

2. Wear of the gears

When the gears has been used over a long period, the gear teeth and the dog will wear and will also tend to make contact on the side, producing noise and causing the dog slip out. Under such condition, the gears should be replaced in sets for satisfactory performance.

3. Measuring clearance between the gear and shaft

Measure the diameter of the gear shaft bore with a cylinder gauge or inside micrometer and measure the shaft diameter with a micrometer. From the two value compute the clearance.

Gears	Standard Value	Serviceable Limit
Mainshaft	0.0009~0.0024	Replace if over 0.0039 (0.10 mm)
2nd gear	(0.022~0.060mm)	
Countershaft low and top gears	0.0012~0.0030 (0.032~0.077 mm)	Replace if over 0.0039 (0.10 mm)

(Reference)

Item	Standard Value
Gear shaft bore	0.6699~0.6709 (17.016~17.043 mm)
Mainshaft diameter	0.6686~0.6690 (16.983~16.994 mm)
Countershaft diameter	0.6679~0.6686 (16.966~16.984 mm)

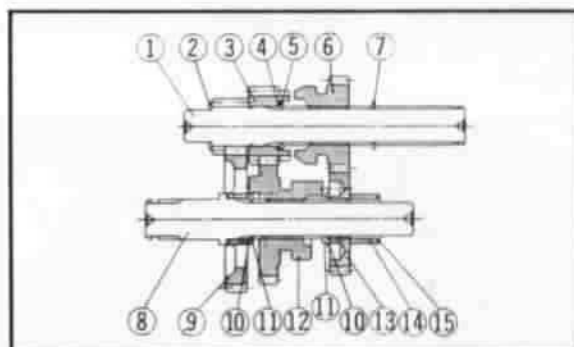
4. Checking the operation of the respective gears

Shift the gears into the neutral position and check to make sure that all of the gears rotate smoothly or slide smoothly.

D. Reassembly

Perform the reassembly in the reverse order of disassembly. Exercise care on the following points.

1. Assemble the respective gears, washers and circlips properly in the accordance with Fig. 45.
2. Replace all circlips with new items.



① Transmission mainshaft ② Thrust washer
③ Mainshaft second gear ④ 17 mm spline washer
⑤ 17 mm circlip ⑥ Mainshaft top gear
⑦ 17 mm circlip ⑧ Transmission countershaft
⑨ Countershaft low gear ⑩ 17 mm spline washer
⑪ 17 mm circlip ⑫ Countershaft second gear
⑬ Countershaft top gear ⑭ Gear collar
⑮ 13.5 mm thrust washer

Fig. 45

10. GEAR SHIFT MECHANISM

A. Description

The gear spindle arm which is connected to the gear shift spindle rotates the gear shift drum and this causes the gear shift fork to move left and right in the drum groove. The gear shift fork is controlled by the groove in the drum and this in turn causes the gears to slide and change gears.

B. Disassembly

1. Refer to the section on disassembly of the crankshaft assembly on page 18. By removing the right crankcase, the gear shift drum and the fork assembly can be removed together with the transmission gear as a complete unit.