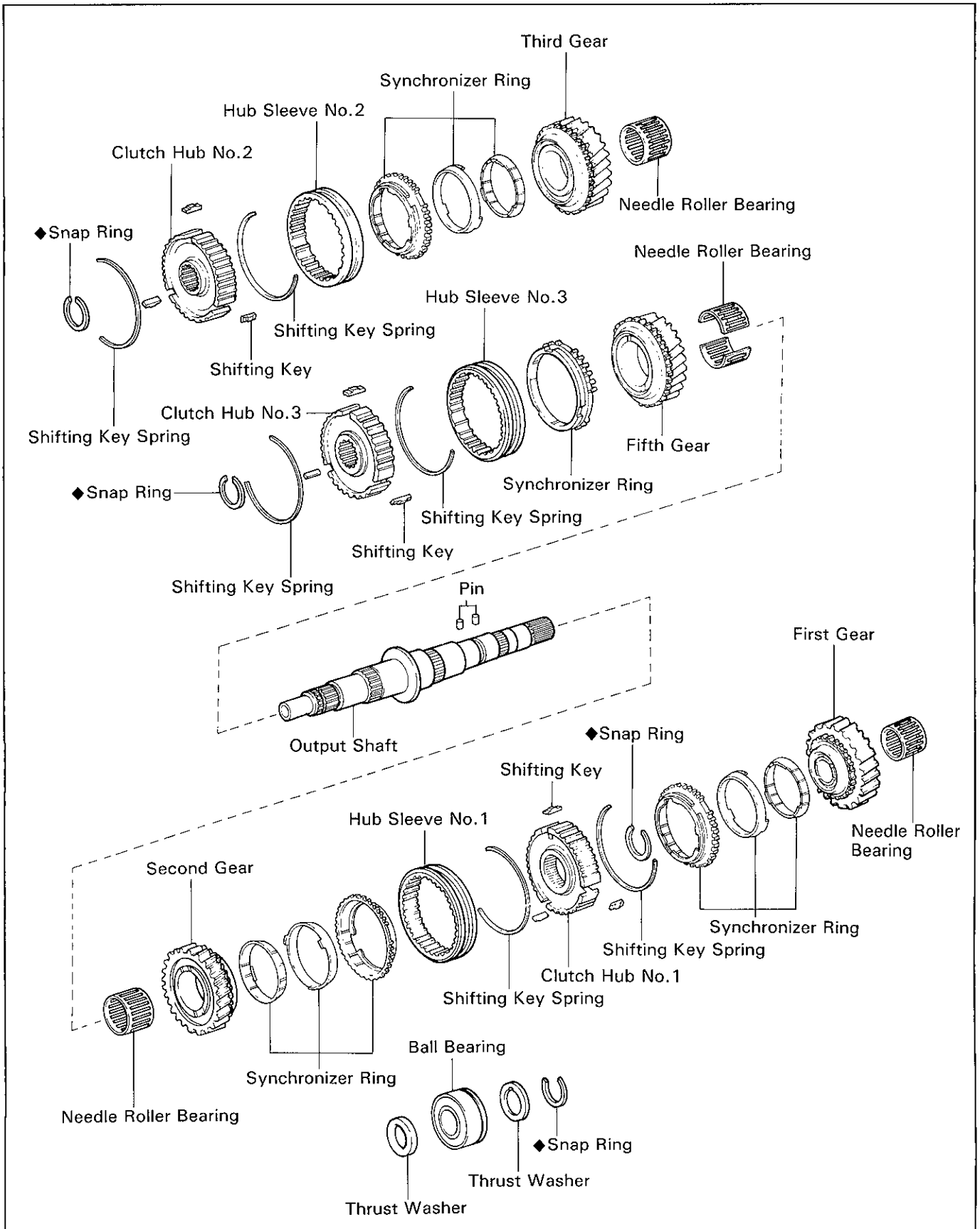
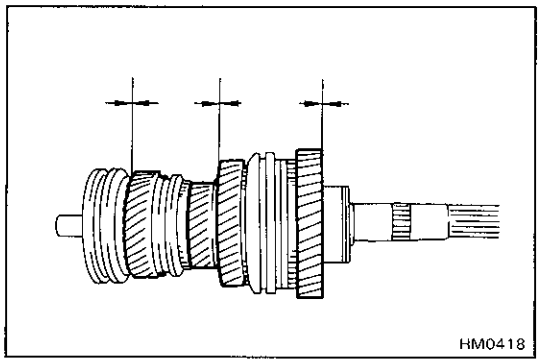
OUTPUT SHAFT

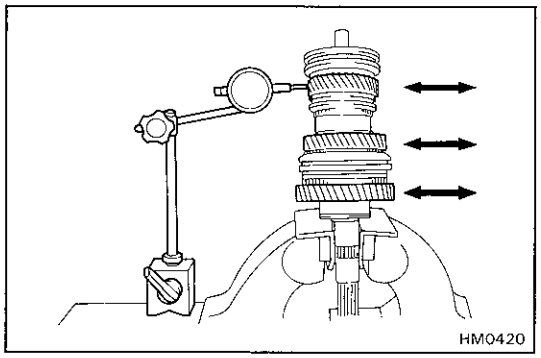
COMPONENTS

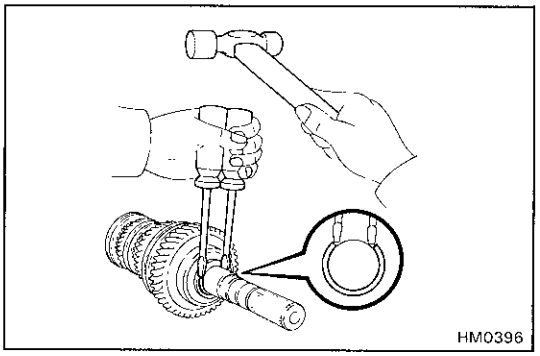


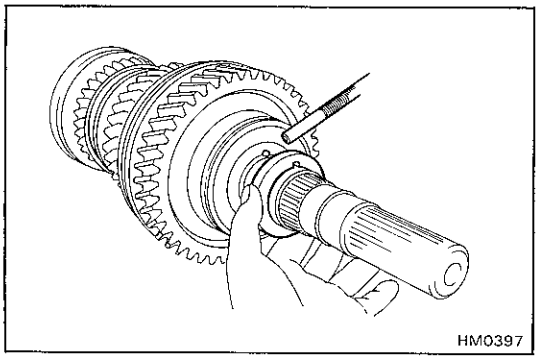
◆ Non-reusable part

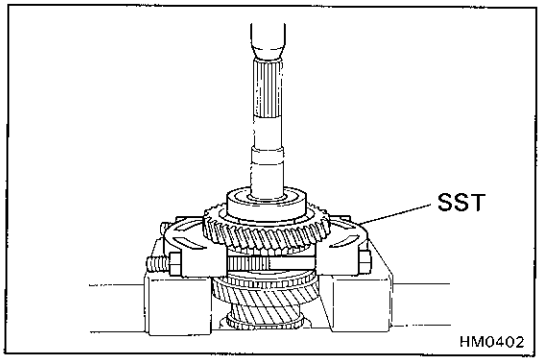
HM0527


HM0418


HM0420


HM0396


HM0397



HM0402

OUPUT SHAFT DISASSEMBLY

1. MEASURE EACH GEAR THRUST CLEARANCE

Measure the thrust clearance of each gear.

Standard clearance:

1st and 3rd gear	0.1 — 0.45 mm (0.0039 — 0.0177 in.)
2nd and 5th gear	0.1 — 0.35 mm (0.0039 — 0.0138 in.)

Maximum clearance:

1st and 3rd gear	0.45 mm (0.0177 in.)
2nd and 5th gear	0.35 mm (0.0138 in.)

2. MEASURE EACH GEAR OIL CLEARANCE

Using a dial indicator, measure the oil clearance of each gear.

Standard clearance:

1st and 3rd gear	0.020 — 0.073 mm (0.0008 — 0.0029 in.)
2nd and 5th gear	0.015 — 0.068 mm (0.0006 — 0.0027 in.)

Maximum clearance:

1st and 3rd gear	0.073 mm (0.0029 in.)
2nd and 5th gear	0.068 mm (0.0027 in.)

3. REMOVE BALL BEARING AND FIRST GEAR

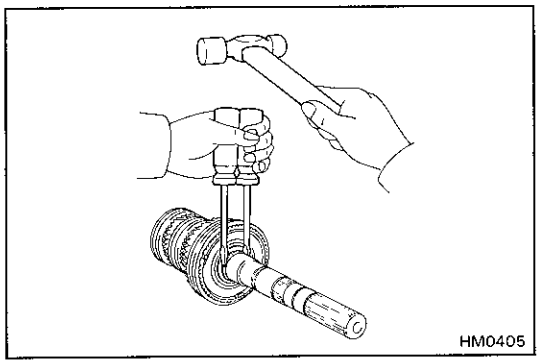
(a) Using two screwdrivers and a hammer, drive out the snap ring.

(b) Remove the thrust washer and pin.

(c) Using SST and a press, remove the ball bearing, thrust washer, first gear and synchronizer rings.

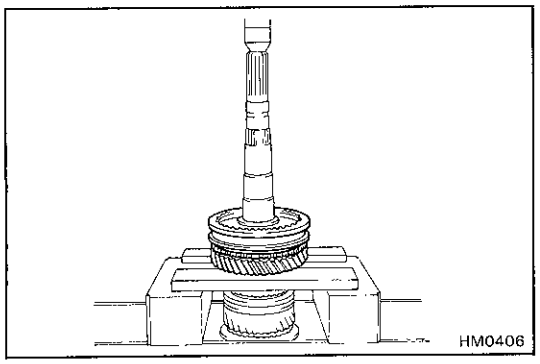
SST 09555-55010

(d) Remove the pin and needle roller bearing.



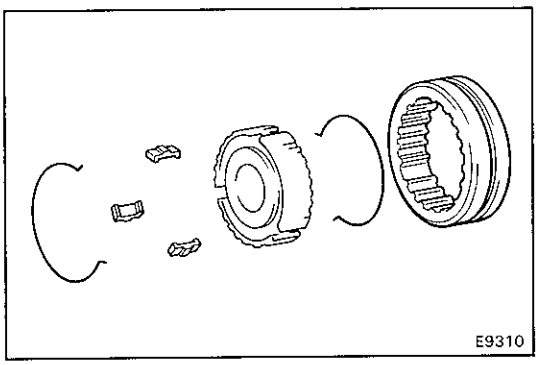
4. **REMOVE HUB SLEEVE NO.1 ASSEMBLY, SYNCHRONIZER RING, SECOND GEAR AND NEEDLE ROLLER BEARING**

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



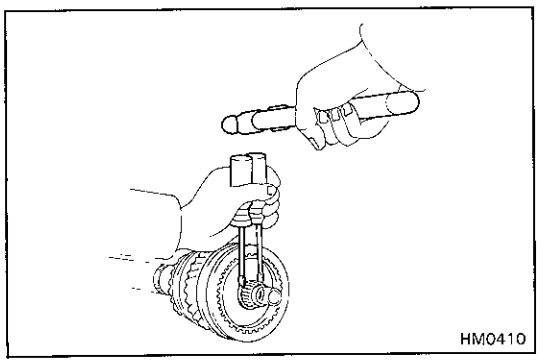
(b) Using a press, remove the hub sleeve No.1 assembly, synchronizer rings, and second gear.

(c) Remove the needle roller bearing.



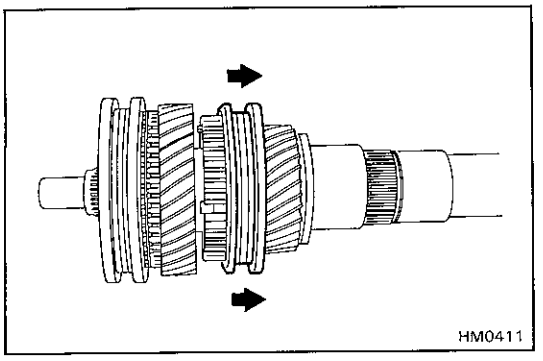
5. **REMOVE HUB SLEEVE NO.1, SHIFTING KEYS AND SPRINGS FROM CLUTCH HUB NO.1**

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

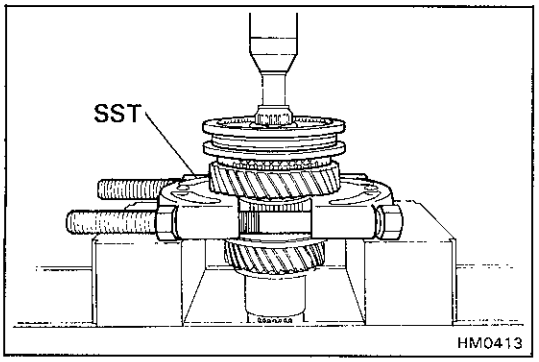


6. **REMOVE HUB SLEEVE NO.2 ASSEMBLY, SYNCHRONIZER RINGS, THIRD GEAR AND NEEDLE ROLLER BEARING**

(a) Remove two screwdrivers and a hammer, drive out the snap ring.



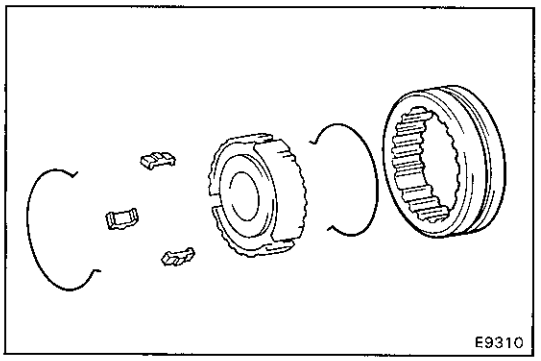
(b) Shift hub sleeve No.3 onto the fifth gear.



(c) Using SST and a press, remove the hub sleeve No.2 assembly, synchronizer rings and third gear.

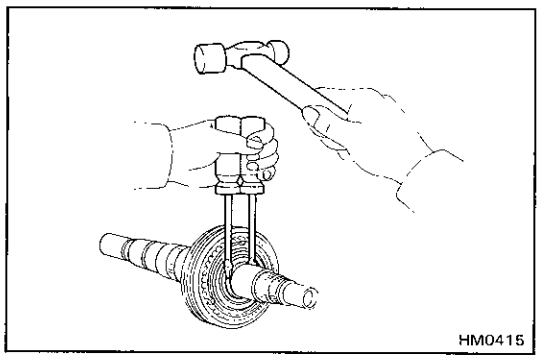
SST 09555-55010

(d) Remove the needle roller bearing.



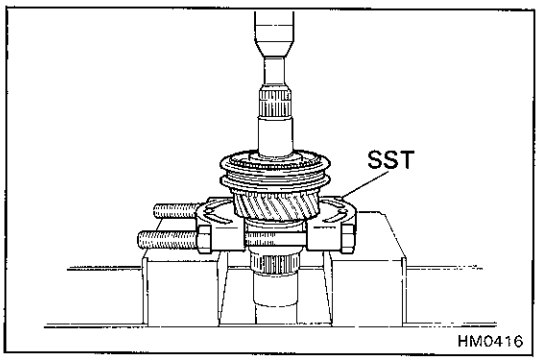
7. REMOVE HUB SLEEVE NO.2, SHIFTING KEYS AND SPRINGS FROM CLUTCH HUB NO.2

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



8. REMOVE HUB SLEEVE NO.3 ASSEMBLY, SYNCHRONIZER RING, FIFTH GEAR AND NEEDLE ROLLER BEARING

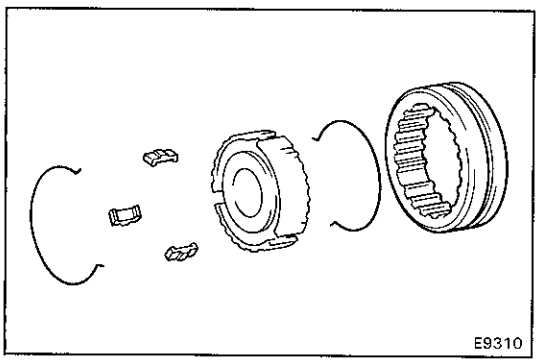
(a) Using two screwdriver, and a hammer, drive out the snap ring.



(b) Using SST and a press, remove the hub sleeve No.3 assembly and synchronizer ring.

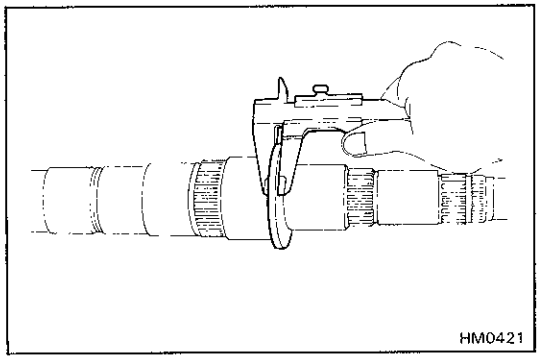
SST 09950-00020

(c) Remove the needle roller bearing.



9. REMOVE HUB SLEEVE NO.3 SHIFTING KEYS AND SPRINGS FROM CLUTCH HUB NO.3

Using a screwdriver, remove the three shifting keys and two springs from the clutch hub No.3.

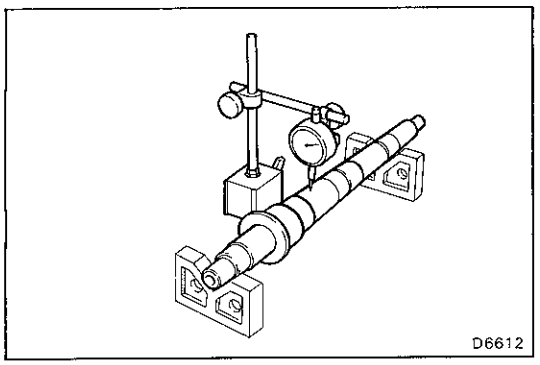

HM0421

INSPECTION OF OUTPUT SHAFT ASSEMBLY

1. INSPECT OUTPUT SHAFT

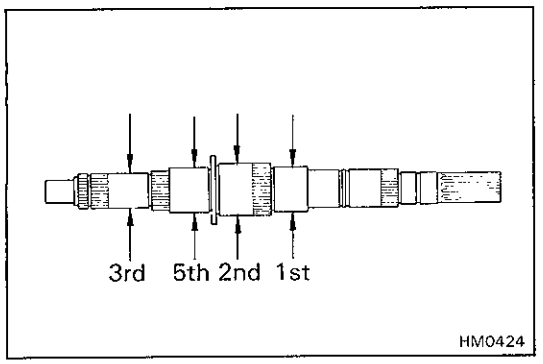
(a) Using calipers, measure the output shaft flange thickness.

Minimum thickness: 4.725 mm (0.1860 in.)


D6612

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

Maximum runout: 0.05 mm (0.0020 in.)

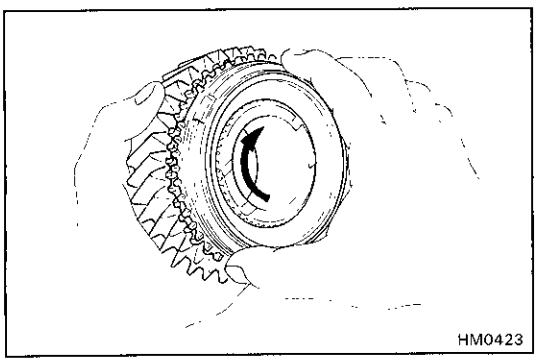


HM0424

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

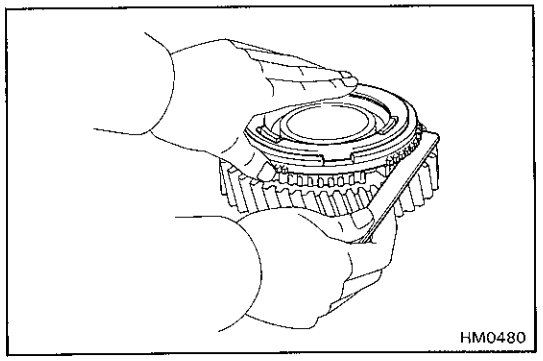
Minimum diameter:

1st	49.979 mm (1.9677 in.)
2nd	57.984 mm (2.2828 in.)
3rd	37.979 mm (1.4952 in.)
5th	45.984 mm (1.8104 in.)


HM0423

2. INSPECT SYNCHRONIZER RINGS

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


HM0480

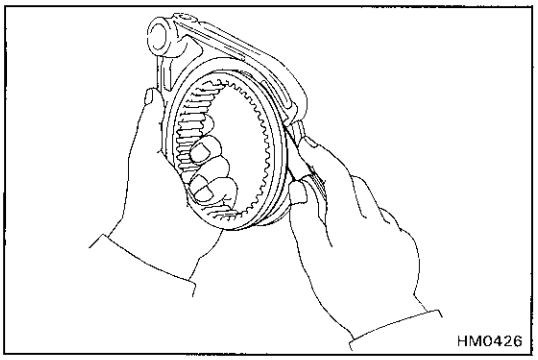
(b) Measure the clearance between the synchronizer ring back and the gear spline end.

Standard clearance:

1st and 2nd gear	0.85 — 1.4 mm (0.0335 — 0.0551 in.)
3rd gear	0.75 — 1.3 mm (0.0295 — 0.0512 in.)

Minimum clearance:

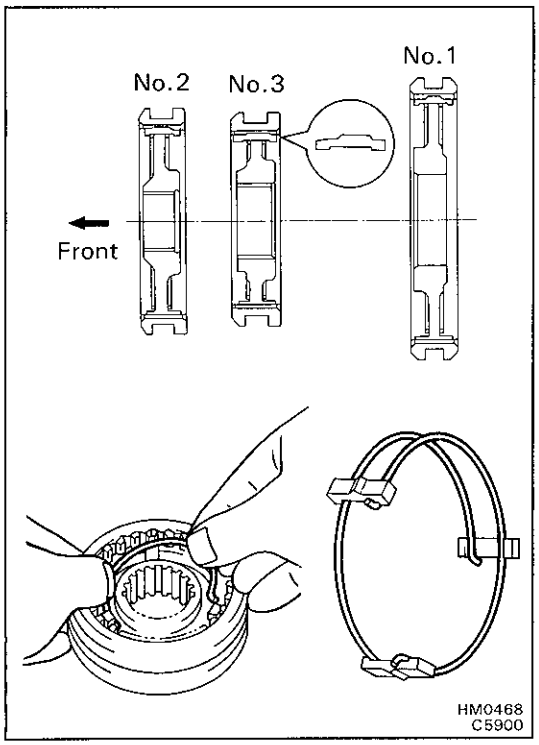
1st and 2nd gear	0.85 mm (0.0335 in.)
3rd gear	0.75 mm (0.0295 in.)



3. **MEASURE CLEARANCE OF SHIFT FORKS AND HUB SLEEVES**

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

Maximum clearance: 0.35 mm (0.0138 in.)



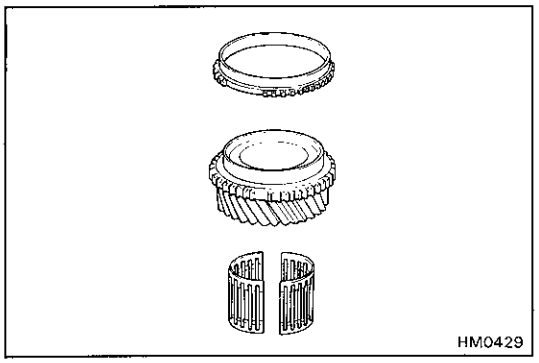
OUTPUT SHAFT ASSEMBLY

1. INSERT CLUTCH HUB NO.1, NO.2 AND NO.3 INTO HUB SLEEVE

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

(b) Install the springs under the shifting keys.

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

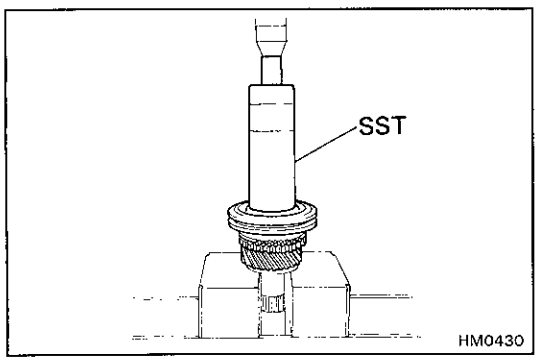


2. INSTALL FIFTH GEAR AND HUB SLEEVE NO.3 ASSEMBLY ON OUTPUT SHAFT

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

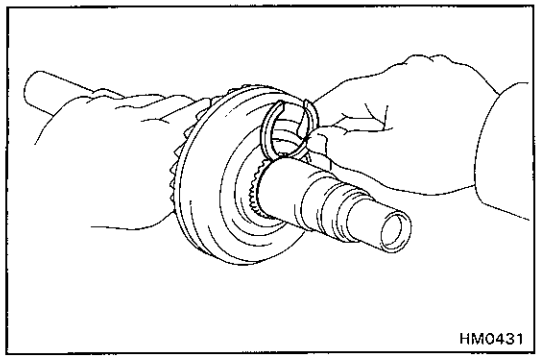
(b) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.

(c) Install the needle roller bearing in the fifth gear.



(d) Using SST and a press, install the fifth gear and hub sleeve No.3.

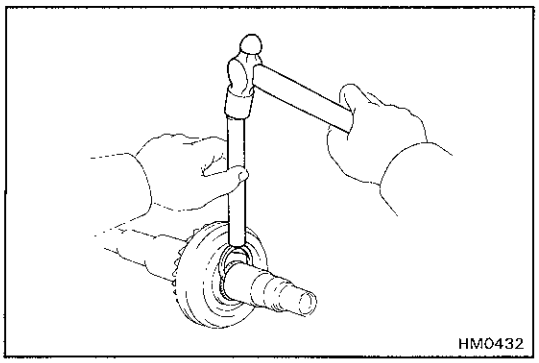
SST 09316-60010 (09316-00010)



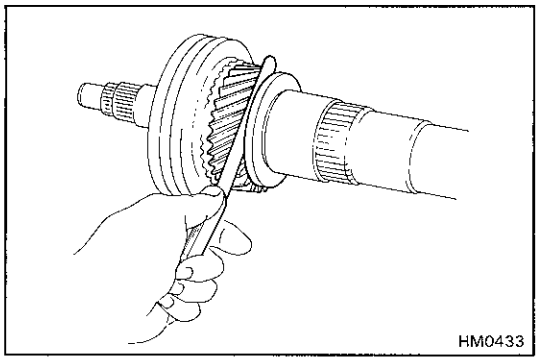
3. INSTALL SNAP RING

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

Mark	Thickness mm (in.)
A	2.40 — 2.45 (0.0945 — 0.0965)
B	2.45 — 2.50 (0.0965 — 0.0984)
C	2.50 — 2.55 (0.0984 — 0.1004)
D	2.55 — 2.60 (0.1004 — 0.1024)
E	2.60 — 2.65 (0.1024 — 0.1044)
F	2.65 — 2.70 (0.1044 — 0.1063)


HM0432

(b) Using a brass bar and hammer, drive in the snap ring.

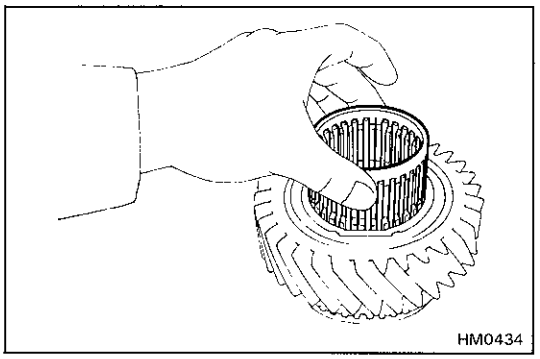

HM0433

4. MEASURE FIFTH GEAR THRUST CLEARANCE

Using a feeler gauge, measure the fifth gear thrust clearance.

Standard clearance: **0.1 — 0.35 mm (0.0039 — 0.0138 in.)**

Maximum clearance: **0.35 mm (0.0138 in.)**

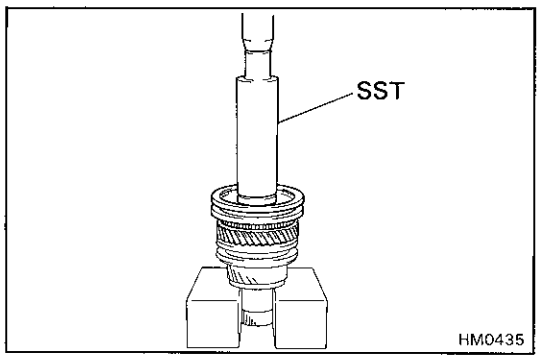

HM0434

5. INSTALL THIRD GEAR AND HUB SLEEVE NO.2 ASSEMBLY

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

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

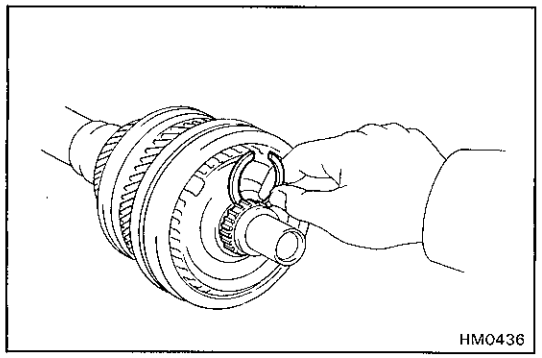
(c) Install the needle roller bearing in the third gear.



HM0435

(d) Using SST and a press, install the third gear and hub sleeve No.2.

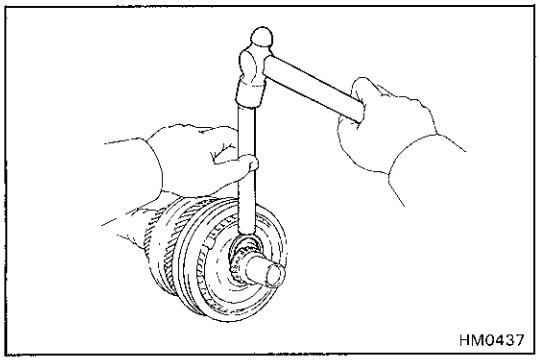
SST 09316-60010 (09316-00010)


HM0436

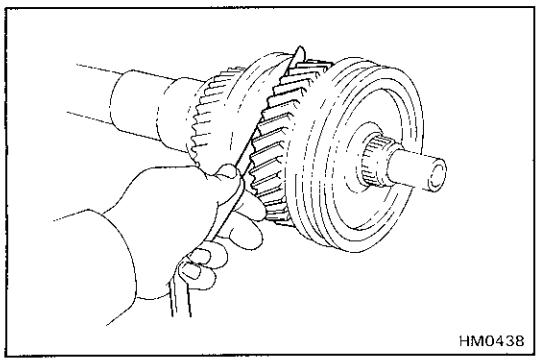
6. INSTALL SNAP RING

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

Mark	Thickness mm (in.)
4	1.90 — 1.95 (0.0748 — 0.0768)
5	1.95 — 2.00 (0.0768 — 0.0787)
6	2.00 — 2.05 (0.0787 — 0.0807)
7	2.05 — 2.10 (0.0807 — 0.0827)
8	2.10 — 2.15 (0.0827 — 0.0847)
9	2.15 — 2.20 (0.0847 — 0.0866)


HM0437

(b) Using a brass bar and a hammer, drive in a new snap ring.

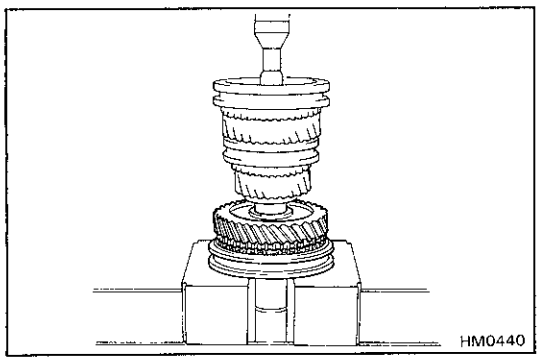

HM0438

7. MEASURE THIRD GEAR THRUST CLEARANCE

Using a feeler gauge, measure the third gear thrust clearance.

Standard clearance: **0.1 — 0.45 mm (0.0039 — 0.0138 in.)**

Maximum clearance: **0.45 mm (0.0138 in.)**


HM0440

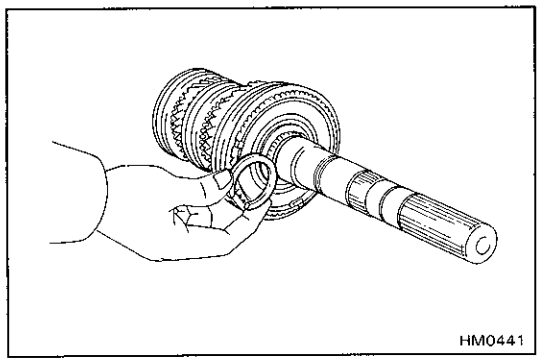
8. INSTALL SECOND GEAR AND HUB SLEEVE NO.1 ASSEMBLY

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

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

(c) Install the needle roller bearing in the second gear.

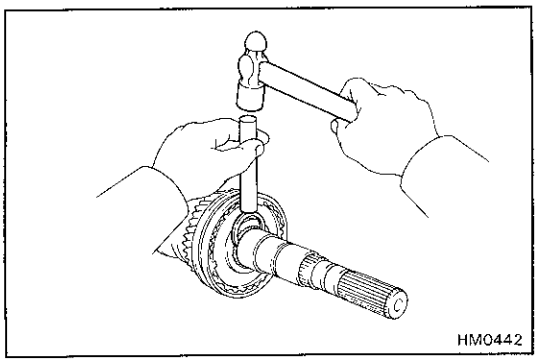
(d) Using a press, install the second gear and hub sleeve No.1 assembly.


HM0441

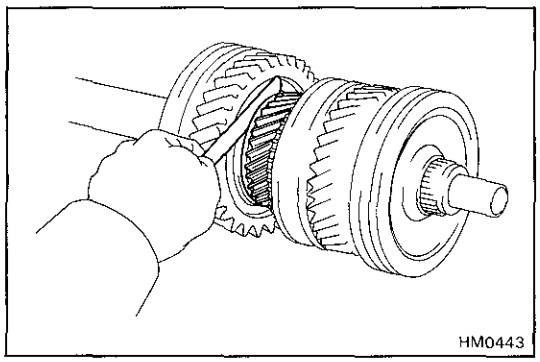
9. INSTALL SNAP RING

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

Mark	Thickness mm (in.)
A	2.90 — 2.95 (0.1142 — 0.1162)
B	2.95 — 3.00 (0.1162 — 0.1181)
C	3.00 — 3.05 (0.1181 — 0.1201)
D	3.05 — 3.10 (0.1201 — 0.1220)
E	3.10 — 3.15 (0.1220 — 0.1240)
F	3.15 — 3.20 (0.1240 — 0.1260)


HM0442

(b) Using a brass bar and a hammer, drive in a new snap ring.

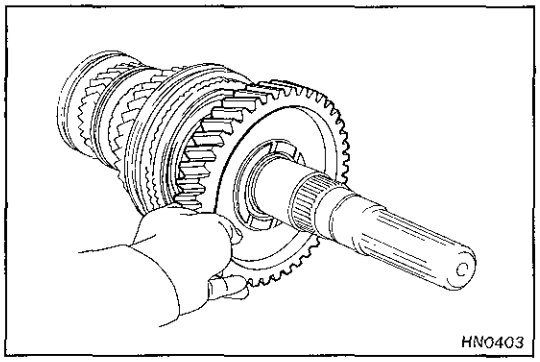


10. MEASURE SECOND GEAR THRUST CLEARANCE

Using a feeler gauge, measure the second gear thrust clearance.

Standard clearance: **0.1 — 0.35 mm (0.0039 — 0.0138 in.)**

Maximum clearance: **0.35 mm (0.0138 in.)**

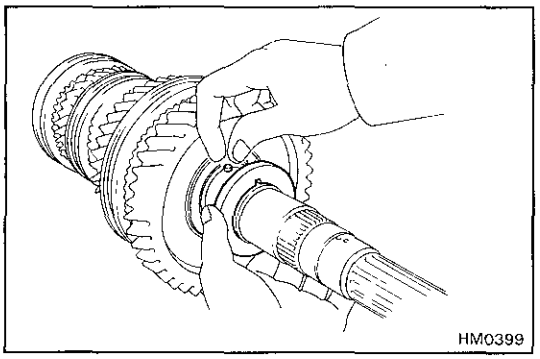


11. INSTALL FIRST GEAR

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

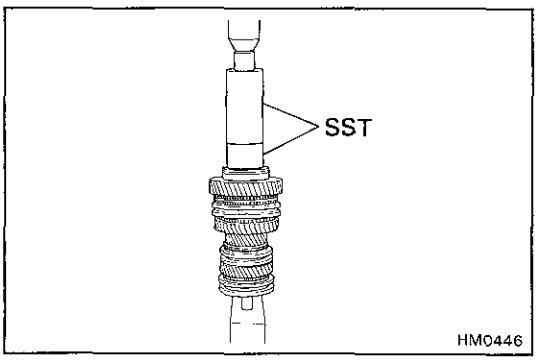
(b) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.

(c) Install the needle roller bearing in the first gear.



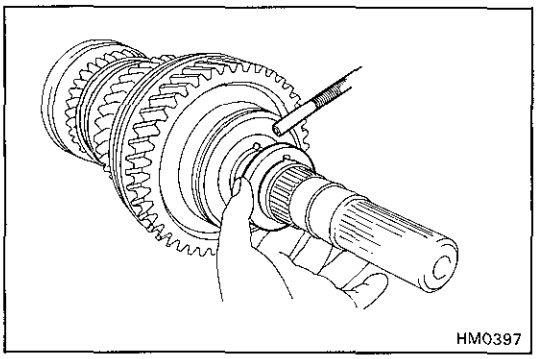
12. INSTALL BALL BEARING

(a) Install the pin and thrust washer.

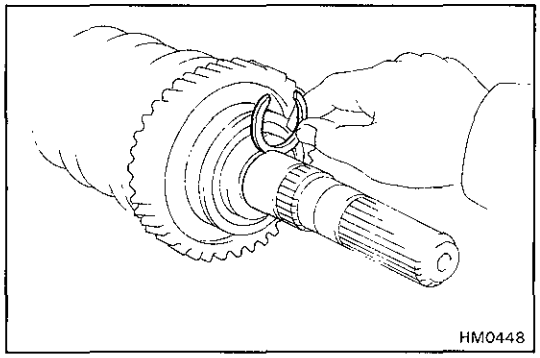


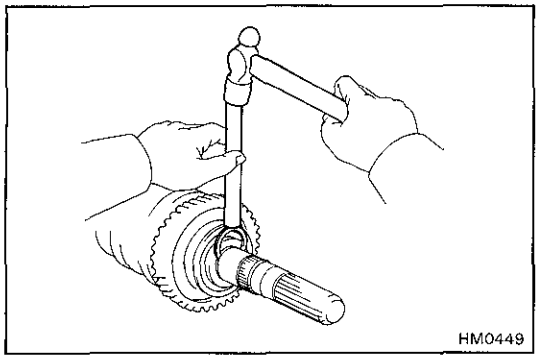
(b) Using SST and a press, install the ball bearing.

SST 09316-60010 (09316-00010), 09523-36010



(c) Install the pin and thrust washer.


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13. INSTALL SNAP RING

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

Mark	Thickness mm (in.)
A	2.40 — 2.45 (0.0945 — 0.0965)
B	2.45 — 2.50 (0.0965 — 0.0984)
C	2.50 — 2.55 (0.0984 — 0.1004)
D	2.55 — 2.60 (0.1004 — 0.1024)
E	2.60 — 2.65 (0.1024 — 0.1044)
F	2.65 — 2.70 (0.1044 — 0.1063)
G	2.70 — 2.75 (0.1063 — 0.1083)
H	2.75 — 2.80 (0.1083 — 0.1102)

(b) Using a brass bar and a hammer, drive in a new snap ring.