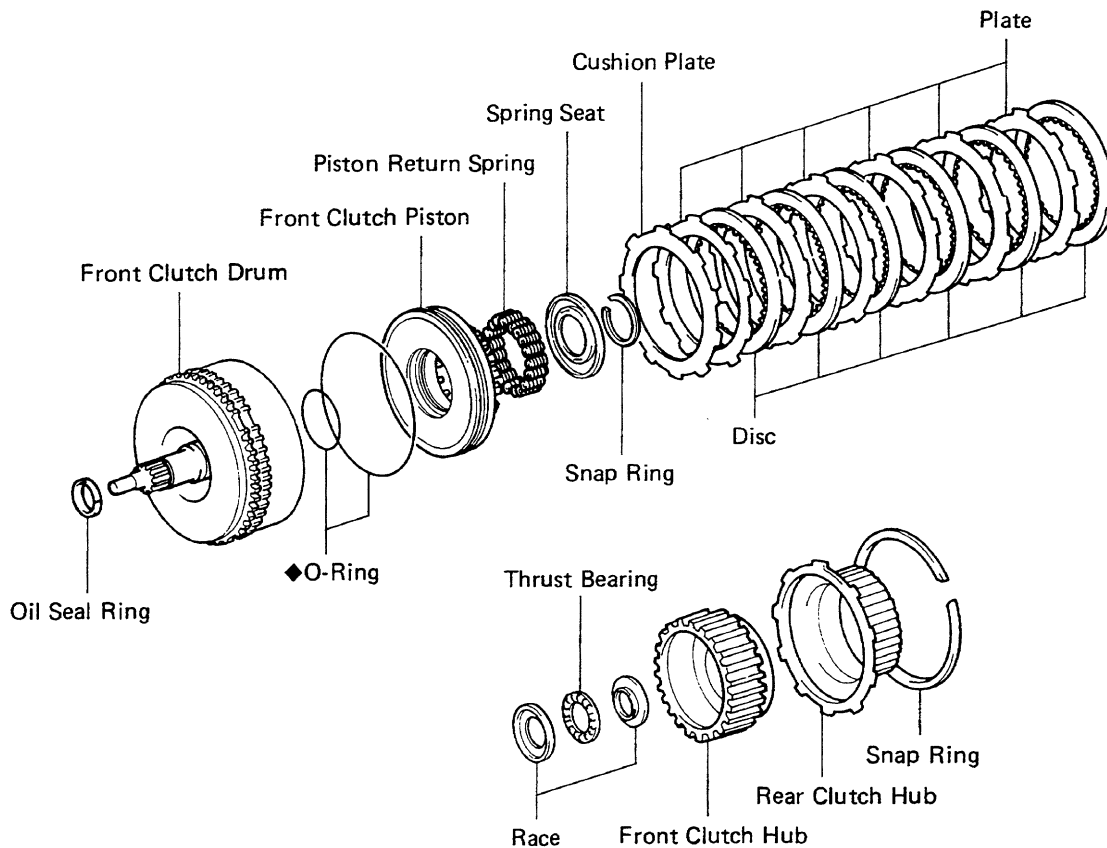
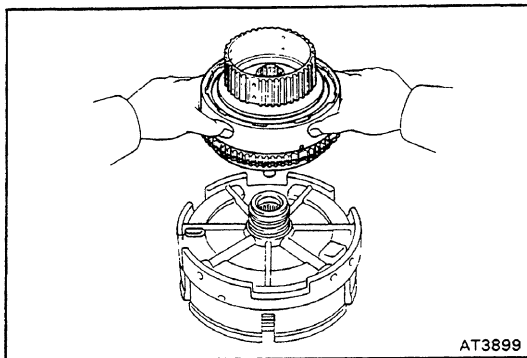


Front Clutch COMPONENTS



◆ Non-reusable part

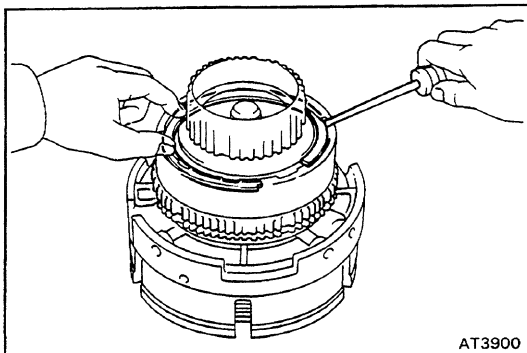
AT3961



AT3899

DISASSEMBLY OF FRONT CLUTCH

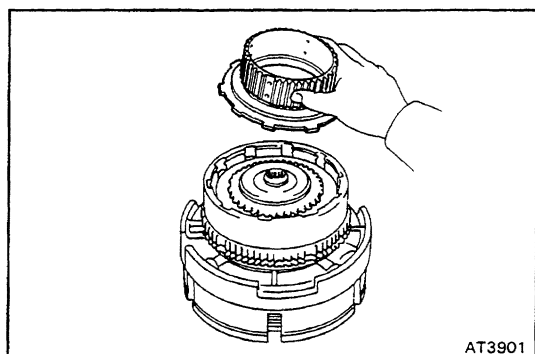
1. PLACE FRONT CLUTCH ASSEMBLY ONTO OVERDRIVE CASE ASSEMBLY



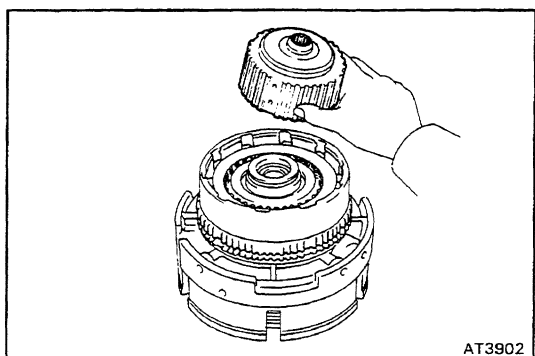
AT3900

2. REMOVE REAR AND FRONT CLUTCH HUBS

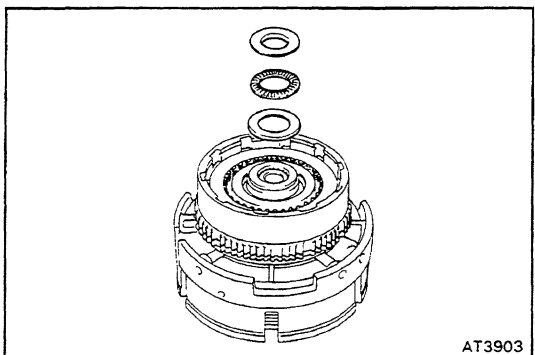
(a) Using a screwdriver, remove the snap ring.



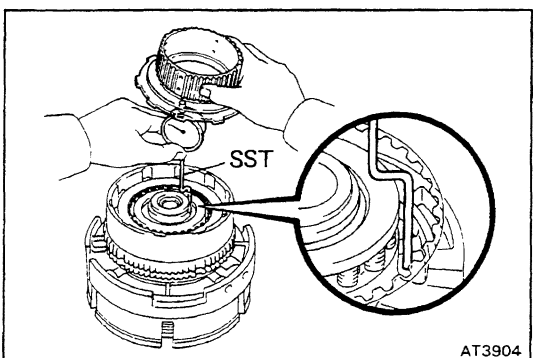
(b) Remove the rear clutch hub.



(c) Remove the front clutch hub.



(d) Remove the two races and thrust bearing.



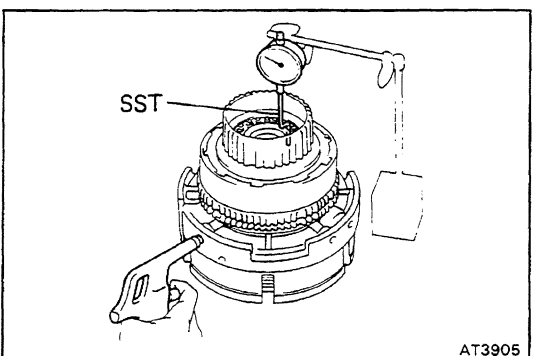
3. CHECK PISTON STROKE OF FRONT CLUTCH

(a) Install SST to a dial indicator.

SST 093 50-36010 (09350-06110)

(b) Place the assembled SST and a dial indicator on the clutch piston.

(c) Install the rear clutch hub with the snap ring.



(d) Using SST and a dial indicator, measure the piston stroke by applying and releasing the compressed air

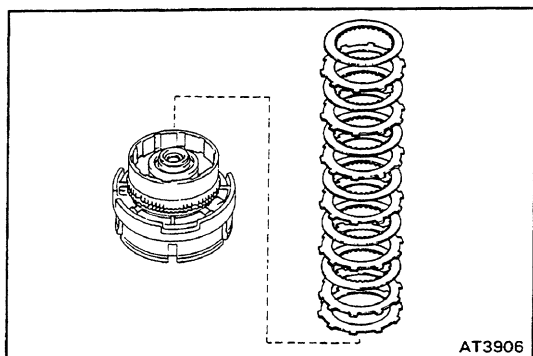
(4 – 8 kg lcrn2, 57 – 114 psi or 392 – 785 kPa) as shown.

SST 09350-36010 (09350-06110)

Piston stroke: 3.93 – 4.23 mm (0.1547 – 0.1665 in.)

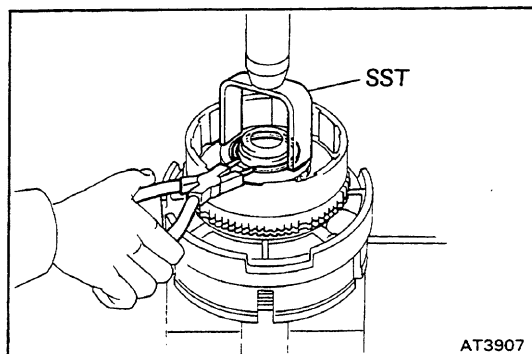
If the piston stroke is greater than specified, inspect the discs.

(e) Remove the snap ring and rear clutch hub.



4. REMOVE DISCS, PLATES AND CUSHION PLATE

Remove the six discs, six plates and cushion plate.

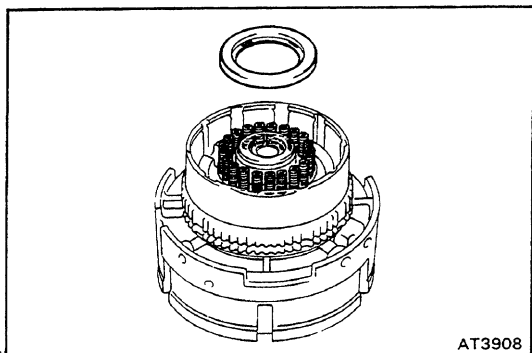


5. REMOVE PISTON RETURN SPRINGS

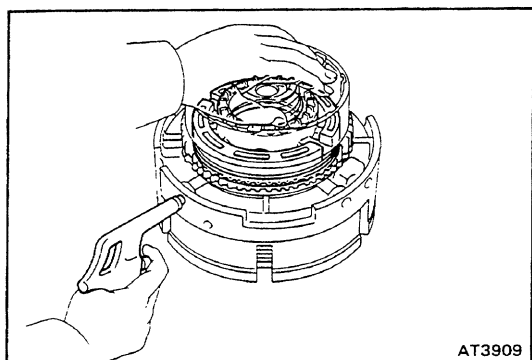
(a) Place SST on the spring seat, and compress the return springs with a shop press.

SST 09350-36010 (09350-06010)

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



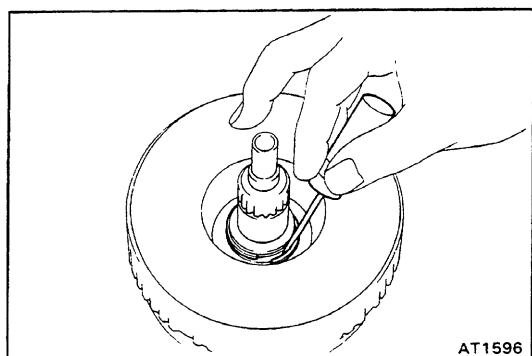
(c) Remove the spring seat and twenty-two return springs.



6. REMOVE FRONT CLUTCH PISTON

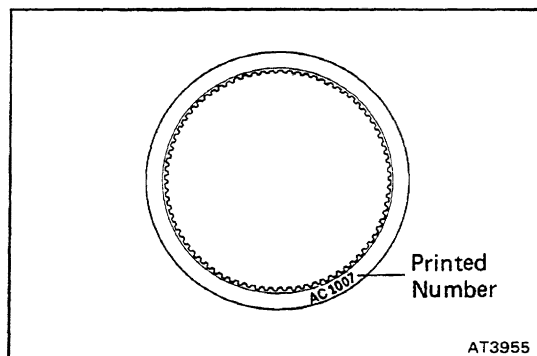
(a) Hold the clutch piston by hand, apply compressed air into the oil hole of the O/D case to remove the clutch piston.

(b) Remove the two O-rings from the clutch piston.

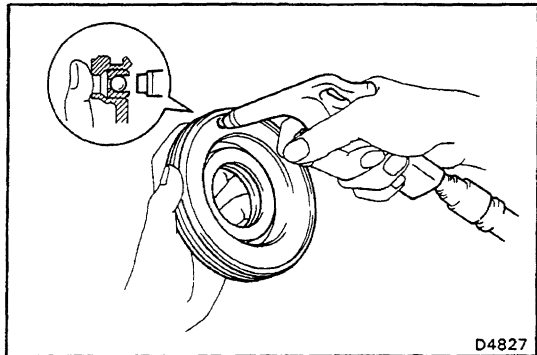


7. REMOVE OIL SEAL RING

Using a small screwdriver, remove the oil seal ring from the clutch drum.



AT3955



D4827

INSPECTION OF FRONT CLUTCH

1. INSPECT DISCS, PLATES AND CUSHION PLATE

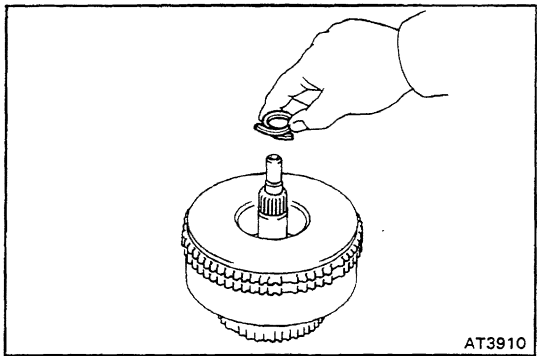
Check to see if the sliding surface of the disc, plate and cushion plate are worn or burnt. If necessary, replace them.

HINT:

- If the lining of the disc is peeling off or discolored, or even if parts of the printed numbers are defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least two hours.

2. INSPECT FRONT CLUTCH PISTON

- Check that check ball is free by shaking the piston.
- Check that the valve does not leak by applying low-pressure compressed air.



AT3910

ASSEMBLY OF FRONT CLUTCH

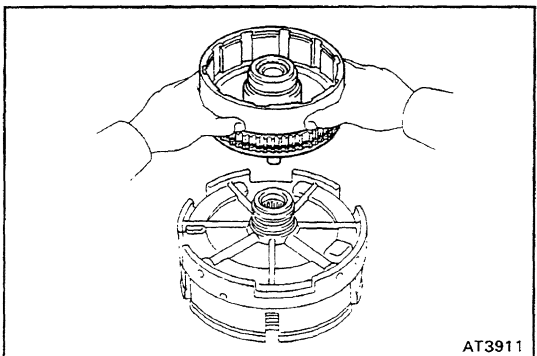
7. INSTALL OIL SEAL RING

- Coat the oil seal ring with ATF.
- Contract the oil seal ring as shown, and install it onto the clutch drum.

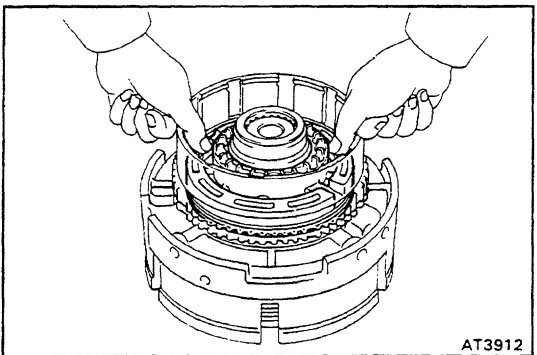
NOTICE: Do not spread the ring ends more than necessary.

HINT: After installing the oil seal ring, check that they rotate smoothly.

2. PLACE FRONT CLUTCH DRUM ONTO OVERDRIVE CASE ASSEMBLY



AT3911

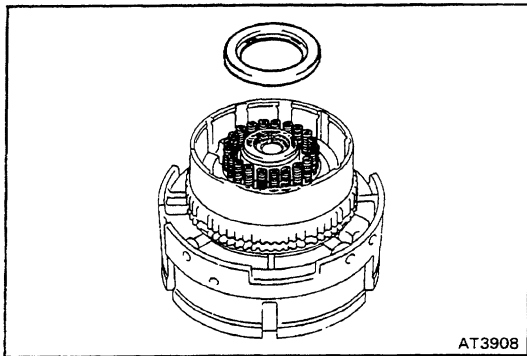


AT3912

3. INSTALL FRONT CLUTCH PISTON

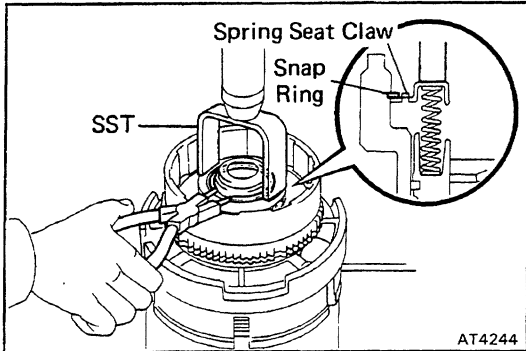
- Coat new two O-rings with ATF, and install them on the clutch piston.
- Push in the clutch piston into the clutch drum by both hands.

NOTICE: Be careful not to damage the O-rings.



4. INSTALL PISTON RETURN SPRINGS

- (a) Place the twenty-two return springs and spring seat on the clutch piston.

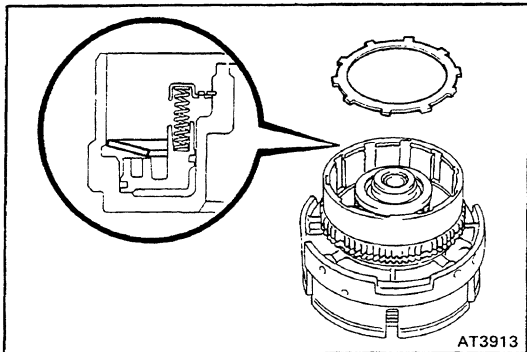


- (b) Place SST on the spring seat, and compress the return springs with a shop press.

SST 09350-36010 (09350-06010)

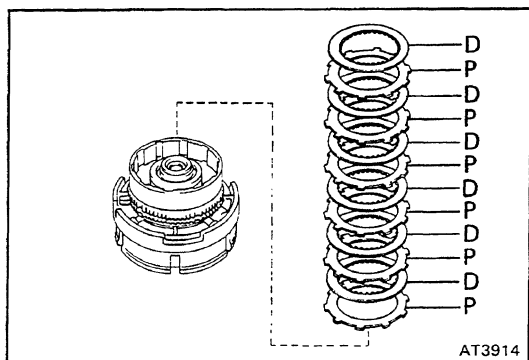
- (c) Using snap ring pliers, install the snap ring.

HINT: Be sure the end gap of the ring is not aligned with the spring seat claw.



5. INSTALL CUSHION PLATE, PLATES AND DISCS

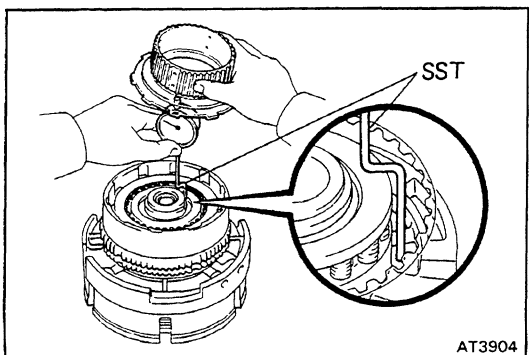
- (a) Install the cushion plate, facing the rounded edge downward.



- (b) install the six plates and six discs in order:

P = Plate D = Disc

P-D -P-D -P-D -P-D -P-D -P-D



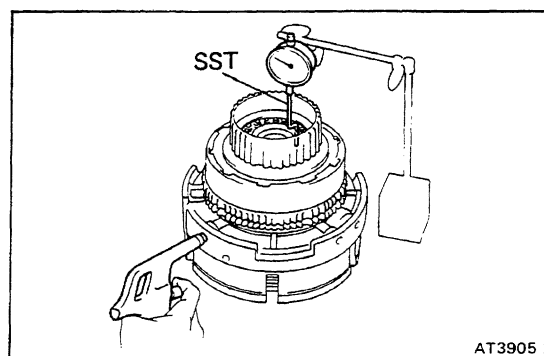
6. CHECK PISTON STROKE OF FRONT CLUTCH

- (a) Install SST to a dial indicator.

SST 09350-36010 (09350-06110)

- (b) Place the assembled SST and a dial indicator on the clutch piston.

- (c) Install the rear clutch hub with the snap ring.



- (d) 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 (09350-06110)

Piston stroke: 3.93 – 4.23 mm (0.1547 – 0.1665 in.)

If the piston stroke is less than specified, parts may have been assembled incorrectly, check and reassemble again.

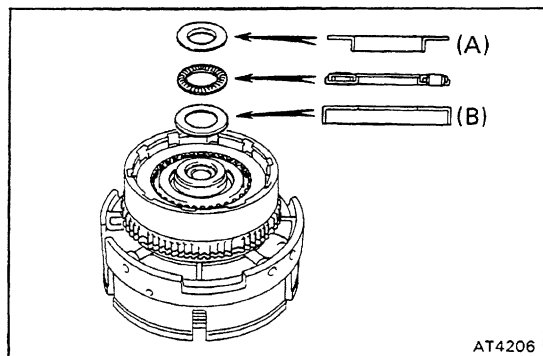
If the piston stroke is not as specified, select another plate.

HINT: There are four different thickness for plate.

mm (in.)

Thickness	
1.8 (0.071)	2.2 (0.087)
2.0 (0.079)	2.4 (0.094)

- (e) Remove the snap ring and rear clutch hub.



7. INSTALL FRONT AND REAR CLUTCH HUBS

- (a) Coat the two races and thrust bearing with petroleum jelly, and install them onto the front clutch drum.

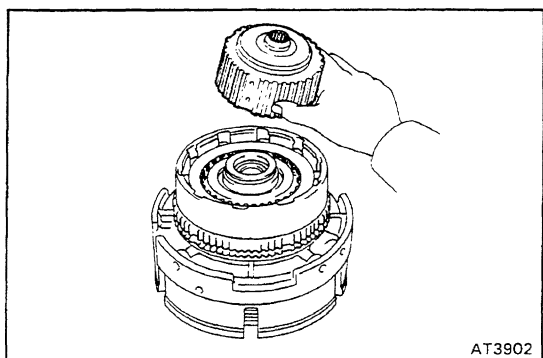
HINT: Races and bearing diameter

mm (in.)

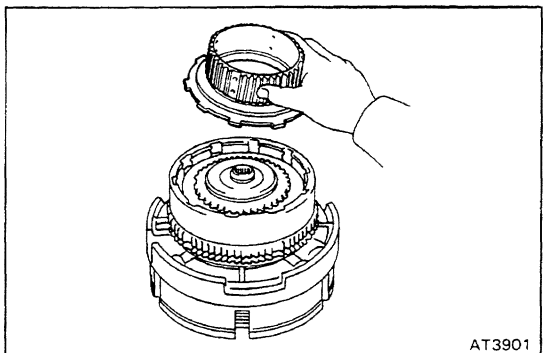
	Inside	Outside
Race (A)	32.8 (1.291)	50.4 (1.984)
Bearing	34.7 (1.366)	52.0 (2.047)
Race (B)	37.0 (1.457)	52.0 (2.047)

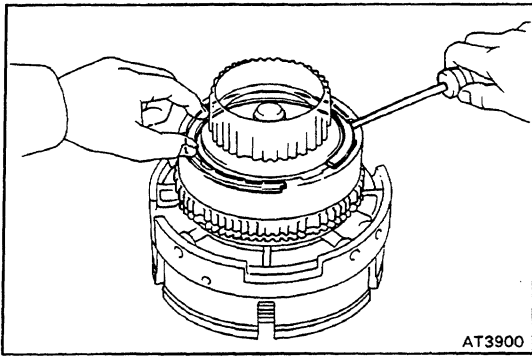
- (b) Install the front clutch hub into the clutch drum.

HINT: Mesh the spline of the front clutch hub with the flukes of the discs by rotating the front clutch hub clockwise or counterclockwise.



- (c) Install the rear clutch hub onto the clutch drum.





(d) Using a screwdriver, install the snap ring.

HINT: Be sure the end gap of the snap ring is not aligned with the cutout portion of the front clutch drum.