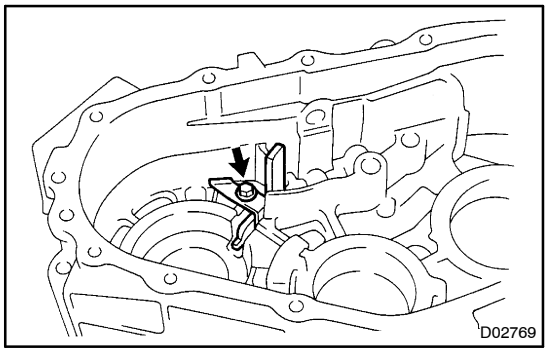
TR090–01

REASSEMBLY

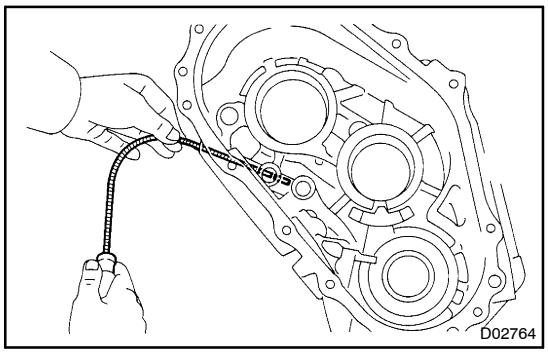
HINT:
Coat all of the sliding and rotating surfaces with gear oil before reassembly.



1. INSTALL OIL RECEIVER

Install the oil receiver to the front case with the bolt.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)



2. INSTALL STARTING PIN

Using a magnetic finger, install the straight pin to the front case.

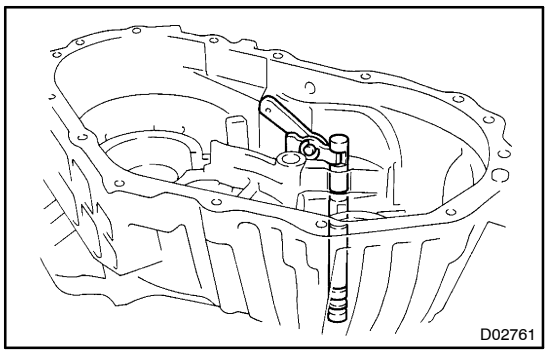
3. INSTALL SHIFT INNER LEVER AND SHIFT INNER LEVER SHAFT

(a) Assemble the shift inner lever and the shift inner lever shaft with the E–ring.

(b) Install the shift inner lever and shift inner lever shaft to the front case.

4. INSTALL FRONT DRIVE SHIFT FORK SHAFT

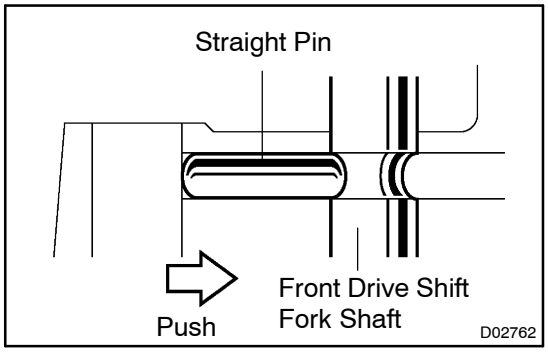
(a) Using pliers, install the snap ring to the front drive shift fork shaft.



(b) Install the front drive shift fork shaft to the front case.

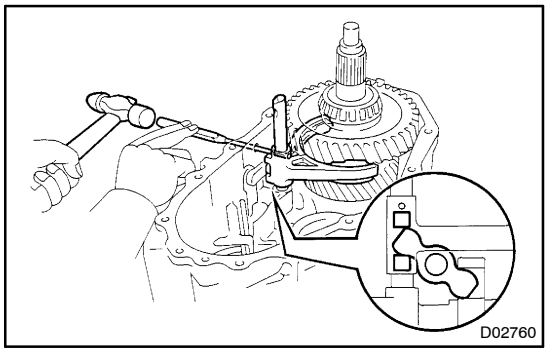
NOTICE:

- **Set the shift inner lever into the fork head part of the front drive shift fork shaft securely.**



- **After installing the front drive shift fork shaft, push the straight pin in the groove of the front drive shift fork shaft, as shown in the illustration.**

5. INSTALL OUTPUT SHAFT ASSEMBLY TO FRONT CASE



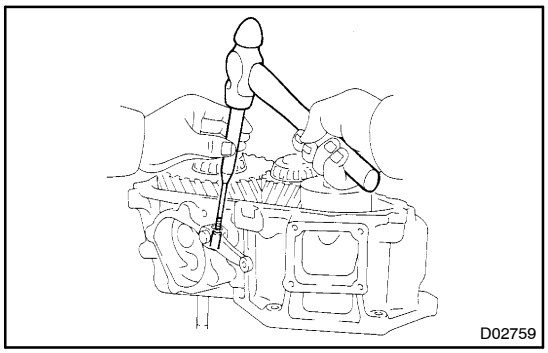
6. INSTALL NO. 1 SHIFT FORK AND HIGH AND LOW SHIFT FORK SHAFT

(a) Install the No. 1 shift fork and the high and low shift fork shaft.

NOTICE:

Set the shift inner lever into the fork head part of the No. 1 shift fork securely.

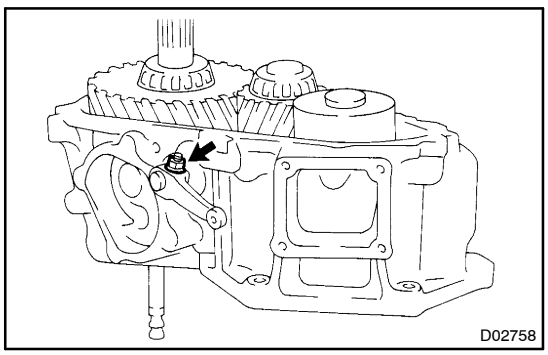
(b) Using a pin punch and hammer, drive in the slotted spring pin to the No. 1 shift fork.



7. INSTALL SHIFT OUTER LEVER

(a) Install the shift outer lever to the shift inner lever.

(b) Using a pin punch and hammer, drive in the lever lock pin.



(c) Install the washer and nut.

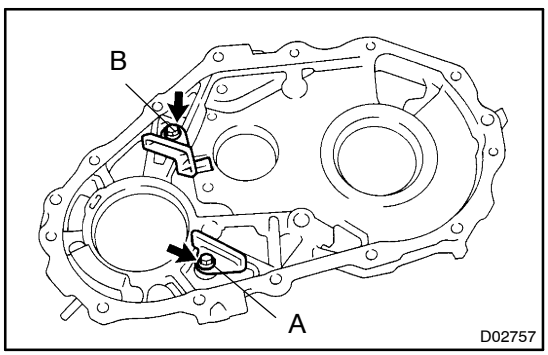
Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

8. INSTALL IDLER GEAR ASSEMBLY TO FRONT CASE

HINT:

If it is difficult to install the idler gear assembly, pull up the output shaft assembly.

9. INSTALL INPUT SHAFT ASSEMBLY TO FRONT CASE



10. INSTALL OIL RECEIVER PIPE

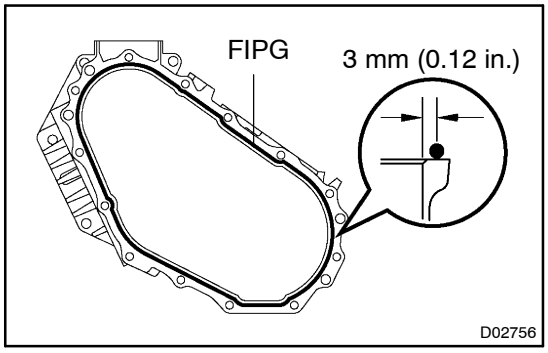
Install the 2 oil receiver pipes to the rear case with the 2 bolts.

Torque:

Bolt A: 12 N·m (120 kgf·cm, 9 ft·lbf)

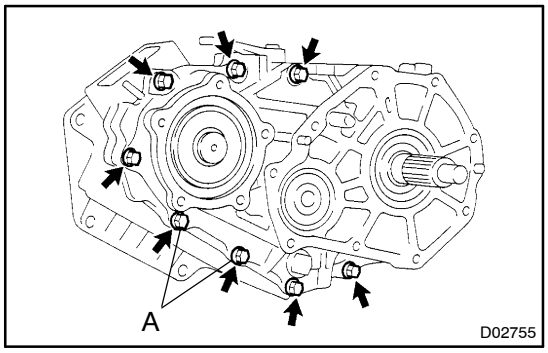
Bolt B: 18 N·m (185 kgf·cm, 13 ft·lbf)

11. INSTALL 2 BEARING OUTER RACES TO REAR CASE



12. ASSEMBLE FRONT CASE AND REAR CASE

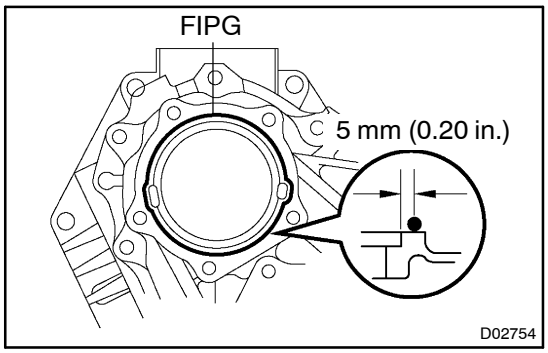
(a) Apply FIPG to the front case.
FIPG:
Part No. 08826–00090, THREE BOND 1280 or equivalent



(b) Apply sealant to the ”A” bolt threads.
Sealant:
Part No. 08833–00080, THREE BOND 1344, LOCTITE 242 or equivalent

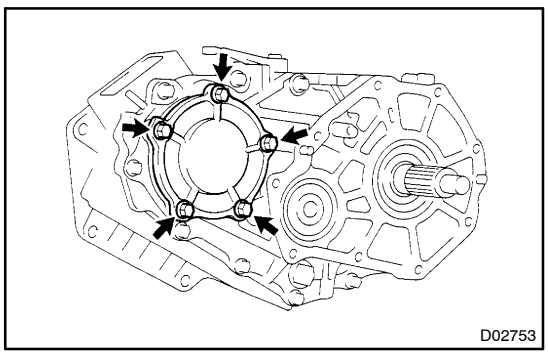
(c) Install the rear case to the front case with the 8 bolts.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

(d) Using a snap ring expander, install the snap ring to the input shaft.



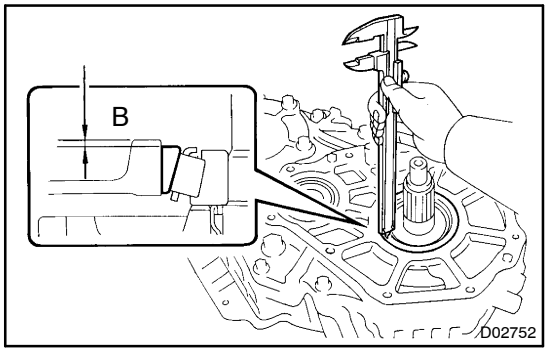
13. INSTALL CASE COVER

(a) Apply FIPG to the rear case.
FIPG:
Part No. 08826–00090, THREE BOND 1281 or equivalent



(b) Apply sealant to the bolt threads.
Sealant:
Part No. 08833–00080, THREE BOND 1344, LOCTITE 242 or equivalent

(c) Install the case cover to the rear case with the 5 bolts.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



14. SELECT ADJUSTING SHIM FOR OUTPUT SHAFT TAPER ROLLER BEARING

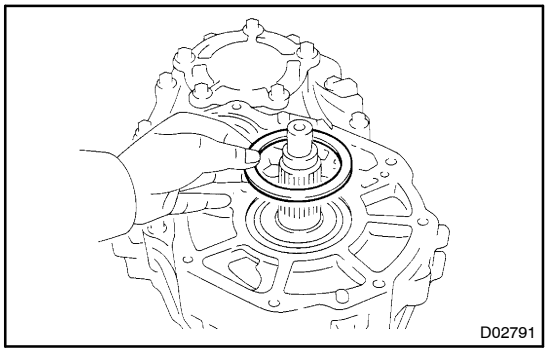
(a) Using vernier calipers, measure the clearance of the dimension ”B”.

(b) Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.

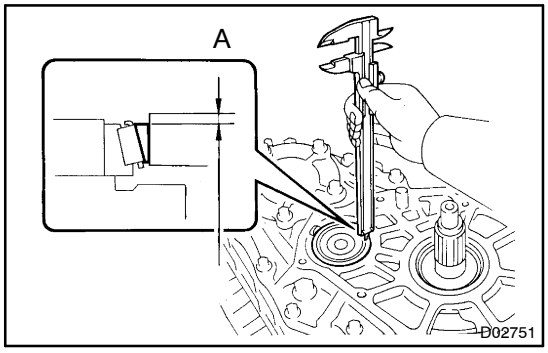
(c) Calculate the required thickness of the adjusting shim.
Thickness: Dimension ”B” + [0.070 – 0.034 mm (0.0028 – 0.0013 in.)]

(d) From the following table, select a shim so that its thickness is within the range of the calculation.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
2	0.30 (0.0118)	8	1.80 (0.0709)
3	0.45 (0.0177)	9	2.00 (0.0787)
4	1.00 (0.0394)	10	2.20 (0.0866)
5	1.20 (0.0472)	11	2.40 (0.0945)
6	1.40 (0.0551)	12	2.60 (0.1024)
7	1.60 (0.0630)	13	0.55 (0.0216)



15. INSTALL ADJUSTING SHIM FOR OUTPUT SHAFT TAPER ROLLER BEARING



16. SELECT ADJUSTING SHIM FOR IDLER GEAR TAPER ROLLER BEARING

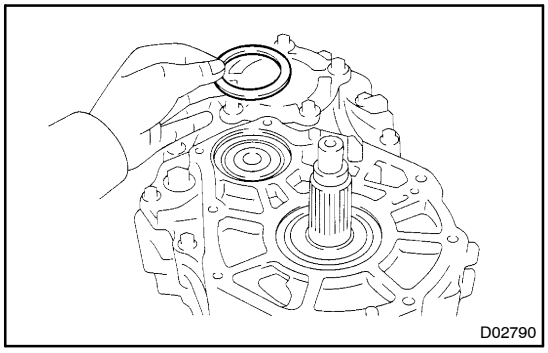
(a) Using vernier calipers, measure the clearance of the dimension ”A”.

(b) Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.

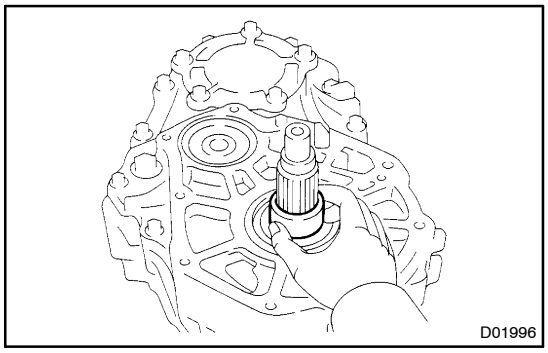
(c) Calculate the required thickness of the adjusting shim.
Thickness: Dimension ”A” + [0.014 – 0.042 mm (0.0006 – 0.0017 in.)]

(d) From the following table, select a shim so that its thickness is within the range of the calculation.

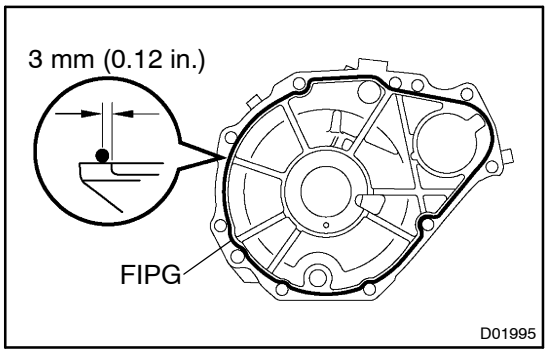
Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
2	0.30 (0.0118)	8	3.20 (0.1260)
3	0.45 (0.0177)	9	3.40 (0.1339)
4	2.40 (0.0945)	10	3.60 (0.1417)
5	2.60 (0.1024)	11	3.80 (0.1496)
6	2.80 (0.1102)	12	4.00 (0.1575)
7	3.00 (0.1181)	13	0.55 (0.0216)



17. INSTALL ADJUSTING SHIM FOR IDLER GEAR TAPER ROLLER BEARING

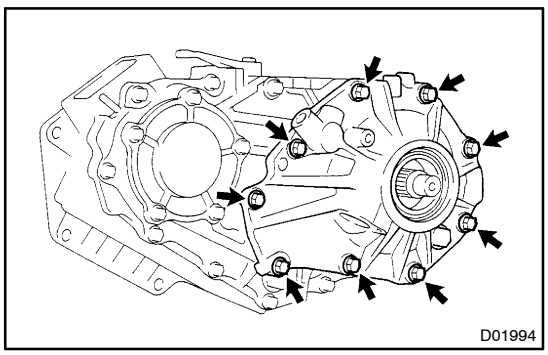


18. INSTALL SPACER TO OUTPUT SHAFT

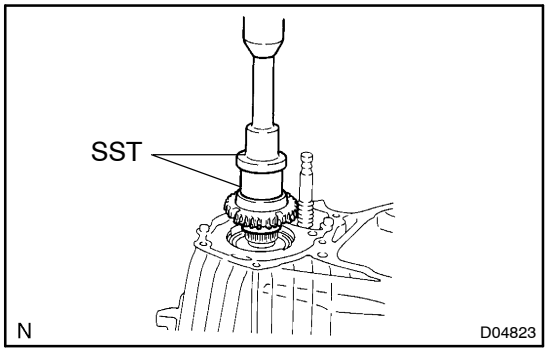


19. INSTALL REAR EXTENSION HOUSING

(a) Apply FIPG to the rear extension housing.
FIPG:
Part No. 08826–00090, THREE BOND 1281 or equivalent



(b) Install the rear extension housing with the 9 bolts.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



20. INSTALL FRONT DRIVE GEAR PIECE

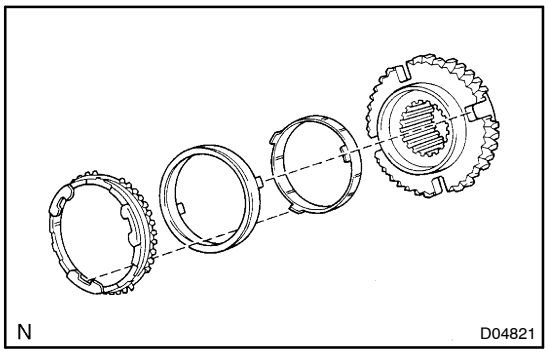
(a) Using SST and a press, install the front drive gear piece to the output shaft.

SST 09517–12010, 09631–20081

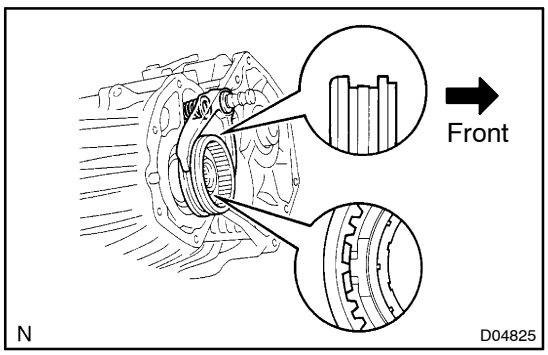
(b) Select a snap ring that allows the minimum axial play.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	2.00 (0.0787)	D	2.30 (0.0906)
B	2.10 (0.0827)	E	2.40 (0.0945)
C	2.20 (0.0866)	–	–

(c) Using a snap ring expander, install a new snap ring.



21. INSTALL NO. 2 SYNCHRONIZER INNER RING, NO. 2 SYNCHRONIZER MIDDLE RING AND NO. 2 SYNCHRONIZER OUTER RING



22. INSTALL FRONT DRIVE CLUTCH SLEEVE AND NO. 2 SHIFT FORK

(a) Install the front drive clutch sleeve, compression spring, 2 plate washers and No. 2 shift fork.

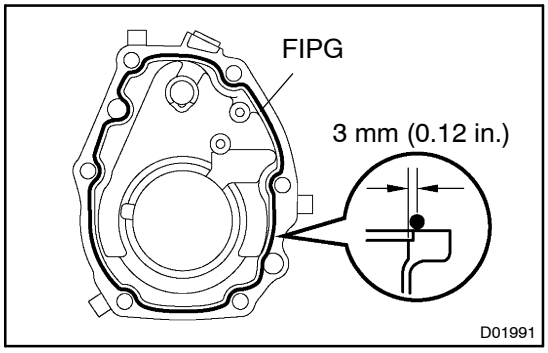
HINT:

Make sure to install the front drive clutch sleeve in the correct direction.

NOTICE:

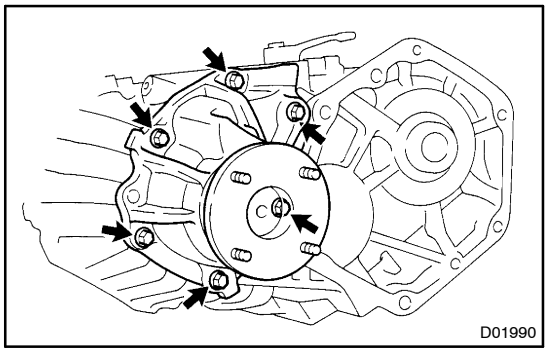
Assemble the front drive clutch sleeve and No. 2 synchronizer outer ring securely to ensure they are in the position as shown in the illustration.

(b) Using pliers, install the snap ring to the front drive shift fork shaft.

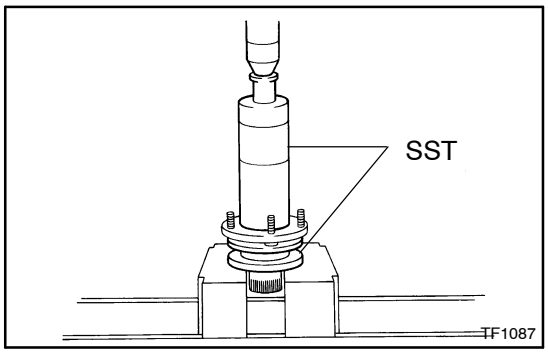


23. INSTALL FRONT EXTENSION HOUSING

(a) Apply FIPG to the front extension housing.
FIPG:
Part No. 08826–00090, THREE BOND 1281 or equivalent

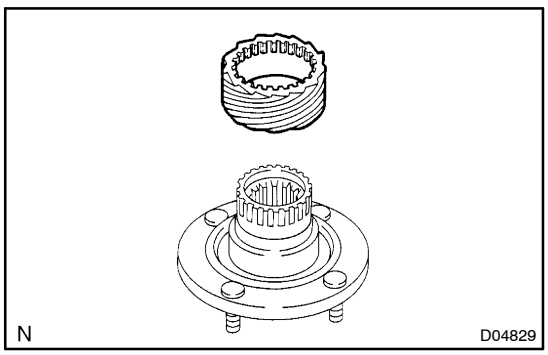


(b) Install the front extension housing with the 6 bolts.
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)



24. INSTALL OUTPUT SHAFT COMPANION FLANGE

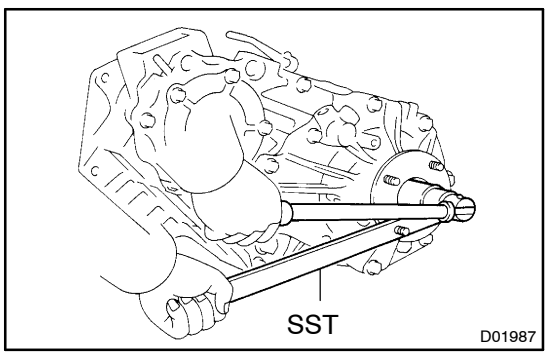
(a) Using SST and a press, install the dust deflector to the companion flange.
SST 09316–20011, 09316–60011 (09316–00011)



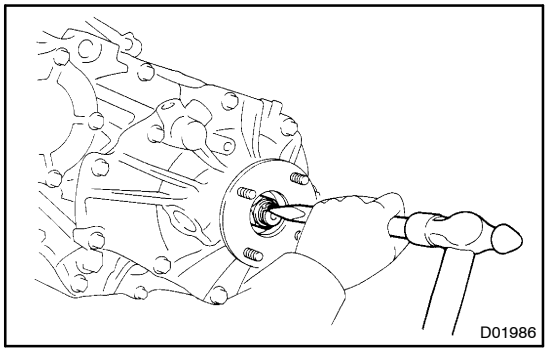
(b) Install the speed sensor drive gear to the companion flange.

HINT:
Align the companion flange grooves with the projections on the speed sensor drive gear.

(c) Install the companion flange.



(d) Using SST to hold the flange, install a new O–ring and nut.
SST 09330–00021
Torque: 127 N·m (1,300 kgf·cm, 94 ft·lbf)

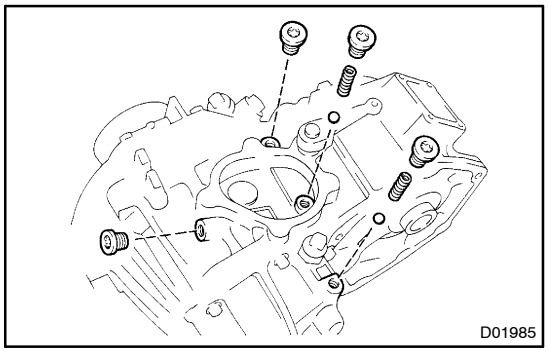


(e) Using a chisel and hammer, stake the nut.

25. INSTALL TRANSFER INDICATOR SWITCH

Install 3 new gaskets, transfer 4WD position switch, L4 position switch and neutral position switch.

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



26. INSTALL SCREW PLUG, SPRING AND BALL

(a) Install the 2 balls and springs.

(b) Apply sealant to the screw plug threads.

Sealant:

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

(c) Using a torx socket wrench (T40), install the 4 screw plugs.

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

27. INSTALL SPEED SENSOR DRIVEN GEAR

Install the speed sensor driven gear with the bolt.

Torque: 11 N·m (115 kgf·cm, 8 ft·lbf)

28. INSTALL BREATHER HOSE