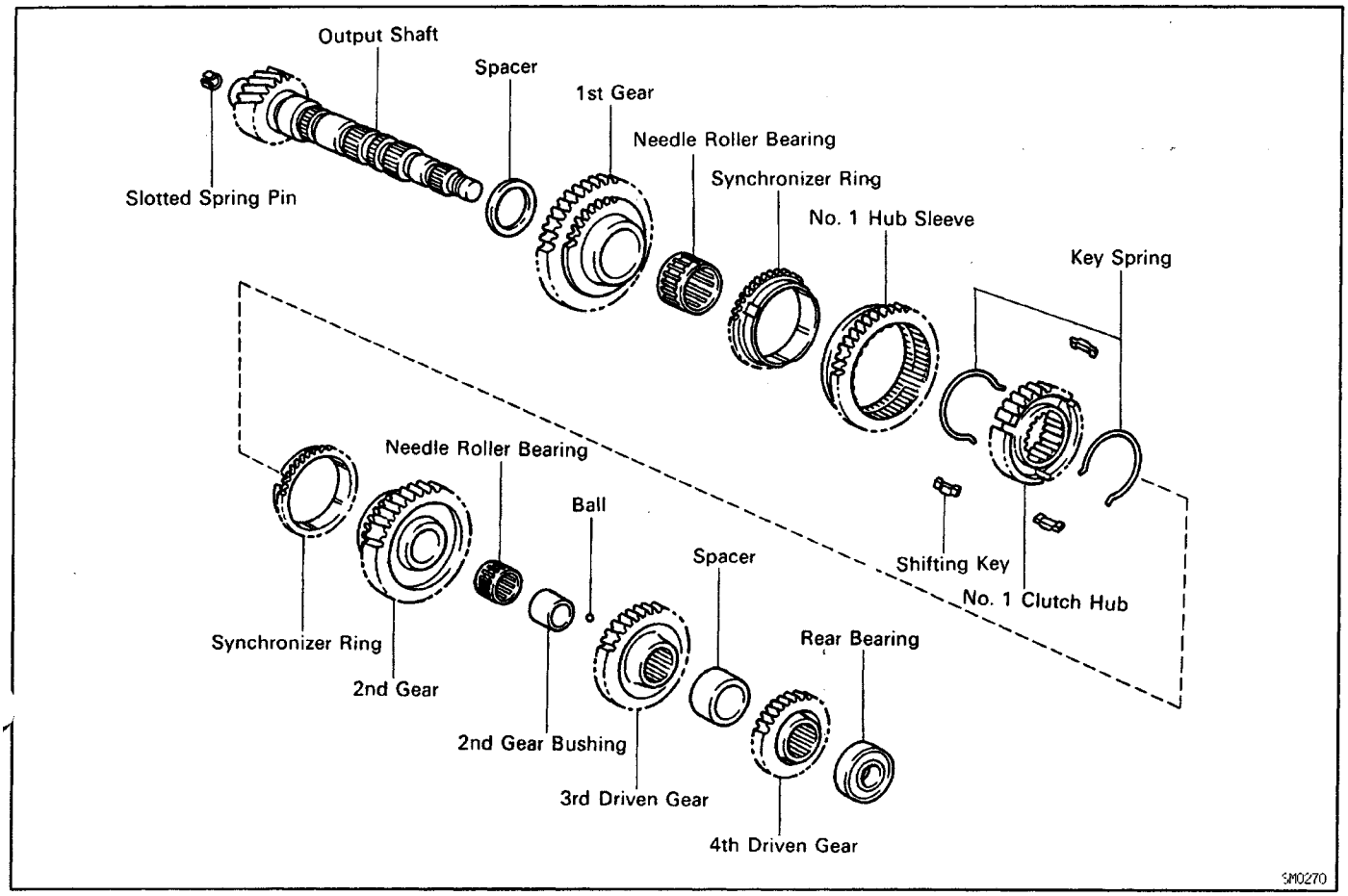
OUTPUT SHAFT

MX02M–01

COMPONENTS



MX037–01

OUTPUT SHAFT DISASSEMBLY

1. INSPECT FIRST AND SECOND GEAR THRUST CLEARANCE

Using a feeler gauge, measure the thrust clearance.

Standard clearance:

1st gear

0.10–0.29 mm (0.0039–0.0114 in.)

2nd gear

0.20–0.44 mm (0.0079–0.0173 in.)

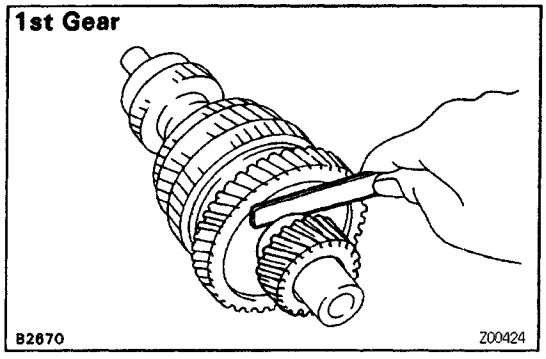
Maximum clearance:

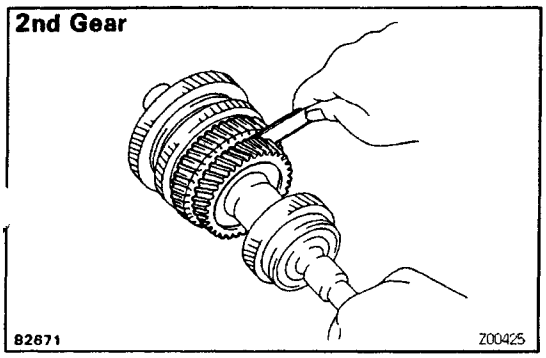
1st gear

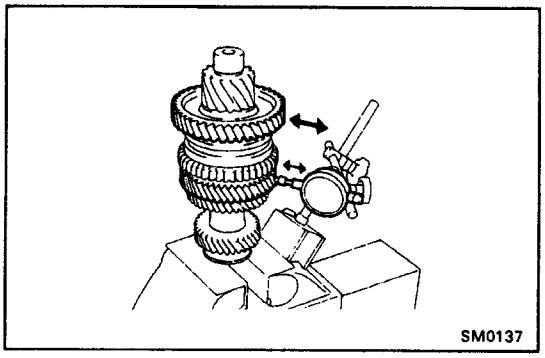
0.35 mm (0.0138 in.)

2nd gear

0.50 mm (0.0197 in.)







2. INSPECT FIRST AND SECOND GEAR OIL CLEARANCE

Using dial indicator, measure the oil clearance between the gear and shaft.

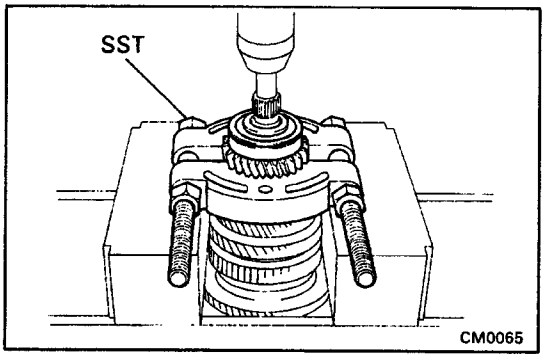
Standard clearance:

0.009–0.053 mm (0.0004–0.0021 in.)

Maximum clearance:

0.070 mm (0.0028 in.)

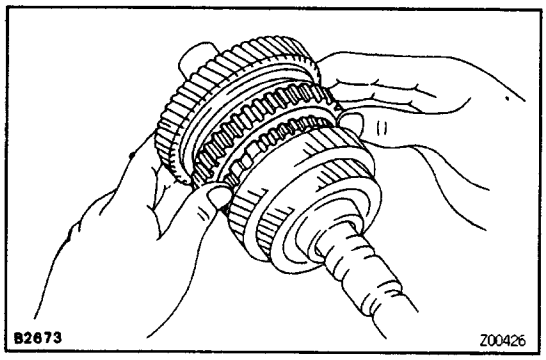
If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.



3. REMOVE REAR BALL BEARING, FOURTH DRIVEN GEAR AND OUTPUT GEAR SPACER

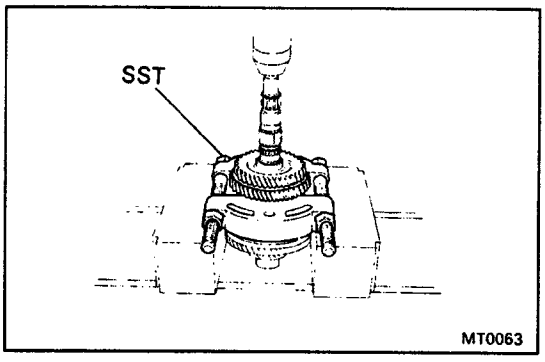
(a) Using SST and a press, remove the rear ball bearing and 4th driven gear.
SST 09950–00020

(b) Remove the output gear spacer and ball.



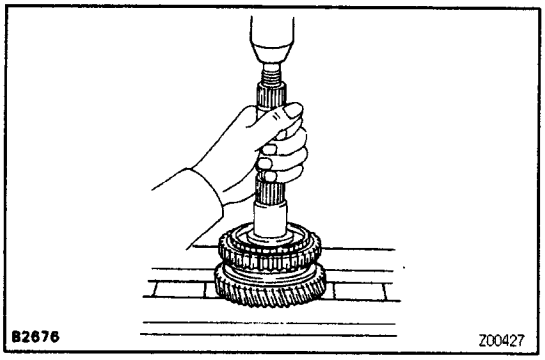
4. REMOVE THIRD DRIVEN GEAR, SECOND GEAR, NEEDLE ROLLER BEARING AND SYNCHRONIZER RING

(a) Shift the No. 1 hub sleeve into the 1st gear.



(b) Using SST and a press, remove the 3rd driven gear and 2nd gear.
SST 09950–00020

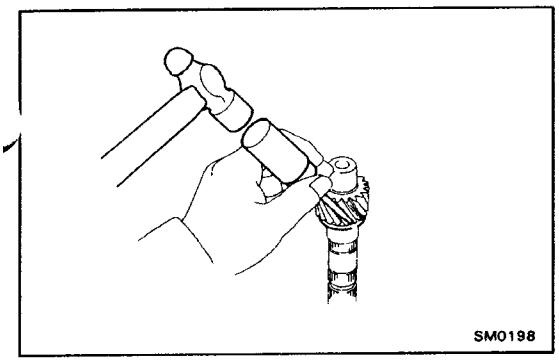
(c) Remove the needle roller bearing and synchronizer ring.



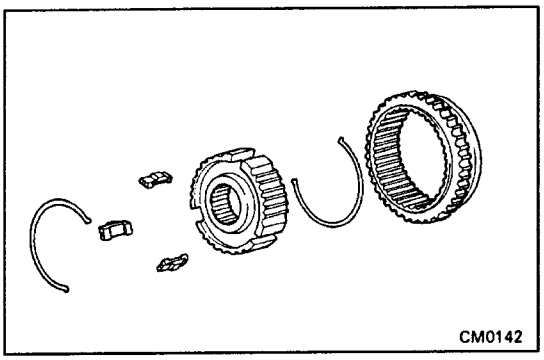
5. REMOVE NO. 1 HUB SLEEVE ASSEMBLY, FIRST GEAR, SYNCHRONIZER RING, NEEDLE ROLLER BEARING, THRUST WASHER AND LOCKING BALL

(a) Using a press, remove the No.1 hub sleeve, 1st gear and synchronizer ring.

(b) Remove the needle roller bearing and locking ball.

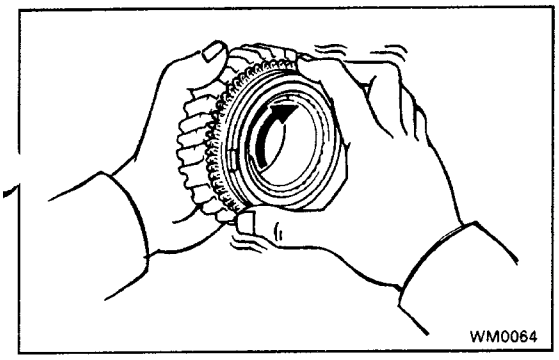


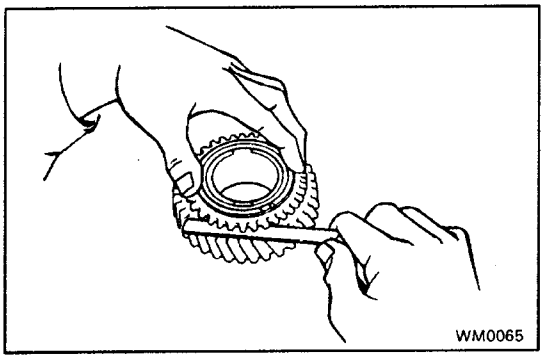
(c) Using a screwdriver and hammer, drive out the thrust washer.



6. REMOVE NO.1 HUB SLEEVE, SHIFTING KEYS AND SPRINGS FROM NO.1 CLUTCH HUB

Using a screwdriver, remove the three shifting keys and spring from the No.1 clutch hub.





OUTPUT SHAFT COMPONENT PARTS INSPECTION

MX02P–01

1. INSPECT SYNCHRONIZER RINGS

(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 and check that the ring is locked.

If the braking effect is insufficient, lightly rub the synchronizer ring and gear cone by applying a small amount of fine lapping compound.

NOTICE:

- **Wash off completely the fine lapping compound after rubbing.**
- **Check again the braking effect of the synchronizer ring.**

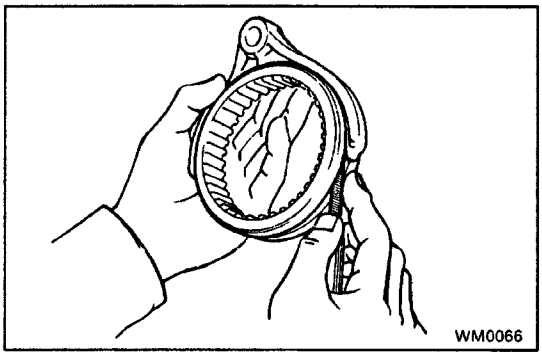
(c) Using a feeler gauge, measure the clearance between the synchronizer ring back and the gear spline end.

Minimum clearance:

0.6 mm (0.024 in.)

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

NOTICE: Wash off completely the fine lapping compound after rubbing.



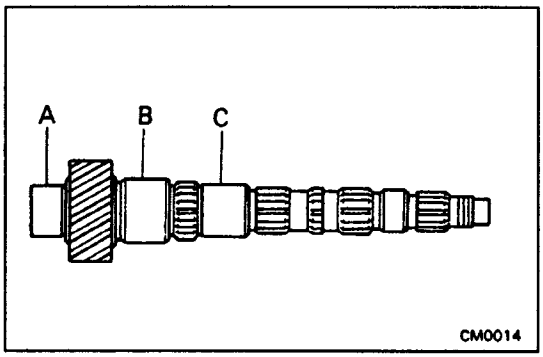
2. INSPECT CLEARANCE OF SHIFT FORKS AND HUB SLEEVES

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.



3. INSPECT OUTPUT SHAFT

(a) Using a micrometer, measure the outer diameter of the output shaft journal surface.

Minimum outer diameter:

Part A

31.970 mm (1.2587 in.)

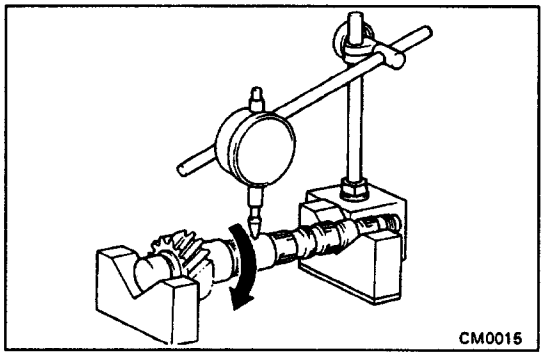
Part B

37.970 mm (1.4849 in.)

Part C

31.990 mm (1.2594 in.)

If the outer diameter is less than the minimum, replace the output shaft.

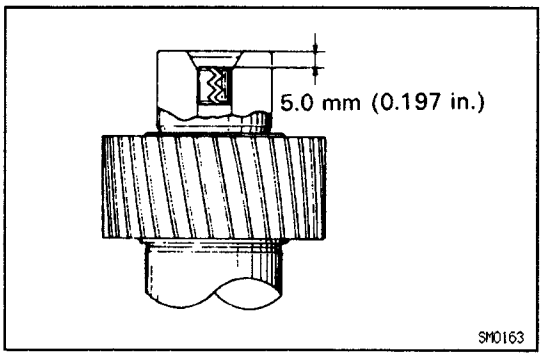


(b) Using a dial indicator, check the shaft runout.

Maximum runout:

0.05 mm (0.0020 in.)

If the runout exceeds the maximum, replace the output shaft.

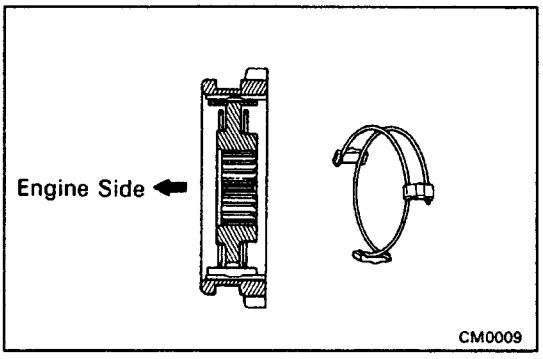


MX02Q–01

OUTPUT SHAFT ASSEMBLY (See page MX1–39)

1. IF OUTPUT SHAFT WAS REPLACED, DRIVE IN SLOTTED SPRING PIN

If the output shaft was replaced, drive the slotted spring pin in the output shaft to a depth of 5.0 mm (0.197 in.).

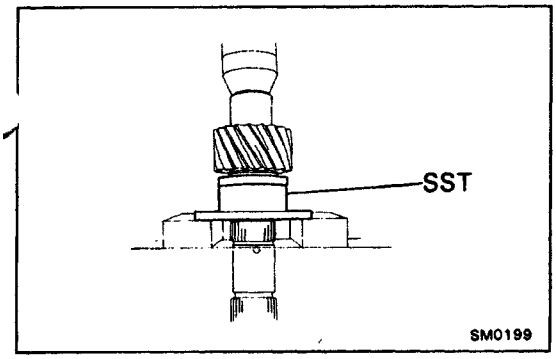


2. INSTALL NO.1 CLUTCH HUB INTO SLEEVE

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

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

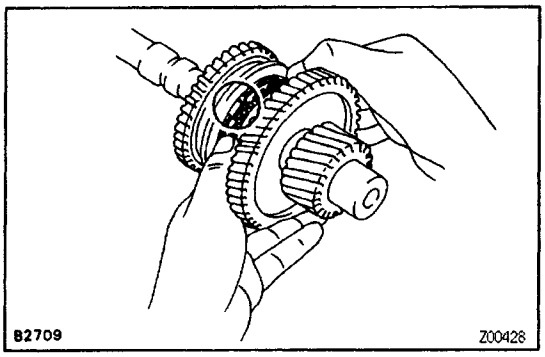
NOTICE: Install the key springs positioned so that their end gaps are not in line.



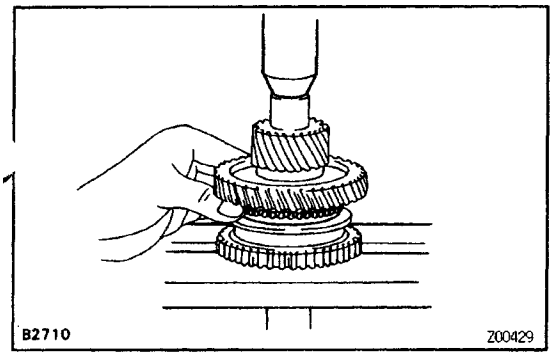
3. INSTALL THRUST WASHER, FIRST GEAR, NEEDLE ROLLER BEARING, SYNCHRONIZER RING AND NO. 1 HUB SLEEVE TO OUTPUT SHAFT

(a) Using SST and a press, install the thrust washer.
SST 09316–60010 (09316–00040)

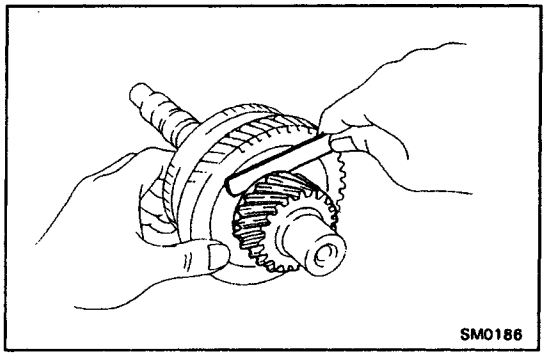
(b) Apply gear oil to the needle roller bearing.



(c) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.



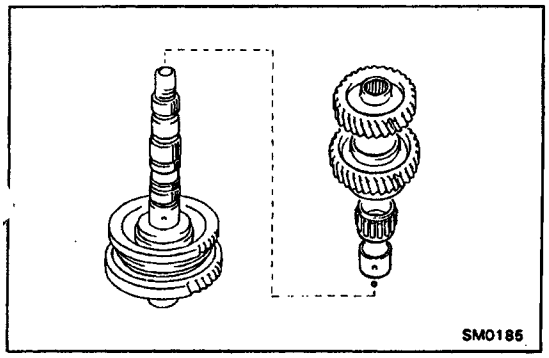
(d) Using a press, install the 1st gear and No. 1 hub sleeve.



4. INSPECT FIRST GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 1st gear thrust clearance.

Standard clearance:
0.10–0.29 mm (0.0039–0.0114 in.)

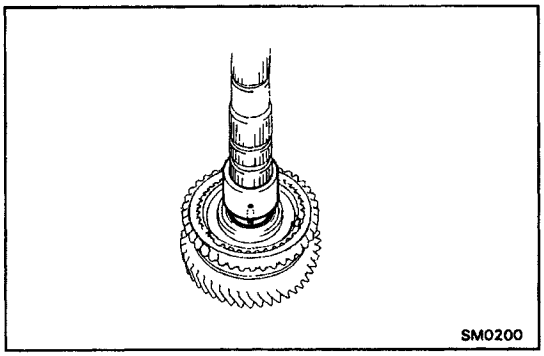


5. INSTALL SYNCHRONIZER RING, SECOND GEAR, NEEDLE ROLLER BEARING AND THIRD DRIVEN GEAR

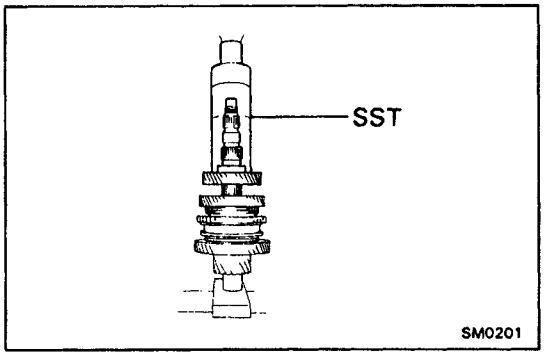
(a) Place the synchronizer ring on the gear and align the ring slots with shifting keys.

(b) Apply gear oil to the needle roller bearing.

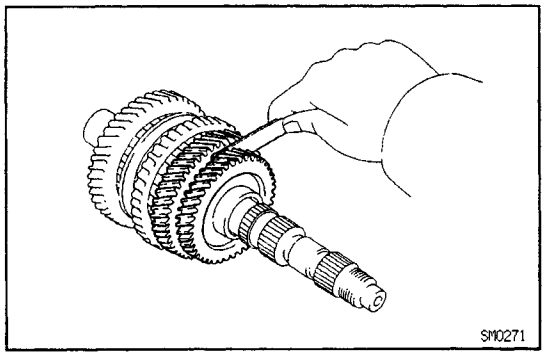
(c) Install the ball.



(d) Fit the 2nd gear bushing groove securely over the ball when installing the 2nd gear bushing on the shaft.
(e) Install the 2nd gear.



(f) Using SST and a press, install the 3rd driven gear.
SST 09316 – 60010 (09316 – 00010)

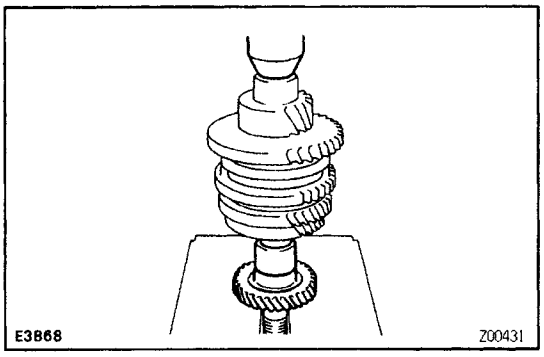


6. INSPECT SECOND GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 2nd gear thrust clearance.

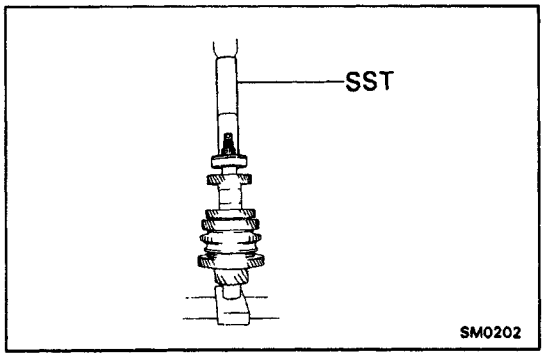
Standard clearance:

0.20–0.44 mm (0.0079–0.0173 in.)



7. INSTALL OUTPUT GEAR SPACER, FOURTH DRIVEN GEAR AND RADIAL BALL BEARING

(a) Install the outer gear spacer.
(b) Using a press, install the 4th driven gear and bearing.



8. INSTALL REAR BEARING

Using SST and a press, install the rear bearing.
SST 09612–22011