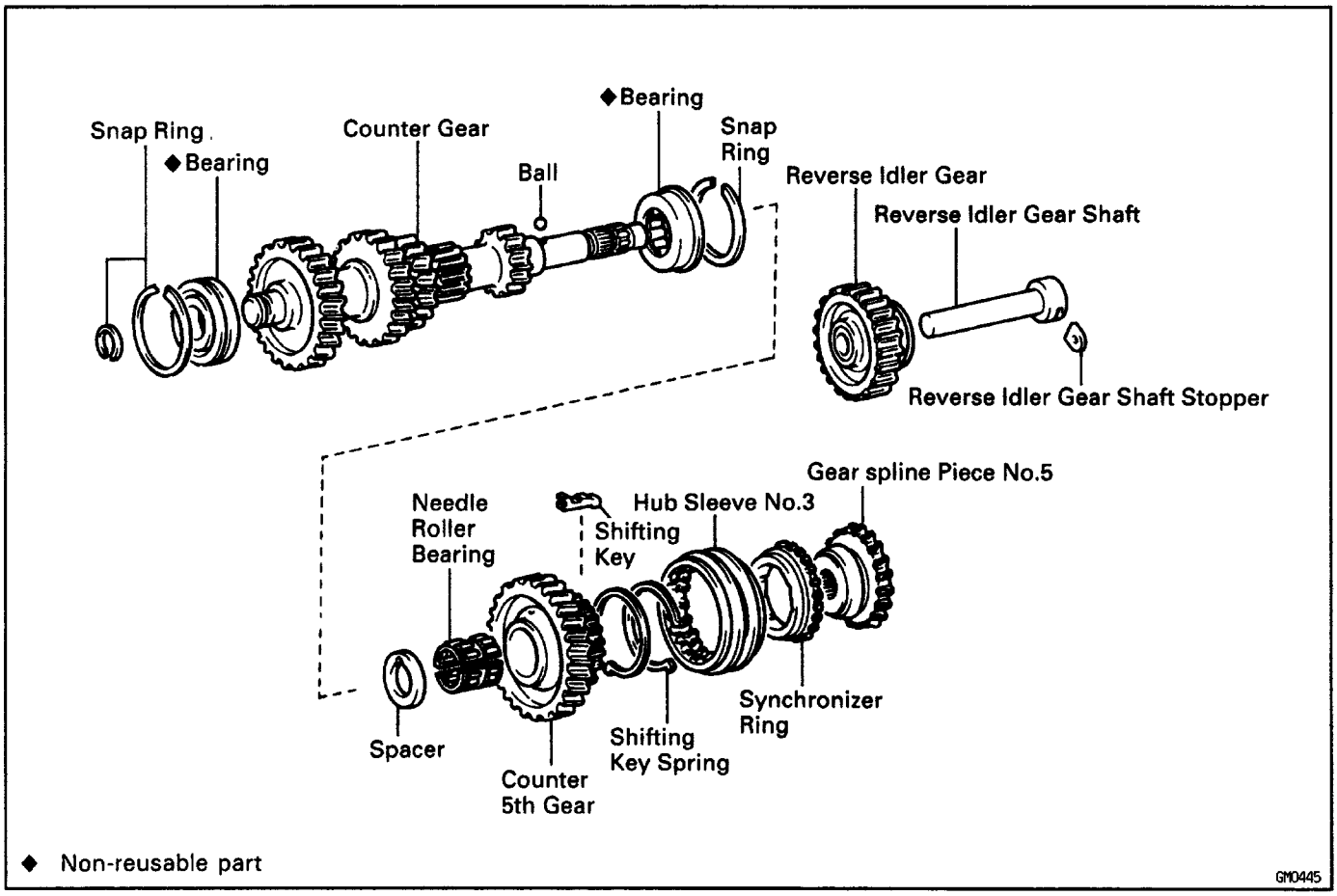
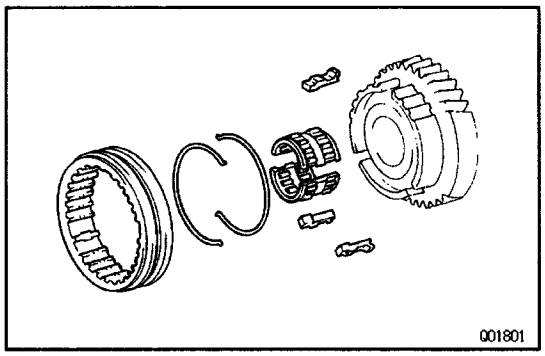
COUNTER GEAR AND REVERSE IDLER GEAR

COMPONENTS

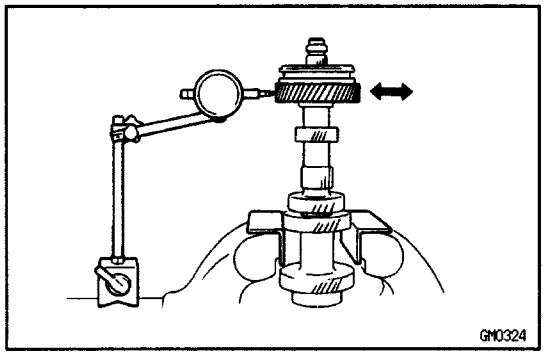




COUNTER GEAR COMPONENT PARTS DISASSEMBLY

REMOVE HUB SLEEVE NO.3, SHIFTING KEYS AND SPRINGS

Using a screwdriver, remove the hub sleeve No.3, 3 shifting keys and 2 springs.



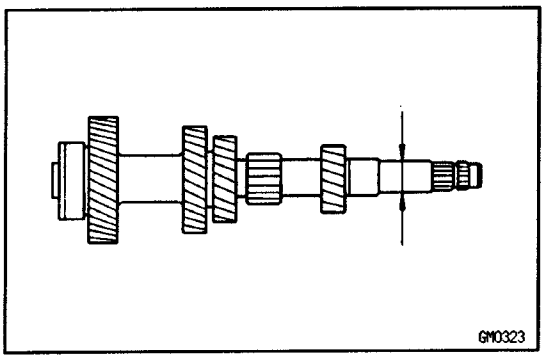
COUNTER GEAR AND REVERSE IDLER GEAR COMPONENT PARTS INSPECTION

1. INSPECT COUNTER 5 TH GEAR RADIAL CLEARANCE

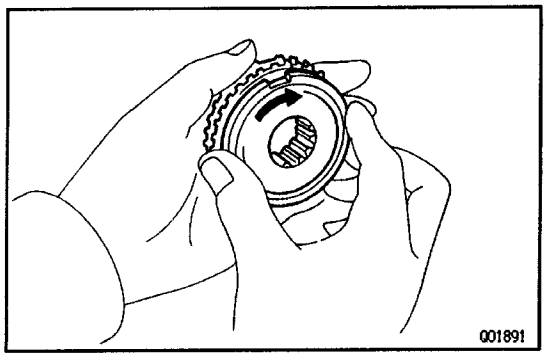
(a) Install the spacer, needle roller bearing and counter 5th gear to the counter gear.

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

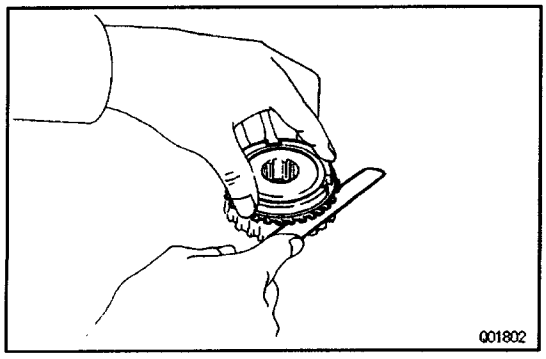
Standard clearance:
0.009–0–032 mm (0.0004–0.0013 in.)
Maximum clearance:
0.032 mm (0.0013 in.)
If the clearance exceeds the maximum, replace the gear, needle roller bearing or counter gear assembly.



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.)
If the outer diameter is less than the minimum, replace the counter gear assembly.



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 fine lapping compound between the synchronizer ring and gear cone.
Lightly rub the synchronizer ring and gear cone together.
NOTICE: Ensure the fins lapping compound is completely washed off after rubbing.
(c) Check again the braking effect of the synchronizer ring. If it does not lock, replace the synchronizer ring.

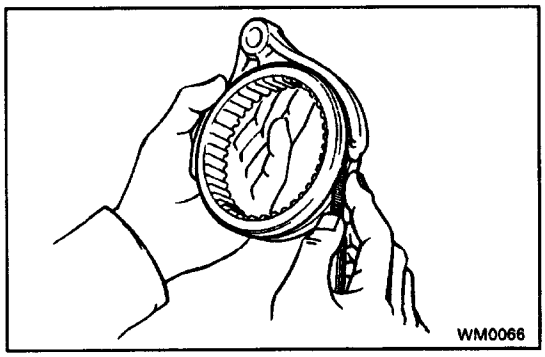


(d) Using a feeler gauge, measure the clearance between the synchronizer ring back and gear spline end.
Minimum clearance:
0.8 mm l0.031 in.)
HINT:
- When replacing either a synchronizer ring or gear, apply a small amount of fine lapping compound between the synchronizer ring and gear cone.

Lightly rub the synchronizer ring and gear cone together.

- When replacing both the synchronizer ring and gear, there is no need to apply any compound or to rub them together.

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



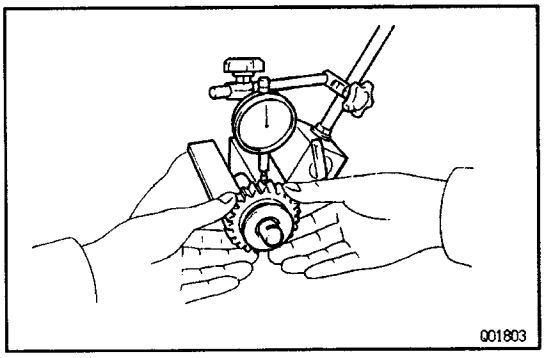
4. INSPECT SHIFT FORKS AND HUB SLEEVES CLEARANCE

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. INSPECT REVERSE IDLER GEAR RADIAL CLEARANCE

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

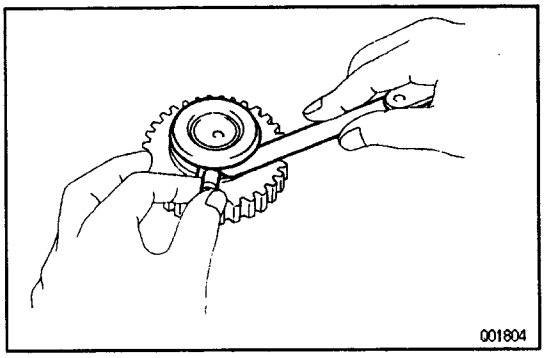
Standard clearance:

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 gear or shaft.



6. INSPECT REVERSE IDLER GEAR AND SHIFT ARM SHOE CLEARANCE

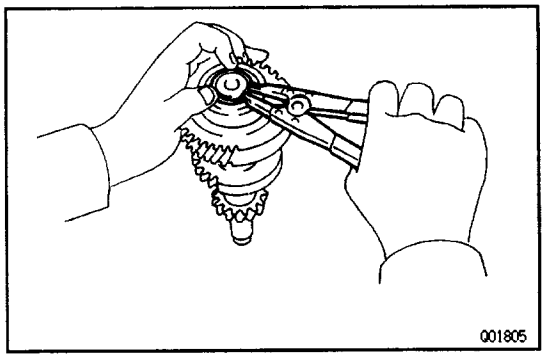
Using a feeler gauge, measure the clearance between the reverse idler gear and shift arm shoe.

Standard clearance:

0.05 – 0.27 mm (0.0020 – 0.0106 in.)

Maximum clearance:

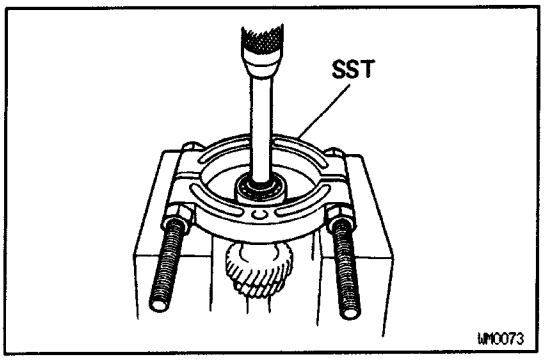
0.50 mm (0.0197 in.)



BEARING REPLACEMENT

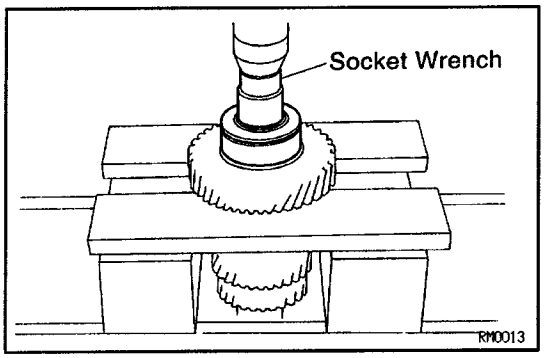
IF NECESSARY. REPLACE COUNTER GEAR FRONT BEARING

(a) Using a snap ring expander, remove the snap ring.

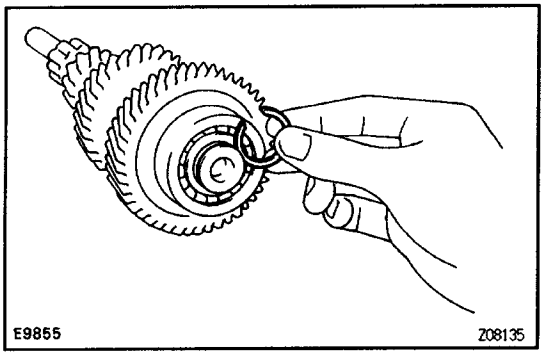


(b) Using SST and a press, remove the bearing.
SST 09950–00020

(c) Replace the side race.

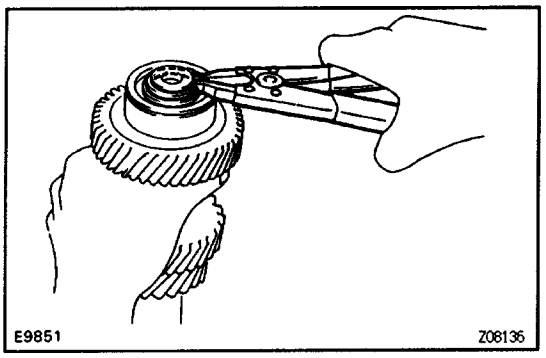


(d) Using a socket wrench and press, install a new bear–ing, the side race and inner race.

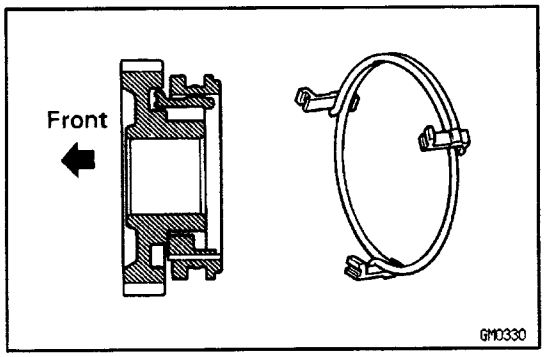


(e) Select a snap ring that will allow minimum axial play.

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)



(f) Using a snap ring expander, install the snap ring.



COUNTER GEAR COMPONENT PARTS ASSEMBLY

INSTALL HUB SLEEVE NO.3. SHIFTING KEYS AND SPRINGS

(a) Install the clutch hub and shifting keys to the hub sleeve.

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

NOTICE: Install the key springs positioned so that their end gaps are not in line.