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# LuK Clutch Academy

## VW Crafter CR 35TDi

The Volkswagen Crafter, launched in 2006, is becoming a popular commercial vehicle on Irish roads and is available in many model ranges. LuK takes a look at the CR35TDi LWB in this handy guide on clutch replacement.

The Crafter is a re-badged Mercedes Sprinter, but with a VW powertrain. The clutch replacement is pretty straight forward, with no special tools required for the repair. In this article we used a four post ramp, a long axle stand and a transmission jack.

Disconnect the battery earth lead and raise the vehicle. Remove both gear link cables by popping them off the linkage arms and stow to the side (fig 1). Remove the gearbox cross member support, held in place by a four nut and bolt arrangement to the chassis and two bolts into the gearbox (fig 2).

Mark the propshaft position and remove the centre support bearing bracket. Remove the bolts for the



propshaft on the gearbox side and disconnect from the gearbox. Secure the propshaft to the side, as you do not need to remove it completely to lower the gearbox.

Remove the support bracket for the DPF, attached to the exhaust and



gearbox (fig 3). A wiring harness is also attached to the bracket, held by one bolt which you will need to remove (fig 4). Remove the hydraulic pipe and using a blanking plug, block the pipe so you do not lose any fluid. Cut the cable tie holding the oxygen sensor cable to the gearbox (fig 5).

Remove the 13 bell housing bolts and keep them in order of removal, as they are all different lengths, so keeping



them in order will make it easier when putting the gearbox back. Carefully lower the gearbox to the floor and remove the worn clutch.

Remove the worn clutch cover and clutch plate. In this example, the dual mass flywheel (DMF) was also replaced with the clutch and bearing. However, in most cases you have no need to replace the DMF, as it's condition can be checked in-situ for signs of heat stress and evidence of grease loss. The DMF should also be tested for free play and rock between the primary and secondary



masses. LuK tool number 400008010 is specifically designed for this purpose. Full instructions and DMF tolerances can be found by searching 'DMF data sheet' on [www.schaeffler-aftermarket.com](http://www.schaeffler-aftermarket.com).

Clean the first motion shaft splines and any debris from the bell housing (especially important when a release bearing has failed). Put a small dab of high melting point grease (but not a copper based product) on the first motion shaft splines and make sure the new driven plate slides freely back and forth. This not only spreads the grease evenly but also makes sure you have the correct kit. Wipe any excess grease off the shaft and driven plate hub. Using a universal alignment tool, and checking the driven plate is the correct way round (note 'getriebeseite' is German for 'gearbox side'), the clutch can be bolted to the flywheel evenly and sequentially.

Before fitting the gearbox, make sure the locating dowels are in place and are not damaged. Refit any that have become dislodged and refit the gearbox. Make sure the gearbox bell housing bolts are secured before lowering the jack. Refitting is the reverse of the removal.

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