

Clutch Replacement

Ford Focus 1.6 EcoBoost



Alistair Mason
Schaeffler

REXPERT Alistair Mason is replacing the clutch and dual mass flywheel (DMF) in a 2012 Ford Focus 1.6 EcoBoost that has covered more than 86,000 miles. The customer reported that the vehicle was difficult to get into gear and the initial diagnosis indicated a clutch disengagement problem, so the customer was advised that gearbox removal was required to pinpoint the exact cause. The scheduled repair time for the clutch replacement is 4.3 hours.

Workshop equipment required

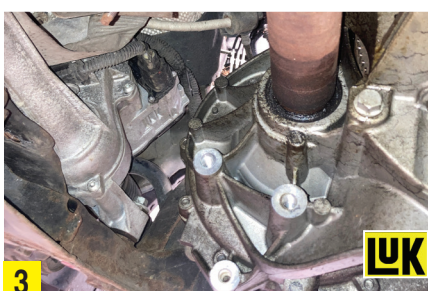
- Vehicle lift (two post is ideal)
- Engine support
- Transmission jack
- Clutch alignment tool
- Vacuum bleeding tool

Gearbox removal

Place the vehicle on the lift, open the bonnet and remove the engine cover and complete air filter assembly. Disconnect and remove the battery, battery tray and carrier (Fig 1), which provides good access to the top of the



gearbox. Ease the gear change cables off the selectors, unbolt the cable bracket and stow against the bulkhead. Remove the upper bellhousing bolts, disconnect the hydraulic clutch pipe at the concentric slave cylinder (CSC), but make sure the rubber seal stays on the pipe and blank the pipe to stop the fluid running out (Fig 2).



Raise the lift to waist height and remove the N/S/F wheel and wheel arch liner, raise the lift to gain access to the underside, and remove the engine undertray. Drain the gearbox oil and while the oil is draining, remove the catalytic converter supporting bracket (Fig 3), and the lower gearbox pendulum mounting. Remove the N/S bottom ball joint pinch bolt, ease the ball joint out of the hub carrier, push the hub assembly outwards and remove the N/S driveshaft from the gearbox. The O/S driveshaft will stay in place when removing the gearbox.



Remove the lower bellhousing bolts and starter motor bolts, leaving two, easily accessible bolts to support the gearbox until the point of removal. Support the engine using either an engine support or a second transmission jack, access the engine bay and remove the top gearbox mounting bolts. Lower the engine slightly and remove the gearbox mounting bolts that are accessed from the N/S wheel arch (Fig 4), then remove the mounting.

Support the gearbox with a transmission jack, remove the final bellhousing bolts, ease the gearbox away from the engine, and when

clear, remove the gearbox from the vehicle and stow in a safe area.

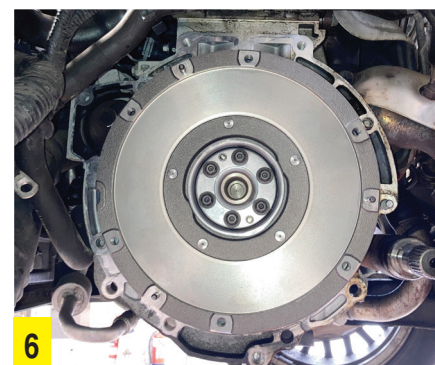
Diagnosis and clutch replacement

With the gearbox removed, the fault was clear: a finger of the diaphragm spring had broken off, restricting the movement of the clutch (Fig 5). With a clutch replacement required and a new DMF advised, authorisation was given for the complete repair.



With the clutch and DMF removed from the car, inspect the back of the engine for any leaks that could potentially contaminate the new components, and scan the QR code on the LuK replacement box with the REXPERT app, to obtain the service information and technical bulletins, as well as the fitting instructions and torque settings.

Mount the new DMF onto the crankshaft, install the new bolts and torque to the manufacturer's specification (Fig 6) and degrease the DMF face with clutch and brake dust cleaner.





Turning to the gearbox, remove the CSC, clean the bellhousing area so that the old clutch dust does not contaminate the new clutch and DMF, and carefully fit the new CSC, ensuring it is located and tightened correctly (Fig 7).

Apply a light smear of high melting point grease onto the gearbox input shaft splines, mount the clutch plate onto the input shaft to evenly distribute the grease and also confirm the correct fitment of the clutch plate, then remove the clutch plate from the input shaft, and wipe off any excess grease.

Mount the new clutch onto the DMF using the clutch alignment tool (Fig 8), but make sure the clutch plate is the correct way round, indicated by "Gearbox side" facing the gearbox. Degrease the clutch pressure plate



surface, using clutch and brake dust cleaner, tighten the bolts in an even and sequential manner, and torque to the manufacturer's specification.

Before refitting the gearbox, place a drainer under the clutch pipe and flush out the old clutch fluid, before replacing it with new fluid of the correct specification, because old, contaminated fluid, can cause the new seal in the CSC to swell and fail. In this instance, the clutch system was bled using a vacuum bleeder.

Check the gearbox alignment dowels are located correctly and that the bellhousing area is clear of cables etc., so not to foul or get caught when installing the gearbox.

Gearbox installation

With the aid of a transmission jack, bring the gearbox close to the engine, take time to align the gearbox correctly. Bring into line the O/S driveshaft, ease the gearbox input shaft into the clutch and then ensure the gearbox locates onto the alignment dowels. Insert two bellhousing bolts and tighten, then fit the upper gearbox mounting and tighten in position. Refit all other bolts and components in reverse order of their removal, and refill the gearbox with oil.

After the battery lead has been reconnected, reset all electrical consumers and carry out a full road test to ensure that the repair has been successfully completed.

Information on Schaeffler products, fitting instructions, labour times and much more can be found on the REPXPART workshop portal - www.repxpert.co.uk - the REPXPART app, or by calling the Schaeffler REPXPART hotline on (+44) 1432 265 265.

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