

DISASSEMBLY

1. REMOVE CLUTCH RELEASE FORK AND BEARING

HINT:

At the time of reassembly, please refer to the following item.
Apply molybdenum disulphide lithium base grease (See page [CL-17](#)).

2. REMOVE FILLER PLUG AND DRAIN PLUG WITH 2 GASKETS

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

3. REMOVE VEHICLE SPEED SENSOR

(a) Remove the bolt and vehicle speed sensor.

Torque: 11 N·m (115 kgf·cm, 8 ft·lbf)

(b) Using a small screwdriver, remove the clip from the vehicle speed sensor.

(c) Remove the vehicle speed sensor driven gear from the vehicle speed sensor.

(d) Using a small screwdriver, remove the O-ring from the vehicle speed sensor.

4. REMOVE BACK-UP LIGHT SWITCH WITH GASKET

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

5. REMOVE CONTROL LEVER HOUSING SUPPORT BRACKET

Remove the 3 bolts and control lever housing support bracket.

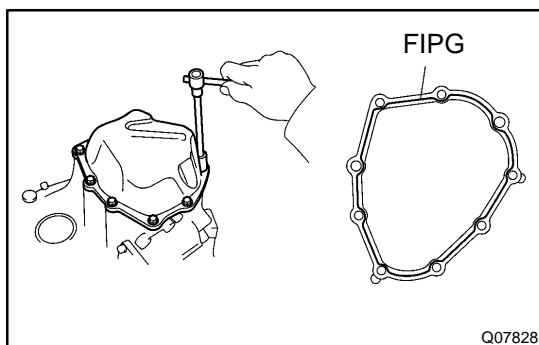
Torque: 11 N·m (115 kgf·cm, 8 ft·lbf)

6. REMOVE SELECTING BELLCRANK ASSEMBLY

(a) Remove the 2 bolts and selecting bellcrank assembly.

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

(b) Remove the control bellcrank dust cover from the selecting bellcrank assembly.



7. REMOVE TRANSMISSION CASE COVER

(a) Remove the 9 bolts.

Sealant:

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

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

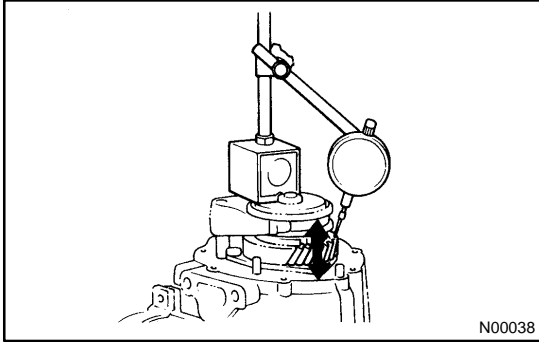
(b) Carefully tap the projection of the transmission case cover with a brass bar and hammer and remove it.

HINT:

At the time of reassembly, please refer to the following item.
Apply FIPG to the transmission case cover, as shown in the illustration.

FIPG:

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



8. INSPECT 5TH GEAR THRUST CLEARANCE

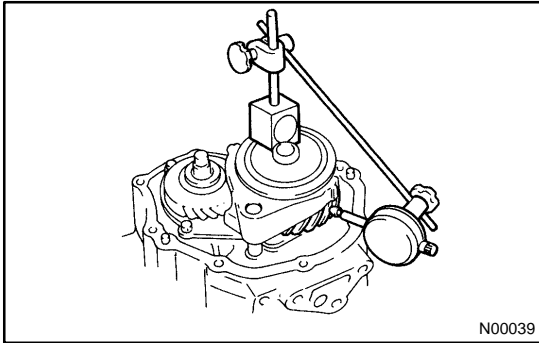
Using a dial indicator, measure the thrust clearance.

Standard clearance:

0.10 - 0.57 mm (0.0039 - 0.0224 in.)

Maximum clearance:

0.57 mm (0.0224 in.)



9. INSPECT 5TH GEAR RADIAL CLEARANCE

Using a dial indicator, measure the radial clearance.

Standard clearance:

KOYO made:

0.015 - 0.058 mm (0.0006 - 0.0023 in.)

NSK made:

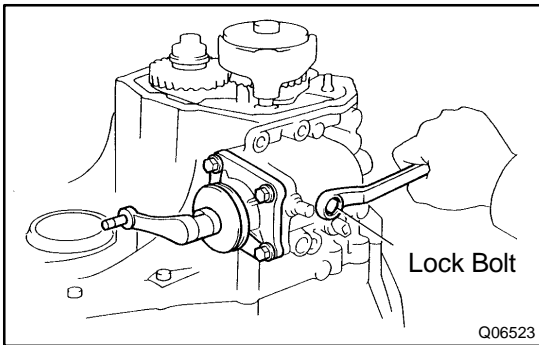
0.015 - 0.056 mm (0.0006 - 0.0022 in.)

Maximum clearance:

KOYO made: 0.058 mm (0.0023 in.)

NSK made: 0.056 mm (0.0022 in.)

If the clearance exceeds the maximum, replace the gear, needle roller bearing or shaft.



10. REMOVE SHIFT AND SELECT LEVER SHAFT ASSEMBLY

(a) Remove the lock bolt and gasket.

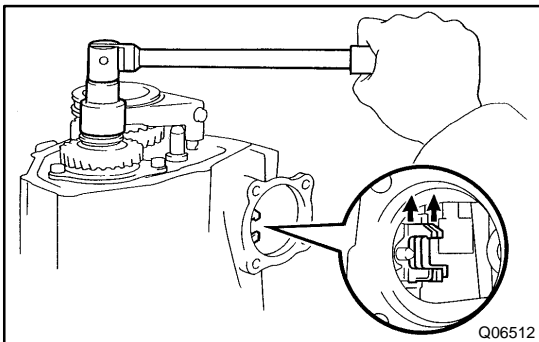
Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

(b) Remove the 4 bolts and pull out the shift and select lever shaft assembly with the gasket.

Sealant:

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

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)



11. REMOVE LOCK NUT

(a) Engage the gear to the double meshing.

(b) Using a chisel and hammer, loosen the staked part of the nut.

(c) Remove the lock nut.

Torque: 118 N·m (1,200 kgf·cm, 87 ft·lbf)

(d) Disengage the double meshing of the gear.

12. REMOVE NO. 3 HUB SLEEVE AND NO. 3 SHIFT FORK

(a) Remove the bolt from the No. 3 shift fork.

Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)

(b) Remove the No. 3 hub sleeve and No. 3 shift fork.

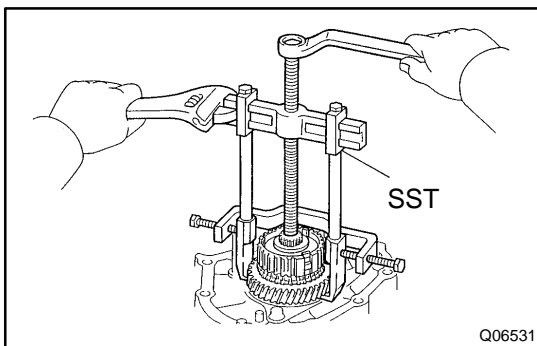
13. REMOVE NO. 3 CLUTCH HUB AND 5TH GEAR

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

HINT:

At the time of reassembly, please refer to the following item.
Select a snap ring that allows the minimum axial play.

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)	-	-



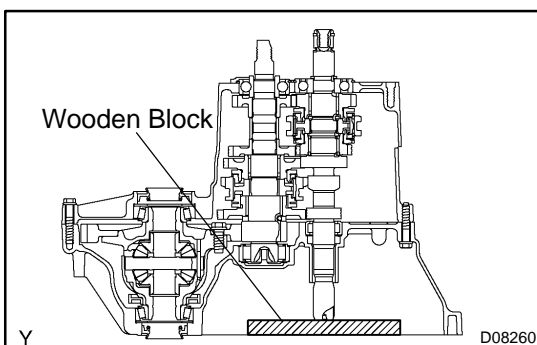
(b) Using SST, remove the No. 3 clutch hub assembly, 5th gear and synchronizer ring.

SST 09950-4001 1

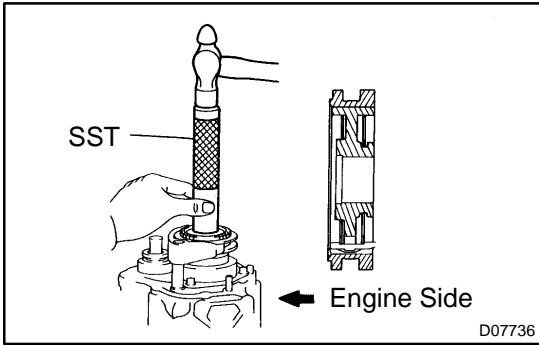
HINT:

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

- Install the No. 3 clutch hub assembly to the No. 3 hub sleeve.



- Before driving in the No. 3 clutch hub assembly, place the suitable sized wooden block on the rear side of the input shaft, as shown in the illustration. When driving it in, fix the input shaft firmly so that it is not pushed downward. Otherwise the input shaft rear bearing is overloaded, it might be damaged.

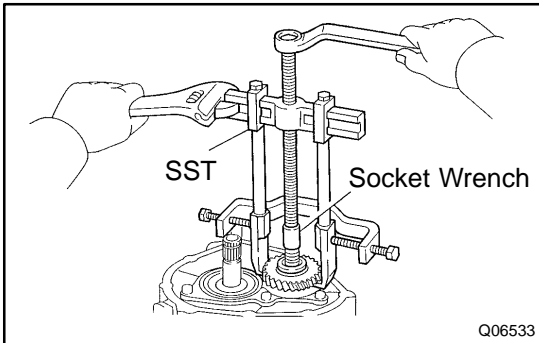


- Using SST and a hammer, drive in the No. 3 hub sleeve assembly with the No. 3 shift fork.
SST 09612-2201 1

NOTICE:

Align the synchronizer ring slots with the shifting keys.

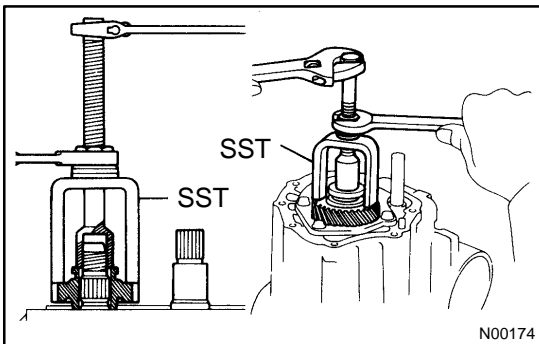
- (c) Remove the needle roller bearings and spacer.



14. REMOVE 5TH DRIVEN GEAR

Using SST and a socket wrench, remove the 5th driven gear.

SST 09950-4001 1

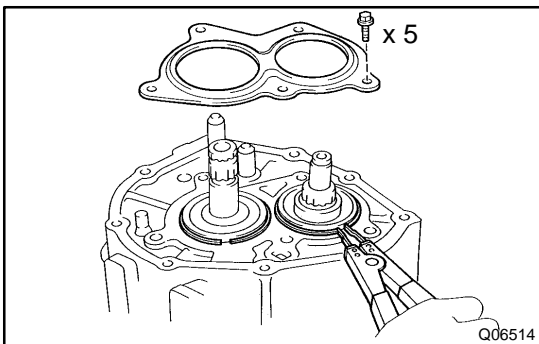


HINT:

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

Using SST, install the 5th driven gear.

SST 09309-12020



15. REMOVE REAR BEARING RETAINER

Remove the 5 bolts and rear bearing retainer.

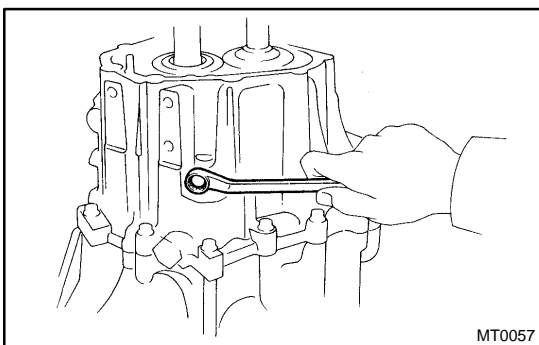
Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)

16. REMOVE BEARING SNAP RING

Using a snap ring expander, remove the 2 snap rings.

HINT:

If it is difficult to remove and install the snap rings, pull up the shafts.

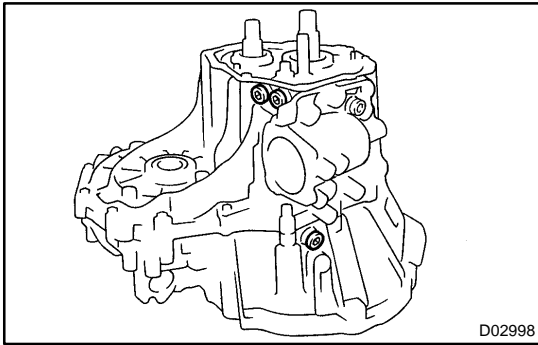


17. REMOVE REVERSE IDLER GEAR SHAFT LOCK BOLT AND GASKET

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

18. REMOVE SNAP RING FROM NO. 2 SHIFT FORK SHAFT

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



19. REMOVE STRAIGHT SCREW PLUG, SEAT, SPRING AND BALL

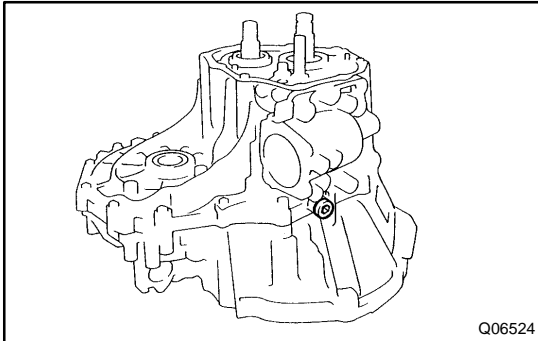
- (a) Using a hexagon wrench, remove the 3 straight screw plugs.

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 seats, springs and balls.



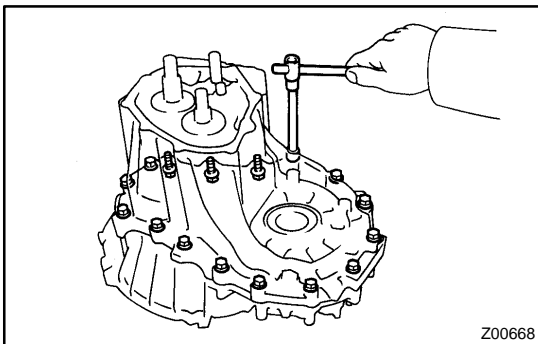
20. REMOVE LOCK BALL ASSEMBLY

Using a hexagon wrench, remove the lock ball assembly.

Sealant:

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

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



21. REMOVE TRANSMISSION CASE

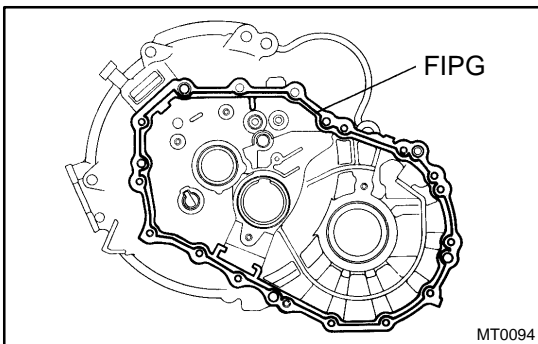
- (a) Remove the 16 bolts.

Sealant:

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

Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)

- (b) Carefully tap the transmission case with a plastic hammer and remove it.



HINT:

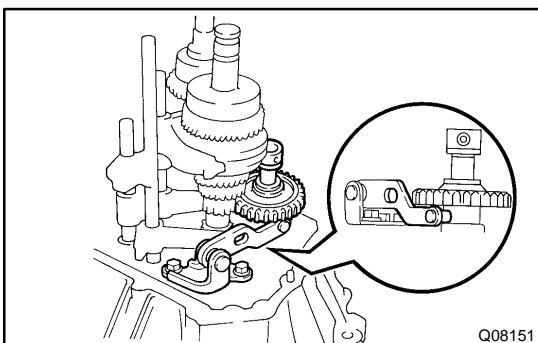
At the time of reassembly, please refer to the following item. Apply FIPG to the transaxle case, as shown in the illustration.

FIPG:

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

- (c) Remove the 2 bolts, No. 1 and No. 2 oil receiver pipes from the transmission case.

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



22. REMOVE REVERSE IDLER GEAR, THRUST WASHER AND SHAFT

23. REMOVE REVERSE SHIFT ARM BRACKET

Remove the 2 bolts and reverse shift arm bracket.

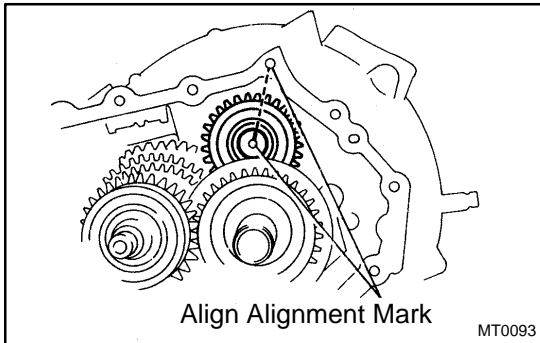
Torque: 17 N·m (175 kgf·cm, 13 ft·lbf)

NOTICE:

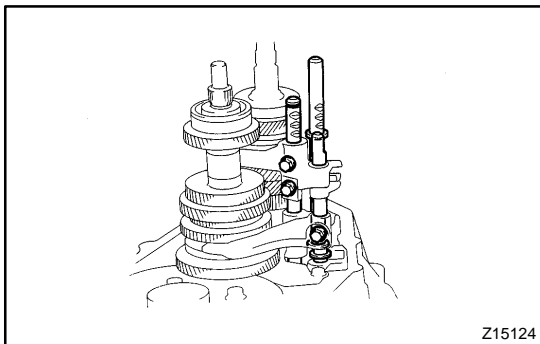
At the time of reassembly, please refer to the following items.

- Set the pin on the top of the reverse shift arm into a groove on the reverse idler gear.

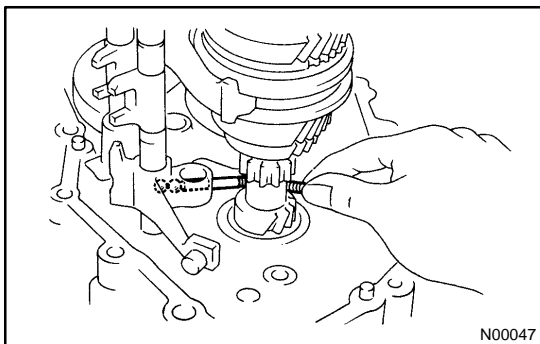
- Fit the claw of the reverse shift arm bracket with the notch of the input shaft front bearing.



- Install the reverse idler gear, thrust washer and shaft, as shown.



- 24. REMOVE SHIFT FORK AND SHIFT FORK SHAFT**
- Using 2 screwdrivers and a hammer, tap out the 3 snap rings.
 - Remove the 3 set bolts.
Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)
 - Remove the No. 2 shift fork shaft and shift head.



- Using a magnetic finger, remove the 2 balls from the reverse shift fork.
- Remove the No. 3 shift fork shaft and reverse shift fork.
- Pull out the No. 1 shift fork shaft.
- Remove the No. 1 and No. 2 shift forks.

25. REMOVE INPUT AND OUTPUT SHAFTS TOGETHER FROM TRANSAXLE CASE

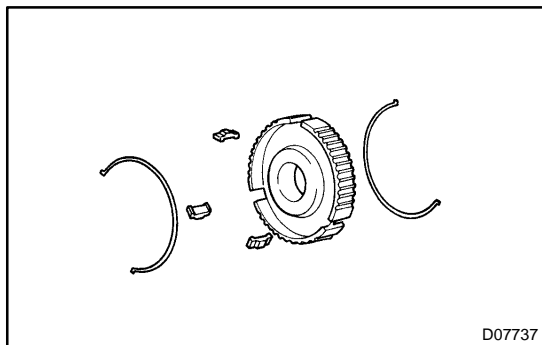
26. REMOVE DIFFERENTIAL CASE ASSEMBLY

NOTICE:

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

Before reassembly, inspect the differential side bearing preload (See page [MX-41](#)).

27. REMOVE MAGNET FROM TRANSAXLE CASE

**28. DISASSEMBLE NO. 3 CLUTCH HUB ASSEMBLY**

- (a) Using a screwdriver, remove the 2 shifting key springs from the No. 3 clutch hub.

NOTICE:

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

Position the shifting key springs so that their end gaps are not aligned.

- (b) Remove the 3 shifting keys from the No. 3 clutch hub.