

# Gear and Synchronizer Ring



## Inspections

1. Inspect the inside of synchronizer ring for wear.
  2. Inspect the synchronizer ring teeth and matching teeth on gear for wear (rounded off).
  3. Inspect the gear hub thrust surface for wear.
  4. Inspect the cone surface for wear on 1st, and 2nd, countershaft gears; 3rd, 4th and 5th mainshaft gears.
  5. Inspect the teeth on all gears for uneven wear, scoring, galling, cracks.
  6. Place the synchronizer ring on matching gear cone and rotate until it stops (approx. 10 to 20 degrees), then measure the clearance between ring and gear.
- Ring-to-Gear Clearance:**  
**Standard (New):** 0.73—1.18 mm  
(0.029—0.047 in.)  
**Service Limit:** 0.4 mm (0.016 in.)
7. Separate the synchronizer ring and gear, and coat them with oil.
  8. Install the synchronizer spring on synchronizer ring.
  9. Put the synchro ring on gear cone again, rotate until it stops, then set it aside for later reassembly.

SYNCHRONIZER SPRING

SYNCHRONIZER RING

Wear

GEAR

SYNCHRONIZER RING