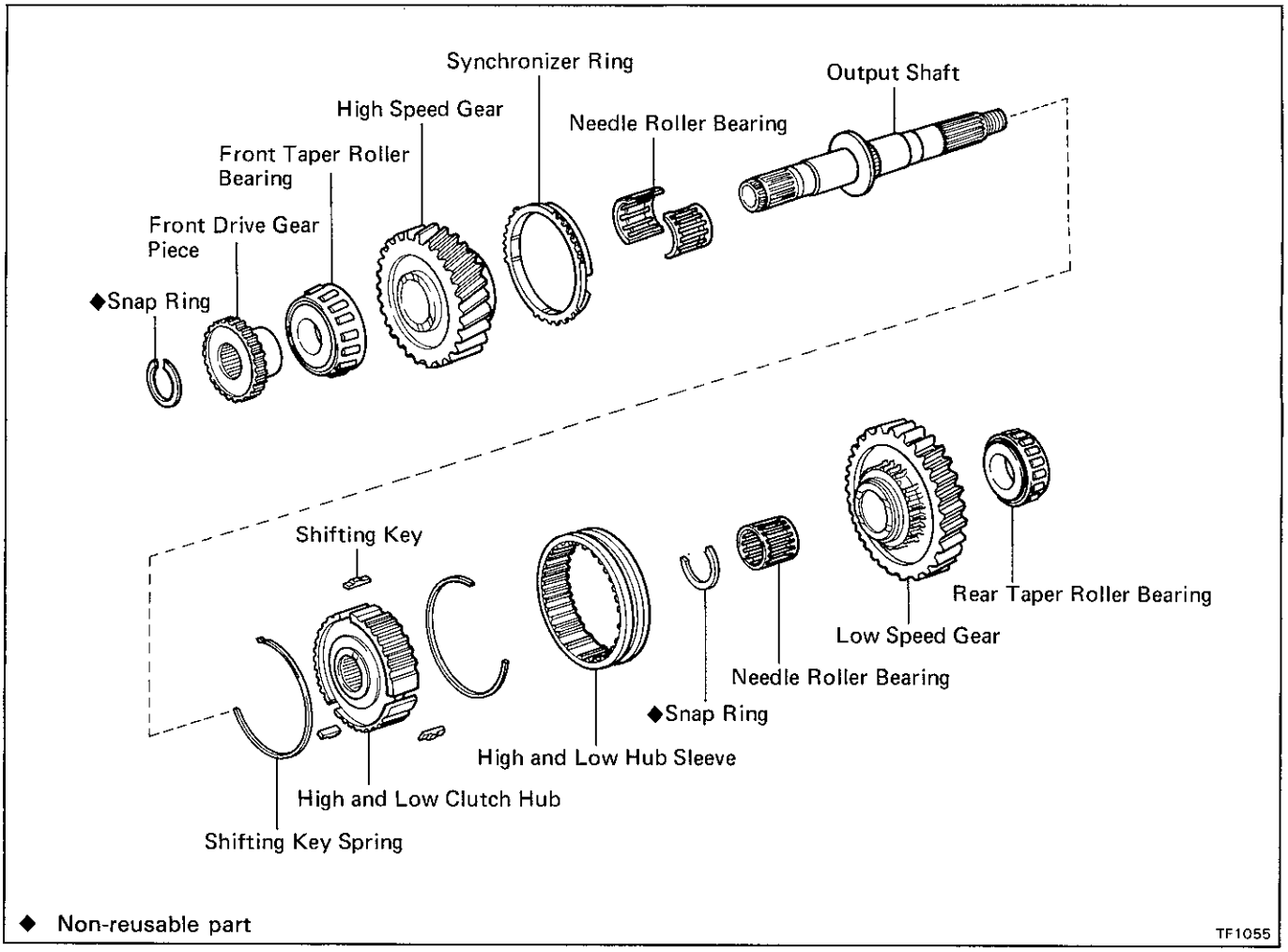
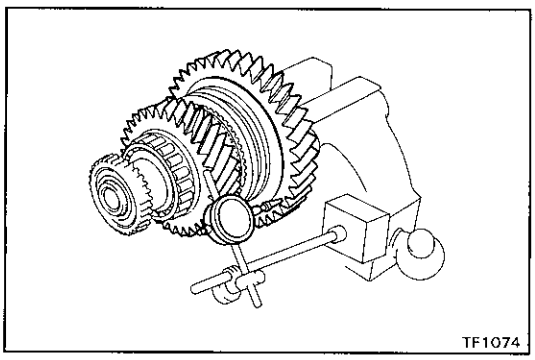
Output Shaft Assembly

COMPONENTS

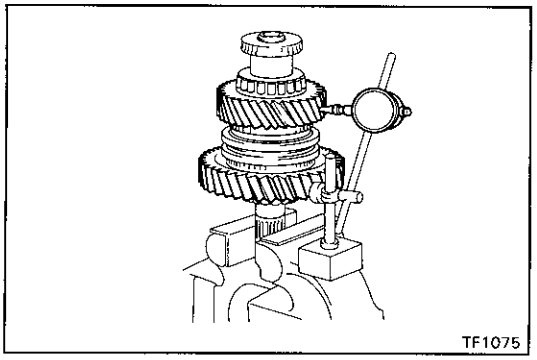


◆ Non-reusable part

TF1055



TF1074



TF1075

DISASSEMBLY OF OUTPUT SHAFT ASSEMBLY

1. MEASURE EACH GEAR THRUST CLEARANCE

Using a dial indicator, measure the thrust clearance of high speed gear and low speed gear.

High speed gear

Standard clearance: 0.28 — 0.43 mm (0.0110 — 0.0169 in.)

Maximum clearance: 0.43 mm (0.0169 in.)

Low speed gear

Standard clearance: 0.20 — 0.45 mm (0.0079 — 0.0177 in.)

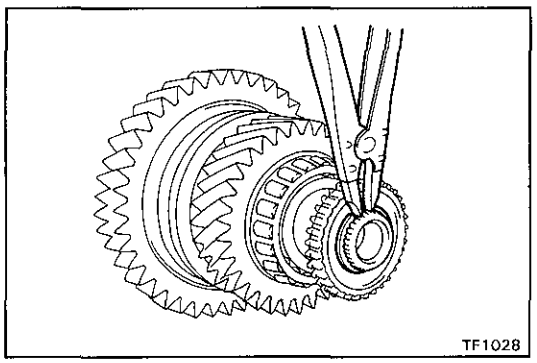
Maximum clearance: 0.45 mm (0.0177 in.)

2. MEASURE EACH GEAR OIL CLEARANCE

Using a dial indicator, measure the oil clearance of high speed gear and low speed gear.

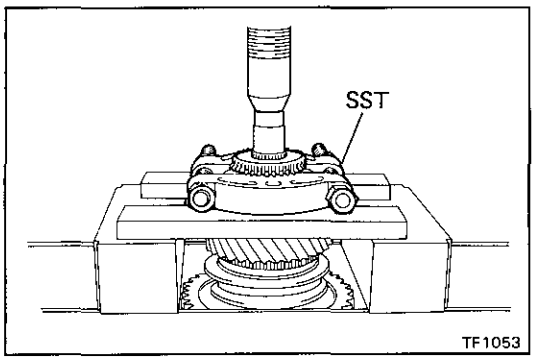
Standard clearance: 0.0075 — 0.034 mm (0.0003 — 0.0013 in.)

Maximum clearance: 0.034 mm (0.0013 in.)



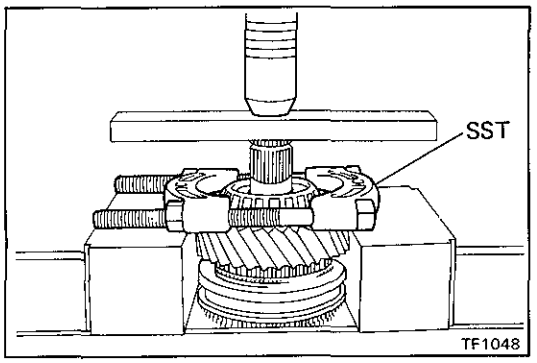
3. **REMOVE FRONT DRIVE GEAR PIECE**

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



(b) Using SST and socket wrench, remove the front drive gear piece.

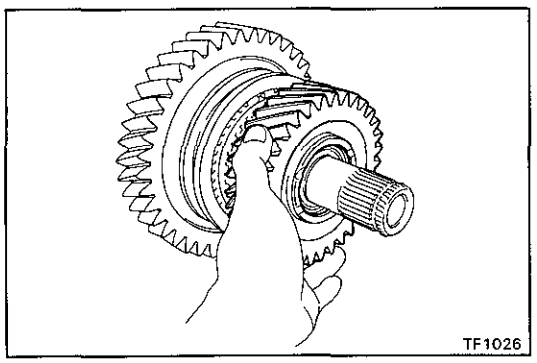
SST 09950-00020



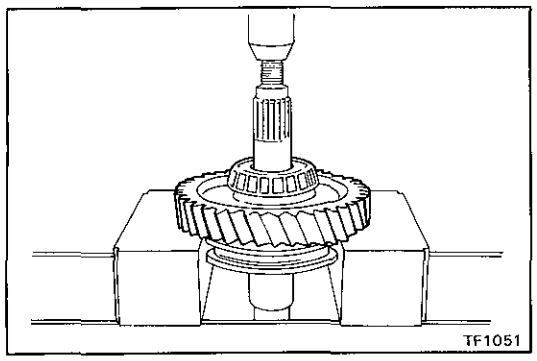
4. **REMOVE FRONT TAPER ROLLER BEARING**

Using SST and a press, remove the front taper roller bearing.

SST 09950-00020



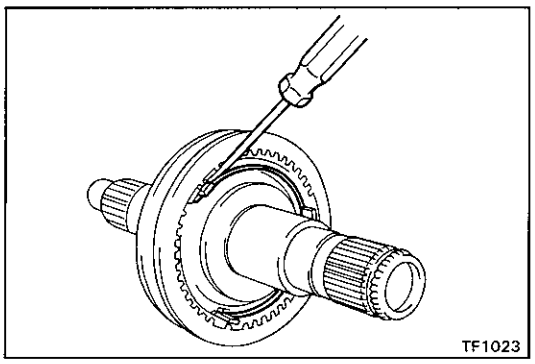
5. **REMOVE HIGH SPEED GEAR, SYNCHRONIZER RING AND NEEDLE ROLLER BEARING**



6. **REMOVE LOW SPEED GEAR AND REAR TAPER ROLLER BEARING**

(a) Using a press, remove the low speed gear and rear taper roller bearing.

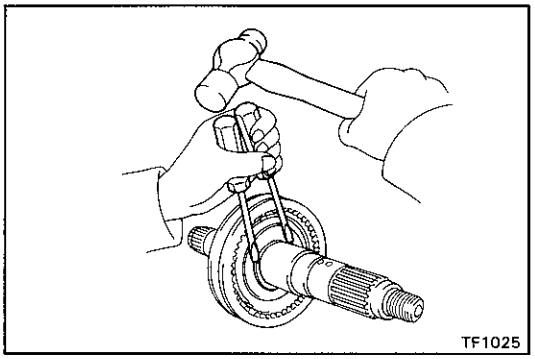
(b) Remove the needle roller bearing.



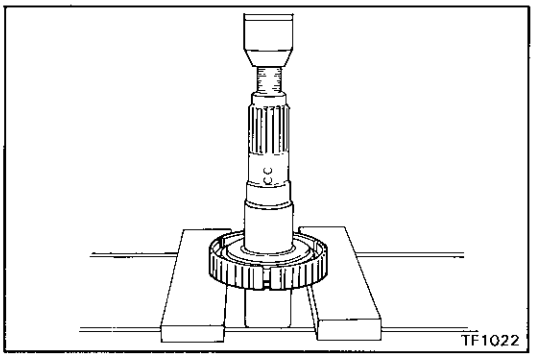
7. REMOVE HIGH AND LOW HUB SLEEVE

(a) Using a screwdriver, remove the two springs.

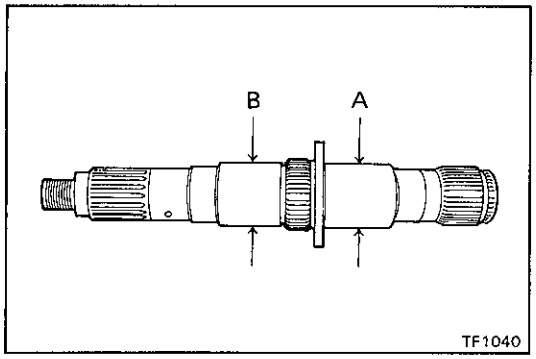
(b) Remove the high and low hub sleeve and shifting keys.

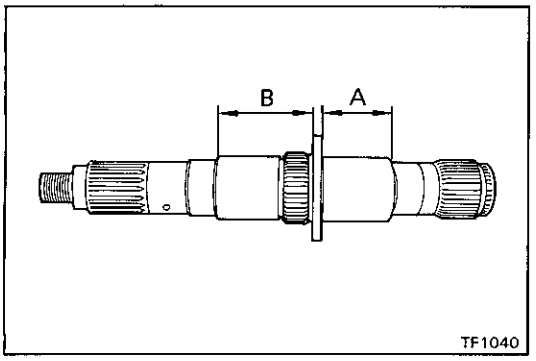


(c) Using two screwdrivers and hammer, drive out the snap ring.



(d) Using a press, remove the clutch hub.





INSPECTION OF OUTPUT SHAFT ASSEMBLY

1. INSPECT OUTPUT SHAFT

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

Minimum diameter:

A: High speed gear 41.984 mm (1.6529 in.)
B: Low speed gear 42.984 mm (1.6923 in.)

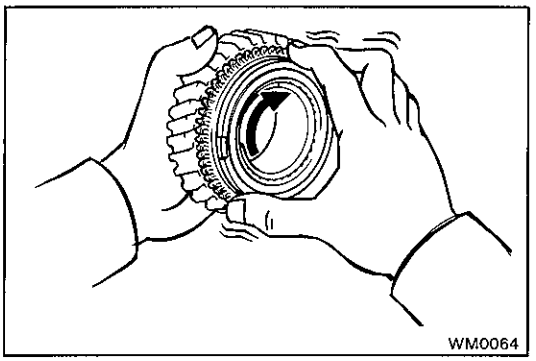
If the clearance is less than the limit, replace the output shaft.

(b) Using calipers, measure the output shaft journal length.

Maximum length:

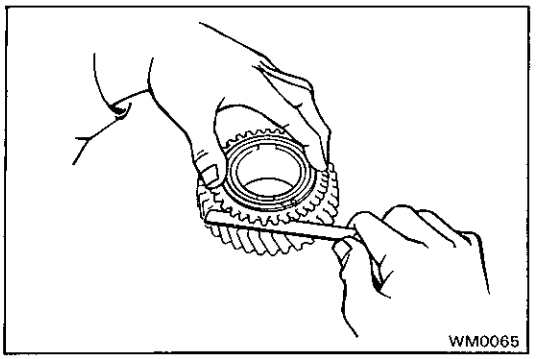
A: High speed gear 46.55 mm (1.8327 in.)
B: Low speed gear 62.35 mm (2.4547 in.)

If the length is less than the limit, replace the output shaft.



2. INSPECT SYNCHRONIZER RINGS

(a) Turn the ring and push it in to check the braking action.

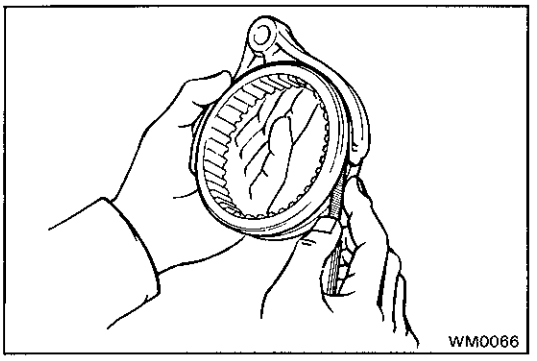


(b) Measure the clearance between the synchronizer ring back and the gear spline end.

Standard clearance: 0.75 — 1.65 mm (0.0295 — 0.0650 in.)

Minimum clearance: 0.75 mm (0.0295 in.)

If the clearance is less than the limit, replace the synchronizer ring.



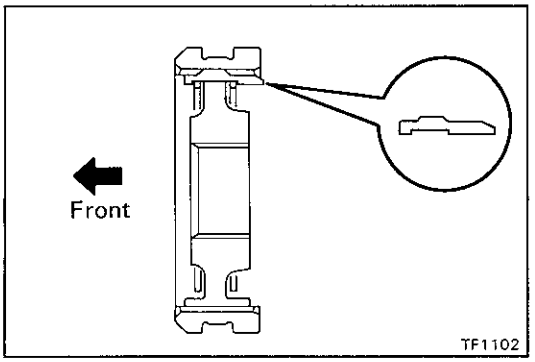
3. MEASURE CLEARANCE OF SHIFT FORK AND SLEEVE

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

Standard clearance: 0.1 — 0.4 mm (0.0039 — 0.0157 in.)

Maximum clearance: 0.4 mm (0.0157 in.)

If the clearance is more than the limit, replace the shift fork or hub sleeve.



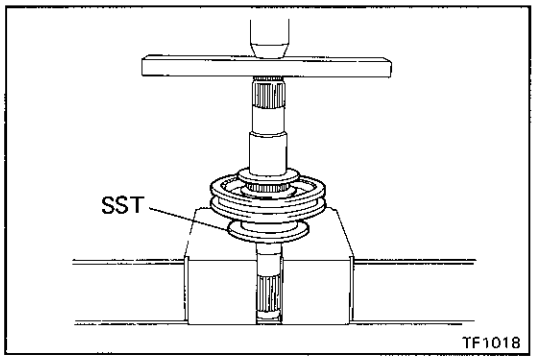
ASSEMBLY OF OUTPUT SHAFT ASSEMBLY

1. INSERT CLUTCH HUB INTO HIGH AND LOW HUB SLEEVE

(a) Insert the clutch hub and shifting keys to the high and low hub sleeve.

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

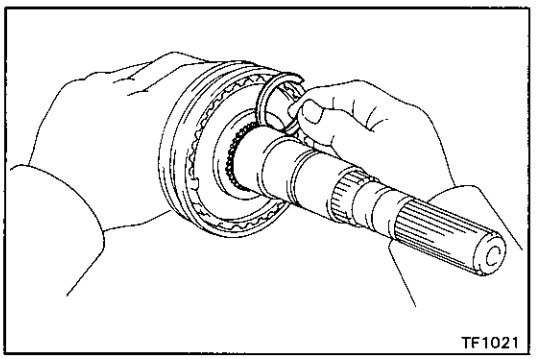
NOTICE: Install the key springs positioned so that their end gaps are not in line.



2. INSTALL HIGH AND LOW HUB SLEEVE

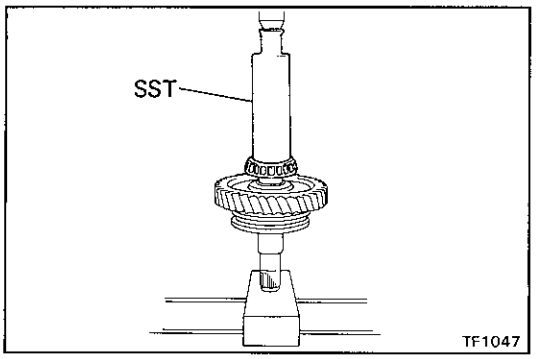
(a) Using SST and a press, install the high and low hub sleeve.

SST 09316-20011



(b) Select a snap ring that will allow minimum axial play and install it on the shaft.

Mark	Thickness mm (in.)
A	2.60 (0.1024)
B	2.65 (0.1043)
C	2.70 (0.1063)
D	2.75 (0.1083)
E	2.80 (0.1102)
F	2.85 (0.1122)
G	2.90 (0.1142)



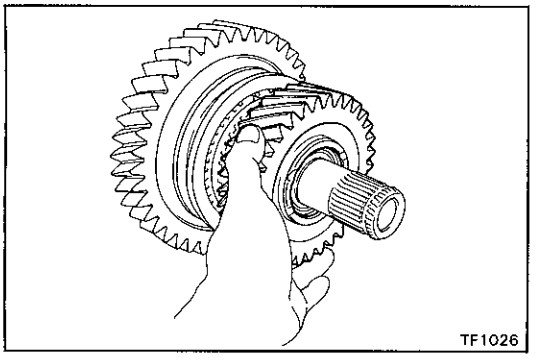
3. INSTALL NEEDLE ROLLER BEARING, LOW SPEED GEAR AND REAR TAPER ROLLER BEARING

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

(b) Install the needle roller bearing and low speed gear.

(c) Using SST and a press, install the rear taper roller bearing.

SST 09316-60010 (09316-00010)

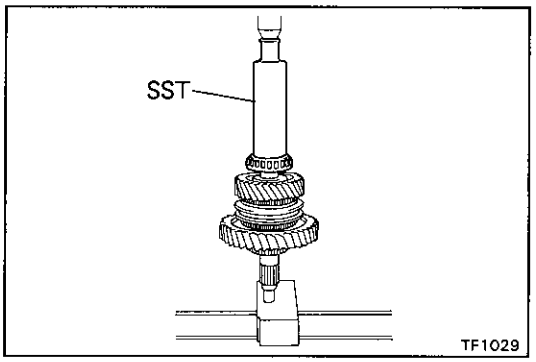


4. INSTALL HIGH SPEED GEAR, SYNCHRONIZER RING AND NEEDLE ROLLER BEARING

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

(b) Install high speed gear, synchronizer ring and needle roller bearing.

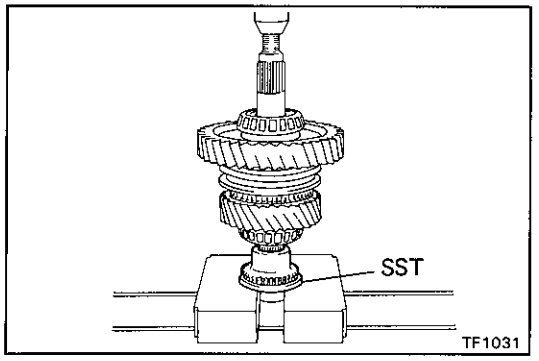
NOTICE: Align the ring slots with the shifting keys.



5. INSTALL FRONT TAPER ROLLER BEARING

Using SST and a press, install the front taper roller bearing.

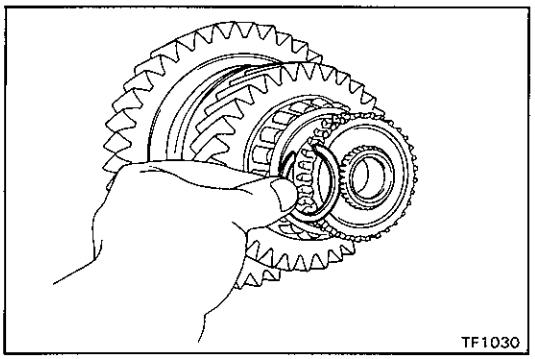
SST 09316-60010 (09316-00010)



6. INSTALL FRONT DRIVE GEAR PIECE

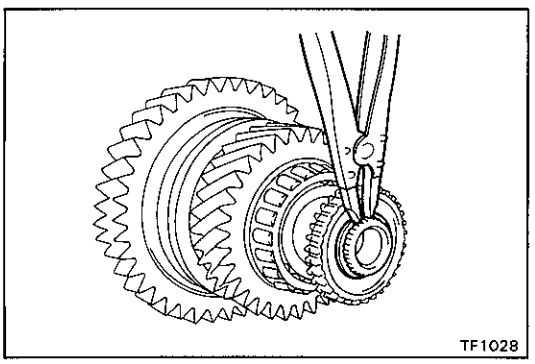
(a) Using SST and a press, install the front drive gear piece.

SST 09316-60010 (09316-00030)



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

Mark	Thickness mm (in.)
A	2.0 (0.0787)
B	2.1 (0.0827)
C	2.2 (0.0866)
D	2.3 (0.0906)
E	2.4 (0.0945)



(c) Using snap ring pliers, install the snap ring.