

## Clutch

The clutch operating mechanism consists of the following:

- Flywheel
- Pilot bearing
- Clutch disc/discs
- Clutch pressure plate
- Release bearing

The 4.0L or 4.6L clutch is a single plate, dry friction clutch disc with a diaphragm-style spring pressure plate. The clutch disc has a splined hub (with integral torsional dampening springs) which attaches the clutch disc to the input shaft. Engine output is coupled to the input shaft by the friction existing between the clutch disc facings and the flywheel/clutch pressure plate assembly.

The 5.4L clutch is a dry friction dual disc design. A vented cast intermediate plate separates the 2 discs. The clutch discs have splined hubs (with integral torsional dampening springs) which attach the clutch disc to the input shaft. Engine output is coupled to the input shaft by the friction existing between the clutch disc facings and the flywheel/clutch pressure plate assembly. The clutch discs and pressure plate are serviced as an assembly.

The primary function of the clutch is to transfer power from the engine to the drivetrain. The clutch connects and disconnects a manually operated transmission and the remainder of the drivetrain from the engine. This permits shifting and changing speeds that correspond to the engine speed through gear reductions, for both forward and reverse gears.

The clutch system is disengaged when the clutch pedal is depressed and engaged when the clutch pedal is released. When the clutch pedal is depressed, it pushes the clutch master cylinder plunger, which transmits hydraulic pressure to the clutch slave cylinder. The slave cylinder engages and compresses through the release bearing and the clutch pressure plate diaphragm spring, releasing the pressure on the clutch disc. This displacement removes the spring load from the clutch pressure plate and eliminates the coupling friction between the engine and the transmission.

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