

DISASSEMBLY

1. **REMOVE BACK-UP LIGHT SWITCH WITH GASKET**
Torque: 40 N·m (410 kgf·cm, 30 ft·lbf)
2. **REMOVE BOLT AND VEHICLE SPEED SENSOR DRIVEN GEAR**
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)
3. **REMOVE CLUTCH HOUSING FROM TRANSMISSION CASE**

Remove the 9 bolts and clutch housing.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

4. **REMOVE CONTROL SHIFT LEVER ARM, DUST BOOT AND NO.1 CONTROL SHIFT YOKE**

- (a) Remove the 3 bolts, nut and control shift lever arm.

Torque:

Nut A: 25 N·m (250 kgf·cm, 18 ft·lbf)

Bolt B: 19 N·m (195 kgf·cm, 14 ft·lbf)

- (b) Remove the dust boot, bolt, nut and No.1 control shift yoke.

Torque:

Nut C: 19 N·m (195 kgf·cm, 14 ft·lbf)

5. **REMOVE CONTROL SHIFT LEVER RETAINER ASSEMBLY**

- (a) Remove the 6 bolts.

Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

- (b) Remove the control shift lever retainer assembly and oil deflector.

6. **REMOVE 2 RESTRICT PINS AND GASKETS**

HINT:

At the time of reassembly, install the black pin on the reverse gear/5th gear side.

Torque: 40 N·m (410 kgf·cm, 30 ft·lbf)

7. **REMOVE EXTENSION HOUSING**

- (a) Remove the shift lever housing set bolt.

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

- (b) Remove the 9 bolts from the extension housing.

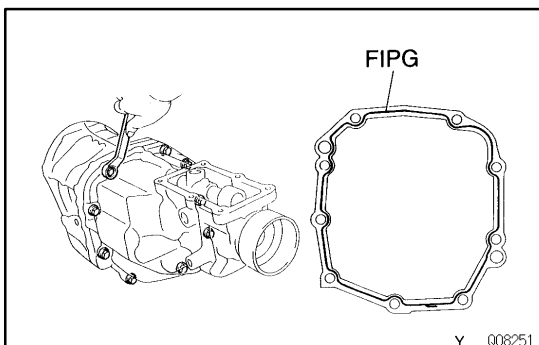
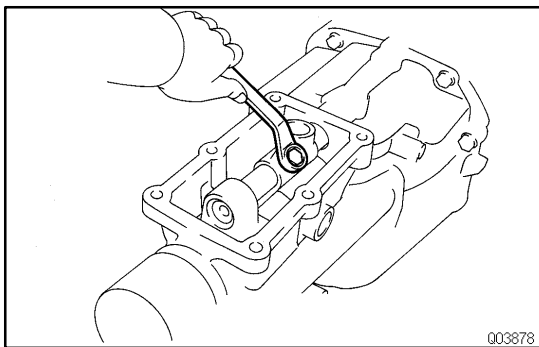
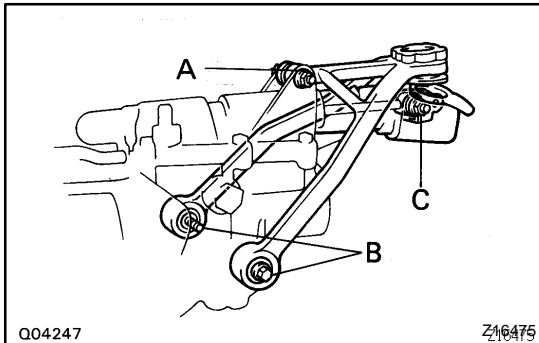
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

- (c) Using a plastic hammer, carefully tap the extension housing.

- (d) Disengage the shift and select lever from the shift head.

- (e) Pull out the extension housing.

FIPG: Part No. 08826-00090, THREE BOND 1281 or equivalent

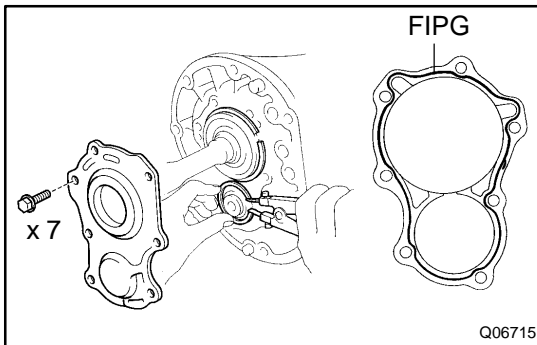


8. REMOVE FRONT BEARING RETAINER AND BEARING SNAP RING

- (a) Remove the 7 bolts.

Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

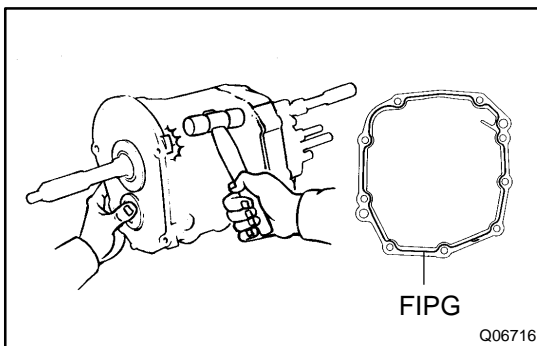
Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)



- (b) Remove the front bearing retainer

FIPG: Part No. 08826-00090, THREE BOND 1281 or equivalent

- (c) Using a snap ring expander, remove the 2 bearing snap rings.



9. SEPARATE INTERMEDIATE PLATE FROM TRANSMISSION CASE

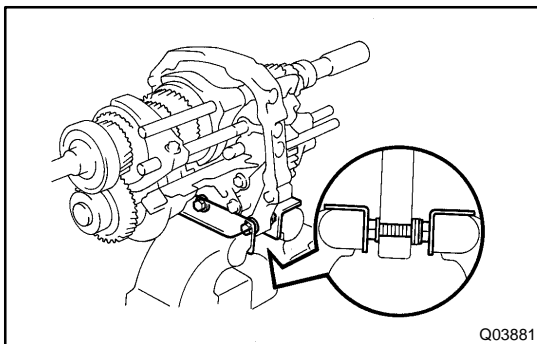
- (a) Using a plastic hammer, carefully tap the transmission case.

- (b) Pull the transmission case from the intermediate plate.

HINT:

At the time of reassembly, align each bearing outer race and each shift fork shaft end with the case holes.

FIPG: Part No. 08826-00090, THREE BOND 1281 or equivalent



10. MOUNT INTERMEDIATE PLATE IN VISE

- (a) Use the 2 long clutch housing bolts, plate washers and suitable nuts, as shown.

NOTICE:

Increase or decrease plate washers so that the bolt tip does not protrude from the nut.

- (b) Mount the intermediate plate in a vise.

11. REMOVE OIL SEPARATOR

Remove the 2 bolts and oil separator.

Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

12. REMOVE FRONT MAGNET

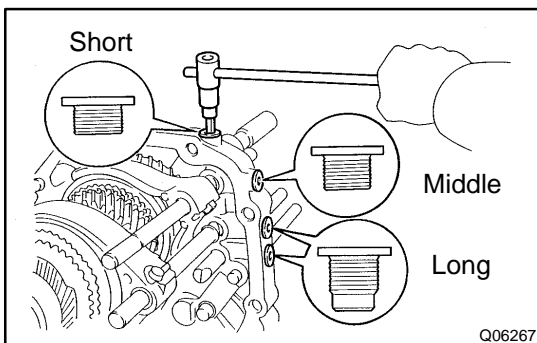
13. REMOVE LOCKING BALL AND SPRING

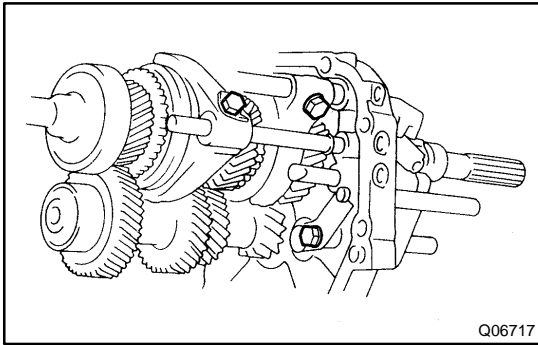
- (a) Using a hexagon wrench, remove the 4 straight screw plugs.

Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

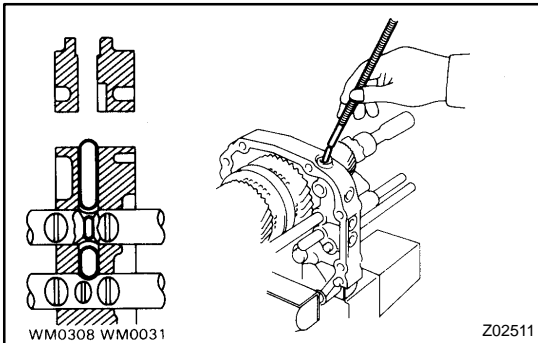
- (b) Using a magnetic finger, remove the 3 springs and balls.





14. REMOVE SHIFT FORK, SHIFT FORK SHAFT AND REVERSE IDLER GEAR

- (a) Remove the No.1 and No.2 shift forks set bolts.
Torque: 20 N·m (200 kgf-cm, 14 ft-lbf)
- (b) Remove the bolt and reverse idler gear shaft stopper.
Torque: 25 N·m (250 kgf-cm, 18 ft-lbf)
- (c) Remove the reverse idler gear and shaft with the snap ring.
- (d) Remove the No.1 shift fork and shaft.

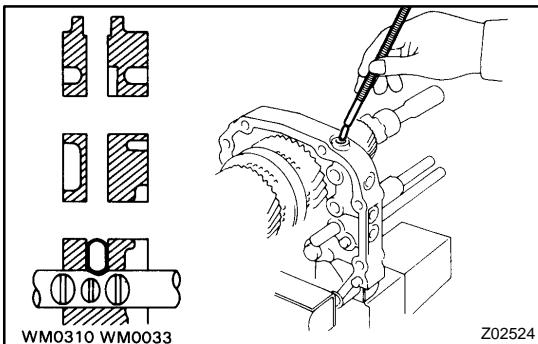


- (e) Using a magnetic finger, remove the No.1 and No.2 interlock pins.

HINT:

At the time of reassembly, apply MP grease to the No.1 and No.2 interlock pins.

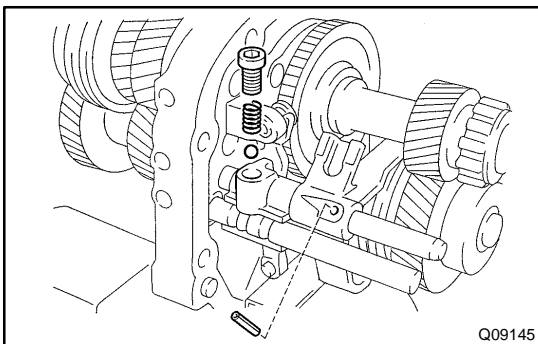
- (f) Using 2 screwdrivers and a hammer, tap out the No. 2 shift fork shaft snap ring.
- (g) Remove the No. 2 shift fork and shaft.



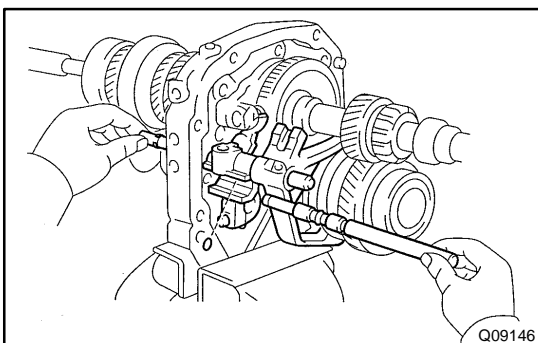
- (h) Using a magnetic finger, remove the No. 3 interlock pin.

HINT:

At the time of reassembly, apply MP grease to the No.3 interlock pin.



- (i) Using a pin punch and hammer, drive out the No. 3 shift fork pin.
- (j) Using a hexagon wrench, remove the plug.
Torque: 25 N·m (250 kgf-cm, 18 ft-lbf)
- (k) Using a magnetic finger, remove the spring and ball.



- (l) Pull out the No.4 shift fork shaft.
- (m) Remove the pin from the reverse shift head.

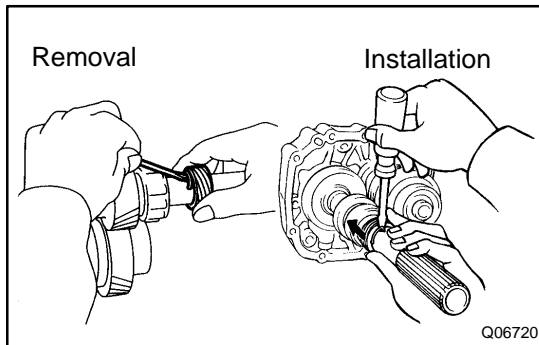
HINT:

At the time of reassembly, apply MP grease to the pin.

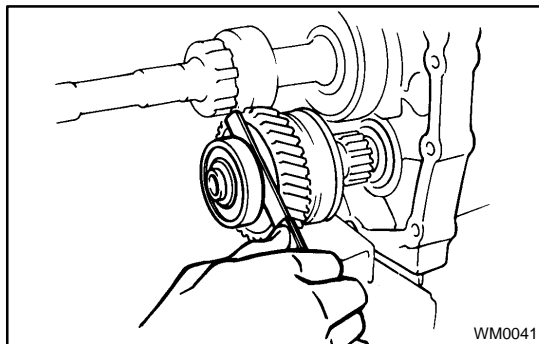
- (n) Remove the No.3 shift fork, fork shaft and reverse shift arm with the snap ring.

HINT:

At the time of reassembly, align the No.3 shift fork with the No.3 hub sleeve groove, put the reverse shift arm into the pivot of bearing retainer and align the reverse shift arm shoe with the reverse idler gear groove.

**15. REMOVE VEHICLE SPEED SENSOR DRIVE GEAR**

Pry out both ends of the clip and remove the drive gear.

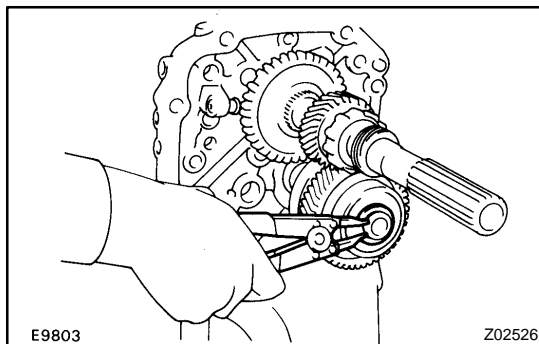
**16. INSPECT COUNTER 5TH GEAR THRUST CLEARANCE**

Using a feeler gauge, measure the counter 5th gear thrust clearance.

Standard clearance:

0.10–0.41 mm (0.0039–0.0161 in.)

Maximum clearance: 0.46 mm (0.0181 in.)

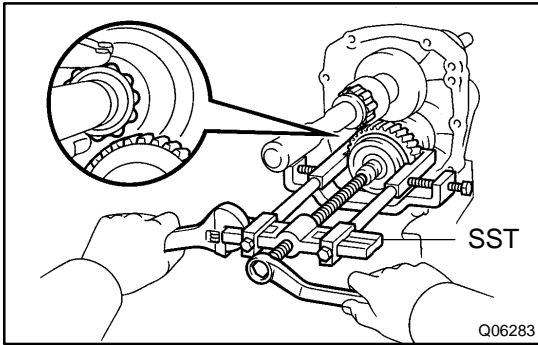
**17. REMOVE COUNTER REAR BEARING, SPACER, COUNTER 5TH GEAR AND NEEDLE ROLLER BEARING**

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

HINT:

At the time of reassembly, select a snap ring that will allow minimum axial play.

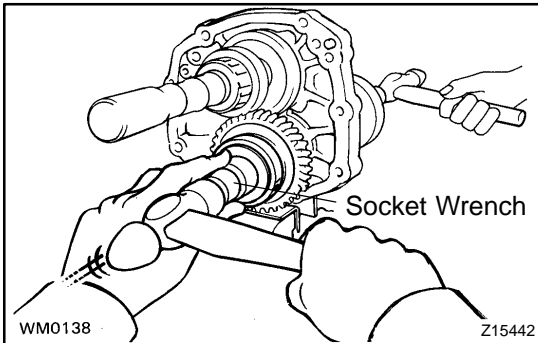
Mark	Thickness mm (in.)
1	1.90–1.95 (0.0748–0.0768)
2	1.96–2.01 (0.0772–0.0791)
3	2.02–2.07 (0.0795–0.0815)
4	2.08–2.13 (0.0819–0.0839)
5	2.14–2.19 (0.0843–0.0862)
6	2.20–2.25 (0.0866–0.0886)
7	2.26–2.31 (0.0890–0.0909)



- (b) Using SST, remove the rear bearing, spacer, counter 5th gear and bearing.
SST 09950-40010

NOTICE:

Be careful not to catch the output shaft rear bearing roller on the counter 5th gear.

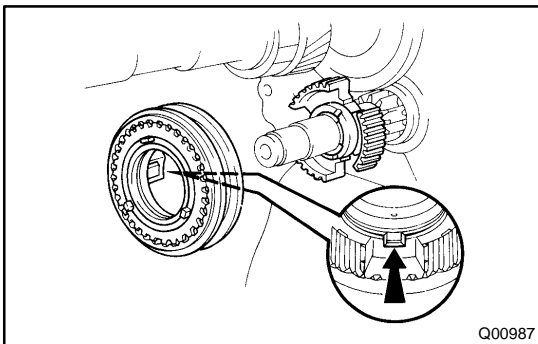


- (c) Remove the spacer.

HINT:

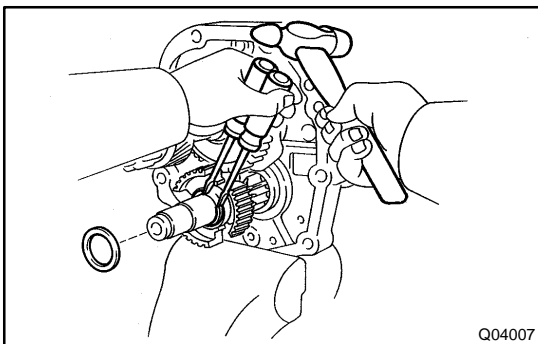
At the time of reassembly, please refer to the following items.

- Install the counter 5th gear with the 5th gear gaps aligned with the synchronizer cone ring pin.
- Using a socket wrench and hammer, drive in the bearing.
- When driving in the bearing support the counter shaft in front with a 1.4–2.3 kg (3–5 lb) hammer or equivalent.



18. REMOVE SYNCHRONIZER RING ASSEMBLY WITH NO.3 HUB SLEEVE AND NO.3 CLUTCH HUB

- (a) Remove the synchronizer ring assembly with the No.3 hub sleeve from the No.3 clutch hub.



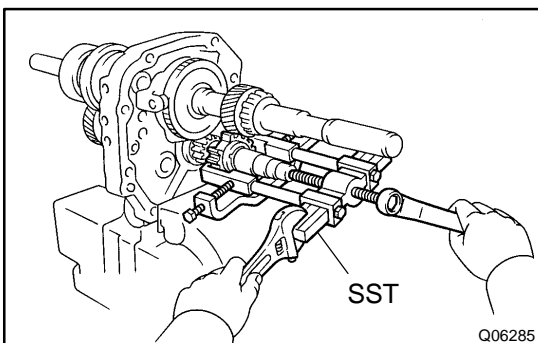
- (b) Remove the spacer.

- (c) Using 2 screwdrivers and a hammer, tap out the snap ring.

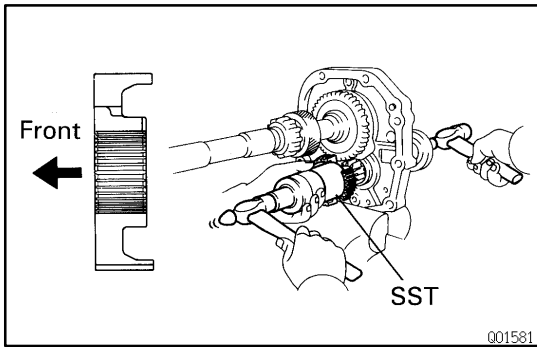
HINT:

At the time of reassembly, select a snap ring that will allow minimum axial play.

Mark	Thickness mm (in.)
2	2.06–2.11 (0.0811–0.0831)
3	2.12–2.17 (0.0835–0.0854)
4	2.18–2.23 (0.0858–0.0878)
5	2.24–2.29 (0.0882–0.0902)

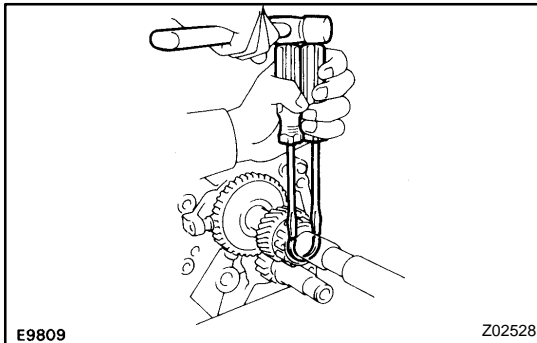


- (d) Using SST, remove the No.3 clutch hub.
SST 09950-40010

**HINT:**

At the time of reassembly, please refer to the following items.

- Using SST and a hammer, drive in the No.3 clutch hub.
SST 09316-60011 (09316-00011, 09316-00071)
- When installing the No.3 clutch hub, support the counter shaft in front with a 1.4–2.3 kg (3–5 lb) hammer or equivalent.

19. REMOVE REAR MAGNET**20. REMOVE OUTPUT SHAFT REAR BEARING AND 5TH GEAR**

- (a) Using 2 screwdrivers and a hammer, tap out the snap ring.

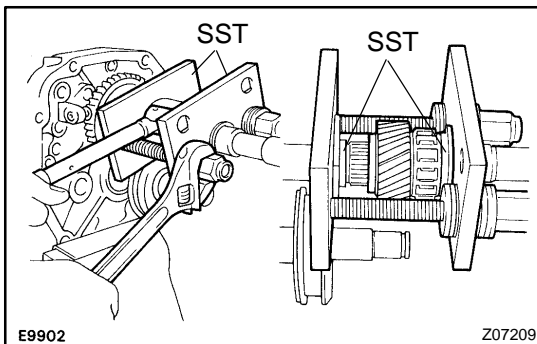
HINT:

At the time of reassembly, select a snap ring that will allow minimum axial play.

Mark	Thickness mm (in.)
8	2.31–2.36 (0.0909–0.0929)
9	2.37–2.42 (0.0933–0.0953)
10	2.43–2.48 (0.0957–0.0976)
11	2.49–2.54 (0.0980–0.1000)
12	2.55–2.60 (0.1004–0.1024)
13	2.61–2.66 (0.1028–0.1047)
14	2.68–2.73 (0.1055–0.1075)
15	2.74–2.79 (0.1079–0.1098)

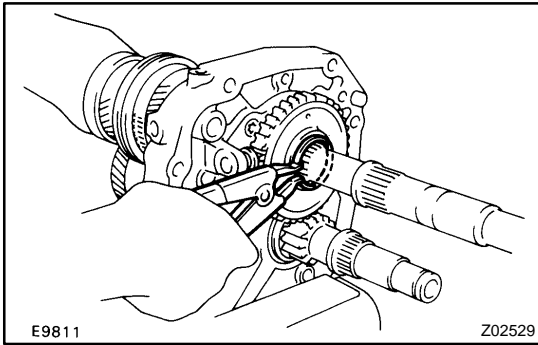
- (b) Using SST, remove the rear bearing and 5th gear.

SST 09312-20011 (09313-00030, 09313-00040, 09313-00050)

**HINT:**

At the time of reassembly, using SST, install the 5th gear and rear bearing.

SST 09312-20011 (09313-00010, 09313-00030, 09313-00040, 09313-00050)



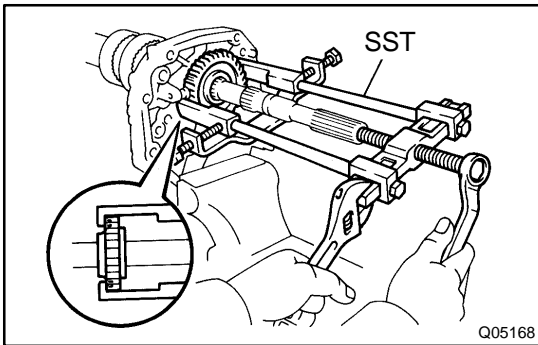
21. REMOVE REVERSE GEAR

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

HINT:

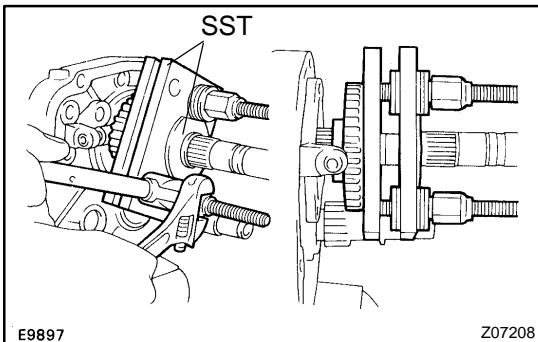
At the time of reassembly, select a snap ring that will allow minimum axial play.

Mark	Thickness mm (in.)
5	2.25–2.30 (0.0886–0.0906)
11	2.30–2.35 (0.0906–0.0925)
12	2.35–2.40 (0.0925–0.0945)
13	2.40–2.45 (0.0945–0.0965)
14	2.45–2.50 (0.0965–0.0984)
15	2.50–2.55 (0.0984–0.1004)
16	2.55–2.60 (0.1004–0.1024)
17	2.61–2.66 (0.1028–0.1047)
18	2.67–2.72 (0.1051–0.1071)
19	2.73–2.78 (0.1075–0.1094)
20	2.79–2.84 (0.1098–0.1118)
21	2.85–2.90 (0.1122–0.1142)
22	2.91–2.96 (0.1146–0.1165)
23	2.97–3.02 (0.1169–0.1189)



(b) Using SST, remove the reverse gear.

SST 09950-40010



HINT:

At the time of reassembly, using SST, install the reverse gear.

SST 09312-20011 (09313-00030, 09313-00040, 09313-00050)

22. REMOVE REAR BEARING RETAINER

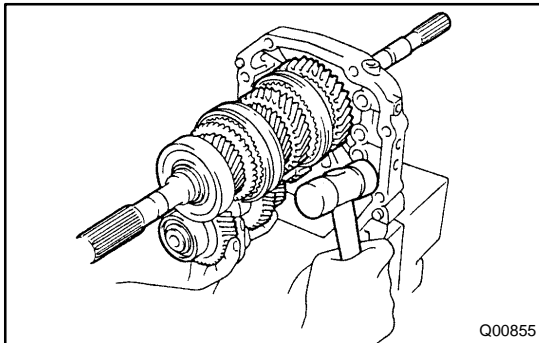
- (a) Using a torx socket wrench (T40), unscrew the 4 torx screws and remove the rear bearing retainer.

Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)

- (b) Using a snap ring expander, remove the 2 snap rings.

HINT:

At the time of reassembly, be sure the snap ring is flush with the intermediate plate surface.

**23. REMOVE OUTPUT SHAFT AND COUNTER GEAR FROM INTERMEDIATE PLATE**

- (a) Remove the output shaft, input shaft and counter gear as a unit from the intermediate plate by pulling on the counter gear and tapping on the intermediate plate with a plastic hammer.
- (b) Remove the input shaft from the output shaft.

HINT:

At the time of reassembly, please refer to the following items.

- Before installing the output shaft, use SST to remove the counter gear center bearing outer race.
SST 09950-60010 (09951-00510),
09950-70010 (09951-07150)
- Install the outer race after installing the counter gear.
- Install the output shaft into the intermediate plate by pulling on the output shaft and tapping on the intermediate plate.
- Apply gear oil to the needle roller bearing.
- Install the needle roller bearing to the input shaft.
- Install the input shaft and counter gear together.
- Using SST and a hammer, install the counter gear center bearing outer race.
SST 09316-60011 (09316-00011)
- Be careful not to damage the bearing rollers.

