



Isuzu D-Max Clutch Replacement



In 2012 Isuzu replaced its aging Rodeo pick-up with the new D-Max which quickly became a credible alternative within the growing pick-up sector, alongside vehicles such as the Toyota Hilux, Mitsubishi L200, and Ford Ranger. The tough 2.5-litre twin-turbo diesel beneath its bonnet enabled it to haul hefty loads up to 3.5 tonne through the wildest terrain making the D-Max a popular choice for rural businesses.

The vehicle featured in this article is a 2014 model with 82,000 miles (132,000 km) on its odometer. Although proven to be a very reliable workhorse, the clutch was showing signs of slipping and therefore it needed to be replaced with a high-quality clutch kit.

The vehicle was brought into the workshop and the bonnet was raised to start the procedure. Being a four-wheel drive vehicle of traditional design with the powertrain mounted longitudinally within a ladder-frame chassis, the gear stick in the cab needs to be taken out in order to remove the transmission.

First of all, disconnect the battery and then remove the gear knob and the centre-console and unclip the wiring harness from the 4WD switch, accessory socket, and heated seats. Next, remove the rubber gasket surrounding the gear stick, which then gives access to the retaining bolts. (Fig.1)

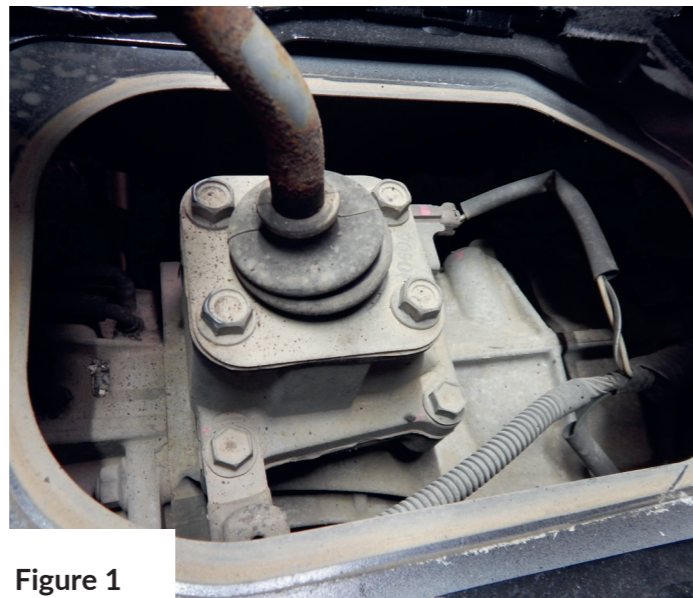


Figure 1

With these parts removed, the gear stick can be unbolted from the transmission. With the vehicle now raised, mark the alignment position of the front and rear propshafts and undo all of the bolts that retain them to the drive flanges. Remove the propshafts, being sure to check all of the universal joints for any excessive 'free-play' or 'stiffness', then put them to one side.

Next, remove the two bolts that retain the clutch slave cylinder and secure it out of the way ready for when the transmission is taken out later. Disconnect the exhaust gas temperature sensor from the wiring harness in preparation for the removal of the Diesel Particulate Filter (DPF) and the differential-pressure sensor hoses.

Support the gearbox with a transmission jack, unbolt the crossmember and the transmission mounting and then remove them. This now gives

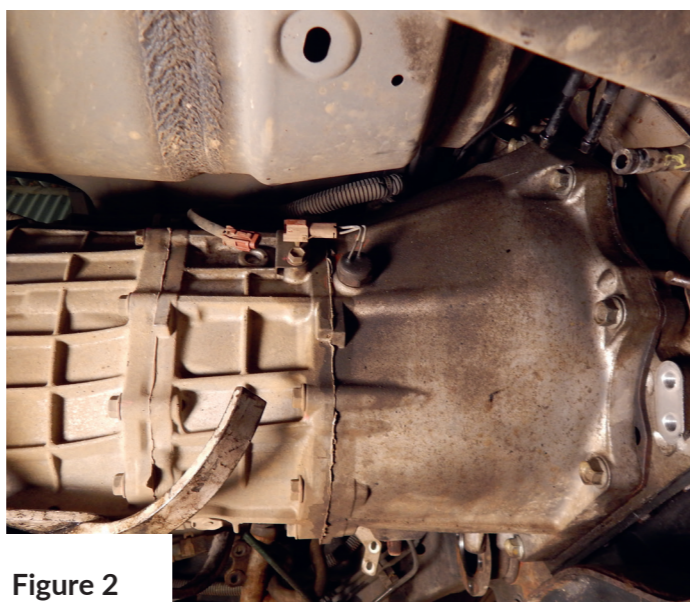


Figure 2

enough room to take out the DPF. Undo the two bolts at the rear that secure it to the exhaust, followed by the three bolts attaching it to the down-pipe. Once released, carefully lower the DPF to the floor; this gives extra clearance when removing the transmission from the engine. (Fig.2)

Disconnect all other remaining switches and sensors from the transmission and secure the wiring harness to one side. With the transmission and transfer box assembly securely supported, undo the bell housing nuts and bolts, being sure to note which bolts are from which location as they differ in length. Note - the starter motor can be left in place because it does not need to be taken out completely for the transmission to be removed.

Then, carefully separate the gearbox assembly from the engine and lower it to a working height. Remove the clutch-pressure plate and friction disc from the flywheel, then inspect them for any 'unusual' wear issues. On this vehicle the flywheel was in good condition and only needed a clean before the new clutch could be fitted. However, the friction disc material was very close to being worn out and therefore it was concluded that this clutch assembly needed to be replaced using Blue Print Clutch Kit ADBP300197.

Align and fit the new pressure plate and friction disc to the flywheel and tighten all eight bolts in a 'star' pattern to the required torque; this is to give an even spread of pressure during the tightening process - preventing twisting and vibration of the cover and the lifting of the pressure plate. (Fig.3)

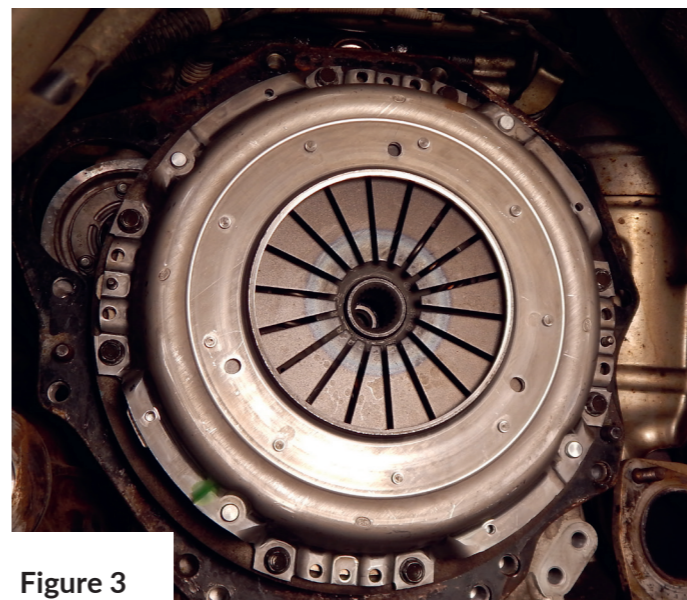


Figure 3

Turning our attention to the release mechanism, it is important to clean the bell housing thoroughly to free it from any grease, dirt and old friction fibres from the previous clutch, then detach the release bearing from the clutch fork and inspect the guide sleeve for wear. Remove the clutch fork and release lever and inspect them for any fractures or other damage, being sure to apply grease to the pivot points before refitting.

Next, fit the new release bearing while securely locating the retaining clips on the fork and ensure it is correctly aligned - failure to do so can lead to operational issues with the clutch mechanism. (Fig.4) Apply a small amount of grease to the input shaft splines before reinstalling the transmission.

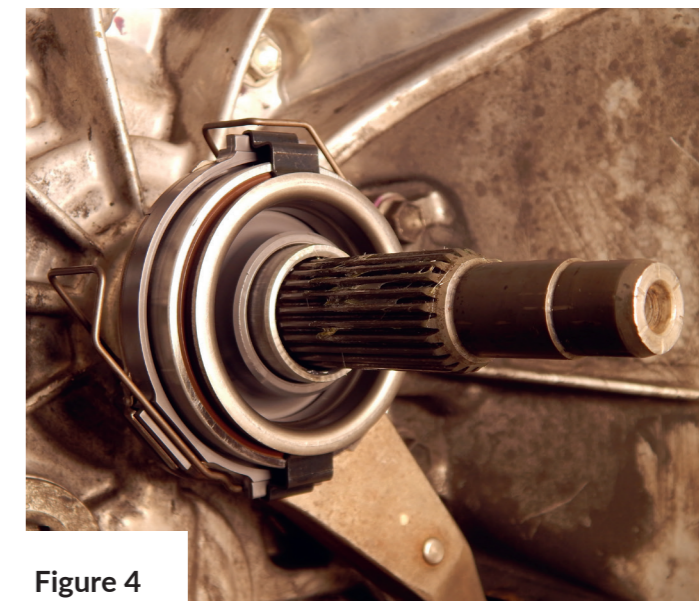


Figure 4

With the new clutch kit fitted, the gearbox assembly can be reunited with the engine. Install and tighten all bell housing nuts and bolts. Locate and align the wiring harness for the transmission and the DPF - this allows all its sensors and switches to be reattached. You can then refit the DPF to the exhaust system and reconnect the hoses and sensors.

Next, refit the crossmember to the chassis, and with the gearbox now supported the transmission jack can be safely taken away. With the gearbox now securely in place, refit the clutch-slave cylinder and the front and rear propshafts, then lower the vehicle.

Moving to the inside, refit the gear stick, followed by the rubber gasket. The centre console can now be put back in place, then reconnect all the switches and refit the gear stick gaiter and knob. Reconnect the battery and close the bonnet. Reset the steering angle sensor using a suitable diagnostic tool and carry out a full road test to check the operation of the new clutch.

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