

COMPONENT PARTS INSTALLATION

BASIC SUBASSEMBLY REASSEMBLY

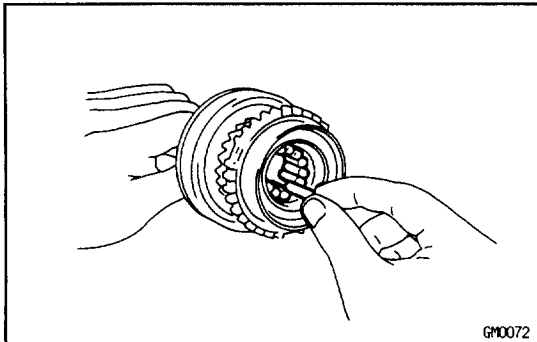
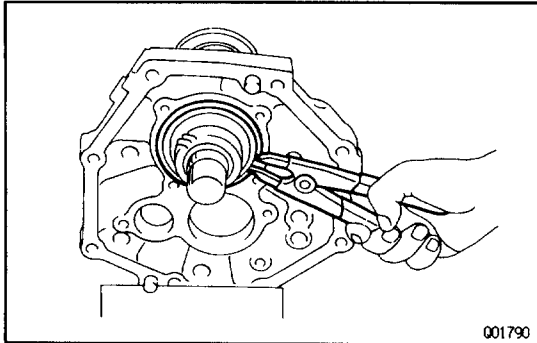
(See pages [MT1-16](#) to [MT1-18](#))

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

1. INSTALL OUTPUT SHAFT TO INTERMEDIATE PLATE

- (a) Install the output shaft into the intermediate plate by pulling on the output shaft and tapping on the intermediate plate.
- (b) Using a snap ring expander, install the output shaft center bearing snap ring.

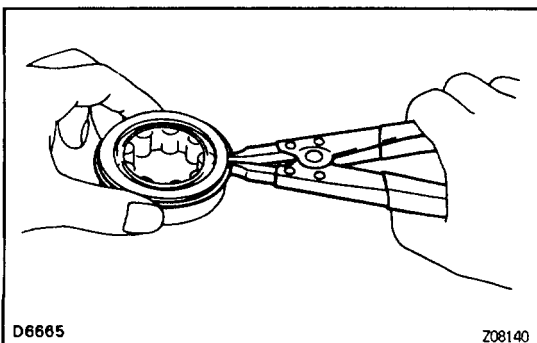
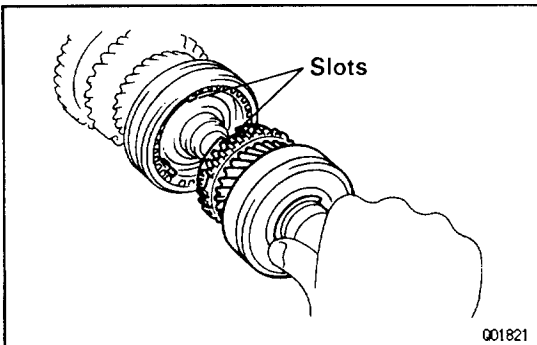
HINT: Be sure the snap ring is flush with the intermediate plate surface.



2. INSTALL INPUT SHAFT TO OUTPUT SHAFT

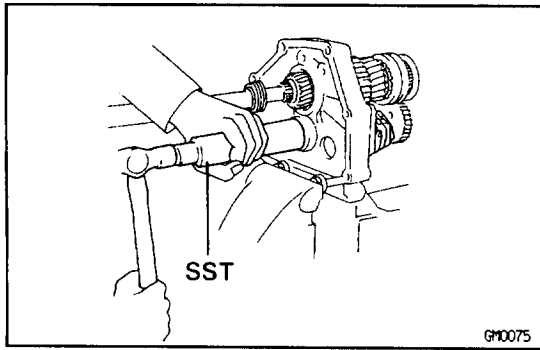
- (a) Apply MP grease to the 13-needle roller bearings and install them into the input shaft.

- (b) Install the input shaft to the output shaft with the synchronizer ring slots aligned with the shifting keys.



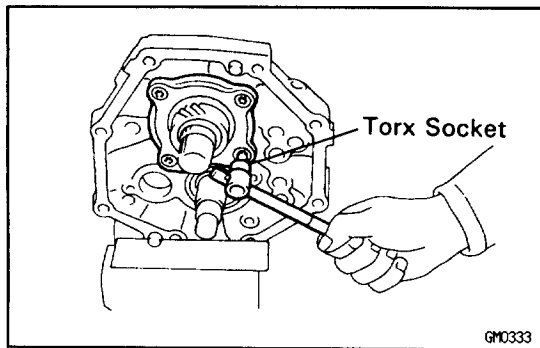
3. INSTALL COUNTER GEAR TO INTERMEDIATE PLATE

- (a) Using a snap ring expander, install the snap ring to the counter gear bearing.



- (b) Install the counter gear into the intermediate plate while holding the counter gear and install the counter rear bearing with SST.

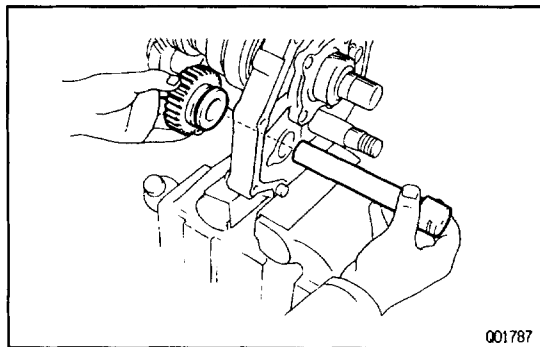
SST 09316-60010 (09316-00010)



4. INSTALL REAR BEARING RETAINER

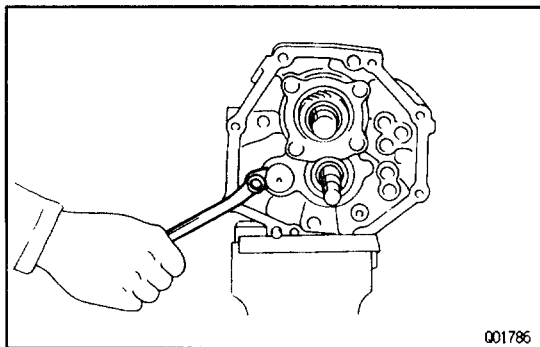
Using a torx socket wrench, install and torque the 4 screws.
(Torx socket wrench T40 09042-00020)

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



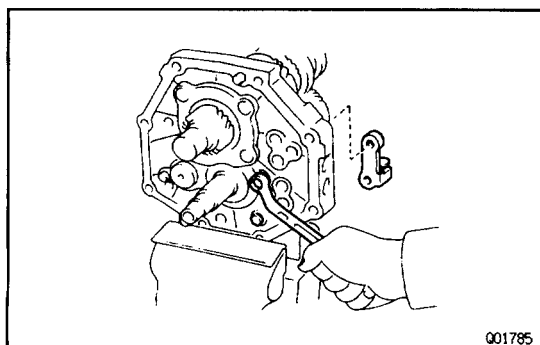
5. INSTALL REVERSE IDLER GEAR AND SHAFT

- (a) Install the reverse idler gear and shaft.



- (b) Install the shaft stopper and torque the bolt.

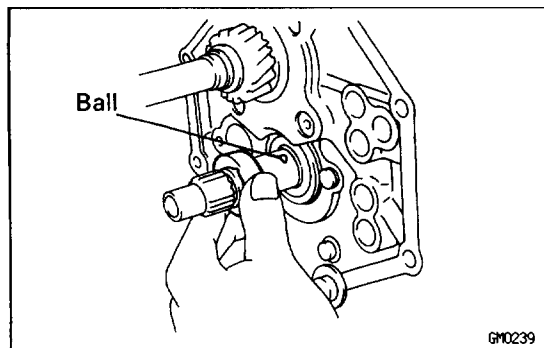
Torque: 17 N·m (175 kgf·cm, 13 ft·lbf)



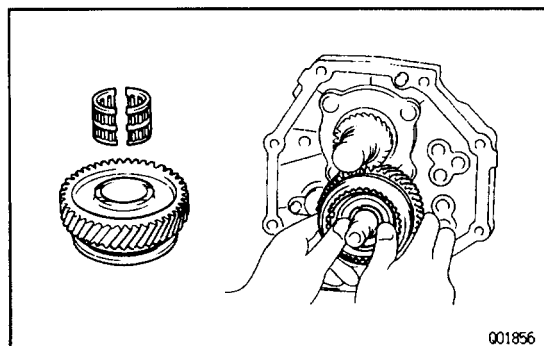
6. INSTALL REVERSE SHIFT ARM BRACKET

Install the reverse shift arm bracket and torque the 2 bolts.

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

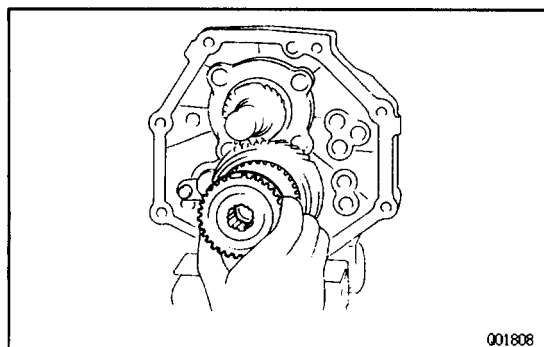


7. INSTALL BALL AND SPACER



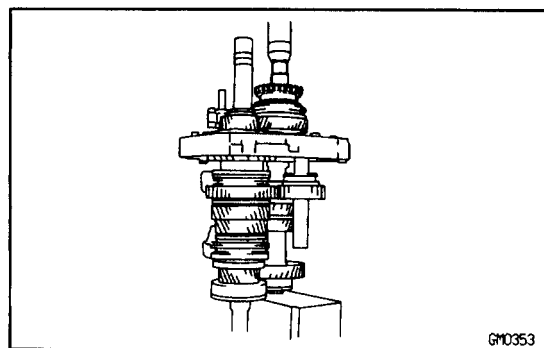
8. INSTALL COUNTER 5TH GEAR WITH HUB SLEEVE NO.3 ASSEMBLY AND NEEDLE ROLLER BEARINGS

- (a) Apply gear oil to the needle roller bearings.
- (b) Install the counter 5th gear with the hub sleeve No.3 and needle roller bearings.

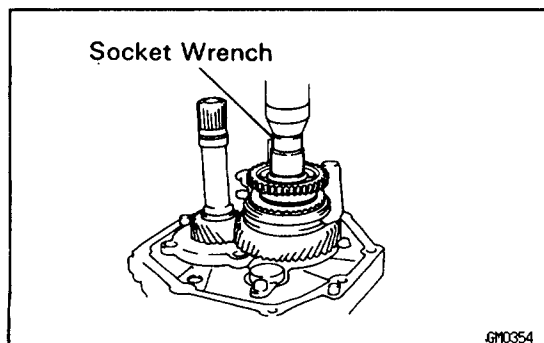


9. INSTALL SYNCHRONIZER RING AND GEAR SPLINE PIECE NO.5.

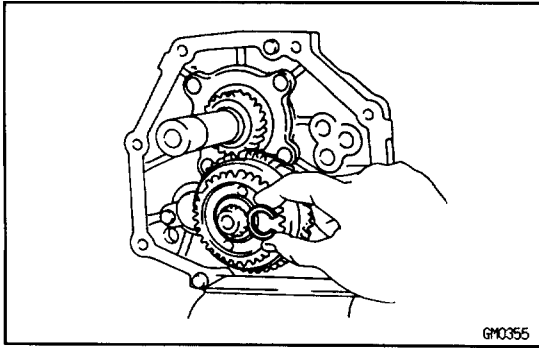
- (a) Install the synchronizer ring on the gear spline piece No.5.



- (b) Dismount the intermediate plate from the vise.
- (c) Stand the transmission, as shown.



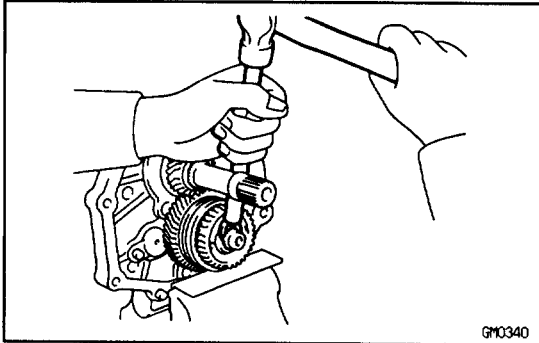
- (d) Using a 22 mm socket wrench and press, install the gear spline piece No.5 with the synchronizer ring slots aligned with the shifting keys.
- (e) Mount the intermediate plate to the vise.



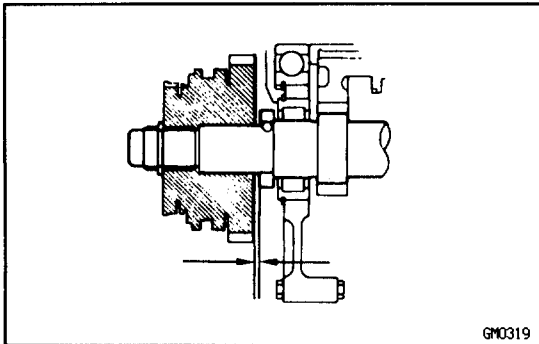
10. INSTALL SNAP RING

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

Mark	Thickness mm (in.)
A	2.80–2.85 (0.110–0.112)
B	2.85–2.90 (0.112–0.114)
C	2.90–2.95 (0.114–0.116)
D	2.95–3.00 (0.116–0.118)
E	3.00–3.05 (0.118–0.120)
F	3.05–3.10 (0.120–0.122)
G	3.10–3.15 (0.122–0.124)



- (b) Using a brass bar and hammer, install the snap ring.



11. INSPECT COUNTER 5TH GEAR THRUST CLEARANCE

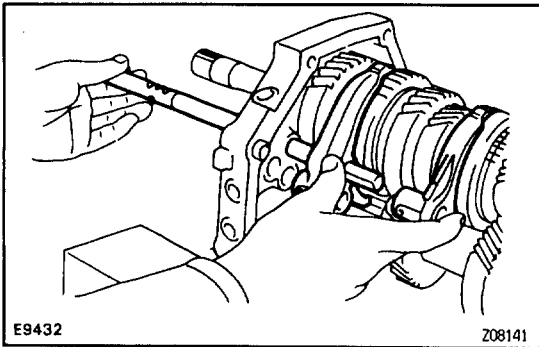
Using a feeler gauge, measure the counter 5th gear thrust clearance.

Standard clearance:

0.10–0.30 mm (0.0039–0.0118 in.)

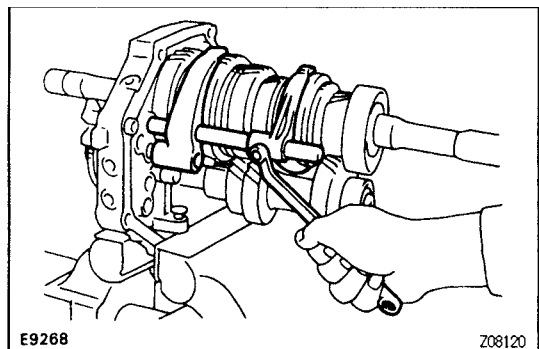
Maximum clearance:

0.30 mm (0.0118 in.)

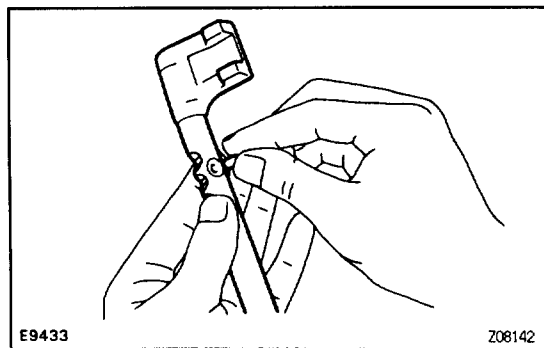


12. INSTALL SHIFT FORK SHAFT NO.2 AND SHIFT FORK NO.2

- (a) Install the shift fork No.1 and No.2.
 (b) Install the shift fork shaft No.2 through the intermediate plate and shift forks.

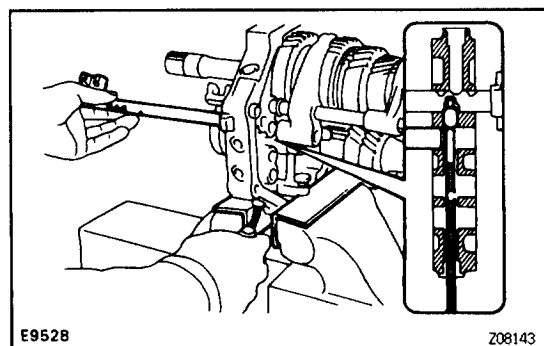


- (c) Install the shift fork No.2 set bolt and torque the bolt.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)



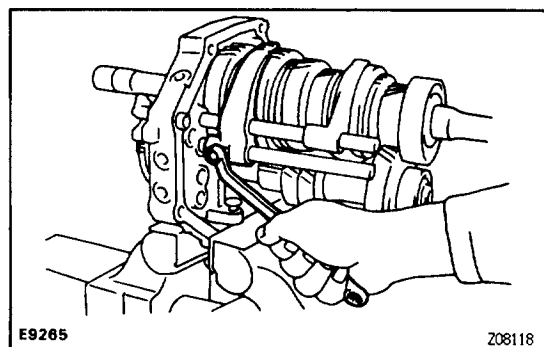
13. INSTALL SHIFT FORK SHAFT NO.1 AND SHIFT FORK NO.1

- (a) Apply MP grease to the interlock pin No.2 and install them into the shift fork shaft No.1.

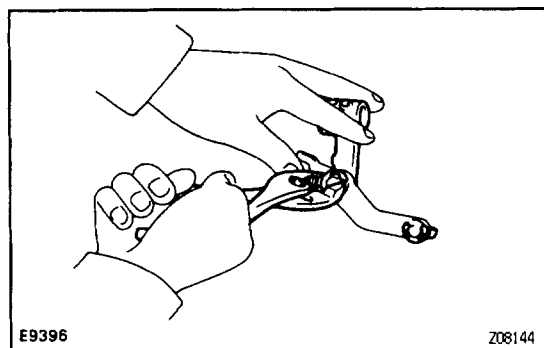


- (b) Using a magnetic finger, install the interlock pin No.1 to the intermediate plate.

- (c) Install the shift fork shaft No.1 through the intermediate plate and shift fork No.1.

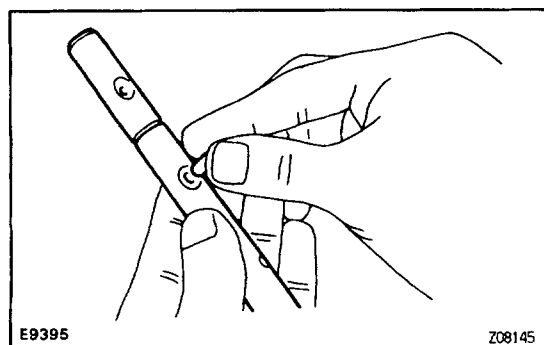


- (d) Install the shift fork No.1 set bolt and torque the bolt.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

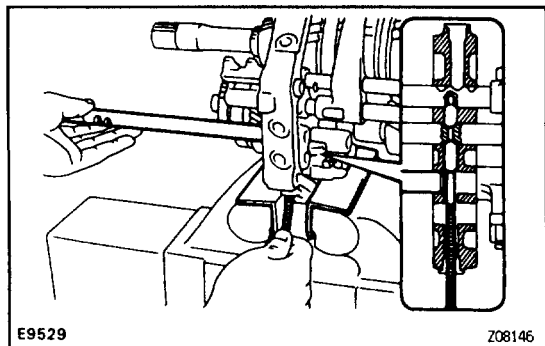


14. INSTALL SHIFT FORK SHAFT NO.3 AND REVERSE SHIFT FORK

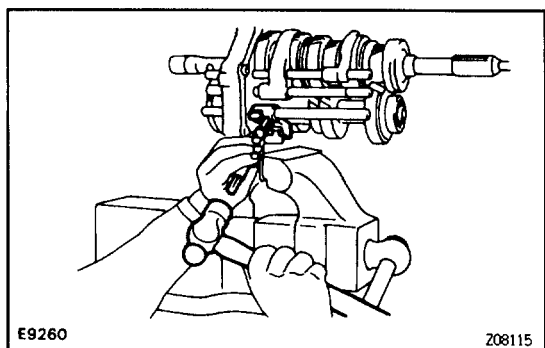
- (a) Install the shift arm shoe, shift fork and 2 E-rings to the reverse shift arm.
- (b) Install the reverse shift arm to the reverse shift arm bracket.



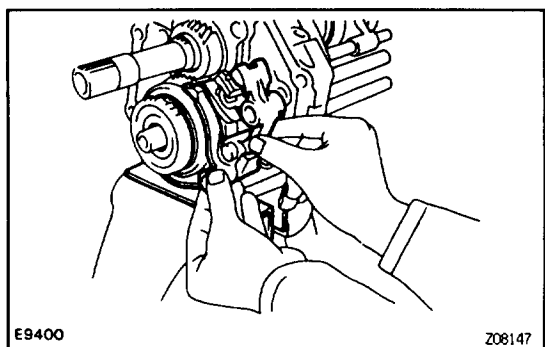
- (c) Apply MP grease to the interlock pin No.2 and install them into the shift fork shaft No.3.



- (d) Using a magnetic finger, install the interlock pin No.1 to the intermediate plate.
- (e) Install the shift fork shaft No.3 through the intermediate plate and reverse shift fork.

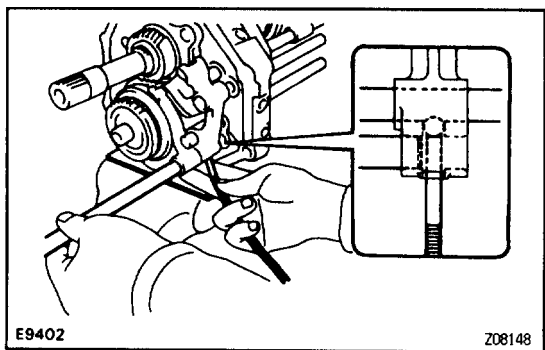


- (f) Using a pin punch and hammer, drive in the slotted spring pin.

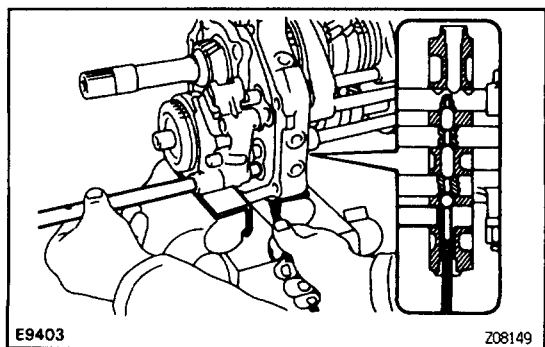


15. INSTALL REVERSE SHIFT HEAD, 5TH SHIFT FORK, SHIFT FORK SHAFT NO.4 AND NO.5

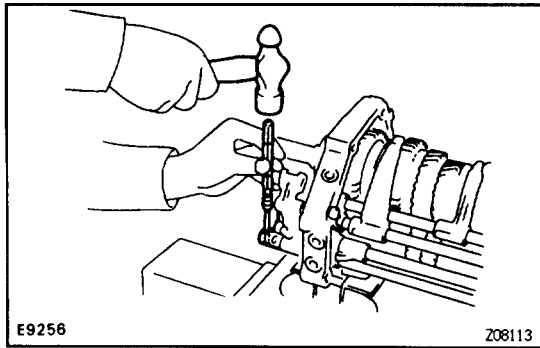
- (a) Install the reverse shift head to the shift fork shaft No. 3.
- (b) Install the shift fork No.3.



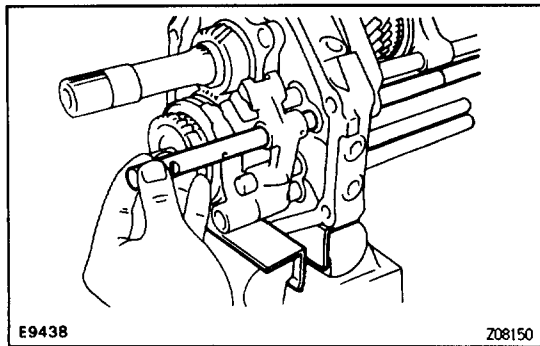
- (c) Using a magnetic finger, install the ball to the reverse shift head.
- (d) Install the shift fork shaft No.4, as shown.



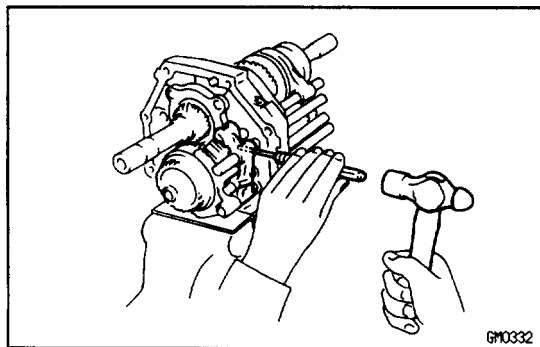
- (e) Using a magnetic finger, install the interlock ball No.1 to the intermediate plate.
- (f) Install the shift fork shaft No.4 through the intermediate plate.



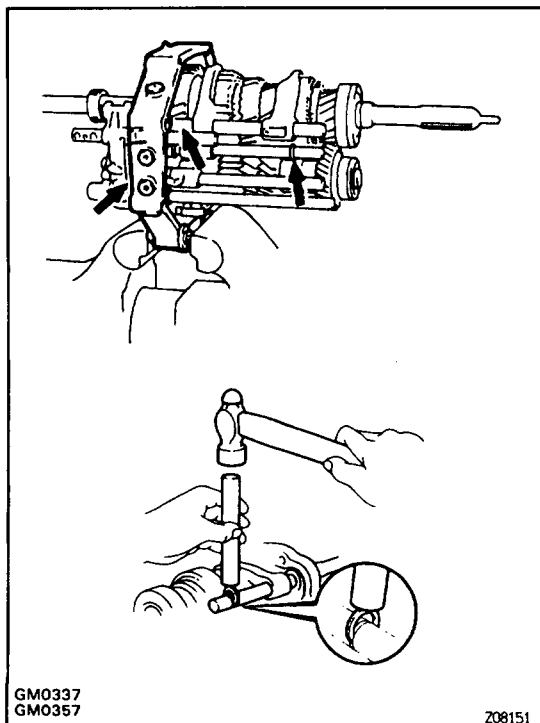
- (g) Using a pin punch and hammer, drive in the slotted spring pin to the shift fork No.3.



- (h) Install the shift fork shaft No.5 through the reverse shift head and intermediate plate.

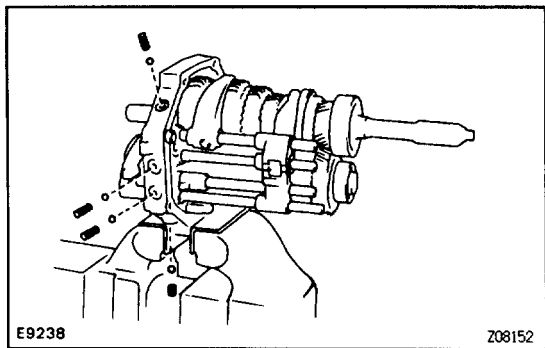


- (i) Using a pin punch and hammer, drive in the slotted spring pin to the reverse shift head.



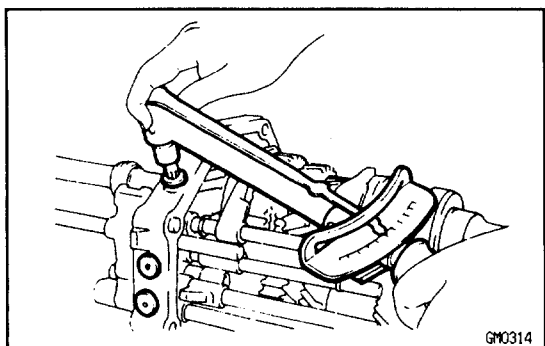
16. INSTALL SHIFT FORK SHAFT SNAP RINGS

Using a brass bar and hammer, drive in the 3 snap rings.



17. INSTALL LOCKING BALLS, SPRINGS AND SCREW PLUGS

- (a) Install the 4 locking balls and springs.
 HINT: Install the short spring into the bottom of intermediate plate.



- (b) Apply liquid sealer to the plug threads.

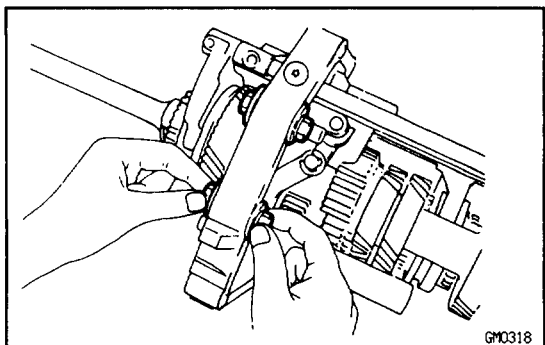
Sealant:

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

- (c) Install the screw plugs and torque the screw plugs with a torx socket wrench.

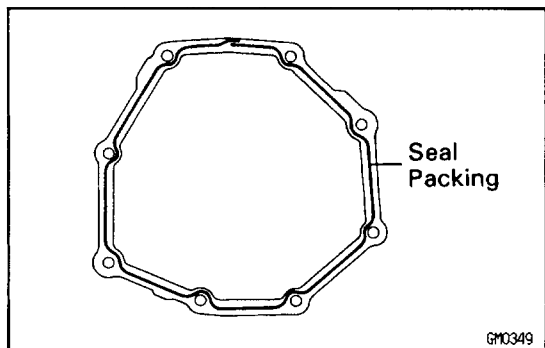
(Torx socket wrench T40 09042-00020)

Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)



18. DISMOUNT INTERMEDIATE PLATE FROM VISE

- (a) Dismount the intermediate plate from the vise.
 (b) Remove the bolts, nuts and plate washers.



19. INSTALL TRANSMISSION CASE

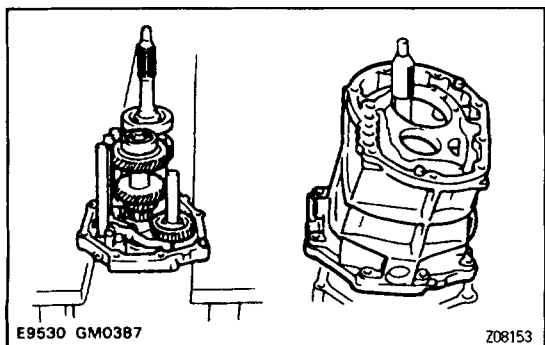
- (a) Remove any FIPG material and be careful not to drop oil on the contacting surfaces of the transmission case or intermediate plate.

- (b) Apply FIPG to the transmission case, as shown.

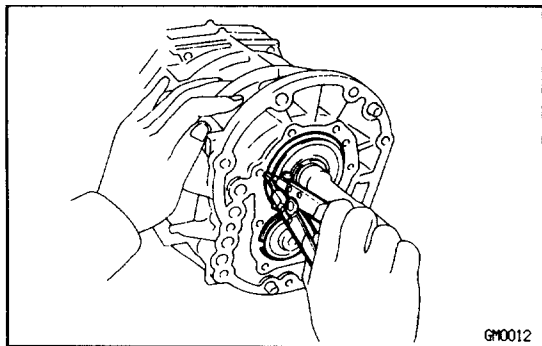
FIPG:

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

HINT: Install the transmission case as soon as the FIPG is applied.

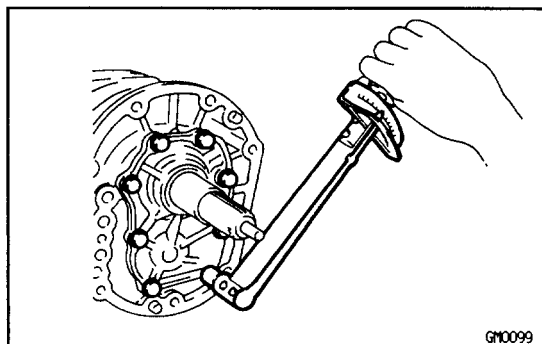


- (c) Stand the intermediate plate, as shown.
 (d) Install the transmission case to the intermediate plate, as shown.



20. INSTALL FRONT BEARING RETAINER

- (a) Using a snap ring expander, install the 2 snap rings to the input shaft bearing and counter gear front bearing.



- (b) Install the bearing retainer with a new gasket.

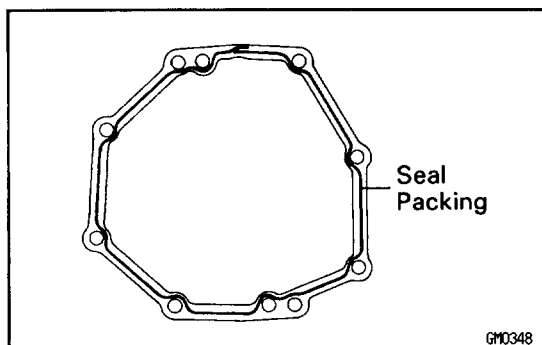
- (c) Apply liquid sealer to the bolt threads.

Sealant:

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

- (d) Install and torque the bolts.

Torque: 17 N·m (170 kgf·cm, 12 ft·lbf)



21. INSTALL TRANSFER ADAPTOR, SHIFT LEVER SHAFT AND SHIFT LEVER HOUSING

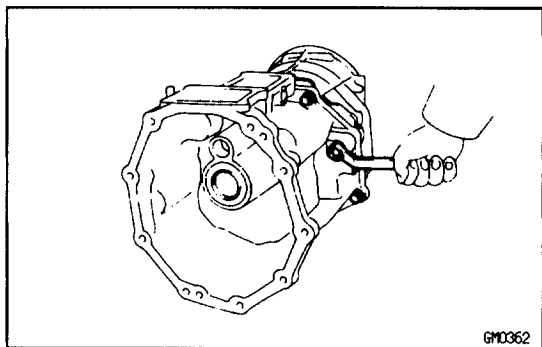
- (a) Remove any FIPG material and be careful not to drop oil on the contacting surfaces of the transfer adaptor or intermediate plate.

- (b) Apply FIPG to the transfer adaptor, as shown.

FIPG:

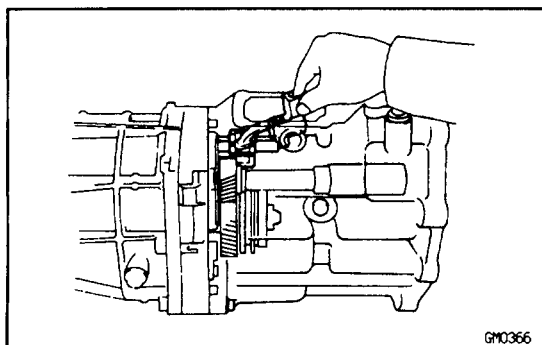
Part No.088826-00090, THREE BOND 1281 or equivalent

HINT: Install the transfer adaptor as soon as the FIPG is applied.

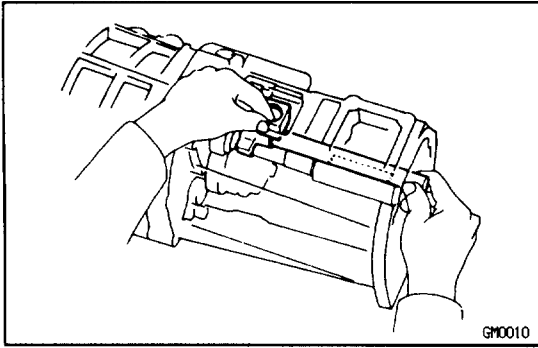


- (c) Install and torque the transfer adaptor with the 8 bolts.

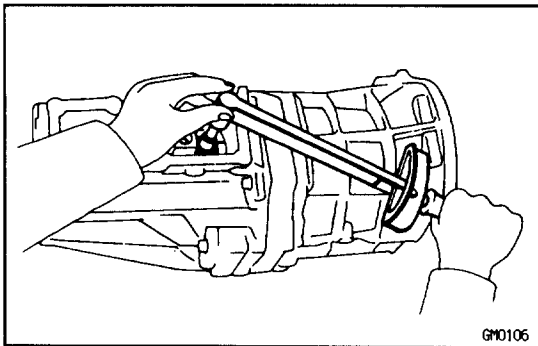
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



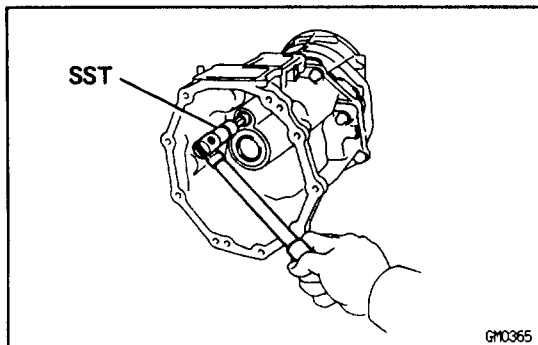
- (d) Install the shift lever housing to the transfer adaptor and connect the fork shafts.



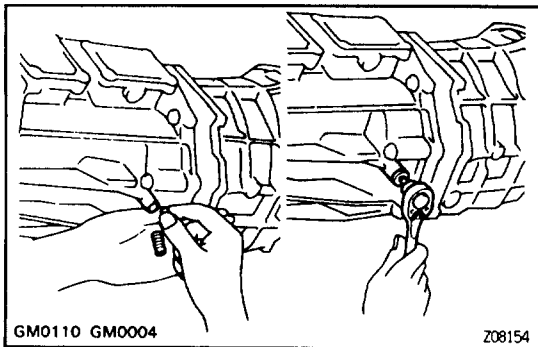
- (e) Install the shift lever shaft to the transfer adaptor and shift lever housing.



- (f) Install and torque the shift lever housing set bolt.
Torque: 38 N·m (390 kgf·cm, 28 ft·lbf)



- (g) Using SST, install and torque the plug.
SST 09923-00010
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



22. INSTALL LOCKING BALL, SPRING AND SCREW PLUG

- (a) Apply liquid sealer to the plug threads.

Sealant:

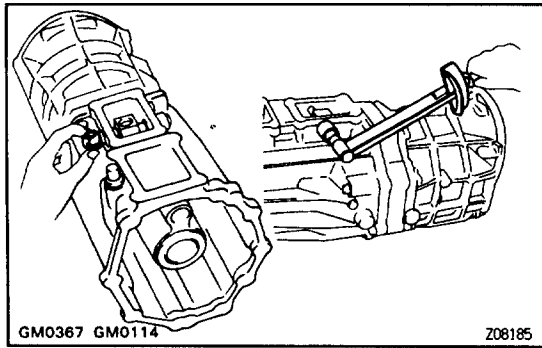
Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

- (b) Install the locking ball, spring and plug, and torque the plug.
(Torx socket wrench T40 09042-00020)

Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)

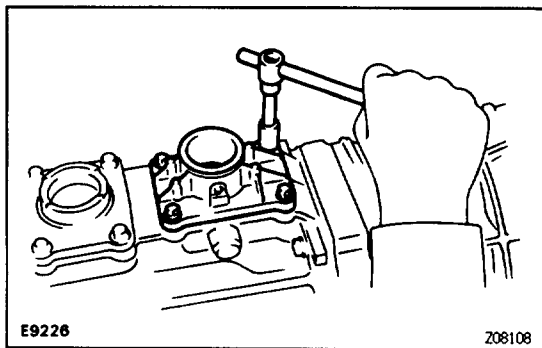
23. AFTER INSTALLING TRANSFER ADAPTOR CHECK FOLLOWING ITEMS

- (a) Check to see that the input and output shafts rotate smoothly.
(b) Check to see that shifting can be made smoothly to all positions.

**24. INSTALL RESTRICT PINS**

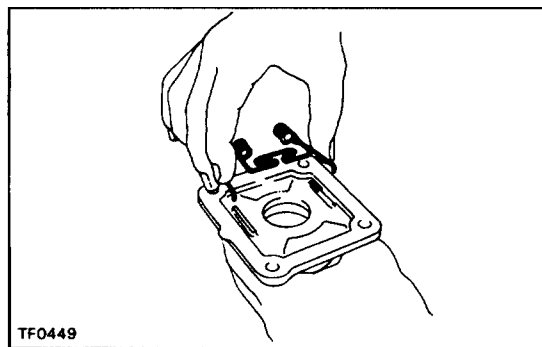
- (a) Install the black pin on the reverse gear/5th gear side.
- (b) Install another pin and torque the pins.

Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)

**25. INSTALL TRANSMISSION SHIFT LEVER CONTROL RETAINER**

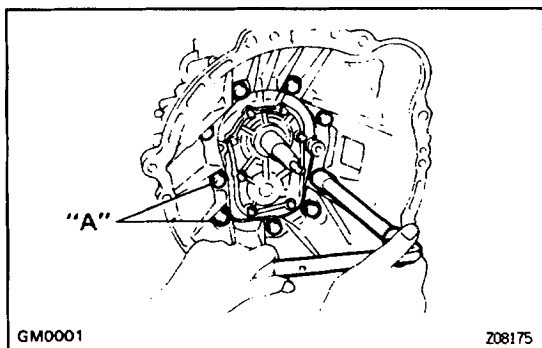
- (a) Install the shift lever control retainer and a new gasket.
- (b) Install the 4 bolts and torque the bolts.

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

**26. INSTALL TRANSFER SHIFT LEVER CONTROL RETAINER**

- (a) Install the select return spring from the retainer.
- (b) Install the shift lever control retainer and a new gasket.
- (c) Install the 4 bolts and torque the bolts.

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

**27. INSTALL CLUTCH HOUSING**

- (a) Install the clutch housing.
- (b) Apply liquid sealer to the "A" bolt threads.

Sealant:

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

- (c) Install the 9 bolts and torque the bolts.

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

28. INSTALL BACK-UP LIGHT SWITCH

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

29. INSTALL RELEASE FORK AND BEARING