "fiddly" to remove them over the cross member purely on the fact there is lots of twists and turn in them. The New pipes come ready fitted with "o" rings for the Gearbox end



The top pipe at the gearbox end is in a "tight" spot, and you will require a 19mm crows foot spanner to undo it.

The pipes come with plastic blanks on either end and I STRONGLY advise you leave these on until you have fed them into position over the cross member to eliminate any risk of getting dirt etc into

them...



Now because my pipe failed, and there was basically no oil left at all in the gearbox circuit, I had to also do an oil / filter change, details of that [here](#) . The procedure is the same, However, because I had lost 80% + of the oil, I needed 2 x 5 litre tubs to replace it.

I also filled the box to overflow initially, started the car and then idled it for 30 secs or so, then refilled the sump again as it had drawn all the oil into the system very quickly. I did this a few times and then followed the "normal" refill procedure to get the correct level

You normally only need 1 5 litre tub as you cannot get all the oil out doing a normal "service". So on the plus side, if there is one, I really have no need to do the second recommended change as I got nearly 9 litres of new oil into the gearbox after replacing the pipes....