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LuK Clutch Academy

Kia Cee'd 1.6 CRDi

The Kia Cee'd is a small family hatchback with various engine and body styles. Launched in 2006, it has become increasingly popular on Irish roads. LuK technical takes a closer look at a clutch replacement and offers some handy hints to garages looking to undertake this repair.

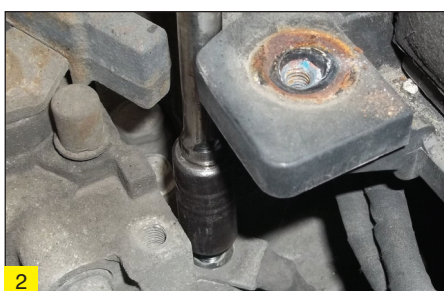
In this example we used a two post ramp, an engine support beam, two long axle stands and one transmission jack. The vehicle may also be fitted with alloy wheels, so make sure the locking tool is available before starting the repair.

Remove the engine cover and disconnect the battery cables. Disconnect the MAF sensor switch and ECU cables and stow them carefully. Remove the air filter housing and ECU as one complete unit. Disconnect the speed sensor and reverse light plugs, and stow safely out of the way.

Remove the locking pins holding the gear change cables in place (fig 1) and carefully pop off the gear change cables and stow. Remove two bolts from the shift linkage bracket, enabling you to remove it from the gearbox as a complete unit. Unbolt the



battery earth cable from the top of the gearbox (fig 2) and stow. Install the engine support beam and remove the two accessible starter motor bolts, one of which holds a bracket for the wiring loom. Remove the bolts from the top gearbox mount, raise the vehicle, remove nearside the front wheel and plastic wheel arch lining. Drain the gearbox oil.



Remove the under tray and then the turbocharger pipe, secured by two brackets on the sump. In this repair, we avoided removing the sub frame completely. Support the sub frame with two long axle stands. Unbolt and remove the four bolts securing the steering rack in place. Disconnect the exhaust support bracket from the sub frame (fig 3). Remove the two front sub frame bolts



completely, and slacken the rear sub frame nut and bolts just enough, so the front of the sub frame can be lowered on the transmission jacks.

Remove the nearside ball joint bolts, and disconnect from its position and remove the drive shaft. Remove the front and rear gearbox mounts. Remove the bracket that secures the hydraulic pipe to the gearbox (fig 4) and remove the two bolts that hold the external slave cylinder in position, and carefully stow away from the working area.



Support the gearbox with the transmission jack. Remove the bottom starter motor bolt and three bottom bell housing bolts from the rear of the gearbox; one bell housing bolt is hidden behind a plastic cover (fig 5). Remove the remaining bell housing

bolts from the front, then carefully separate the gearbox from the engine. You should have enough clearance inside the wheel arch to position the gearbox inside and support it using the transmission jack safely.

Remove the clutch and release bearing. Check the bell housing for any debris and oil contamination, and rectify before refitting the gearbox. The release bearing should always be changed during a clutch replacement. The release arm should be checked for smooth operation and for wear on the ball pivot.

Check the flywheel for signs of heat stress, such as hairline fractures or cracks. The surface of the flywheel should be checked to make sure it is within the manufacturer's wear tolerance. If the surface of the flywheel is to be skimmed, make sure that the same amount is taken from the clutch bolting surface.

Failure to check and rectify these areas may cause the clutch to operate incorrectly. Before fitting the new clutch disc, make sure the input shaft is clean and free from any wear. Smear a little high melting point grease on the splines, then slide the new clutch plate up and down the splines a couple of times, before removing the plate and wiping off any excess grease.

Refitting the gearbox is the reversal of removal, remembering to refill the gearbox oil to the correct level when the gearbox is refitted.

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