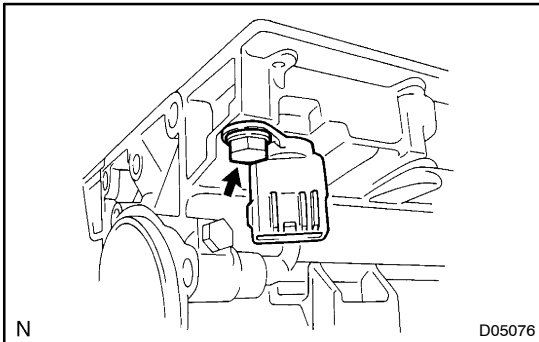


DISASSEMBLY

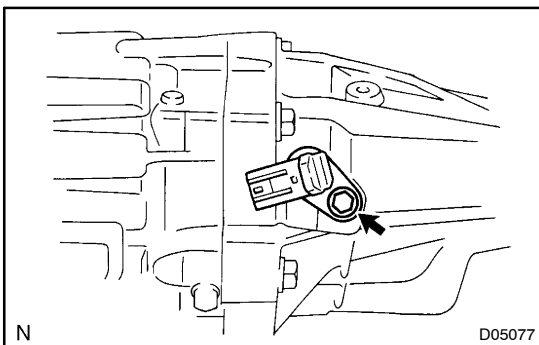
1. REMOVE BREATHER HOSE



2. REMOVE SOLENOID WIRE RETAINING BOLT

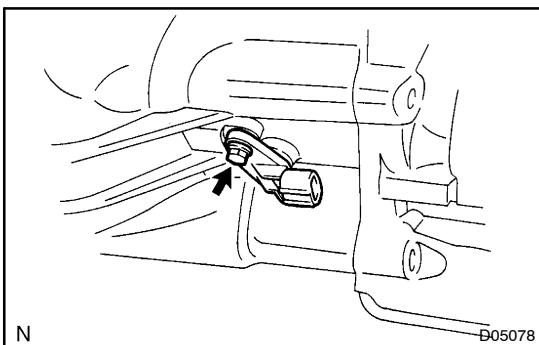
NOTICE:

Remove the bolt only and do not remove the solenoid wire.



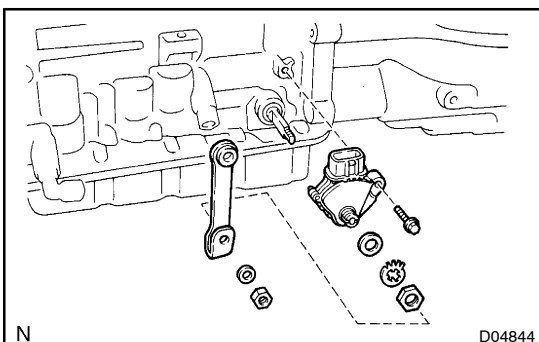
3. REMOVE TRANSMISSION OUTPUT SPEED SENSOR

- (a) Remove the bolt and transmission output speed sensor.
- (b) Remove the O-ring from the sensor.



4. REMOVE TRANSMISSION INPUT SPEED SENSOR

- (a) Remove the bolt and transmission input speed sensor.
- (b) Remove the O-ring from the sensor.

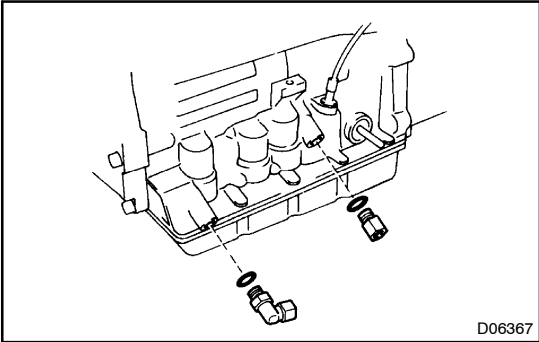


5. REMOVE TRANSMISSION CONTROL SHIFT LEVER

Remove the nut and washer.

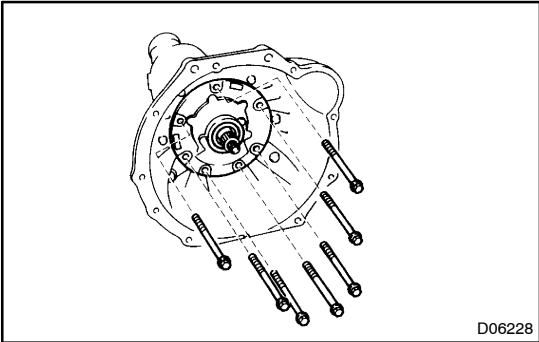
6. REMOVE NEUTRAL START SWITCH

- (a) Unstake the lock washer.
- (b) Remove the lock washer.
- (c) Remove the nut and bolt, and then remove the neutral start switch.



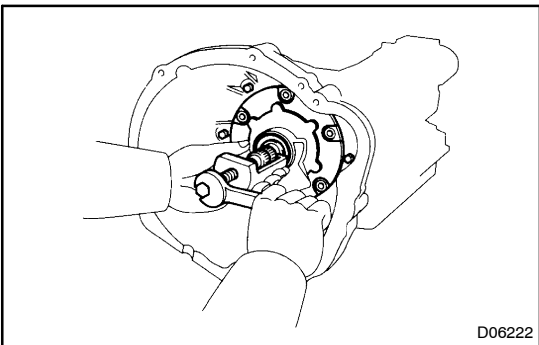
7. REMOVE UNION AND ELBOW

- (a) Remove the union and elbow.
- (b) Remove the 2 O-rings from the union and elbow.



8. REMOVE OIL PUMP

- (a) Remove the 7 bolts holding the oil pump to the transmission case.

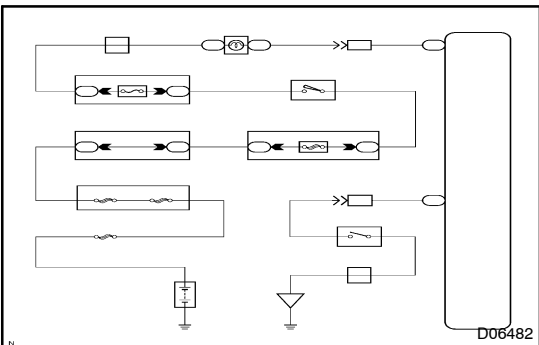


- (b) Using SST, remove the oil pump.
SST 09610-20012

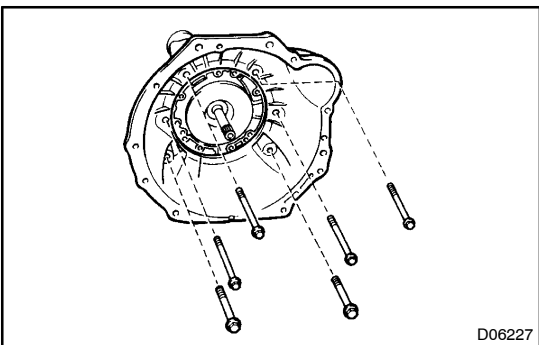
NOTICE:

Do not damage the stator shaft busing surface.

- (c) Grasp the front pump stator shaft and pull the pump from the case.

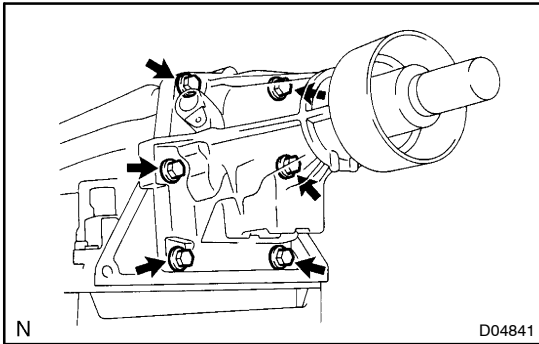


9. REMOVE ASSEMBLED BEARING AND RACE FROM OIL PUMP

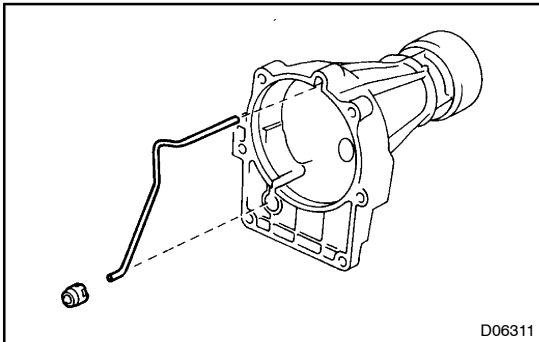


10. REMOVE TRANSMISSION HOUSING

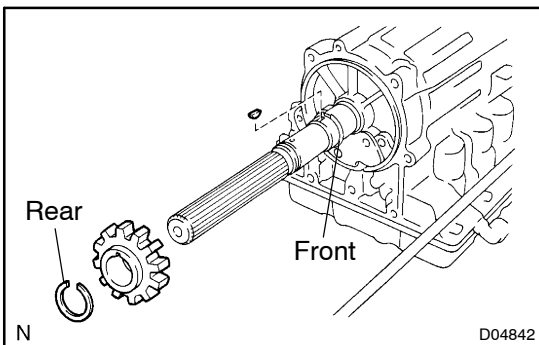
- (a) Remove the 6 bolts.
- (b) While holding the input shaft, remove the transmission housing.
- (c) Remove the O-ring from the O/D case.

**11. REMOVE EXTENSION HOUSING AND GASKET**

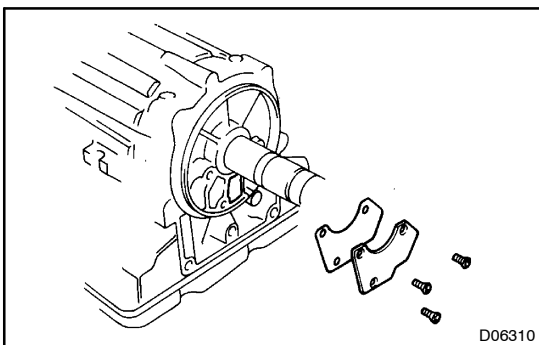
- (a) Remove the 6 bolts and extension housing.
- (b) Remove the gasket.



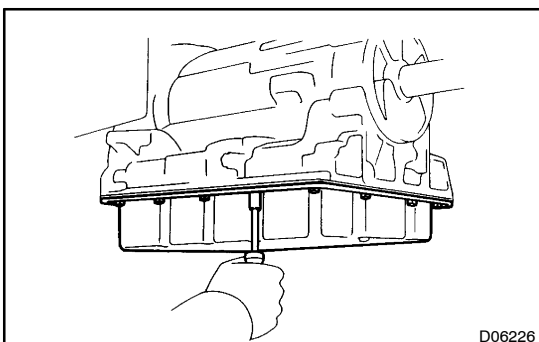
- (c) Remove the gasket and oil apply pipe from the extension housing.

**12. REMOVE SENSOR ROTOR AND KEY**

- (a) Using a snap ring expander, remove the rear side snap ring.
- (b) Remove the sensor rotor and key.
- (c) Using a snap ring expander, remove the front side snap ring.

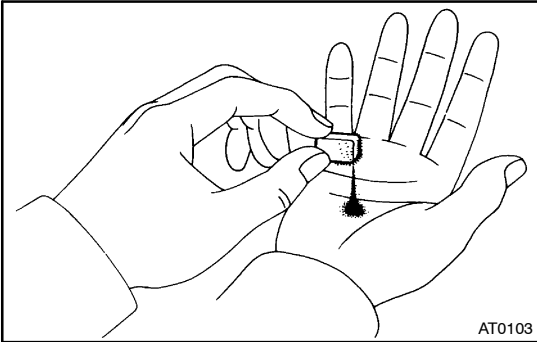
**13. REMOVE GOVERNOR OIL STRAINER**

- (a) Remove the 3 screws, cover and gasket.
- (b) Remove the governor oil strainer from the transmission case.

**14. REMOVE OIL PAN****NOTICE:**

Do not turn the transmission over as this will contaminate the valve body with any foreign matter at the bottom on the pan.

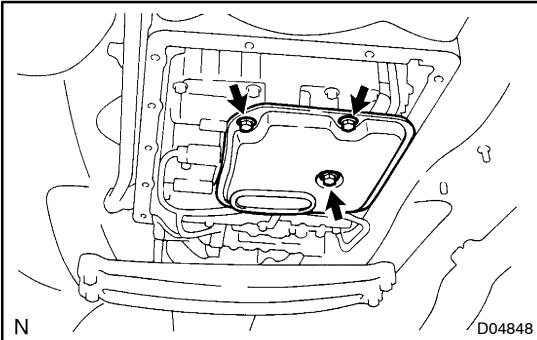
- (a) Remove the 14 bolts.
- (b) Remove the pan by lifting the transmission case.
- (c) Remove the oil pan gasket.

**15. EXAMINE PARTICLES IN PAN**

Remove the magnets and use them to collect any steel chips. Look carefully at the chips and particles in the pan and the magnet to anticipate what type of wear you will find in the transmission.

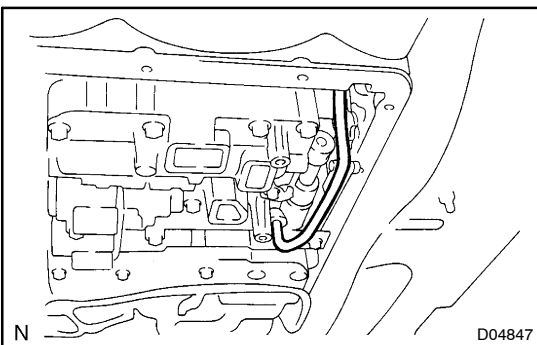
Steel (magnetic): bearing, gear and plate wear

Brass (non-magnetic): bushing wear

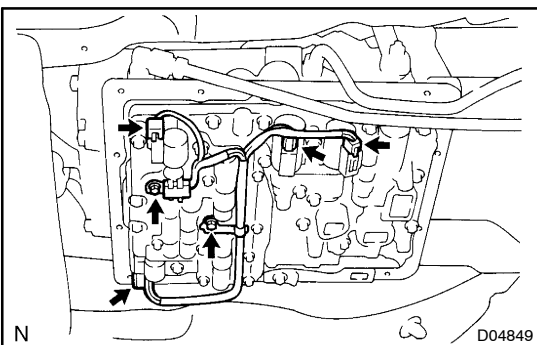
**16. REMOVE OIL STRAINER**

(a) Remove the 3 bolts and oil strainer.

(b) Remove the 3 gaskets.

**17. REMOVE OIL PIPE**

Pry up both oil pipe ends with a large screwdriver and remove the oil pipe.

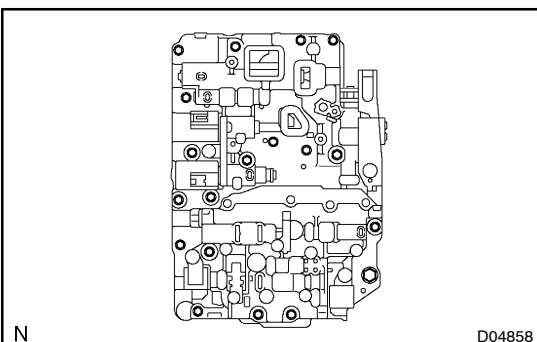
**18. REMOVE SOLENOID WIRING WITH ATF TEMPERATURE SENSOR**

(a) Remove the bolt and disconnect the ATF temperature sensor.

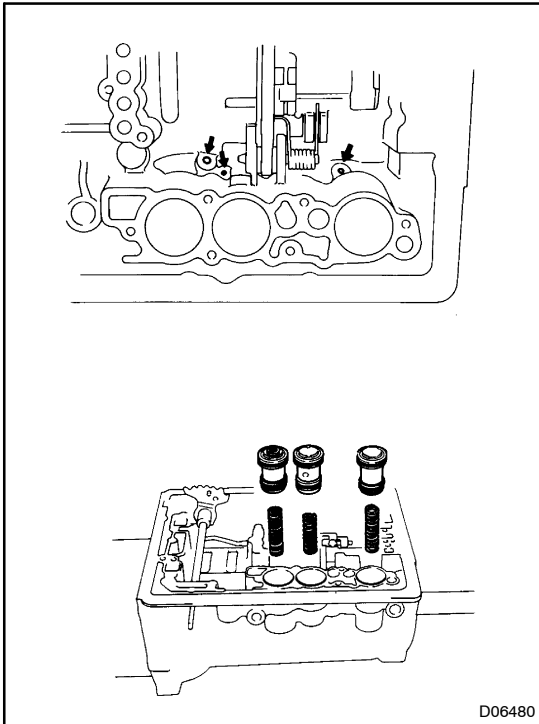
(b) Remove the bolt and clamp.

(c) Disconnect the 4 connectors from the solenoid.

(d) Remove the clamp from the ATF temperature sensor.

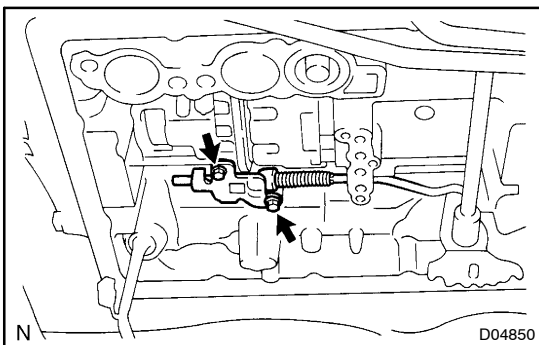
**19. REMOVE VALVE BODY**

(a) Remove the 17 bolts.

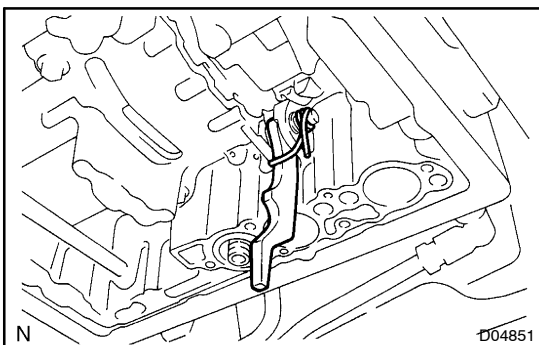
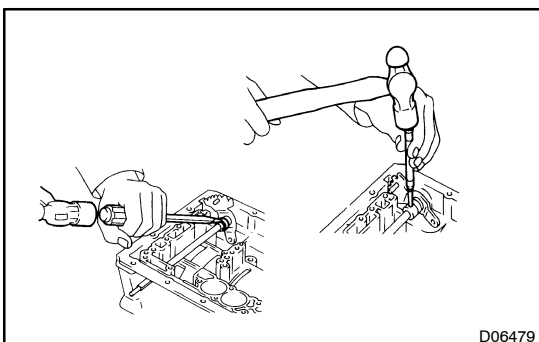
**20. REMOVE ACCUMULATOR PISTON AND SPRING****CAUTION:**

Keep face away to avoid injury. Do not use regular high-pressure air.

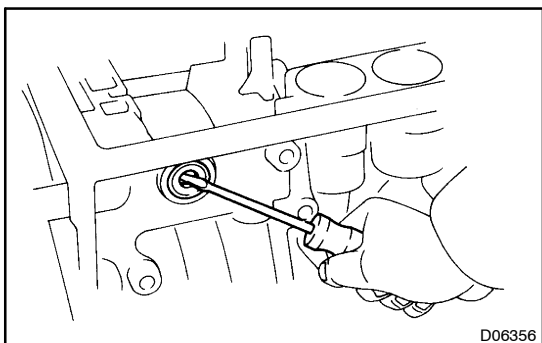
- (a) Position a rag to catch each piston.
- (b) Applying compressed air to the oil holes shown, and remove the 3 pistons and springs.
- (c) Remove the 2 O-rings from each piston.

**21. REMOVE PARKING LOCK PAWL BRACKET**

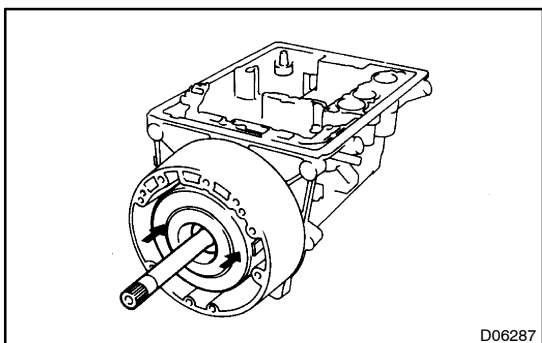
Remove the 2 bolts and parking lock pawl bracket.

**22. REMOVE SPRING, PARKING LOCK PAWL PIN AND PARKING LOCK PAWL****23. REMOVE MANUAL VALVE LEVER SHAFT**

- (a) Using a hammer and screwdriver, pry and shift the spacer.
- (b) Using a hammer and pin punch, drive out the pin.
- (c) Slide the manual valve lever shaft out case and remove the manual valve lever and spacer.

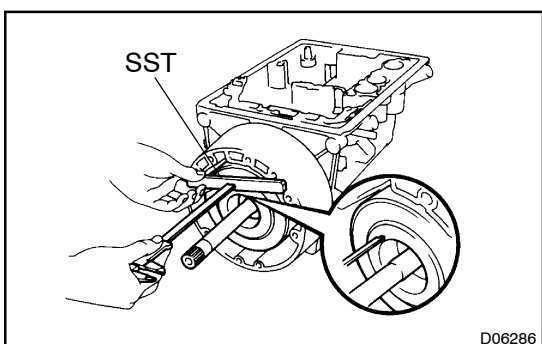


- (d) Using a screwdriver, remove the 2 oil seals.



24. MEASURE INSTALLATION DISTANCE OF O/D DIRECT CLUTCH

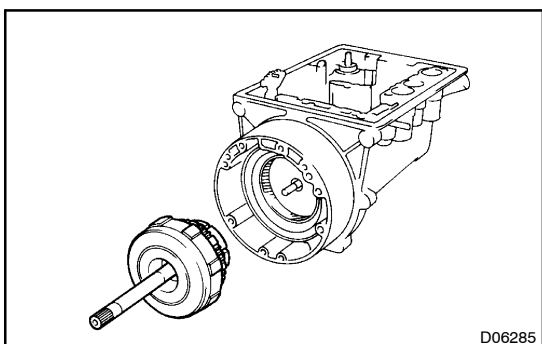
- (a) Push the input shaft and drum toward the rear to make sure the O/D direct clutch is installed correctly.



- (b) Place SST on the O/D case.
SST 09350-20015 (09370-12010)
- (c) Using calipers, measure distance between the tops of SST and clutch drum.

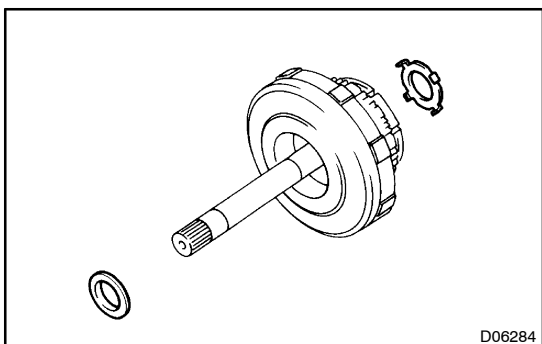
HINT:

Make a note of the measurement for the reference at assembly.

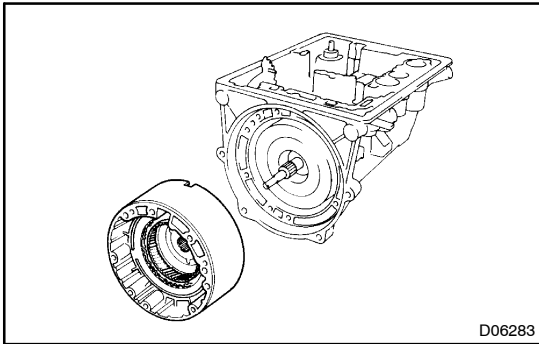


25. REMOVE O/D PLANETARY GEAR UNIT WITH O/D DIRECT CLUTCH AND ONE-WAY CLUTCH

- (a) Remove the O/D planetary gear with the O/D direct clutch and one-way clutch from the O/D case.



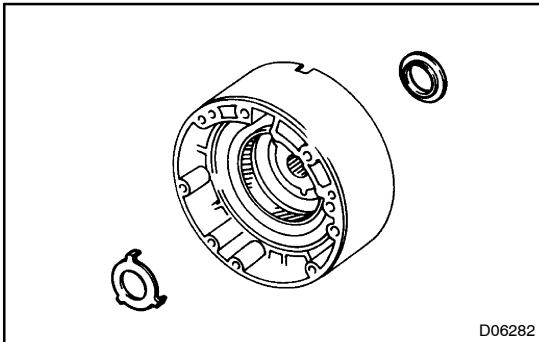
- (b) Remove the race and thrust washer.

**26. REMOVE O/D CASE**

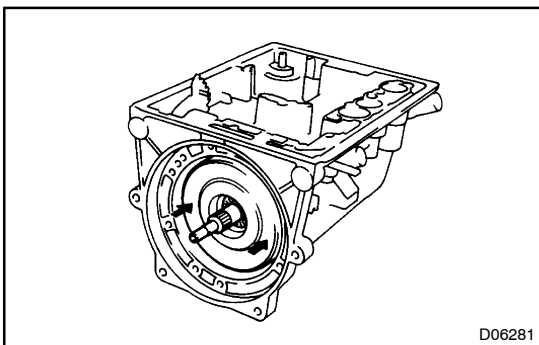
- (a) Remove the O/D case from the transmission case.

HINT:

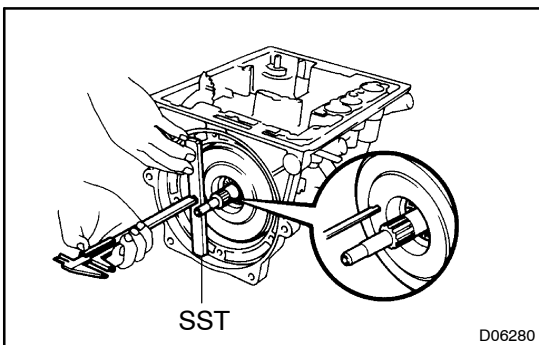
When the O/D case is removed, the front clutch sometimes adheres to it.



- (b) Remove the 2 races.

**27. MEASURE INSTALLATION DISTANCE OF FRONT CLUTCH**

- (a) Push the input shaft and drum toward the rear to make sure the front clutch is installed correctly.



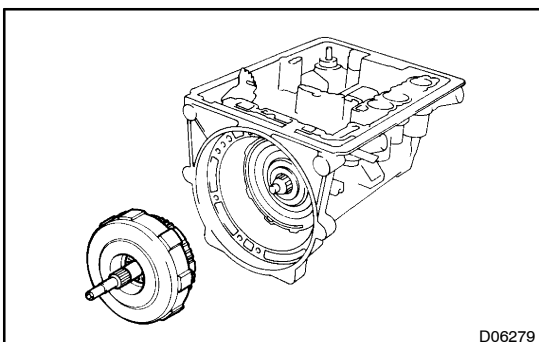
- (b) Place SST on the transmission case.

SST 09350-20015 (09370-12010)

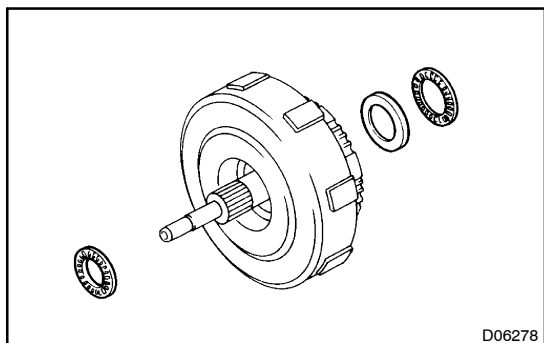
- (c) Using calipers, measure distance between the tops of SST and clutch drum.

HINT:

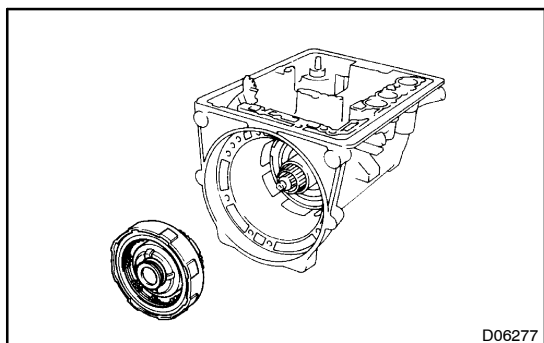
Make a note of the measurement for the reference at assembly.

**28. REMOVE FRONT CLUTCH**

- (a) Remove the front clutch from the transmission case.

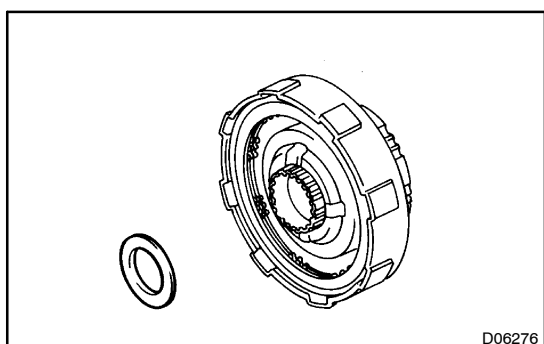


(b) Remove the 2 bearings and race.

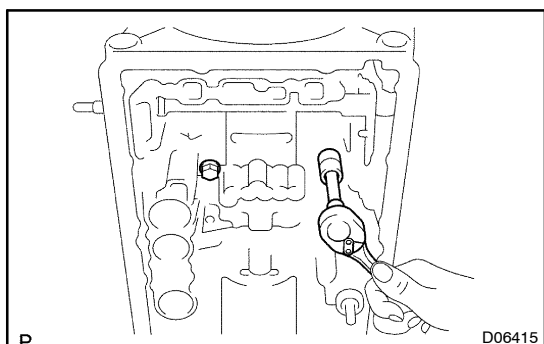


29. REMOVE REAR CLUTCH

(a) Remove the rear clutch from the transmission case.



(b) Remove the race.

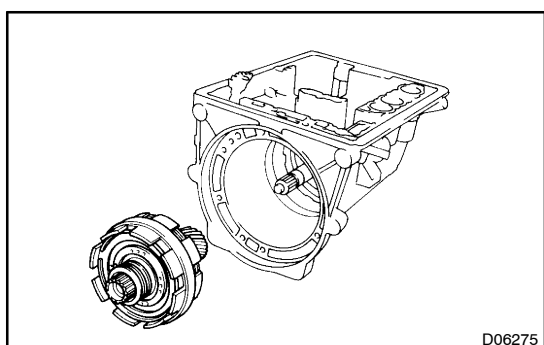


30. REMOVE CENTER SUPPORT

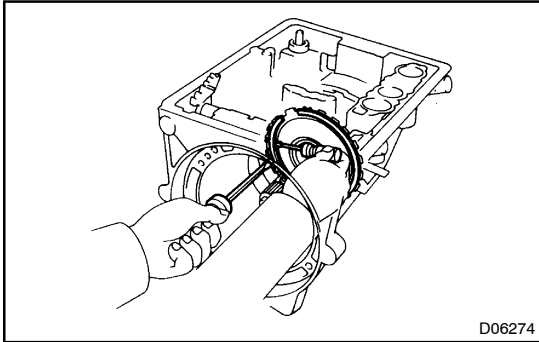
(a) Remove the 2 center support bolts and wave washers.

HINT:

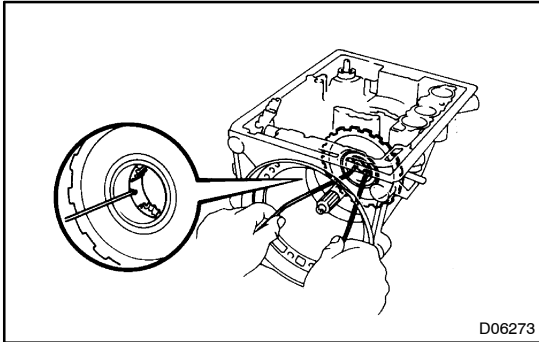
After removing 1 bolt, the other 1 will be loose.



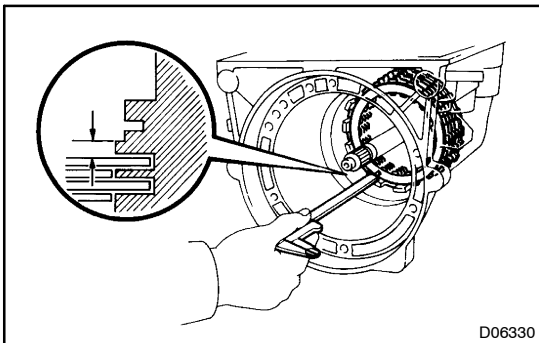
(b) Remove the center support from the transmission case.

**31. REMOVE FRONT PLANETARY GEAR UNIT**

- (a) Using 2 screwdrivers, remove the snap ring.



- (b) Insert the 2 wires into the planetary gear and remove it.

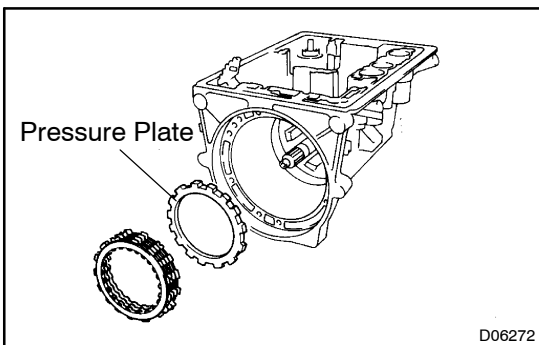
**32. CHECK PACK CLEARANCE OF NO. 3 BRAKE**

Using calipers, measure the clearance between the disc and transmission case, as shown.

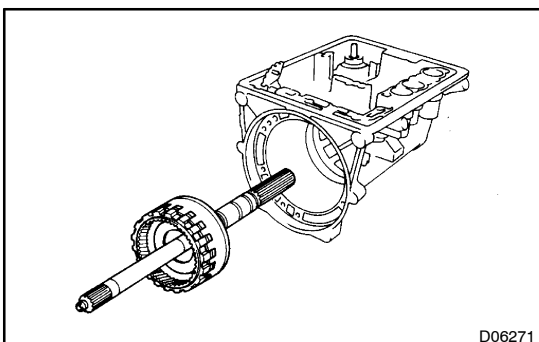
Clearance:

0.52 – 1.27 mm (0.0205 – 0.0500 in.)

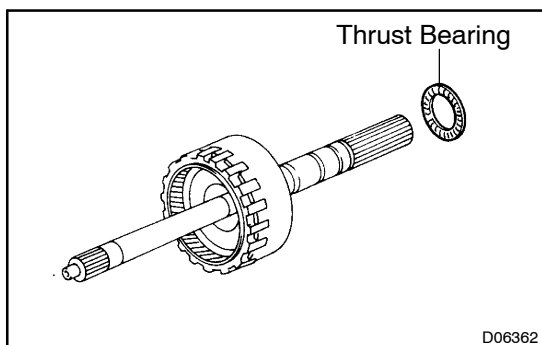
If the values are non-standard, inspect the discs
(See [page AT-78](#)).

**33. REMOVE NO. 3 BRAKE PACK AND PRESSURE PLATE**

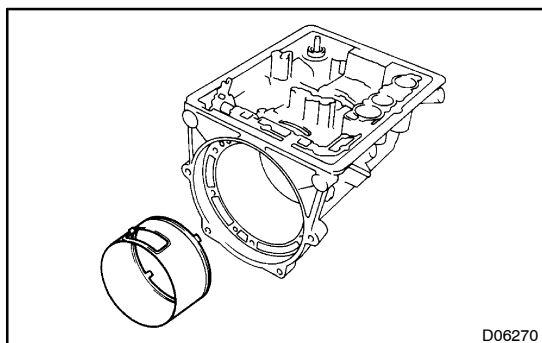
- (a) Remove the 5 discs and 4 plates.
(b) Remove the pressure plate.

**34. REMOVE REAR PLANETARY GEAR UNIT AND OUTPUT SHAFT**

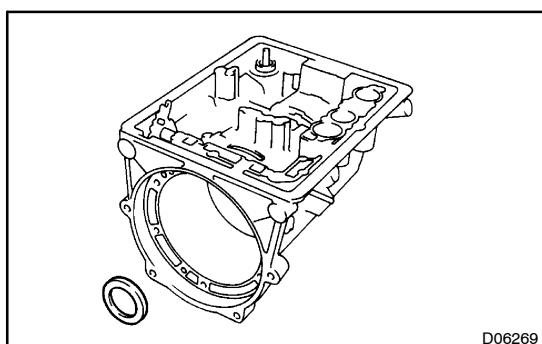
- (a) Remove the rear planetary gear unit and output shaft.



(b) Remove the bearing.

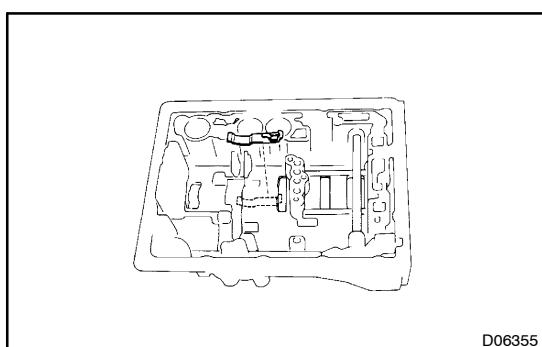


35. REMOVE BRAKE APPLY PIPE

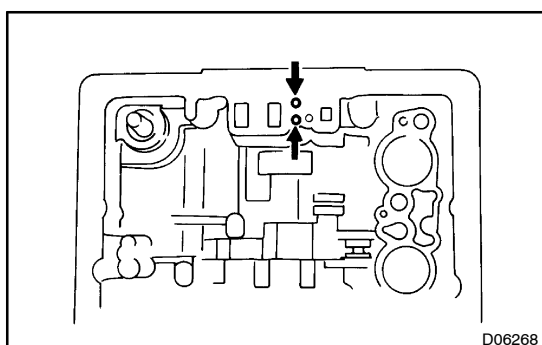


36. REMOVE RACE

Remove the race from the transmission case.

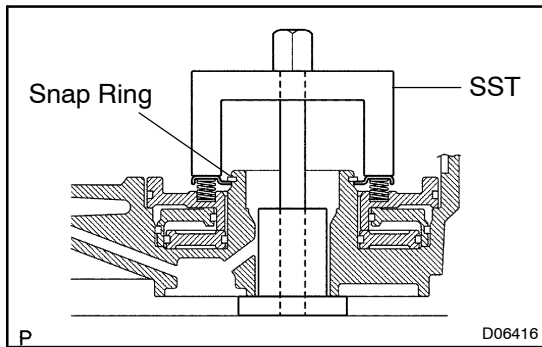


37. REMOVE LEAF SPRING

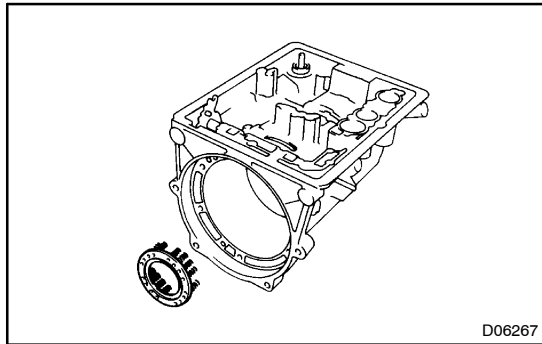


38. CHECK NO. 3 BRAKE PISTON MOVING

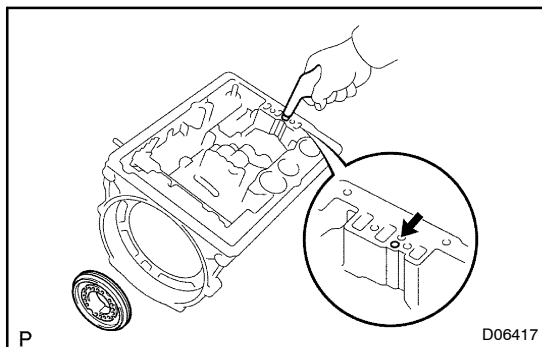
Make sure the No. 3 brake pistons move smoothly when applying and releasing the compressed air into the transmission case.



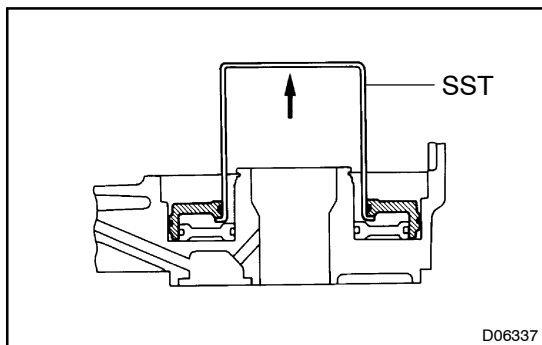
- 39. REMOVE COMPONENTS OF NO. 3 BRAKE PISTON**
- (a) Set SST on the spring retainer, and compress the return springs.
SST 09350-20015 (09369-20040)
 - (b) Using a snap ring expander, remove the snap ring.



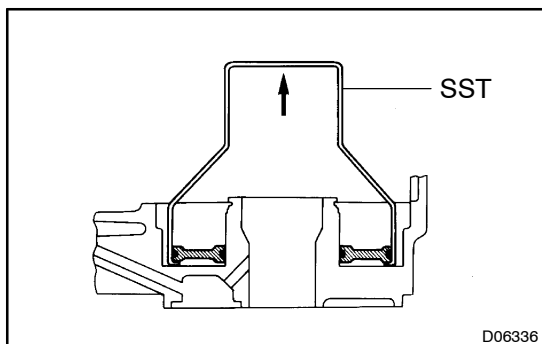
- (c) Remove the piston return spring.



- (d) Hold outer piston with hand, apply compressed air to the transmission case to remove the outer piston.
If the piston does not pop out with compressed air, lift the piston out with needle-nose pliers.
- (e) Remove the O-ring from the outer piston.



- (f) Insert SST behind the reaction sleeve and gradually lift it out of the transmission case.
SST 09350-30020 (09350-07080)
- (g) Remove the 2 O-rings from the reaction sleeve.



- (h) Insert SST behind the inner piston and gradually lift it out of the transmission case.
SST 09350-30020 (09350-07090)
- (i) Remove the 2 O-rings from the inner piston.