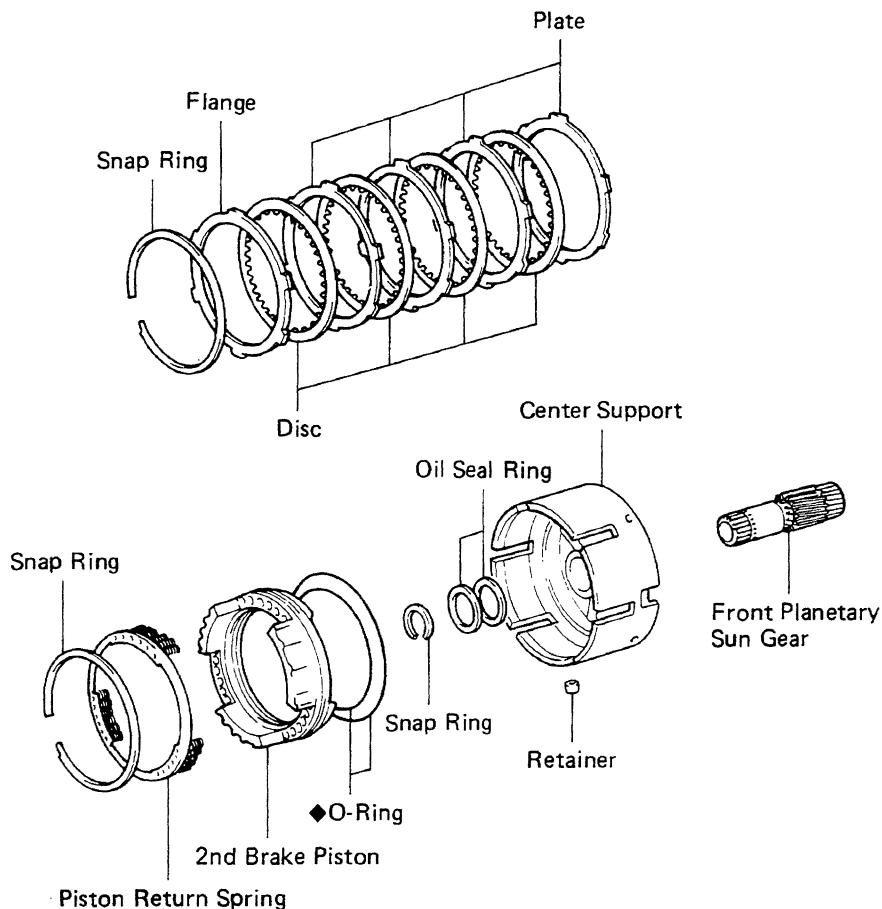
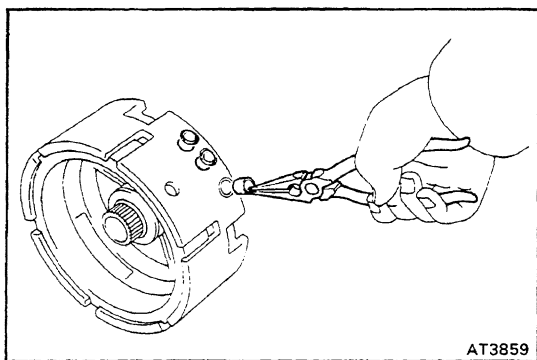


## Second Brake COMPONENTS



◆ Non-reusable part

AT3989

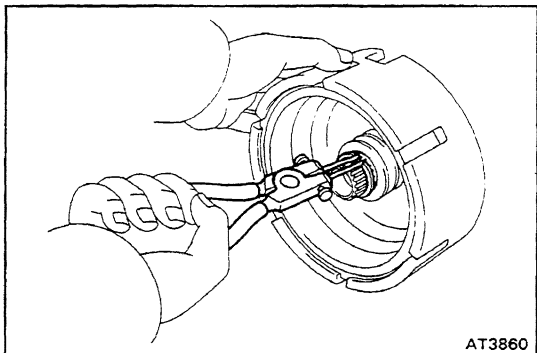


AT3859

### DISASSEMBLY OF SECOND BRAKE

#### 1. REMOVE RING RETAINERS

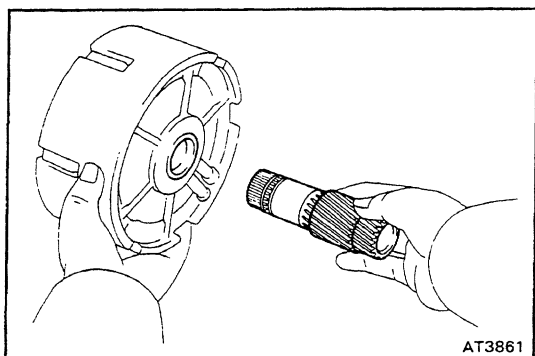
Using needle nose pliers, remove the three ring retainers from the oil holes of the center support.



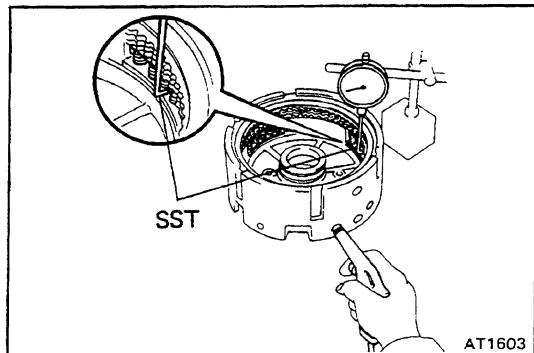
AT3860

#### 2. REMOVE FRONT PLANETARY SUN GEAR

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



(b) Remove the sun gear.



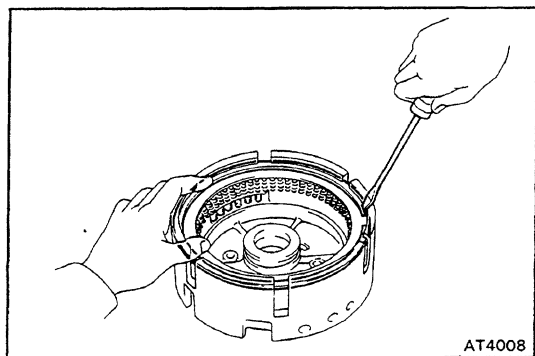
### 3. CHECK PISTON STROKE OF SECOND BRAKE

Using SST and a dial indicator, measure the piston stroke by applying and releasing the compressed air (4 – 8 kg /Cm<sup>2</sup>, 57 – 114 psi or 392 – 785 kPa) as shown.

SST 09350-36010 (09350-06120)

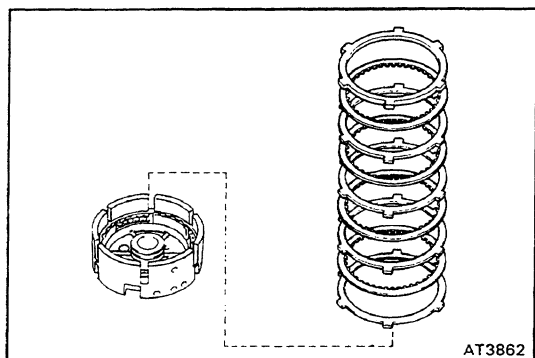
**Piston stroke: 1.60 – 1.80 mm (0.0630 – 0.0709 in.)**

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

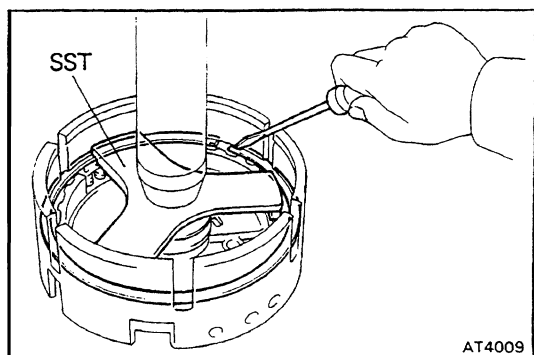


### 4. REMOVE FLANGE, DISCS AND PLATES

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



(b) Remove the flange, four discs and four plates.



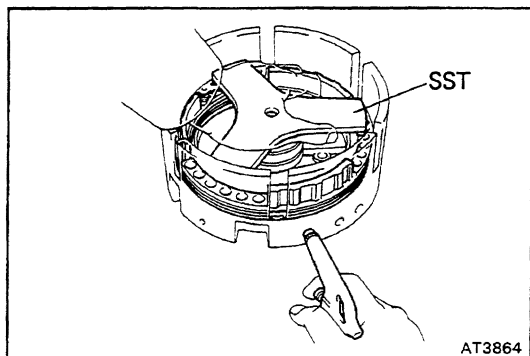
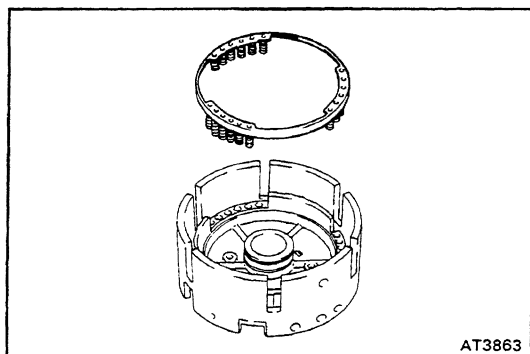
### 5. REMOVE PISTON RETURN SPRING

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

SST 09350-36010 (09350-06020)

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

(c) Remove the return spring.



## 6. REMOVE SECOND BRAKE PISTON

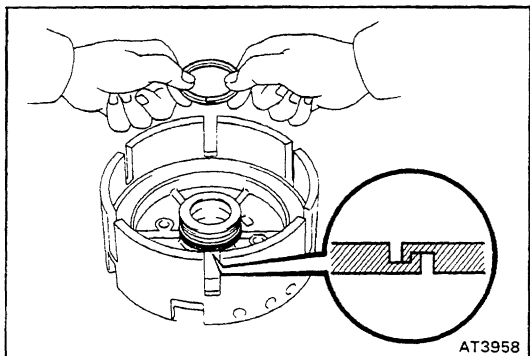
(a) Place the return spring on the brake piston, and then place SST on the return spring.

SST 09350-36010 (09350-06020)

(b) Hold SST so it does not slant, and apply compressed air into the oil hole of the center support to remove the brake piston.

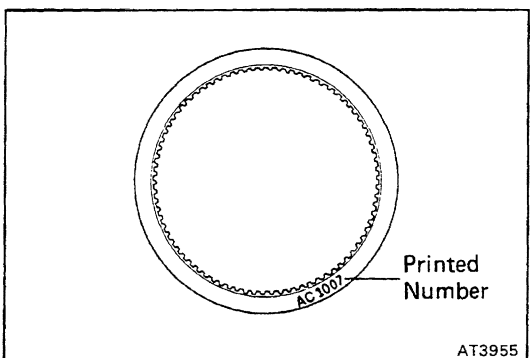
SST 09350-36010 (09350-06020)

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



## 7. REMOVE OIL SEAL RINGS

Remove the two oil seal rings from the center support.



## INSPECTION OF SECOND BRAKE

### 1. INSPECT DISCS, PLATES AND FLANGE

Check to see if the sliding surface of the disc, plate and flange 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 BUSHING OF CENTER SUPPORT

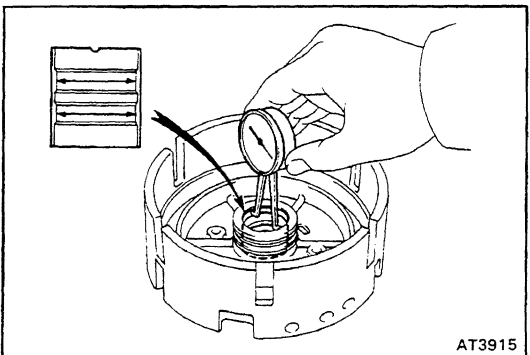
Using a dial indicator, measure the inside diameter.

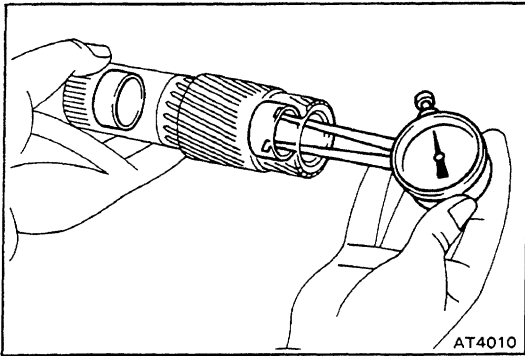
Standard inside diameter: 35.000 – 35.025 mm

(1.3780 – 1.3789 in.)

**Maximum inside diameter: 35.08 mm (1.3811 in.)**

If the inside diameter is greater than maximum, replace the center support.





### 3. INSPECT BUSHINGS OF FRONT PLANETARY SUN GEAR

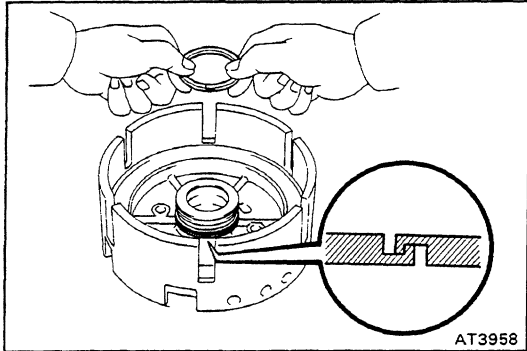
Using a dial indicator, measure the inside diameter.

**Standard inside diameter: 24.000 – 24.021 mm**

**(0.9449 – 0.9457 in.)**

**Maximum inside diameter: 24.07 mm (0.9476 in.)**

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



## ASSEMBLY OF SECOND BRAKE

### 1. INSTALL OIL SEAL RINGS

(a) Coat the two oil seal rings with ATF

(b) Contract the oil seals, and install them onto the center support.

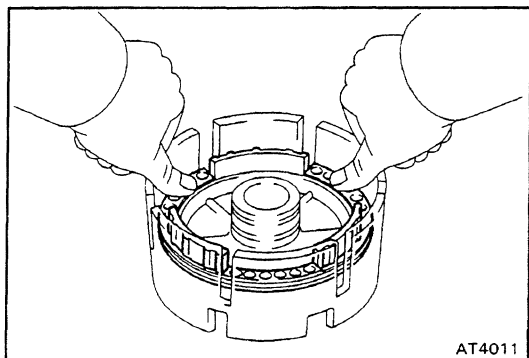
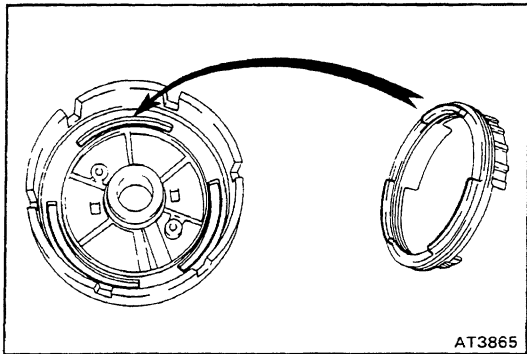
**NOTICE: Do not spread the ring ends more than necessary.**

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

### 2. INSTALL SECOND BRAKE PISTON

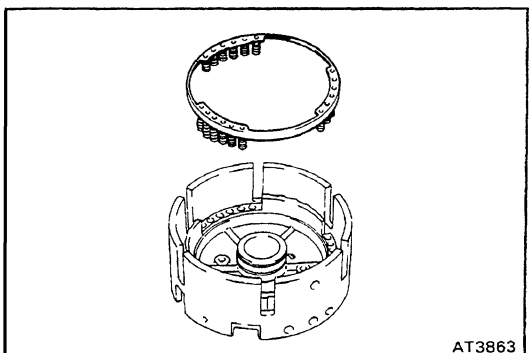
(a) Coat new two O-rings with ATF, and install them on the brake piston.

(b) Align the protrusions of the brake piston with the grooves of the center support.



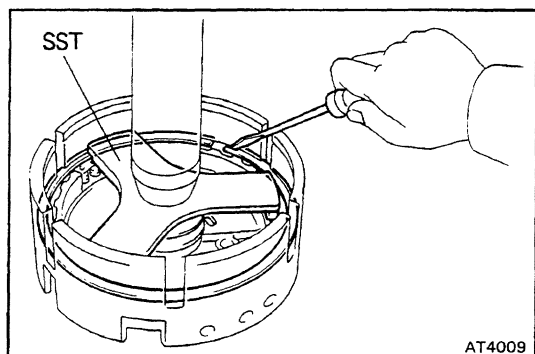
(c) Push in the brake piston into the center support with both hands.

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



### 3. INSTALL PISTON RETURN SPRING

(a) Place the return spring on the brake piston.

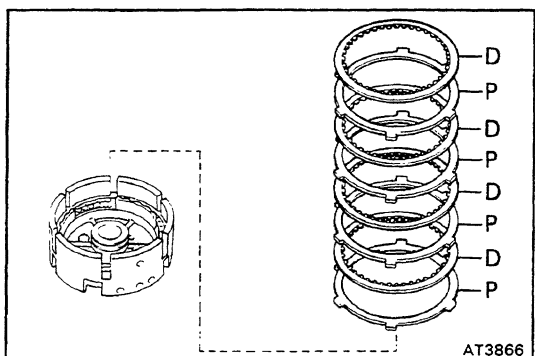


- (b) Place SST on the return spring, and compress the return spring with a shop press.

SST 09350-36010 (09350-06020)

- (c) 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 center support.

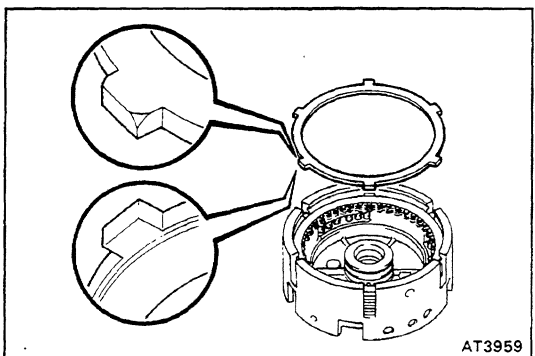


#### 4. INSTALL PLATES, DISCS AND FLANGE

- (a) Install the four plates and four discs in order:

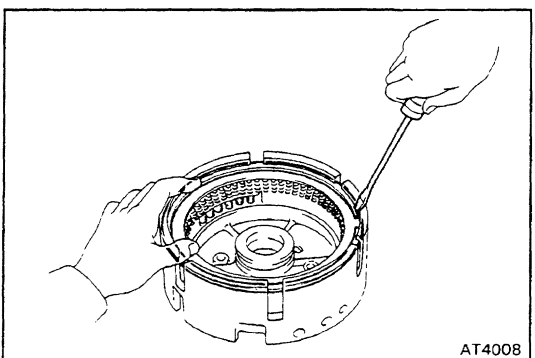
P = Plate D = Disc

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



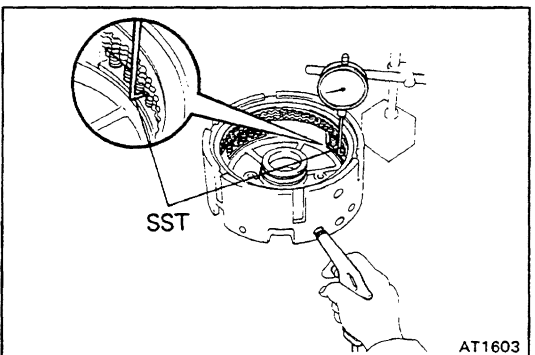
- (b) Install the flange, facing the rounded edge upward.

HINT: If the flange is step-edged, install the flange with the step-edge, facing downward.



- (c) Using a screwdriver, install the snap ring.

HINT: Be sure the end gap of the snap ring is not aligned the cutout portion of the center support.



#### 5. CHECK PISTON STROKE OF SECOND BRAKE

Using SST and a dial indicator, measure the piston stroke by applying and releasing the compressed air (4 – 8 kg /cm<sup>2</sup>, 57 – 114 psi or 392 – 785 kPa) as shown.

SST 09350-36010 109350-061201

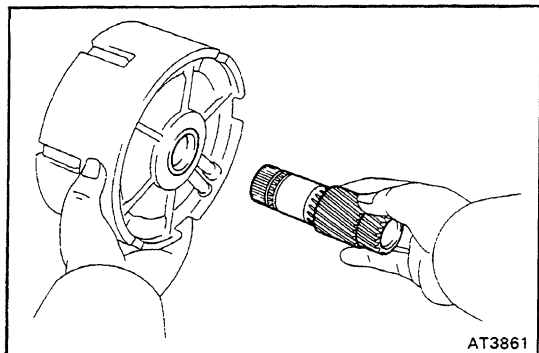
**Piston stroke: 1.60 – 1.80 mm (0.0630 – 0.0785 in.)**

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 flange.

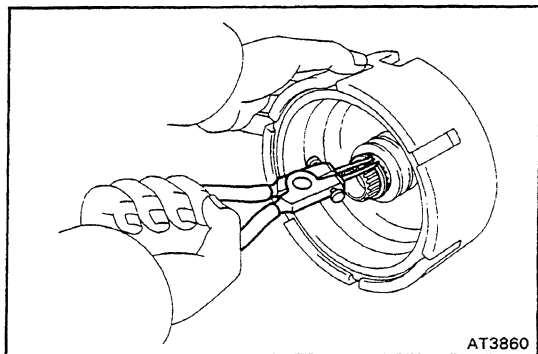
HINT: There are four different thickness for flange.  
mm (in.)

| No.  | Thickness   | No. | Thickness   |
|------|-------------|-----|-------------|
| None | 5.0 (0.197) | 2   | 5.4 (0.213) |
| 1    | 5.2 (0.205) | 3   | 5.6 (0.220) |

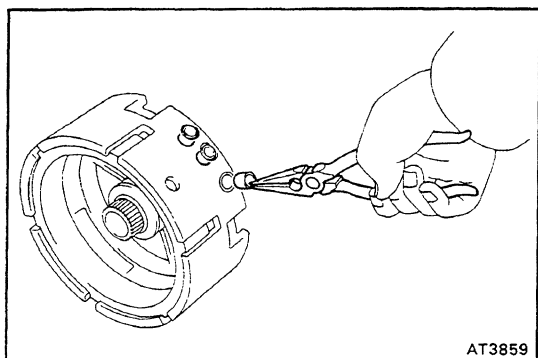


## 6. INSTALL FRONT PLANETARY SUN GEAR

(a) Install the sun gear.



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



## 7. INSTALL RING RETAINERS

Using needle nose pliers, install the three ring retainers into the oil holes of the center support.