

## Transmission Parts

### Input Shaft

A long shaft that extends from the rear of the engine to the inside of the transmission housing. The shaft is made of case hardened steel with a helical gear machined at the transmission and machined splines on the other.

### Lay Shaft

Or countershaft is constructed from case hardened material with several different sized gears machined on to it. The lay shaft gears transfers drive to the desired gear on the main shaft when the driver selects the gear.

### Mainshaft

Or output shaft holds the output gear and synchronizers. The input shaft and main shaft are in direct line from the front of the transmission to the rear. The main shaft rotates in the same direction as the input shaft.

### Reverse idler gear

The reverse idler gear (commonly a spur type gear) is used to reverse the rotation of the output shaft, thereby allowing the driver to reverse the vehicle. The reverse idler gear and shaft are located between the input and the main shaft, when reverse gear is selected, the spur gear meshes with the lay shaft reverse gear and the main shaft reverse gear.