

HELP

Sorry folks if you need it I can NOT reply as MOTORHOMEFACTS wants me to pay to respond to personal emails OR update the tread I started. ...they have cut you off from further advice through their www site.

The only way is email me directly. I will be happy to respond.

Garry

ggrigg@o2.co.uk

FIAT DUCATO 5th GEAR REPAIR **DON'T PANIC ITs NOT THE END OF THE WORLD!**

So you are sitting on the Motorway pootling along in the outside lane, grotty weather but what the heck, you are nice and comfy with arm rests and a good view ahead. Then you come to a little incline and the load increases a little, it pops out of gear and you are coasting, slip it back while wondering WHY and out it comes again as soon as you put it under load. "What is going on?" you think or something similar.... you have the dreaded Ducato 5th gear worn out symptom! Never mind only 26K on the clock, one has been reported at 18K ... "they do that sir!". No panic it may not be that bad see below how to sort it, possibly on the side of the road if you have the bits (almost certainly not but I understand some are now carrying spares ready!)

WHY?

Lots of theories and there will be some truth in most of them sotake your pick.

1 Poor lubrication.

I understand the 4 speed box is a 20 year old design and 5th has been added as an extra on the end. It certainly looks that way. That's a plus, as its easy to get at under the wheel arch, without disturbing the rest of the box. Fiat have attempted to feed oil in there with a pipe from the main box splash. This drains into a canny double skin arrangement in the cover pan which has two tubes running off into the center of the gear shafts. This feeds oil to the centers nicely and all should be well. NOT if the oil level in the main box is a little low. OR if one is spending extended periods in 5th and the main box is not spinning up the oil into the over flow from time to time to feed the external cluster.

This could be compounded by the fact that there is no level plug to check the oil. One has to drain and refill with the correct amount to be sure there is sufficient. Motorhomes spend extended period draining between trips.

2 Driving style

In a Ducato van or Ducato chassis based commercial the driver is not burning his own diesel so tends to thrash away in top as long as possible before going for the leisurely 5th. Similarly he will exit 5th as soon as the revs start to drop on an incline and thrash away in fourth once the load kicks in. Similarly long motorway stints in 5th or lots of local drops? Long trips are usually the

domain of the class one boys. Motorhome owners tend to be conservative with diesel and go for top as soon as possible and hold it for as long as possibleadmit it ...I DID!

3 Work load

How many vans and commercials are at gross max wt 99% of the time? I suspect they are often running less than 10% capacity with bulky light wt. Boxes. They tend to be more aerodynamic with no “upstairs” along for the ride. Remember the energy required is a function of the cross section area x coefficient of drag x speed squared! So in a motorhome the 5th gets a bit of stick.

4 Quality of components.

Legal disclaimer ... make your own mind up when you get the bits out. The bit that failed on mine were the tiny teeth on the gear that engage the syncro lock ring. These appear to be sweated on to the main drive lump and as such present a small area of contact and likely to be tempered when heated to drop onto the main set if not done carefully?

5 Water in the box.

Not confirmed this one mine was OK. I hear tell of two casting/strengthening webs either side of the selector input shaft. This just below the wiper trough water drain? It has been suggested that it fills with water waiting for you to wiggle the gear lever and let the water into the box. I can't confirm this but some suggested there was a recall ... well slop silicone around it when serviced at F*** and stay mum?

All very well but how to fix?

Tools needed and basic protocol.

10 nuts, bolts etc. in total to remove and refit + oil fill.

1 drain plug

5 on the cover

1 for the selector fork

1 for each cog. ...

Reversing light switch to refill ... Simple! (searchthameerkat.com)

All the bits can all be readily accessed from under the nearside wheel arch. I raised the motor on one ramp to get a little more height and full left lock to expose the 5th gear cover on the end of the box.

Drain the box and clean the magnetic plug that will be doing a good impression of Denis the Menace with an iron filling hair cut!

Remove the 5th gear cover/pan with standard **13mm socket and short extension**. One top bolt is out of view. Use a ring spanner if you have plenty of time. As the pan comes off check for bits! It may be advisable in hindsight to **stick a big fat magnet on the pan** first ... **if you have one of these gearboxes go out and do it now**. It will prevent any debris entering the main box while yours is still wearing out! Use silicone bath sealer to improve “adhesion” **it will keep all metal debris out of the expensive bits**.

Small hammer and “through handle” screw driver to release the tab washer and remove “C” spanner nut on synco hub/gear cluster. C spanner not much use as its recessed in the hub a little. Persuade it with the hammer screwdriver combination in one of the slots.

Remove the 13mm bolt in the selector fork. Not wired in or locked in any way.

The synco hub and selector can be removed. They need encouragement with a screwdriver between them and the main gear. Don't worry they are shot anyway! There are 3 ball bearings on spring loaded pistons between the synco hub and ring ...they WILL try to escape if the ring is separated from the hub.

Release the bur on the thread lock collar of the **37mm nut** on the other gear and ease it off too.

Almost done ...put it all back together with new bits!

i.e. a pair of gears and synco hub and ring. Fiat know what you need!

Its standard kit! Ill get exploded drawing and number in here eventually but I have just finished mine tonight!

See ... not many tools and the pros reckon 2 hours in a car park (probably right in terms of time on job)

The synco ring will be shot on one side and it looks reversible but you wouldn't would you?

The smaller gear will be fine but they are a matched pair for the helical mesh.

Refill with as much oil as you are advised through the reversing light switch in my case. Just accessible if you disconnect the air hoses from the air filter. Its **23 mm AF** with a spring clip plug on the loom.

Improvements?

Plaster the cover with magnets to retain passing ironmongery in the external area. DO IT ANYWAY BEFORE IT FAILS.

Fit a little window if you want to see your oil level.

Fit an easy access filler point to the cover while its off.

Revise your driving style...it wasn't wrong but we can help the poor little thing in future now we know how much trouble its in.

Drop it off the one leveling ramp and BOOK A FERRY!

Garry

p.s. I have now test driven the unit and whilst I didnt notice much movement in the lever while on and off power in 5th before, it must have had some movement as it popped out altogether once the little spring loaded synco balls couldn't hang on in their recesses any more. Now it is rock steady when in 5th going on and off power. Could this be a way of monitoring wear?

pps

Consumption has improved from 27 to 31 mpg with the revised driving strategy i..e. by holding 4th longer and going down to it sooner on reaching an incline!

HELP

sorry folks if you need it I can NOT reply as MOTORHOMEFACETS wants me to pay to respond to personal emails OR update the tread I started. ...they have cut you off from further advice through their www site.

The only way is email me directly. I will be happy to respond.

Garry

ggrigg@o2.co.uk