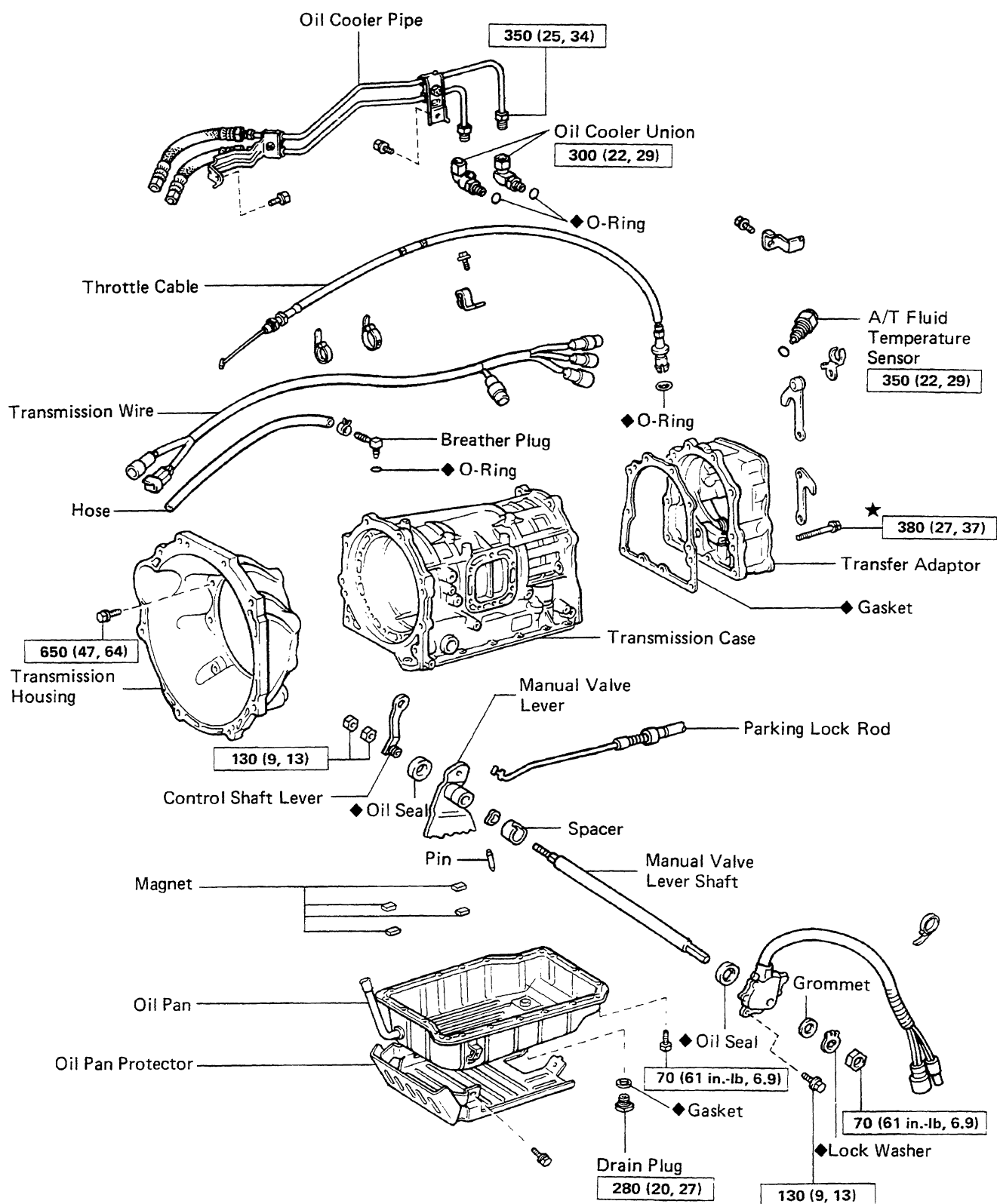


REMOVAL OF COMPONENT PARTS

COMPONENTS

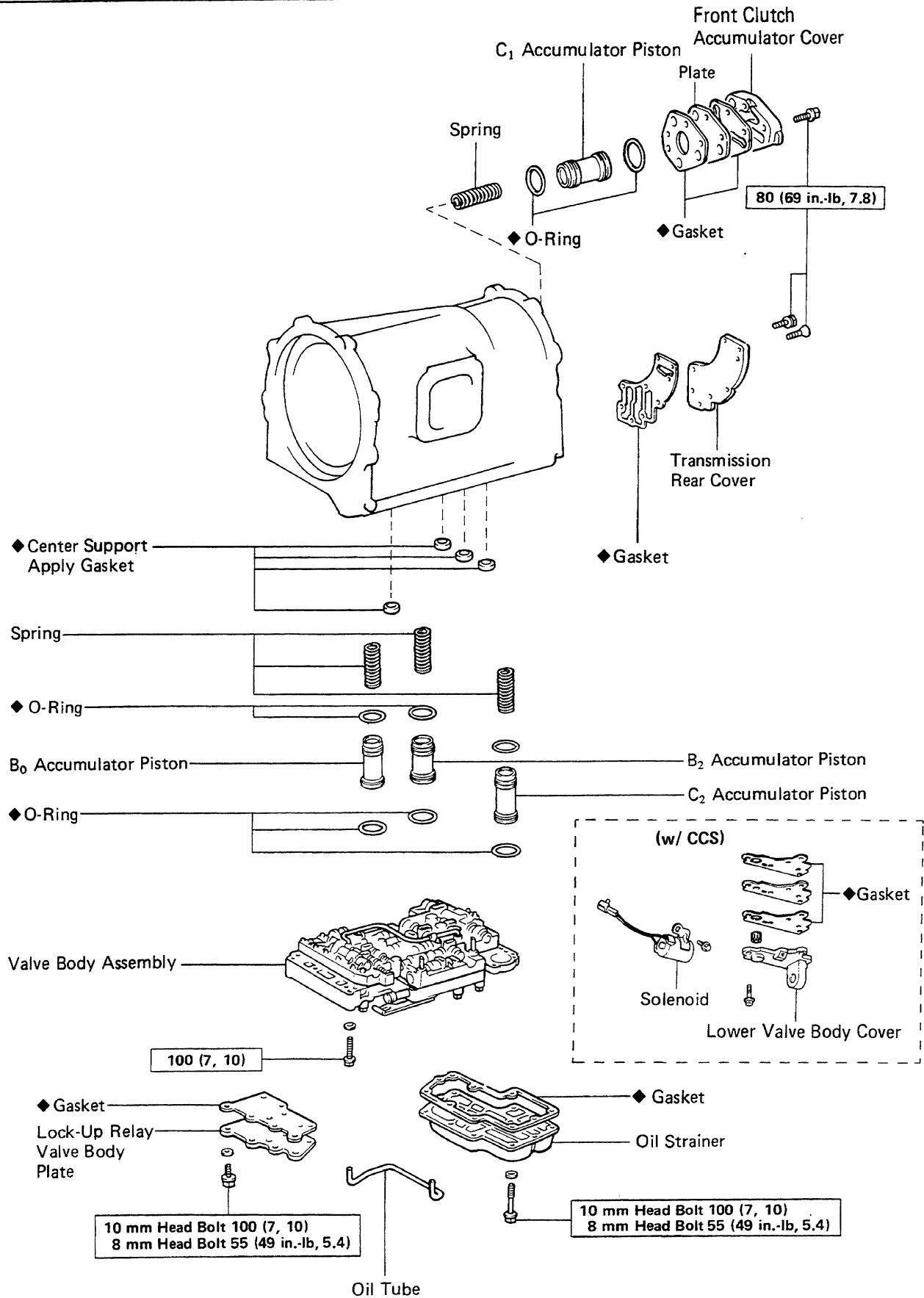


kg-cm (ft-lb, N·m) : Specified torque

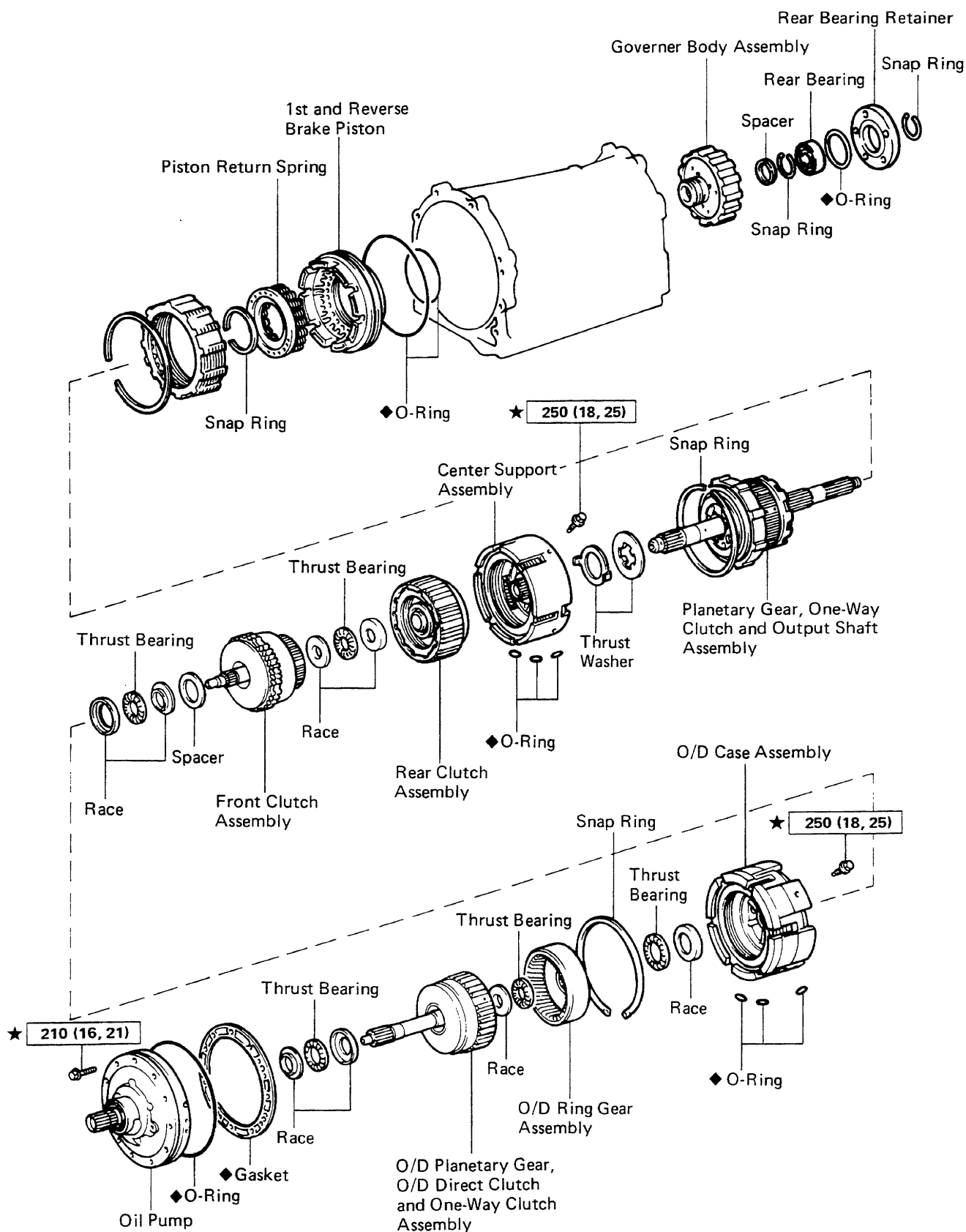
◆ Non-reusable part

★ Precoated part

COMPONENTS (Cont'd)



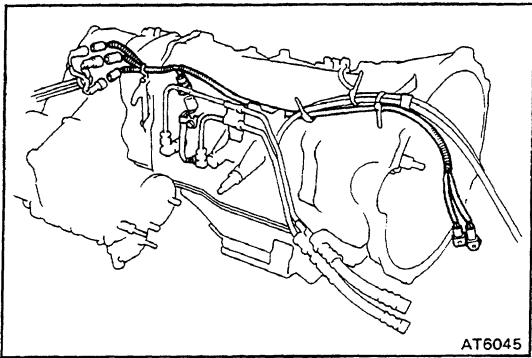
COMPONENTS (Cont'd)



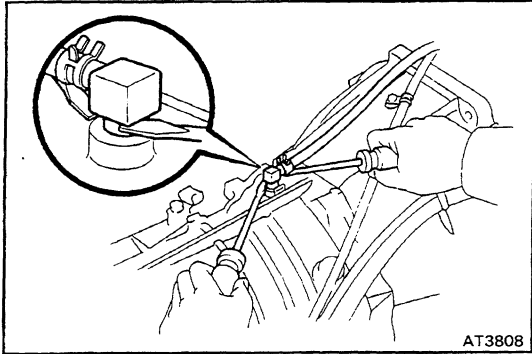
[kg-cm (ft-lb, N·m)] : Specified torque

◆ Non-reusable part

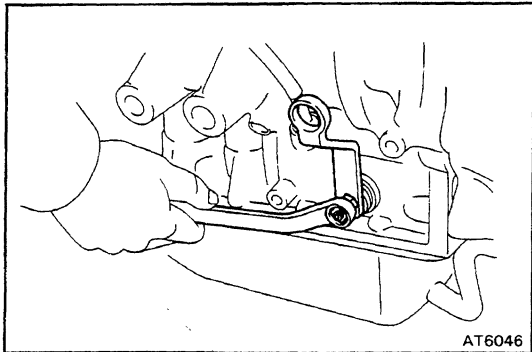
★ Precoated part

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

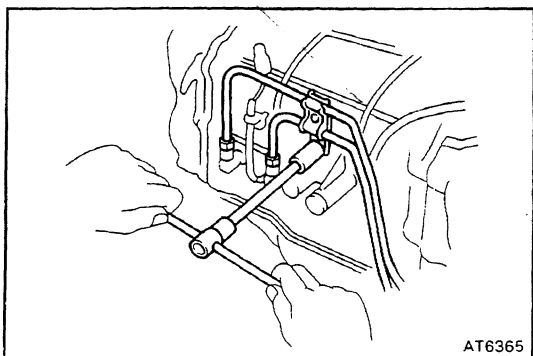
Disconnect the connectors, and remove the transmission wiring.

**2. REMOVE BREATHER PLUG AND HOSE**

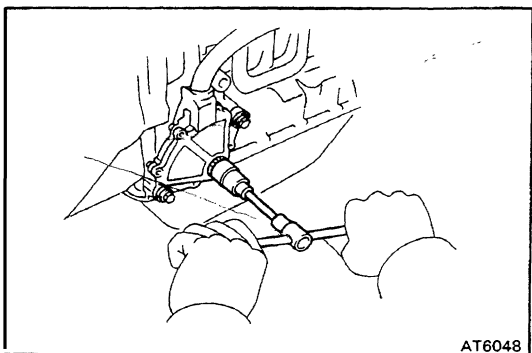
- (a) Using two screwdrivers, pry out the breather plug.
- (b) Remove the O-ring from the breather plug.

**3. REMOVE CONTROL SHAFT LEVER**

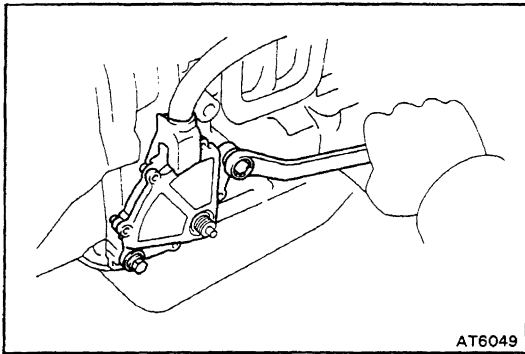
Remove the two nuts and lever.

**4. REMOVE OIL COOLER PIPES**

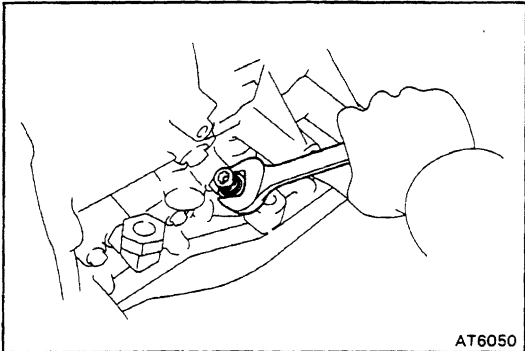
- (a) Remove the mount stay bolt.
- (b) Loosen the two union bolts, and remove two cooler pipe assembly.

**5. REMOVE NEUTRAL START SWITCH**

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

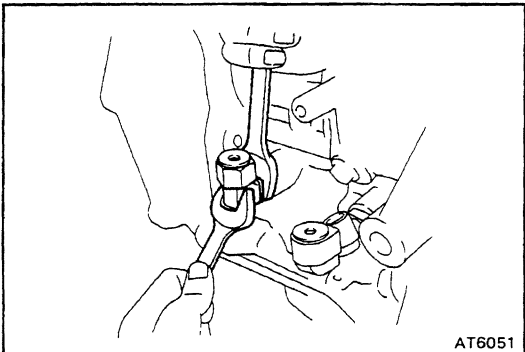


(c) Remove the two bolts and neutral start switch.



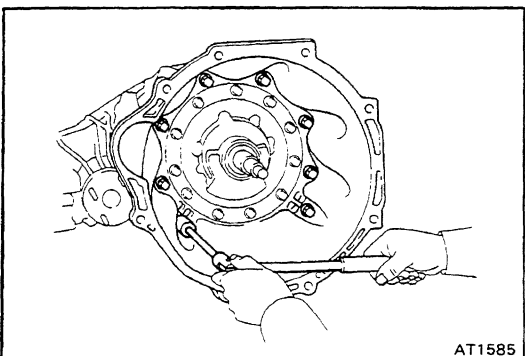
6. REMOVE AIT FLUID TEMPERATURE SENSOR

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



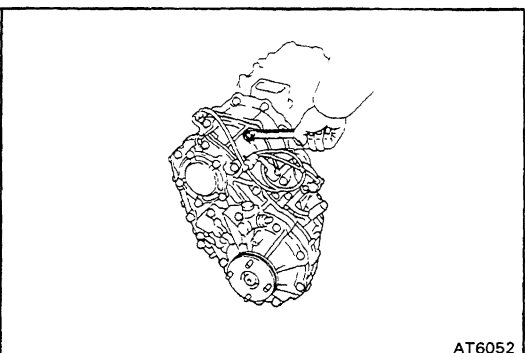
7. REMOVE OIL COOLER UNIONS

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



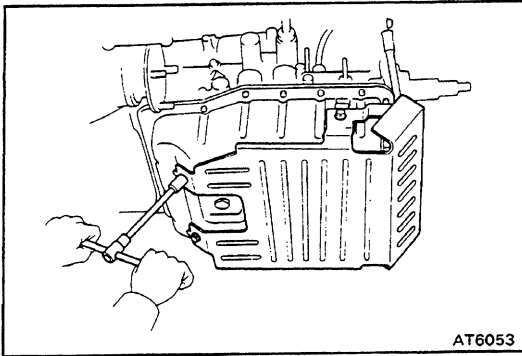
8. REMOVE TRANSMISSION HOUSING

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



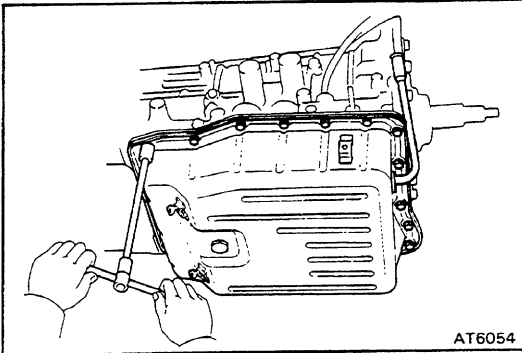
9. REMOVE TRANSFER ASSEMBLY

Remove the six bolts and the transfer.



10. REMOVE OIL PAN PROTECTOR

Remove the four bolts and protector.



1. REMOVE OIL PAN

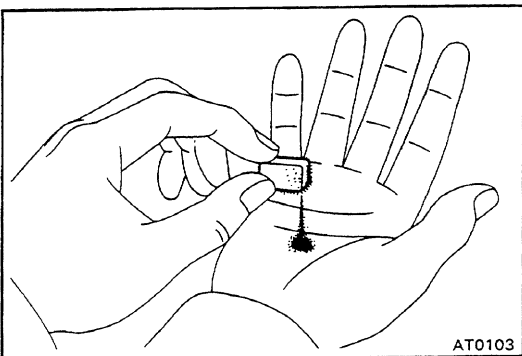
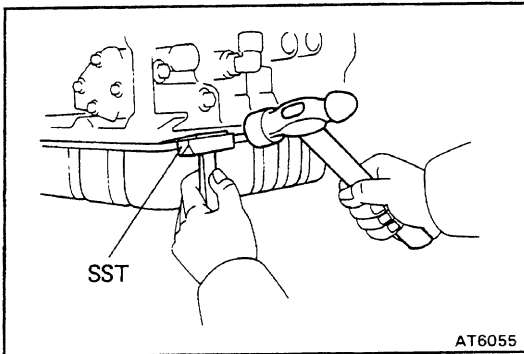
NOTICE: Do not turn the transmission over as this will contaminate the valve body with any foreign matter at the bottom of the pan.

(a) Remove the twenty bolts.

(b) Insert the blade of SST between the transmission and oil pan, cut off applied sealer.

SST 09032-00100

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



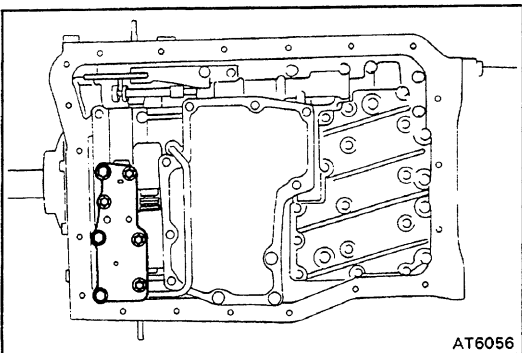
12. EXAMINE PARTICLES IN PAN

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 plate wear

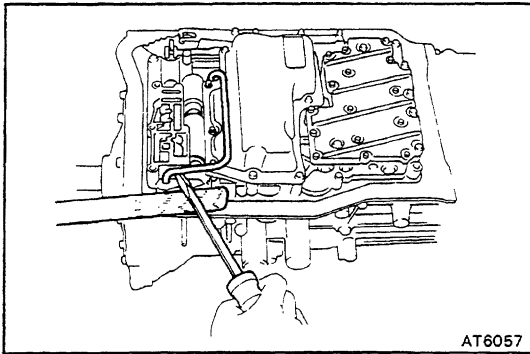
Brass (non-magnetic) Bushing wear



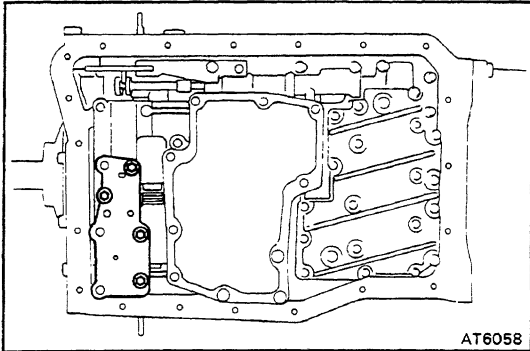
13. REMOVE OIL TUBE

(a) Remove the seven bolts, four wave washers, lockup relay valve body plate and gasket.

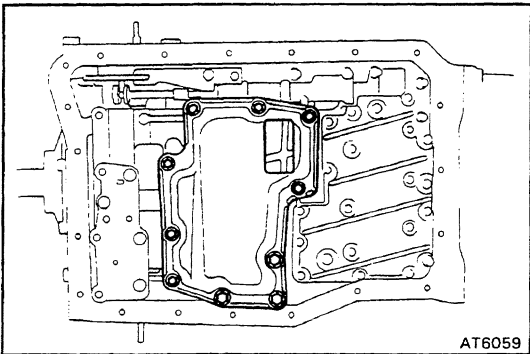
HINT: Do not drop the lock-up relay valve pins.



- (b) Using a large screwdriver, remove the oil tube by prying both tube ends.

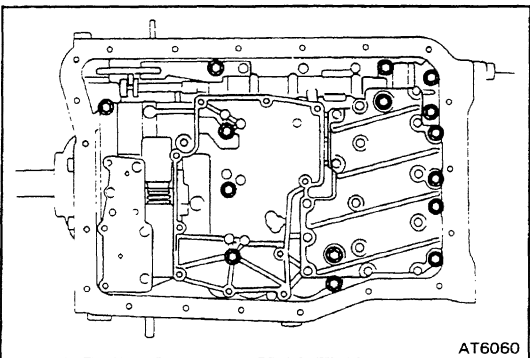


- (c) Temporarily install the lock-up relay valve body plate with the four bolts.



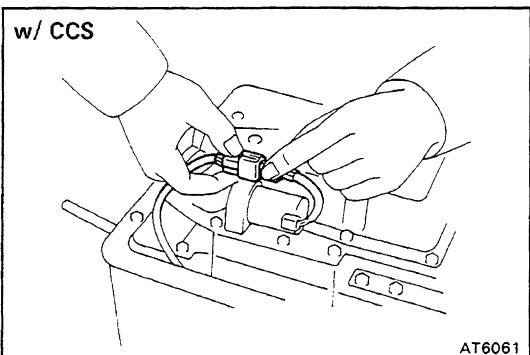
14. REMOVE OIL STRAINER

Remove the ten bolts, seven wave washers, oil strainer and gasket.

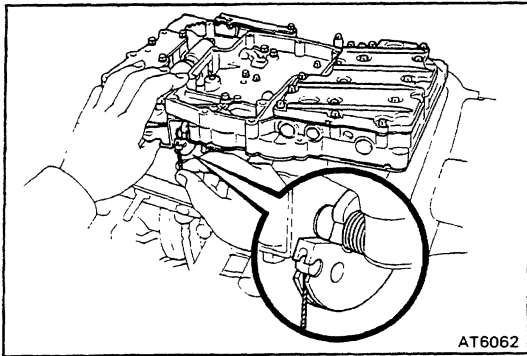


15. REMOVE VALVE BODY

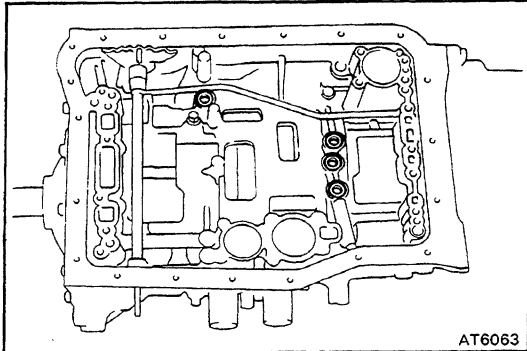
- (a) Remove the fifteen bolts.



- (b) (w/ Cruise Control System)
Disconnect the connector from the solenoid.

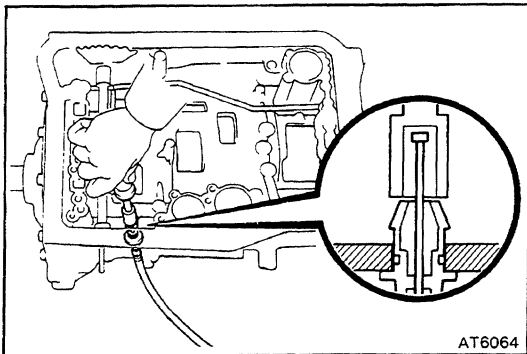


- (c) Disconnect the throttle cable from the cam and remove the valve body.



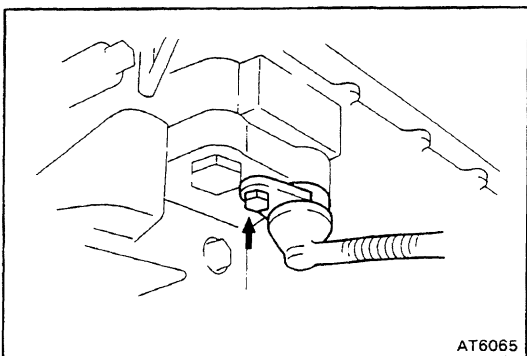
16. REMOVE CENTER SUPPORT APPLY GASKETS

Remove the four apply gaskets.



17. REMOVE THROTTLE CABLE

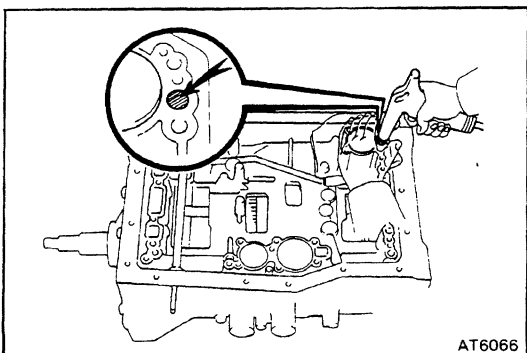
Using a 10 mm socket driver, remove the throttle cable by pushing the retainer portion of the throttle cable.



18. (w/ Cruise Control System)

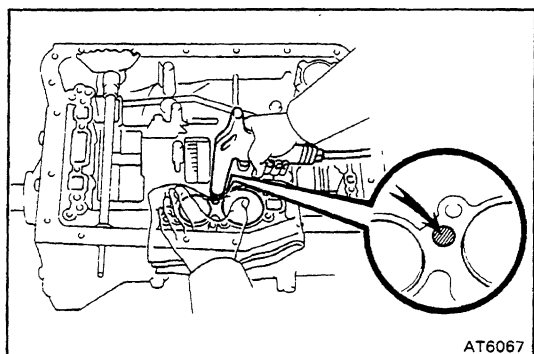
REMOVE SOLENOID WIRING

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

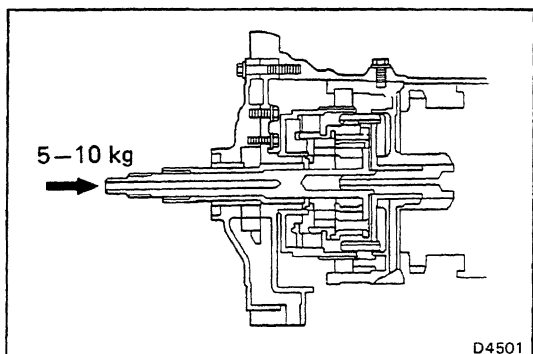


19. REMOVE C2, B0, B2 ACCUMULATOR PISTONS AND SPRINGS

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

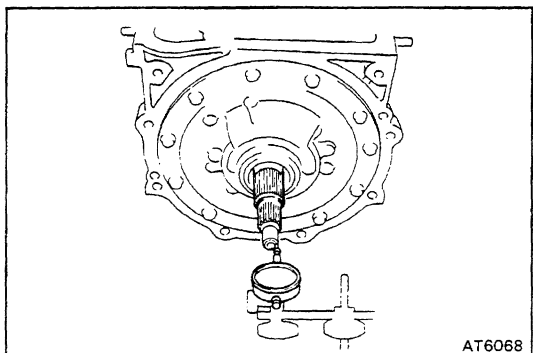


- (b) Remove the B0 accumulator piston together with the B2 accumulator piston by applying compressed air to the oil hole.
- (c) Remove the B0 and B2 accumulator pistons.
- (d) Remove the O-ring from the accumulator pistons.



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 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N).

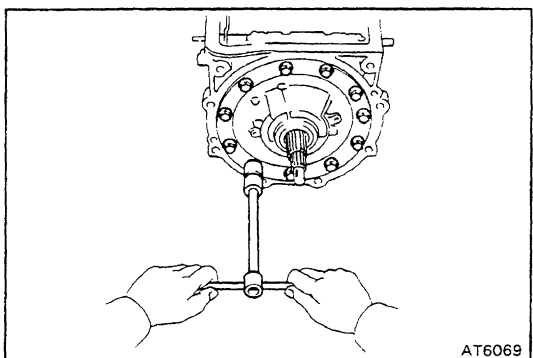


- (b) Using dial indicator, measure the thrust clearance of the input shaft.

Standard thrust clearance: 0.40 – 0.90 mm

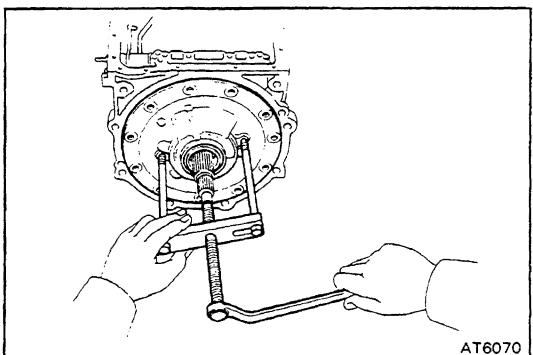
(0.0157 – 0.0354 in.)

Maximum thrust clearance: 0.90 mm (0.0354 in.)



21. REMOVE OIL PUMP

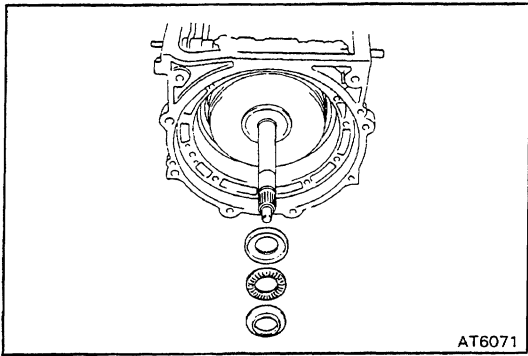
- (a) Remove the eleven bolts holding the oil pump to the transmission case.



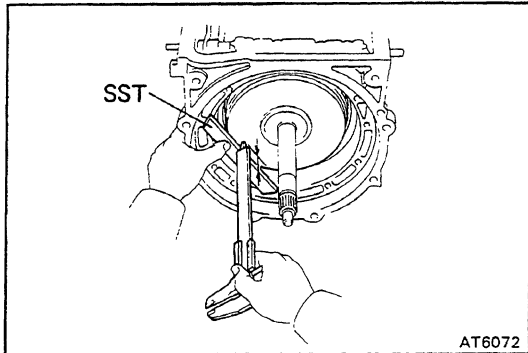
- (b) Using SST, remove the oil pump and gasket.

SST 09350-36010 (09350-06140)

- (c) Remove the O-ring from the oil pump.

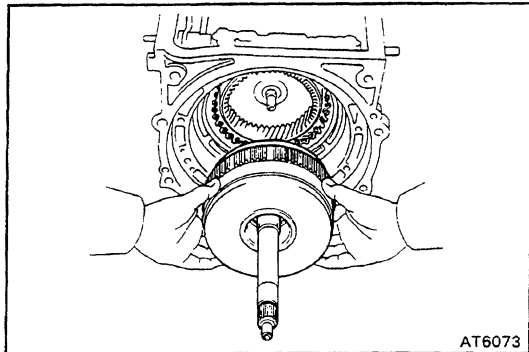


- (d) Remove the two races and thrust bearing from the O/D direct clutch drum or oil pump.

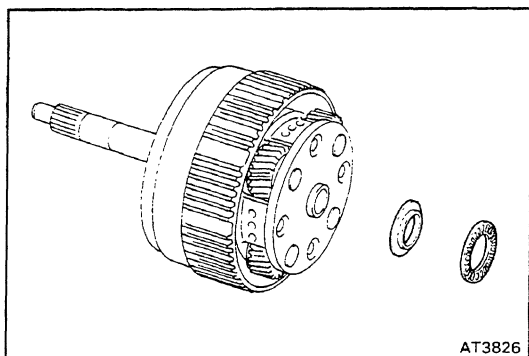


22. REMOVE OVERDRIVE PLANETARY GEAR, OVERDRIVE DIRECT CLUTCH AND ONE-WAY CLUTCH ASSEMBLY

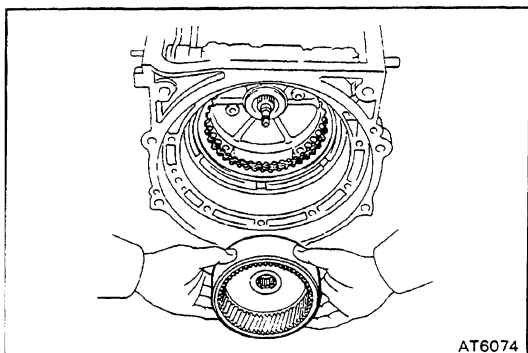
- (a) Place SST on the installation surface of the oil pump.
SST 09350-36010 (09350-06090)
(b) Using calipers, measure the distance between the tops of SST and the clutch drum for assembly.



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

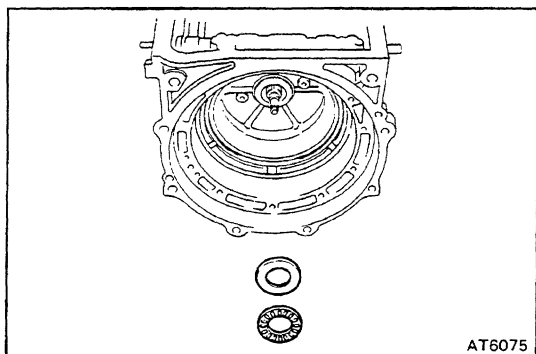


- (d) Remove the bearing and race from the O/D planetary gear or ring gear flange.

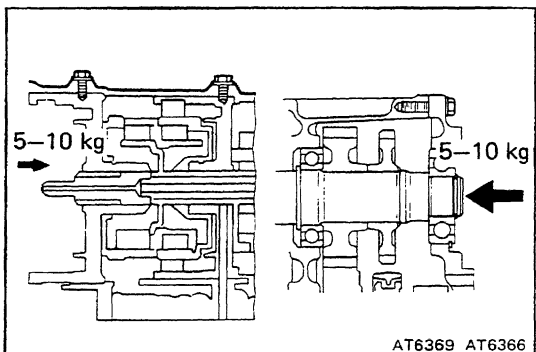


23. REMOVE OVERDRIVE PLANETARY RING GEAR ASSEMBLY

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

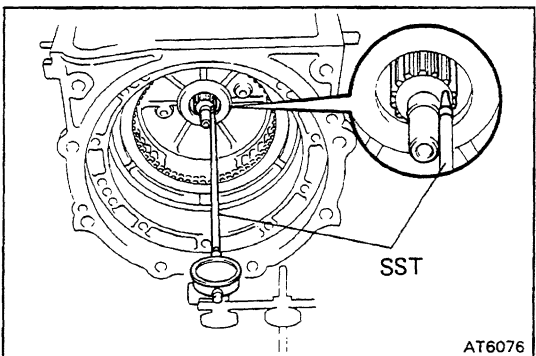


- (b) Remove the thrust bearing and race from the O/D case or ring gear flange.



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

- (a) Push the transmission output shaft toward the front of the transmission by applying a force of 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N).
- (b) Push the O/D case toward the rear of the transmission by applying a force of 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N).



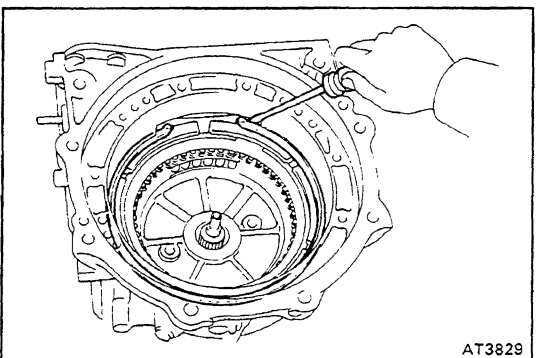
- (c) Using SST and dial indicator, measure the thrust clearance of the input shaft.

SST 09350-36010 (09350-06130)

Standard thrust clearance: 0.30 – 0.70 mm

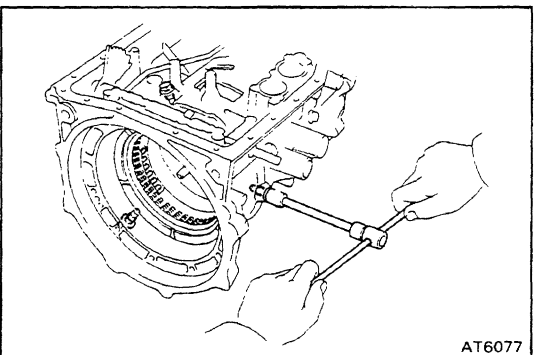
(0.0118 – 0.0276 in.)

Maximum thrust clearance: 0.70 mm (0.0276 in.)

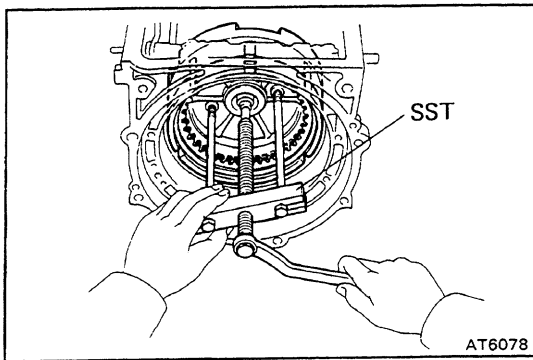


25. REMOVE OVERDRIVE CASE ASSEMBLY

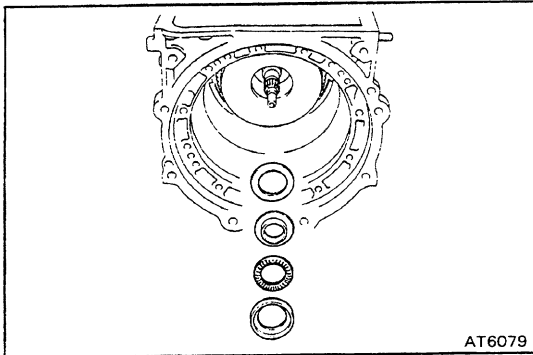
- (a) Using a screwdriver, remove the snap ring.



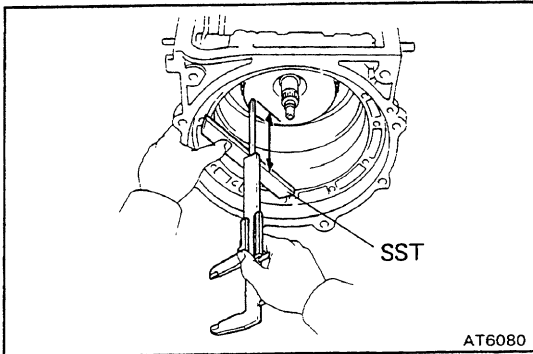
- (b) Remove the three O/D case set bolts.



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

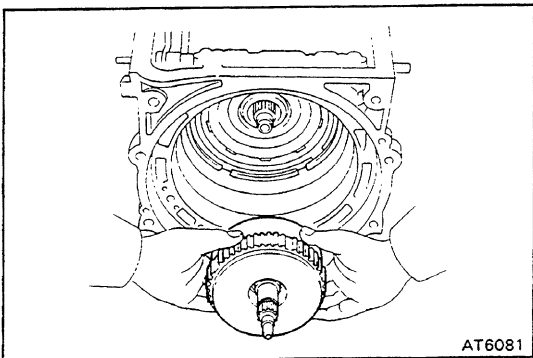


- (e) Remove the oil seal ring from the input shaft.
- (f) Remove the two races, thrust bearing and spacer from the front clutch drum or O/D case.
- (g) Reinstall the oil seal ring to the input shaft.

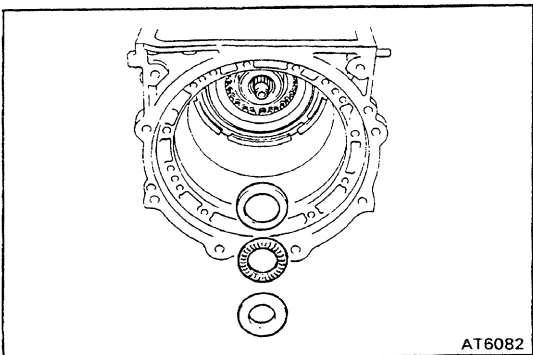


26. REMOVE FRONT CLUTCH ASSEMBLY

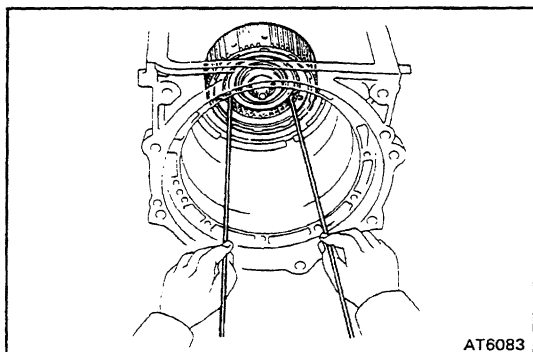
- (a) Place SST on the installation surface of the oil pump.
SST 09350-36010 (09350-06090)
- (b) Using calipers, measure the distance between the tops of SST and the clutch drum for assembly.



- (c) Remove the front clutch assembly.

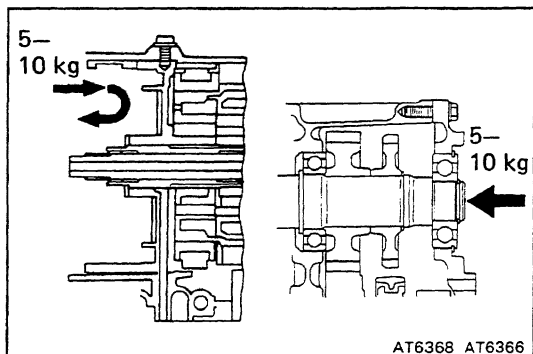


- (d) Remove the two races and thrust bearing from the rear clutch drum or front clutch hub.



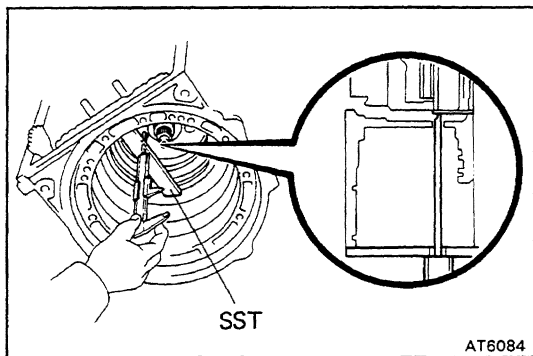
27. REMOVE REAR CLUTCH ASSEMBLY

Insert 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 5 – 10 kg (11.0–22.0 lb, 49–98N).
- (b) Push the center support toward the rear of the transmission by applying a force of 5 – 10 kg (11 .0 – 22.0 lb, 49 – 98 N), then pull with the same amount of force.

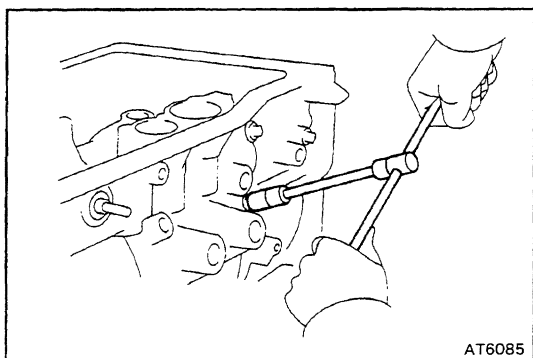


- (c) Place SST on the center support.

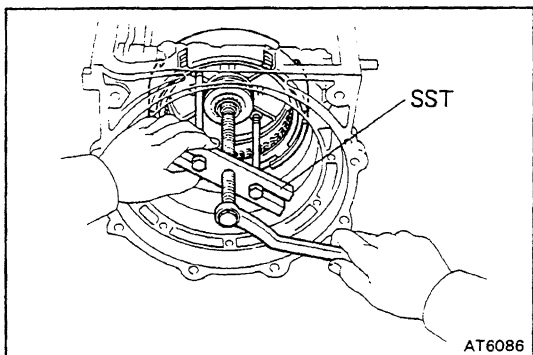
SST 09350–36010 (09350–06090)

- (d) Using calipers, measure distance (A) between the tops of SST and the thrust washer on the front planetary gear.

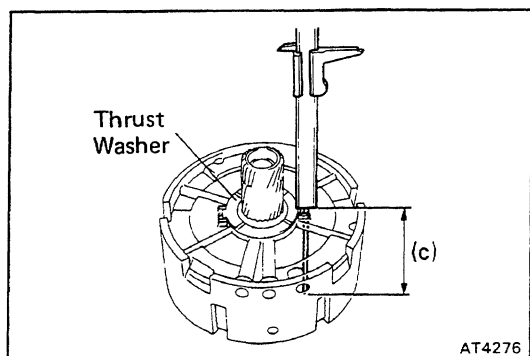
- (e) Using calipers, measure thickness (B) of SST.



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



Using SST, remove the center support assembly.
SST 09350–36019 (09350–06140)



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

Center support thrust clearance:

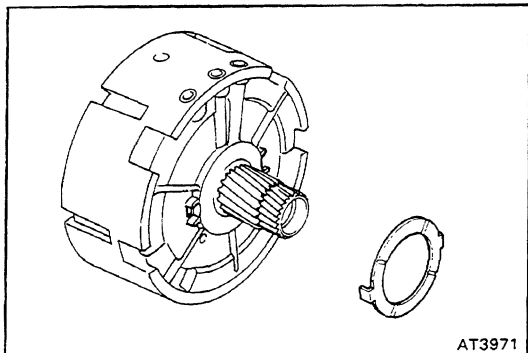
$$A - (B + C)$$

Standard thrust clearance: 0.30 – 0.70 mm

(0.0118 – 0.0276 in.)

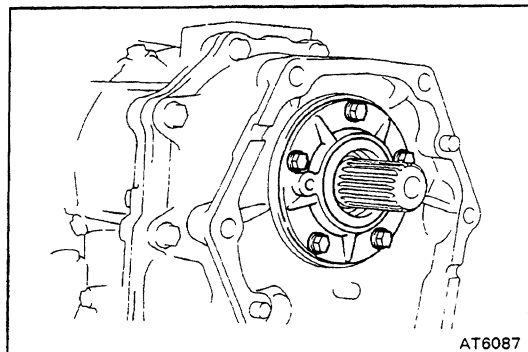
Maximum thrust clearance: 0.90 mm (0.0354 in.)

Remove the thrust washer from the center support.

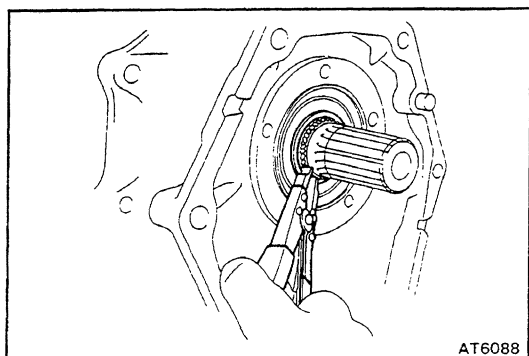


29. REMOVE TRANSFER ADAPTOR AND OUTPUT SHAFT REAR BEARING

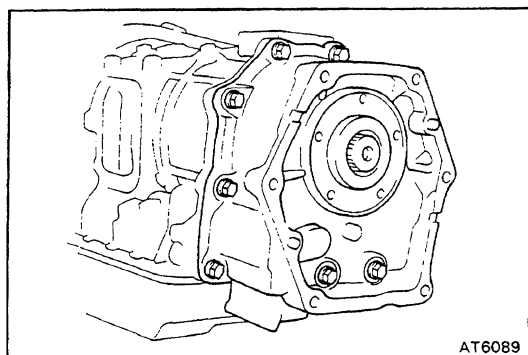
- (a) Remove the five bolts and the rear bearing retainer.

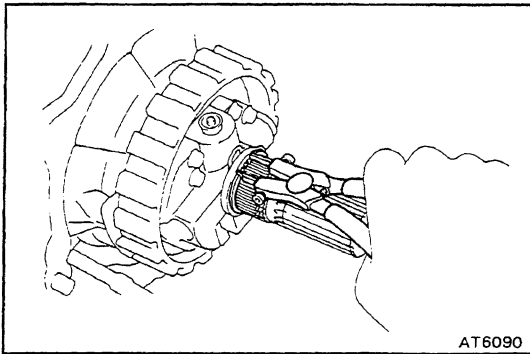


- (b) Using snap ring pliers, remove the snap ring.



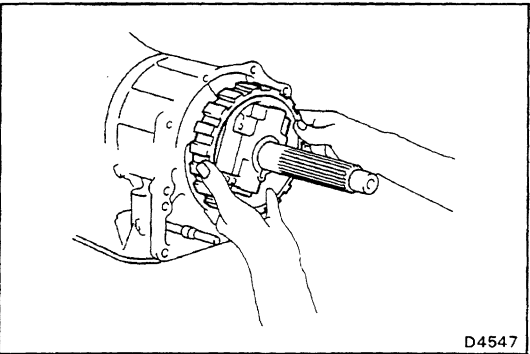
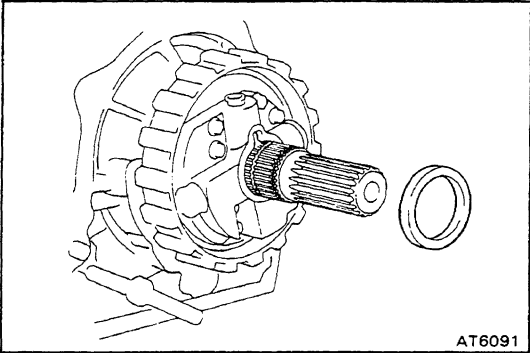
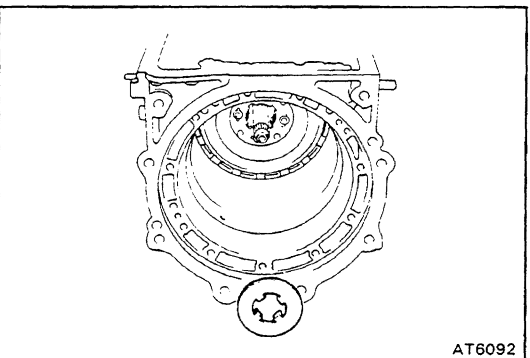
- (c) Remove the ten bolts and the adaptor
- (d) Remove the gasket.



**30. REMOVE OUTPUT SHAFT SPACER**

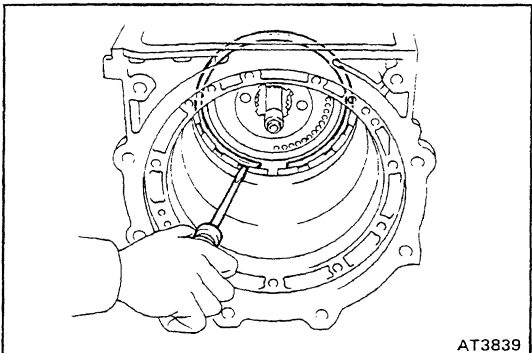
Using snap ring pliers, remove the snap ring.

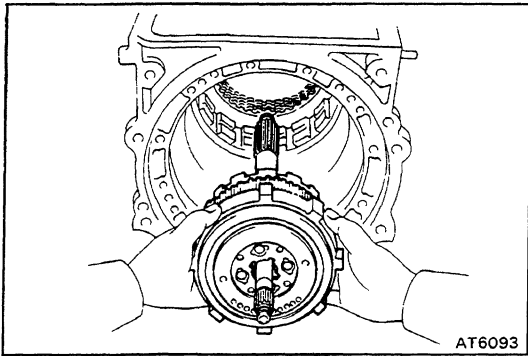
(b) Remove the output shaft spacer.

**31. REMOVE GOVERNOR BODY ASSEMBLY****32. REMOVE PLANETARY GEARS, ONE-WAY CLUTCH AND OUTPUT SHAFT ASSEMBLY**

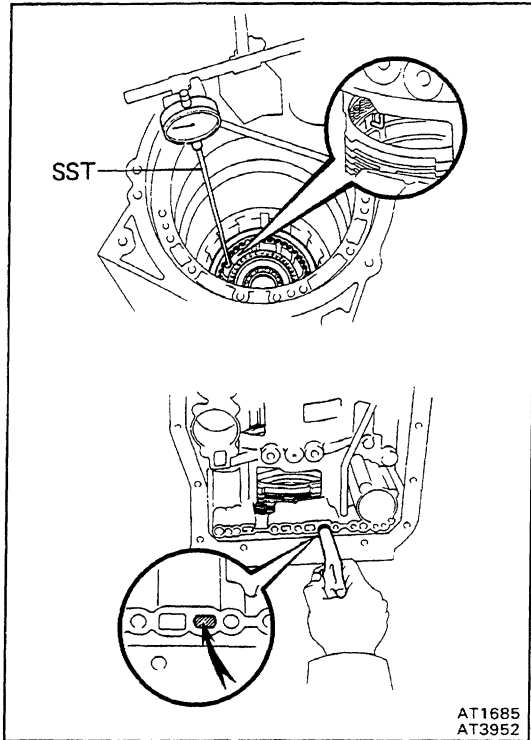
(a) Remove the thrust washer from the planetary gear.

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





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



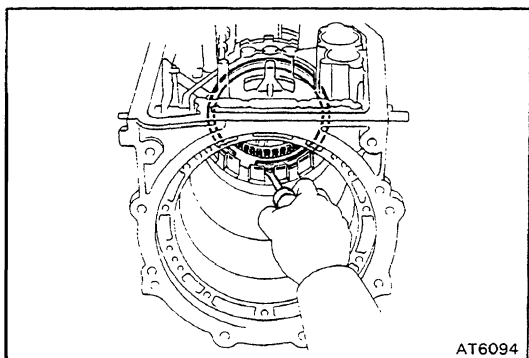
33. CHECK PISTON STROKE OF FIRST AND REVERSE BRAKE PISTON

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

SST 09350-36010 (09350-06130)

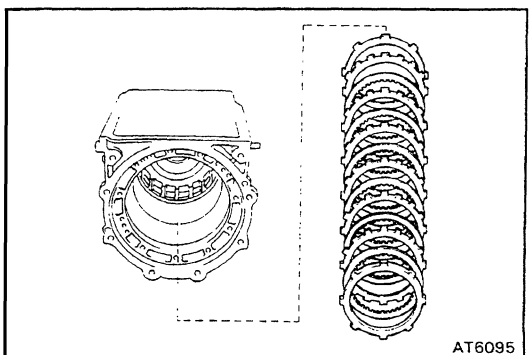
Piston stroke: 3.30 – 3.80 mm (0.1299 – 0.1496 in.)

If the piston stroke is not as specified, inspect the discs.
(See page [AT-102](#))

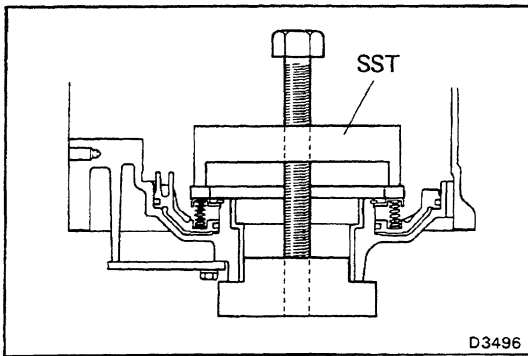


34. REMOVE FIRST AND REVERSE BRAKE PISTON

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

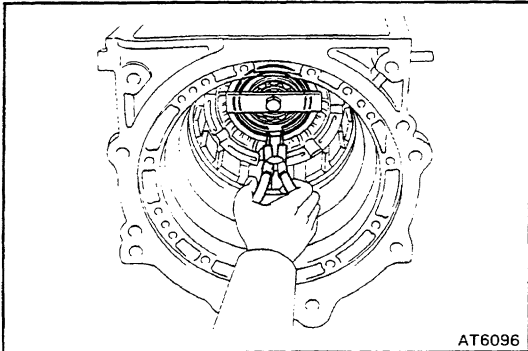


- (b) Remove the flange, six discs, six plates and cushion plate.

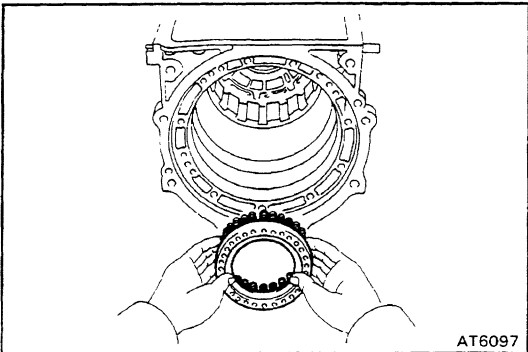


- (c) Set SST on the spring retainer, and compress the return spring.

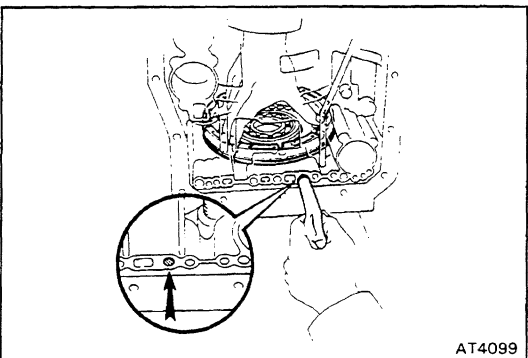
SST 09350-36010 (09350-06030)



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

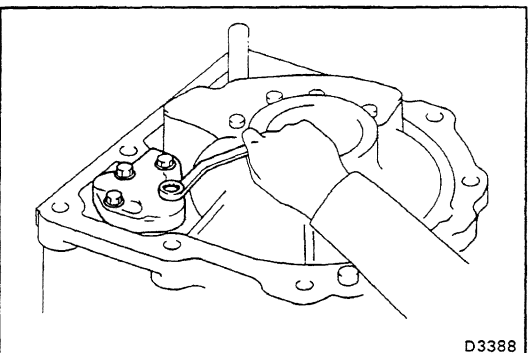


- (e) Remove the piston return spring.



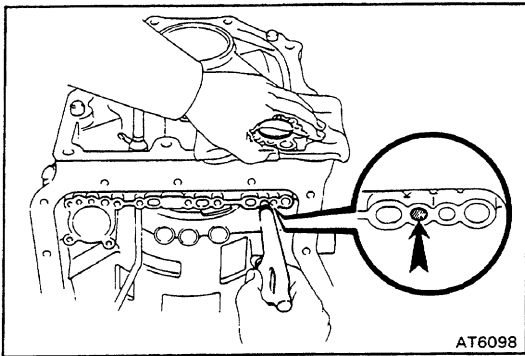
- (f) Hold first and reverse brake piston with hand, remove first and reverse brake piston by applying compressed air into the oil hole of the transmission case.

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

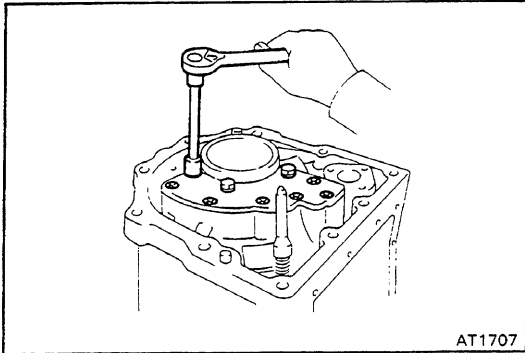


35. REMOVE C, ACCUMULATOR PISTON AND SPRING

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

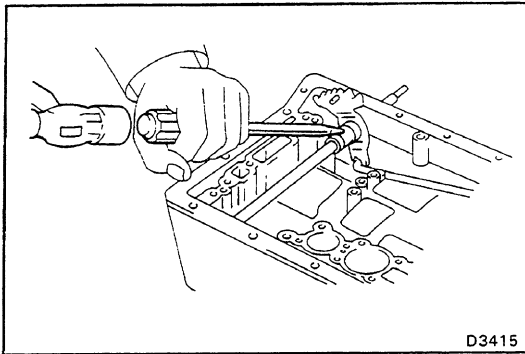


- (b) Remove the accumulator piston and spring by applying compressed air to the oil hole.
- (c) Remove the O-rings from accumulator piston.



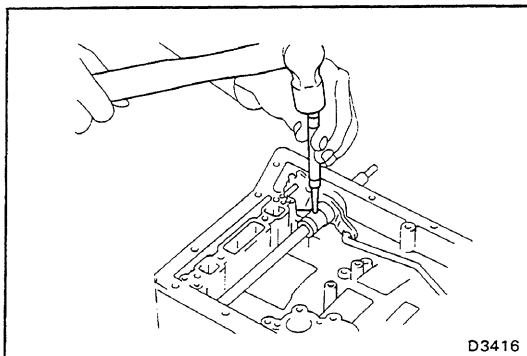
36. REMOVE TRANSMISSION REAR COVER

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

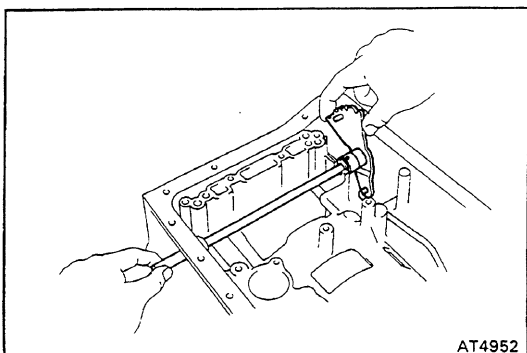


37. REMOVE MANUAL VALVE LEVER, SHAFT AND 41L SEALS

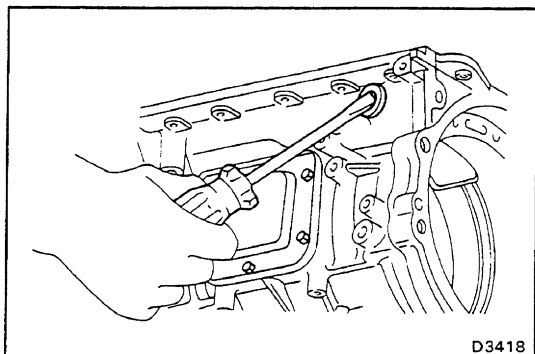
- (a) Using a screwdriver or chisel, cut off the spacer and remove it from the shaft.



- (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.



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