TR05J–01

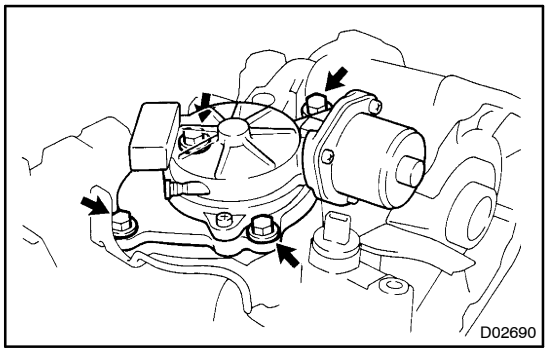
DISASSEMBLY

1. REMOVE BREATHER HOSE

2. REMOVE SPEED SENSOR DRIVEN GEAR

Remove the bolt and speed sensor driven gear.

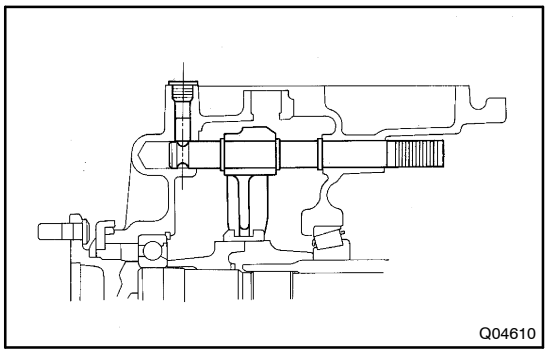
Torque: 11 N·m (115 kgf·cm, 8 ft·lbf)



3. w/ One Touch 2–4 Selector System: REMOVE MOTOR ACTUATOR

Remove the 4 bolts and motor actuator.

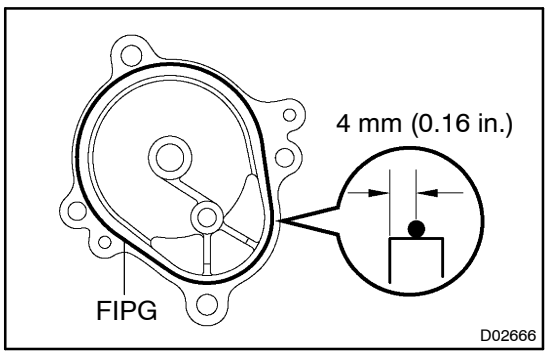
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



HINT:

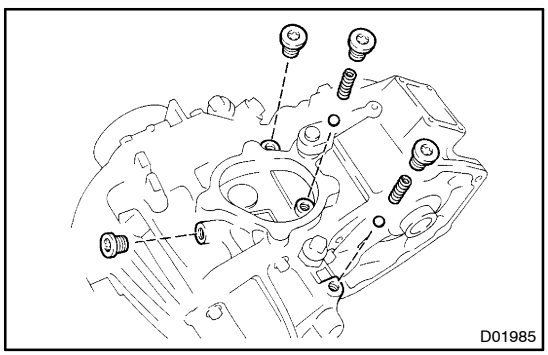
At the time of reassembly, please refer to the following items.

- Set the motor actuator in 4WD condition.



- Apply FIPG to the motor actuator.
  FIPG: Part No. 08826–00090, THREE BOND 1281 or equivalent

4. w/ One Touch 2–4 Selector System: REMOVE OUTPUT GEAR FROM FRONT CASE



5. REMOVE SCREW PLUG, SPRING AND BALL

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

HINT:

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

Apply sealant to the screw plug threads.

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

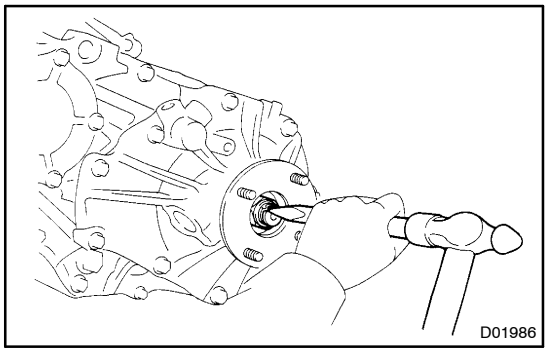
Torque: 19 N·m (190 kgf·cm, 14 ft·lbf)

(b) Using a magnetic finger, remove the 2 springs and balls.

6. REMOVE TRANSFER INDICATOR SWITCH

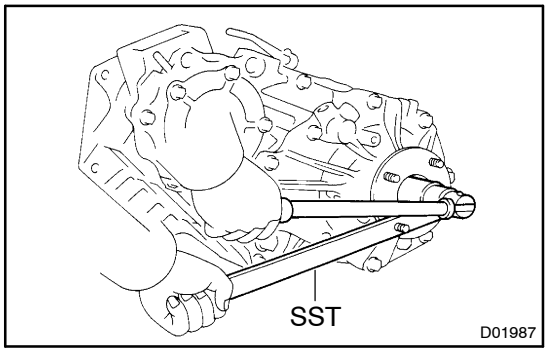
Remove the transfer 4WD position switch, L4 position switch, neutral position switch and 3 gaskets.

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



7. REMOVE OUTPUT SHAFT COMPANION FLANGE

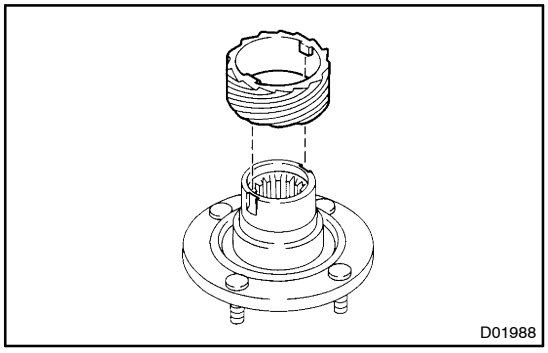
(a) Using a chisel and hammer, unstake the staked part of the nut.



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

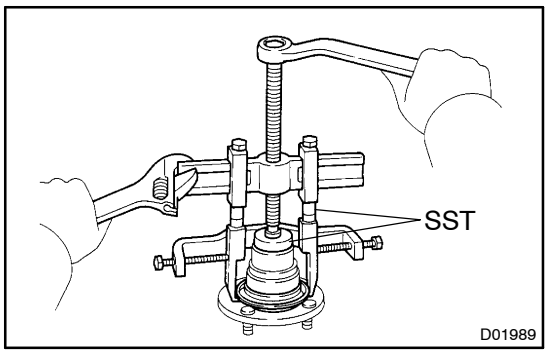
(c) Remove the companion flange.

HINT:
If necessary, tap the companion flange lightly with a plastic hammer.

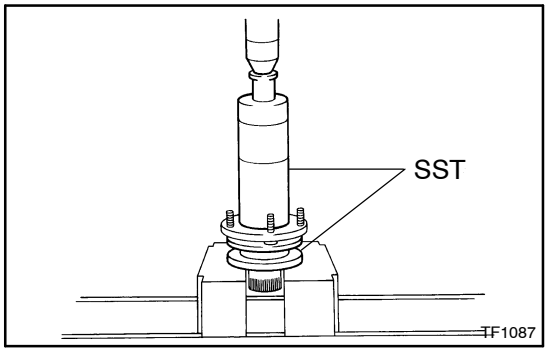


(d) Remove the speed sensor drive gear from the companion flange.

HINT:
At the time of reassembly, please refer to the following item. Align the companion flange grooves with the projections on the speed sensor drive gear.

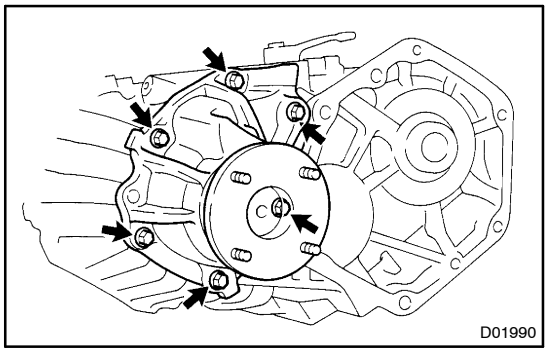


(e) Using SST, remove the dust deflector from the companion flange.
SST 09950–40011 (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04060, 09957–04010, 09958–04010), 09950–60010 (09951–00400)



HINT:
At the time of reassembly, please refer to the following item.
Using SST and a press, install the dust deflector to the companion flange.

SST 09316–20011, 09316–60011 (09316–00011)

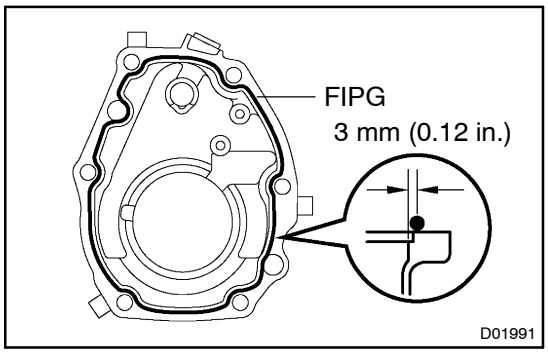


8. REMOVE FRONT EXTENSION HOUSING

Remove the 6 bolts and front extension housing.

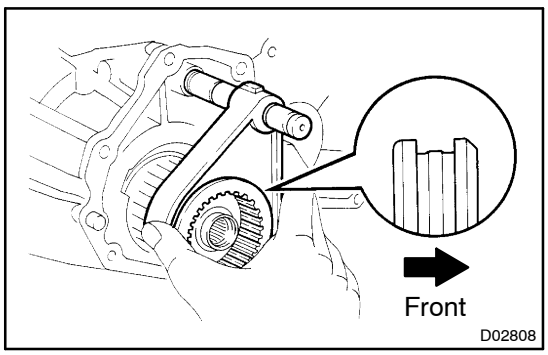
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

HINT:
If necessary, tap the front extension housing lightly with a plastic hammer.



HINT:
At the time of reassembly, please refer to the following item.
Apply FIPG to the front extension housing.

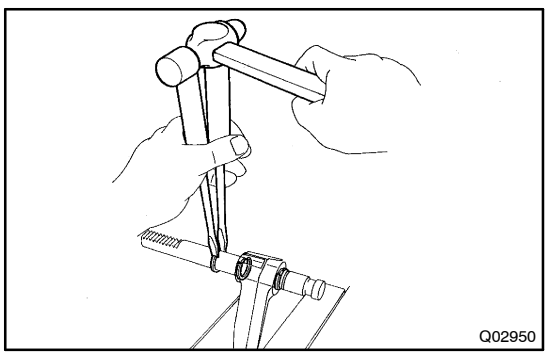
FIPG: Part No. 08826–00090, THREE BOND 1281 or equivalent



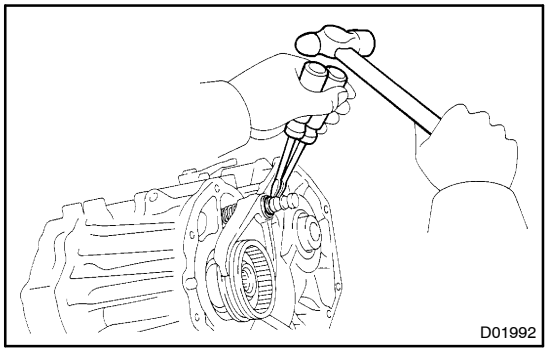
9. w/ One Touch 2–4 Selector System:
REMOVE FRONT DRIVE CLUTCH SLEEVE, NO.2 SHIFT FORK AND FRONT DRIVE SHIFT FORK SHAFT

(a) Remove the front drive clutch sleeve, No.2 shift fork and front drive shift fork shaft from the front case.

HINT:
At the time of reassembly, please refer to the following item.
Make sure to install the front drive clutch sleeve in the correct direction.

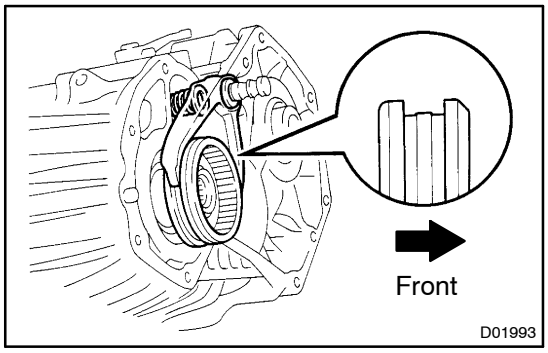


(b) Using 2 screwdrivers and a hammer, drive out the 3 snap rings from the front drive shift fork shaft.
(c) Separate the front drive shift fork shaft and No.2 shift fork.



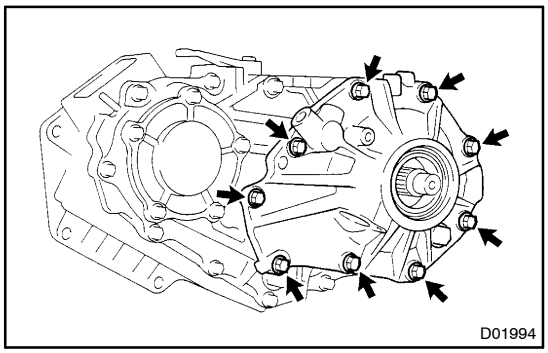
10. w/o One Touch 2–4 Selector System: REMOVE FRONT DRIVE CLUTCH SLEEVE AND NO.2 SHIFT FORK

(a) Using 2 screwdrivers and a hammer, tap out the snap ring from the front drive shift fork shaft.



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

HINT:
At the time of reassembly, please refer to the following item. Make sure to install the front drive clutch sleeve in the correct direction.

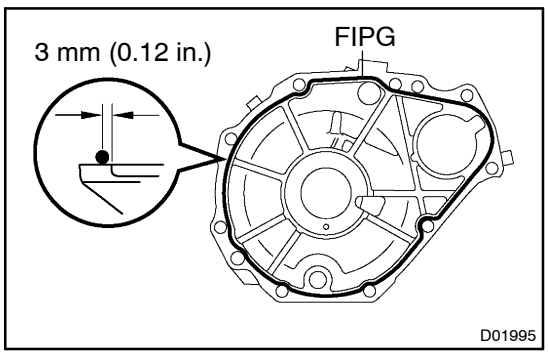


11. REMOVE REAR EXTENSION HOUSING

Remove the 9 bolts and rear extension housing.

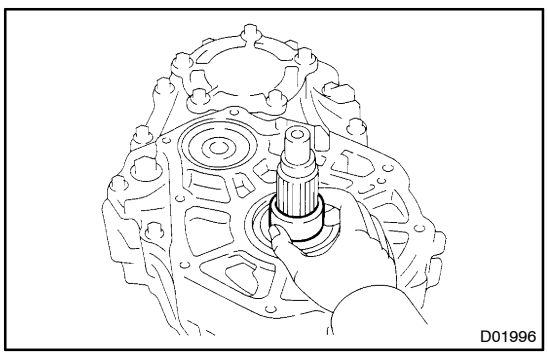
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

HINT:
If necessary, tap the rear extension housing lightly with a plastic hammer.

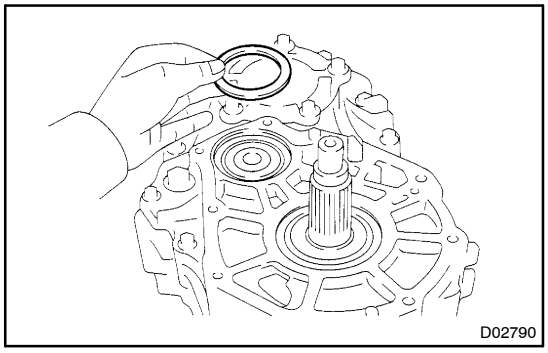


HINT:
At the time of reassembly, please refer to the following item.
Apply FIPG to the rear extension housing.

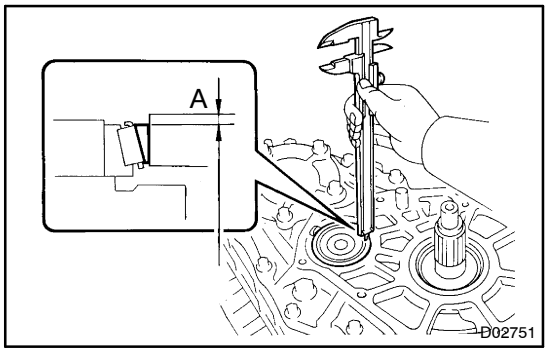
FIPG: Part No. 08826–00090, THREE BOND 1281 or equivalent



12. REMOVE SPACER FROM OUTPUT SHAFT


D02790

13. REMOVE ADJUSTING SHIM FOR IDLER GEAR TAPER ROLLER BEARING

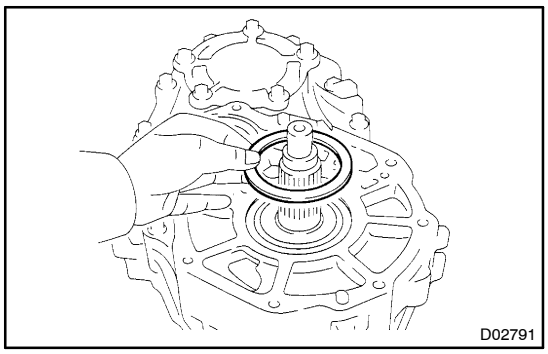


D02751

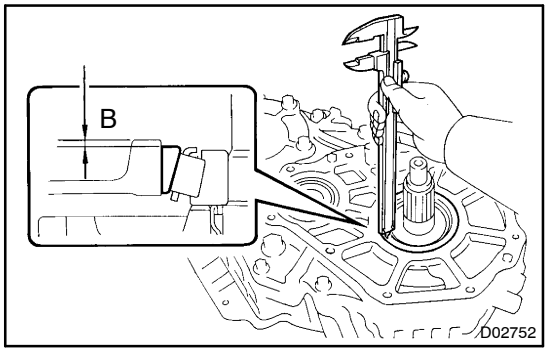
HINT:
At the time of reassembly, please refer to the following items.
Select an adjusting shim for the idler gear taper roller bearing.

- Using vernier calipers, measure the clearance of the dimension ”A”.
- Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.
- Calculate the required thickness of the adjusting shim.
  Thickness: Dimension ”A” + [0.014 – 0.042 mm (0.0006 – 0.0017 in.)]
- 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)


D02791

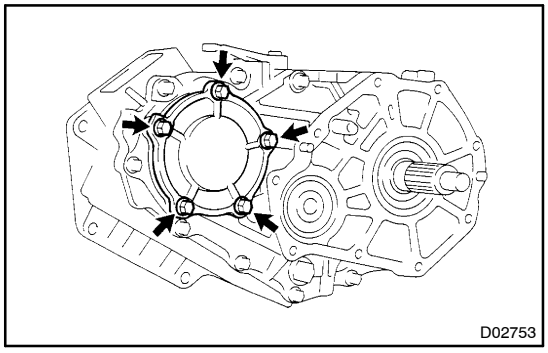
14. REMOVE ADJUSTING SHIM FOR OUTPUT SHAFT TAPER ROLLER BEARING



HINT:
At the time of reassembly, please refer to the following items.
Select an adjusting shim for the output shaft taper roller bearing.

- Using vernier calipers, measure the clearance of the dimension ”B”.
- Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.
- Calculate the required thickness of the adjusting shim.
  Thickness: Dimension ”B” + [0.070 – 0.034 mm (0.0028 – 0.0013 in.)]
- 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.)
B	0.30 (0.0118)	H	1.80 (0.0709)
C	0.45 (0.0177)	J	2.00 (0.0787)
D	1.00 (0.0394)	K	2.20 (0.0866)
E	1.20 (0.0472)	L	2.40 (0.0945)
F	1.40 (0.0551)	M	2.60 (0.1024)
G	1.60 (0.0630)	N	0.55 (0.0216)



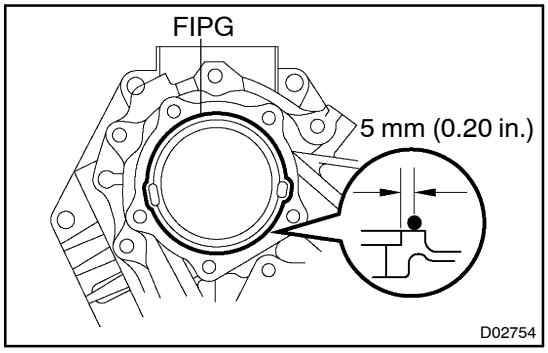
15. REMOVE CASE COVER

(a) Remove the 5 bolts.

HINT:
At the time of reassembly, please refer to the following item.
Apply sealant to the bolt threads.

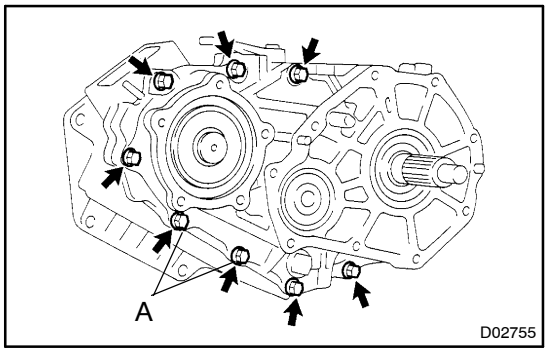
Sealant: Part No. 08833–00080, THREE BOND 1344, LOCTITE 242 or equivalent
Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

(b) Using a brass bar and hammer, tap the case cover and remove it.



HINT:
At the time of reassembly, please refer to the following item.
Apply FIPG to the rear case.

FIPG: Part No. 08826–00090, THREE BOND 1281 or equivalent



16. SEPARATE FRONT CASE AND REAR CASE

(a) Using a snap ring expander, remove the snap ring from the rear case.

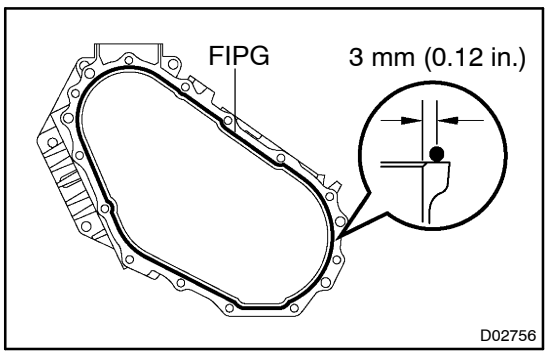
(b) Remove the 8 bolts.

HINT:
At the time of reassembly, please refer to the following item.
Apply sealant to the "A" bolt threads.

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

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

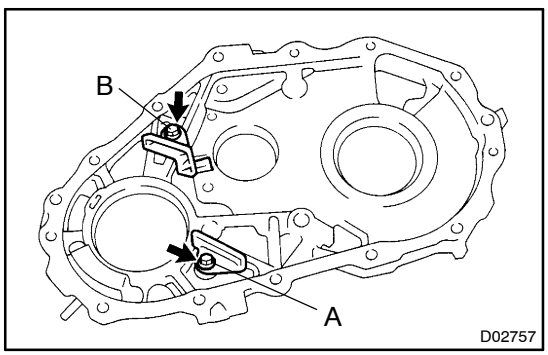
(c) Using a brass bar and hammer, tap the rear case and separate it.



HINT:
At the time of reassembly, please refer to the following item.
Apply FIPG to the front case.

FIPG: Part No. 08826–00090, THREE BOND 1281 or equivalent

17. REMOVE 2 BEARING OUTER RACES FROM REAR CASE

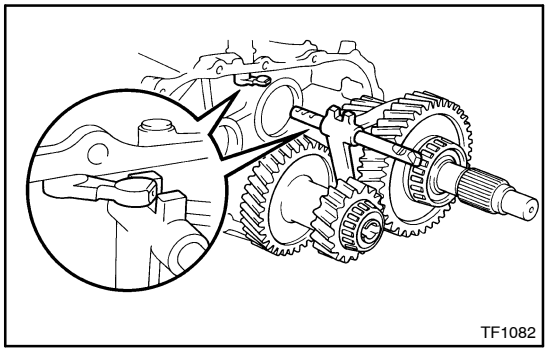


18. REMOVE OIL RECEIVER PIPE

Remove the 2 bolts and oil receiver pipes from the rear case.

Torque:
Bolt A: 12 N·m (120 kgf·cm, 9 ft·lbf)
Bolt B: 18 N·m (185 kgf·cm, 13 ft·lbf)

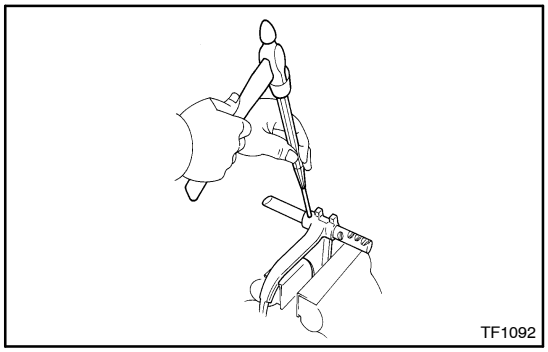
19. REMOVE INPUT SHAFT ASSEMBLY FROM FRONT CASE


TF1082

20. w/ One Touch 2–4 Selector System:
REMOVE IDLER GEAR ASSEMBLY, OUTPUT SHAFT ASSEMBLY, NO.1 SHIFT FORK WITH HIGH AND LOW SHIFT FORK SHAFT

(a) Remove the idler gear assembly, output shaft assembly, No.1 shift fork with the high and low shift fork shaft from the front case.

NOTICE:
At the time of reassembly, please refer to the following item.
Set the shift inner lever into the fork head part of the No.1 shift fork securely.

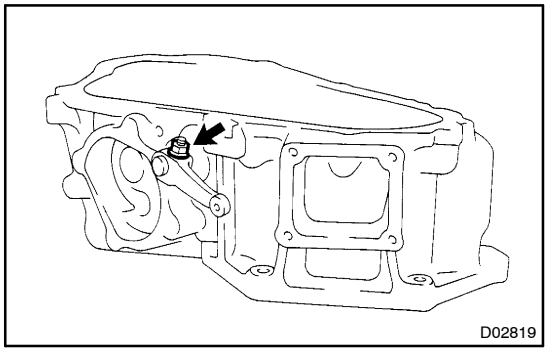

TF1092

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

(c) Separate the No.1 shift fork and the high and low shift fork shaft.

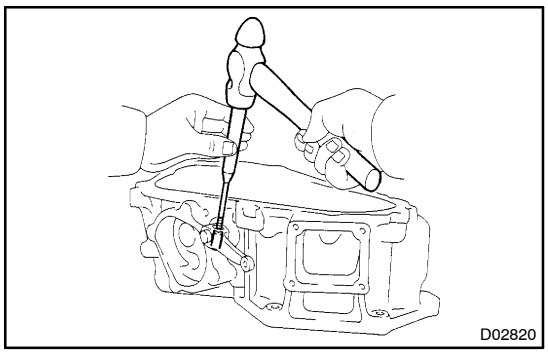
21. w/o One Touch 2–4 Selector System:
REMOVE IDLER GEAR ASSEMBLY FROM FRONT CASE

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


D02819

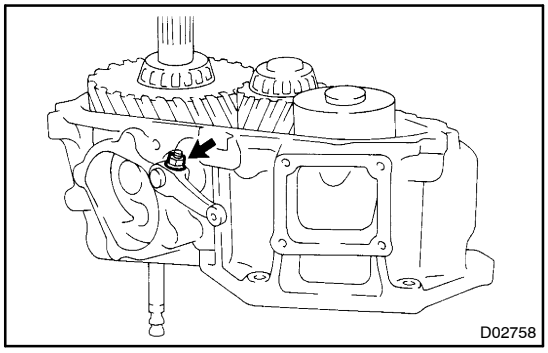
22. w/ One Touch 2–4 Selector System:
REMOVE SHIFT OUTER LEVER AND SHIFT INNER LEVER SHAFT

(a) Remove the nut and washer from the shift outer lever.
Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)


D02820

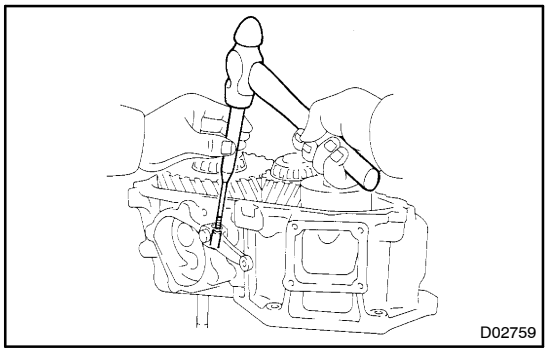
(b) Using a pin punch and hammer, drive out the lever lock pin.

(c) Remove the shift outer lever and shift inner lever shaft.



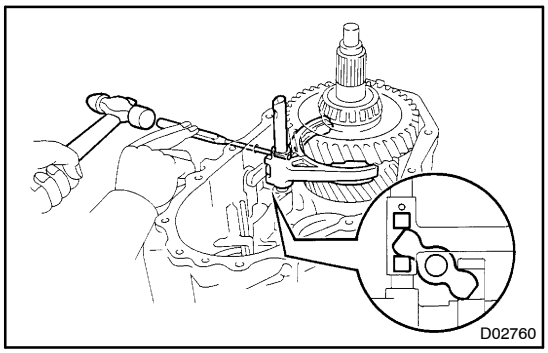
23. w/o One Touch 2–4 Selector System:
REMOVE SHIFT OUTER LEVER

(a) Remove the nut and washer from the shift outer lever.
Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)



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

(c) Remove the shift outer lever from the shift inner lever.



24. w/o One Touch 2–4 Selector System:
REMOVE NO.1 SHIFT FORK AND HIGH AND LOW SHIFT FORK SHAFT

(a) Using a pin punch and hammer, drive out the slotted spring pin from the No.1 shift fork.

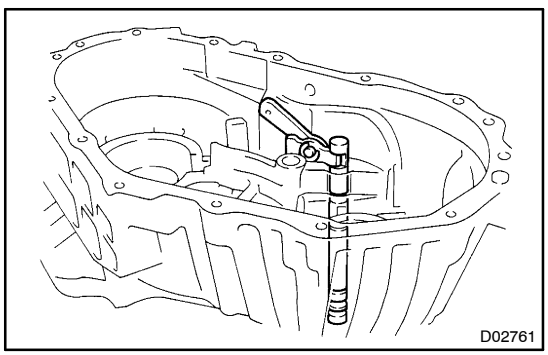
(b) Remove the No.1 shift fork and the high and low shift fork shaft.

NOTICE:

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

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

25. w/o One Touch 2–4 Selector System:
REMOVE OUTPUT SHAFT ASSEMBLY FROM FRONT CASE



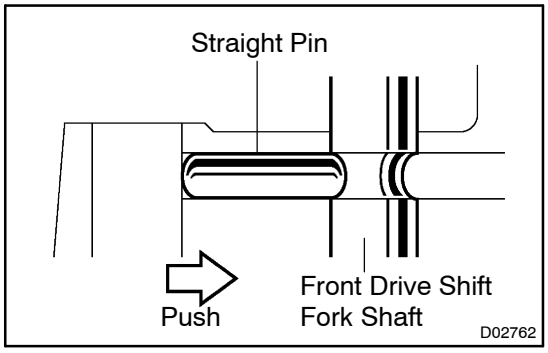
26. w/o One Touch 2–4 Selector System:
REMOVE FRONT DRIVE SHIFT FORK SHAFT

(a) Remove the front drive shift fork shaft from the front case.

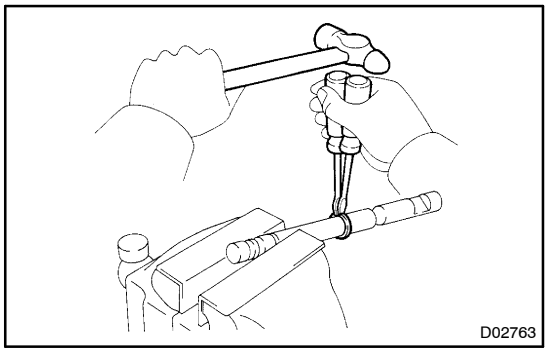
NOTICE:

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

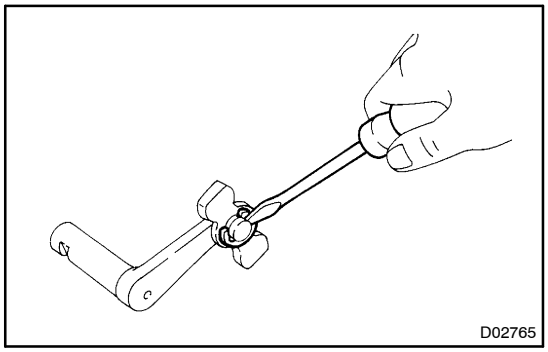
- **Set the shift inner lever into the fork head part of the front drive shift fork shaft securely.**



- **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.**



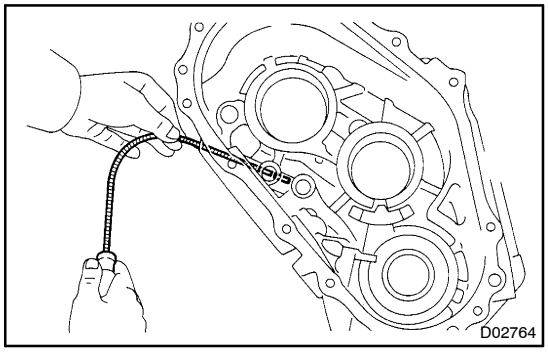
(b) Using 2 screwdrivers and a hammer, drive out the snap ring from the front drive shift fork shaft.



27. w/o One Touch 2–4 Selector System: REMOVE SHIFT INNER LEVER SHAFT AND SHIFT INNER LEVER

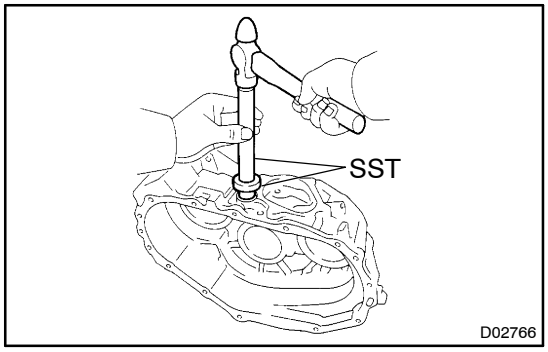
(a) Remove the shift inner lever shaft and shift inner lever from the front case.

(b) Using a screwdriver, pry out the E–ring and separate the shift inner lever shaft and shift inner lever.



28. w/o One Touch 2–4 Selector System: REMOVE STRAIGHT PIN

Using a magnetic finger, remove the straight pin from the front case.



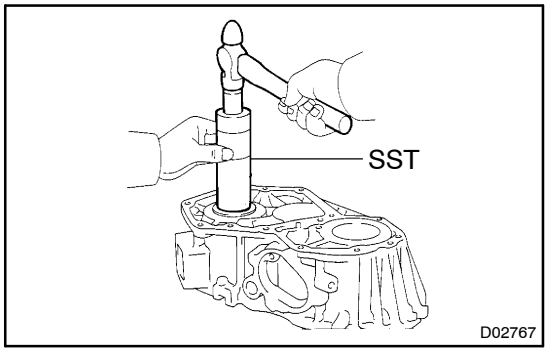
29. IF NECESSARY, REPLACE SHIFT LEVER OIL SEAL OF FRONT CASE

(a) Using a screwdriver, pry out the oil seal.

(b) Apply MP grease to the lip of a new oil seal.

(c) Using SST and a hammer, drive in a new oil seal.

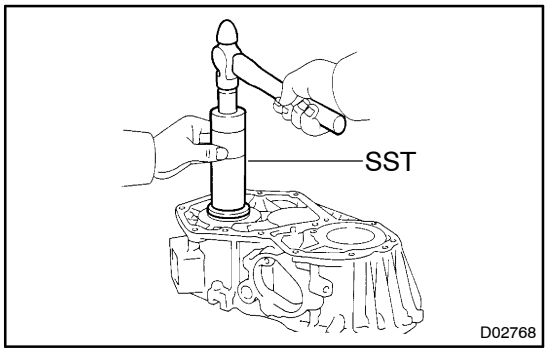
SST 09950–60010 (09951–00270), 09950–70010 (09951–07150)



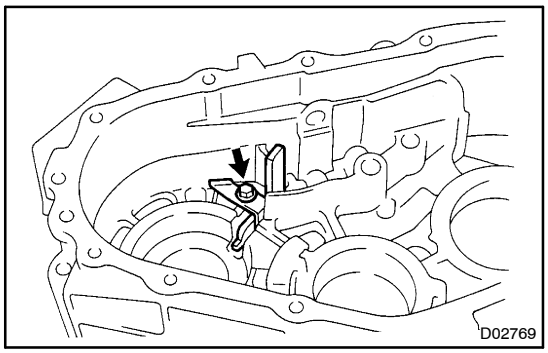
30. IF NECESSARY, REPLACE INPUT SHAFT OIL SEAL OF FRONT CASE

(a) Using SST and a hammer, drive out the oil seal.
SST 09316–60011 (09316–00011)

(b) Apply MP grease to the lip of a new oil seal.



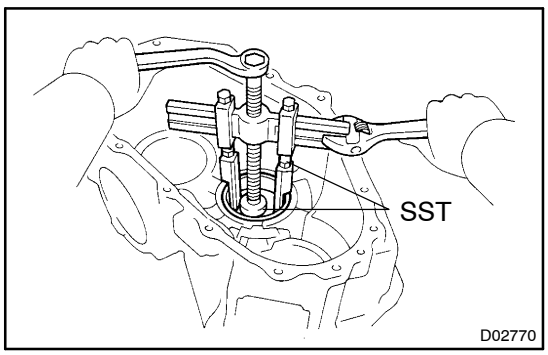
(c) Using SST and a hammer, drive in a new oil seal.
SST 09316–60011 (09316–00011, 09316–00031)



31. REMOVE OIL RECEIVER

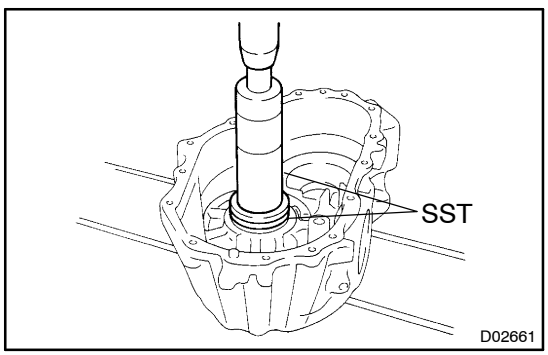
Remove the bolt and oil receiver from the front case.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

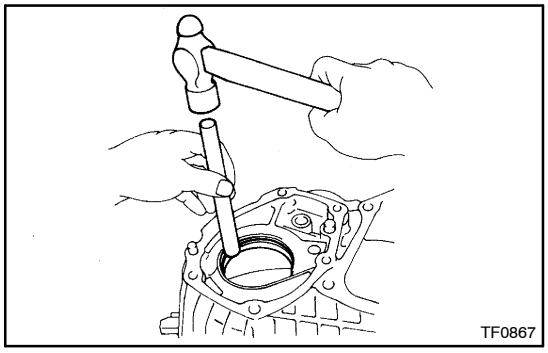


32. IF NECESSARY, REPLACE BEARING OUTER RACE OF FRONT CASE

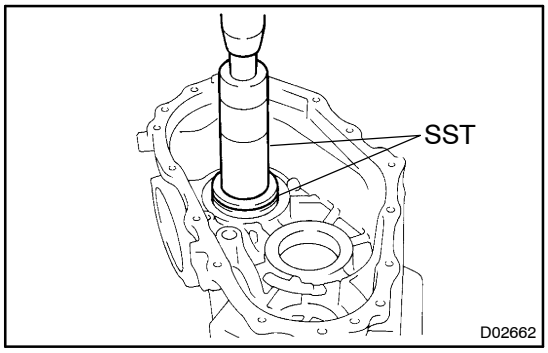
(a) Using SST, remove the bearing outer race (for the idler gear).
SST 09950–40011 (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04060, 09957–04010), 09950–60010 (09951–00320)



HINT:
At the time of reassembly, please refer to the following item.
Using SST and a press, install the bearing outer race (for the idler gear).
SST 09316–60011 (09316–00011, 09316–00031), 09950–60020 (09951–00790)


TF0867

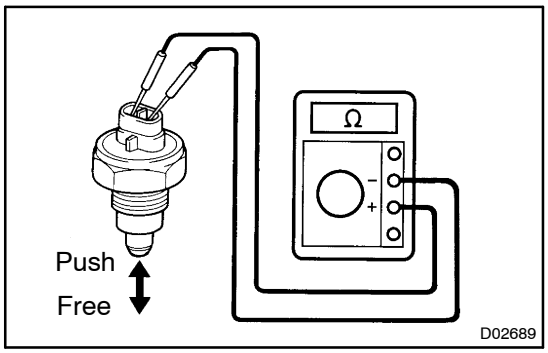
(b) Using a brass bar and hammer, remove the bearing outer race (for the output shaft).



D02662

HINT:
At the time of reassembly, please refer to the following item.
Using SST and a press, install the bearing outer race (for the output shaft).

SST 09316–60011 (09316–00011, 09316–00031), 09950–60020 (09951–00890)



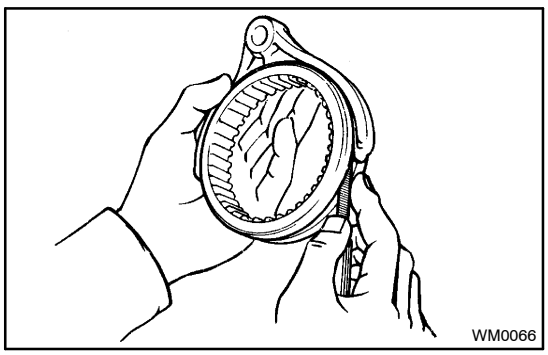
D02689

33. INSPECT TRANSFER INDICATOR SWITCH

Check that continuity exists between the terminals, as shown.

Switch Position	Specified Condition
Push	Continuity
Free	No continuity

If continuity is not as specified, replace the switch.


WM0066

34. INSPECT NO.2 SHIFT FORK AND FRONT DRIVE CLUTCH SLEEVE CLEARANCE

Using a feeler gauge, measure the clearance between the No.2 shift fork and clutch sleeve.

Standard clearance: 0.1 – 0.4 mm (0.0039 – 0.0157 in.)
Maximum clearance: 0.4 mm (0.0157 in.)

If the clearance exceeds the maximum, replace the shift fork or clutch sleeve.