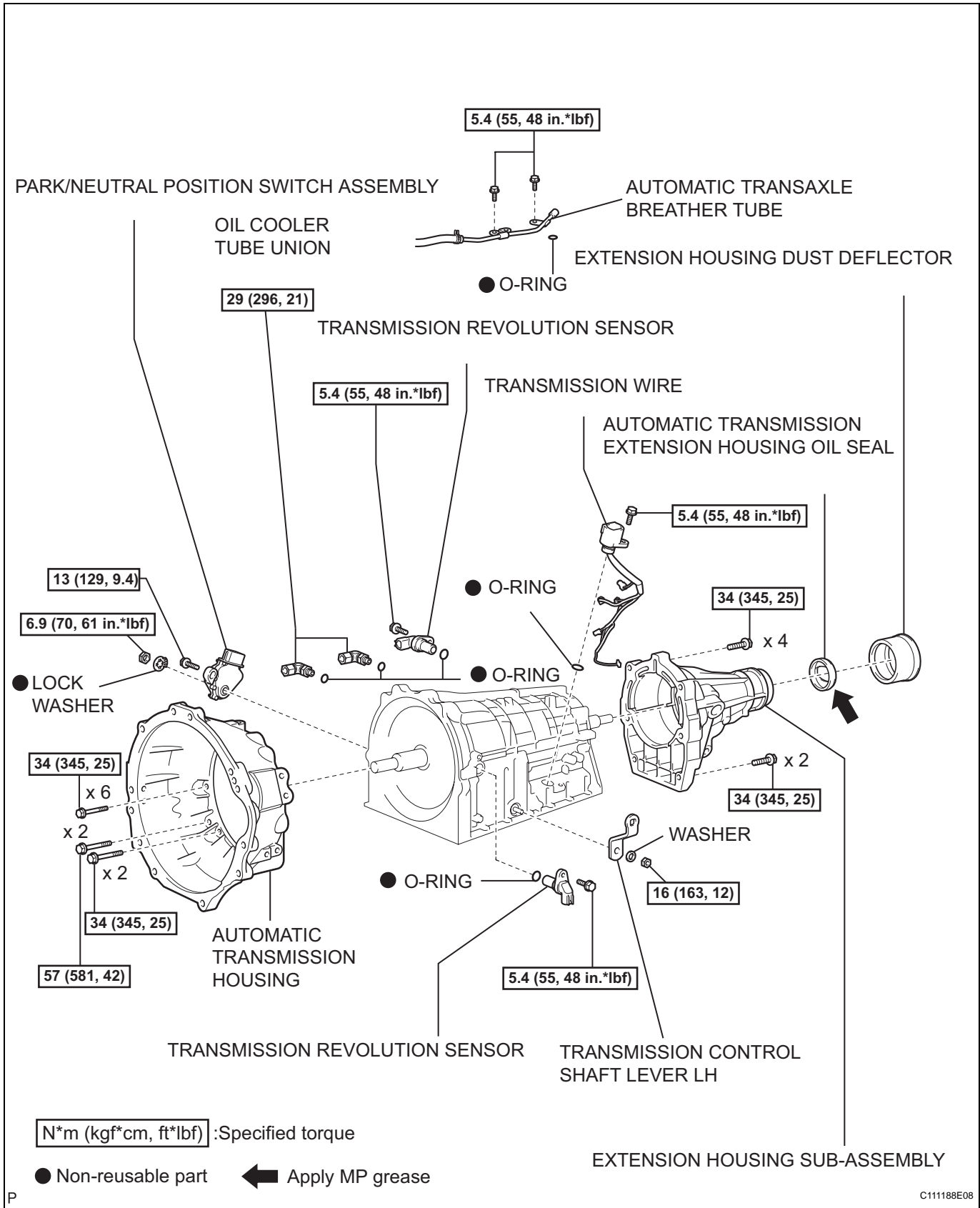
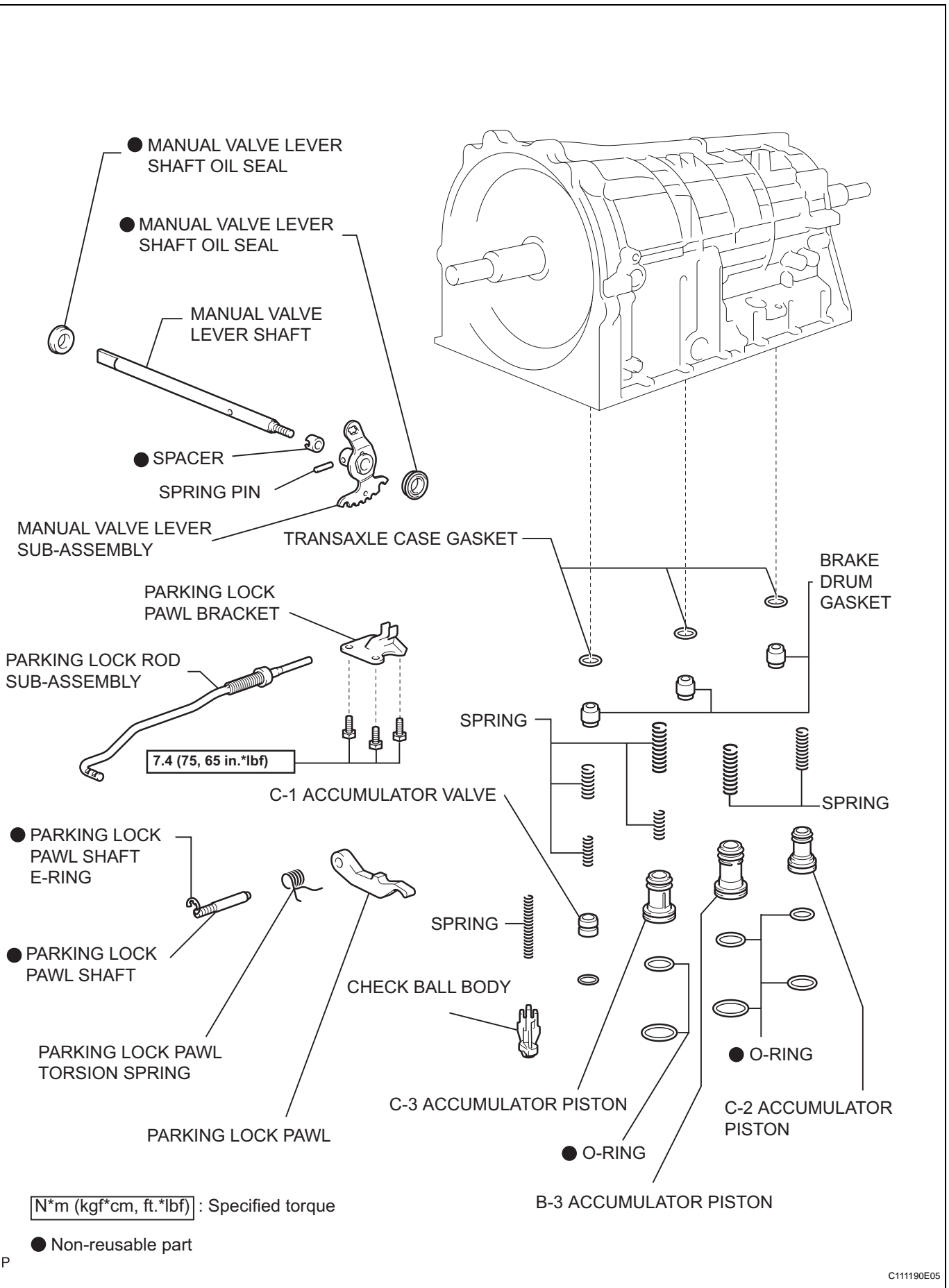


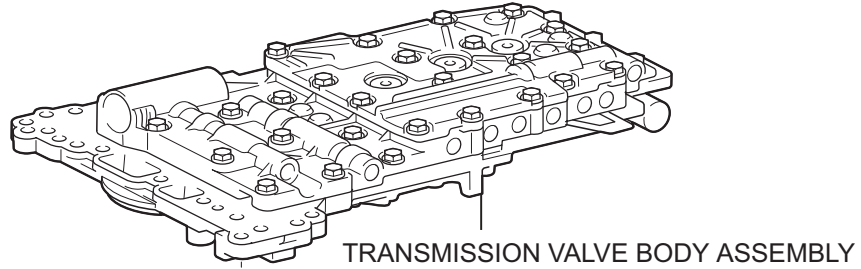
AUTOMATIC TRANSMISSION UNIT

COMPONENTS



AT



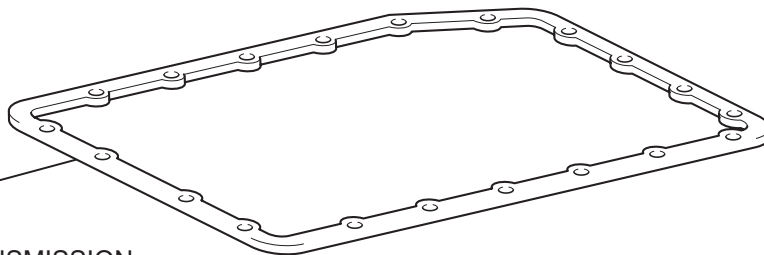


x 19
11 (112, 8)

● OIL STRAINER O-RING

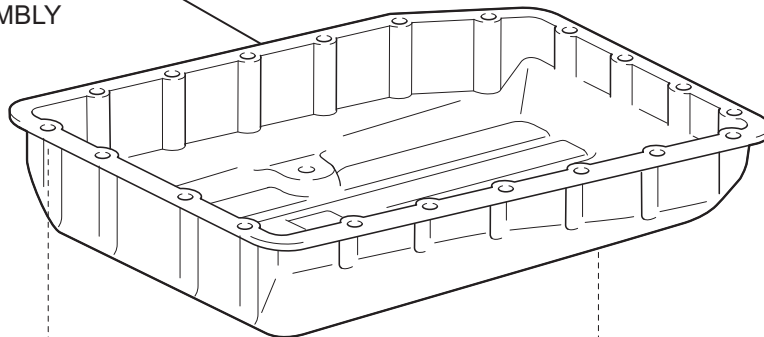


10 (100, 7) x 4



TRANSMISSION OIL CLEANER MAGNET

AUTOMATIC TRANSMISSION OIL PAN SUB-ASSEMBLY



4.4 (45, 39 in.*lbf) x 20

● GASKET

● GASKET

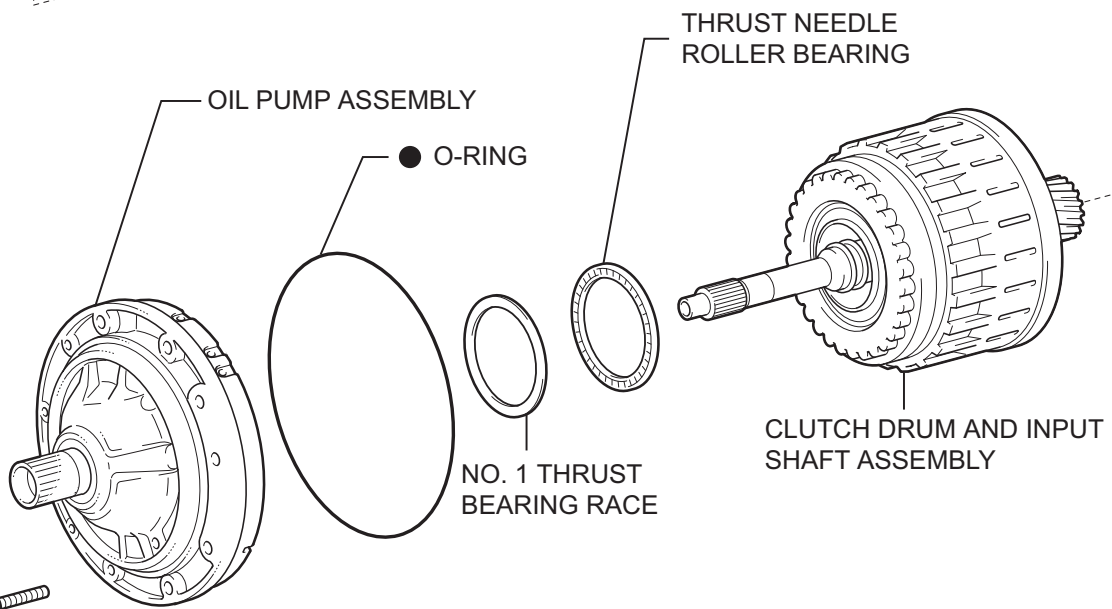
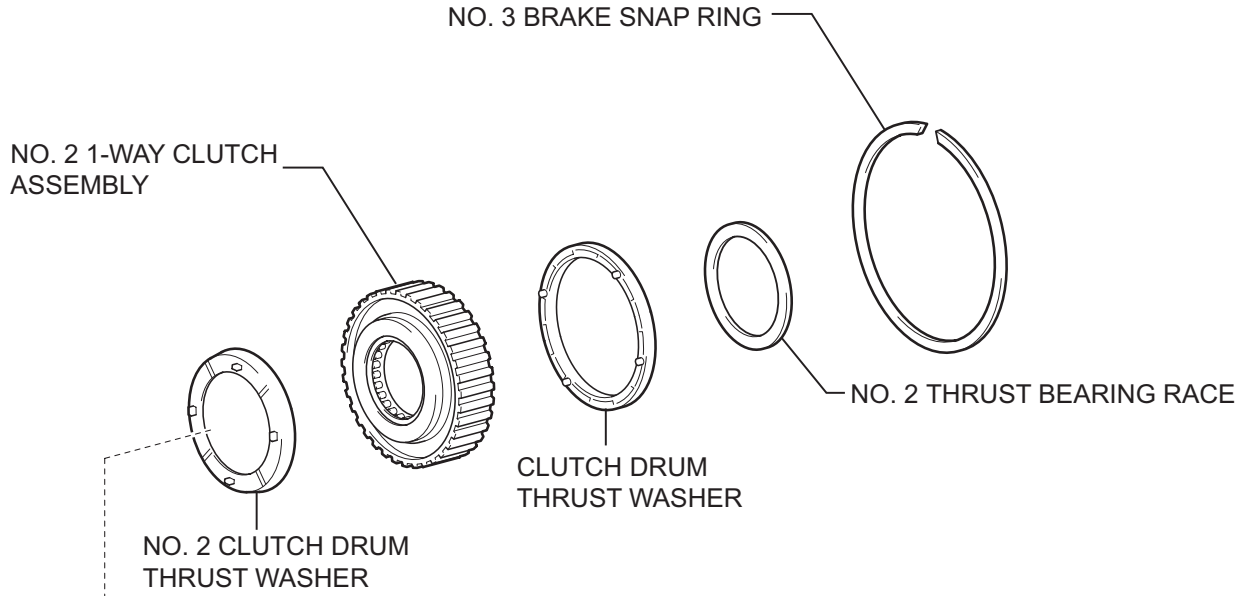
N*m (kgf*cm, ft*lbf) :Specified torque

20 (204, 15)

28 (285, 21)

● Non-reusable part

AT



x10

21 (214, 15)

N*m (kgf*cm, ft*lbf) :Specified torque

● Non-reusable part

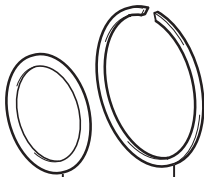
AT

NO. 3 BRAKE PISTON RETURN SPRING SUB-ASSEMBLY

2ND BRAKE CYLINDER

1-WAY CLUTCH ASSEMBLY

2ND BRAKE PISTON



2ND BRAKE PISTON SNAP RING

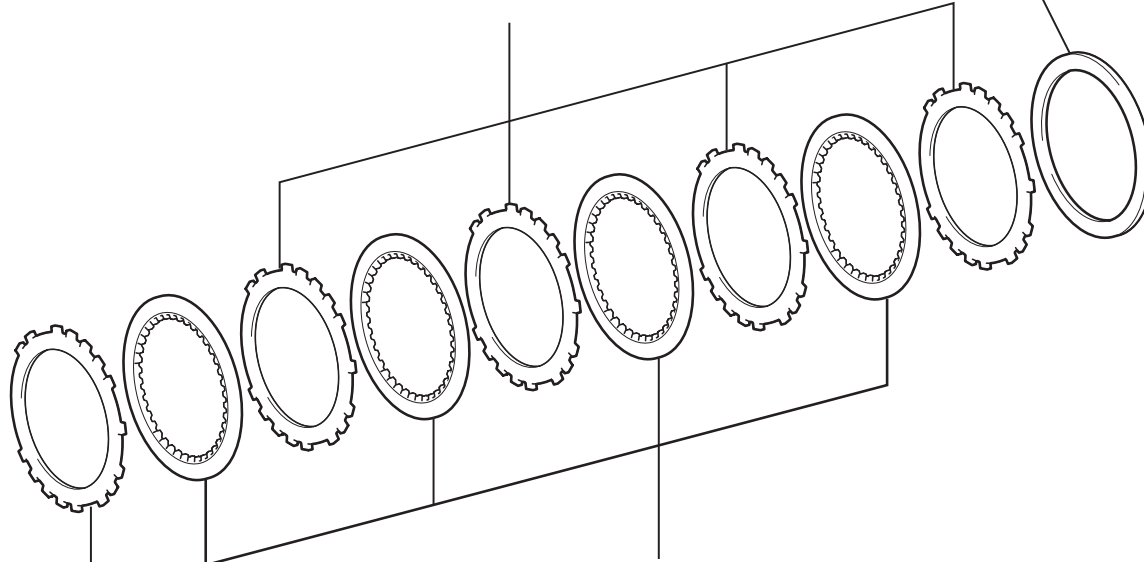
● 2ND BRAKE PISTON O-RING

NO. 1 PLANETARY CARRIER THRUST WASHER

2ND BRAKE PISTON HOLE SNAP RING

CUSHION PLATE

NO. 3 BRAKE PLATE



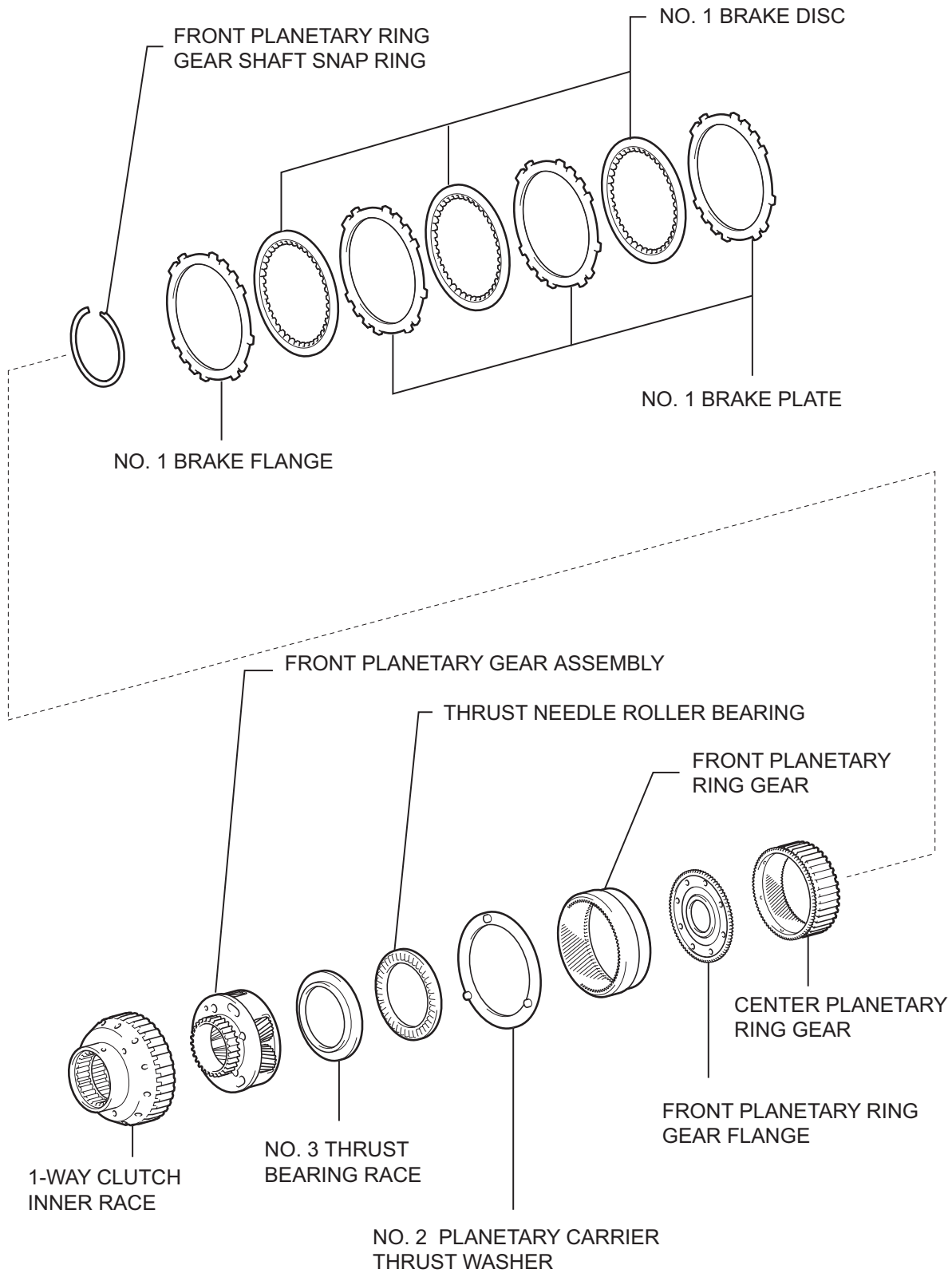
NO. 3 BRAKE DISC

NO. 3 BRAKE FLANGE

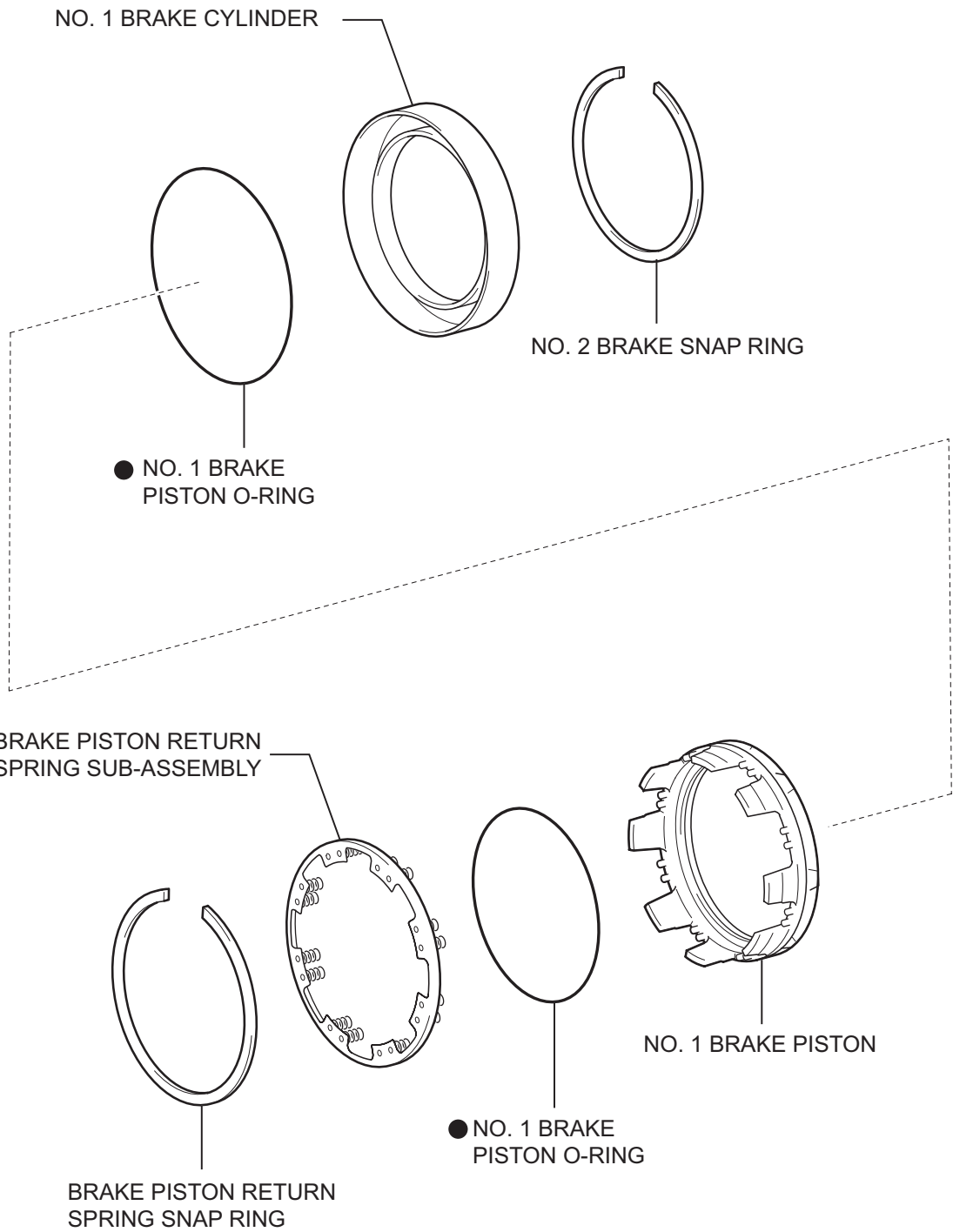
● Non-reusable part

AT

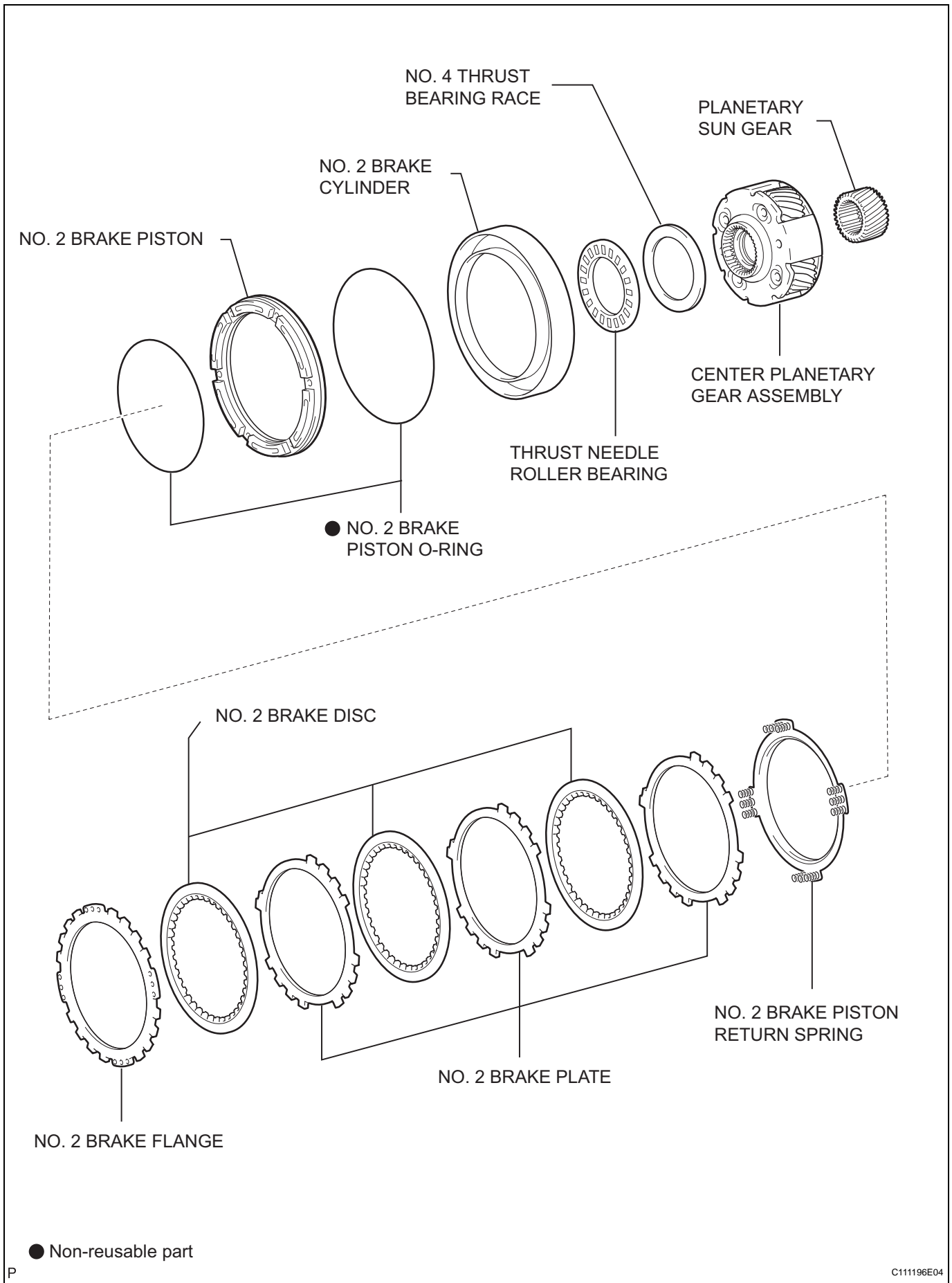
P



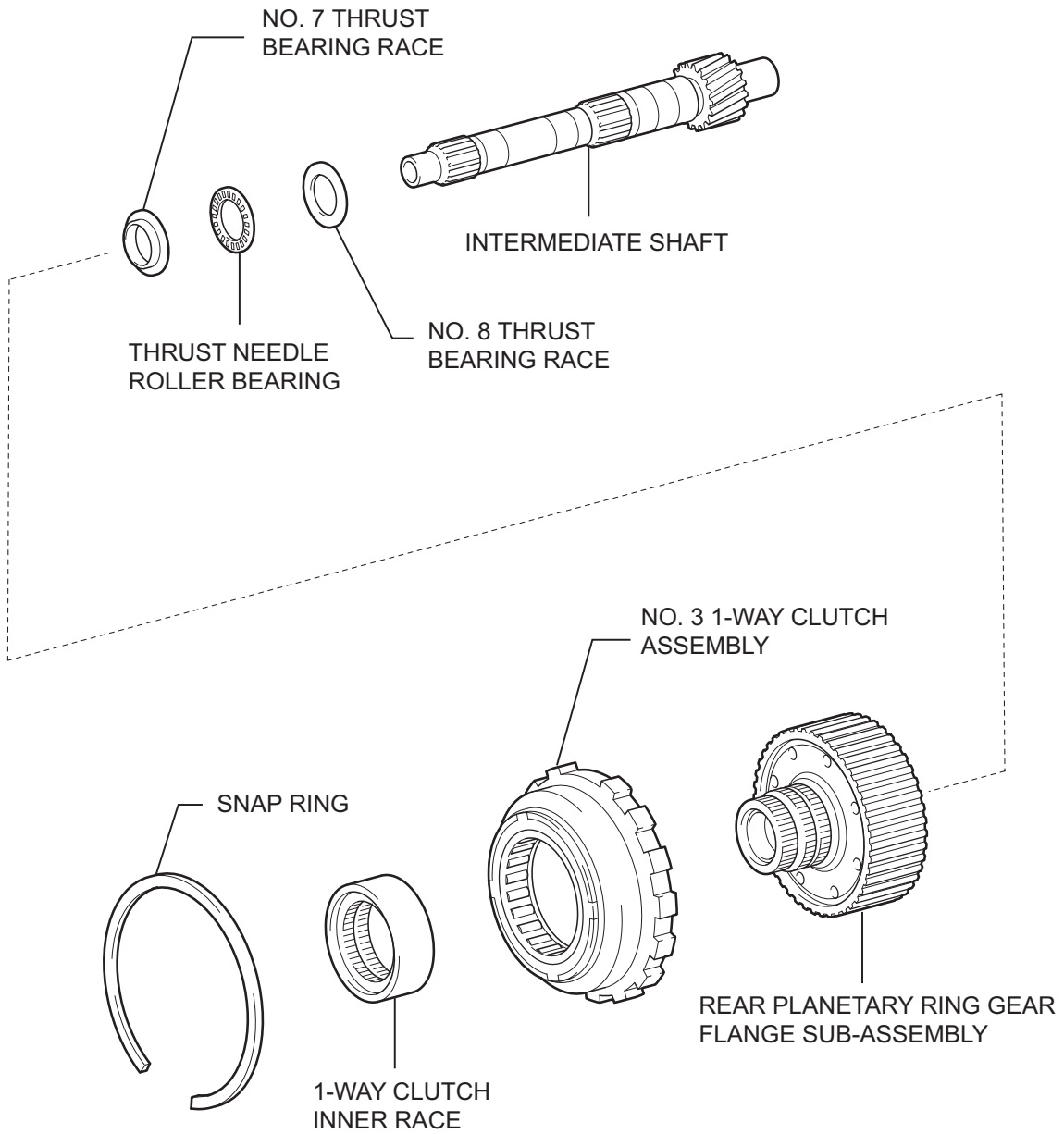
AT



● Non-reusable part

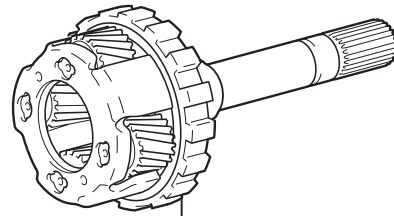


AT



AT

THRUST NEEDLE
ROLLER BEARING

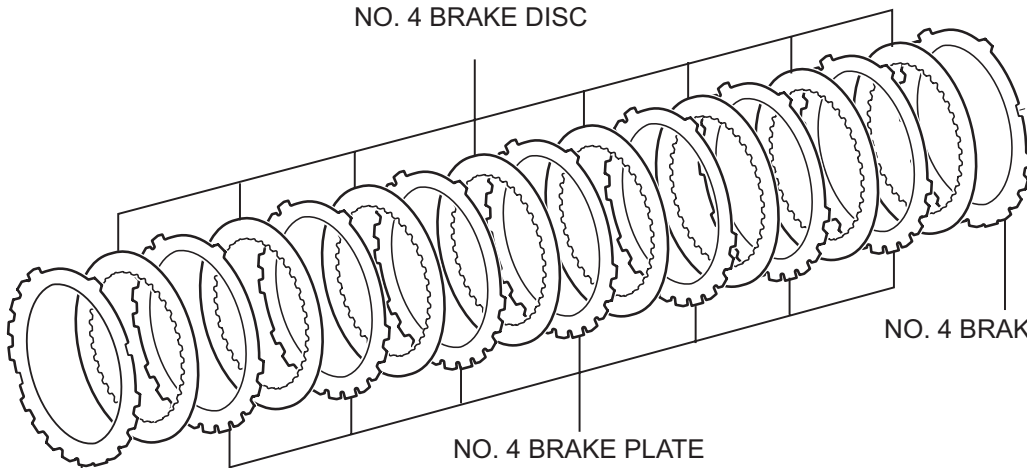


REAR PLANETARY GEAR ASSEMBLY



NO. 9 THRUST
BEARING RACE

NO. 4 BRAKE DISC

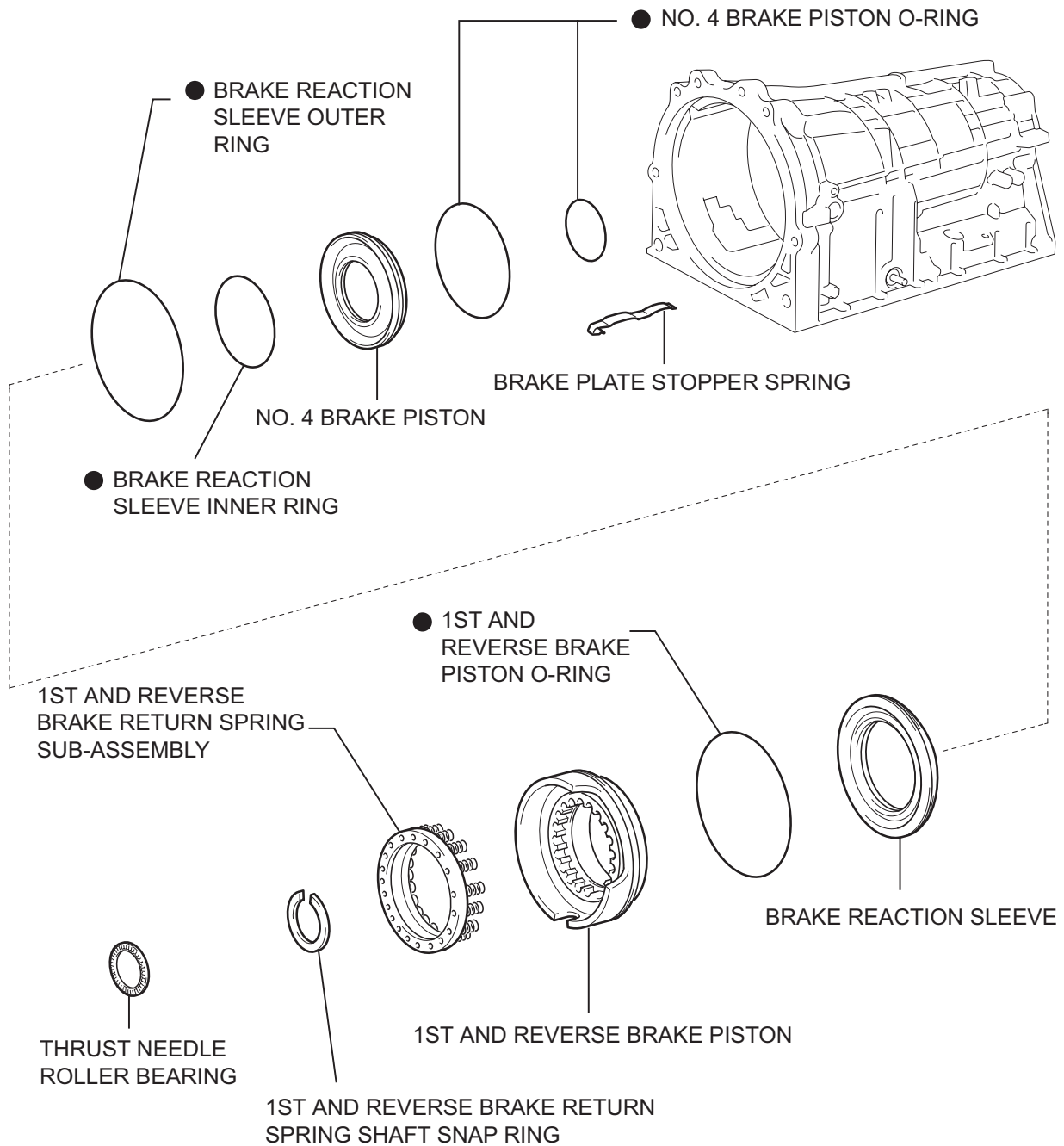


NO. 4 BRAKE FLANGE

NO. 4 BRAKE PLATE

NO. 4 BRAKE FLANGE

AT



AT

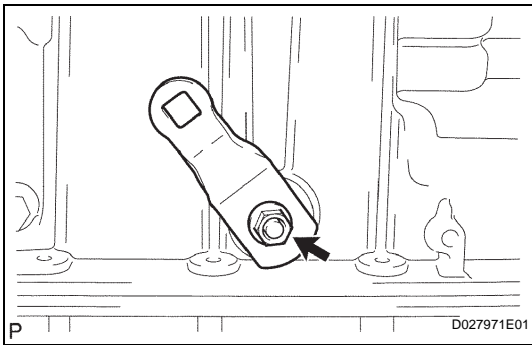
● Non-reusable part

P

DISASSEMBLY

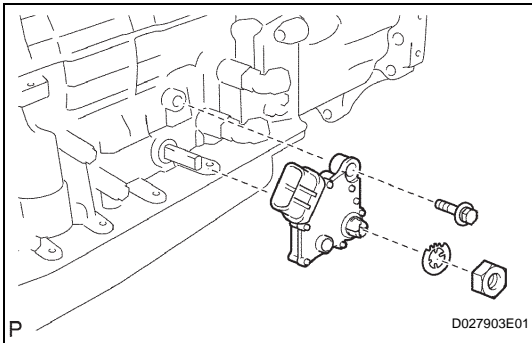
1. REMOVE TRANSMISSION CONTROL SHAFT LEVER LH

- (a) Remove the nut, washer and control shaft lever LH.



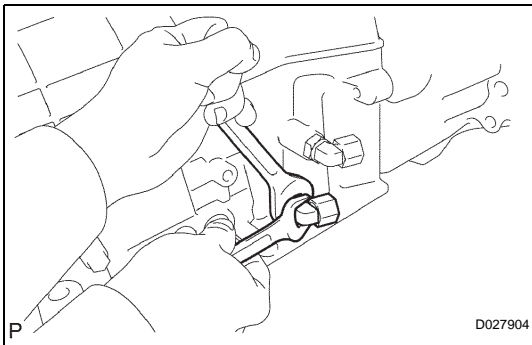
2. REMOVE PARK/NEUTRAL POSITION SWITCH ASSEMBLY

- (a) Using a screwdriver, pry out the lock washer.
 (b) Remove the nut, lock washer and bolt.
 (c) Remove the park/neutral position switch.



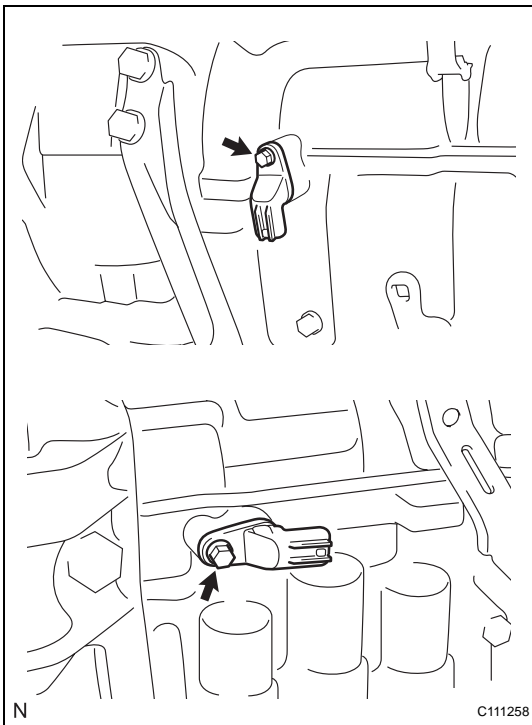
3. REMOVE OIL COOLER TUBE UNION

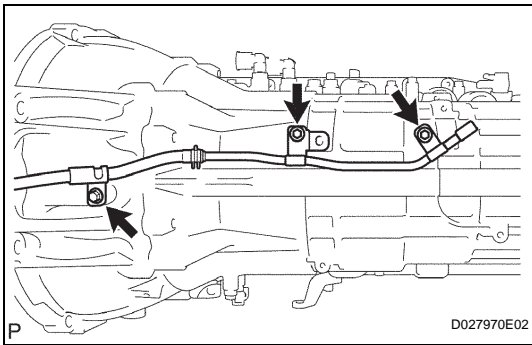
- (a) Remove the 2 oil cooler tube unions.
 (b) Remove the O-ring from the oil cooler tube union.



4. REMOVE TRANSMISSION REVOLUTION SENSOR

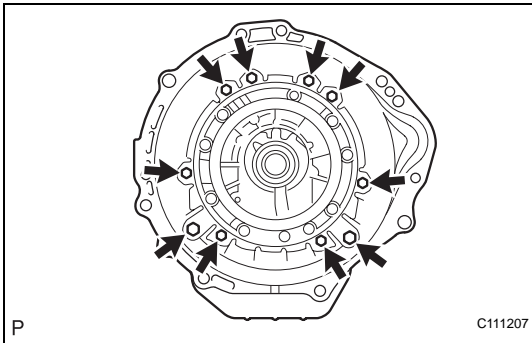
- (a) Remove the 2 bolts and 2 transmission revolution sensors.
 (b) Remove the O-ring from each sensor.





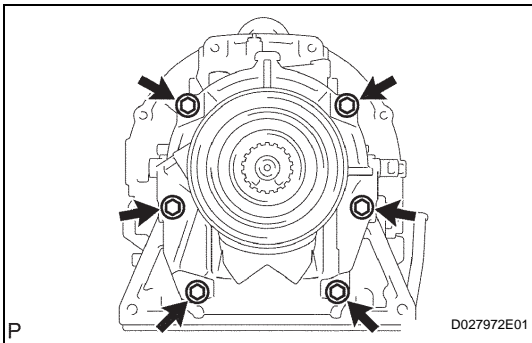
5. REMOVE AUTOMATIC TRANSAXLE BREATHER TUBE

- (a) Remove the 3 bolts.
- (b) Remove the breather tube.
- (c) Remove the O-ring from breather tube.



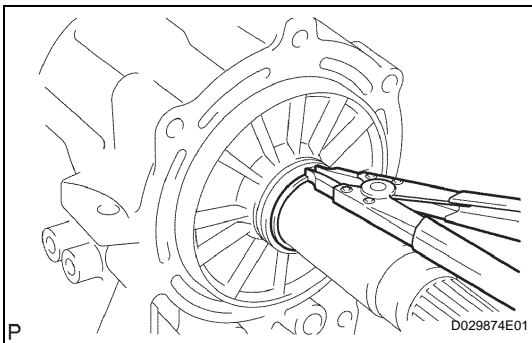
6. REMOVE AUTOMATIC TRANSMISSION HOUSING

- (a) Remove the 10 bolts.
- (b) Remove the transmission housing.

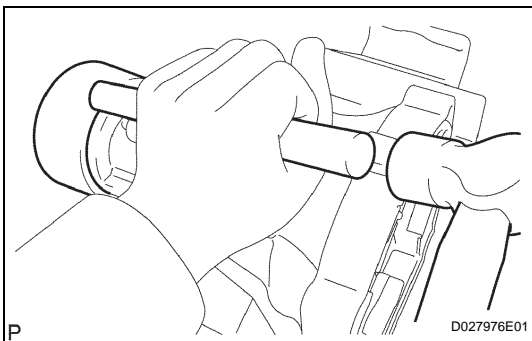


7. REMOVE EXTENSION HOUSING SUB-ASSEMBLY

- (a) Remove the 6 bolts.
- (b) Remove the extension housing assembly.
HINT:
Use a brass bar and hammer to remove the extension housing assembly.
- (c) Remove the gasket from the extension housing assembly.

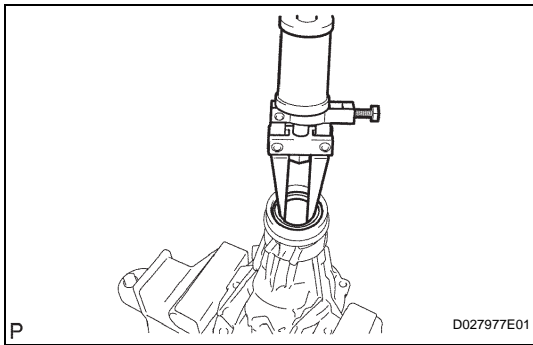


- (d) Using a snap ring expander, remove the snap ring.
- (e) Remove the thrust needle roller bearing and 2 bearing races.



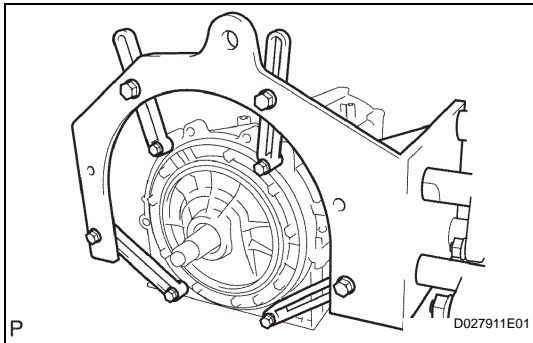
8. REMOVE EXTENSION HOUSING DUST DEFLECTOR

- (a) Using a brass bar and hammer, remove the extension housing dust deflector.



9. REMOVE AUTOMATIC TRANSMISSION EXTENSION HOUSING OIL SEAL

- (a) Using SST, tap out the oil seal.
SST 09308-00010



10. FIX AUTOMATIC TRANSMISSION CASE SUB-ASSEMBLY

- (a) Install the transmission case onto the overhaul attachment.

11. REMOVE AUTOMATIC TRANSMISSION OIL PAN SUB-ASSEMBLY

NOTICE:

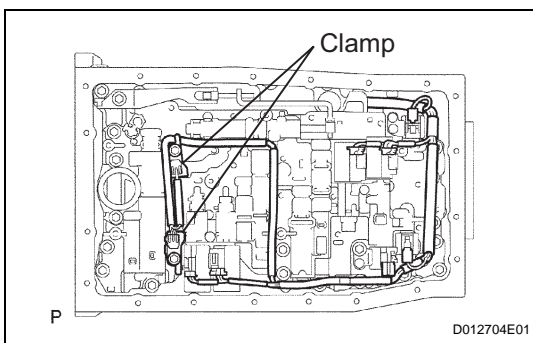
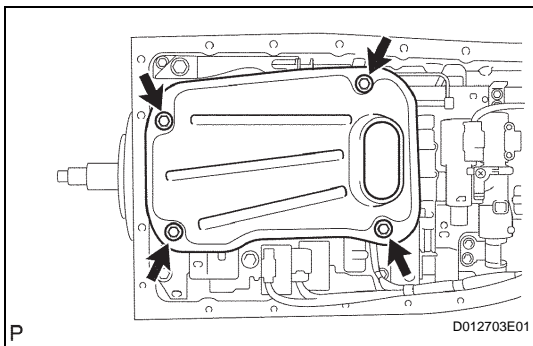
Do not turn the transmission over as this will contaminate the valve body with foreign matter on the bottom of the pan.

- (a) Remove the drain plug and 20 bolts.

12. INSPECT AUTOMATIC TRANSMISSION OIL PAN SUB-ASSEMBLY (See page [AT-211](#))

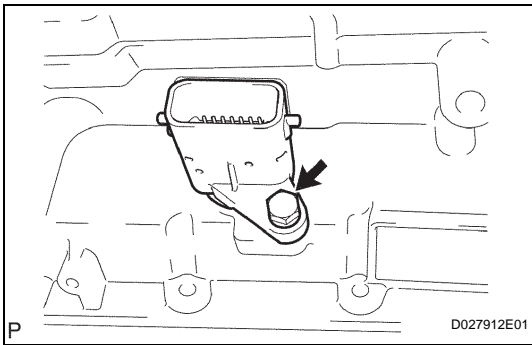
13. REMOVE VALVE BODY OIL STRAINER ASSEMBLY

- (a) Turn over the transmission.
- (b) Remove the 4 bolts holding the valve body oil strainer assembly from the valve body.
- (c) Remove the O-ring from the valve body oil strainer assembly.

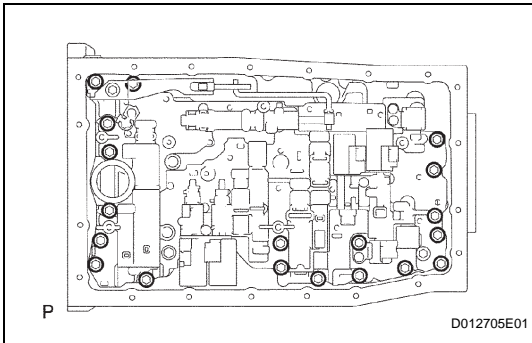


14. REMOVE TRANSMISSION WIRE

- (a) Remove the ATF temperature sensor.
- (b) Remove the 2 bolts and 2 clamps.
- (c) Disconnect the 7 connectors from the shift solenoid valves.

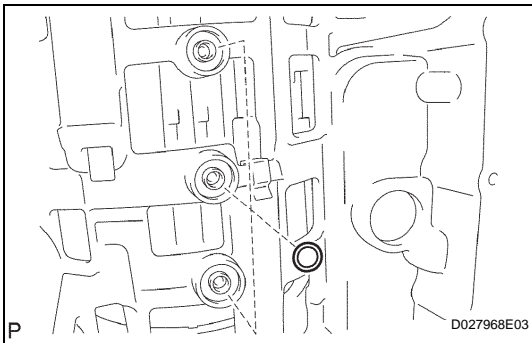


- (d) Remove the bolt from the case.
- (e) Pull the transmission wire out of the transmission case.
- (f) Remove the O-ring from the transmission wire.



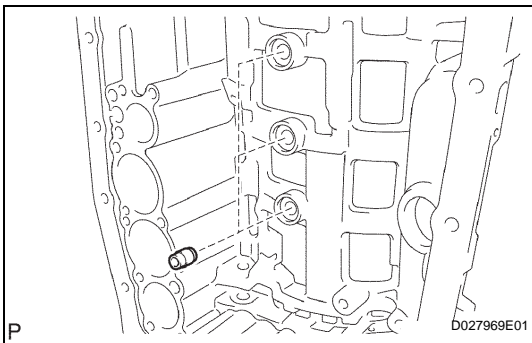
15. REMOVE TRANSMISSION VALVE BODY ASSEMBLY

- (a) Remove the 19 bolts.
- (b) Remove the valve body assembly.



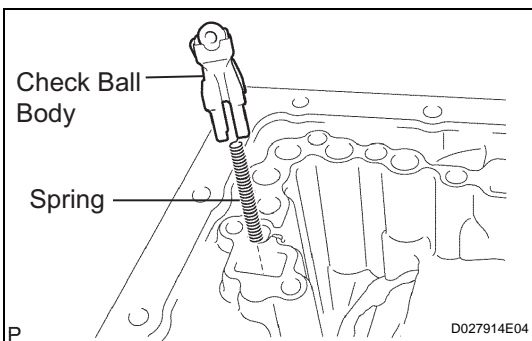
16. REMOVE TRANSAXLE CASE GASKET

- (a) Remove the 3 transaxle case gaskets.



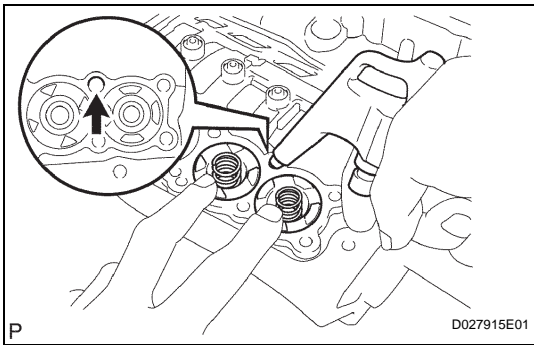
17. REMOVE BRAKE DRUM GASKET

- (a) Remove the 3 brake drum gaskets.



18. REMOVE CHECK BALL BODY

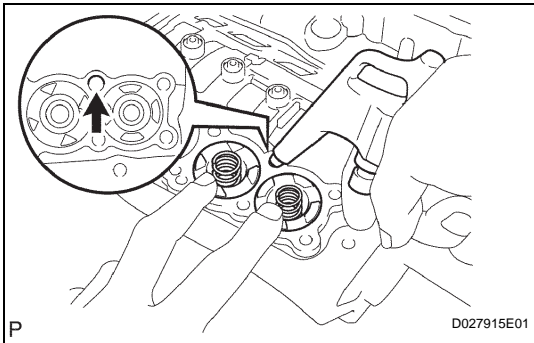
- (a) Remove the check ball body and spring.

**19. REMOVE C-2 ACCUMULATOR PISTON**

- (a) Applying compressed air to the oil hole, remove the C-2 accumulator piston and spring.
- (b) Remove the 2 O-rings from the piston.

NOTICE:

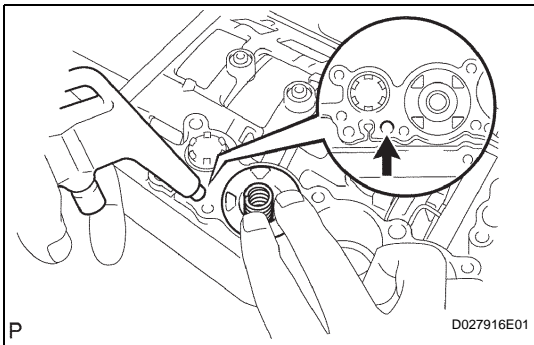
Be careful as the C-3 and B-3 accumulator pistons may jump out.

**20. REMOVE B-3 ACCUMULATOR PISTON**

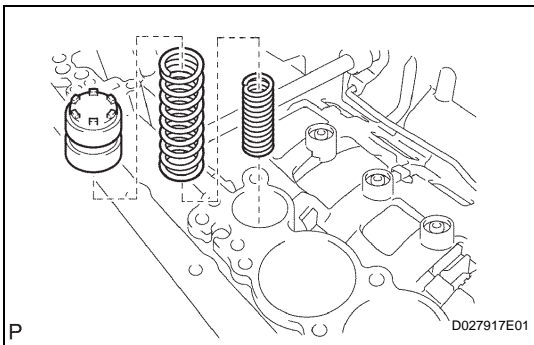
- (a) Applying compressed air to the oil hole, remove the B-3 accumulator piston and spring.
- (b) Remove the 2 O-rings from the piston.

NOTICE:

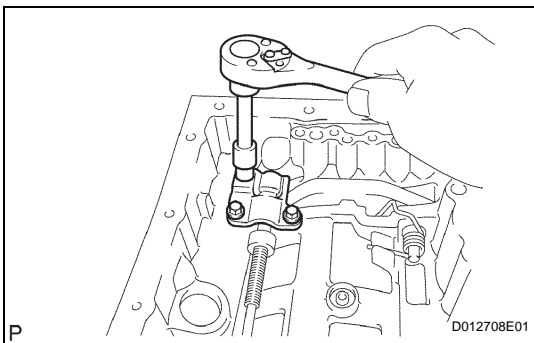
Be careful as the C-3 accumulator piston may jump out.

**21. REMOVE C-3 ACCUMULATOR PISTON**

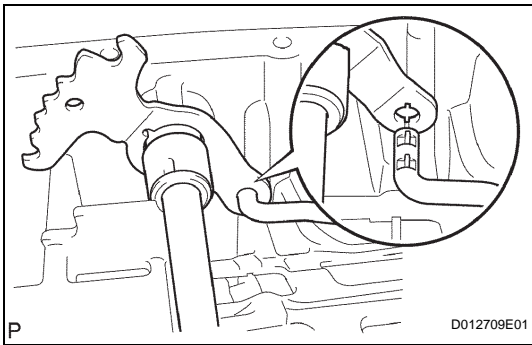
- (a) Applying compressed air to the oil hole, remove the C-3 accumulator piston and the 2 springs.
- (b) Remove the 2 O-rings from the piston.

**22. REMOVE C-1 ACCUMULATOR VALVE**

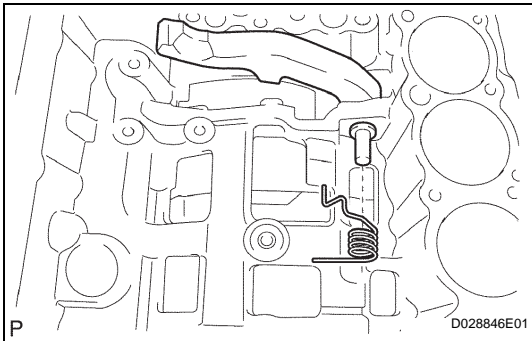
- (a) Remove the C-1 accumulator valve and 2 springs.

**23. REMOVE PARKING LOCK PAWL BRACKET**

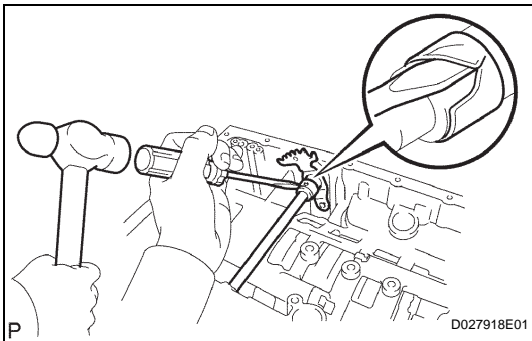
- (a) Remove the 3 bolts and parking lock pawl bracket.

**24. REMOVE PARKING LOCK ROD SUB-ASSEMBLY**

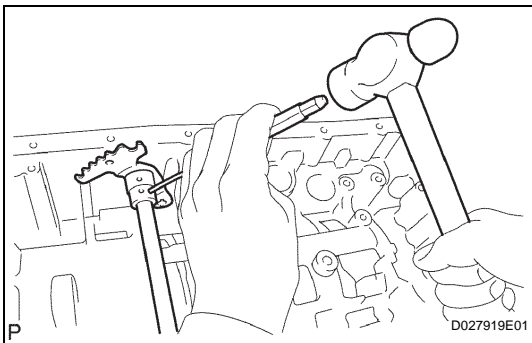
- (a) Disconnect the parking lock rod from the manual valve lever.

**25. REMOVE PARKING LOCK PAWL SHAFT**

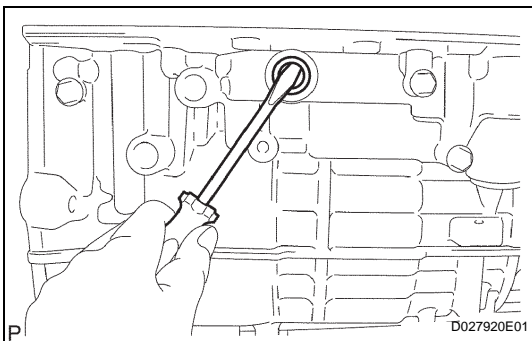
- (a) Pull out the parking lock pawl shaft from the front side, and then remove the lock pawl and spring.
- (b) Remove the E-ring from the shaft.

**26. REMOVE MANUAL VALVE LEVER SUB-ASSEMBLY**

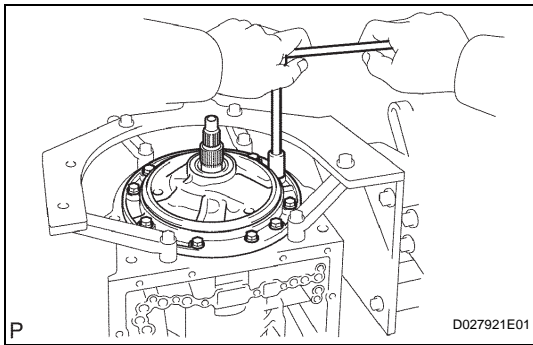
- (a) Using a hammer and screwdriver, cut off the spacer and remove it from the shaft.



- (b) Using a pin punch and hammer, tap out the spring pin.
HINT:
Slowly drive out the spring pin so that it does not fall into the transmission case.
- (c) Pull the manual valve lever shaft out through the case, and remove the manual valve lever.

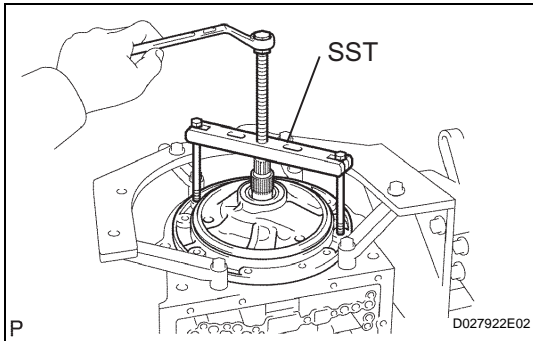
**27. REMOVE MANUAL VALVE LEVER SHAFT OIL SEAL**

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

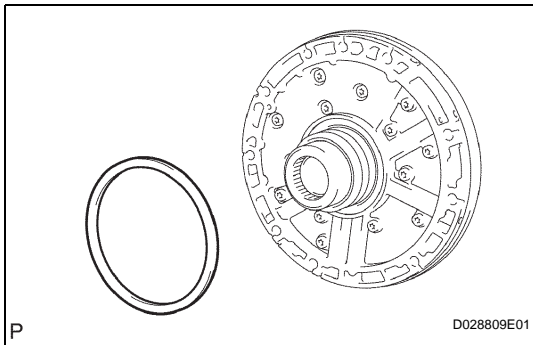


28. REMOVE OIL PUMP ASSEMBLY

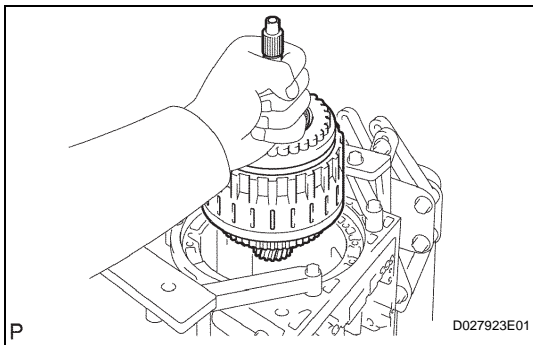
- (a) Remove the 10 bolts holding the oil pump from the transmission case.



- (b) Using SST, remove the oil pump.
SST 09350-30020 (09350-07020)

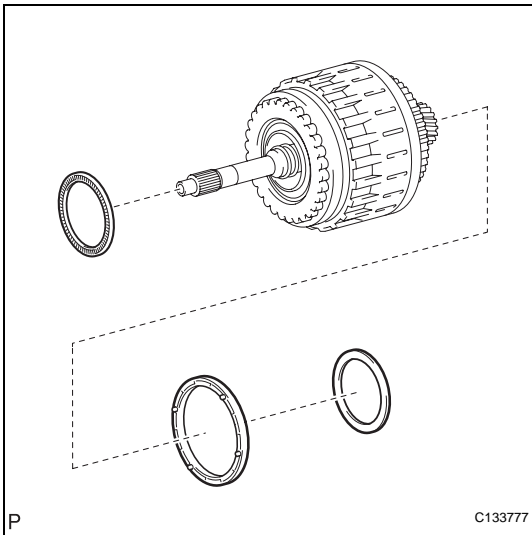


- (c) Remove the No. 1 thrust bearing race from the front oil pump.



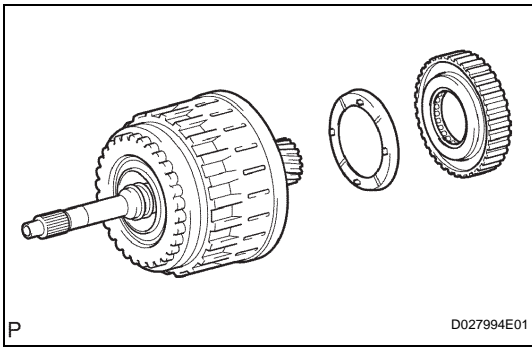
29. REMOVE CLUTCH DRUM AND INPUT SHAFT ASSEMBLY

- (a) Remove the clutch drum and input shaft drum assembly from the transmission case.



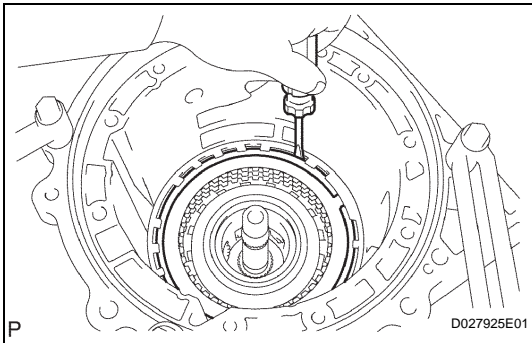
- (b) Remove the clutch drum thrust washer, No. 2 thrust bearing race and thrust needle roller bearing.

30. INSPECT NO. 2 1-WAY CLUTCH ASSEMBLY (See page AT-212)



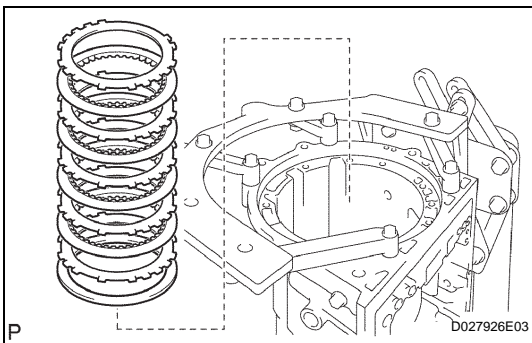
31. REMOVE NO. 2 1-WAY CLUTCH ASSEMBLY

- (a) Remove the No. 2 1-way clutch assembly and No. 2 clutch drum thrust washer from the clutch drum and input shaft assembly.



32. REMOVE NO. 3 BRAKE SNAP RING

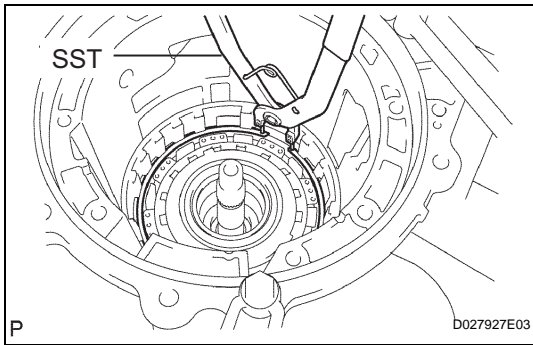
- (a) Using a screwdriver, remove the No. 3 brake snap ring from the case.



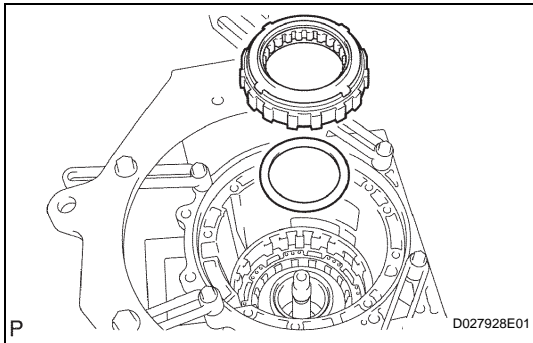
33. REMOVE NO. 3 BRAKE DISC

- (a) Remove the flange, cushion plate, 4 discs and 4 plates from the case.

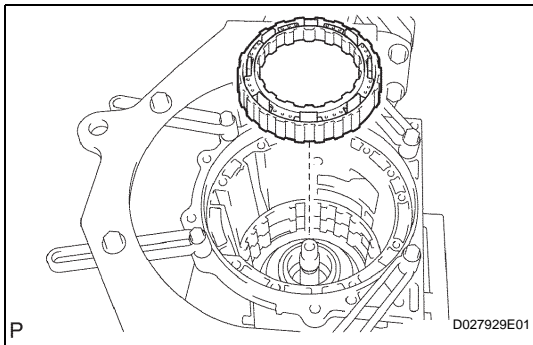
34. INSPECT NO. 3 BRAKE DISC (See page AT-212)

**35. REMOVE 2ND BRAKE PISTON HOLE SNAP RING**

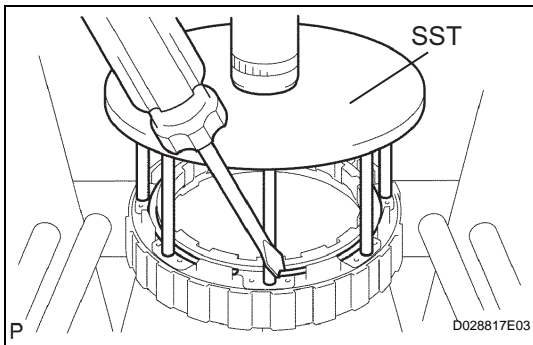
- (a) Using SST, remove the snap ring.
SST 09350-30020 (09350-07060)

**36. REMOVE 1-WAY CLUTCH ASSEMBLY**

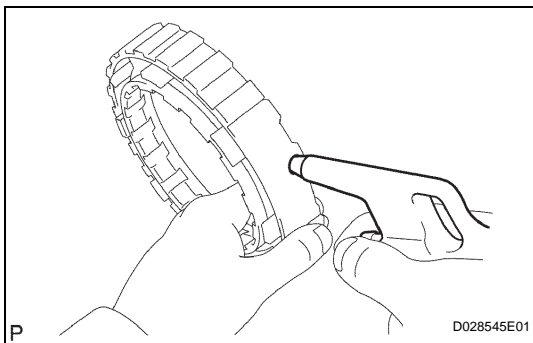
- (a) Remove the 1-way clutch assembly and the No. 1 planetary carrier thrust washer from the case.

**37. REMOVE 2ND BRAKE CYLINDER**

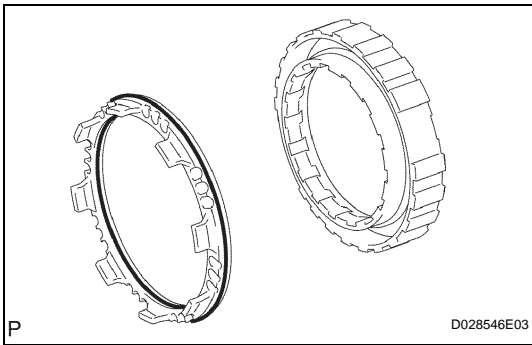
- (a) Remove the 2nd brake cylinder from the case.

**38. REMOVE 2ND BRAKE PISTON**

- (a) Using SST and a press, remove the snap ring.
SST 09351-40010
- (b) Remove the 2nd brake piston return spring from the 2nd brake piston.

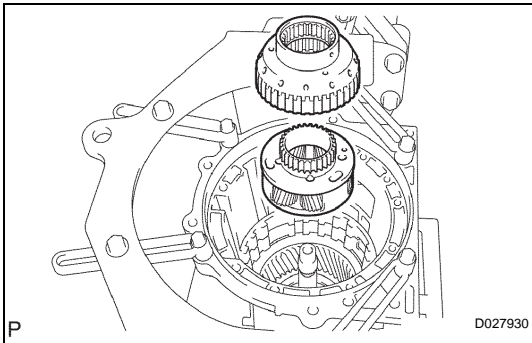


- (c) Hold the 2nd brake piston and apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the brake cylinder to remove the 2nd brake piston.



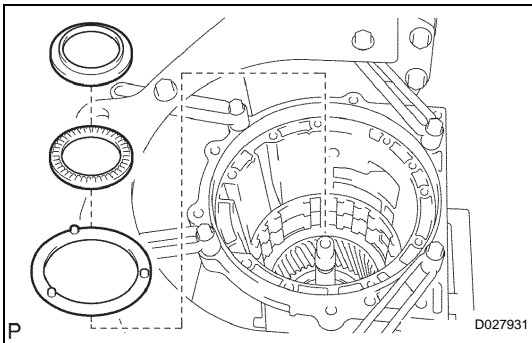
(d) Remove the 2 O-rings from the 2nd brake piston.

39. INSPECT NO. 3 BRAKE PISTON RETURN SPRING SUB-ASSEMBLY (See page AT-212)



40. REMOVE FRONT PLANETARY GEAR ASSEMBLY

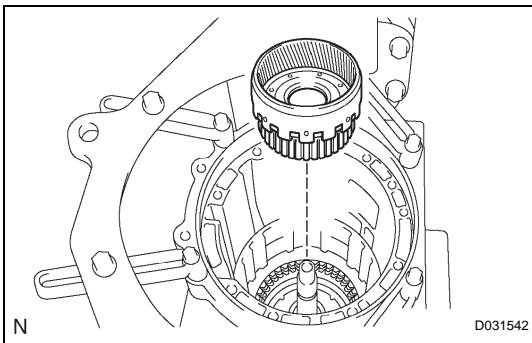
(a) Remove the front planetary gear and 1 way clutch inner race from the case.



(b) Remove the thrust needle roller bearing, thrust bearing race No. 3 and planetary carrier thrust washer No. 2 from the front planetary gear.

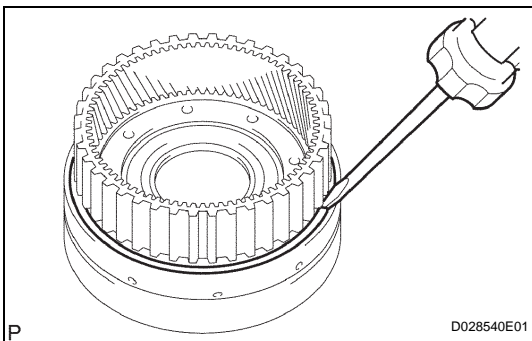
41. INSPECT FRONT PLANETARY GEAR ASSEMBLY (See page AT-212)

42. INSPECT 1-WAY CLUTCH ASSEMBLY (See page AT-213)



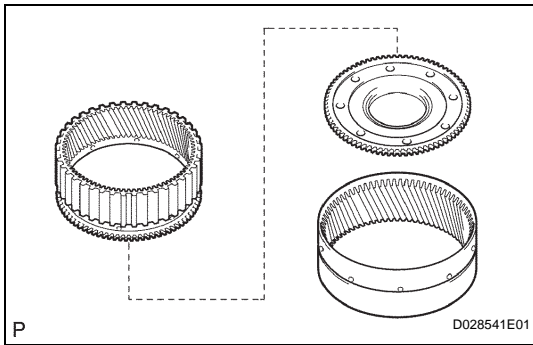
43. REMOVE FRONT PLANETARY RING GEAR

(a) Remove the front planetary ring gear from the transmission case.

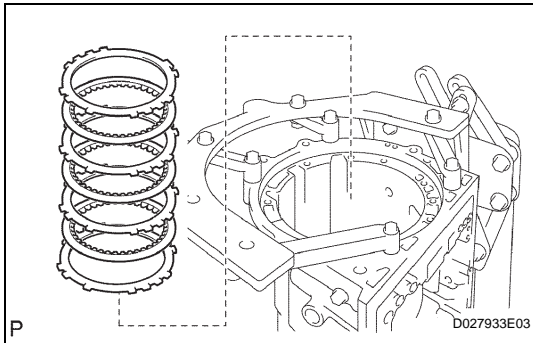


44. REMOVE CENTER PLANETARY RING GEAR

(a) Using a screwdriver, remove the snap ring.



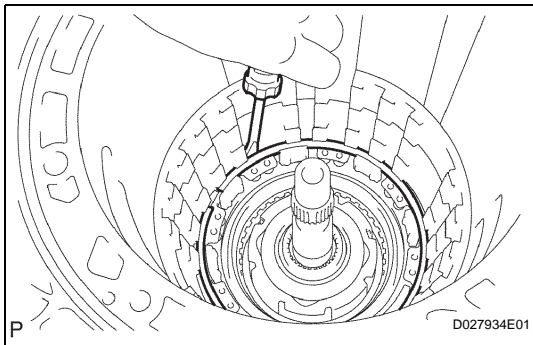
- (b) Remove the center planetary ring gear and front planetary ring gear flange from the front planetary ring gear.



45. REMOVE NO. 1 BRAKE DISC

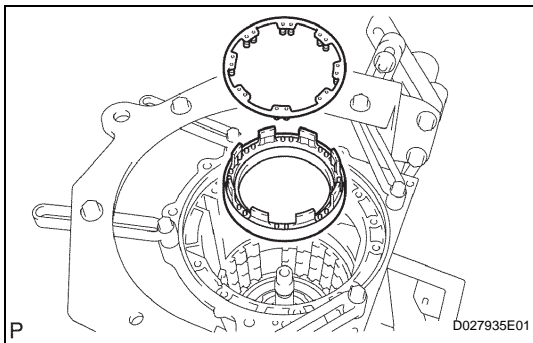
- (a) Remove the flange, 3 discs and 3 plates from the case.

46. INSPECT NO. 1 BRAKE DISC (See page [AT-213](#))



47. REMOVE BRAKE PISTON RETURN SPRING SNAP RING

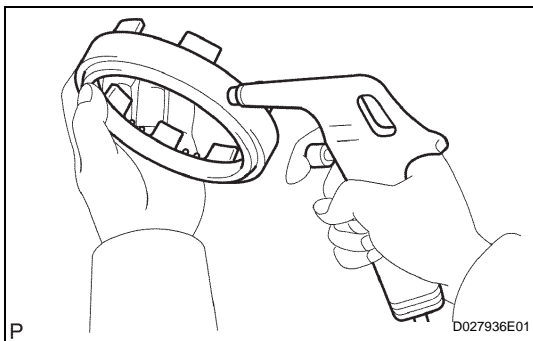
- (a) Using a screwdriver, remove the brake piston return spring snap ring from the case.



48. REMOVE BRAKE PISTON RETURN SPRING SUB-ASSEMBLY

- (a) Remove the brake piston return spring and No. 1 brake piston with the No. 1 brake cylinder from the transmission case.

49. INSPECT BRAKE PISTON RETURN SPRING SUB-ASSEMBLY (See page [AT-213](#))



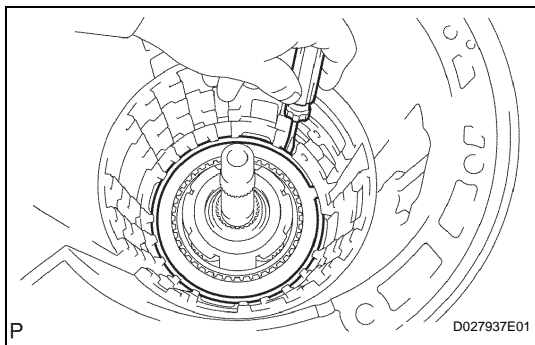
50. REMOVE NO. 1 BRAKE PISTON

- (a) Hold the No. 1 brake piston and apply compressed air (392 kPa, 4 kgf/cm², 57 psi) to the transmission case to remove the No. 1 brake piston.

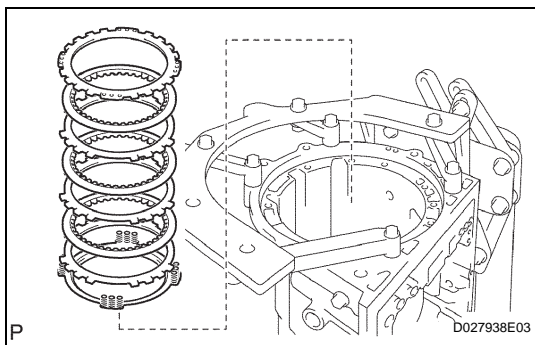
HINT:

If the piston does not pop out with compressed air, lift the piston out with needle-nose pliers.

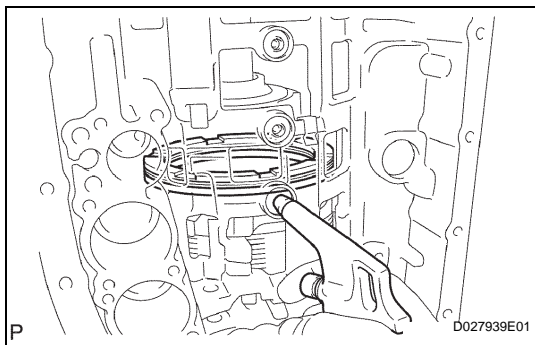
- (b) Remove the 2 O-rings from the No. 1 brake piston.

**51. REMOVE NO. 2 BRAKE DISC**

- (a) Using a screwdriver, remove the snap ring from the case.



- (b) Remove the flange, the brake piston return spring, the 3 discs and the 3 plates from the case.

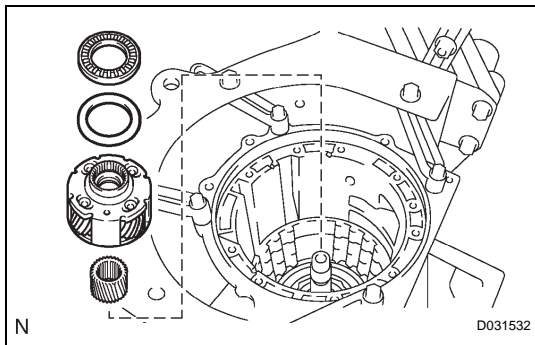
52. INSPECT NO. 2 BRAKE DISC (See page AT-213)**53. INSPECT NO.2 BRAKE PISTON RETURN SPRING SUB-ASSEMBLY (See page AT-213)****54. REMOVE NO. 2 BRAKE PISTON**

- (a) Hold the No. 2 brake piston and apply compressed air (392 kPa, 4 kgf/cm², 57 psi) to the transmission case to remove the No. 2 brake piston.

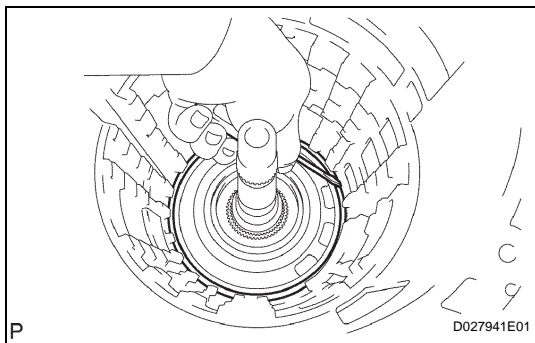
HINT:

If the piston does not pop out with compressed air, lift the piston out with needle-nose pliers.

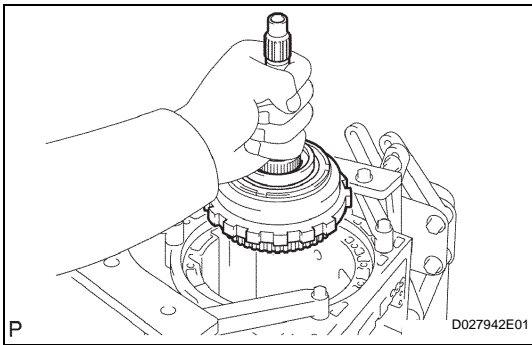
- (b) Remove the 2 O-rings from the No. 2 brake piston.

**55. REMOVE CENTER PLANETARY GEAR ASSEMBLY**

- (a) Remove the center planetary gear assembly, planetary sun gear, thrust needle roller bearing and No. 4 thrust bearing race from the case.

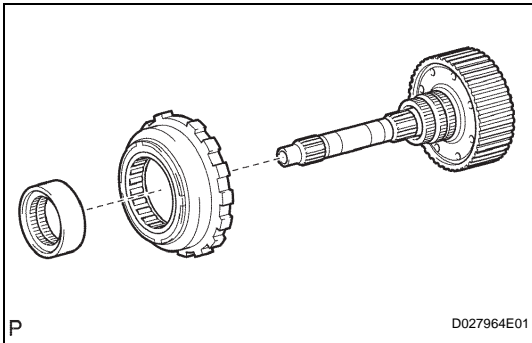
56. INSPECT CENTER PLANETARY GEAR ASSEMBLY (See page AT-214)**57. REMOVE INTERMEDIATE SHAFT**

- (a) Using a screwdriver, remove the snap ring from the case.



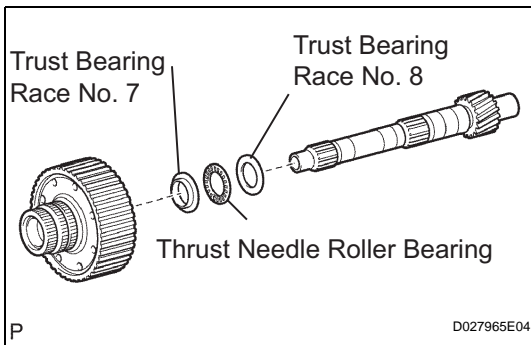
- (b) Remove the intermediate shaft with the No. 3 1-way clutch assembly from the case.

58. INSPECT NO. 3 1-WAY CLUTCH ASSEMBLY (See page AT-214)



59. REMOVE NO. 3 1-WAY CLUTCH ASSEMBLY

- (a) Remove the No. 3 1-way clutch assembly and 1-way clutch inner race from the intermediate shaft.



60. REMOVE REAR PLANETARY RING GEAR FLANGE SUB-ASSEMBLY

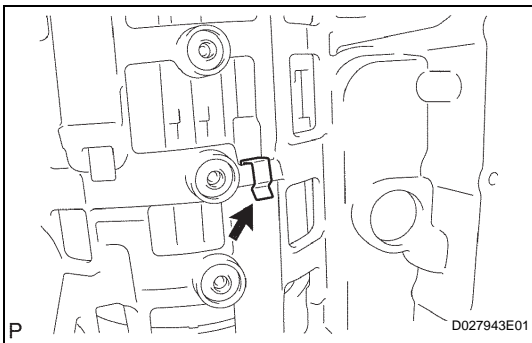
- (a) Remove the No. 8 thrust bearing race, thrust needle roller bearing, No. 7 thrust bearing race and rear planetary ring gear flange from the intermediate shaft.

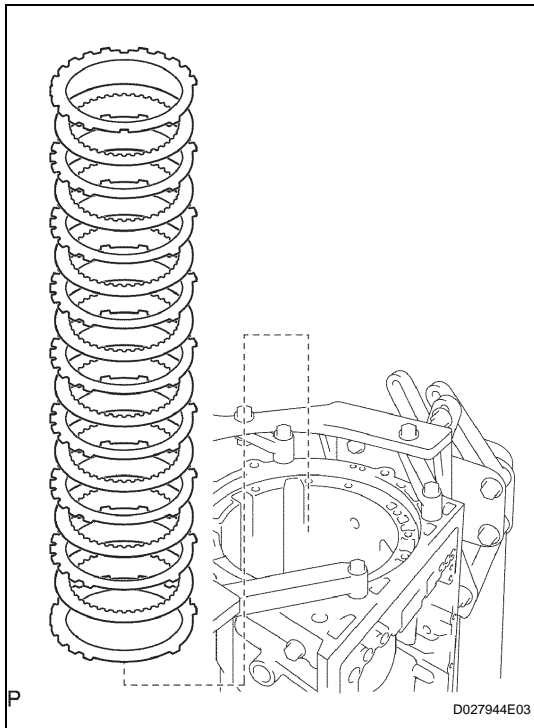
61. INSPECT REAR PLANETARY RING GEAR FLANGE SUB-ASSEMBLY (See page AT-214)

62. INSPECT INTERMEDIATE SHAFT (See page AT-214)

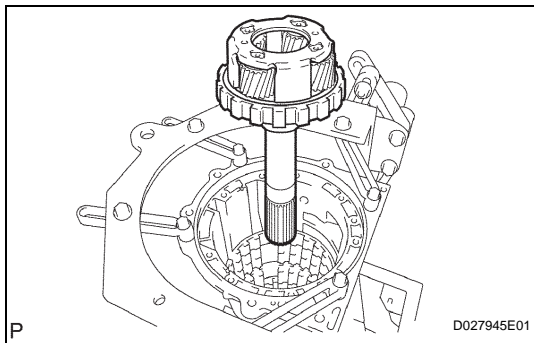
63. REMOVE BRAKE PLATE STOPPER SPRING

- (a) Remove the brake plate stopper spring from the case.

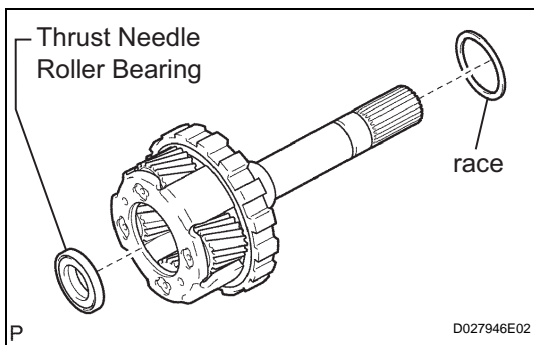


**64. REMOVE NO. 4 BRAKE DISC**

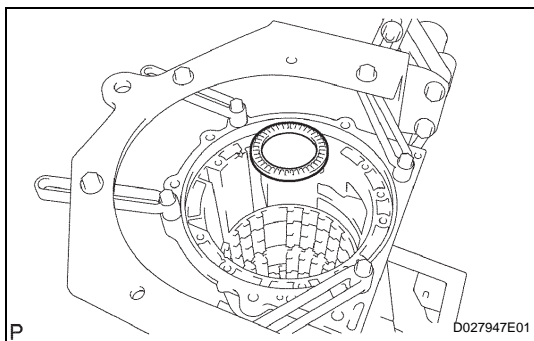
- (a) Remove the 7 plates, the 8 discs and the 2 flanges from the case.

65. INSPECT NO. 4 BRAKE DISC (See page AT-215)**66. REMOVE REAR PLANETARY GEAR ASSEMBLY**

- (a) Remove the rear planetary gear assembly from the case.

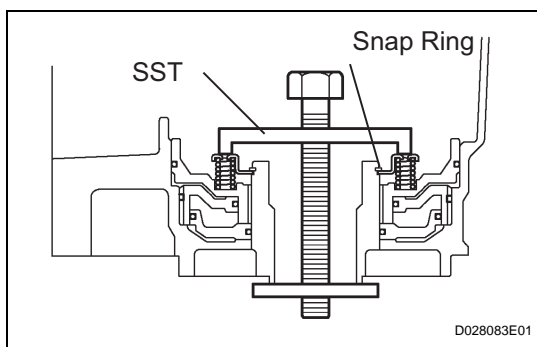


- (b) Remove the No. 9 thrust bearing race and the thrust needle roller bearing from the rear planetary gear assembly.



- (c) Remove the thrust needle roller bearing from the case.

67. INSPECT REAR PLANETARY GEAR ASSEMBLY (See page AT-214)



68. REMOVE 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY

- (a) Place SST on the spring retainer and compress the brake return spring.

SST 09350-30020 (09350-07050)

- (b) Using SST, remove the snap ring and the 1st and reverse brake return spring.

SST 09350-30020 (09350-07070)

69. INSPECT 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY (See page AT-216)

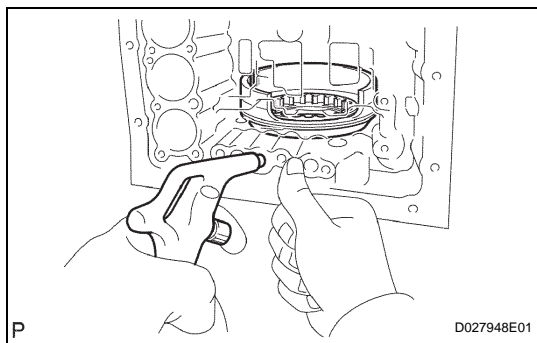
70. REMOVE 1ST AND REVERSE BRAKE PISTON

- (a) Hold the 1st and reverse brake piston and apply compressed air (392 kPa, 4 kgf/cm², 57 psi) to the transmission case to remove the 1st and reverse brake piston.

HINT:

If the piston does not pop out with compressed air, lift the piston out with needle-nose pliers.

- (b) Remove the O-ring from the 1st and reverse brake piston.

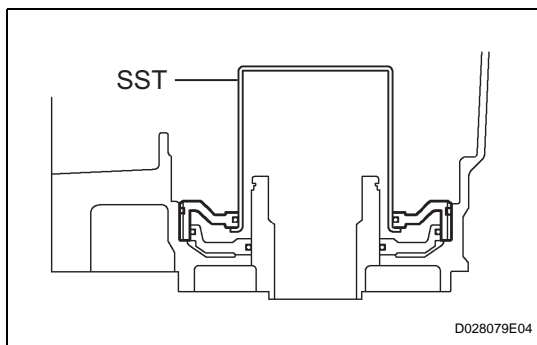


71. REMOVE BRAKE REACTION SLEEVE

- (a) Using SST, remove the reaction sleeve.

SST 09350-30020 (09350-07080)

- (b) Remove the 2 O-rings from the reaction sleeve.

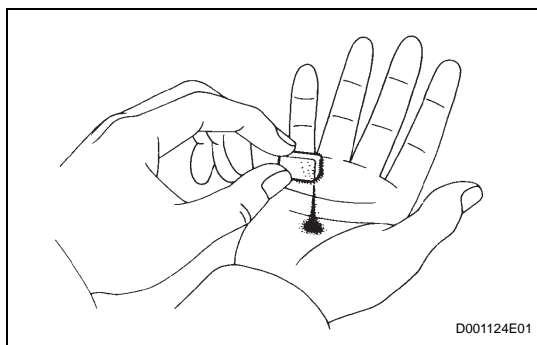
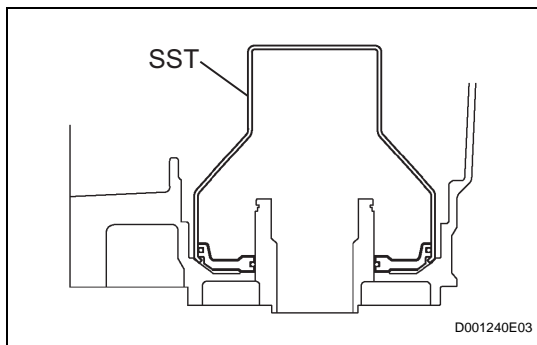


72. REMOVE NO. 4 BRAKE PISTON

- (a) Using SST, remove the No. 4 brake piston.

SST 09350-30020 (09350-07090)

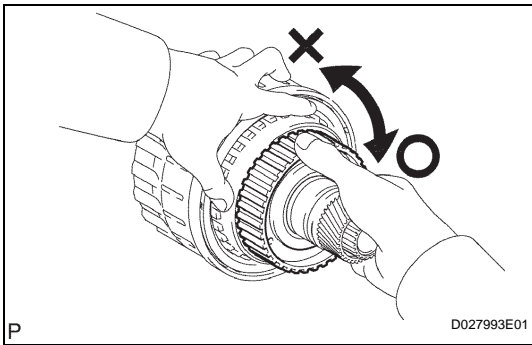
- (b) Remove the 2 O-rings from the No. 4 piston.



INSPECTION

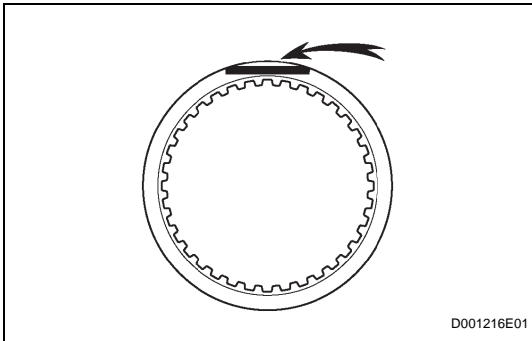
1. INSPECT AUTOMATIC TRANSMISSION OIL PAN SUB-ASSEMBLY

- (a) Remove the magnets, and use them to collect steel particles.
- (b) Carefully look at the foreign matter and particles in the pan and on the magnets to anticipate the type of wear you will find in the transmission.
- Steel (magnetic): bearing, gear and clutch plate wear
 - Brass (non-magnetic): bushing wear



2. INSPECT NO. 2 1-WAY CLUTCH ASSEMBLY

- Hold the reverse clutch hub and turn the No. 2 1-way clutch assembly.
- Check that the No. 2 1-way clutch assembly turns freely clockwise and locks when turned counterclockwise.

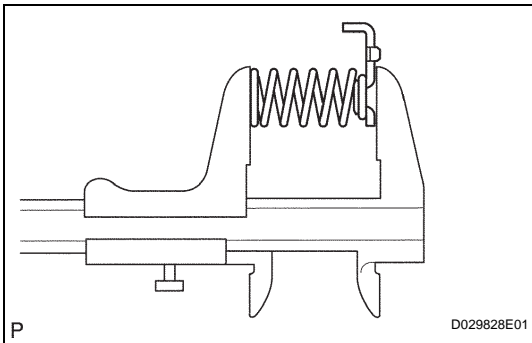


3. INSPECT NO. 3 BRAKE DISC

- Replace all discs if one of the following problems is present: 1) a disc, plate or flange is worn or burnt, 2) the lining of a disc is peeled off or discolored, or 3) grooves or printed numbers have even slight damage.

NOTICE:

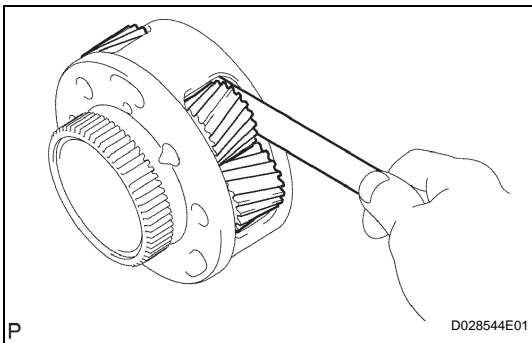
Before assembling new discs, soak them in ATF for at least 15 minutes.



4. INSPECT NO. 3 BRAKE PISTON RETURN SPRING SUB-ASSEMBLY

- Using vernier calipers, measure the free length of the spring together with the spring seat.

**Standard free length:
15.72 mm (0.619 in.)**



5. INSPECT FRONT PLANETARY GEAR ASSEMBLY

- Using a feeler gauge, measure the front planetary pinion gear thrust clearance.

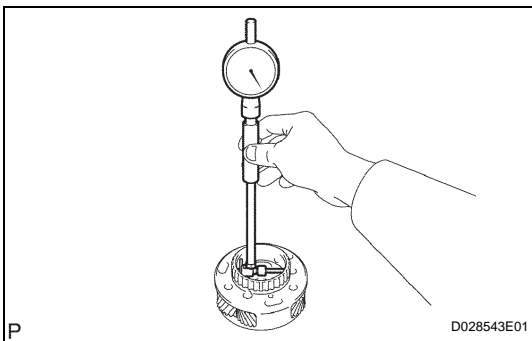
Standard clearance:

0.2 to 0.60 mm (0.008 to 0.024 in.)

Maximum clearance:

0.65 mm (0.026 in.)

If the clearance is greater than the maximum, replace the front planetary gear assembly.

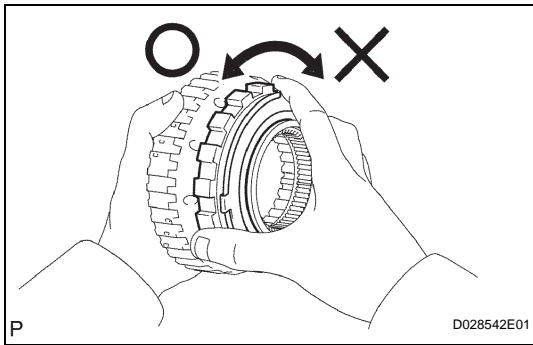


- Using a dial indicator, measure the inside diameter of the front planetary gear bushing.

Maximum inside diameter:

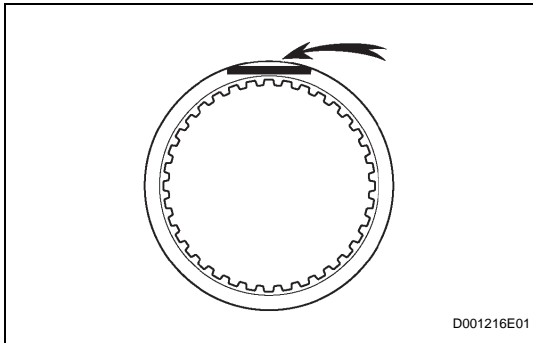
57.48 mm (2.263 in.)

If the inside diameter is greater than the maximum, replace the front planetary gear.



6. INSPECT 1-WAY CLUTCH ASSEMBLY

- Install the 1-way clutch assembly onto the 1-way clutch inner race.
- Hold the 1-way clutch inner race and turn the 1-way clutch assembly.
- Check that the 1-way clutch assembly turns freely counterclockwise and locks when turned clockwise.
- Remove the 1-way clutch assembly from the 1-way clutch inner race.

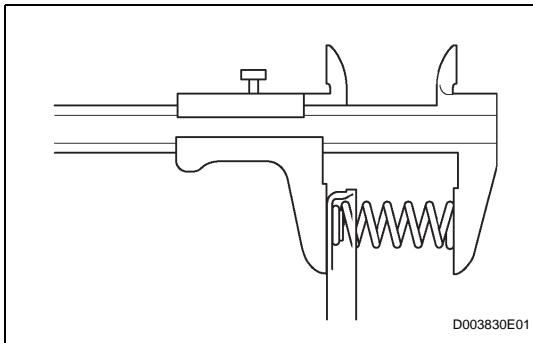


7. INSPECT NO. 1 BRAKE DISC

- Replace all discs if one of the following problems is present: 1) a disc, plate or flange is worn or burnt, 2) the lining of a disc is peeled off or discolored, or 3) grooves or printed numbers have even slight damage.

NOTICE:

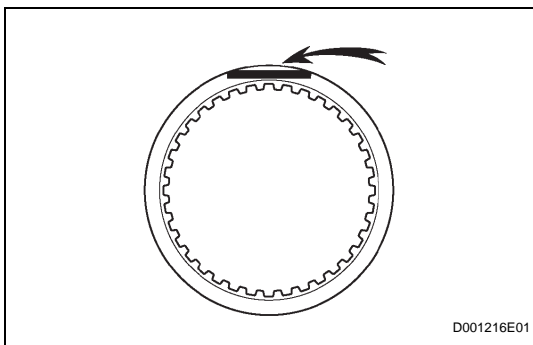
Before assembling new discs, soak them in ATF for at least 15 minutes.



8. INSPECT BRAKE PISTON RETURN SPRING SUB-ASSEMBLY

- Using vernier calipers, measure the free length of the spring together with the spring seat.

**Standard free length:
17.05 mm (0.671 in.)**

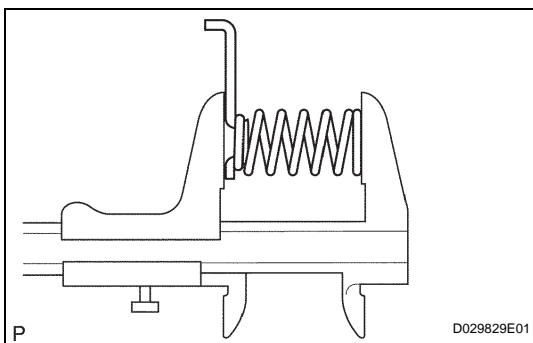


9. INSPECT NO. 2 BRAKE DISC

- Replace all discs if one of the following problems is present: 1) a disc, plate or flange is worn or burnt, 2) the lining of a disc is peeled off or discolored, or 3) grooves or printed numbers have even slight damage.

NOTICE:

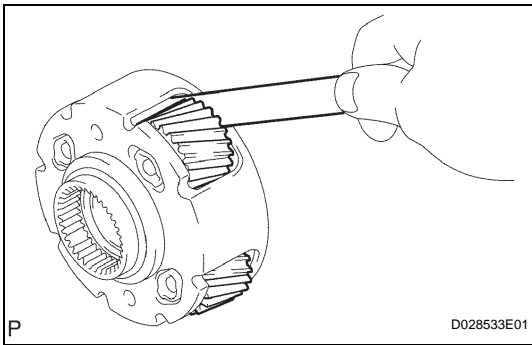
Before assembling new discs, soak them in ATF for at least 15 minutes.



10. INSPECT NO. 2 BRAKE PISTON RETURN SPRING SUB-ASSEMBLY

- Using vernier calipers, measure the free length of the spring together with the spring seat.

**Standard free length:
17.45 mm (0.687 in.)**



11. INSPECT CENTER PLANETARY GEAR ASSEMBLY

- (a) Using a feeler gauge, measure the center planetary gear pinion thrust clearance.

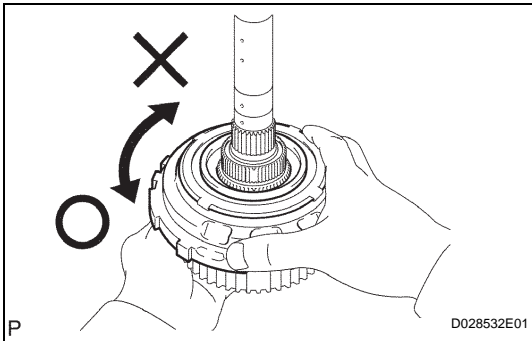
Standard clearance:

0.12 to 0.68 mm (0.005 to 0.027 in.)

Maximum clearance:

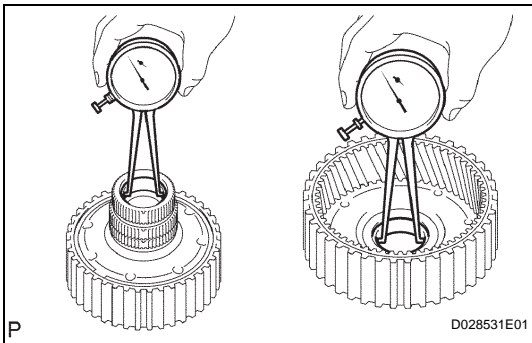
0.73 mm (0.029 in.)

If the clearance is greater than the maximum, replace the center planetary gear assembly.



12. INSPECT NO. 3 1-WAY CLUTCH ASSEMBLY

- (a) Hold the rear planetary ring gear flange sub-assembly, and turn the 1-way clutch assembly.
- (b) Check that the 1-way clutch assembly turns freely counterclockwise and locks when turned clockwise.



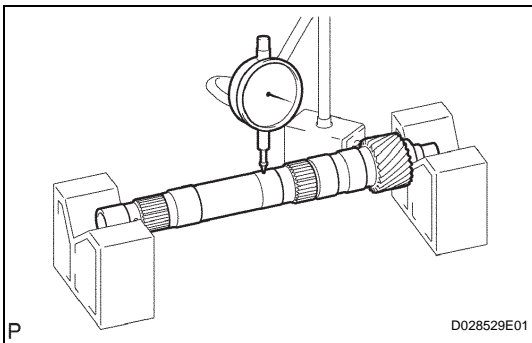
13. INSPECT REAR PLANETARY RING GEAR FLANGE SUB-ASSEMBLY

- (a) Using a dial indicator, measure the inside diameter of the rear planetary ring gear bushing.

Maximum inside diameter:

32.18 mm (1.2667 in.)

If the inside diameter is greater than the maximum, replace the rear planetary ring gear.



14. INSPECT INTERMEDIATE SHAFT

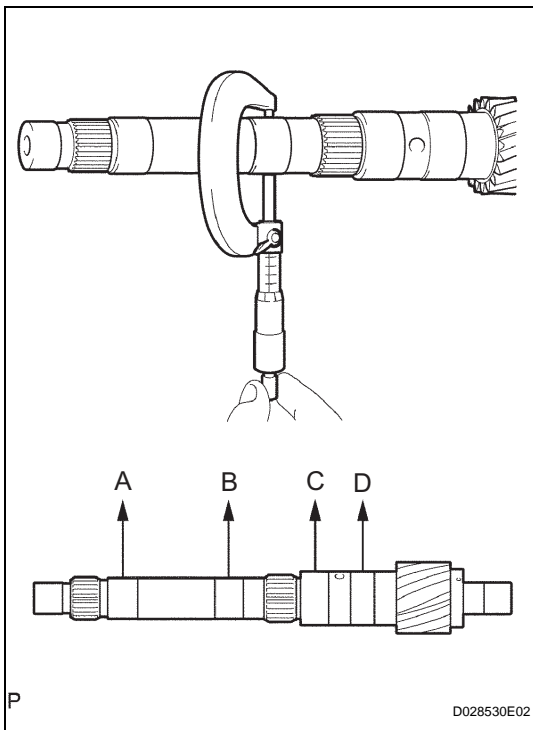
- (a) Using a dial indicator, check the intermediate shaft runout.

Maximum runout:

0.08 mm (0.003 in.)

NOTICE:

If the bend exceeds the specification, replace the intermediate shaft with a new one.



- (b) Using a micrometer, check the outer diameter of the intermediate shaft positions shown in the diagram.

Standard diameter:

A:
25.962 to 25.975 mm (1.022 to 1.023 in.)

B:
25.962 to 25.975 mm (1.022 to 1.023 in.)

C:
32.062 to 32.075 mm (1.262 to 1.263 in.)

D:
32.062 to 32.075 mm (1.262 to 1.263 in.)

Minimum diameter:

A:
25.912 mm (1.020 in.)

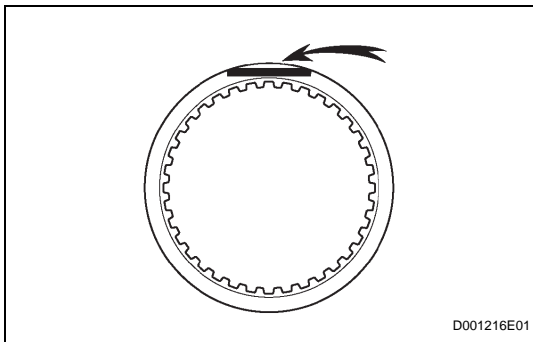
B:
25.912 mm (1.020 in.)

C:
32.012 mm (1.260 in.)

D:
32.012 mm (1.260 in.)

NOTICE:

If the outer diameter is outside the standard, replace the intermediate shaft with a new one.

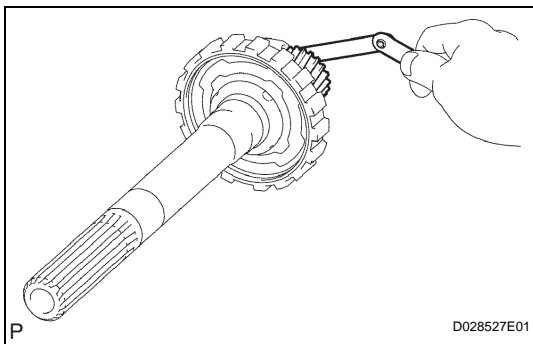


15. INSPECT NO. 4 BRAKE DISC

- (a) Replace all discs if one of the following problems is present: 1) a disc, plate or flange is worn or burnt, 2) the lining of a disc is peeled off or discolored, or 3) grooves or printed numbers have even slight damage.

NOTICE:

Before assembling new discs, soak them in ATF for at least 15 minutes.



16. INSPECT REAR PLANETARY GEAR ASSEMBLY

- (a) Using a feeler gauge, measure the rear planetary gear pinion thrust clearance.

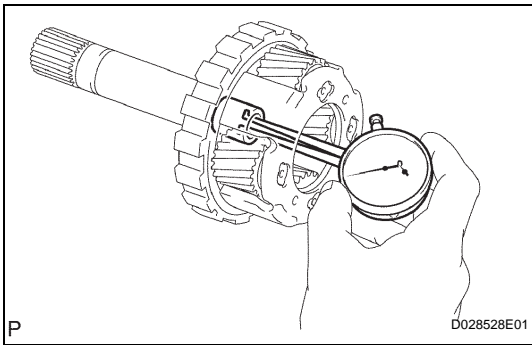
Standard clearance:

0.2 to 0.6 mm (0.008 to 0.024 in.)

Maximum clearance:

0.65 mm (0.026 in.)

If the clearance is greater than the maximum, replace the planetary gear assembly.

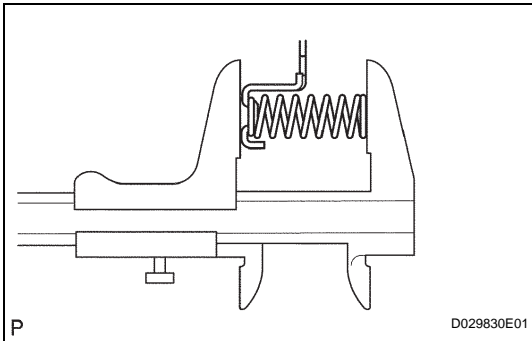


- (b) Using a dial indicator, measure the inside diameter of the rear planetary gear bushing.

Maximum inside diameter:

20.075 mm (0.7904 in.)

If the inside diameter is greater than the maximum, replace the rear planetary gear assembly.

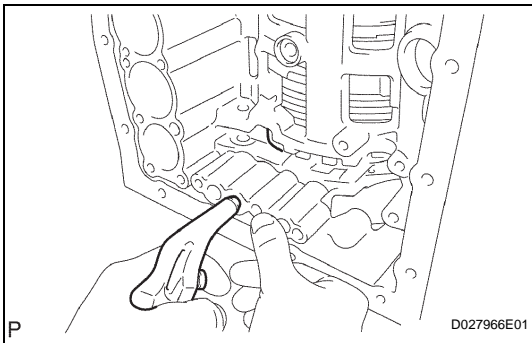


17. INSPECT 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY

- (a) Using vernier calipers, measure the free length of the spring together with the spring seat.

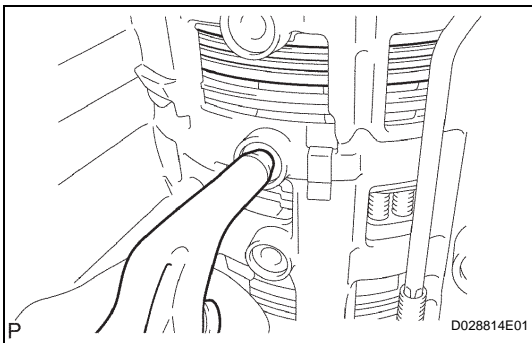
Standard free length:

23.74 mm (0.9347 in.)



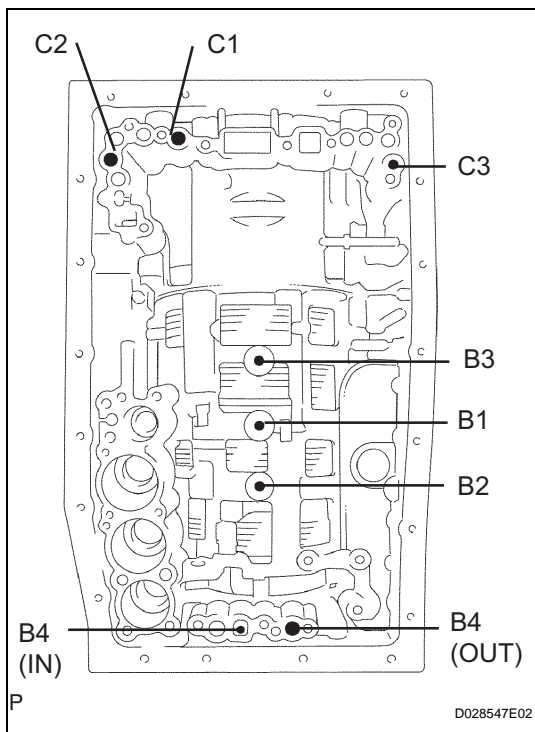
18. INSPECT PACK CLEARANCE OF FIRST AND REVERSE BRAKE

- (a) Make sure the 1st and reverse brake pistons move smoothly when applying and releasing the compressed air into the transmission case.



19. INSPECT NO. 1 PISTON STROKE OF BRAKE PISTON

- (a) Make sure the No. 1 brake piston moves smoothly when applying and releasing the compressed air into the transmission case.



20. INSPECT INDIVIDUAL PISTON OPERATION INSPECTION

- (a) Check the operating sound while applying compressed air into the oil holes indicated in the illustration.

HINT:

When inspecting the O/D direct clutch, use the C3 accumulator piston holes indicated in the illustration. If there is no sound, disassemble and check the installation condition of the parts.

- (1) No. 2 clutch (C2)
- (2) No. 3 clutch (C3)
- (3) No. 1 clutch (C1)
- (4) No. 3 brake (B3)
- (5) No. 1 brake (B1)
- (6) No. 2 brake (B2)
- (7) No. 4 brake (B4)