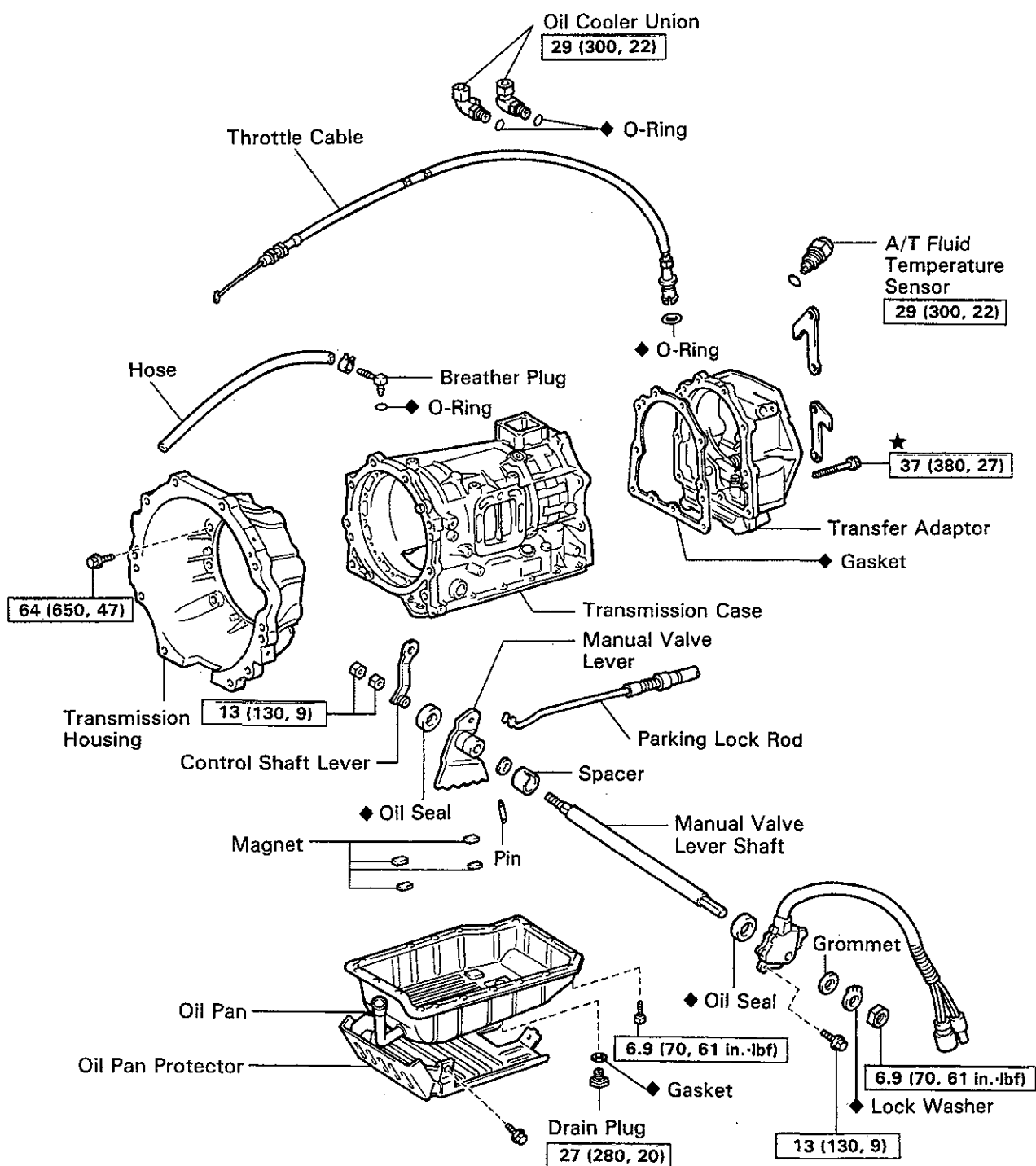


COMPONENT PARTS REMOVAL COMPONENTS

AT07T-01

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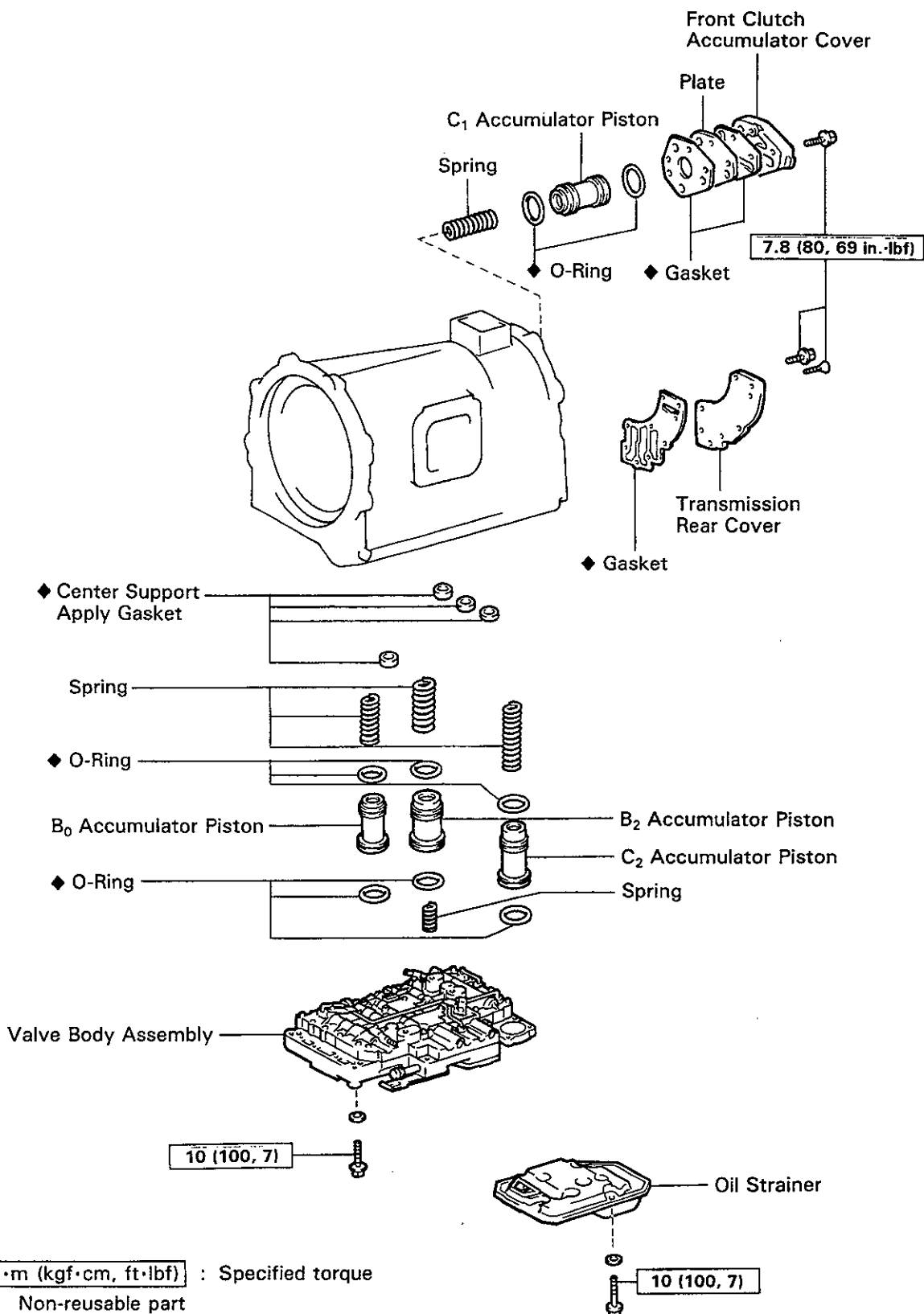


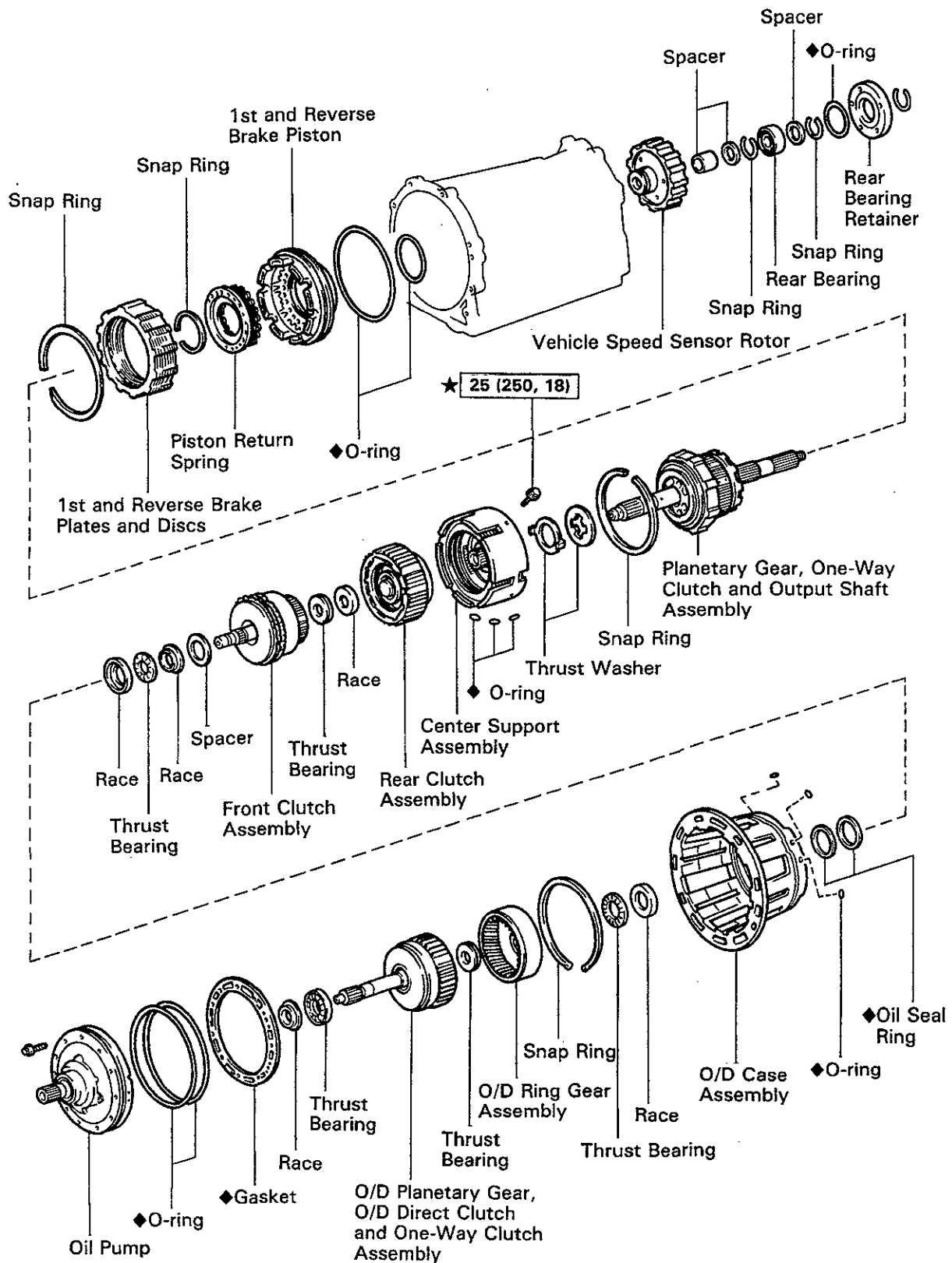
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

★ Precoated part

AT





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

◆ Non-reusable part

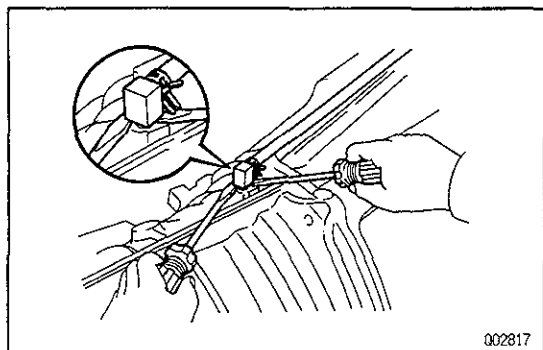
★ Precoated part

SEPARATE BASIC SUBASSEMBLY**1. REMOVE TRANSMISSION WIRING**

Disconnect the connectors, and remove the transmission wiring.

2. REMOVE BREATHER LUG AND HOSE

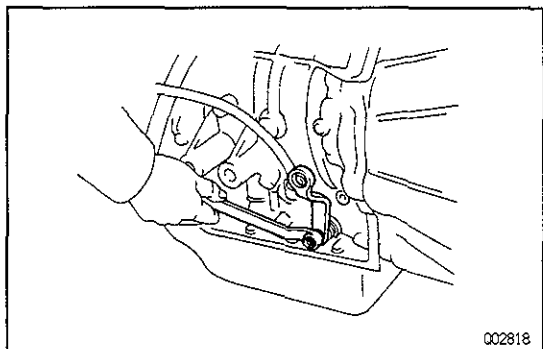
- (a) Using two screwdrivers, pry out the breather plug.
- (b) Remove the O—ring from the breather plug.

**3. REMOVE CONTROL SHAFT LEVER**

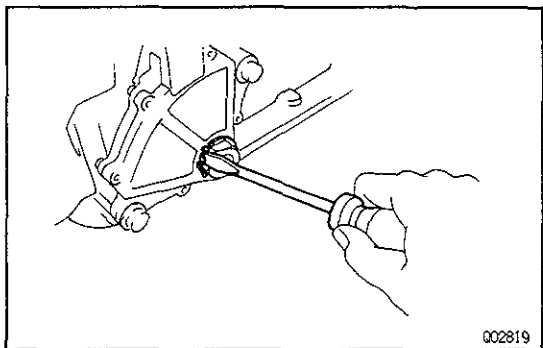
Remove the two nuts and the lever.

4. REMOVE OIL COOLER PIPES

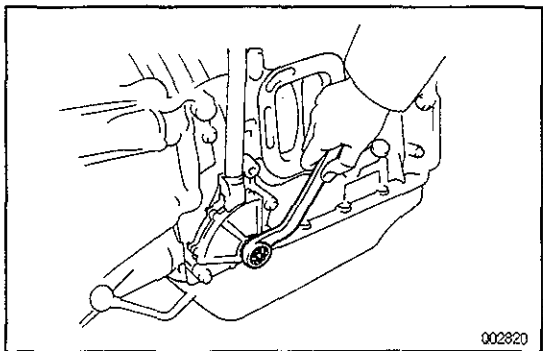
- (a) Remove the mount stay bolt.
- (b) Loosen the tow union bolts, and remove two cooler pipe assembly.

**5. REMOVE NEUTRAL START SWITCH**

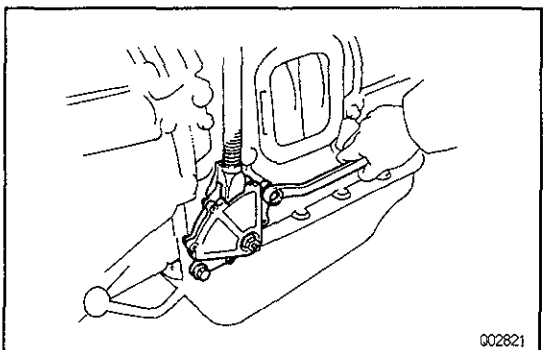
- (a) Unstake the lock washer.

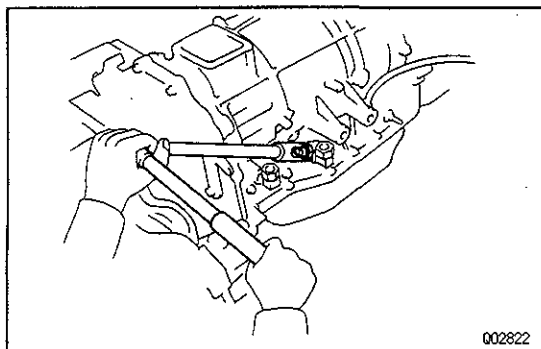


- (b) Remove the nut, lock washer and grommet.



- (c) Remove the two bolts and neutral start switch.

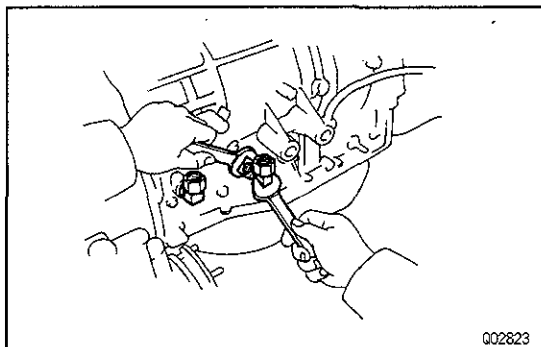




6. REMOVE TRANSMISSION TEMPERATURE SENSOR

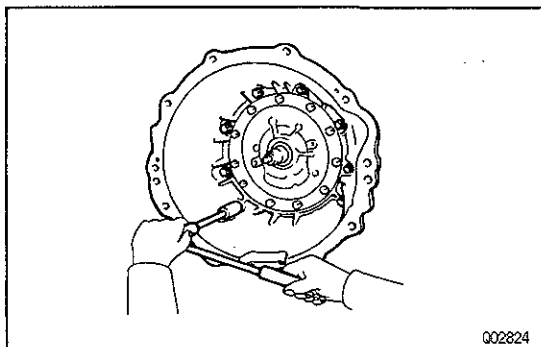
- (a) Remove the sensor from front union.
- (b) Remove the O—ring from the sensor.

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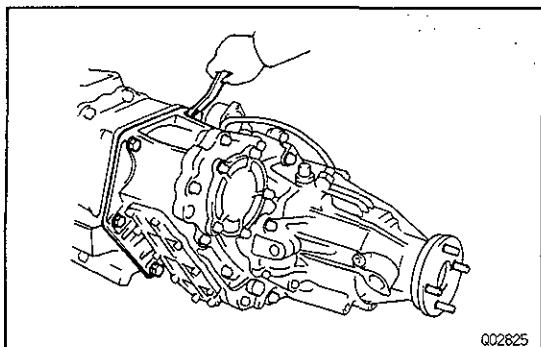
7. REMOVE OIL COOLER UNIONS

- (a) Remove the two unions.
- (b) Remove the O—rings from the both unions.



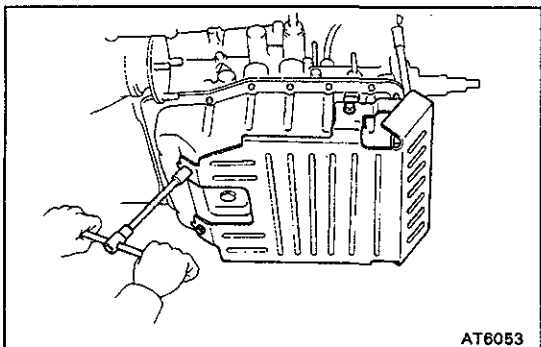
8. REMOVE TRANSMISSION HOUSING

- (a) Remove the throttle cable clamp bolt.
- (b) Remove the eight bolts and transmission housing.



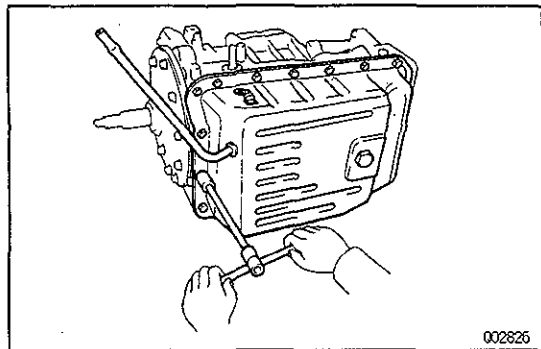
9. REMOVE TRANSFER ASSEMBLY

Remove the six bolts and the transfer.



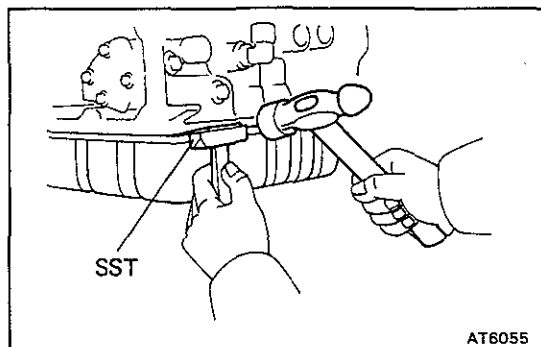
10. REMOVE OIL PAN PROTECTOR

Remove the four bolts and protector.

**11. REMOVE OIL PAN**

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

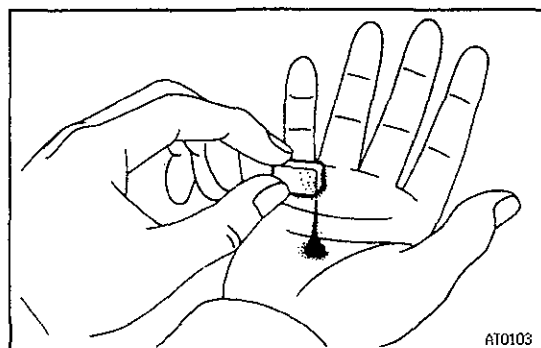
- (a) Remove the twenty bolts.



- (b) Tap in the blade SST between the transmission and oil pan, cut off applied sealer.

SST 09302-00100

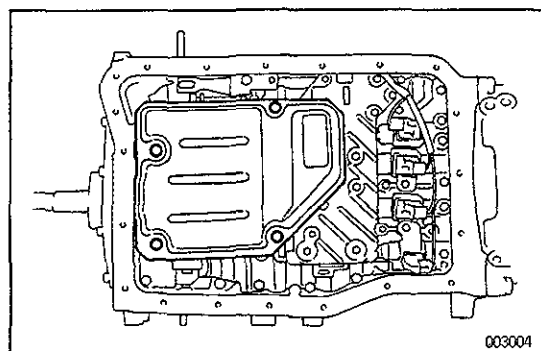
NOTICE: Be careful not to damage the oil pan flange.

**12. EXAMINE PARTICLES IN PAN**

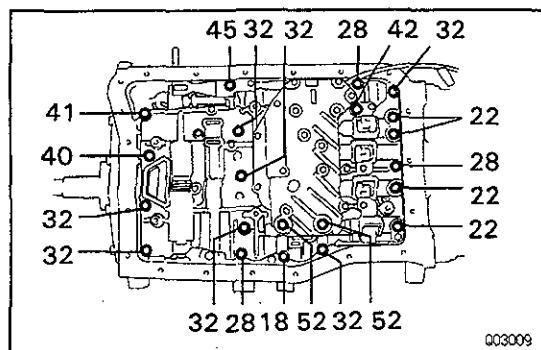
Remove the magnets and use them to collect any steel particles.

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:

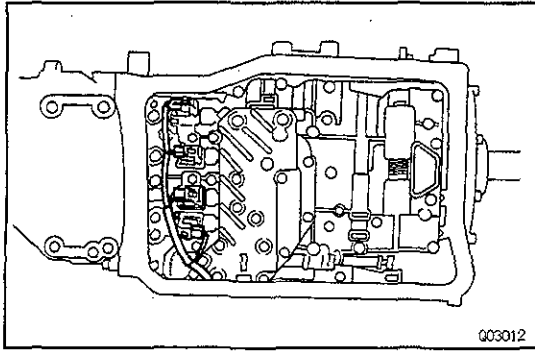
- **Steel (magnetic):** Bearing, gear, and clutch
- **Brass (non-magnetic):** Bushing wear

**13. REMOVE OIL STRAINER**

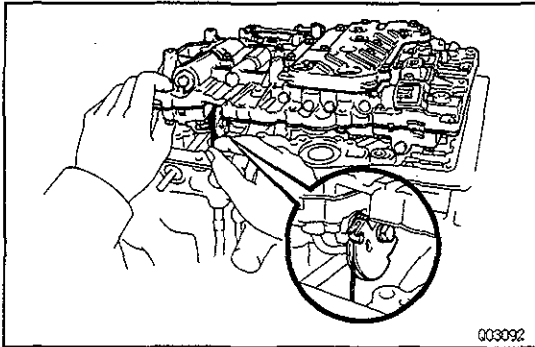
Remove the four bolts and oil strainer.

**14. REMOVE VALVE BODY**

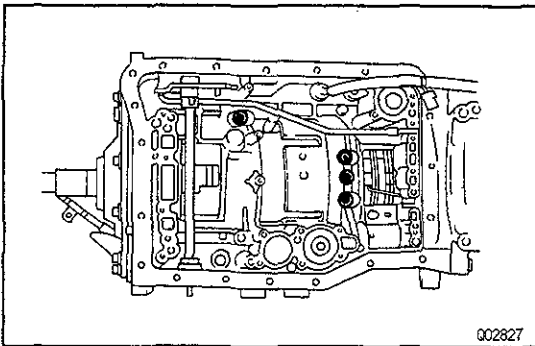
- (a) Remove the twenty one bolts.



- (b) Disconnect the four connectors from the solenoids.

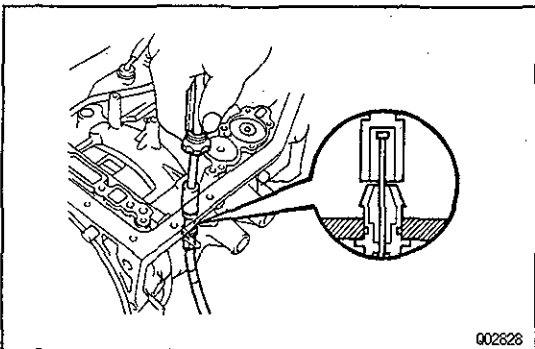


- (c) Disconnect the throttle cable from the cam and remove the valve body.



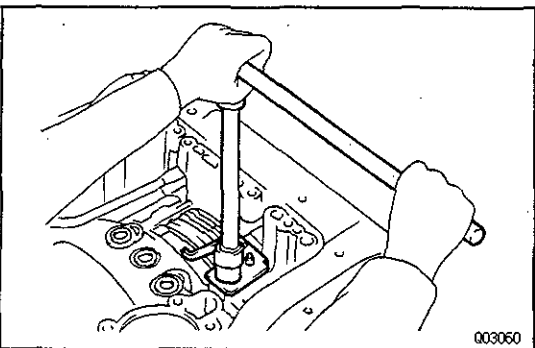
**15. REMOVE O / D CASE AND CENTER SUPPORT
APPLY GASKETS**

Remove the four apply gaskets.

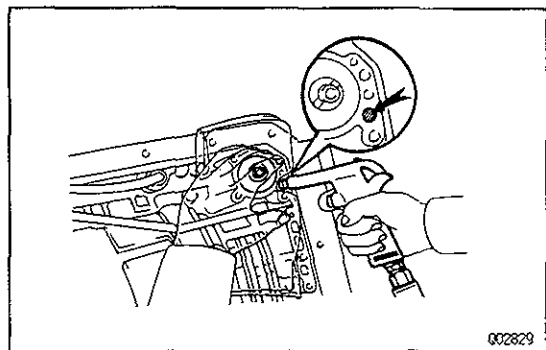


16. REMOVE THROTTLE CABLE

Using 10 mm socket driver, remove the throttle cable by pushing the retainer portion of the throttle cable.

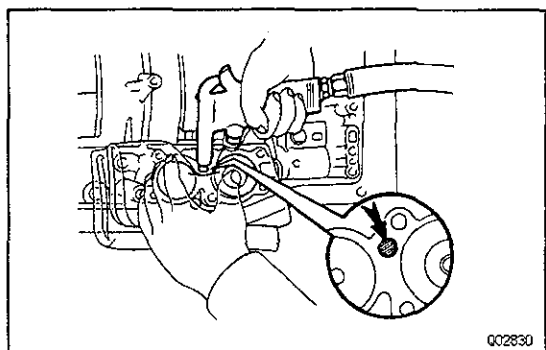


17. REMOVE ONE-WAY CLUTCH RETAINER

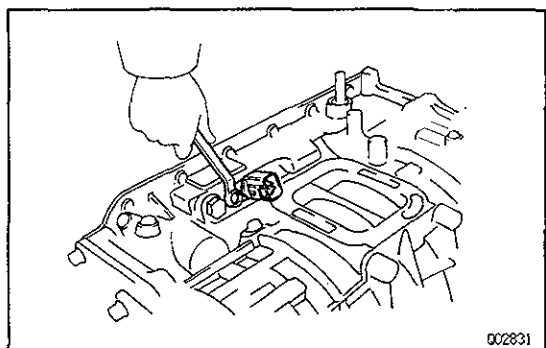


18. REMOVE C₂ B₀ B₂ ACCUMULATOR PISTONS AND SPRINGS

- (a) Remove the C₂ accumulator piston and spring by applying compressed air to the oil hole.

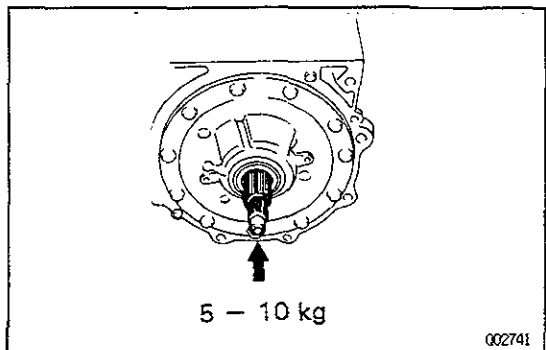


- (b) Remove the B₀ accumulator piston together with the B₂ accumulator piston by applying compressed air to the oil hole.
- (c) Remove the B₀ and B₂ accumulator pistons.
- (d) Remove the O—ring from the accumulator pistons.



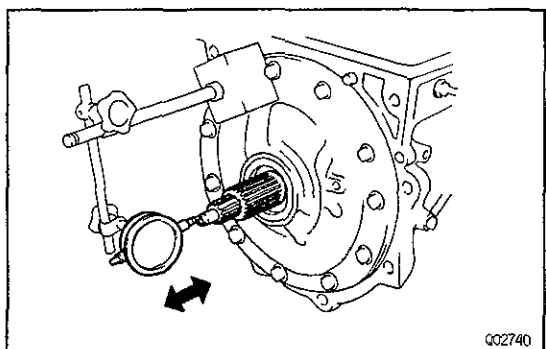
19. REMOVE SOLENOID WIRING

- (a) Remove the bolt and the solenoid wiring.
- (b) Remove the O—ring from it.



20. CHECK THRUST CLEARANCE OF OVERDRIVE INPUT SHAFT (OVERDRIVE PLANETARY GEAR)

- (a) Push the O/D input shaft toward the rear of the transmission by applying a force of 49–98 N (5–10 kgf, 11.0–22.0lbf)



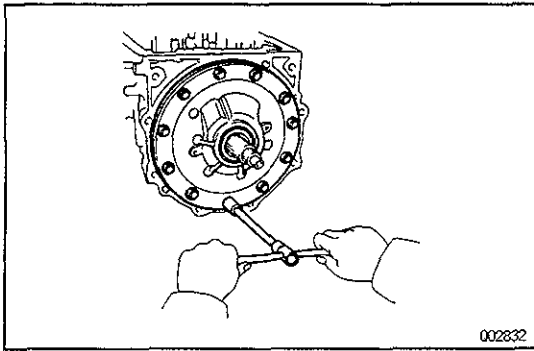
- (d) Using dial indicator, measure the thrust clearance of the input shaft.

Standard thrust clearance:

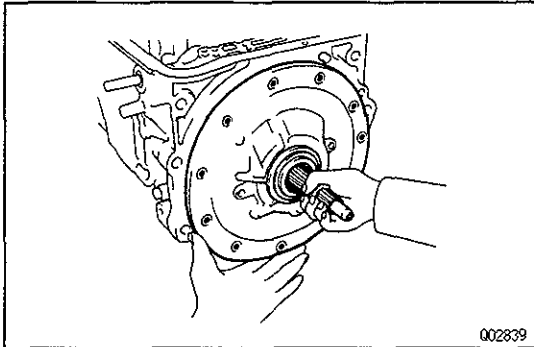
0.40–0.90 mm (0.0157–0.0354 in.)

Maximum thrust clearance:

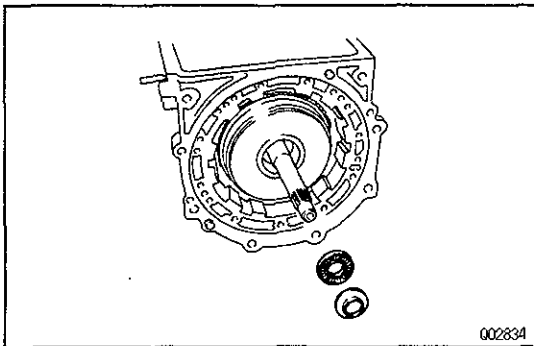
0.90 mm (0.0354 in.)

**21. REMOVE OIL PUMP**

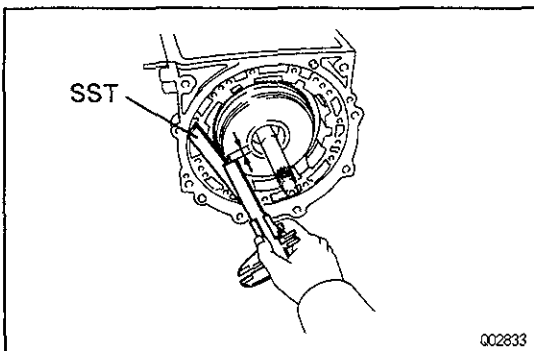
- (a) Remove the eleven bolts holding the oil pump to the transmission case.



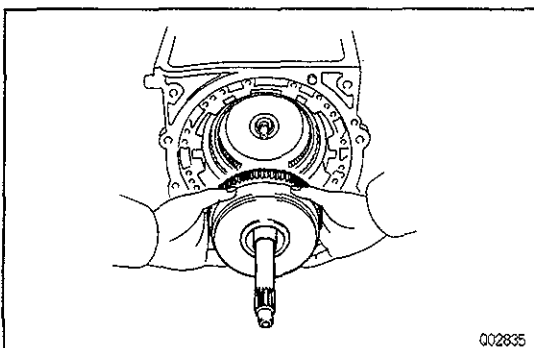
- (b) Remove the oil pump and gasket.
 (c) Remove the O-ring from the oil pump.
 (d) Remove the oil pump gasket.



- (d) Remove the race and thrust bearing from the O/D direct clutch drum or oil pump.

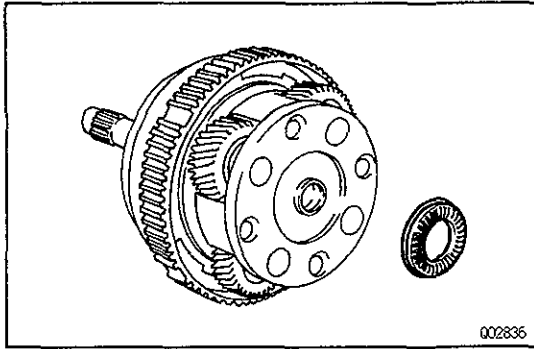
**22. REMOVE OVERDRIVE PLANETARY GEAR, OVER-DRIVE DIRECT CLUTCH AND ONE-WAY CLUTCH ASSEMBLY**

- (a) Place SST on the installation surface of the oil pump. 09350-36010(09350-06090)
 (b) Using calipers, measure the distance between the tops of SST and the clutch drum for assembly.

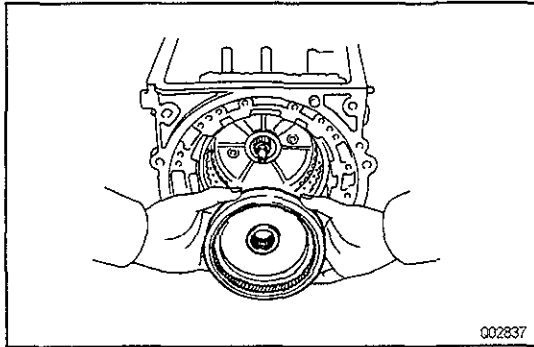


- (c) Remove the O/D planetary gear, direct clutch and one-way clutch assembly.

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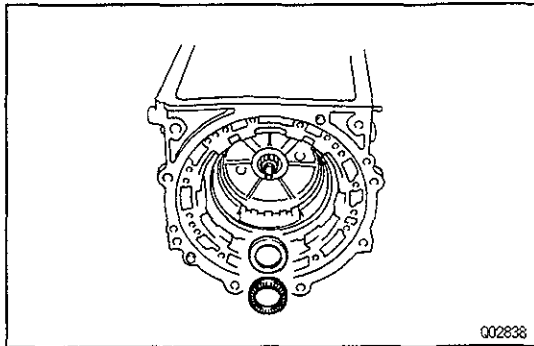


- (d) Remove the bearing from the O/D planetary gear or ring gear flange.

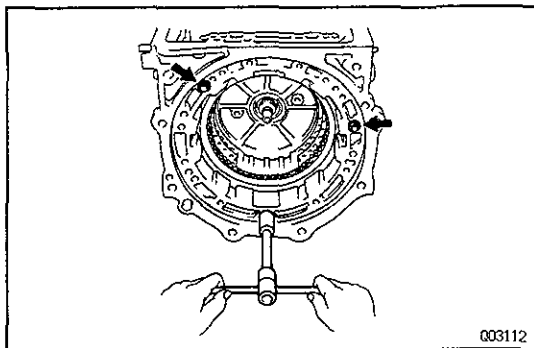


23. REMOVE OVERDRIVE PLANETARY RING GEAR ASSEMBLY

- (a) Remove the ring gear assembly from the O/D case.

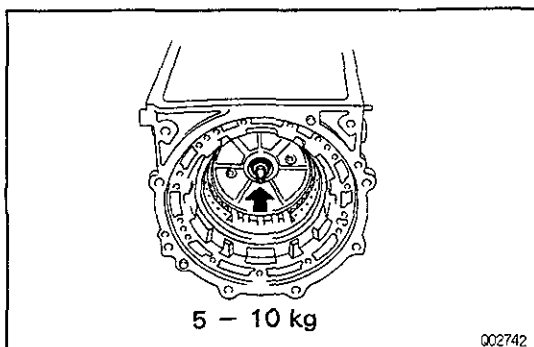


- (b) Remove the thrust bearing and race from the O/D case or ring gear flange.

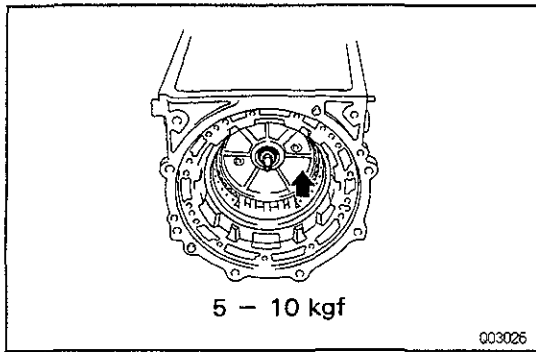


24. CHECK THRUST CLEARANCE OF INPUT SHAFT (FRONT CLUTCH DRUM)

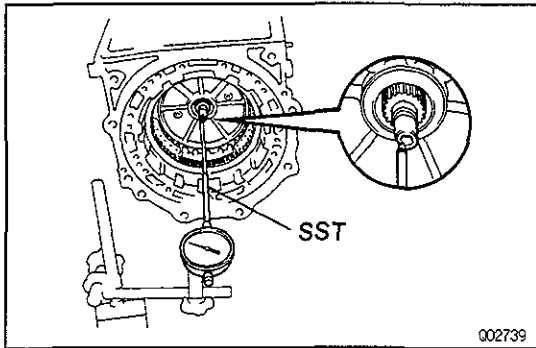
- (a) Temporarily install the three bolts.



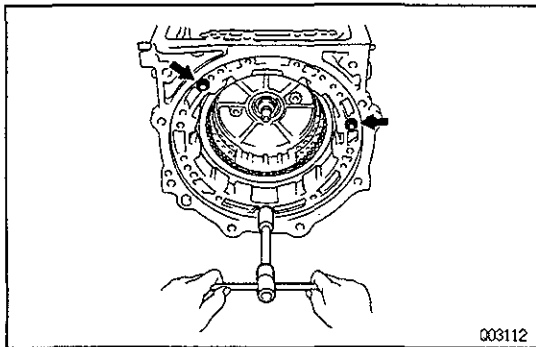
- (b) Push the transmission output shaft toward the front of the transmission by applying a force of 49–98 N (5–10 kgf, 11.0–22.0 lbf).



- (c) Push the O/D case toward the rear of the transmission by applying a force of 49–98 N (5–10 kgf, 11.0–22.0 lbf)

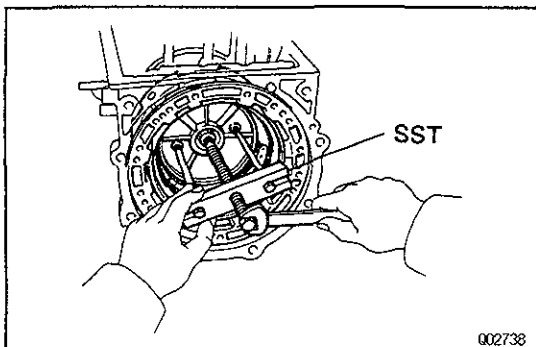


- (d) Using SST and dial indicator, measure the thrust clearance of the input shaft.
 SST 09350–36010(09350–06130)
Standard thrust clearance:
 0.30–0.70 mm (0.0118–0.0276 in.)
Maximum thrust clearance:
 0.70 mm (0.0276 in.)

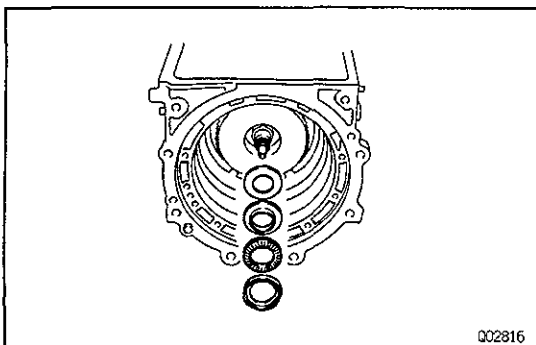


25. REMOVE OVERDRIVE CASE ASSEMBLY

- (a) Remove three bolts.

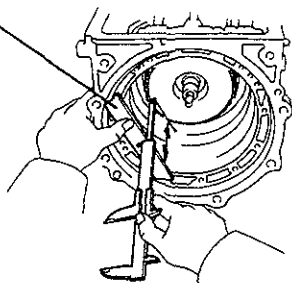


- (b) Using SST, remove the O/D case assembly.
 SST 09350–36010(09350–06140)
 (c) Remove the three O-rings from the oil holes of the O/D case.

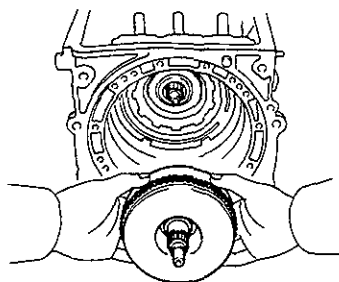


- (d) Remove the oil seal ring from the input shaft.
 (e) Remove the two races, thrust bearing and spacer from the front clutch drum or O/D case.
 (f) Reinstall the oil seal ring to the input shaft.

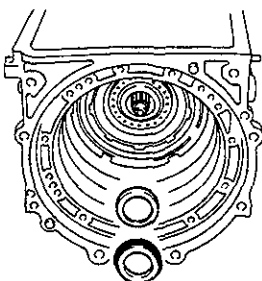
SST



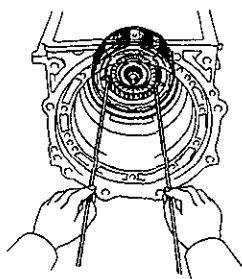
002813



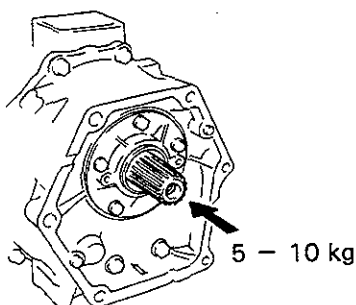
002814



002815



002812



002743

26. REMOVE FRONT CLUTCH ASSEMBLY

- (a) Place SST, on the installation surface of the oil pump. SST 09350-36010(09350-06090)
- (b) Using calipers, measure the distance between the tops of SST and the clutch drum for assembly.

- (c) Remove the front clutch assembly.

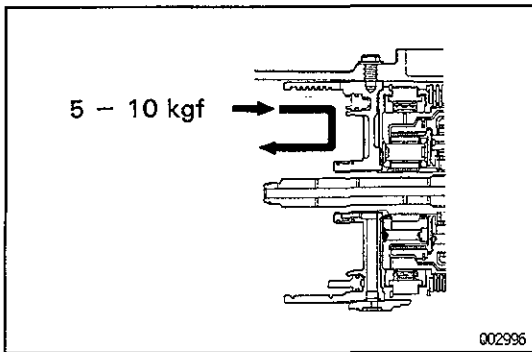
- (d) Remove the race and thrust bearing from the rear clutch drum or front clutch hub.

27. REMOVE REAR CLUTCH ASSEMBLY

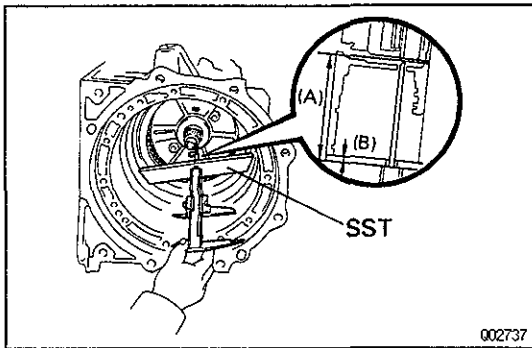
Install two wires into flukes of the clutch discs, and remove the rear clutch assembly.

28. CHECK THRUST CLEARANCE OF CENTER SUPPORT, AND REMOVE CENTER SUPPORT ASSEMBLY

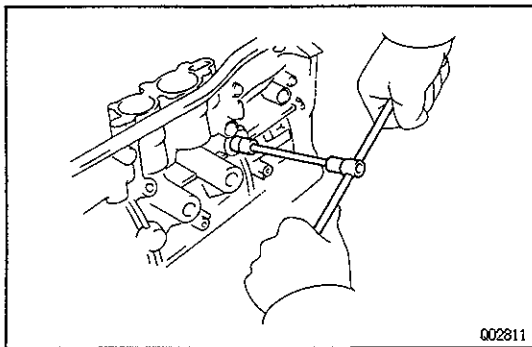
- (a) Push the transmission output shaft toward the front of the transmission by applying a force of 49-98 N (5-10 kgf, 11.0-22.0 lbf).



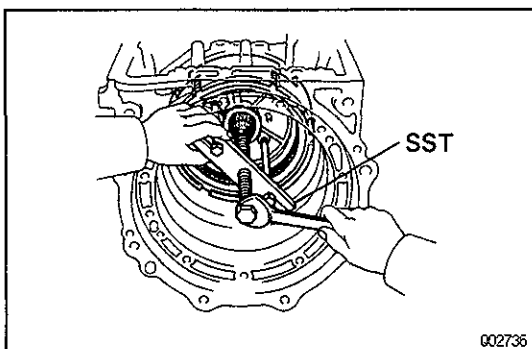
- (b) Push the center support toward the rear of the transmission by applying a force of 49–98 N (5–10 kgf, 11.0–22.0 lbf), then pull with the same amount of force.



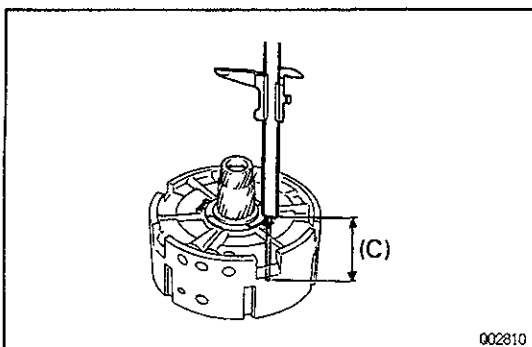
- (c) Place SST on the center support.
SST 09350–36010(09350–06090)
- (d) Using calipers, measure distance (A) between the tops of SST and the thrust washer on the front planetary gear.
- (e) Using calipers, measure the thickness (B) of SST.



- (f) Remove the three center support set bolts.



- (g) Using SST, remove the center support assembly.
SST 09350–36010(09350–06140)



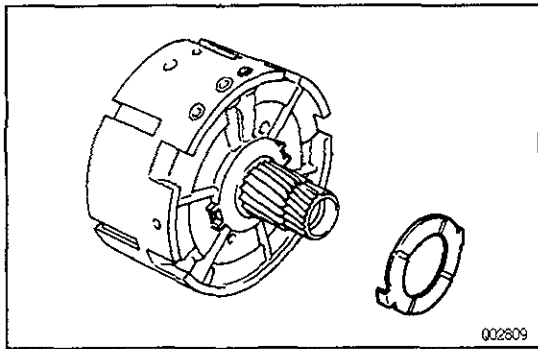
- (h) Turn the center support together with the thrust washer, and place it on that surface.
- (i) Inserting the calipers into the thrust washer hole, measure the distance (C) between it and the flat surface.

Center support thrust clearance:

$$A - (B + C)$$

Standard thrust clearance:

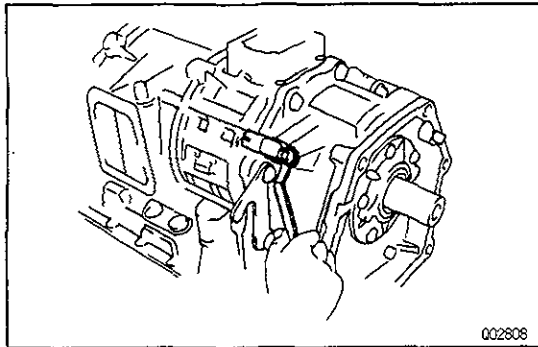
$$0.30 - 0.70 \text{ mm } (0.0118 - 0.0276 \text{ in.})$$



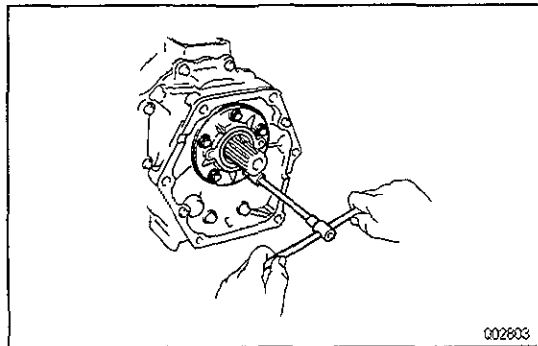
Maximum thrust clearance:

0.90 mm (0.0354 in.)

- (j) Remove the thrust washer from the center support.

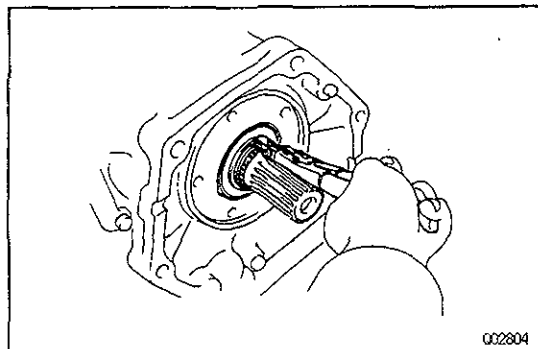


29. REMOVE SPEEDSENSOR

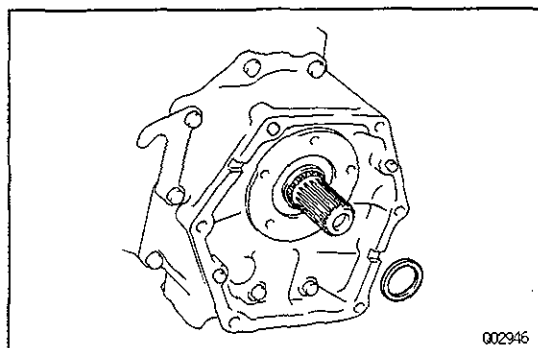


30. REMOVE TRANSFER ADAPTOR AND OUTPUT SHAFT REAR BEARING

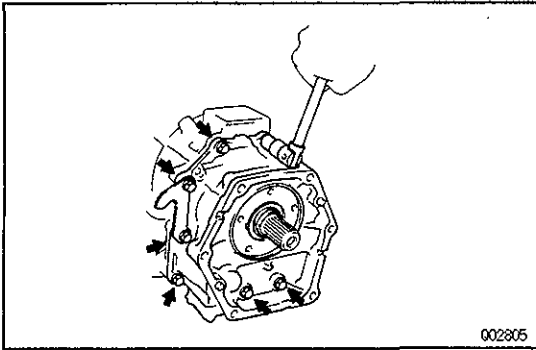
- (a) Remove the five bolts and the rear bearing retainer.



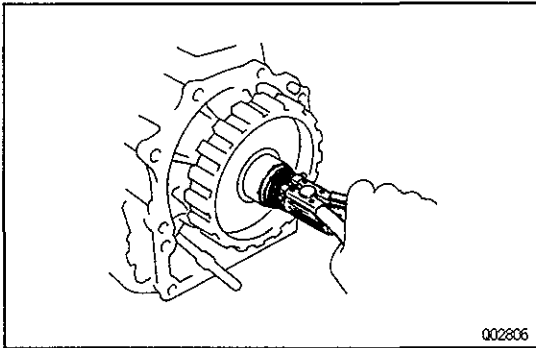
- (b) Using snap ring pliers, remove the snap ring.



- (c) Remove the spacer from the output shaft.

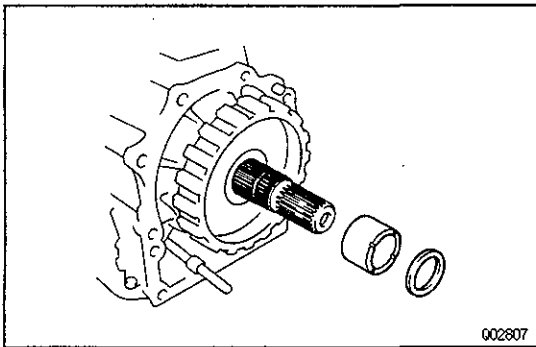


- (d) remove the ten bolts and the adaptor.
- (e) Remove the gasket.

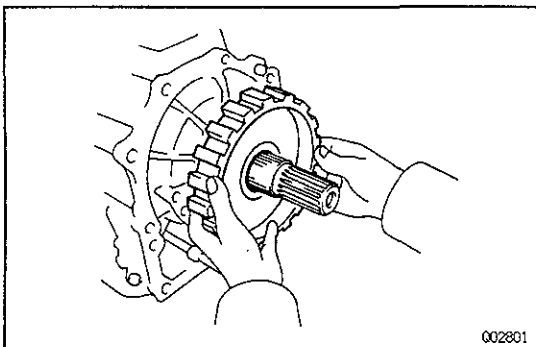


31. REMOVE OUTPUT SHAFT SPACER

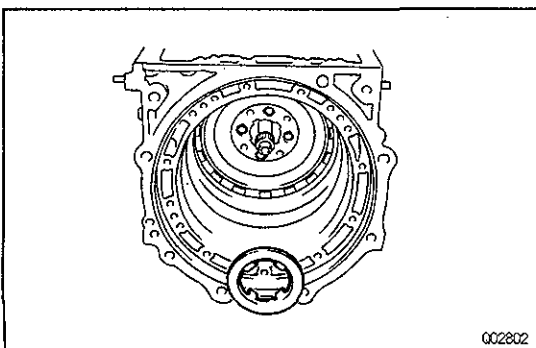
- (a) Using snap ring pliers, remove the snap ring.



- (b) Remove the output shaft spacer.



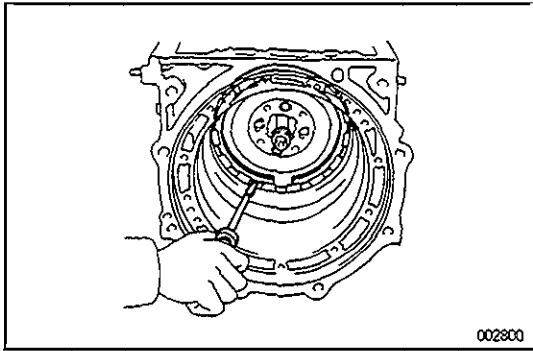
32. REMOVE SPEED SENSOR ROTOR



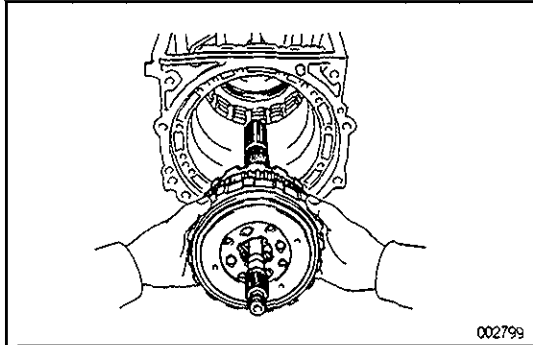
33. REMOVE PLANETARY GEARS, ONE — WAY CLUTCH AND OUTPUT SHAFT ASSEMBLY

- (a) Remove the thrust washer from the planetary gear.

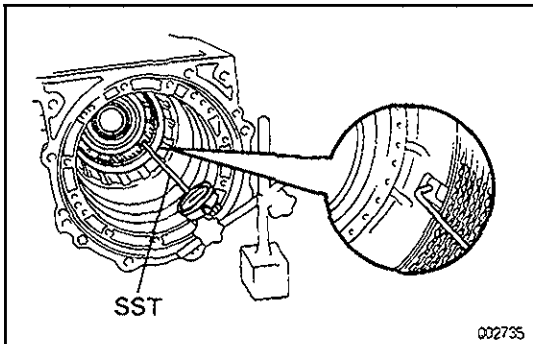
AT



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



(c) Remove the planetary gears, one-way clutch and output shaft assembly.



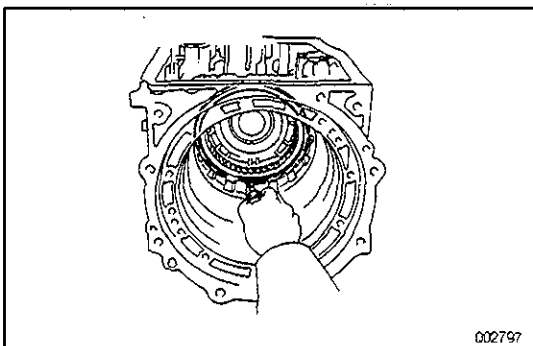
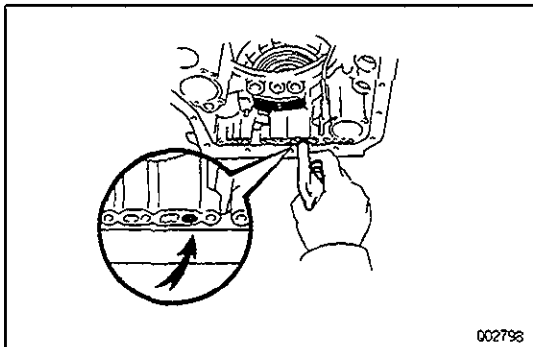
34. CHECK PISTON STROKE OF FIRST AND REVERSE BRAKE PISTON

Using SST and a dial indicator, measure the piston stroke by applying and releasing the compressed air 392–785 kPa (4–8 kgf/cm², 57–114 psi) as shown. SST 09350–36010(09350–06130)

Piston stroke:

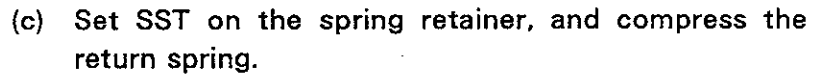
3.30–3.80 mm (0.1299–0.1496 in.)

If the piston stroke is not as specified, inspect the discs.

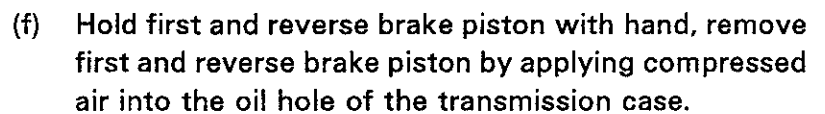


35. REMOVE FIRST AND REVERSE BRAKE PISTON

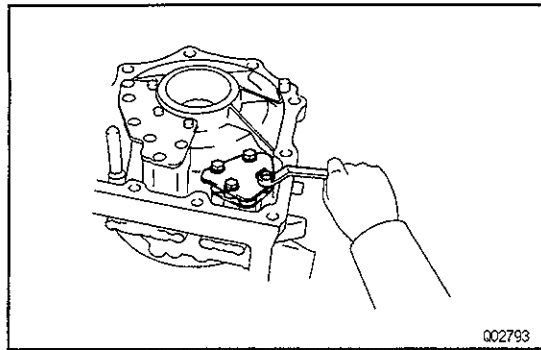
(a) Using a screwdriver, remove the snap ring.



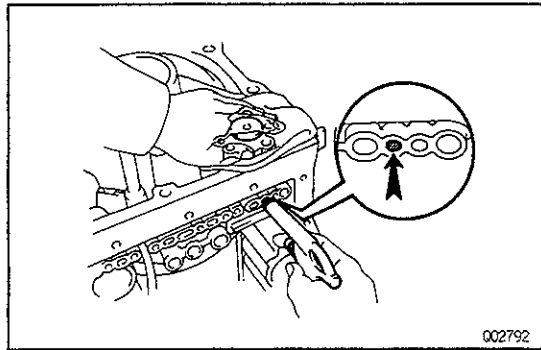
SST 09350-36010(09350-06030)



(g) Remove the two O-rings from brake piston.

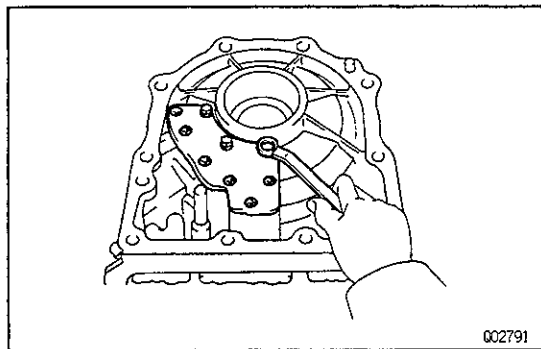
**36. REMOVE C₁ ACCUMULATOR PISTON AND SPRING**

- (a) Remove the four bolts, front clutch accumulator cover, two gaskets and plate.

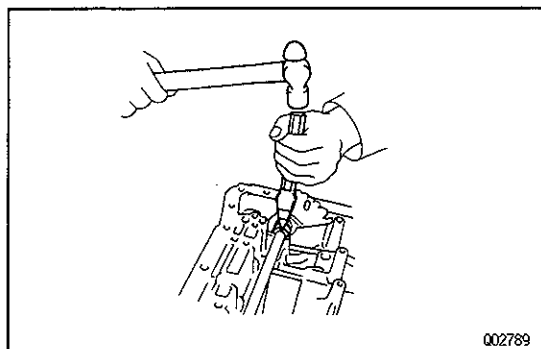


- (b) Remove the accumulator piston and spring by applying compressed air to the oil hole.

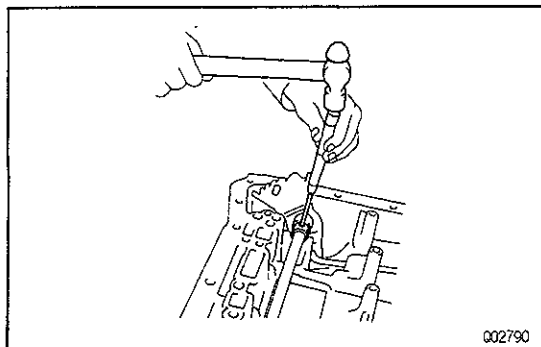
- (c) Remove the O—rings from accumulator piston.

**37. REMOVE TRANSMISSION REAR COVER**

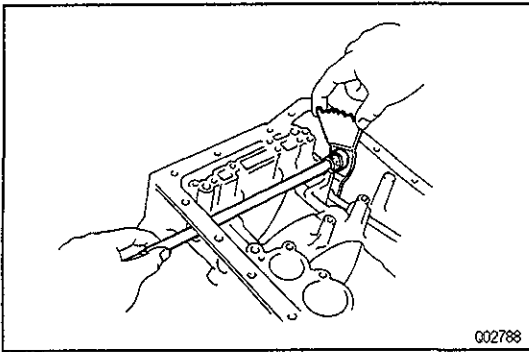
Remove the three bolts, six screws, rear cover and gasket.

**38. REMOVE MANUAL VALVE LEVER, SHAFT AND OIL SEALS**

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

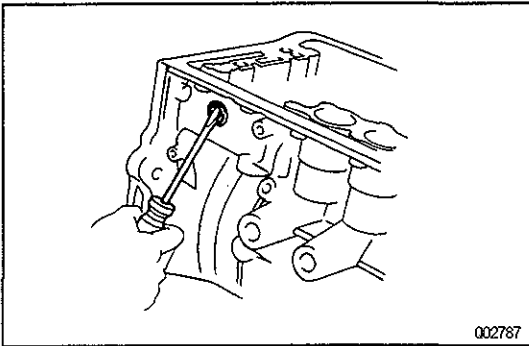


- (b) Using a pin punch, tap out the pin.



- (c) Pull the manual valve lever shaft out through the case, remove the manual valve lever, parking lock rod assembly, the two plate washers and wave washer.
- (d) Disconnect the parking lock rod from the manual valve lever.

AT



- (e) Using a screwdriver, pry out the two oil seals.

GENERAL NOTES

The instructions here are organized so that you work on only one component group at a time. This will help avoid confusion from similar—looking parts of different subassemblies being on your workbench at the same time.

The component groups are inspected and repaired from the converter housing side.

As much as possible, complete the inspection, repair and assembly before proceeding to the next component group. If a component group can not be assembled because parts are being ordered, be sure to keep all parts of that group in a separate container while proceeding with disassembly, inspection, repair and assembly of other component groups.

Recommended fluid of the automatic transmission is ATF type DEXRON ® II.

GENERAL CLEANING NOTES:

1. All disassembled parts should be washed clean with any fluid passages and holes blown through with compressed air.
2. When using compressed air to dry parts, always aim away from yourself to prevent accidentally spraying automatic transmission fluid or kerosene on your face.
3. The recommended automatic transmission fluid or kerosene should be used for cleaning.

PARTS ARRANGEMENT:

1. After cleaning, the parts should be arranged in proper order to allow performing inspection, repairs and reassembly with efficiency.
2. When disassembling valve body, be sure to keep each valve together with the corresponding spring.
3. New disc for the brakes and clutches that are to be used for replacement must be soaked in transmission fluid for at least fifteen minutes before assembly.

GENERAL ASSEMBLY:

1. All oil seal rings, clutch discs, clutch plates, rotating parts, and sliding surfaces should be coated with transmission fluid prior to reassembly.
2. Make sure that the ends of snap ring are not aligned with one of the cutouts and are installed in the groove correctly.
4. If worn bushing is to be replaced, the subassembly containing that bushing must also be replaced.
5. Check thrust bearings and races for wear or damage, Replace if necessary.
6. Use petroleum jelly to keep parts in place.