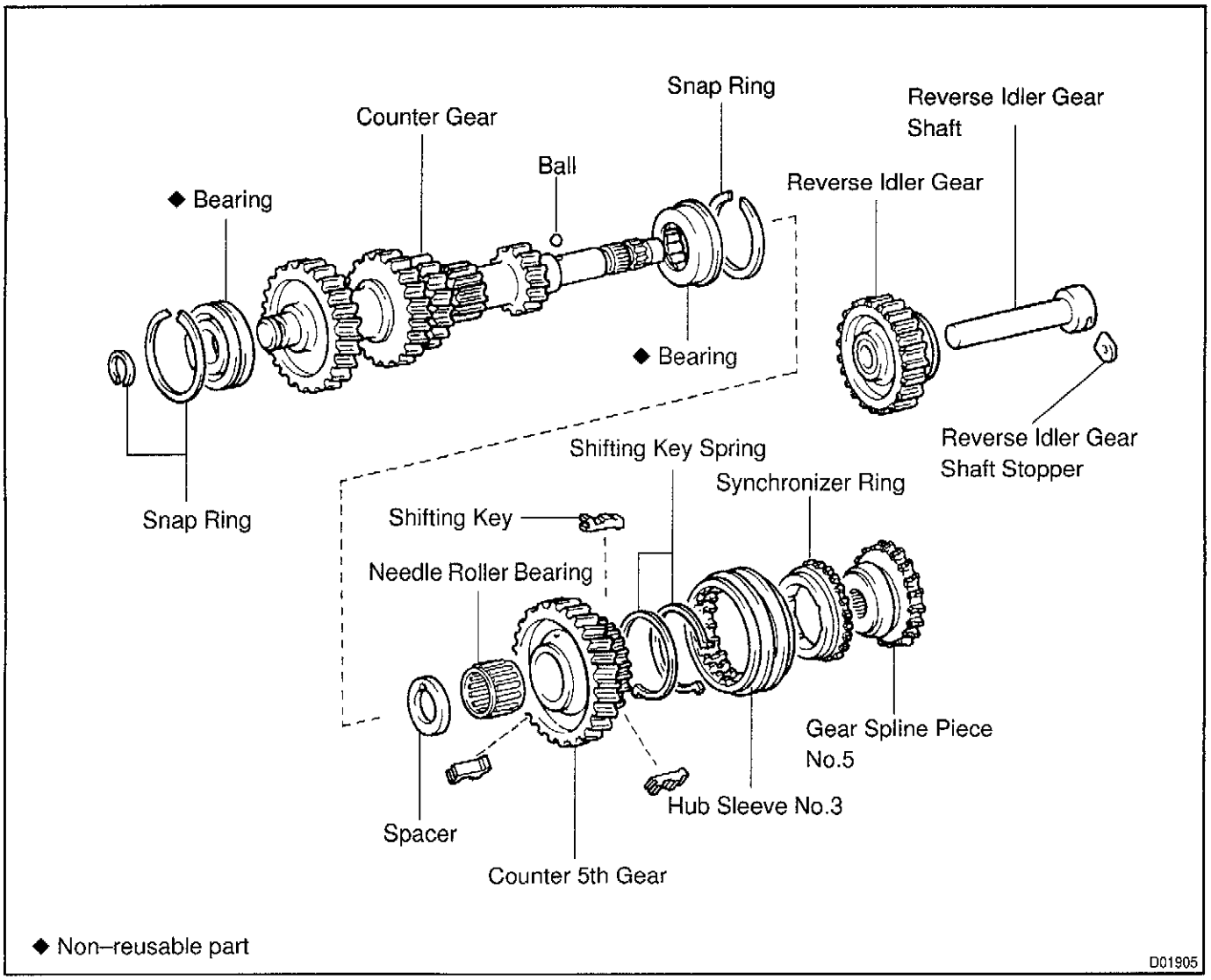
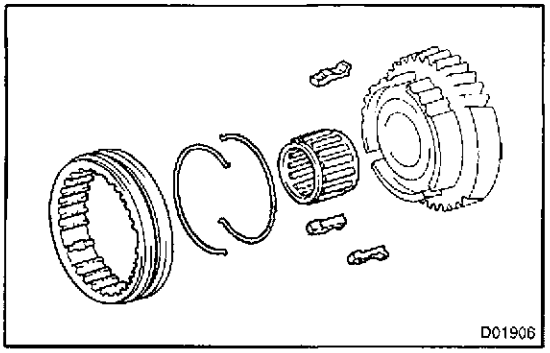
# COUNTER GEAR AND REVERSE IDLER GEAR

## COMPONENTS

MT06C-01



MT060-01




# DISASSEMBLY

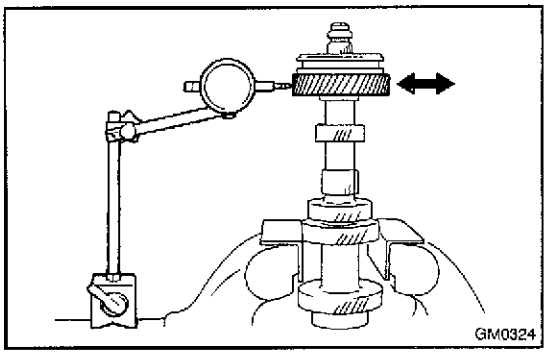
## REMOVE HUB SLEEVE NO.3, SHIFTING KEY AND SPRING

(a) Remove the hub sleeve No.3.

(b) Using a screwdriver, remove the 3 shifting keys and 2 springs.

MT06E-01

# INSPECTION

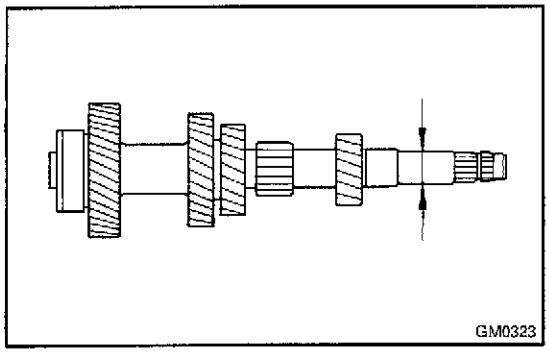



## 1. MEASURE COUNTER 5TH GEAR RADIAL CLEARANCE

(a) Install the spacer, needle roller bearing and counter 5th gear to the counter gear.

(b) Using a dial indicator, measure the counter 5th gear radial clearance.

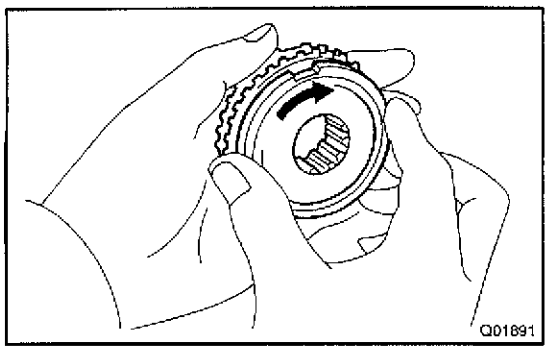
**Standard clearance:**
**0.009–0.032 mm (0.0004–0.0013 in.)**
**Maximum clearance:**
**0.032 mm (0.0013 in.)**




## 2. INSPECT COUNTER GEAR

Using a micrometer, measure the outer diameter of needle roller bearing race.

**Standard outer diameter:**
**25.98–26.00 mm (1.0228–1.0236 in.)**
**Minimum outer diameter:**
**25.86 mm (1.0181 in.)**




## 3. INSPECT SYNCHRONIZER RING

(a) Check for wear or damage.

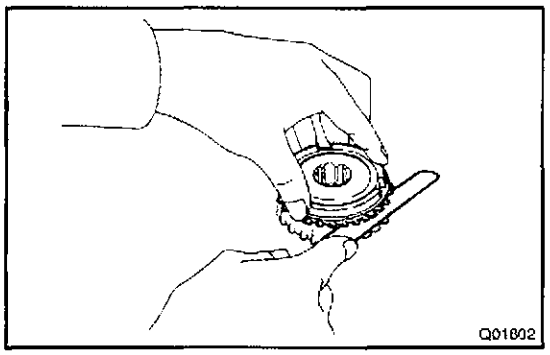
(b) Check the braking effect of the synchronizer ring. Turn the synchronizer ring in one direction while pushing it to the gear cone. Check that the ring locks.

If the braking effect is insufficient, apply a small amount of the fine lapping compound between the synchronizer ring and gear cone. Lightly rub the synchronizer ring and gear cone together.

**NOTICE:**

**Ensure the fine lapping compound is completely washed off after rubbing.**

(c) Check again the braking effect of the synchronizer ring.



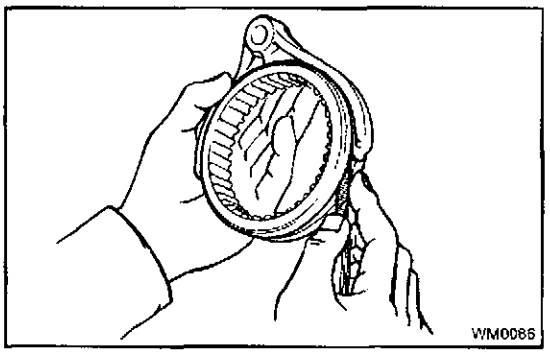

(d) Using a feeler gauge, measure the clearance between the synchronizer ring back and gear spline end.

**Minimum clearance: 0.8 mm (0.031 in.)**

If the clearance is less than the minimum, replace the synchronizer ring, and apply a small amount of the fine lapping compound on gear cone.

**NOTICE:**

**Ensure the fine lapping compound is completely washed off after rubbing.**

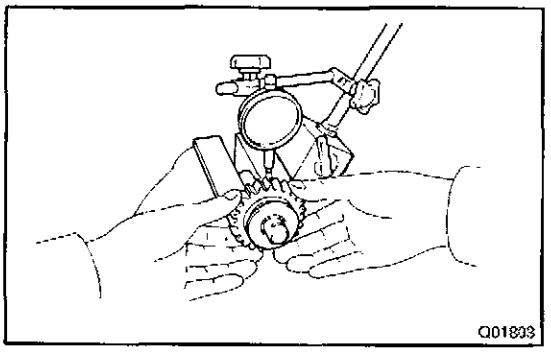



### 4. MEASURE SHIFT FORK AND HUB SLEEVE CLEARANCE

Using a feeler gauge, measure the clearance between the hub sleeve and shift fork.

**Maximum clearance: 1.0 mm (0.039 in.)**

If the clearance exceeds the maximum, replace the shift fork or hub sleeve.

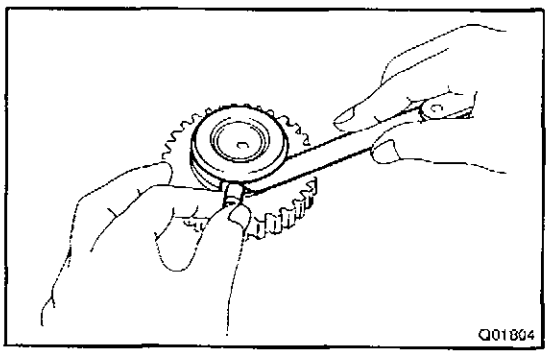



### 5. MEASURE REVERSE IDLER GEAR RADIAL CLEARANCE

Using a dial indicator, measure the reverse idler gear radial clearance.

**Standard clearance:**
**0.04–0.08 mm (0.0016–0.0031 in.)**
**Maximum clearance:**
**0.13 mm (0.0051 in.)**

If the clearance exceeds the maximum, replace the reverse idler gear or reverse idler gear shaft.

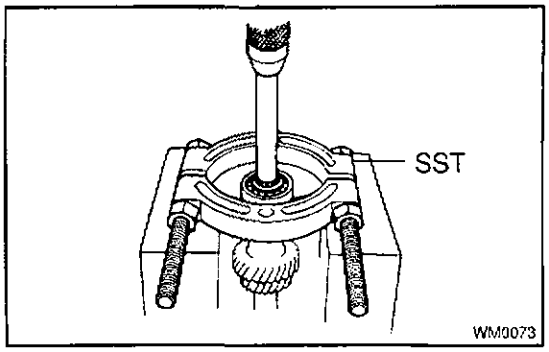



### 6. MEASURE REVERSE IDLER GEAR AND SHIFT ARM SHOE CLEARANCE

Using a feeler gauge, measure the clearance between the reverse idler gear and shift arm shoe.

**Standard clearance:**
**0.05–0.27 mm (0.0020–0.0106 in.)**
**Maximum clearance:**
**0.50 mm (0.0197 in.)**

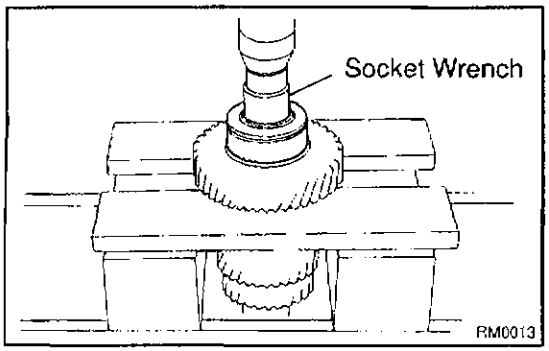
If the clearance exceeds the maximum, replace the shift arm or reverse idler gear.




# REPLACEMENT

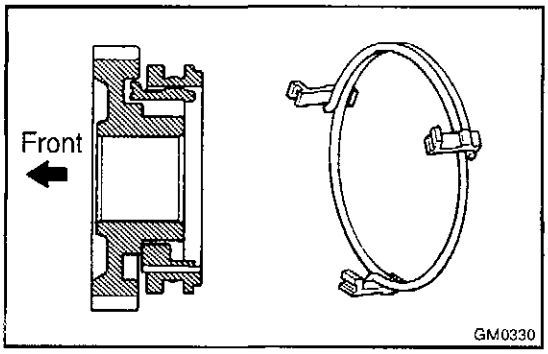
## IF NECESSARY, REPLACE COUNTER GEAR FRONT BEARING

(a) Using a snap ring expander, remove the snap ring.
(b) Using SST and a press, remove the bearing.
SST 09950–00020
(c) Replace the side race.




(d) Using a press and socket wrench, install the bearing, side race and inner race.
(e) Select a snap ring that allows the minimum axial play.

| Mark | Thickness mm (in.) |
|---|---|
| 1 | 2.05–2.10 (0.0807–0.0827) |
| 2 | 2.10–2.15 (0.0827–0.0846) |
| 3 | 2.15–2.20 (0.0846–0.0866) |
| 4 | 2.20–2.25 (0.0866–0.0886) |
| 5 | 2.25–2.30 (0.0886–0.0906) |
| 6 | 2.30–2.35 (0.0906–0.0925) |




MTD8G-01

# REASSEMBLY

## INSTALL HUB SLEEVE NO.3, SHIFTING KEY AND SPRING

(a) Install the hub sleeve No.3 and shifting keys to the counter 5th gear.

(b) Install the shifting key springs under the shifting keys.

**NOTICE:**

**Position the key springs so that their end gaps are not aligned.**