3. 12 TRANSMISSION

A. Construction

The transmission receives the rotary power from the crankshaft and through a series of gears, changes it to the desired speed and then transmits it to the drive chain sprocket to drive the rear wheel.

The transmission on the S 90, CL 90, CL 90 L, CD 90 and CT 90 has four speeds. C 90 has three speeds. All the gears are constand meshed, assuring smooth gear change. The later series transmission on the CT 90 is equipped with a sub-transmission which has a low speed range selectability, see section 3. 15.

The primary reduction ratio for 90 cc : 3.722. **(Fig. 3. 86)**

1. Operation **(S 90, CL 90, CL 90 L, CD 90 CT 90)**

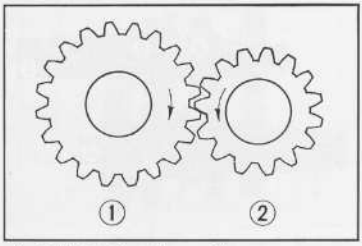

Fig. 3. 86 Reduction and torque ratios
① Driven gear
② Drive gear

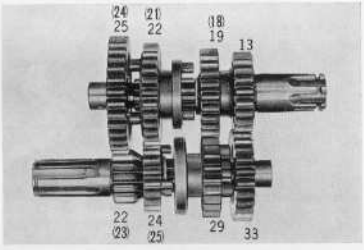

Fig. 3. 87 Number of gear teeth, ( ) indicate CD 90

Low : (Fig. 3. 88)

The power from the crankshaft is transmitted through the clutch to the spline fixed driven gear on the transmission main shaft. ①

The power from the transmission main shaft ① is transmitted from the main shaft drive gear to the freely rotating counter shaft low gear ④.

However, the counter shaft second gear ⑤ which is splined to the counter shaft and is moved against the low gear ④ by the shift fork and is locked by means of a dog, forming an integral unit with the countershaft to transmit the driving force to the drive sprocket mounted on the left end of the counter shaft.

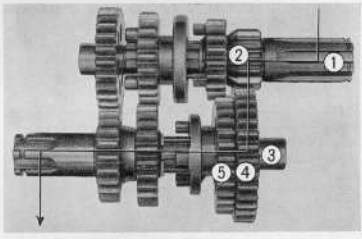

Fig. 3. 88 Low gear
① Transmission mainshaft
② Low gear
③ Transmission countershaft
④ Countershaft low gear
⑤ Countershaft second gear