

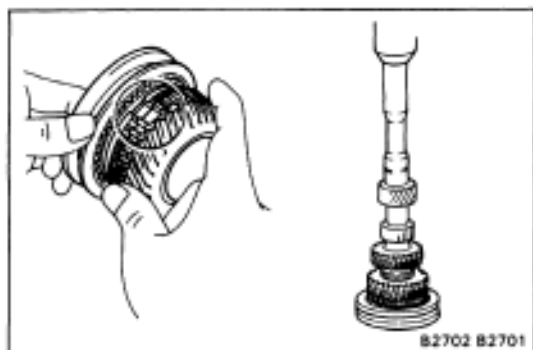
ASSEMBLY OF TRANSMISSION

(See pages MT-5 to MT-7)

1. INSERT NO.2 CLUTCH HUB INTO HUB SLEEVE

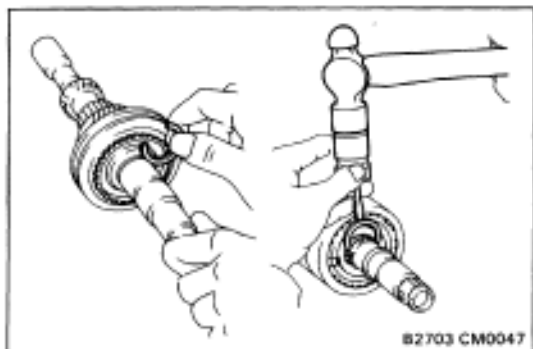
- Install the clutch hub and shifting keys to the hub sleeve.
- Install the shifting key springs under the shifting keys.

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



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

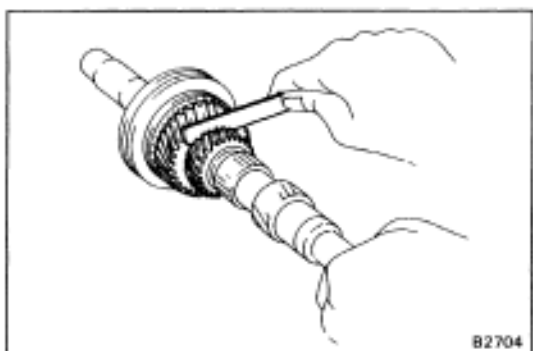
- Apply gear oil to the needle roller bearings.
- Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
- Using a press, install the 3rd gear and No.2 hub sleeve.



3. INSTALL SNAP RING

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

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)

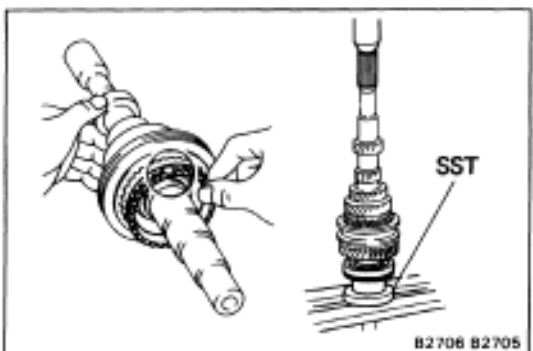


4. MEASURE THIRD GEAR THRUST CLEARANCE

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

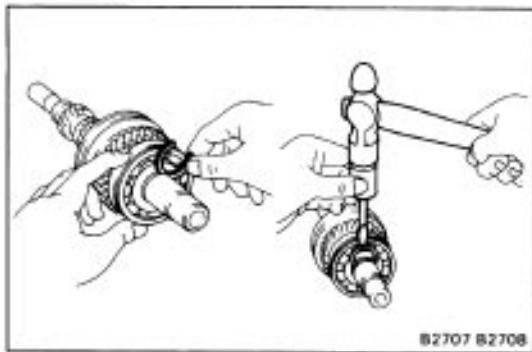
Standard clearance: 0.10–0.35 mm

(0.0039–0.0138 in.)



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

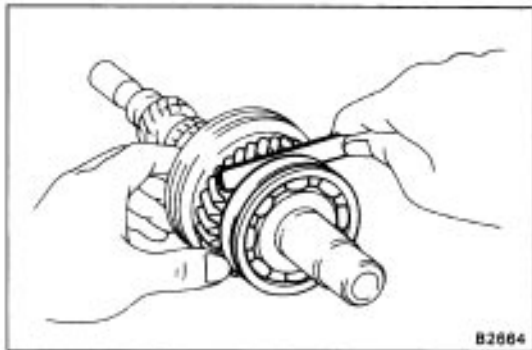
- Apply gear oil to the needle roller bearings.
 - Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
 - Using SST, press in the radial ball bearing.
- SST 09608-12010 (09608-00070)



6. INSTALL SNAP RING

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

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)

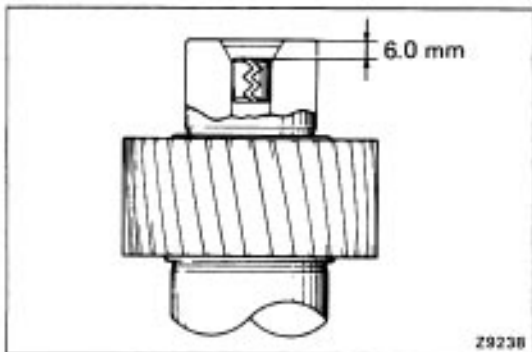


7. MEASURE FOURTH GEAR THRUST CLEARANCE

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

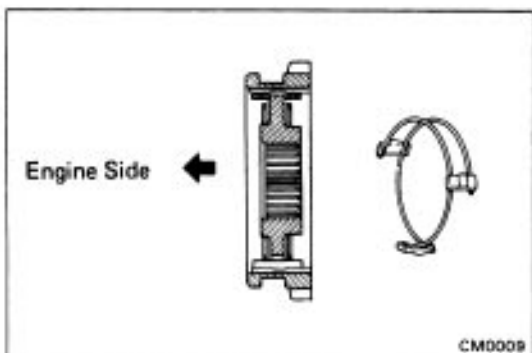
Standard clearance: 0.10 – 0.55 mm

(0.0039–0.0217 in.)



8. 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 6.0 mm (0.236 in.).

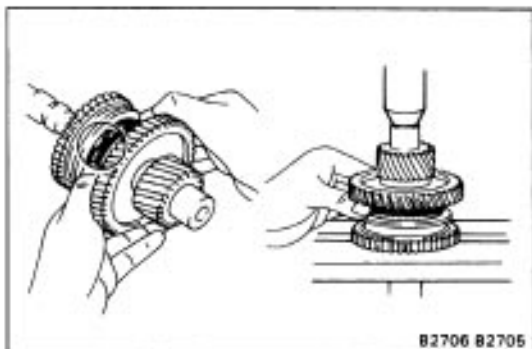


9. INSERT NO.1 CLUTCH HUB INTO HUB SLEEVE

(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.



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

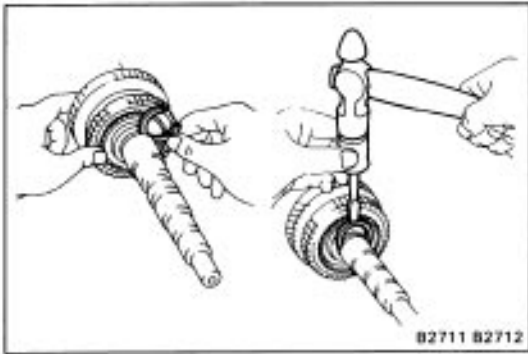
(a) Install the locking ball in the shaft.

(b) Fit the thrust washer groove securely over the locking ball when installing the thrust washer on the shaft.

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

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

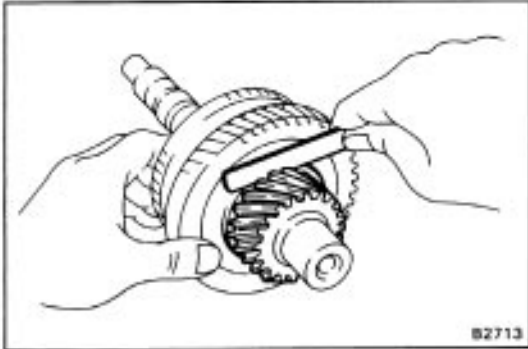
(e) Using a press, install the 1st gear and No.1 hub sleeve.



11. INSTALL SNAP RING

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

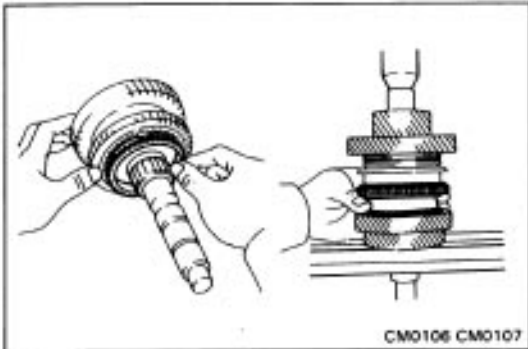
Mark	Thickness mm(in.)	Mark	Thickness mm (in.)
A	2.50 (0.0984)	D	2.68 (0.1055)
B	2.56 (0.1008)	E	2.74 (0.1079)
C	2.62 (0.1031)	F	2.80 (0.1102)



12. MEASURE FIRST GEAR THRUST CLEARANCE

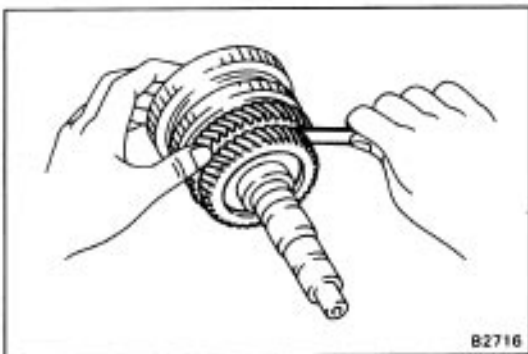
Using a feeler gauge, measure the 1st gear thrust clearance.

Standard clearance: 0.10–0.40 mm
(0.0039–0.0157 in.)



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

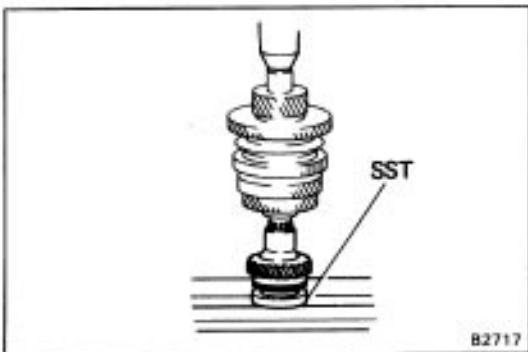
- Install the spacer.
- Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
- Apply gear oil to the needle roller bearing.
- Install the 2nd gear.
- Using a press, install the 3rd driven gear.



14. MEASURE SECOND GEAR THRUST CLEARANCE

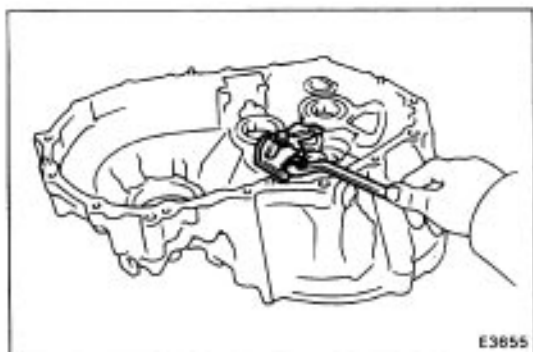
Using a feeler gauge, measure the 2nd gear thrust clearance.

Standard clearance: 0.10–0.45 mm
(0.0039–0.0177 in.)

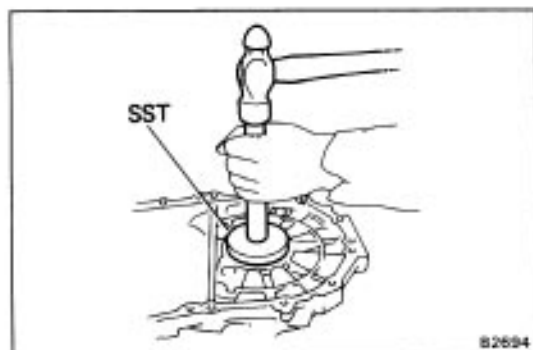


15. INSTALL OUTPUT GEAR SPACER, FOURTH DRIVEN GEAR AND RADIAL BALL BEARING

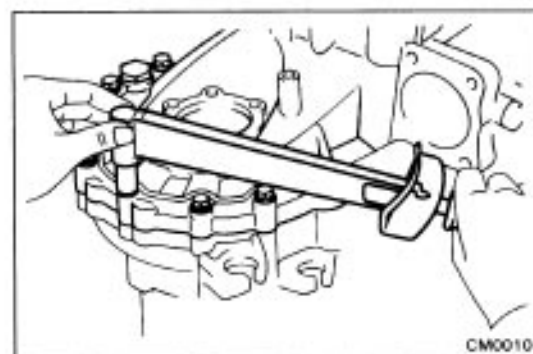
- Install the spacer.
- Using SST, press in the 4th driven gear and bearing.
SST 09608-12010 (09608-00070)

**16. INSTALL MAGNET****17. INSTALL OIL RECEIVER**

Install the oil receiver with the two bolts.

**18. ADJUST DIFFERENTIAL SIDE BEARING PRELOAD**

- (a) Install the thinnest shim into the transmission case.
- (b) Using SST, drive in the outer race of the side bearing.
SST 09608-20012 (09608-03020, 09608-03090)



- (c) Install the differential to the transaxle case.

- (d) Install the transmission case.

- (e) Install and torque the case bolts.

Torque: 300 kg-cm (22 ft-lb, 29 N-m)

- (f) Using SST and torque meter, measure the preload.
SST 09564-32011

Preload (starting):

New bearing 8–16 kg-cm

(6.9–13.9 in.-lb, 0.8–1.6 N-m)

Reused bearing 5–10 kg-cm

(4.3–8.7 in.-lb, 0.5–1.0 N-m)

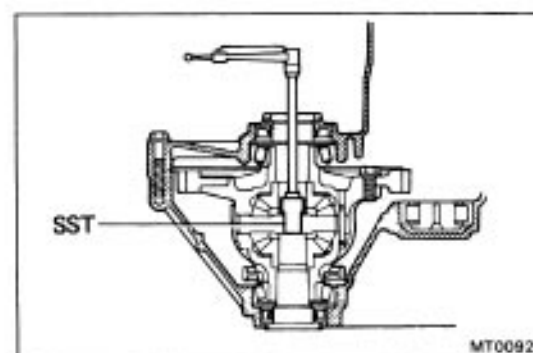
If the preload is not within specification, remove the transmission case side outer race of the side bearing with SST.

(See step 10 on page [MT-15](#))

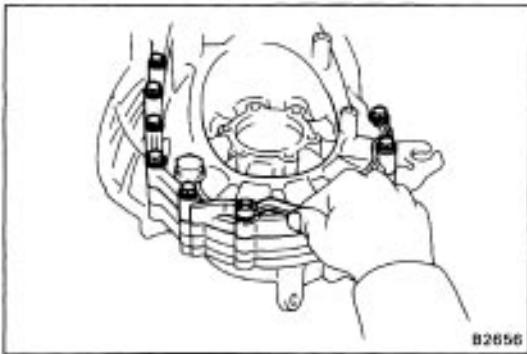
Reselect an adjusting shim.

HINT: The preload will change about 3–4 kg-cm

(2.6–3.5 in.-lb, 0.3–0.4 N-m) with each shim thickness.



Mark	Thickness mm(in.)	Mark	Thickness mm(in.)
A	2.10 (0.0827)	L	2.60 (0.1024)
B	2.15 (0.0846)	M	2.65 (0.1043)
C	2.20 (0.0866)	N	2.70 (0.1063)
D	2.25 (0.0886)	P	2.75 (0.1083)
E	2.30 (0.0906)	Q	2.80 (0.1102)
F	2.35 (0.0925)	R	2.85 (0.1122)
G	2.40 (0.0945)	S	2.90 (0.1142)
H	2.45 (0.0965)	T	2.95 (0.1161)
J	2.50 (0.0984)	U	3.00 (0.1181)
K	2.55 (0.1004)		

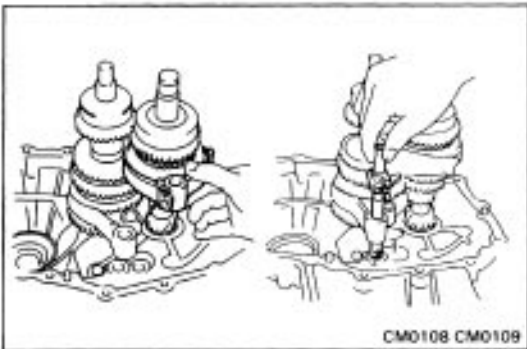


19. REMOVE TRANSMISSION CASE



20. INSTALL INPUT AND OUTPUT SHAFTS

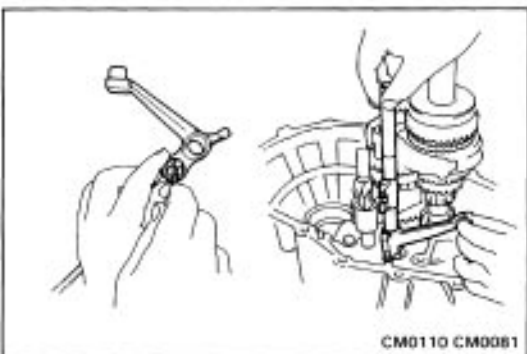
Install the input and output shafts together.



21. INSTALL SHIFT FORKS AND SHIFT FORK SHAFTS

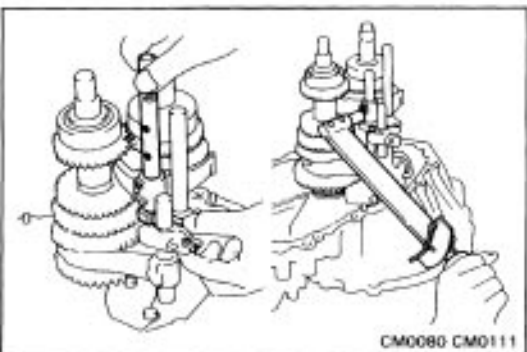
(a) Place No.1 and No.2 shift forks into the groove of No.1 and No.2 hub sleeves.

(b) Insert No.1 fork shaft into No.1 shift fork hole.



(c) Insert the two interlock balls into the reverse shift fork hole.

(d) Install No.3 fork shaft and the reverse shift fork.



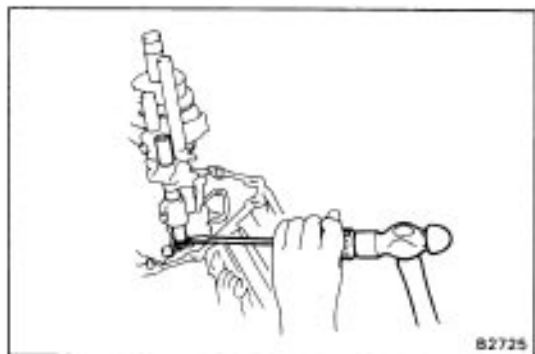
(e) Install No.2 fork shaft and the shift head.

(f) Apply sealant to the bolt threads.

Sealant: Part No. 08833-00070, Adhesive 1324, THREE BOND 1324 or equivalent

(g) Install the three bolts.

Torque: 160 kg-cm (12 ft-lb, 16 N-m)



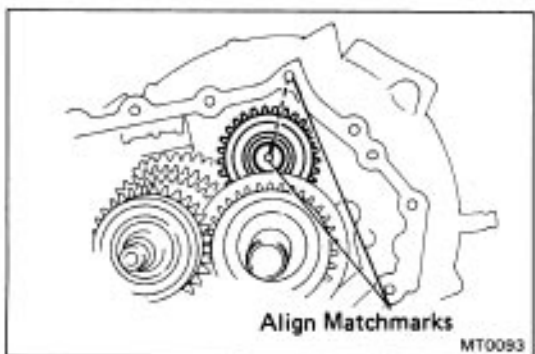
- (h) Using a screwdriver and hammer, install the three snap rings.



22. INSTALL REVERSE SHIFT ARM

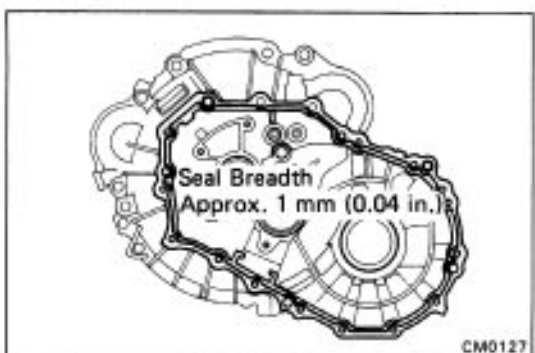
- (a) Put the reverse shift fork pivot into the reverse shift arm and install the reverse shift arm to the transaxle case.
 (b) Install and torque the bolts.

Torque: 175 kg-cm (13 ft-lb, 17 N-m)



23. INSTALL REVERSE IDLER GEAR AND SHAFT

Install the reverse idler gear and shaft as shown.



24. INSTALL TRANSMISSION CASE

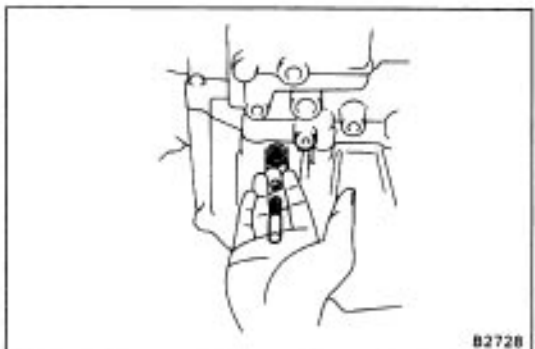
- (a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transmission case or transaxle case.
 (b) Apply seal packing to the transmission case as shown.
Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

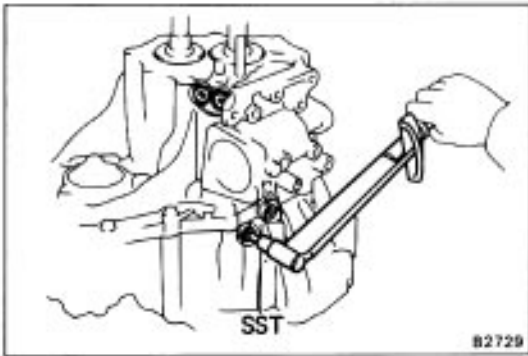
HINT: Install the transmission case as soon as the seal packing is applied.

- (c) Install and torque the sixteen bolts.
Torque: 300 kg-cm (22 ft-lb, 29 N-m)

25. INSTALL BALLS, SPRINGS, SEATS, PLUGS AND LOCK BALL ASSEMBLY

- (a) Insert the balls, springs and seats into the holes.





(b) Apply sealant to the plugs and lock ball assembly threads.

Sealant: Part No.08833-00080, THREE BOND 1344,

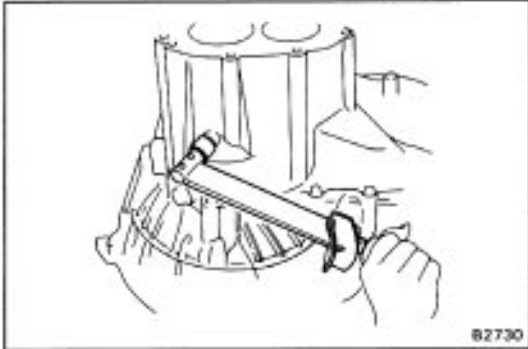
LOCTITE 242 or equivalent

(c) Using SST, tighten the three plugs and lock ball assembly.

SST 09313-30021

Torque: Plug 250 kg-cm (18 ft-lb, 25 N-m)

Lock ball assembly 400 kg-cm (29 ft-lb, 39 N-m)



26. INSTALL AND TORQUE REVERSE IDLER GEAR SHAFT

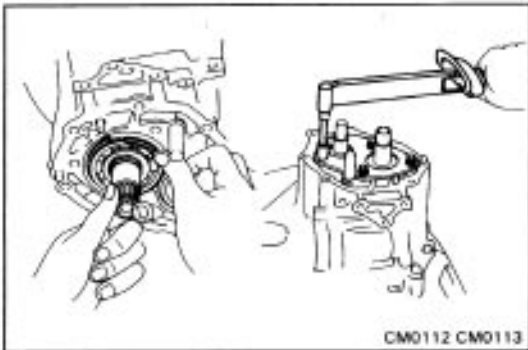
(a) Apply sealant to the bolt threads.

Sealant: Part No. 08833-00070, Adhesive 1324,

THREE BOND 1324 or equivalent

(b) Install and torque the bolt.

Torque: 300 kg-cm (22 ft-lb, 29 N-m)



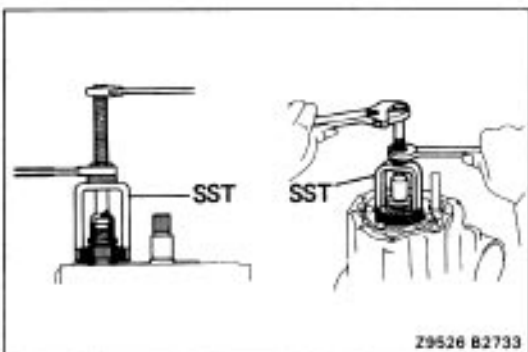
27. INSTALL BEARING SNAP RINGS

28. INSTALL SNAP RING TO NO.2 FORK SHAFT

29. INSTALL REAR BEARING RETAINER

Install and torque the five bolts.

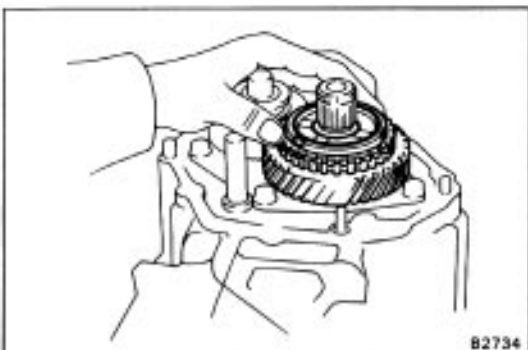
Torque: 195 kg-cm (14 ft-lb, 19 N-m)



30. INSTALL FIFTH DRIVEN GEAR

Using SST, install the 5th driven gear.

SST 09309-12020

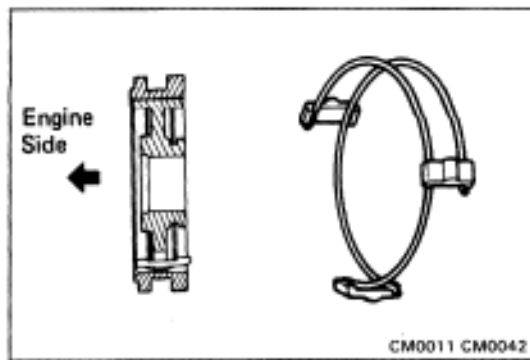


31. INSTALL SPACER, NEEDLE ROLLER BEARINGS, FIFTH GEAR AND SYNCHRONIZER RING

(a) Install the spacer.

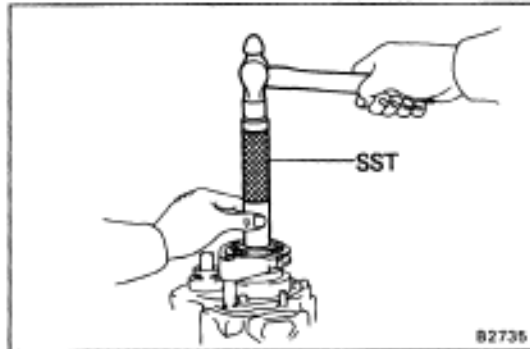
(b) Apply gear oil to the needle roller bearings.

(c) Install the 5th gear with the needle roller bearings and synchronizer ring.



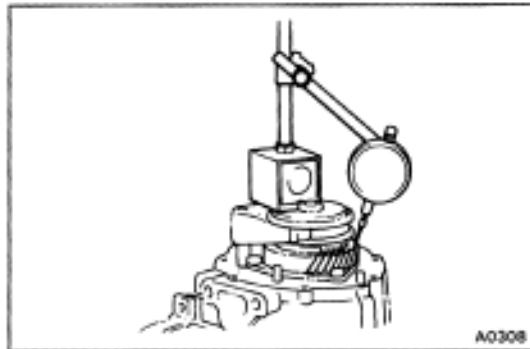
32. INSERT NO.3 CLUTCH HUB INTO HUB SLEEVE

- (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.



33. INSTALL NO.3 HUB SLEEVE ASSEMBLY WITH NO.3 SHIFT FORK

- (a) Support the tip of the input shaft with a spacer or such to raise the transaxle assembly.
 - (b) Using SST, drive in No.3 hub sleeve with shift fork.
- SST 09612-22011
- NOTICE:** Align the synchronizer ring slots with the shifting keys.

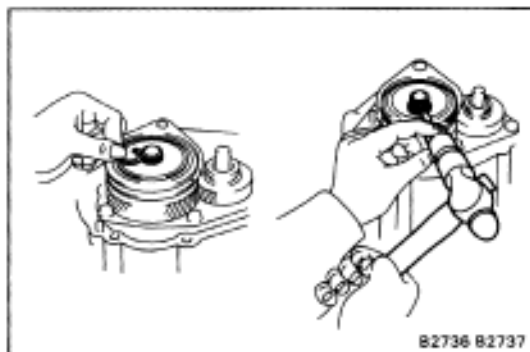


34. MEASURE FIFTH GEAR THRUST CLEARANCE

Using a dial indicator, measure the thrust clearance.

Standard clearance: 0.10–0.57 mm

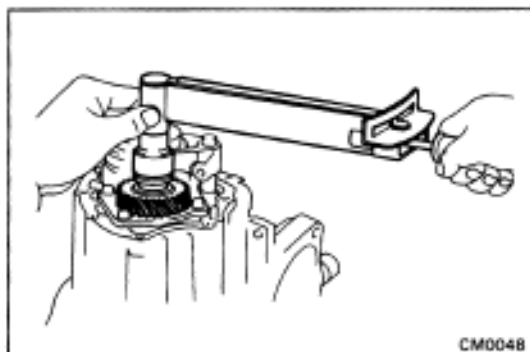
(0.0039–0.0224 in.)



35. INSTALL SNAP RING

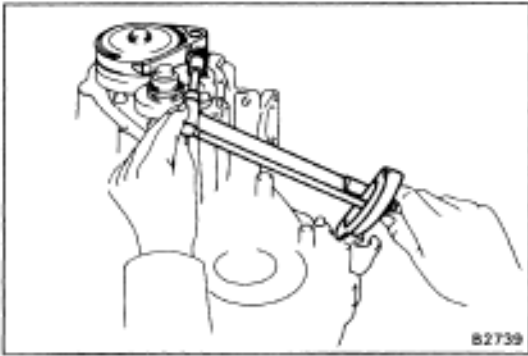
Select a snap ring that will allow minimum axial play and install it on the shaft.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	2.25 (0.0886)	E	2.49 (0.0980)
B	2.31 (0.0909)	F	2.55 (0.1004)
C	2.37 (0.0933)	G	2.61 (0.1028)
D	2.43 (0.0957)		

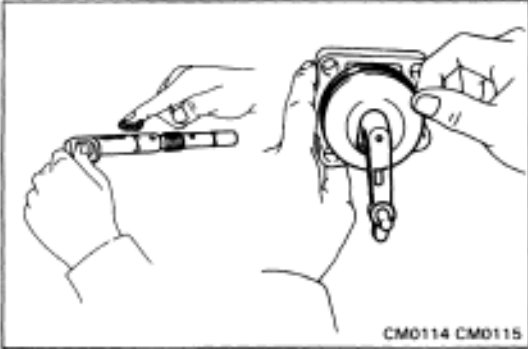


36. INSTALL LOCK NUT

- (a) Engage the gear double meshing.
 - (b) Install and torque the nut.
- Torque: 1,200 kg-cm (87 ft-lb, 118 N-m)**
- (c) Disengage the gear double meshing.
 - (d) Stake the lock nut.

**37. INSTALL BOLT**

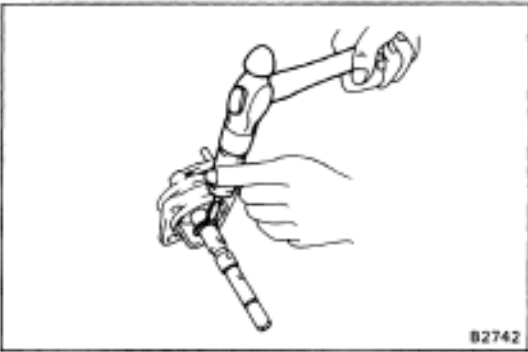
Torque: 160 kg-cm (12 ft-lb, 16 N-m)

**38. ASSEMBLE SHIFT AND SELECT LEVER SHAFT ASSEMBLY**

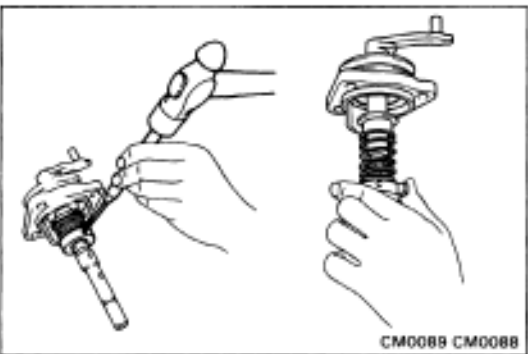
(a) Apply MP grease to the shaft.

(b) Install the boot shaft to the control shaft cover.

HINT: Make sure to install the boot in correct direction.
Position the air bleed of the boot downward.

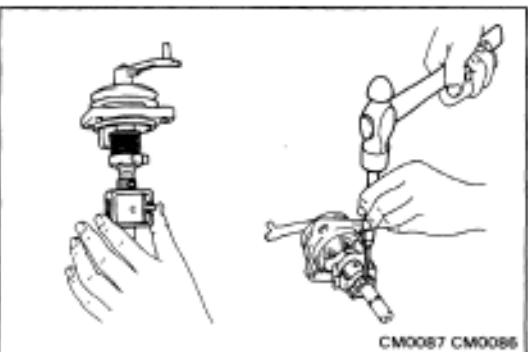


(c) Install the snap ring and spring seat.



(d) Install the compression spring and select inner lever.

(e) Using a pin punch and hammer, drive in the slotted spring pin.

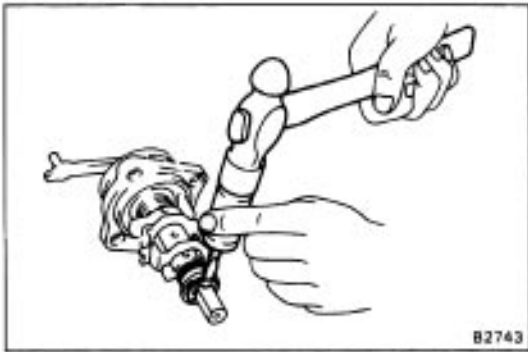


(f) Align the interlock plate with No.1 shift inner lever and install it.

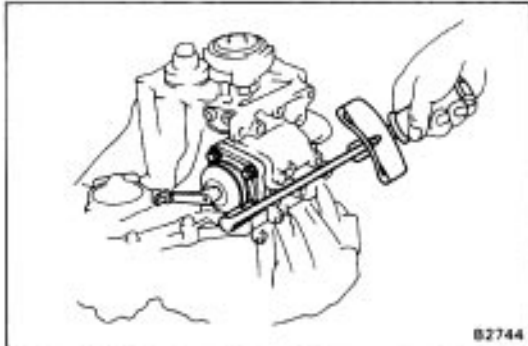
(g) Using a pin punch and hammer, drive in the slotted spring pin.

(h) Install No.2 shift inner lever.

(i) Using a pin punch and hammer, drive in the slotted spring pins.



(j) Install the compression spring, seat and E-ring.



39. INSTALL SHIFT AND SELECT LEVER SHAFT ASSEMBLY

(a) Place a new gasket in position on the control shaft cover.

(b) Apply sealant to the bolt threads.

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

(c) Install the shift and select lever shaft, and torque the bolts.

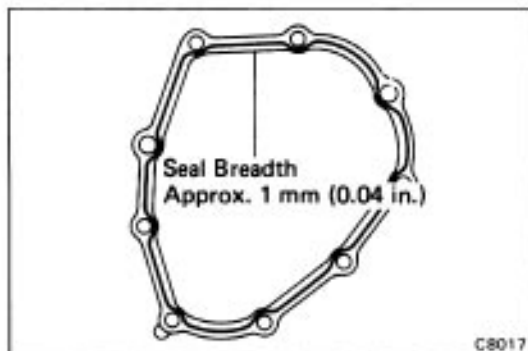
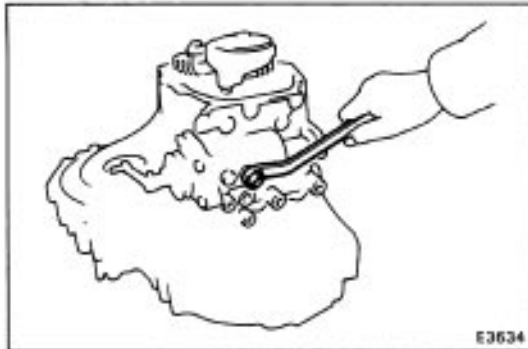
Torque: 200 kg-cm (14 ft-lb, 20 N-m)

(d) Install the bellcrank to the transmission case.

40. INSTALL LOCK BOLT

Install the lock bolt.

Torque: 300 kg-cm (22 ft-lb, 29 N-m)



41. INSTALL TRANSMISSION CASE COVER

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transmission case or case cover.

(b) Apply seal packing to the transmission case as shown.

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

HINT: Install the transmission case cover as soon as the seal packing is applied.

(c) Install and torque the nine bolts.

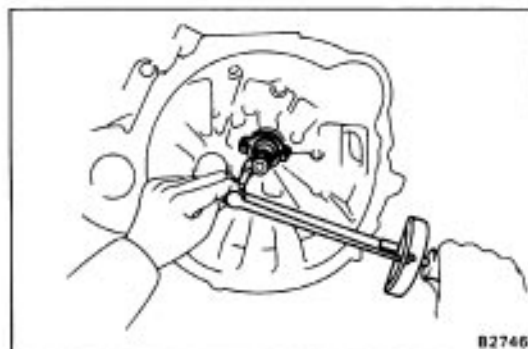
Torque: 185 kg-cm (13 ft-lb, 18 N-m)

42. INSTALL FRONT BEARING RETAINER

Using a torx socket wrench, torque the three torx screws.

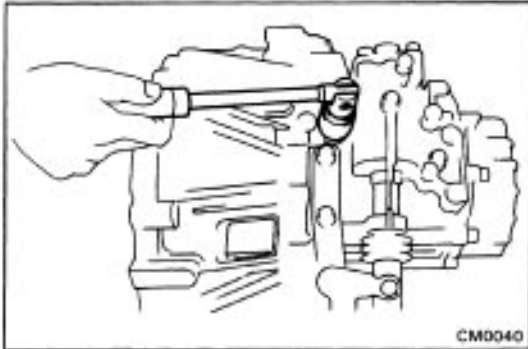
(Torx socket wrench 09042-00010)

Torque: 110 kg-cm (8 ft-lb, 11 N-m)



**43. INSTALL RELEASE FORK AND BEARING**

- (a) Apply molybdenum disulphide lithium base grease to the following parts.
- Release bearing hub inside groove
 - Input shaft spline
 - Release fork contact surface
- (b) Apply MP grease to the front surface of the release bearing.

**44. INSTALL BACK-UP LIGHT SWITCH**

Install the back-up light switch.

Torque: 410 kg-cm (30 ft-lb, 40 N-m)

45. INSTALL SPEEDOMETER DRIVEN GEAR