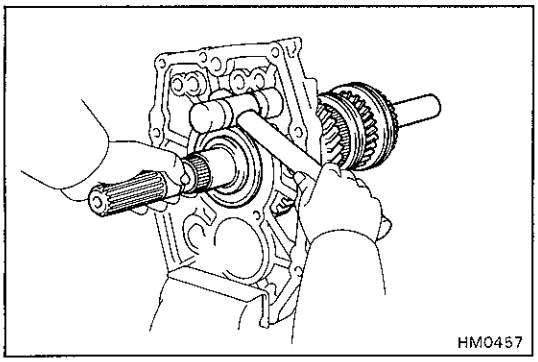

HM0457

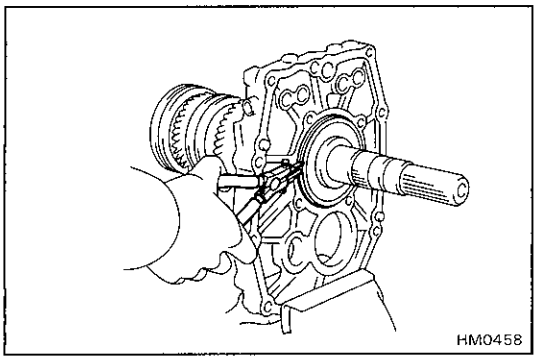
COMPONENT PARTS INSTALLATION

BASIC SUBASSEMBLY REASSEMBLY

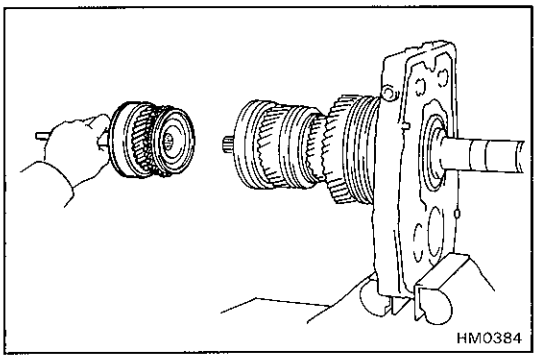
(See pages MT-5 to 7)

1. INSTALL OUTPUT SHAFT ASSEMBLY TO INTERMEDIATE PLATE

(a) Install the output shaft assembly into the intermediate plate by pulling on the output shaft assembly and tapping on the intermediate plate.


HM0458

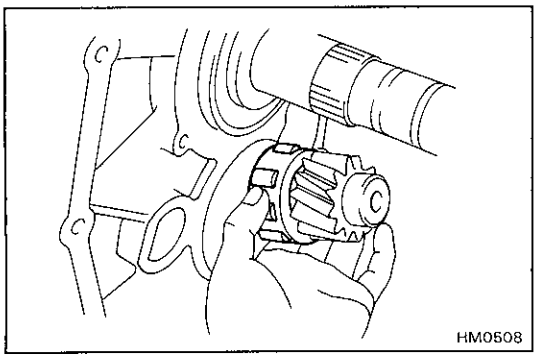
(b) Using a snap ring expander, install the snap ring.


HM0384

2. INSTALL INPUT SHAFT

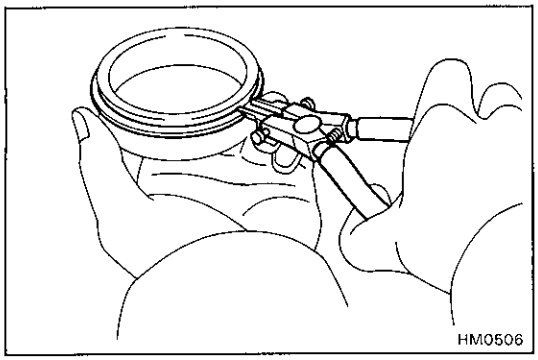
(a) Apply MP grease to the 12-needle roller bearing and install them into the input shaft.

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

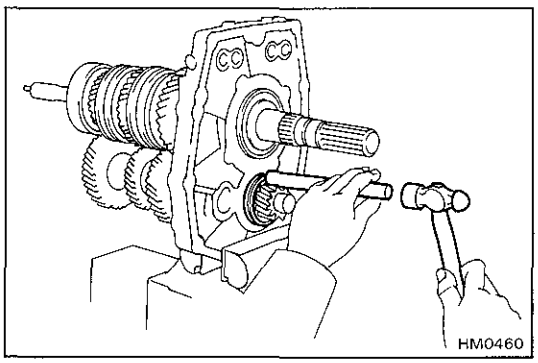

HM0508

3. INSTALL COUNTER GEAR

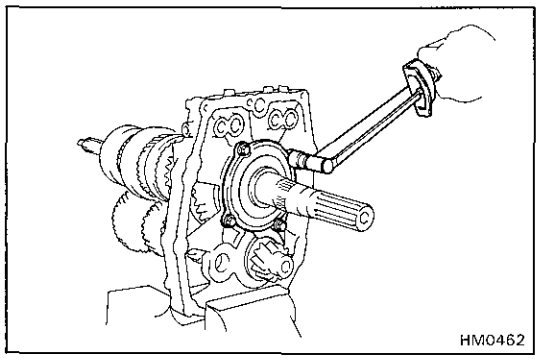
(a) Install the counter gear into the intermediate plate and install the roller bearing.


HM0506

(b) Using a snap ring expander, install the snap ring to outer race.



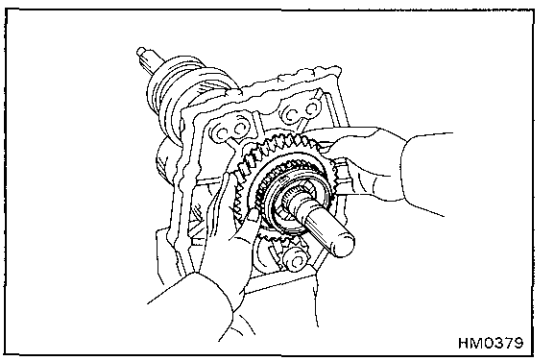
(c) Install the counter gear rear bearing outer race with a brass bar and hammer.



4. INSTALL REAR BEARING RETAINER

Install and torque the bolts.

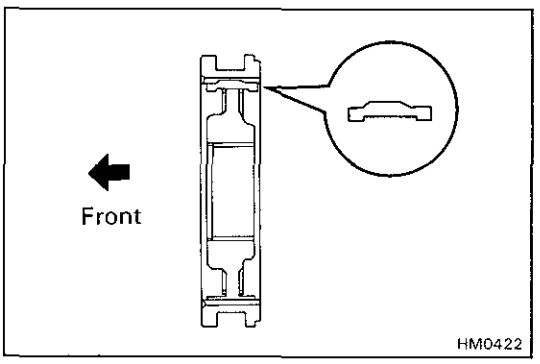
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



5. INSTALL REVERSE GEAR, HUB SLEEVE NO.4 ASSEMBLY AND NEEDLE ROLLER BEARING

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

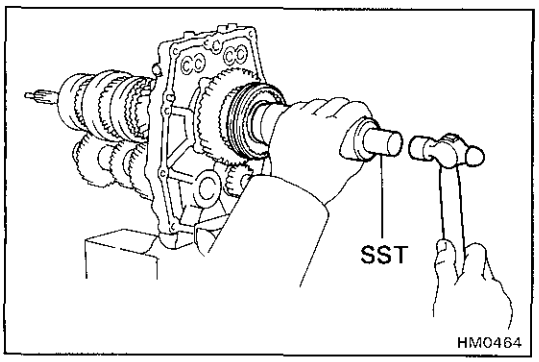
(b) Install the needle roller bearing and reverse gear with synchronizer ring.



(c) Install the clutch hub No.4 and shifting keys to the hub sleeve No.4.

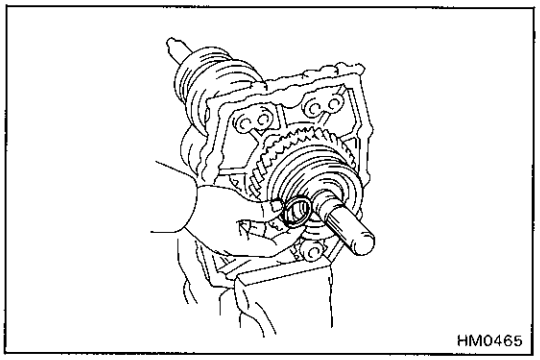
(d) Install the spring under the shifting keys.

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



(e) Using SST and a hammer, install the hub sleeve No.4 assembly.

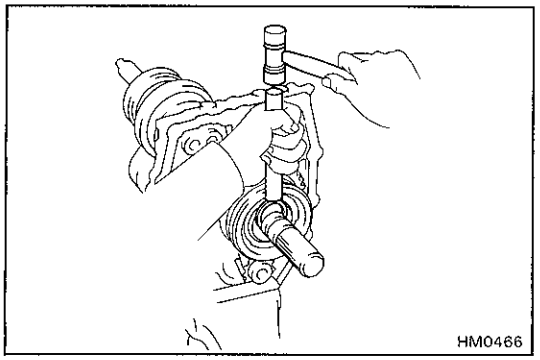
SST 09316-60010 (09316-00010)


HM0465

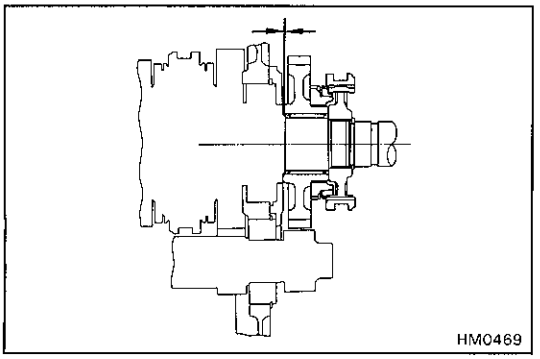
6. INSTALL SNAP RING

(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)


HM0466

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

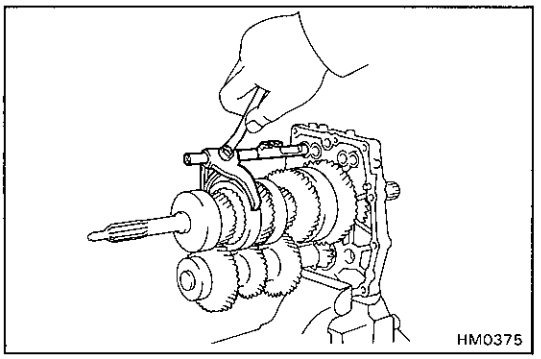

HM0469

7. MEASURE REVERSE GEAR THRUST CLEARANCE

Using a feeler gauge, measure the reverse gear clearance.

Standard clearance: 0.1 — 0.67 mm (0.0039 — 0.0264 in.)

Maximum clearance: 0.67 mm (0.0264 in.)


HM0375

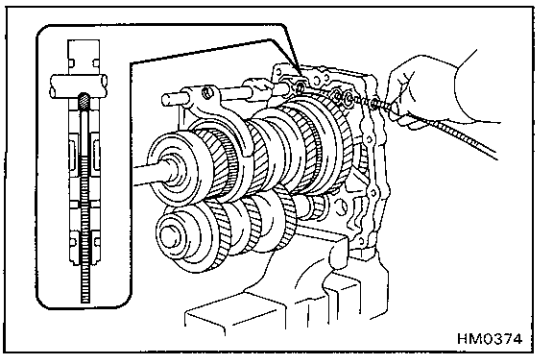
8. INSTALL SHIFT FORK SHAFT NO.2 AND SHIFT FORK NO.2

(a) Place shift fork No.2 into the grove of hub sleeve No.2.

(b) Install shift fork shaft No.2 to shift fork No.2 and intermediate plate.

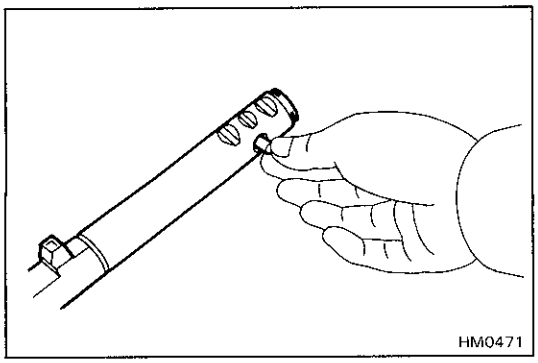
(c) Install and torque the set bolt.

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

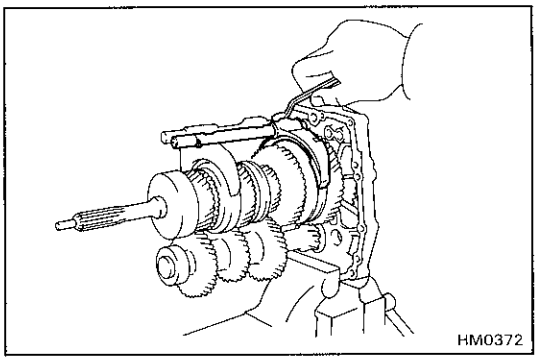

HM0374

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

(a) Using a magnetic finger, install the interlock pin into the intermediate plate.



(b) Install the interlock pin into the shaft hole.

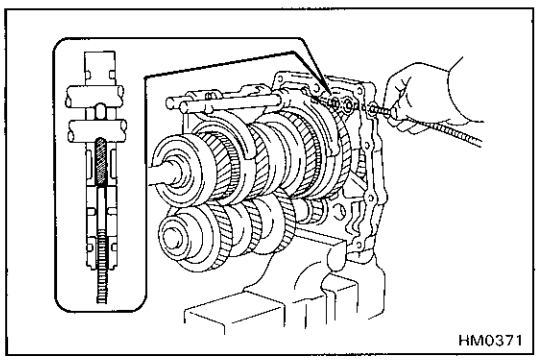


(c) Place shift fork No.1 into the groove of hub sleeve No.1.

(d) Install shift fork shaft No.1 to shift fork No.1 and intermediate plate.

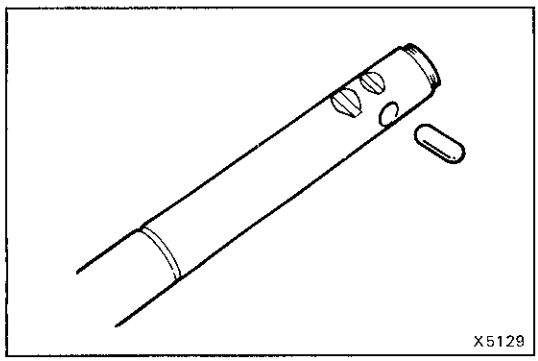
(e) Install and torque the bolt.

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

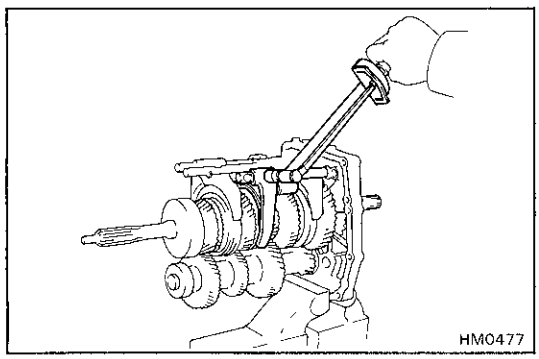


10. INSTALL SHIFT FORK SHAFT NO.3, REVERSE SHIFT HEAD AND SHIFT FORK NO.3

(a) Using a magnetic finger, install the interlock pin into the intermediate plate.



(b) Install the interlock pin into the shaft hole.

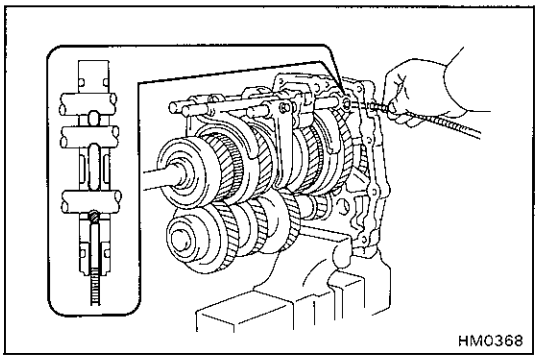


(c) Place shift fork No.3 into the groove of hub sleeve No.3.

(d) Install shift fork shaft No.3 to shift fork No.3, reverse shift head and shift fork through the intermediate plate.

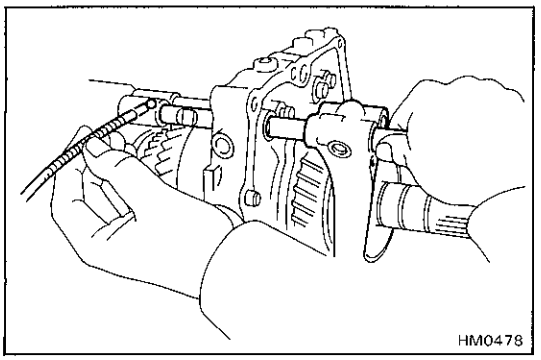
(e) Install and torque the set bolt.

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)


HM0368

11. INSTALL SHIFT FORK SHAFT NO.3 OR NO.4 AND REVERSE SHIFT FORK

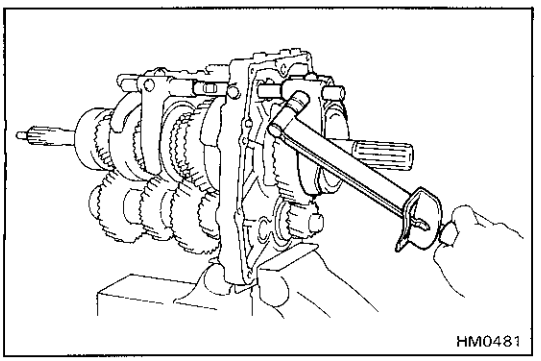
(a) Using a magnetic finger, install the locking ball into the intermediate plate.


HM0478

(b) Place reverse shift fork into the groove of hub sleeve No.3 or No.4.

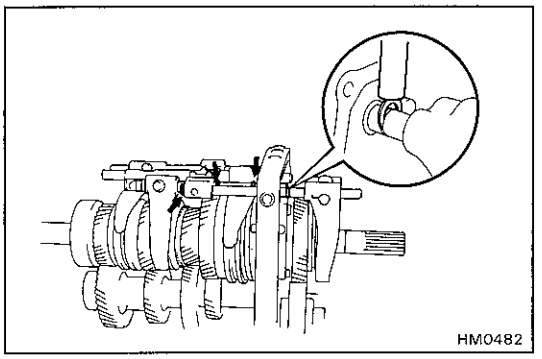
(c) Install shift fork shaft No.3 or No.4 to reverse shift fork and shift fork through the intermediate plate.

(d) Using a magnetic finger, install the locking ball into the reverse shift head.


HM0481

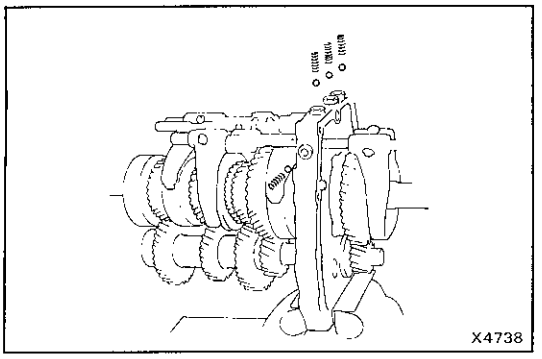
(e) Install and torque the set bolt.

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)


HM0482

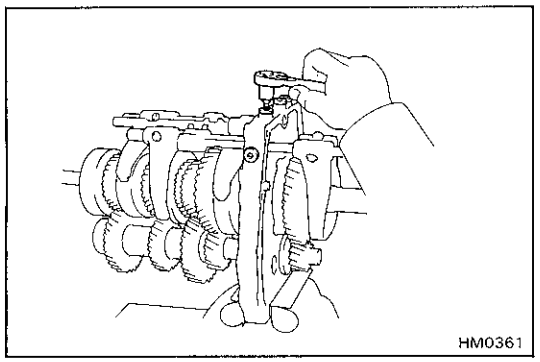
12. INSTALL FORK SHAFT SNAP RINGS

Using a brass bar and hammer, tap in the four snap rings.


X4738

13. INSTALL LOCKING BALLS, SPRINGS AND SCREW PLUGS

(a) Install the four locking balls, springs and screw plugs.


HM0361

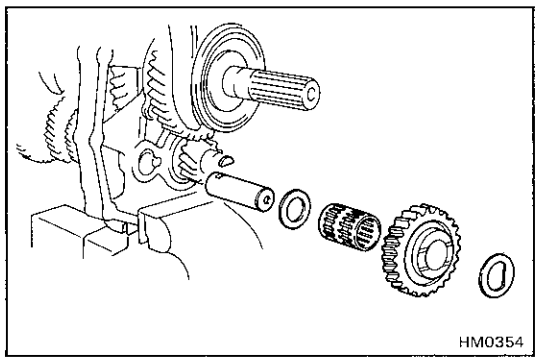
(b) Apply liquid sealer to the plug threads.

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

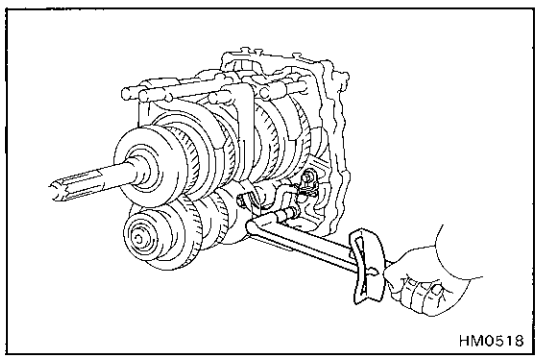
(c) Using a torx socket wrench, torque the screw plug.

(Torx socket wrench T40 09042-00020)

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


HM0354

14. INSTALL REVERSE IDLER GEAR TO INTERMEDIATE PLATE


HM0518

15. DISMOUNT INTERMEDIATE PLATE FROM VISE

(a) Dismount the intermediate plate from the vise.

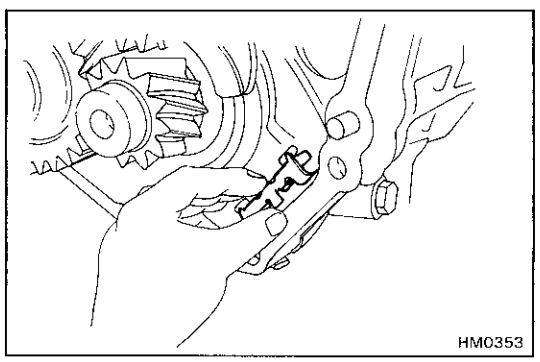
(b) Remove the bolts, nuts and plate washers.

16. INSTALL OIL RECEIVER TO INTERMEDIATE PLATE

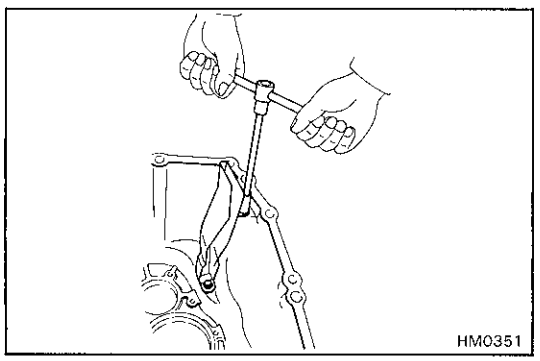
(a) Install the oil receiver.

(b) Install and torque the three bolts.

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


HM0353

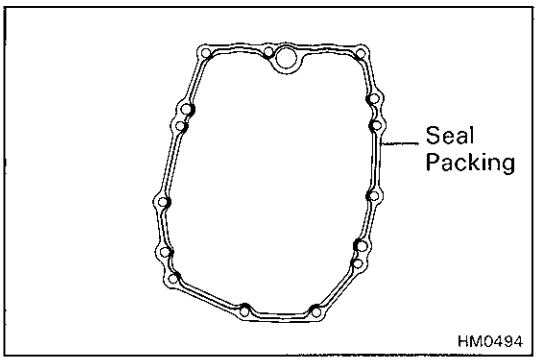
17. INSTALL MAGNET TO INTERMEDIATE PLATE


HM0351

18. INSTALL OIL RECEIVER TO FRONT CASE

Install and torque the two bolts.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)



19. ASSEMBLE TRANSMISSION CASE AND INTERMEDIATE PLATE

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

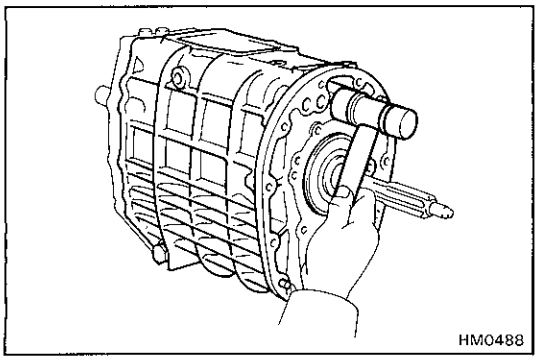
(b) Apply seal packing to the transmission case as shown in the figure.

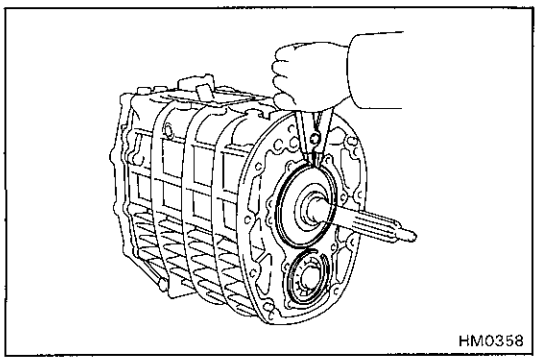
Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

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

(c) Align each bearing outer race, each fork shaft end and reverse idler gear shaft end with the case installation holes, and install the case.

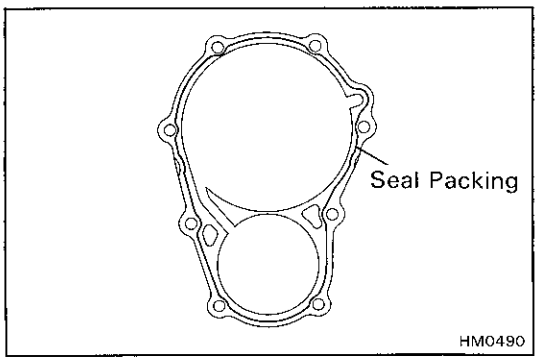
(d) Using a plastic hammer, tap on the case to install it.





20. INSTALL BEARING SNAP RINGS

Using a snap ring expander, install the two snap rings to the input shaft bearing and counter gear front bearing.



21. INSTALL FRONT BEARING RETAINER

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the front bearing retainer.

(b) Apply seal packing to the retainer as shown in the figure and install it to the transmission case.

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

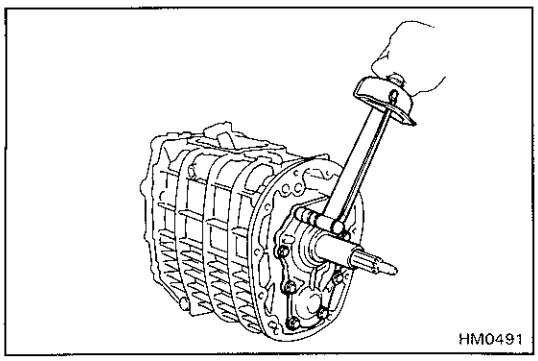
HINT: Install the front bearing retainer as soon as the seal packing is applied.

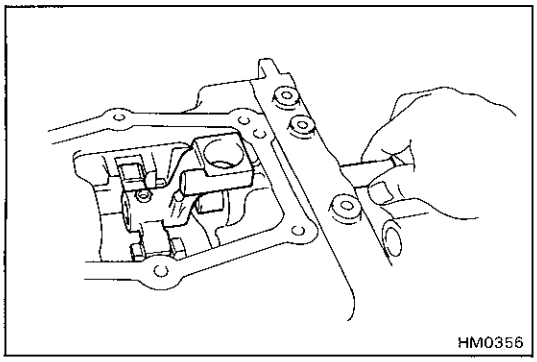
(c) Apply liquid sealer to the bolt threads.

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

(d) Install and torque the eight bolts.

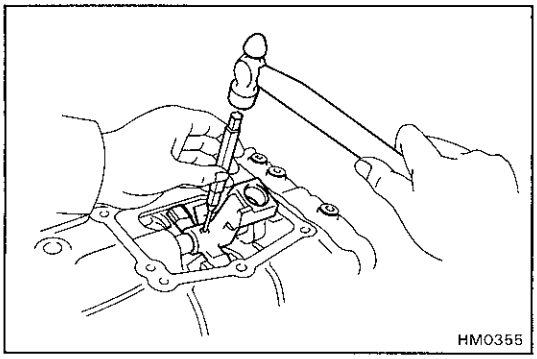
Torque: 16 N·m (170 kgf·cm, 12 ft·lbf)



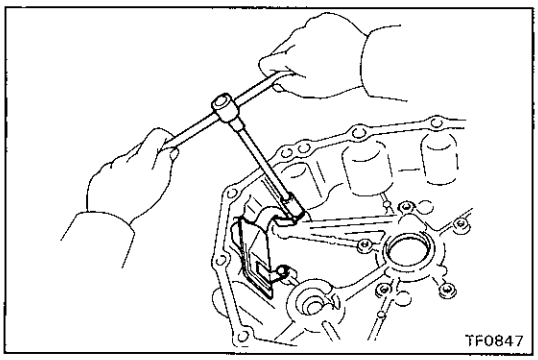

HM0356

22. INSTALL SHIFT LEVER SHAFT AND SHIFT LEVER HOUSING

(a) Install the shift lever shaft and shift lever housing.


HM0355

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

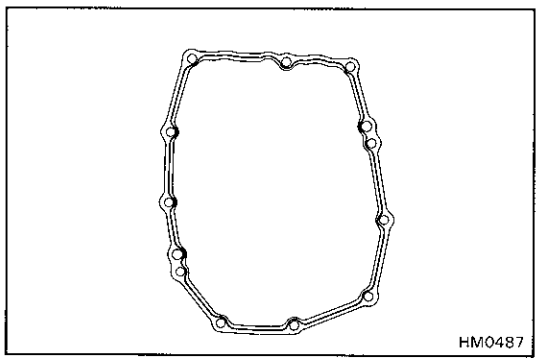

TF0847

23. INSTALL OIL STRAINER TO TRANSFER ADAPTOR

(a) Install the oil strainer.

(b) Install and torque the two bolts.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)


HM0487

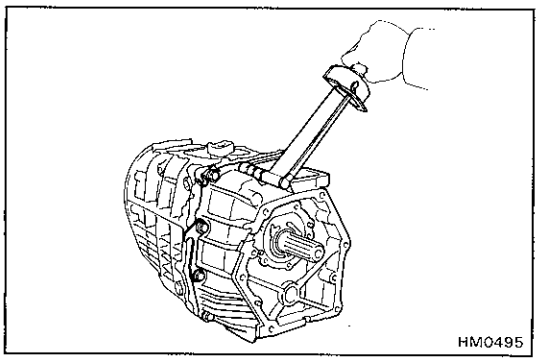
24. INSTALL TRANSFER ADAPTOR

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transfer adaptor.

(b) Apply seal packing to the transfer adaptor as shown.

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

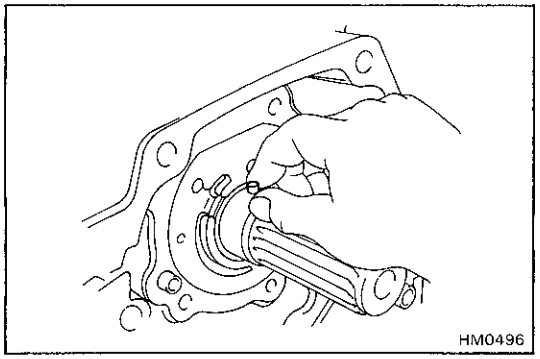
HINT: Install the transfer adaptor as soon as the seal packing is applied.


HM0495

(c) Install the transfer adaptor.

(d) Install and torque the eleven bolts.

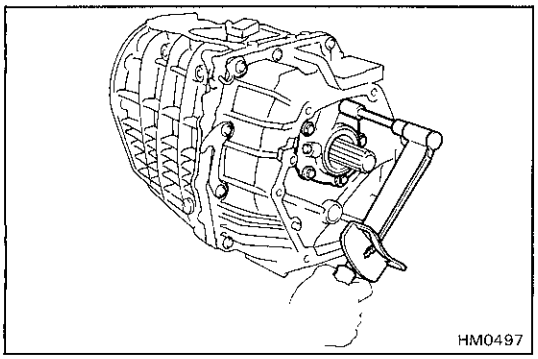
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)


HM0496

25. INSTALL OIL PUMP BODY

(a) Apply MP grease to the straight pin.

(b) Install the two straight pins.


HM0497

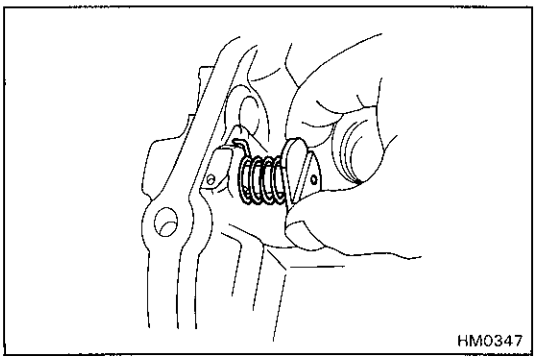
(c) Install the oil pump body.

(d) Apply liquid sealer to the bolt threads.

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

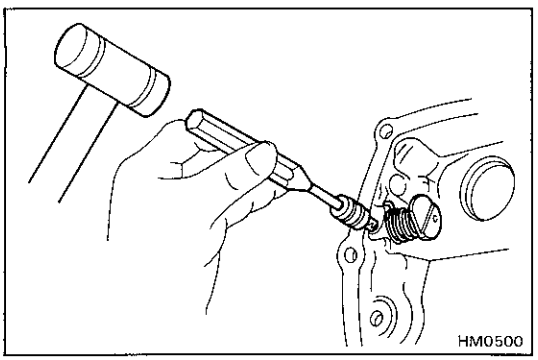
(e) Install and torque the five bolts.

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

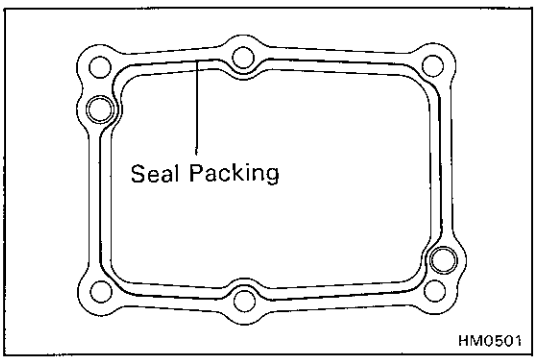

HM0347

26. INSTALL REVERSE RESTRICT PIN

(a) Install the reverse restrict pin to the shift control retainer.


HM0500

(b) Using a hammer, tap in the slotted spring pin as shown.



HM0501

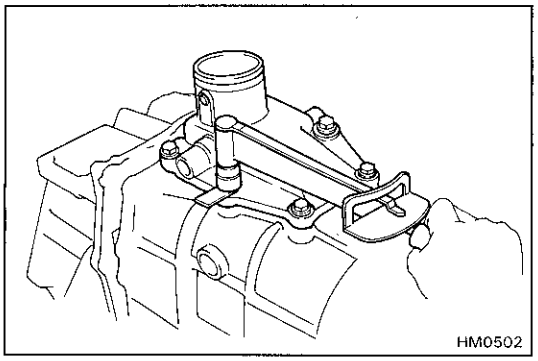
27. INSTALL SHIFT LEVER CONTROL RETAINER

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the shift lever control retainer as shown.

(b) Apply seal packing to the shift lever control retainer.

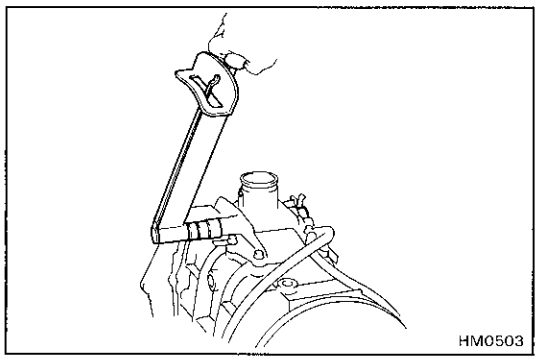
Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

HINT: Install the shift lever control retainer as soon as the seal packing is applied.


HM0502

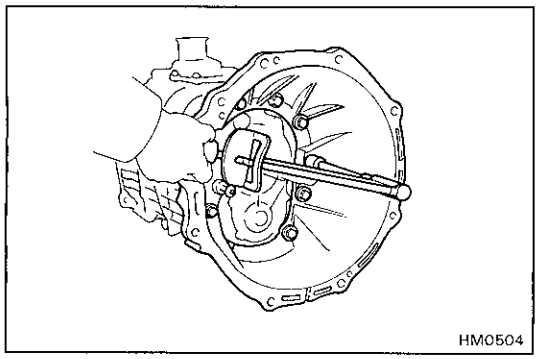
(c) Install and torque the six bolts.

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


HM0503

28. INSTALL TWO RESTRICT PINS

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


HM0504

29. INSTALL CLUTCH HOUSING

(a) Install the clutch housing.

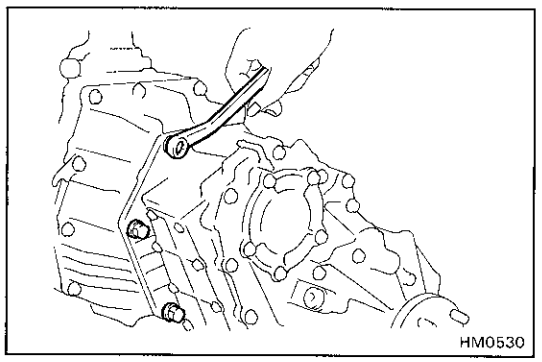
(b) Install and torque the ten bolts.

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

30. INSTALL BACK-UP LIGHT SWITCH

Torque: 44 N·m (450 kgf·cm, 33 ft·lbf)

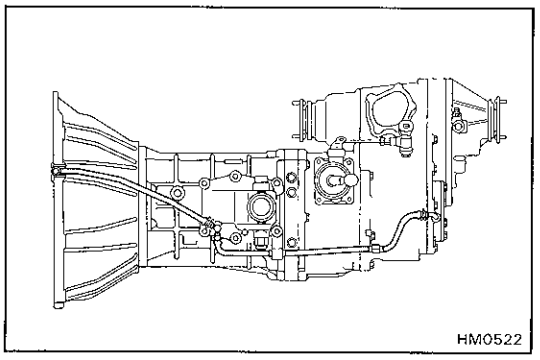
31. INSTALL RELEASE FORK AND BEARING


HM0530

32. INSTALL TRANSFER TO TRANSFER ADAPTOR

Install the transfer to the transfer adaptor with six bolts.

Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)


HM0522

33. INSTALL BREATHER HOSE