LuK Clutch Academy

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Nissan Navara

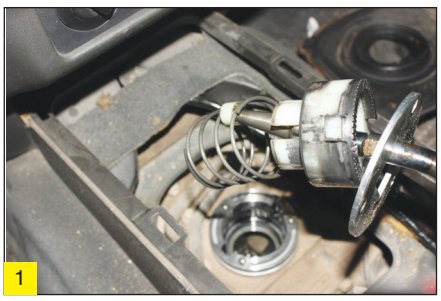
The Nissan Navara (D40) has proved a to be a popular pick-up truck. Unfortunately, the later 2.5 dCi model hasn't been without some problems, mainly due to overloading the vehicle. Because of this overloading, some owners have complained of burnt out clutches at seemingly low mileage. LuK offers advice on tackling this clutch replacement.

One of the fixes for this complaint was to replace the clutch and Dual Mass Flywheel (DMF) with a solid flywheel and a new clutch. However, this fix wasn't without problems, replacing the DMF with a conventional flywheel then allowed the vibrations from the engine, which were previously damped out by the DMF, to be transmitted throughout the vehicle.

LuK introduced a modified clutch to help overcome the original problem when the vehicle is overloaded. This modified clutch is bigger in design and, unlike the original, it is a Self Adjusting Clutch (SAC).

In this article, we take you through the replacement procedure of the 4WD version. This particular Navara had been previously converted from a DMF to a solid flywheel. The only special tools required are a transmission jack and the SAC mounting tool (LuK part number 400 0237 10). On this vehicle, we used a two post ramp as it offered easier excess.

As with any clutch replacement, safety comes first and the battery must be disconnected by removing the earth lead. Before raising the vehicle on the ramp, the gear lever must be removed. To do this, remove the gear levers cover by unclipping it. Remove the sound proofing material and unscrew the gear lever knob. The selector mechanism (fig. 1) is then removed by undoing the M10 screws (to prevent contaminatio, a piece of rag can be placed carefully in top of the gearbox selector aperture and a plastic bag can be cabled tied to the end of the gear lever mechanism).



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With the vehicle raised on the ramp, the propshaft from the gearbox to the rear axle is removed. To do this, make a mark on the axle flange (fig. 2) to ensure the shaft, when re-fitted, is in the original position, then remove the bolts and slide out of the gearbox. Disconnect all electrical connections to the gearbox switches. The crank position sensor is also removed to prevent damage when the gearbox is removed. The wiring harness should then be unclipped from the gearbox casing (fig. 3). Remove the two bolts securing the

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slave cylinder to the gearbox (there is no need to disconnect the hydraulic pipe) and stow to one side clear of the gearbox.

Before disconnecting the transfer box from the front axle, the exhaust will have to be removed. To do this, carefully support the exhaust and then undo the two bolts securing the exhaust to the down pipe. The exhaust can then be popped out of its rubber mountings and lowered to the floor. The propshaft is then removed. As with the gearbox to rear axle, make a mark to insure the shaft when re-fitted is in the original position. Remove all the securing bolts and lower the shaft to the floor.

At the front of the gearbox bell housing is a small inspection plate which must be removed (fig. 4). Before undoing the bell housing bolts, support the gearbox with a suitable transmission jack (it is advisable to

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secure the gearbox to the jack with a strong chain). The gearbox support bracket can then be undone, and the gearbox lowered slightly to allow access to the top bell housing bolts. Remove all of the bell housing bolts, and then pull the gearbox back to release from the engine.

With the gearbox removed, the old clutch and solid flywheel can be removed. If a LuK DMF is fitted, it can be tested on the vehicle for signs of heat stress and evidence of grease loss. Rock and rotational free play can also be tested with the LuK DMF testing tool (LuK part number 400 0080 10). Full instructions and DMF tolerances can be found by searching 'DMF data sheet' on www.schaeffler-aftermarket.co.uk.

Before fitting the new DMF and clutch, check for any signs of oil contamination and fix any possible causes. When replacing the release bearing, check the release fork for any signs of wear. Fit the new DMF and clutch, paying attention to the vehicle manufacturer's recommend torque settings. The clutch must be fitted with the aid of the SAC tool.

Check out the latest in online support at www.RepXpert.co.uk or contact the LuK technical hotline at +44 (0)1432 264 264.