

**Haynes**
shows you how

BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual

1 General information

The manual transmission is a 5-speed unit, and is contained in a cast-alloy casing bolted to the rear of the engine.

Drive is transmitted from the crankshaft via the clutch to the input shaft, which has a splined extension to accept the clutch friction plate. The output shaft transmits the drive via the driveshaft to the rear differential.

The input shaft runs in line with the output shaft. The input shaft and output shaft gears are in constant mesh with the layshaft gear cluster. Gears are selected by sliding synchromesh hubs, which lock the appropriate output shaft gears to the output shaft.

Gear selection is via a floor-mounted lever and selector mechanism. The selector mechanism causes the appropriate selector fork to move its respective synchro-sleeve along the shaft, to lock the gear pinion to the synchro-hub. Since the synchro-hubs are splined to the output shaft, this locks the pinion to the shaft, so that drive can be transmitted. To ensure that gear-changing can be made quickly and quietly, a synchro-mesh system is fitted to all forward gears, consisting of balk rings and spring-loaded fingers, as well as the gear pinions and synchro-hubs. The synchro-mesh cones are formed on the mating faces of the balk rings and gear pinions.

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