

Transmission rumble and thump – story so far

My 2007 TDV8 has had two persistent faults since bought about 12 months ago and so far all attempts to fix them have been only partially successful.

Time perhaps to bring the full force of the forum knowledge to bear on the problem?

Fault 1

Cruising at close to 70 mph on a light throttle or using cruise there is occasionally a thump from the transmission and what feels like momentary loss of drive or power, the revs blip up slightly for an instant and then everything is back to normal. Happens about every 40 miles or so.

Best way of describing it is feels like sudden momentary slipping out of gear – imagine driving a manual and you knock the gear lever into neutral but without dipping the clutch.

If cruise control was engaged it disengages and the dash message centre shows ‘cruise cancelled’. Sometimes (but not always) the message centre showed ‘HDC fault – system not available’ after one of these thumps.

Thump does not occur if speed is kept higher than say 80 mph or lower at say 50 mph.

Fault 2

At 30 mph and 1500 - 2000 engine rpm there is a low frequency rumble that sounds like tyre noise. At higher speeds the vibration is felt at a higher frequency which can be felt through the whole car and is more pronounced when accelerating.

Actions taken so far

- Checked wheel bearings
- Wheels checked for flat spots, cracks and run-out – all OK and then refurbished and new tyres of a different brand fitted.
- Ran car on borrowed set of smaller diameter wheels during refurb but sound was the same
- Replaced front differential (which cured a loud noise when slowing from high speed)
- Drained and renewed fluids in differentials, transfer case and gearbox. Replaced gearbox sump with metal sump and new filter.
- Recalibrated transfer case
- Fitted new battery and did hard reset
- Fitted new brake light switch (old switch had signs of arcing)
- Fitted new OE stop/tail bulbs sourced from Land Rover (old ones were generic)
- Fitted new gearbox lever arm and pivot mechanism
- Checked connection plugs to transfer case ECU and wiring plugs in area behind battery – all appear clean and dry
- Checked and cleaned all three connector plugs and earth strap to transfer case
- Acquired Gap Diagnostics IID Tool and loaded beta version firmware update
- Reset gearbox using IID Tool
- Read and cleared all fault codes with IID
- Fault codes that reoccur are:

- Body Control ECU – BIB70 local interconnection network bus circuit two (circuit two is just for the back-up sounder for the alarm)
- Instrument pack ECU - U0132 lost communication with ride level ECU and U0159 lost communication with park assist CM
- Transfer case ECU – U0101 lost communication with transmission control module (TCM)
- Transmission ECU software and engine ECU software updated to latest versions and transmission adaptations reset again by specialist (Bristol Transmissions) using Autologic tool.

Test driven by Bristol Transmissions (prior to the software updates) and suspected diagnosis is torque converter lock up clutch is on the way out causing the vibration but no signs of revs fluctuation on load as would normally be expected if TC was faulty. Unsure if this related to the thump at 70 mph.

There has been NO reoccurrence of the ‘HDC fault System not available’ since bulb change and gearbox reset with IID Tool but the occasional thump at 70 mph and vibration are still present. All other times gearchanges are smooth and in all other respects car drives very well.

Further actions taken

- Inspected and cleaned ABS module multiplug in auxiliary battery box
- Inspected and cleaned two multiplugs under n/s rear wheelarch
- Removed n/s rear wheelarch liner and inspected wiring below
- Removed n/s front wheelarch liner and cleaned and inspected wiring below including speed sensor and pad wear sensor (did not remove and clean earthing point – looked dry and clean)
- Removed o/s front wheel arch liner, inspected wiring beneath including wheel speed sensor
- Unplugged and cleaned every engine sensor on top of engine.

Some further suggestions found on internet forums for other types of car with similar problem:

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| <ol style="list-style-type: none"> 1. Camshaft position sensor faulty 2. Crankshaft position sensor faulty 3. Brake fluid and brake pads low – resolved when these replaced |
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<p>My current theory? There is something worn, loose or broken in the lock up clutch in TC causing it to vibrate. There is a damping mechanism in the TC which is intended to absorb the vibration inherently associated with the partial engagement of the lock up clutch – this may be faulty?</p>

<p>When it does lock – it occasionally suddenly unlocks momentarily – causing the thump. This suggests there is a problem with the TC spool valves or electronic pressure regulating solenoid (EPRS4) that control the operation of the lock up clutch. ECPRS4 is in turn controlled by the TCM – so could be a fault with the TCM. To theorise even further – perhaps the sudden unlocking has over time damaged the TC – causing the vibration (I suspect the car has had this problem for a long time – before I acquired it).</p>

Yet more actions taken:

- Replaced front brake discs and pads
- Emailed Gap Diagnostics (manufacturer of IID Tool) and they investigated live values available from torque converter and have updated software accordingly. My IID tool now can display TC values as they change between 'Open' 'Regulated' and 'Closed'. In normal driving around town these values seem to change at appropriate times. When the 'thump' happens at cruising speed the live value for the TC changes from 'closed' to 'regulated' and then back to 'closed' again.
- Went to a Land Rover dealership and had them connect the dealer diagnostic computer. No DTCs other than the ones found by the IID tool were found.

Most recent (drastic) action taken.

Had a transmission specialist replace the Torque converter with a brand new one sourced from ZF and this involved a complete change of transmission fluid and change of filter. Gearbox adaptations reset again with my IID Tool.

Result: No change to the slight vibration and still getting the 'thump' at cruising speed of about 65-70 mph.

Interesting that the vibration hasn't changed so pretty much rules out the TC as being the source.

Now thinking the vibration and thump are not related.

Possible further action:

The thump could be caused by one of the valves in the gearbox that control gearchanges, clutches and the TC being faulty and not holding pressure. My transmission specialist says there is a kit available from ZF now so they can all be changed. This is a sump off gearbox job but no need to remove the gearbox to do it.

The vibration could be caused by a worn CV joint in the front propshaft or a worn universal joint in the rear propshaft. I did find a thread over on the Disco 3 site where a garage found wear in a front propshaft CV joint that was only evident once the propshaft was removed.