# LuK Clutch Academy

# Peugeot 107 Semi-Auto

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This month, REPXPERT's Alistair Mason replaced the clutch on a semi-automatic Peugeot 107, which was fitted with a 1.0 litre 1KR engine, had covered just over 50,000 miles and reportedly suffered from clutch 'slipping'.

Because these 'city' cars can be subjected to a lot of stop/start driving, the service life of the clutch can be significantly reduced; therefore, this provides independent repairers with an excellent opportunity to carry out a clutch replacement. However, the challenge of replacing the clutch in a semi-automatic vehicle may be daunting, so Alistair has produced a step-by-step guide to illustrate how surprisingly straightforward this type of repair is, which should take just shy of 4 hours.

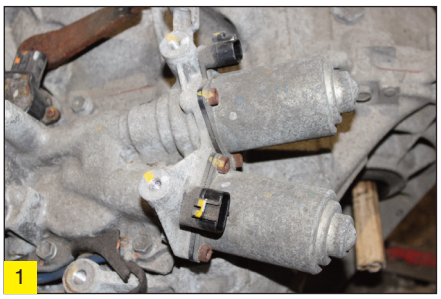
**Step-by-step procedure**

To carry out the replacement effectively and safely requires a two-post ramp, engine support and transmission jack, as well as a diagnostic machine to reset the clutch alternator, locking wheel bolt key and radio code. Workshop instructions and labour times can be found via Schaeffler's service brand, REPXPERT, while technical bulletins should be checked prior to the repair.

With the vehicle on the ramp, open the bonnet, remove the batter and disconnect the fuse box/ECU carrier from the battery carrier.

Disconnect the wiring loom retaining clips and then remove the battery carrier to gain access to the top of the gearbox. Then disconnect the wiring loom multiplugs from the gear change and clutch actuators, remove the wiring loom retaining brackets and stow the wiring loom to the rear of the engine bay.

Remove the three retaining bolts from the clutch actuator unit, and disconnect the two multiplugs from the gear change actuators at the rear of the gearbox (Fig 1).



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Unscrew the upper bell housing bolts and the upper starter motor bolt – at this point, the ramp can be raised to waist height and both front wheels can be taken off.

Once the wheels have been safely stored away, raise the ramp again to gain full access to the underside. The next task is to drain the gearbox oil. While it is draining, unlock both front wishbone bolts. Separate both front anti-roll bar links, refit the drain plug and disconnect the N/S splash guard – allowing space for the gearbox removal.

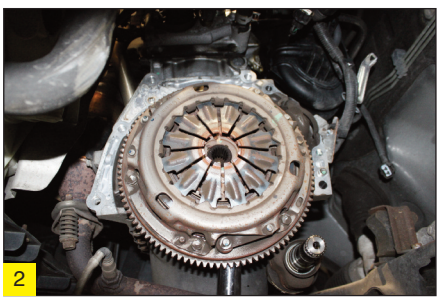
Detach the gearbox pendulum mounting from the underside of the gearbox. Disconnect both driveshafts from the gearbox by levering them out – these are retained by 'snap rings' so sometimes a quick tug on the lever is required. Once removed, the hub assemblies are simple to pull out and the driveshafts are positioned to give clearance for gearbox removal.

Remove the flywheel cover from the lower section of the bell housing, as well as the remaining bell housing bolts and lower starter motor bolt. Remember to leave one housing bolt which is easy to access, so it can support the gearbox before it is removed.

Disconnect the lambda probe multiplug and also remove the retaining bracket. Then support the engine with either a sub-frame attached engine support, an engine brace or a floor-mounted support, such as a large axle stand or transmission jack.

From the engine bay, remove the gearbox mounting on the N/S. Once removed, lower the engine slightly, support the gearbox with a transmission jack, remove the final bell housing bolt, ease the gearbox away from the engine and flywheel, and then lower the gearbox to remove.

With the gearbox removed, check what clutch is currently installed; in this scenario, it was evident that a conventional diaphragm spring clutch that was installed, so the usual replacement procedure applies (Fig 2).



2

Check for any leaks from the engine or gearbox that could contaminate the new clutch, and rectify the issue if required.

Remove the clutch assembly, clean the flywheel and inspect for heat cracks. Remove the surface glaze using Emory cloth, clean the bell housing, take off the old release bearing and actuator shaft, before inspecting for any wear on all contact areas (Fig 3).

3

Before fitting the new release bearing, lubricate the moving contact points on the release system with high-melting point grease. After installation, apply a light smear of high-melting point grease to the gearbox input shaft splines, and then position the new clutch plate onto the input shaft. Ensure it is correctly fitted and wipe off any excess grease.

Finally, install the new clutch using a clutch plate aligning tool, confirming that the clutch plate is facing the correct direction and remembering to always tighten the bolts evenly and sequentially.

Install the gearbox and refit in reverse order of removal, refill the gearbox with the correct quantity and specification of oil, and torque all bolts to the manufacturer's recommendation. When the repair is complete, the final task is to reset the clutch actuator using a diagnostic computer. Once reset, conduct a short road test to ensure the operation is a success.

**Find more information on the REPXPERT garage portal, www.repxpert.co.uk, or call the Schaeffler technical hotline on +44 1432 264 264.**

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