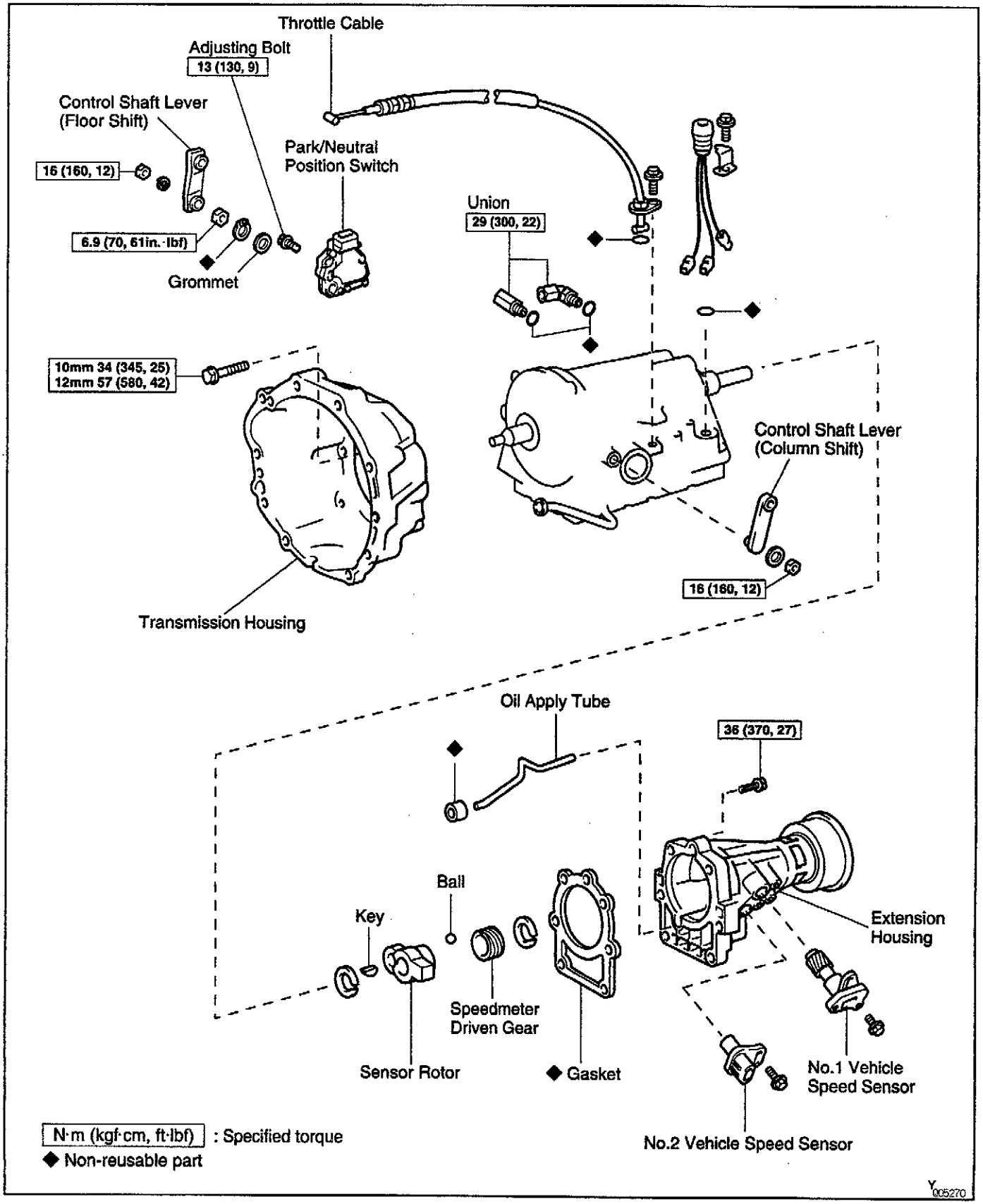
COMPONENT PARTS REMOVAL

AT08F–01

COMPONENTS

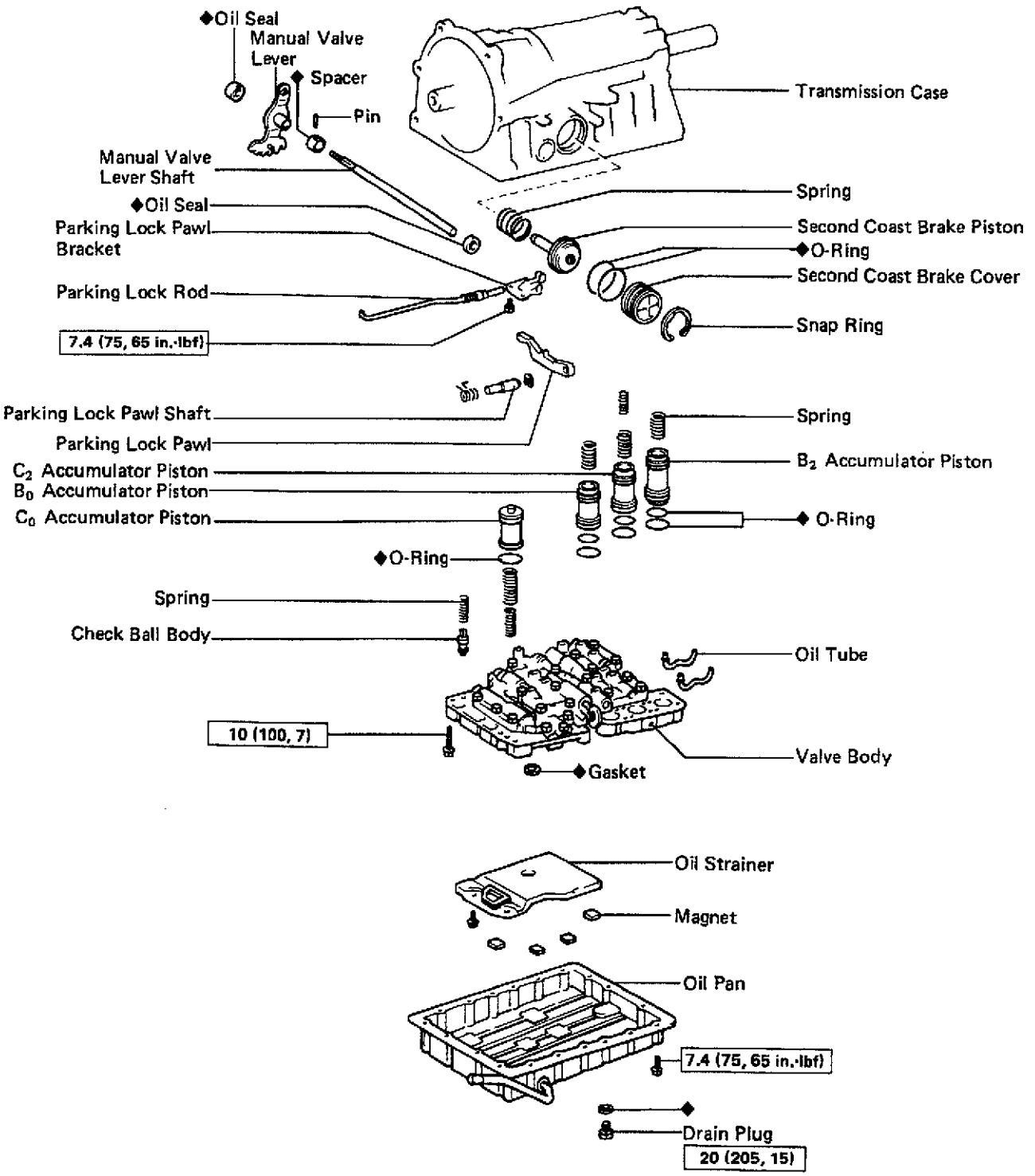
(TRUCK, 4 RUNNER)



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

◆ Non-reusable part

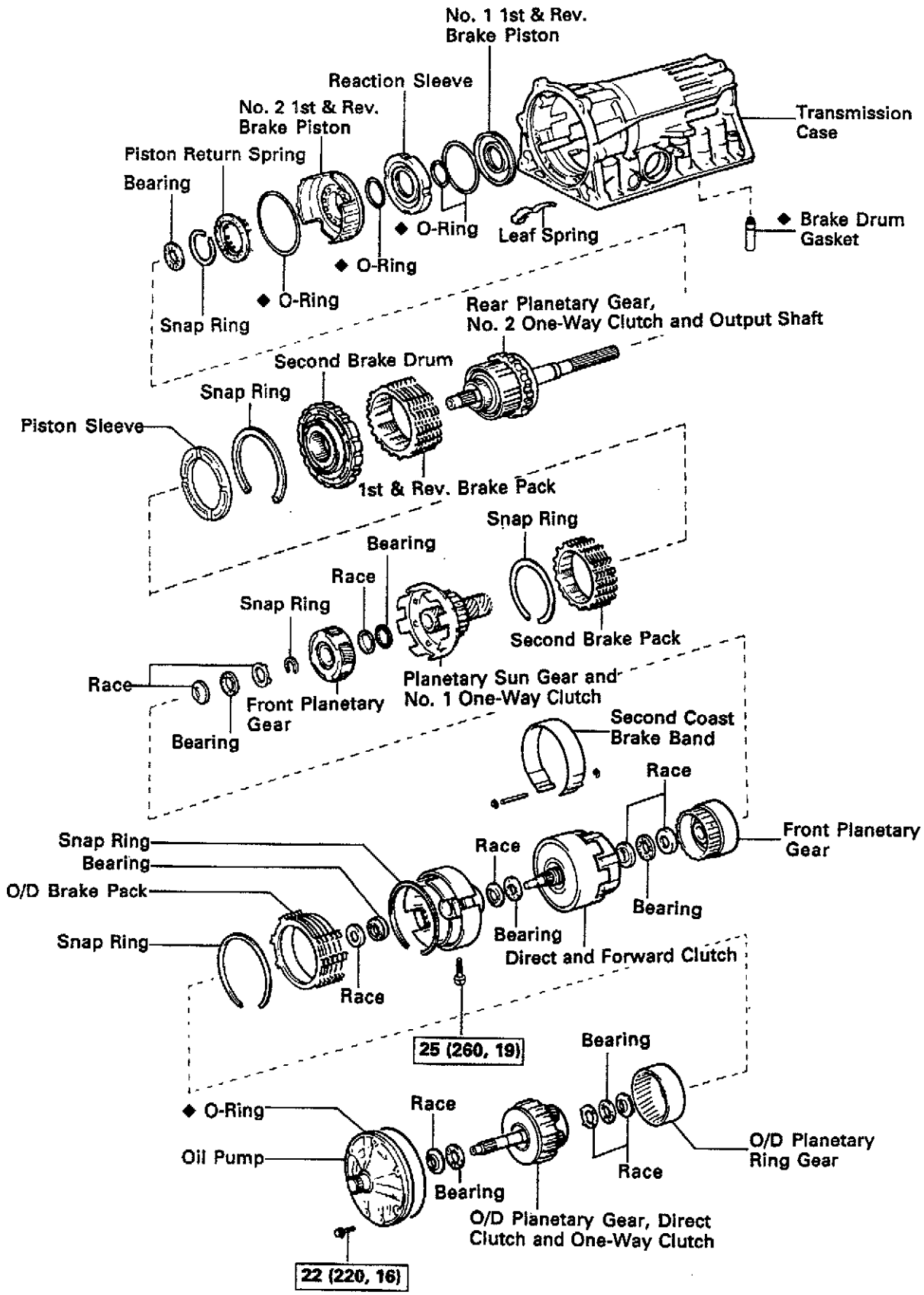
Y005270



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

◆ Non-reusable part

Q00630

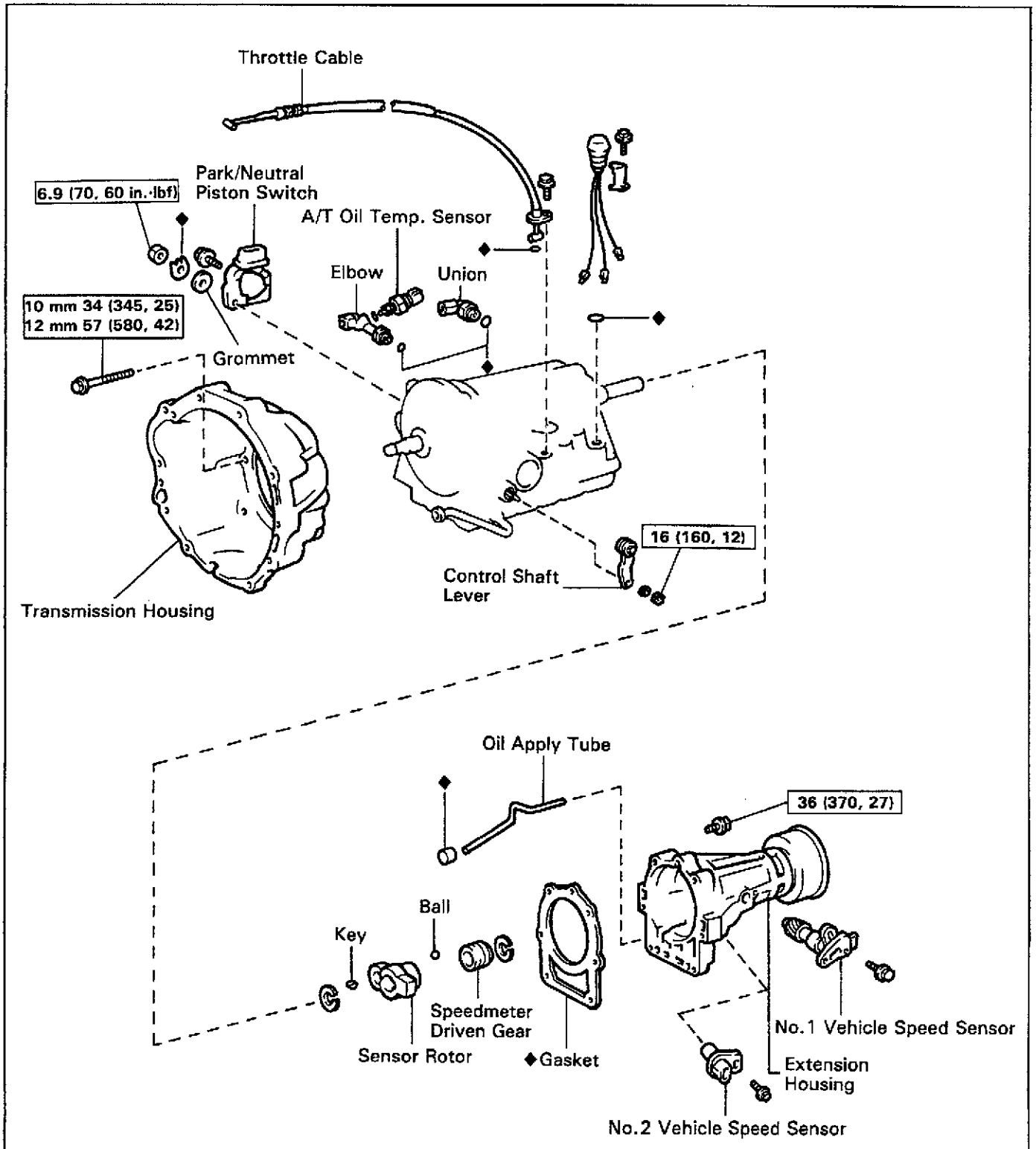


N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

AT5654

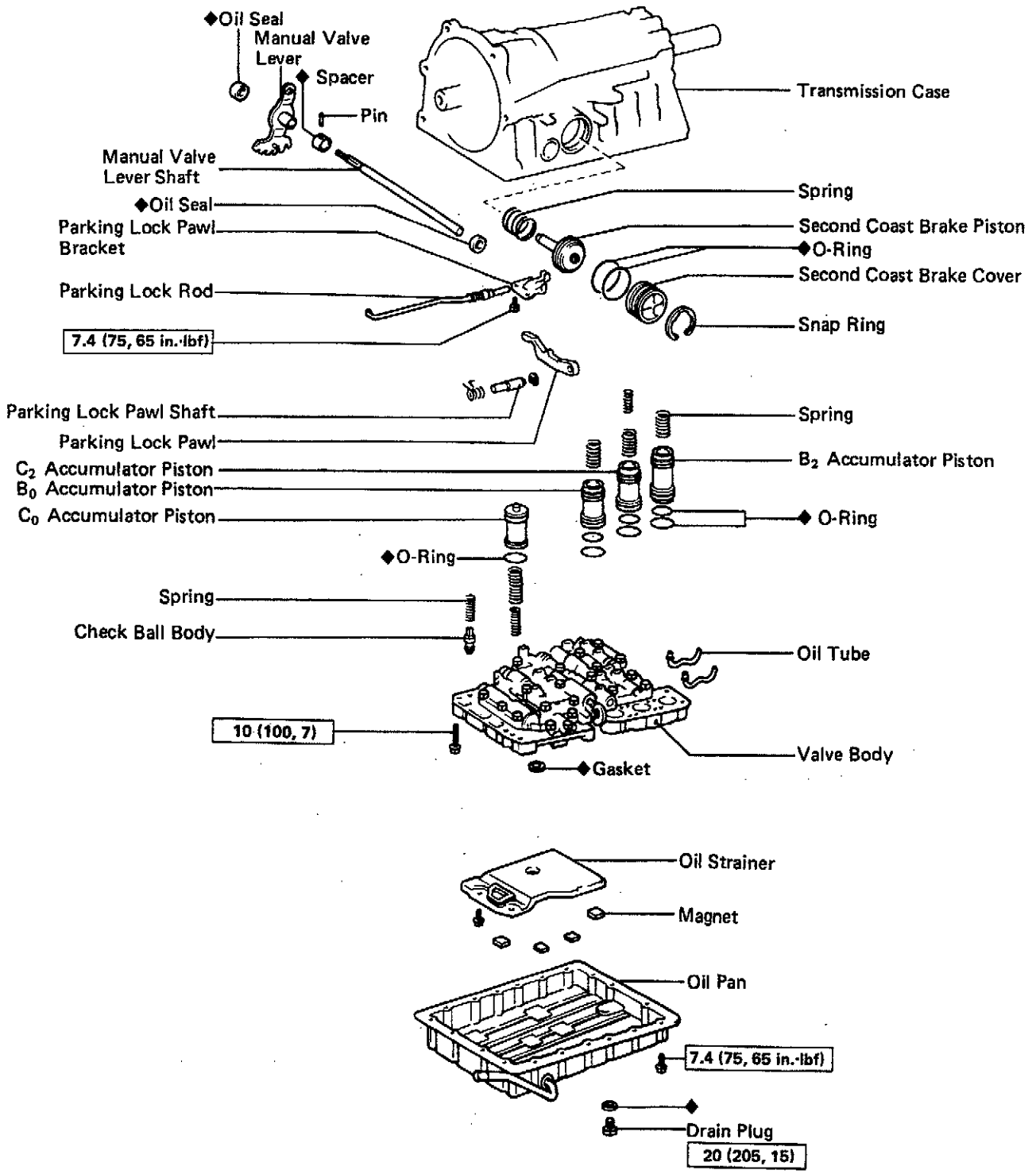
COMPONENTS
(T100)



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

◆ Non-reusable part

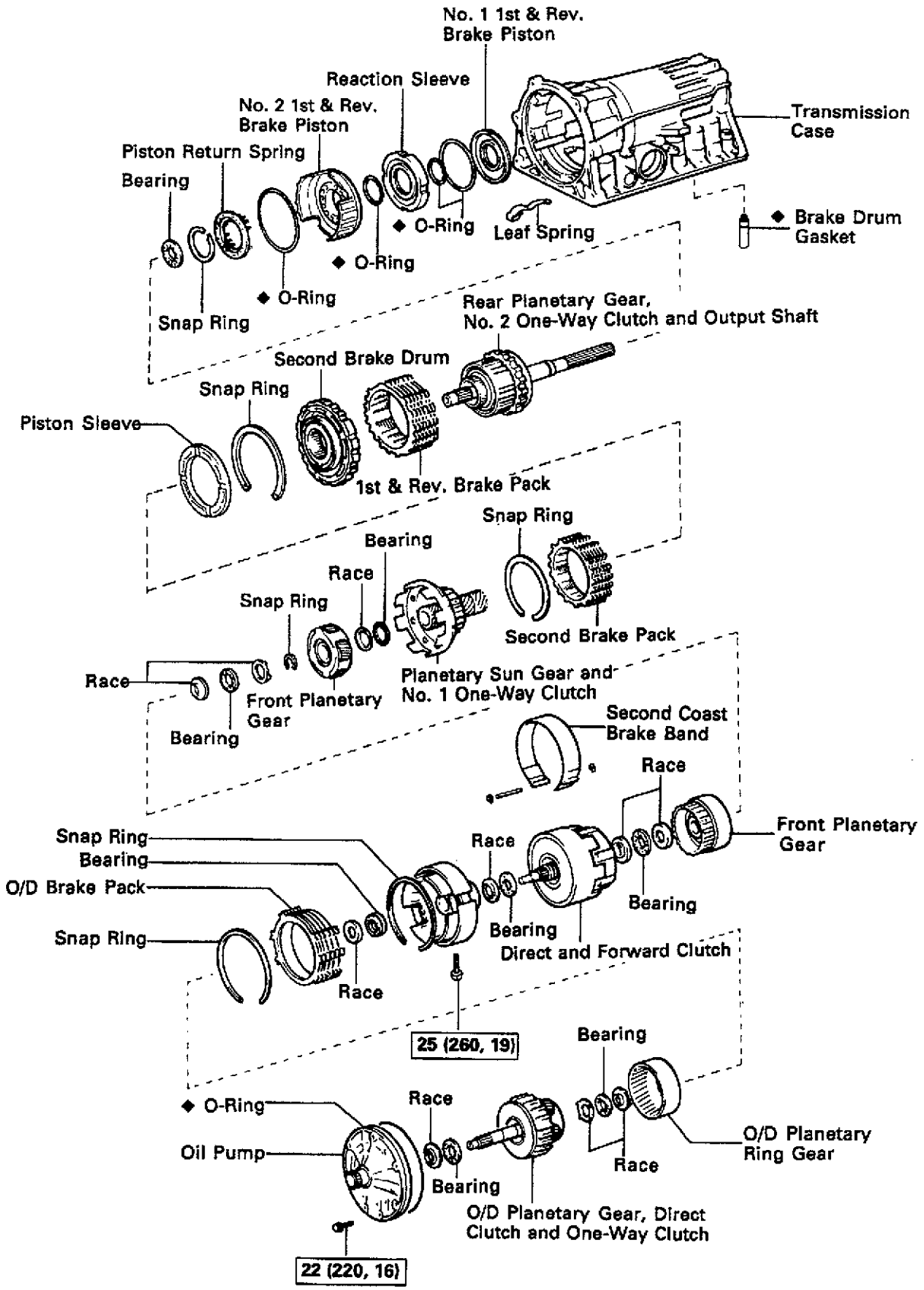
002963



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

◆ Non-reusable part

Q00630

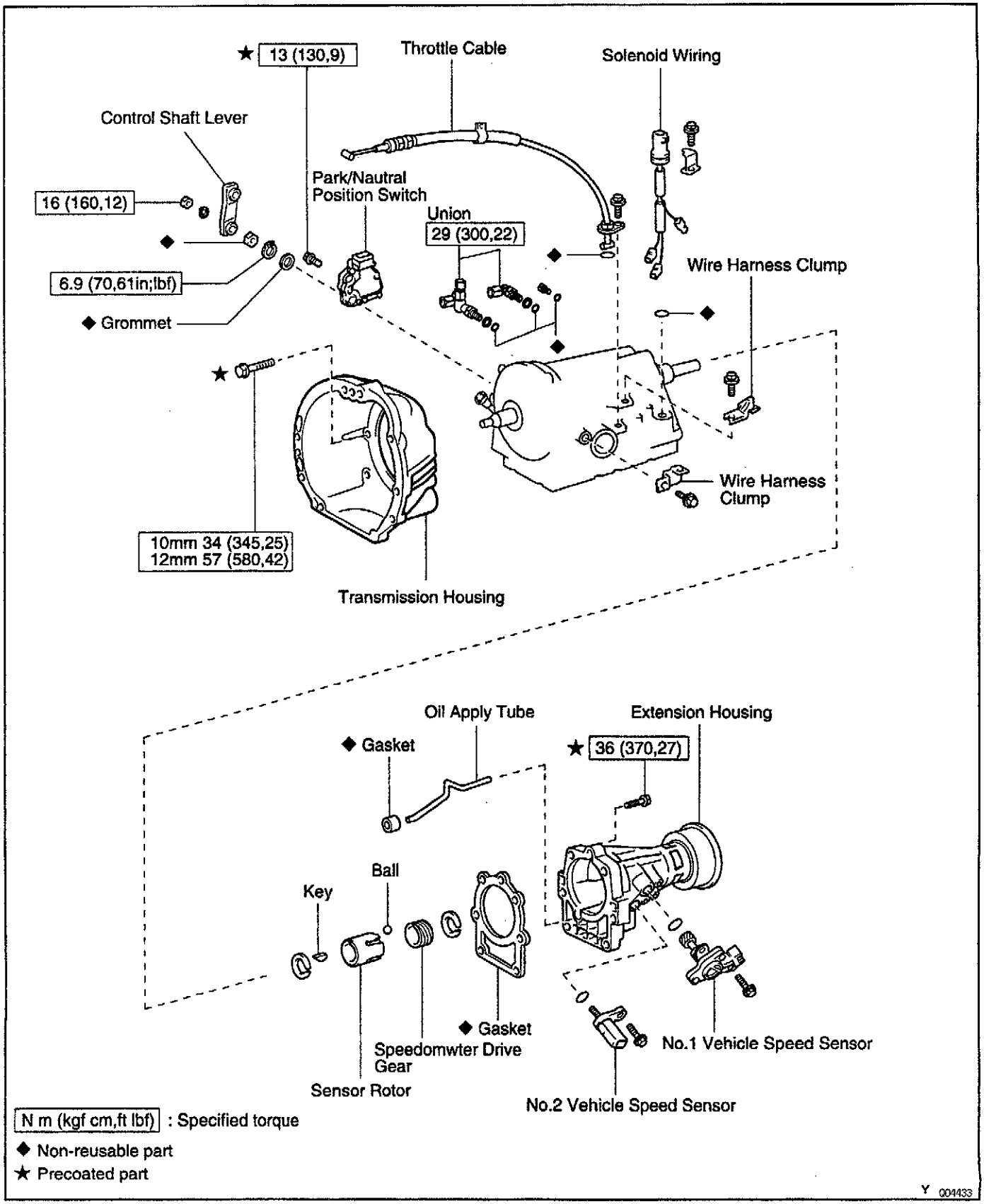


N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

AT5654

COMPONENTS (SUPRA)

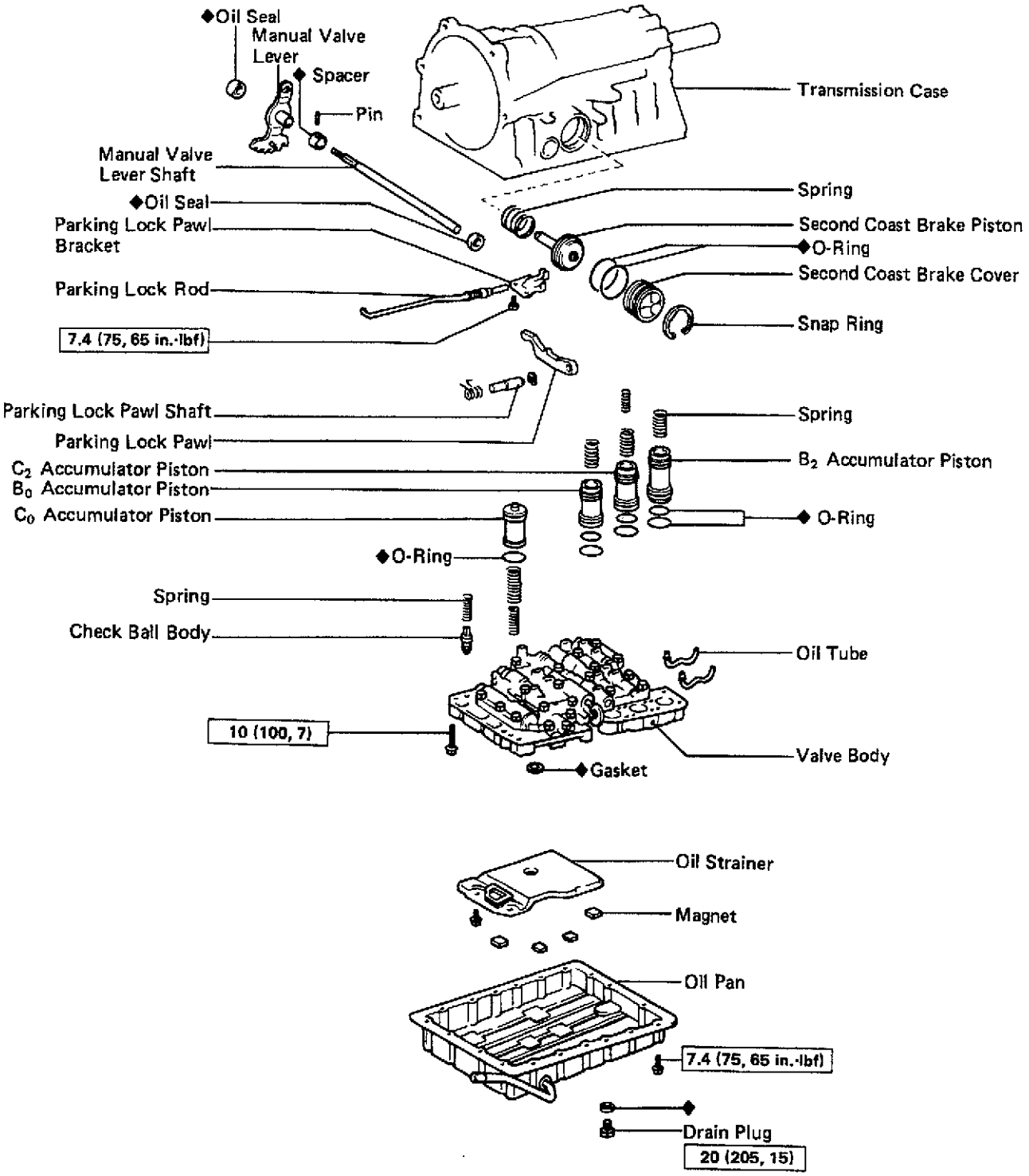


N m (kgf cm,ft lbf) : Specified torque

◆ Non-reusable part

★ Precoated part

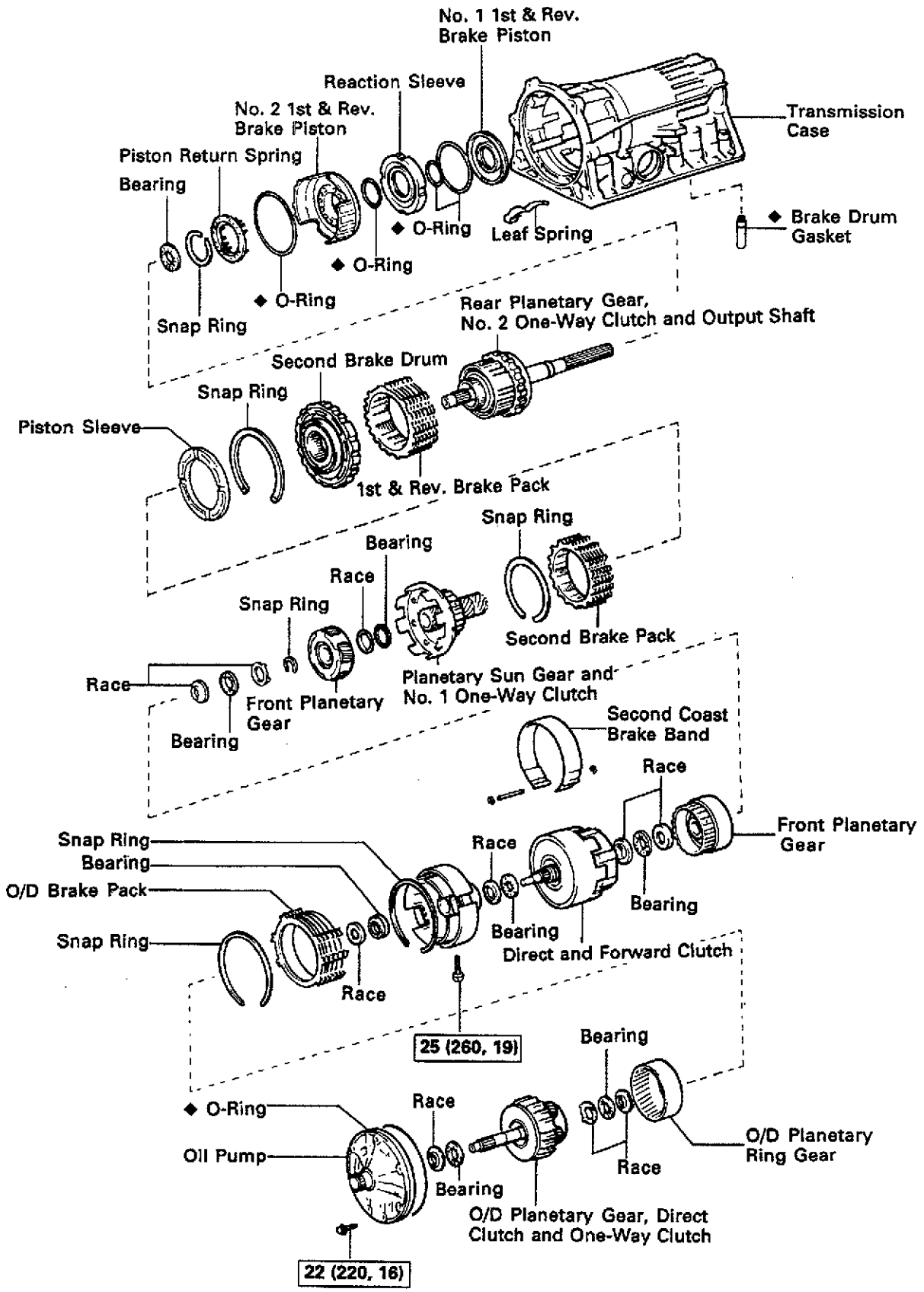
Y 004433



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

◆ Non-reusable part

Q00630

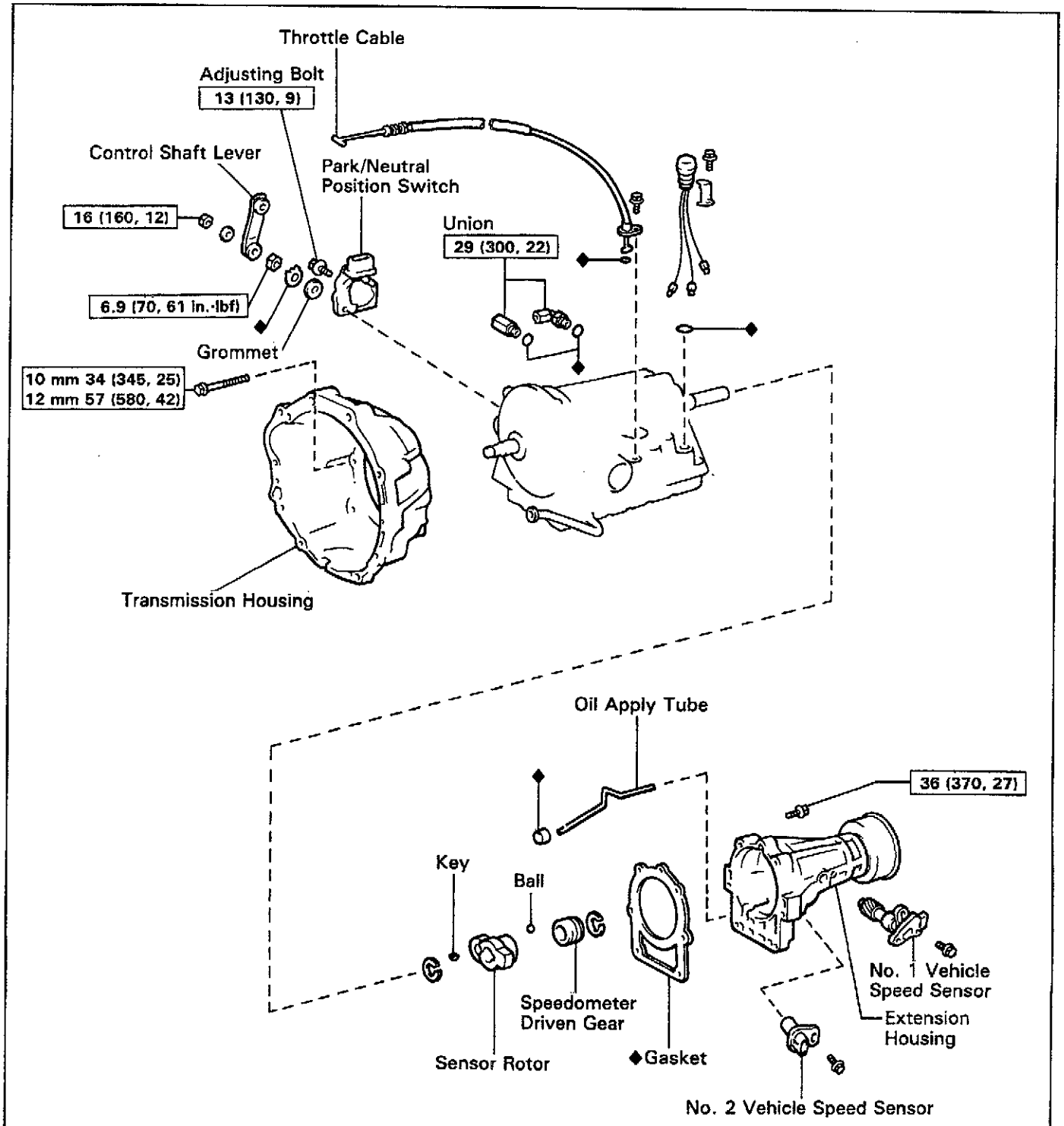


N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

AT5654

COMPONENTS (PREVIA)

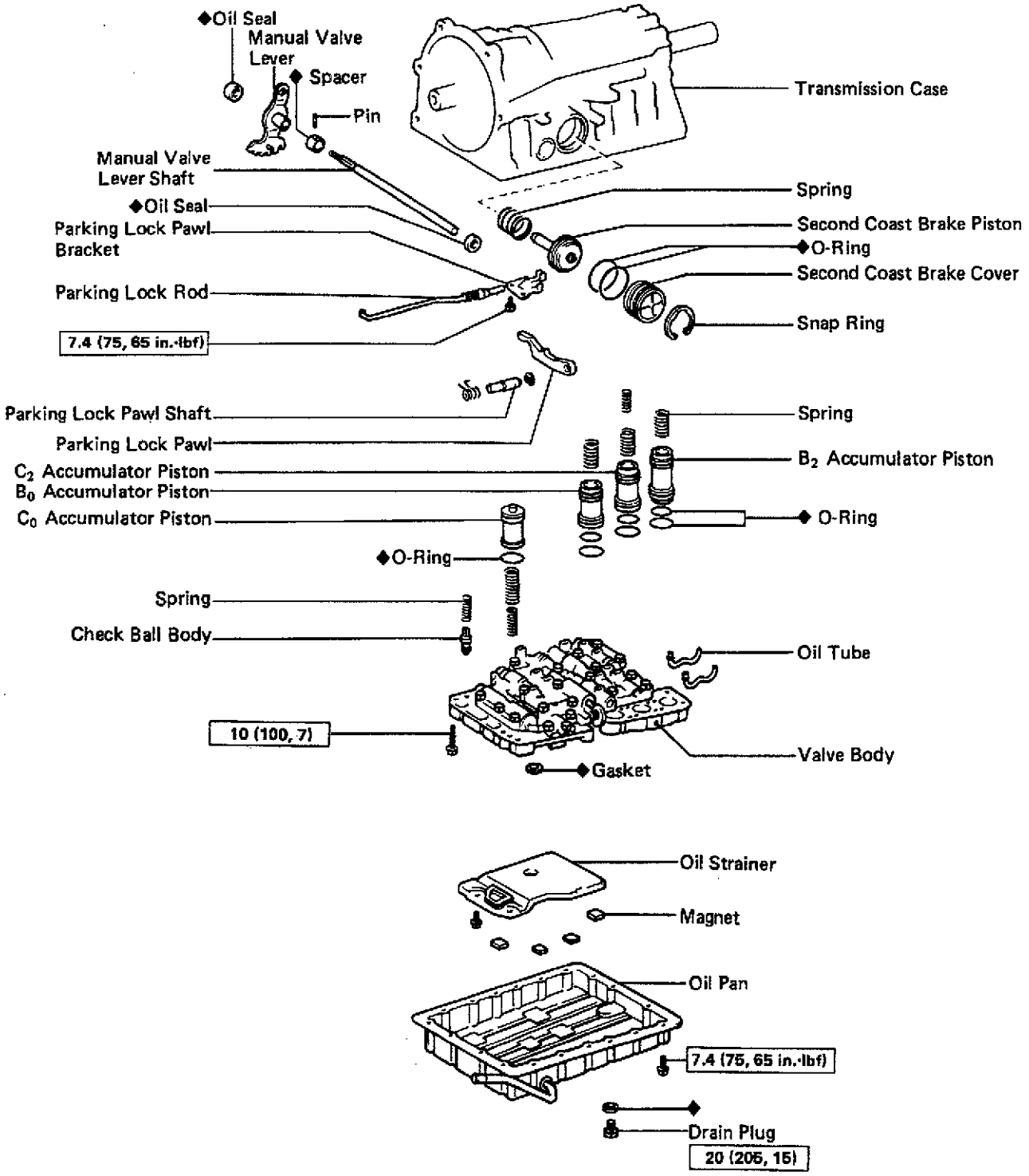


N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

Q00771

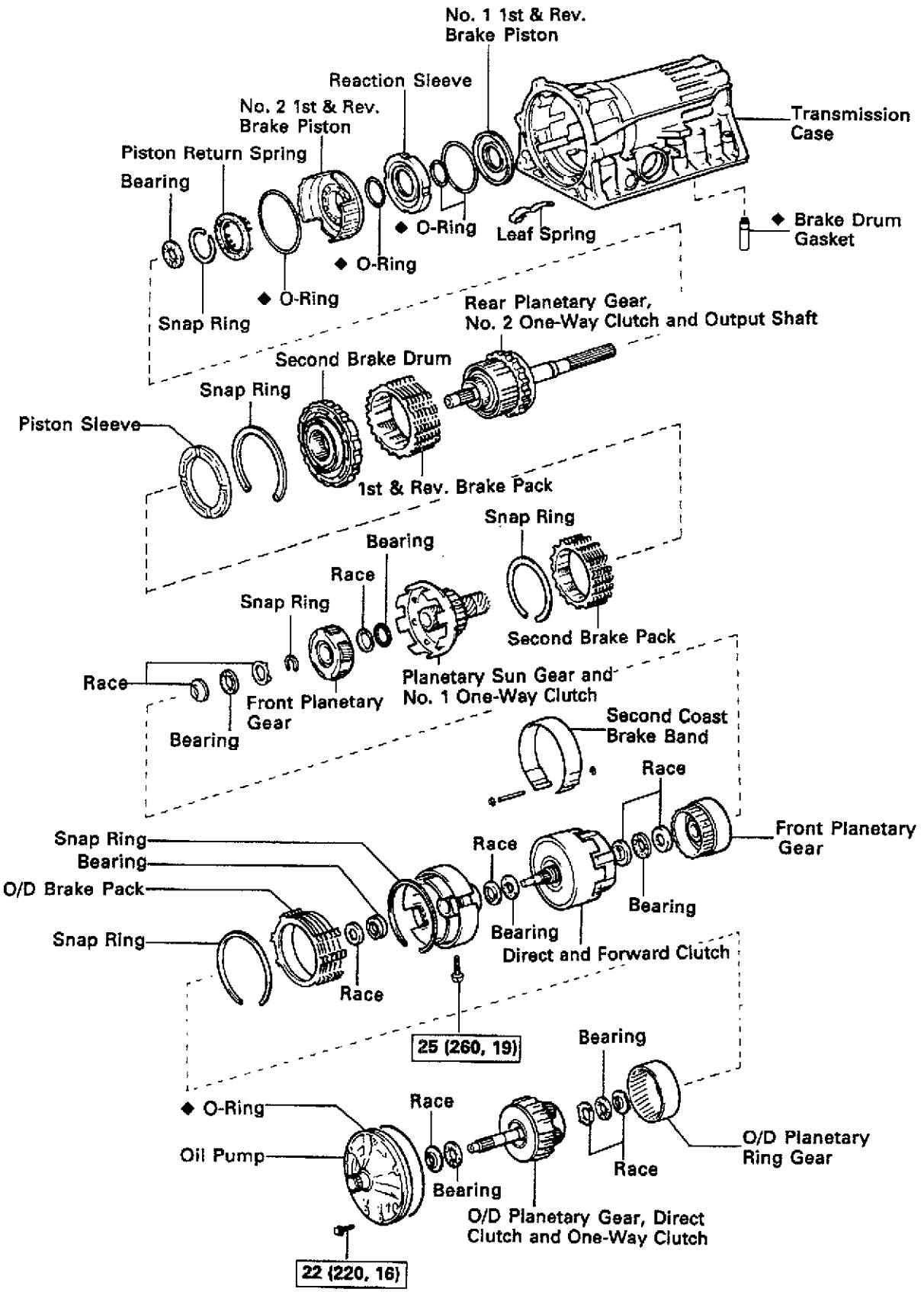
Z07601



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

◆ Non-reusable part

Q00630



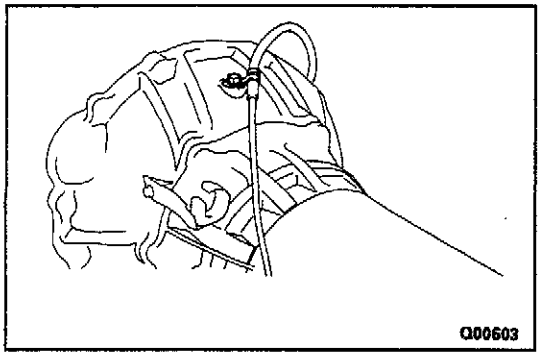
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

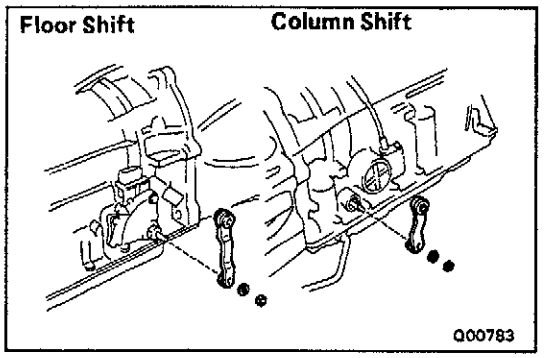
AT5654

AT08G-01

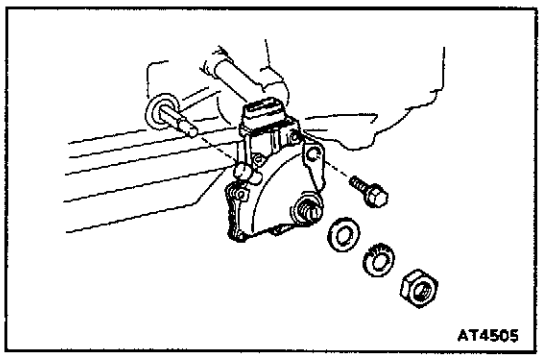
TRANSMISSION DISASSEMBLY



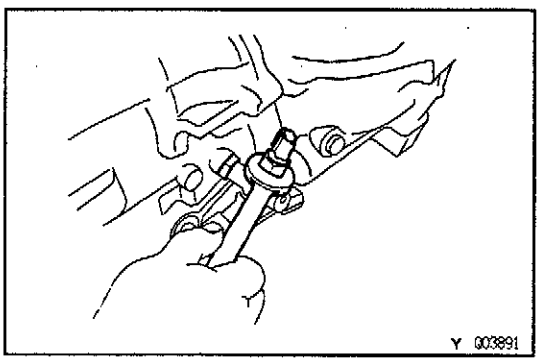
1. **SUPRA, PREVIA:**
   REMOVE WIRE HARNESS CLAMP AND THROTTLE CABLE CLAMP



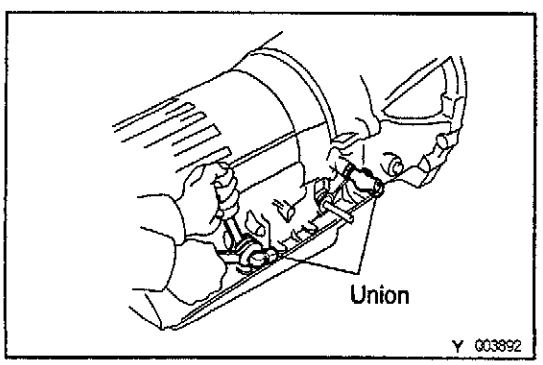
2. **REMOVE TRANSMISSION CONTROL SHAFT LEVER**



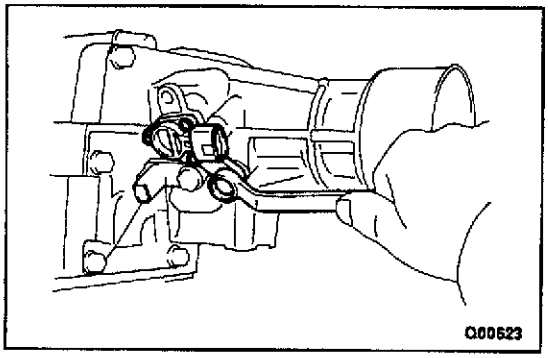
3. **REMOVE PARK/NEUTRAL POSITION SWITCH**
   (a) Unstake the lock washer.
   (b) Remove the nut and bolt, and then remove the park/neutral position switch.
   (c) Remove the lock washer and grommet.



4. **SUPRA, T100:**
   REMOVE A/T OIL TEMPERATURE SENSOR
   (a) Remove the oil temperature sensor.
   (b) Remove the O–ring from the sensor.



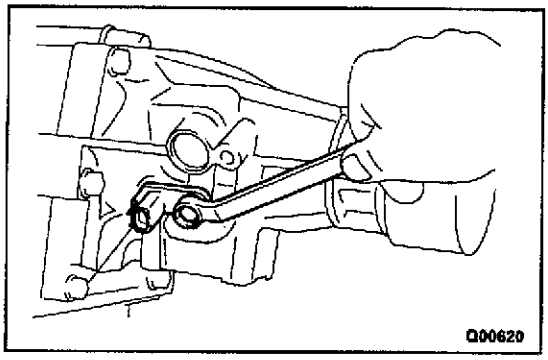
5. **REMOVE UNIONS**
   (a) Remove the 2 unions.
   (b) Remove the O–rings from both unions.



6. REMOVE NO.1 VEHICLE SPEED SENSOR

(a) Remove the No.1 vehicle speed sensor.

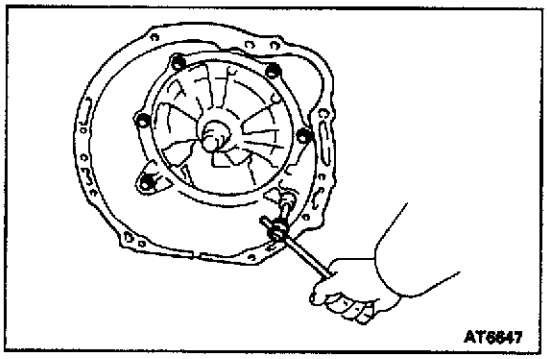
(b) Remove the O–ring from it.



7. REMOVE NO.2 VEHICLE SPEED SENSOR

(a) Remove the No.2 vehicle speed sensor.

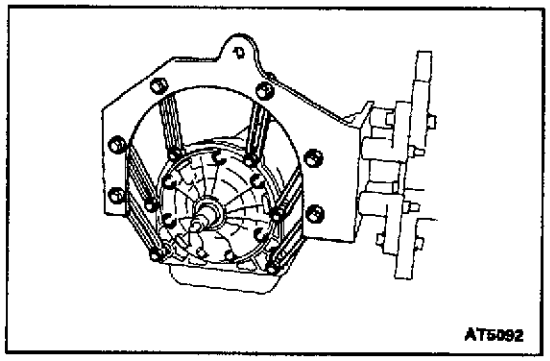
(b) Remove the O–ring from it.



8. REMOVE TRANSMISSION HOUSING

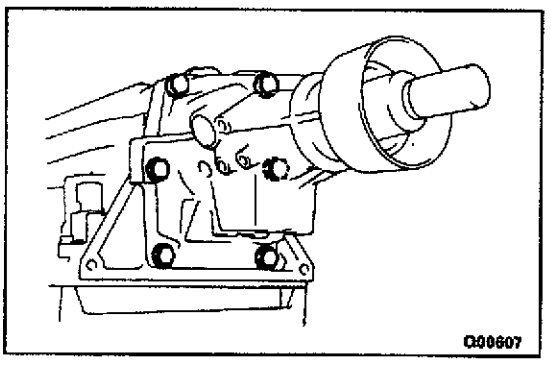
(a) Remove the 6 bolts.

(b) Remove the transmission housing.



9. INSTALL TRANSMISSION CASE

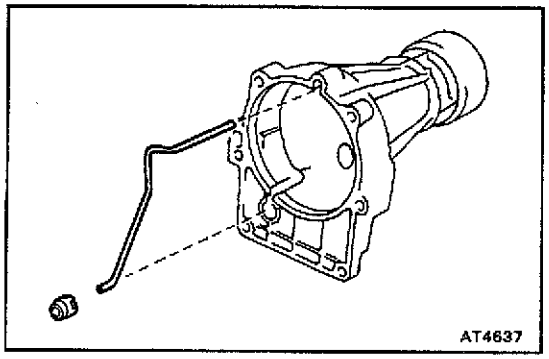
Install the transmission case on the overhaul attachment.



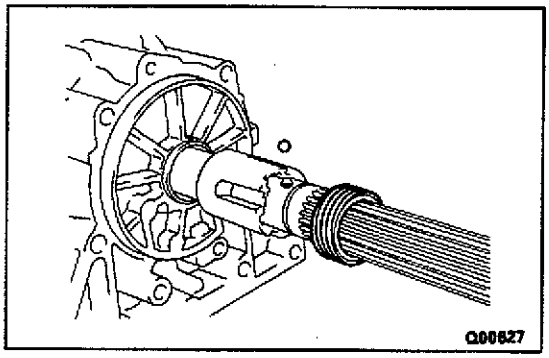
10. REMOVE EXTENSION HOUSING

(a) Remove the 6 bolts.

(b) Remove the extension housing.

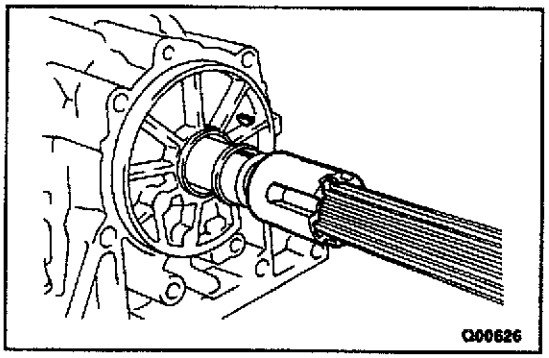


(c) Remove the oil apply tube and gasket from the extension housing.



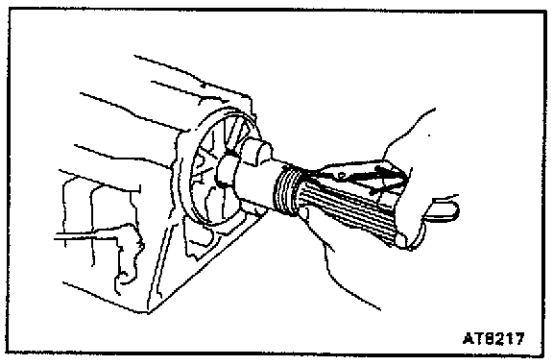
11. SUPRA:
REMOVE SPEEDOMETER DRIVE GEAR AND BALL

(a) Using snap ring pliers, remove the snap ring.
(b) Remove the speedometer drive gear and ball.



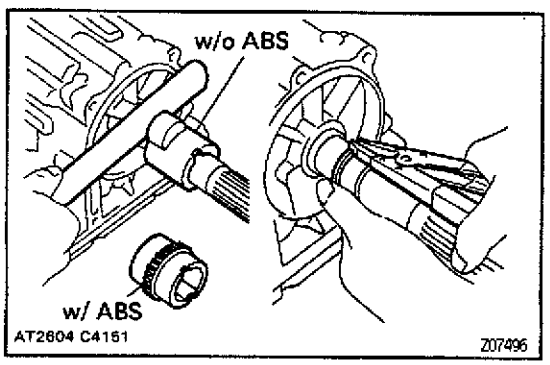
12. SUPRA:
REMOVE SENSOR ROTOR AND KEY

(a) Remove the sensor rotor and key.
(b) Using snap ring pliers, remove the snap ring.



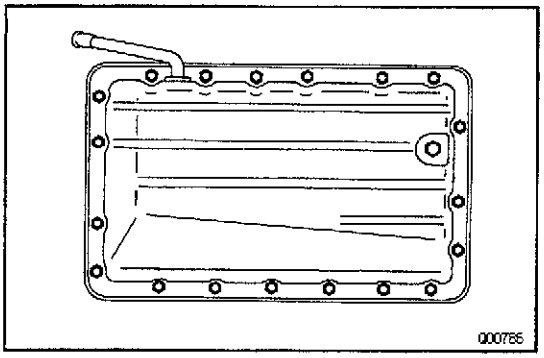
13. OTHERS:
REMOVE SPEEDOMETER DRIVE GEAR AND BALL

(a) Using snap ring pliers, remove the snap ring.
(b) Remove the speedometer drive gear and ball.



14. OTHERS:
REMOVE SENSOR ROTOR AND KEY

(a) Remove the sensor rotor and key.
(b) Using snap ring pliers, remove the snap ring.

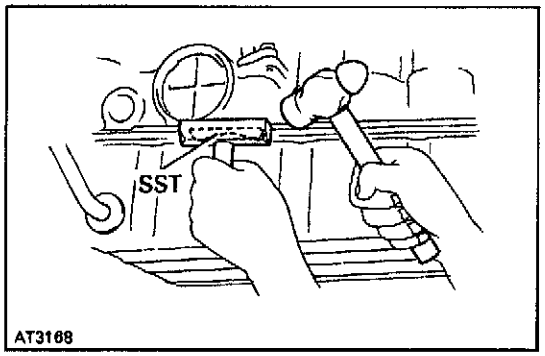


15. REMOVE OIL PAN

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 19 bolts.

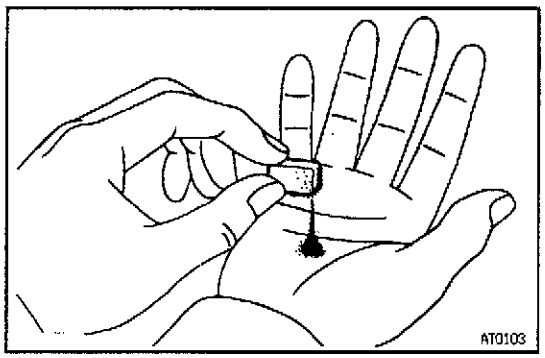
AT



(b) Install the blade of SST between the transmission case and oil pan, cut off applied sealer.
SST 09032—00100

NOTICE: Be careful not to damage the oil pan flange.

(c) Remove the pan by lifting the transmission case.

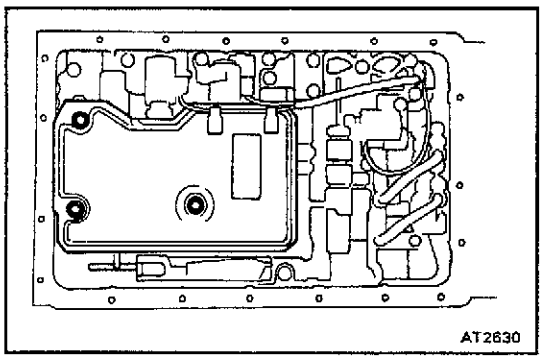


16. EXAMINE PARTICLES IN PAN

Remove the magnets and use them to collect steel particles.

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.

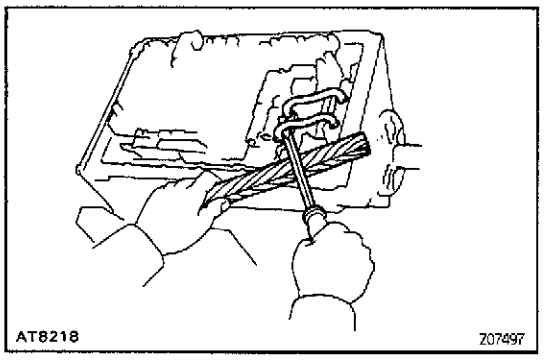
Steel (magnetic) ... bearing, gear and clutch plate wear
Brass (non—magnetic) ... bushing wear



17. REMOVE OIL STRAINER AND GASKETS

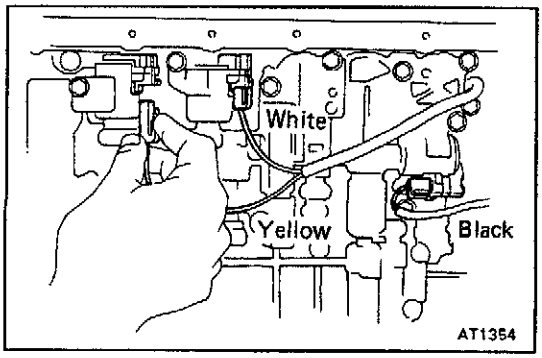
(a) Remove the 3 bolts holding the oil strainer to the valve body.

(b) Remove the oil strainer and 2 gaskets.



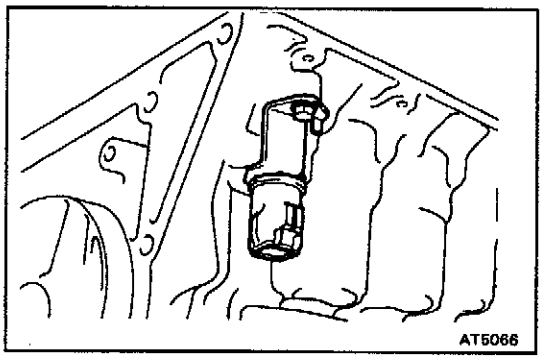
18. REMOVE OIL TUBES

Pry up both tube ends with a large screwdriver and remove the 2 oil tubes.

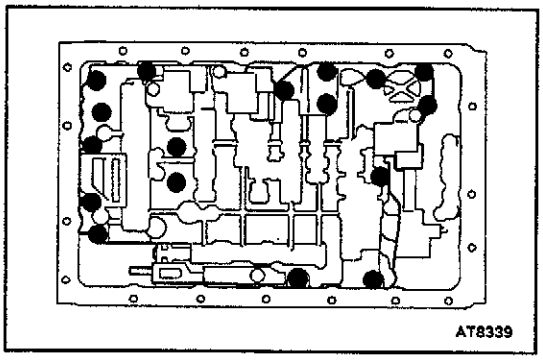


19. REMOVE SOLENOID WIRING

(a) Disconnect the 3 connectors from No.1, No.2 and lock–up solenoids.

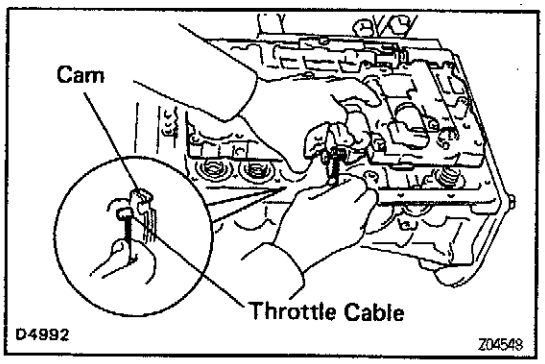


(b) Remove the bolt and stopper plate from the case.
(c) Pull out the solenoid wiring form the transmission case.
(d) Remove the O–rings from the grommet.

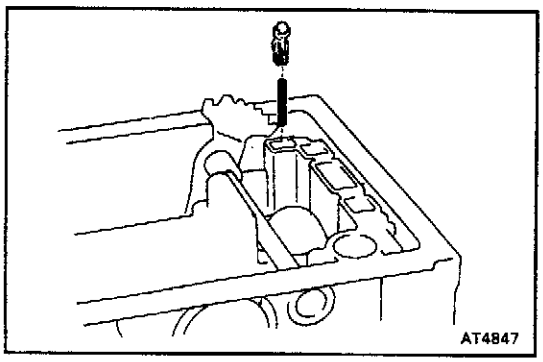


20. REMOVE VALVE BODY

(a) Remove the 17 bolts.

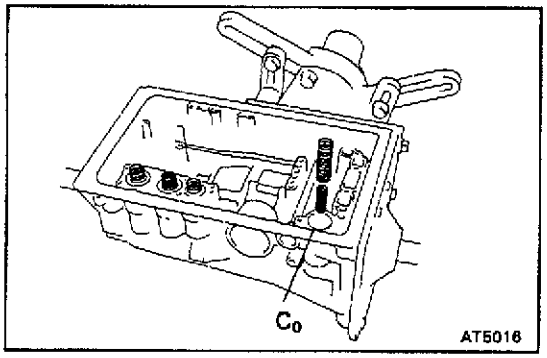


(b) Disconnect the throttle cable from the cam and remove the valve body.

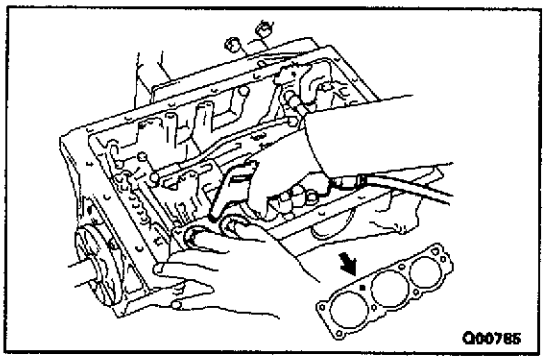


21. REMOVE CHECK BALL BODY, ACCUMULATOR SPRINGS AND PISTONS

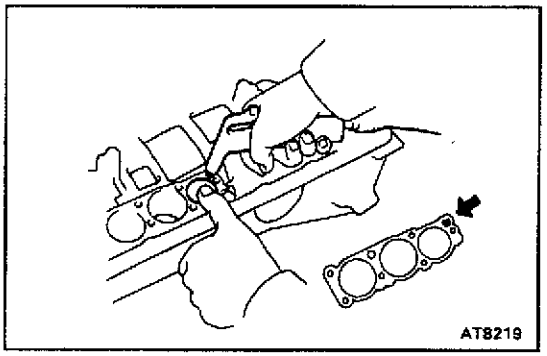
(a) Remove the check ball body and spring.



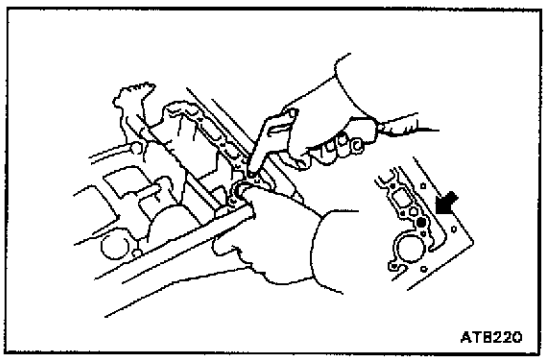
(b) Remove the 2 springs from C_0 accumulator piston.



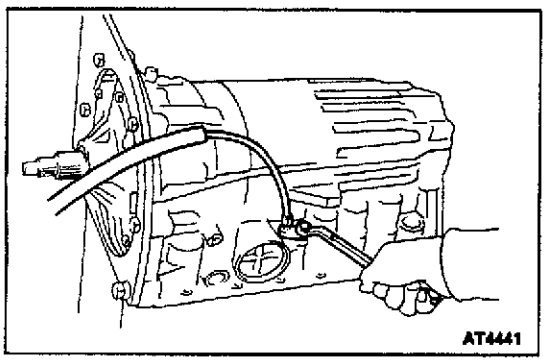
(c) Applying compressed air to the oil hole, remove the B_2 and C_2 accumulator pistons and springs.



(d) Applying compressed air to the oil hole, remove the B_0 accumulator piston and spring.

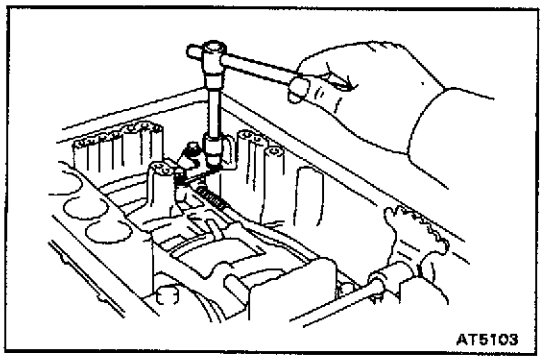


(e) Applying compressed air to the oil hole, remove the C_0 accumulator piston.
(f) Remove the O–ring from each piston.



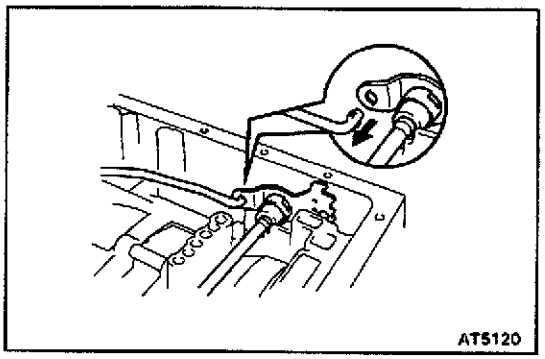
22. REMOVE THROTTLE CABLE

(a) Remove the retaining bolt and pull out the throttle cable.
(b) Remove the O–ring from the cable.

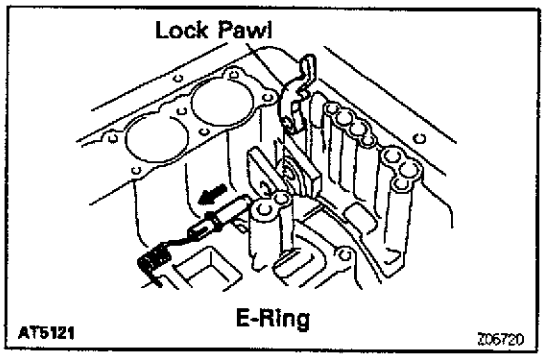


23. REMOVE PARKING LOCK ROD AND PAWL

(a) Remove the parking lock pawl bracket.

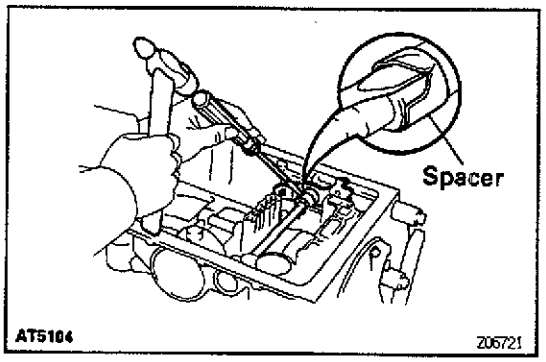


(b) Disconnect the parking lock rod from the manual valve lever.



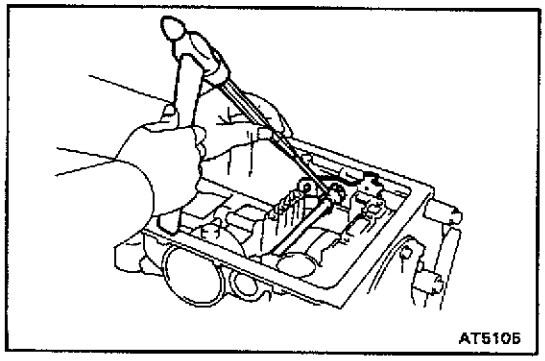
(d) Pull the parking lock pawl shaft out from the front side, then remove the lock pawl and spring.

(c) Remove the E—ring from the shaft.



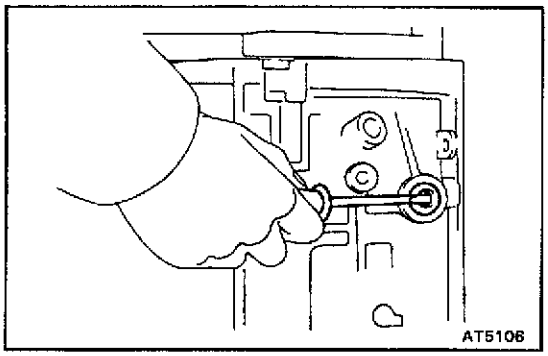
24. REMOVE MANUAL VALVE LEVER SHAFT AND OIL SEALS

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

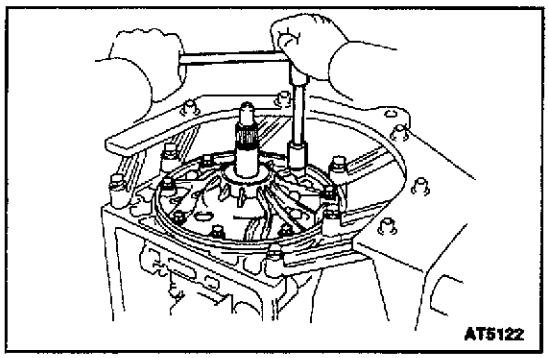


(b) Using a pin punch, drive out the pin.

(c) Pull the manual valve lever shaft out through the case and remove the manual valve lever.



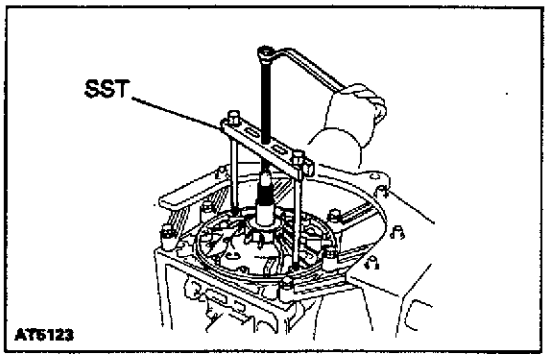
(d) Using a screwdriver, remove the 2 oil seals.



25. REMOVE OIL PUMP

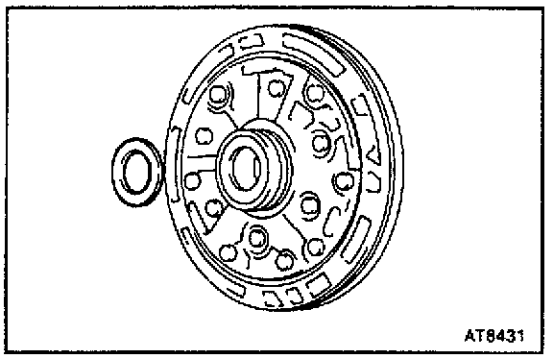
(a) Stand up the transmission.

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

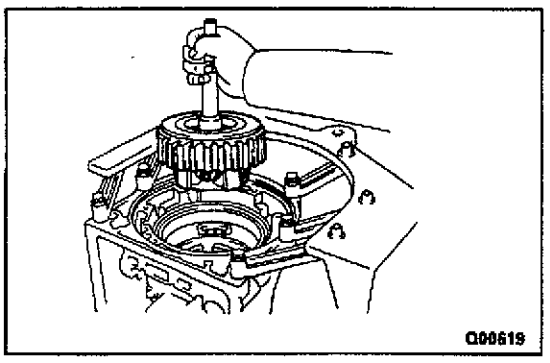


(c) Using SST, remove the oil pump.
SST 09610–20012

(d) Remove the O–ring from it.

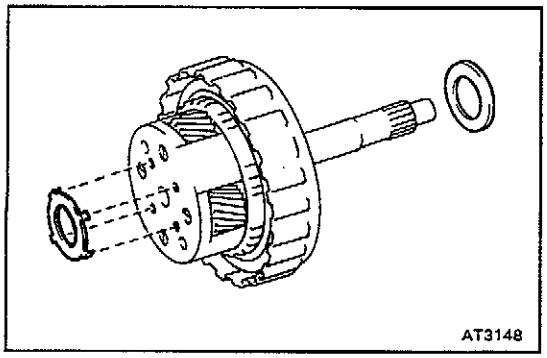


(e) Remove the race from the oil pump.

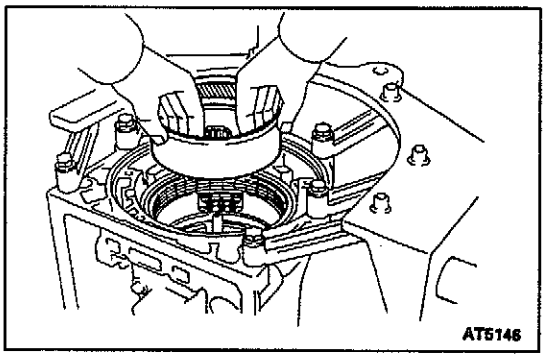


26. REMOVE OVERDRIVE PLANETARY GEAR WITH OVERDRIVE DIRECT CLUTCH AND ONE – WAY CLUTCH

(a) Remove the overdrive planetary gear with the overdrive direct clutch and overdrive one–way clutch from the transmission case.

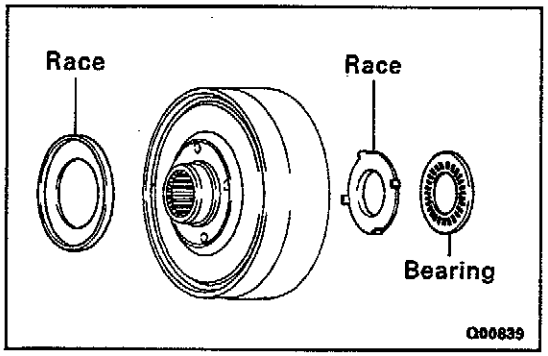


(b) Remove the race and assembled bearing and race.

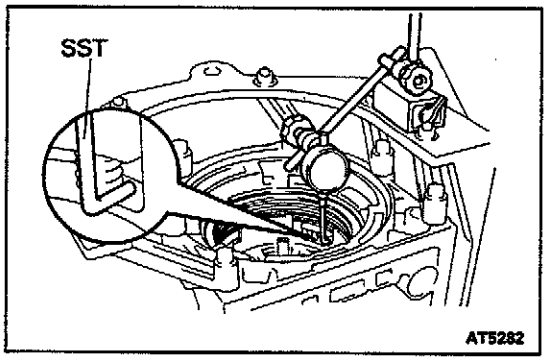


27. REMOVE OVERDRIVE PLANETARY RING GEAR

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

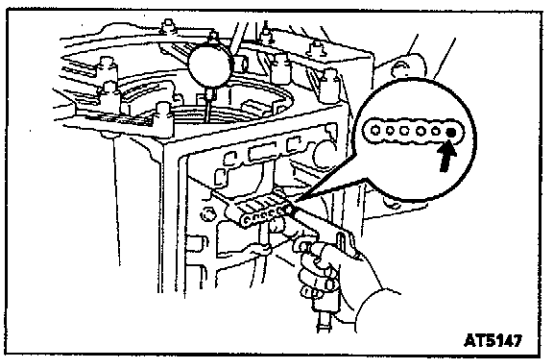


(b) Remove the bearing and 2 races from the planetary ring gear.



28. CHECK PISTON STROKE OF OVERDRIVE BRAKE

(a) Place SST and a dial indicator onto the overdrive brake piston.
SST 09350–30020 (09350–06120)



(b) Measure the stroke while applying and releasing compressed air (392–785 kPa, 4–8 kgf/cm², 57–114 psi).

Piston stroke:

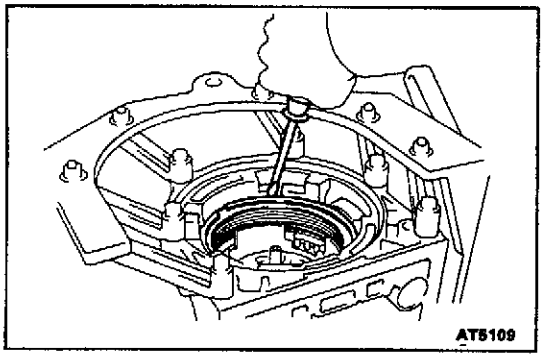
PREVIA:

1.32–1.62 mm (0.0520–0.0638 in.)

OTHERS:

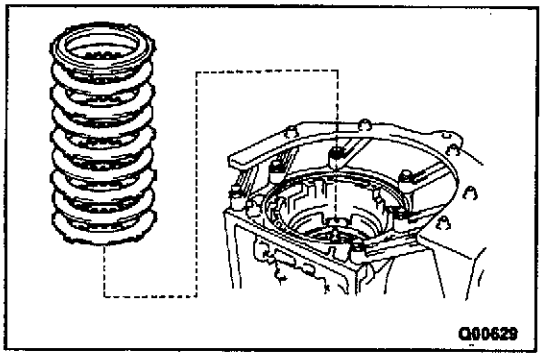
1.40–1.70 mm (0.0551–0.0669 in.)

If the values are non–standard, inspect the disc.

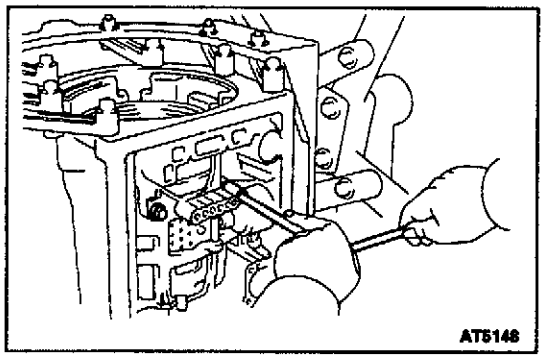


29. REMOVE FLANGES, PLATES AND DISCS OF OVER-DRIVE BRAKE

(a) Remove the snap ring.

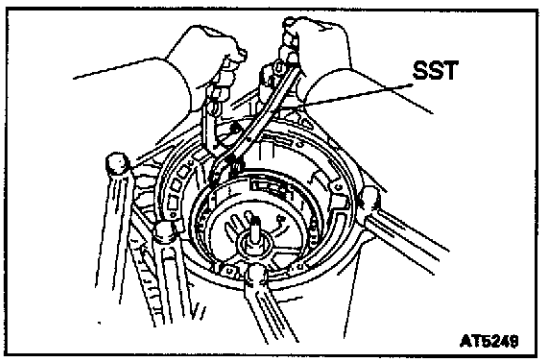


(b) Remove the flanges, plates and discs as a set.

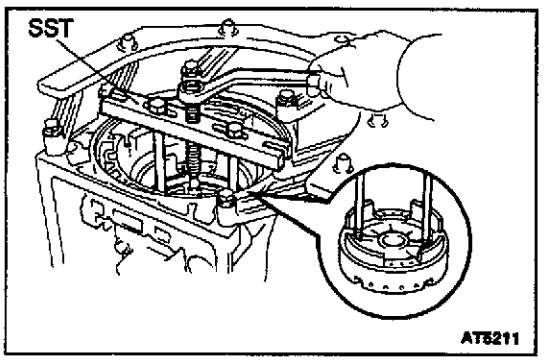


30. REMOVE OVERDRIVE SUPPORT ASSEMBLY

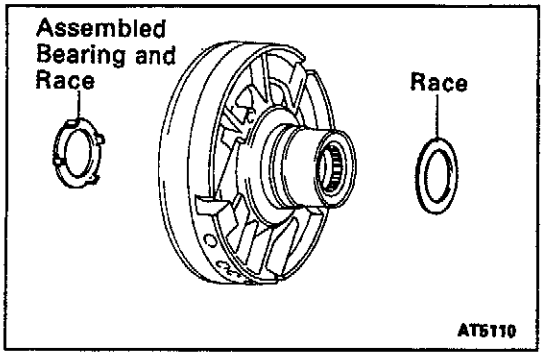
(a) Remove the 2 bolts holding the overdrive support assembly to the case.



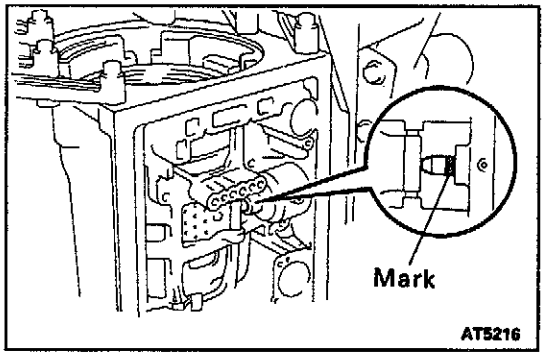
(b) Using SST, remove the snap ring.
SST 09350–30020 (09350–07060)



(c) Using SST, remove the overdrive support assembly.
SST 09350–30020 (09350–07020)

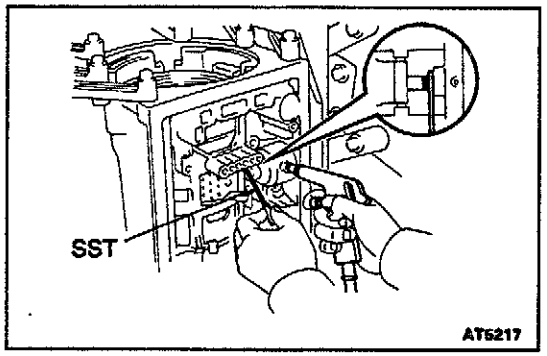


(d) Remove the assembled bearing and race from the overdrive support.

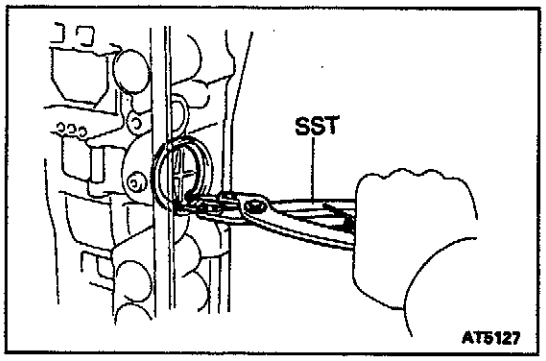


31. CHECK PISTON ROD STROKE OF SECOND COAST BRAKE

(a) Place a mark on the second coast brake piston rod.

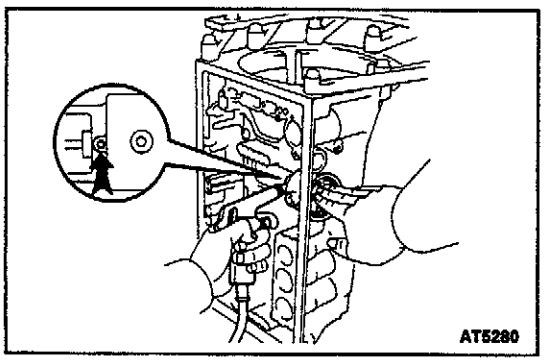


(b) Using SST, measure the stroke while applying and releasing compressed air (392–785 kPa, 4–8 kgf/cm², 57–114 psi).
SST 09240–00020
Piston stroke:
1.5–3.0 mm (0.059–0.118 in.)
If the values are non–standard, inspect the brake band.

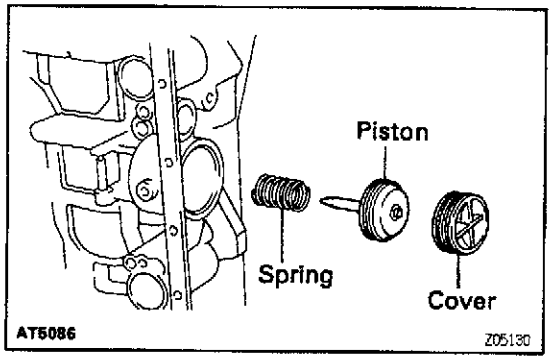


32. REMOVE SECOND COAST BRAKE COVER, PISTON ASSEMBLY AND SPRING

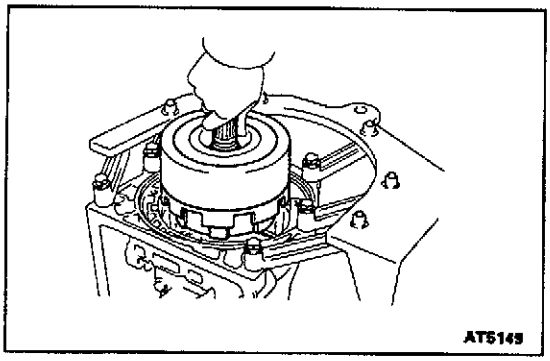
(a) Using SST, remove the snap ring.
SST 09350–30020 (09350–07060)



(b) Applying compressed air to the oil hole, remove the second coast brake cover, piston assembly and spring.

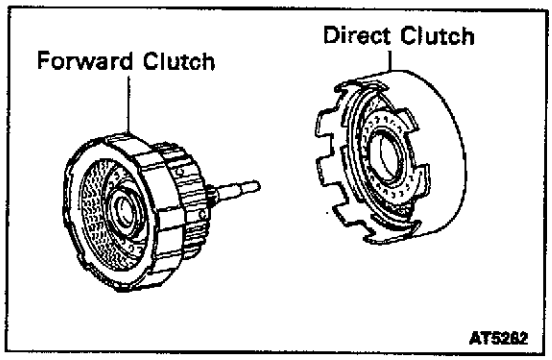


(c) Remove the 2 O–rings from the cover.

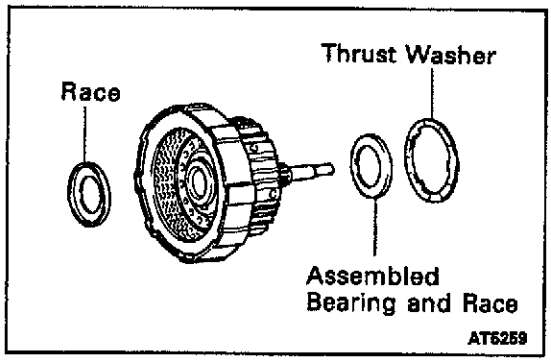


33. REMOVE DIRECT CLUTCH WITH FORWARD CLUTCH

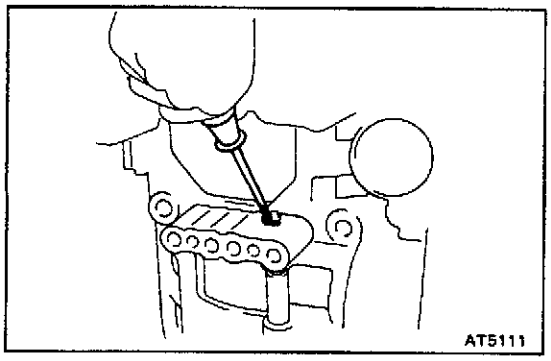
(a) Remove the direct clutch with the forward clutch from the case.



(b) Remove the direct clutch from the forward clutch.



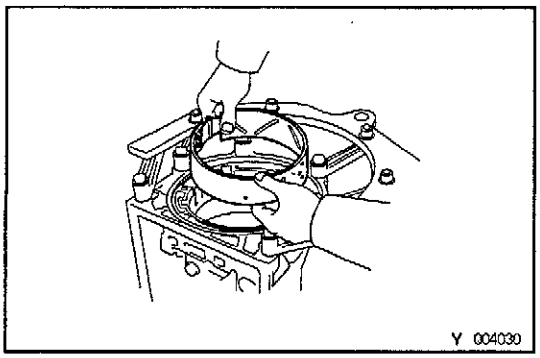
(c) Remove the assembled bearing and race, thrust washer and race from the forward clutch.



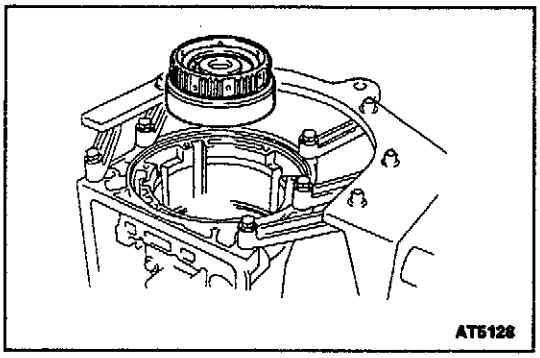
34. REMOVE SECOND COAST BRAKE BAND

(a) Remove the E–ring from the pin.

(b) Remove the pin from the brake band.

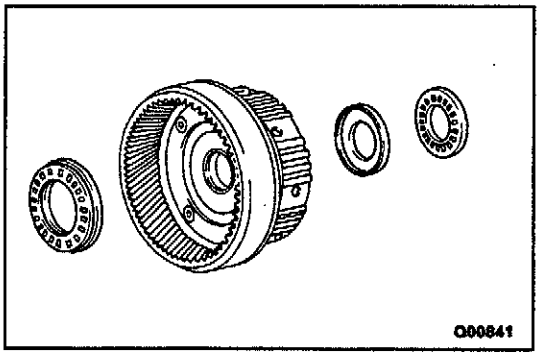


(c) Remove the second coast brake from the case.

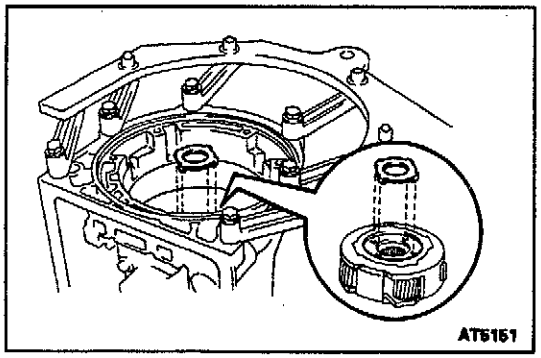


35. REMOVE FRONT PLANETARY GEAR UNIT

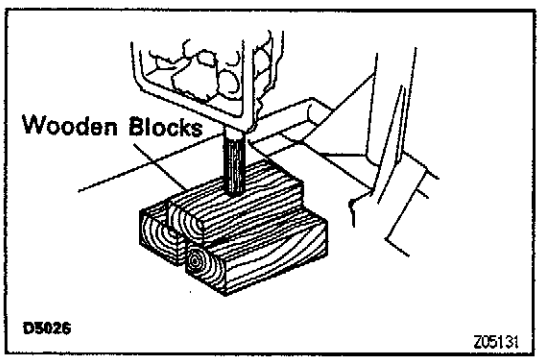
(a) Remove the front planetary ring gear from the case.



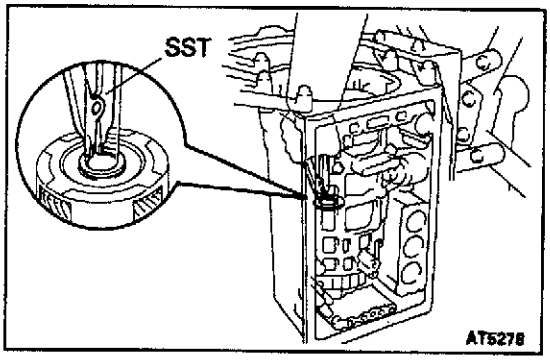
(b) Remove the bearing and race from the front planetary ring gear.



(c) Remove the race from the front planetary gear.

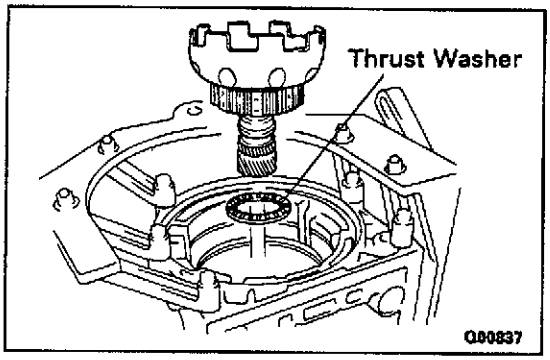


(d) With wooden blocks under the output shaft, stand the transmission on the output shaft.



36. REMOVE FRONT PLANETARY GEAR

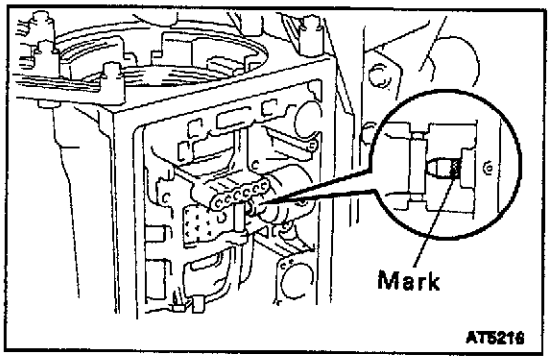
(a) Using SST, remove the snap ring.
SST 09350–30029 (09350–07070)
HINT: Pushing the output shaft towards the front makes it easier to remove.



37. REMOVE PLANETARY SUN GEAR WITH NO.1 ONE –WAY CLUTCH

(a) Remove the planetary sun gear with No.1 one–way clutch from the case.

(b) Remove the thrust washer.



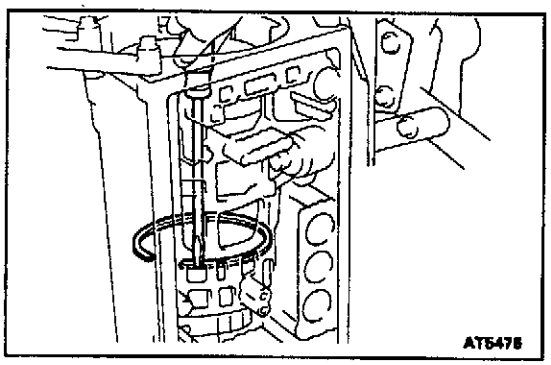
38. CHECK PACK CLEARANCE OF SECOND BRAKE

Using a feeler gauge, measure the clearance between the snap ring and flange.

Clearance:

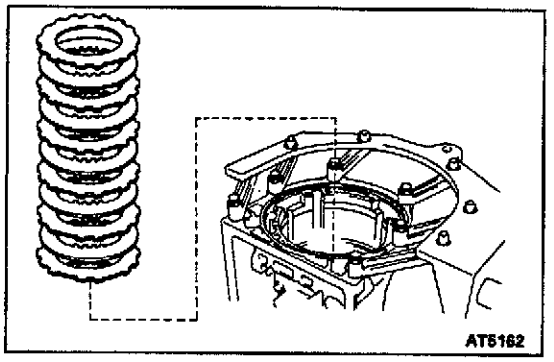
0.62–1.98 mm (0.0244–0.0780 in.)

If the values are non–standard, inspect the discs.

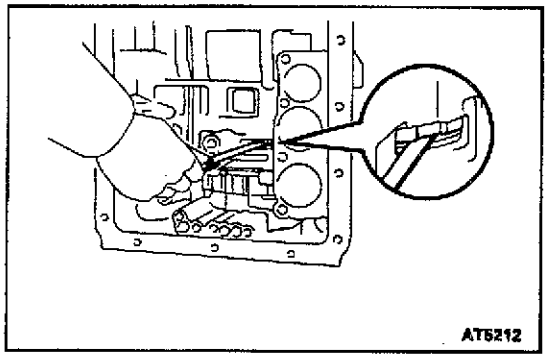


39. REMOVE FLANGE, PLATES AND DISCS OF SECOND BRAKE

(a) Remove the snap ring.



(b) Remove the flange, plates and discs.



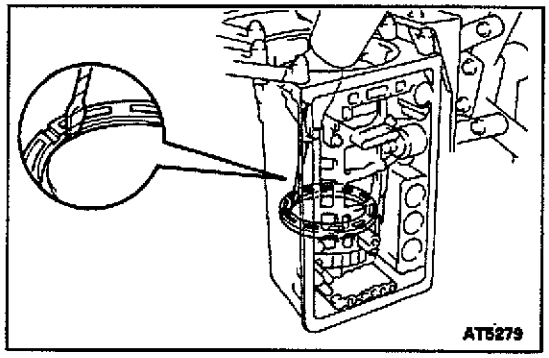
40. CHECK PACK CLEARANCE OF FIRST AND REVERSE BRAKE

Using a feeler gauge, measure the clearance between the plate and second brake drum.

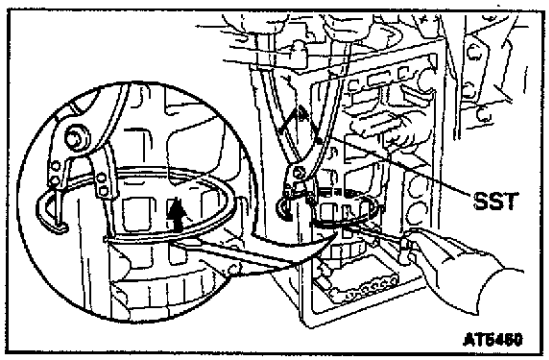
Clearance:

0.60—1.12 mm (0.0236—0.0441 in.)

If the values are non—standard, inspect the discs.

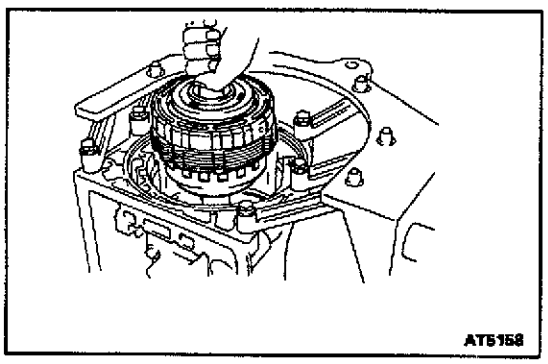


41. REMOVE SECOND BRAKE PISTON SLEEVE

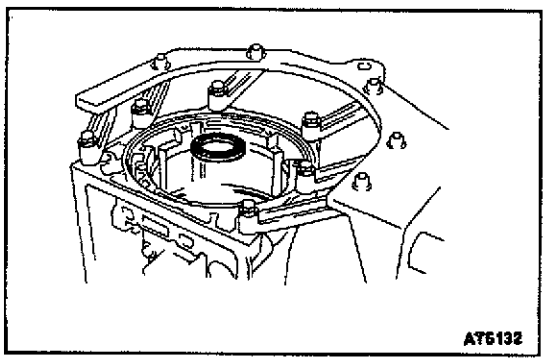


42. REMOVE REAR PLANETARY GEAR WITH SECOND BRAKE DRUM, FIRST AND REVERSE BRAKE PACK AND OUTPUT SHAFT

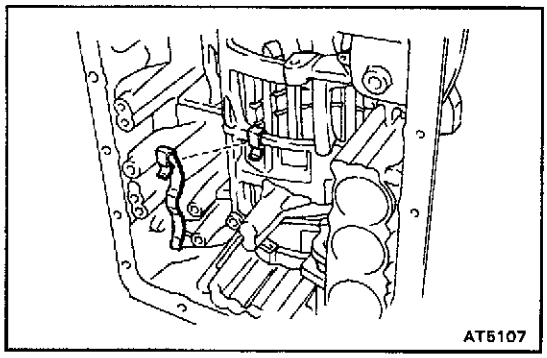
(a) Using SST and screwdriver, remove the snap ring.
SST 09350—30020 (09350—07060)



(b) Remove the rear planetary gear, second brake drum, first and reverse brake pack and output shaft as an assembly.

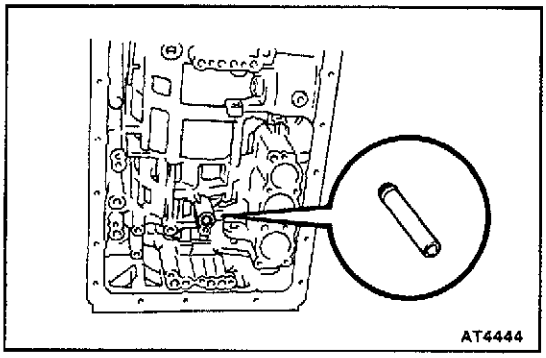


(c) Remove the assembled thrust bearing and race from the case.



43. REMOVE LEAF SPRING

AT



44. REMOVE BRAKE DRUM GASKET