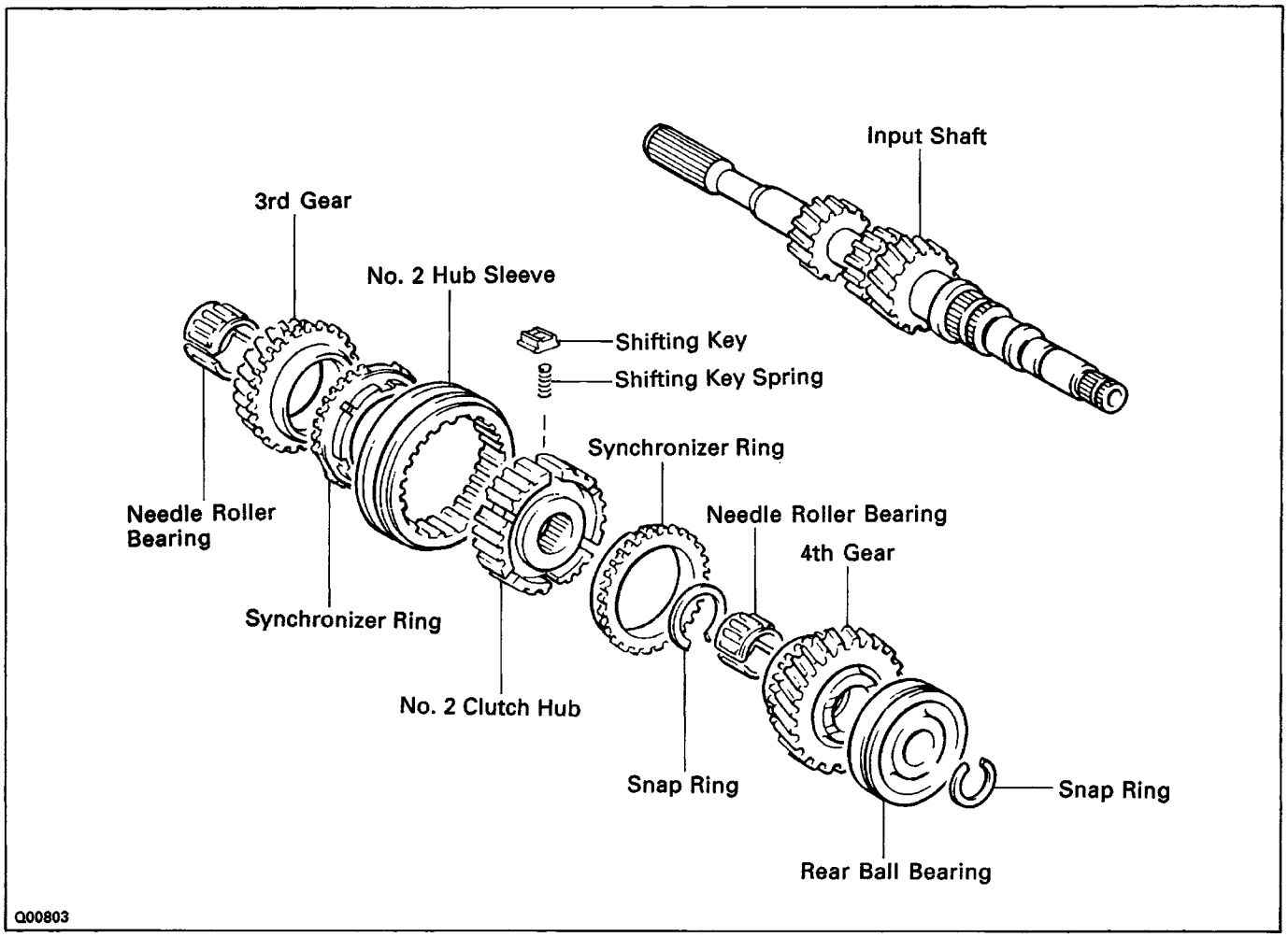
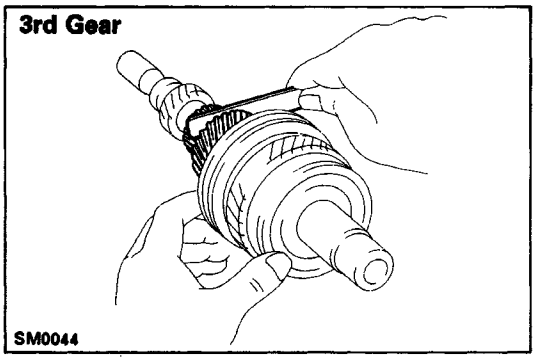
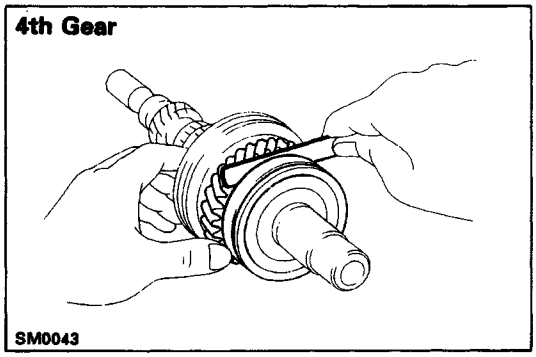
COMPONENT PARTS
Input Shaft Assembly







DISASSEMBLY OF INPUT SHAFT ASSEMBLY

1. INSPECT THIRD AND FOURTH GEAR THRUST CLEARANCE

Using a feeler gauge, measure the thrust clearance.

Standard clearance:

3rd gear

0.10–0.35 mm (0.0039–0.0138 in.)

4th gear

0.10–0.55 mm (0.0039–0.0217 in.)

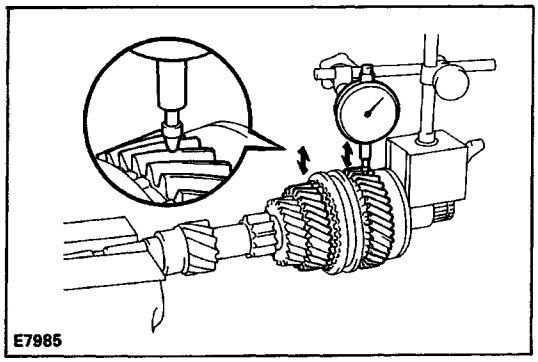
Maximum clearance:

3rd gear

0.40 mm (0.0157 in.)

4th gear

0.60 mm (0.0236 in.)



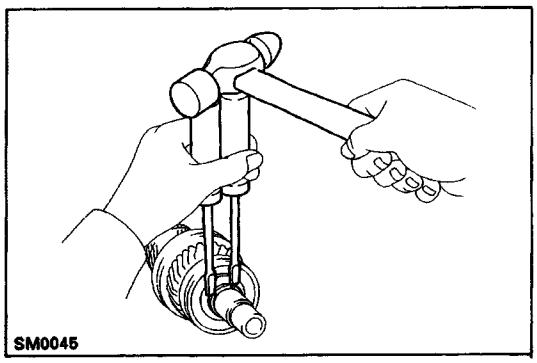
2. INSPECT THIRD AND FOURTH GEAR OIL CLEARANCE

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

Standard clearance: 0.015–0.058 mm (0.0006–0.0023 in.)

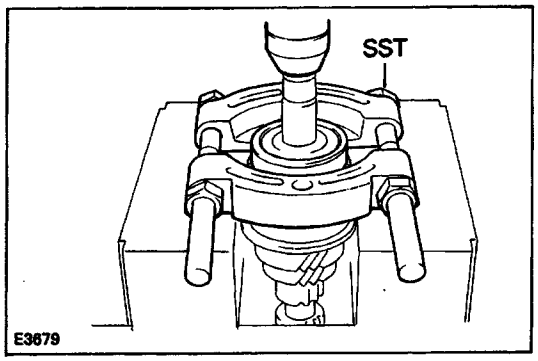
Maximum clearance: 0.070 mm (0.0028 in.)

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



3. REMOVE SNAP RING

Using two screwdriver and a hammer, tap out the snap ring.



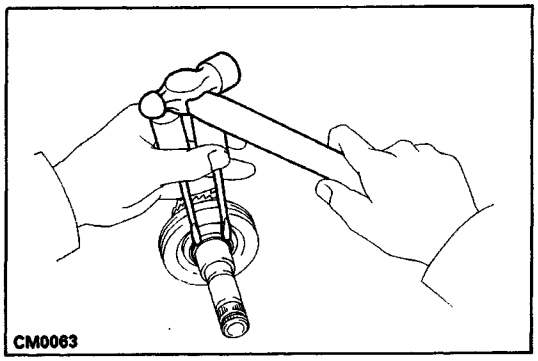
4. REMOVE REAR BALL BEARING, FOURTH GEAR, NEEDLE ROLLER BEARING, SPACER AND SYNCHRONIZER RING FROM INPUT SHAFT

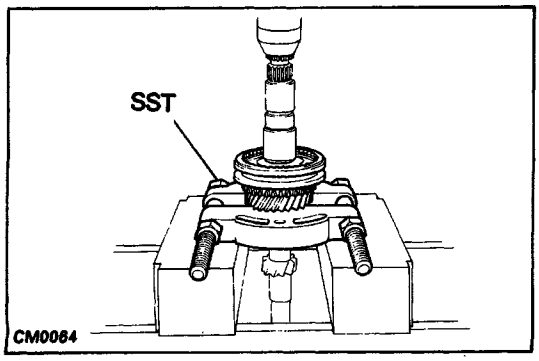
(a) Using SST and a press, remove the rear ball bearing.
SST 09950–00020

(b) Remove the 4th gear, needle roller bearing, spacer and synchronizer ring.

5. REMOVE SNAP RING

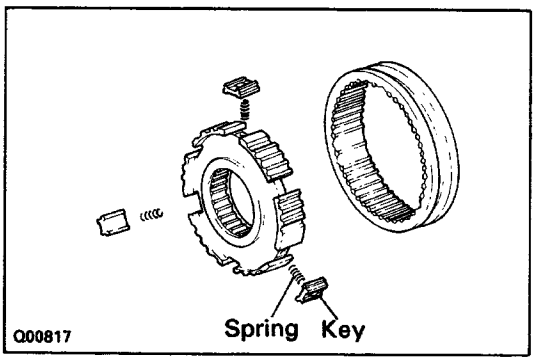
Using two screwdriver and a hammer, tap out the snap ring. ,





6. REMOVE NO. 2 HUB SLEEVE ASSEMBLY, THIRD GEAR, SYNCHRONIZER RING AND NEEDLE ROLLER BEARING

Using SST and a press, remove No. 2 hub sleeve, 3rd gear, synchronizer ring and needle roller bearing.
SST 09950–00020



7. REMOVE NO. 2 HUB SLEEVE, SHIFTING KEYS AND SPRINGS FROM NO. 2 CLUTCH HUB

Using a screwdriver, remove the three shifting keys and springs from No. 2 clutch hub.

INSPECTION OF INPUT SHAFT COMPONENT PARTS

1. INSPECT SYNCHRONIZER RING FOR THIRD GEAR

(a) Check for wear or damage.

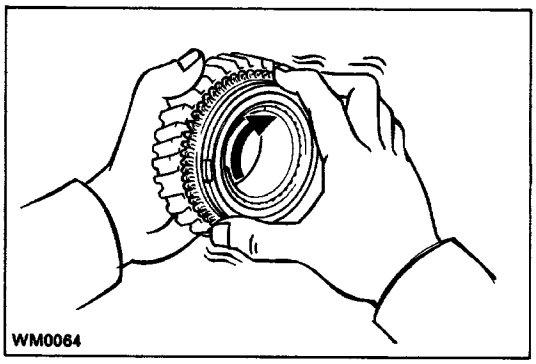
(b) Check the braking effect of the synchronizer ring.

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 syn–chronizer ring and gear cone by applying a small amount of fine lapping compound.

NOTICE: Wash off completely the fine lapping com–pound after rubbing.

Check again the braking effect of the synchronizer ring.

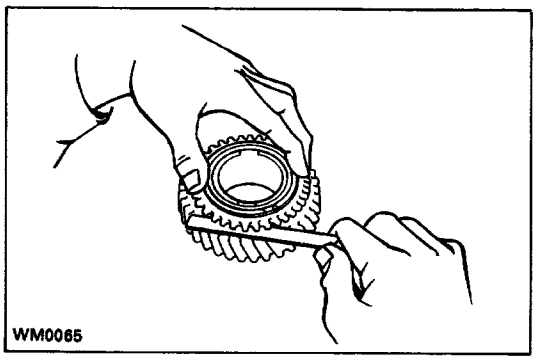


(c) Measure the clearance between the synchronizer ring back and gear spline end.

Maximum clearance: 0.6 mm (0.024 in.)

If the clearance is less than the limit, replace the syn–chronizer ring and gear cone by applying a small amount of fine compound.

NOTICE: Wash off completely the fine lapping com–pound after rubbing.



2. INSPECT SYNCHRONIZER RING FOR FOURTH GEAR

(a) Check for wear or damage.

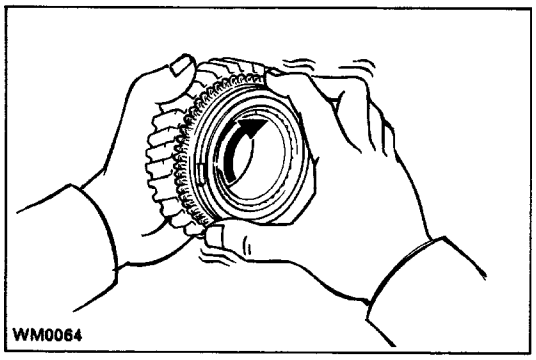
(b) Check the braking effect of the synchronizer ring.

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 syn–chronizer ring and gear cone by applying a small amount of fine lapping compound.

NOTICE: Wash off completely the fine lapping com–pound after rubbing.

Check again the braking effect of the synchronizer ring.

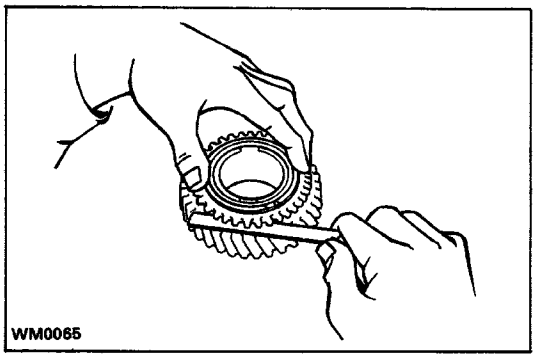


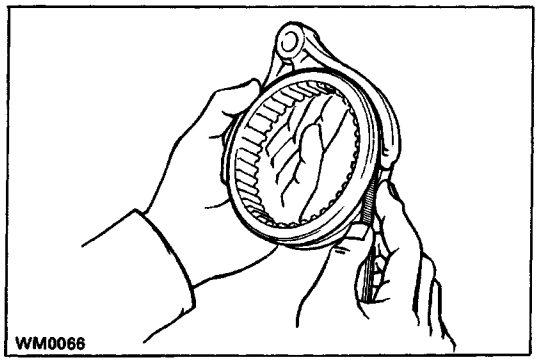
(c) Measure the clearance between the synchronizer ring back and gear spline end.

Minimum clearance: 0.6 mm (0.024 in.)

If the clearance is less than the limit, replace the syn–chronizer ring and gear cone by applying a small amount of fine lapping compound.

NOTICE: Wash off completely the fine lapping com–nound after rubbing.



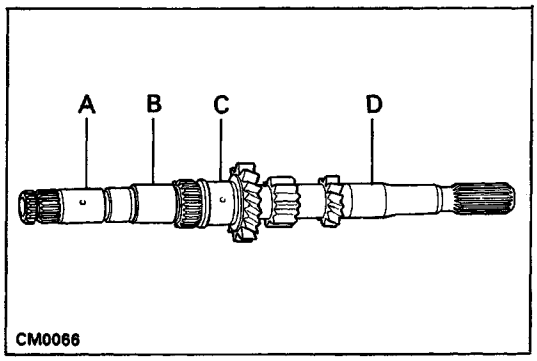


3. INSPECT CLEARANCE OF SHIFT FORK AND HUB SLEEVE

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.



4. INSPECT INPUT SHAFT

(a) Check the input shaft for wear or damage.

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

Maximum clearance:

Part A

24.870 mm (0.9791 in.)

Part B

28.970 mm (1.1405 in.)

Part C

30.970 mm (1.2193 in.)

Part D

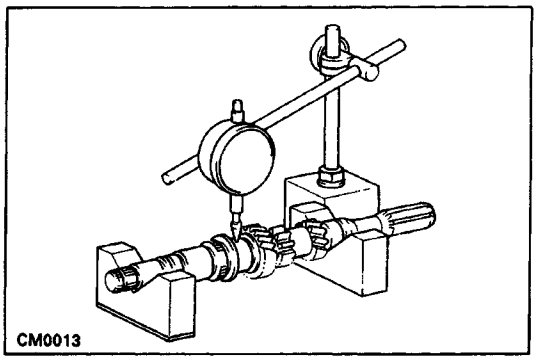
24.970 mm (0.9831 in.)

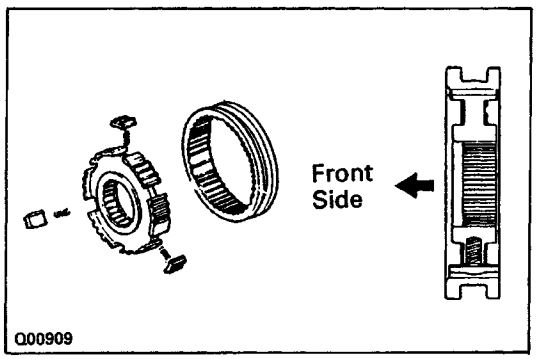
If the outer diameter exceeds the minimum, replace the input shaft.

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

Maximum clearance: 0.05 mm (0.0020 in.)

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





ASSEMBLY OF INPUT SHAFT ASSEMBLY

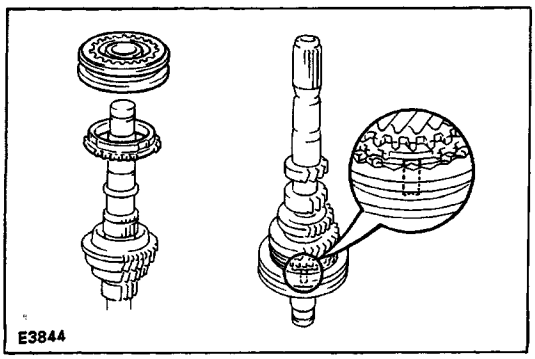
(See page MT–26**)**

HINT: Coat all of the sliding and rotating surface with gear oil before assembly.

1. INSTALL NO. 2 CLUTCH HUB INTO HUB SLEEVE

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

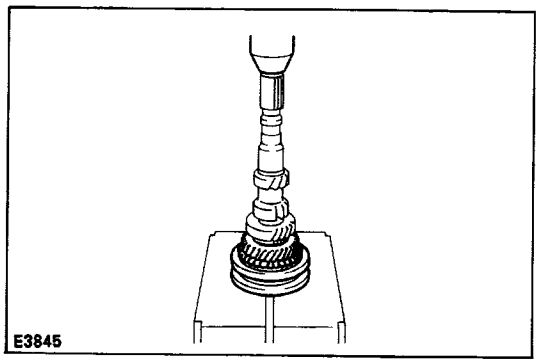
(b) Install the hub sleeve to the clutch hub.



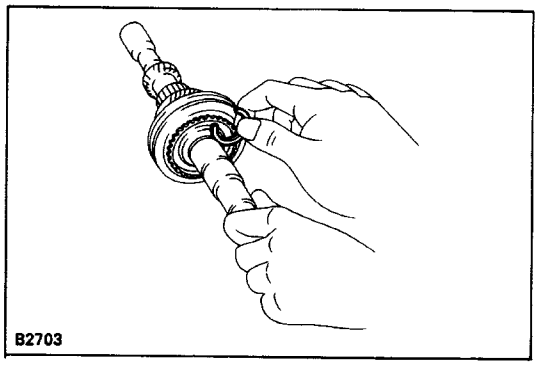
2. INSTALL THIRD GEAR, NEEDLE ROLLER BEARING, SYNCHRONIZER RING AND NO. 2 HUB SLEEVE ASSEMBLY TO INPUT SHAFT

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

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



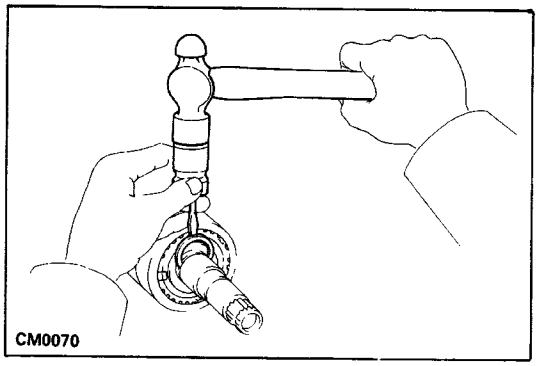
(c) Using a press, install the 3rd gear and No. 2 hub sleeve.



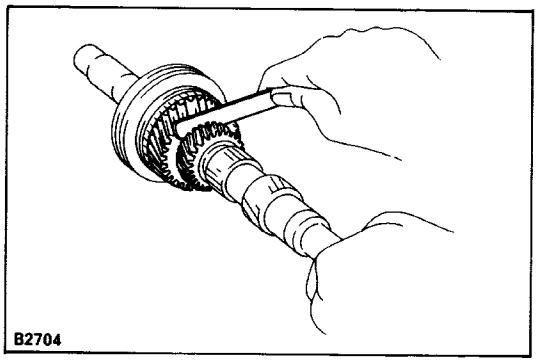
3. INSTALL SNAP RING

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

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
0	2.30 (0.0906)	3	2.48 (0.0976)
1	2.36 (0.0929)	4	2.54 (0.1000)
2	2.42 (0.0953)	5	2.60 (0.1024)



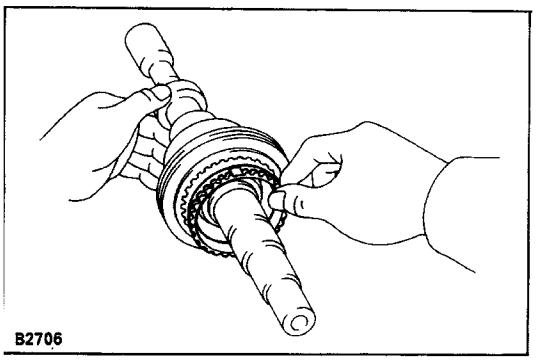
(b) Using a screwdriver and hammer, tap in the snap ring.



4. INSPECT THIRD GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 3rd gear thrust clearance.

Standard clearance: 0.10–0.35 mm (0.0039–0.0138 in.)

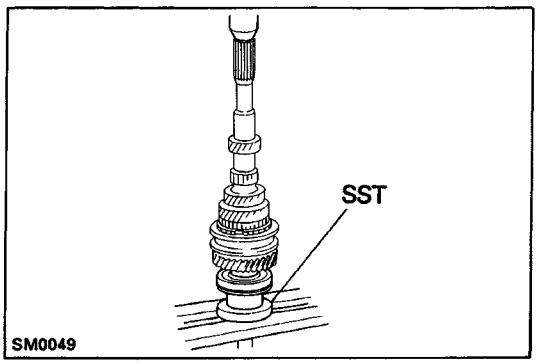


5. INSTALL SYNCHRONIZER RING, NEEDLE ROLLER BEARING, SPACER, FOURTH GEAR AND REAR BALL BEARING

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

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

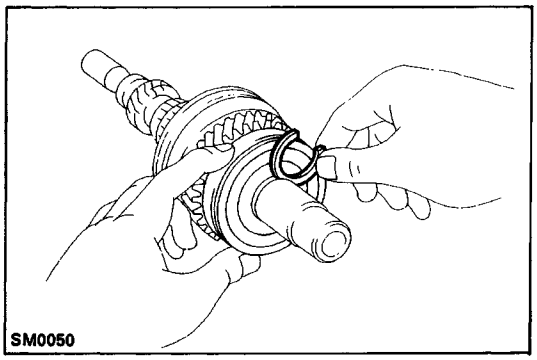
(c) Using SST and a press, install the rear ball bearing.
SST 09608–20012 (09608–03070)



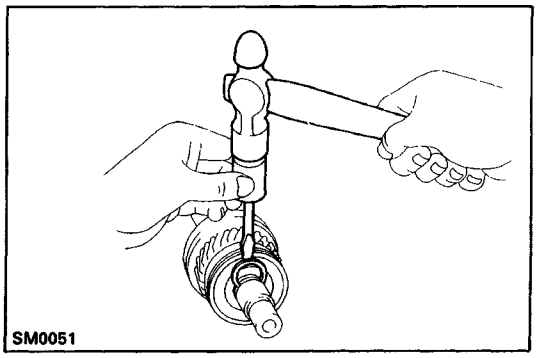
6. INSTALL SNAP RING

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

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	2.29 (0.0902)	D	2.47 (0.0972)
B	2.35 (0.0925)	E	2.53 (0.0996)
C	2.41 (0.0949)	F	2.59 (0.1020)



(b) Using a screwdriver and hammer, tap in the snap ring.



7. MEASURE FOURTH GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 4th gear thrust clearance.

Standard clearance: 0.10–0.55 mm (0.0039–0.0217 in.)