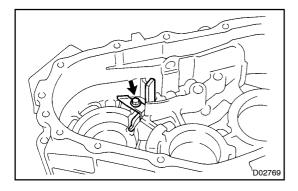
#### TROOP O

## REASSEMBLY

#### HINT:

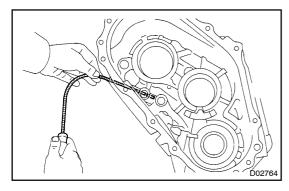
Coat all of the sliding and rotating surfaces with gear oil before reassembly.



### 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)



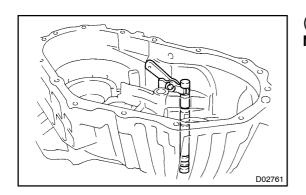
## 2. INSTALL STARTING PIN

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

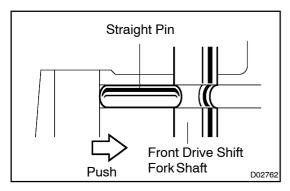
- 3. INSTALL SHIFT INNER LEVER AND SHIFT INNER LEVER SHAFT
- (a) Assemble the shift inner lever and the shift inner lever shaft with the E -ring.
- (b) Install the shift inner lever and shift inner lever shaft to the front case.

#### 4. INSTALL FRONT DRIVE SHIFT FORK SHAFT

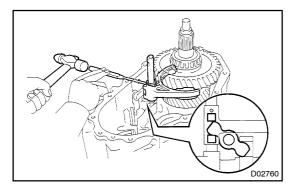
(a) Using pliers, install the snap ring to the front drive shift fork shaft.



- (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



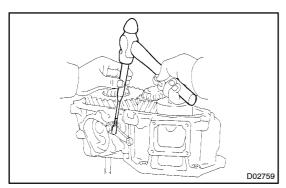
## 6. INSTALL NO. 1 SHIFT FORK AND HIGH AND LOW SHIFT FORK SHAFT

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

#### NOTICE:

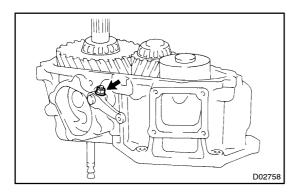
Set the shift inner lever into the fork head part of the No. shift fork securely.

(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.



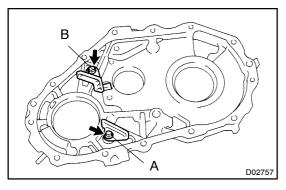
(c) Install the washer and nut.

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

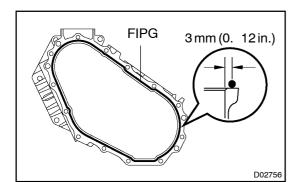
Install the 2 oil receiver pipes to the rear case with the 2 bolts.

**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

LAND CRUISER SUP (RM695E)

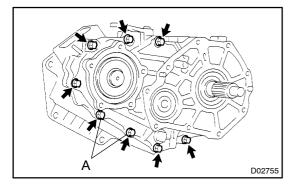


#### 12. ASSEMBLE FRONT CASE AND REAR CASE

(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.

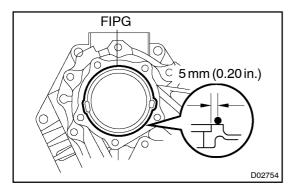
Sealant:

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.

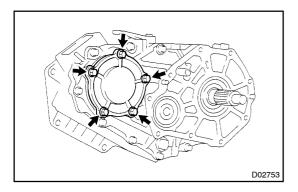


## 13. INSTALL CASE COVER

(a) Apply FIPG to the rear case.

FIPG:

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



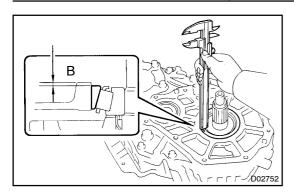
(b) Apply sealant to the bolt threads.

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)

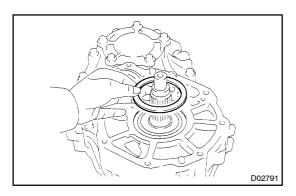


## 14. SELECT ADJUSTING SHIM FOR OUTPUT SHAFT TA-PER ROLLER BEARING

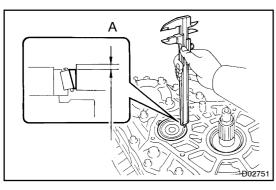
- (a) Using vernier calipers, measure the clearance of the dimension "B".
- (b) Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.
- (c) Calculate the required thickness of the adjusting shim.

  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 (0.0 118)	8	1.80 (0.0709)
3	0.45 (0.0 177)	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 (0.055 1)	12	2.60 (0. 1024)
7	1.60 (0.0630)	13	0.55 (0.02 16)



## 15. INSTALL ADJUSTING SHIM FOR OUTPUT SHAFT TA-PER ROLLER BEARING

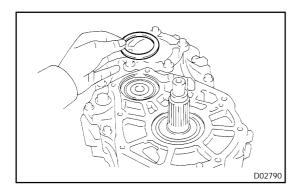


# 16. SELECT ADJUSTING SHIM FOR IDLER GEAR TAPER ROLLER BEARING

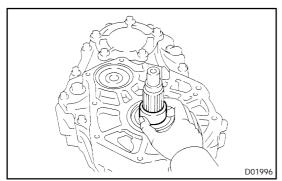
- (a) Using vernier calipers, measure the clearance of the dimension "A".
- (b) Lightly hold down the bearing outer race in the thrust direction to eliminate any looseness before making the measurement.
- (c) Calculate the required thickness of the adjusting shim.

  Thickness: Dimension "A" + [0.0 14 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.

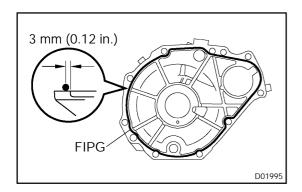
Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
2	0.30 (0.0 118)	8	3.20 (0. 1260)
3	0.45 (0.0 177)	9	3.40 (0. 1339)
4	2.40 (0.0945)	10	3.60 (0. 1417)
5	2.60 (0. 1024)	11	3.80 (0. 1496)
6	2.80 (0. 1102)	12	4.00 (0. 1575)
7	3.00 (0. 1181)	13	0.55 (0.02 16)



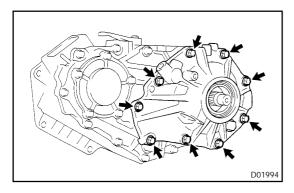
17. INSTALL ADJUSTING SHIM FOR IDLER GEAR TAPER ROLLER BEARING



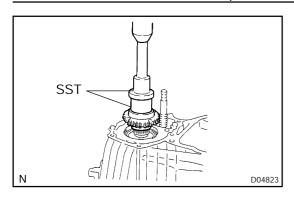
18. INSTALL SPACER TO OUTPUT SHAFT



- 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

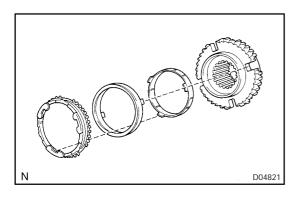
(a) Using SST and a press, install the front drive gear piece to the output shaft.

SST 09517-12010, 09631-20081

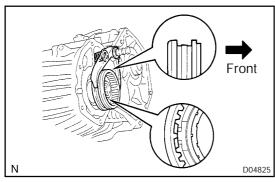
(b) Select a snap ring that allows the minimum axial play.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
Α	2.00 (0.0787)	D	2.30 (0.0906)
В	2.10 (0.0827)	E	2.40 (0.0945)
С	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.

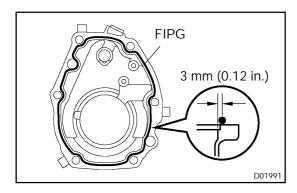
### HINT:

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.

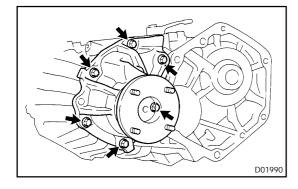
(b) Using pliers, install the snap ring to the front drive shift fork shaft.



## 23. INSTALL FRONT EXTENSION HOUSING

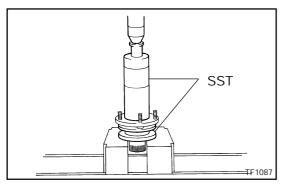
(a) Apply FIPG to the front extension housing. **FIPG:** 

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



(b) Install the front extension housing with the 6 bolts.

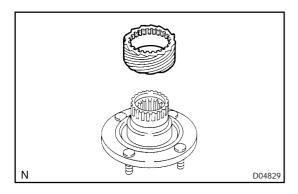
Torque: 37 N⋅m (380 kgf⋅cm, 27 ft⋅lbf)



## 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)

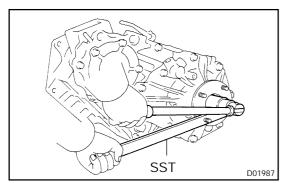


(b) Install the speed sensor drive gear to the companion flange.

## HINT:

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

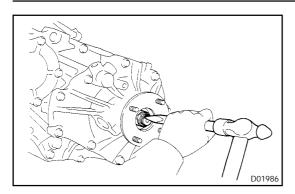
(c) Install the companion flange.



(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)

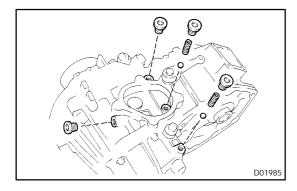


(e) Using a chisel and hammer, stake the nut.

## 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