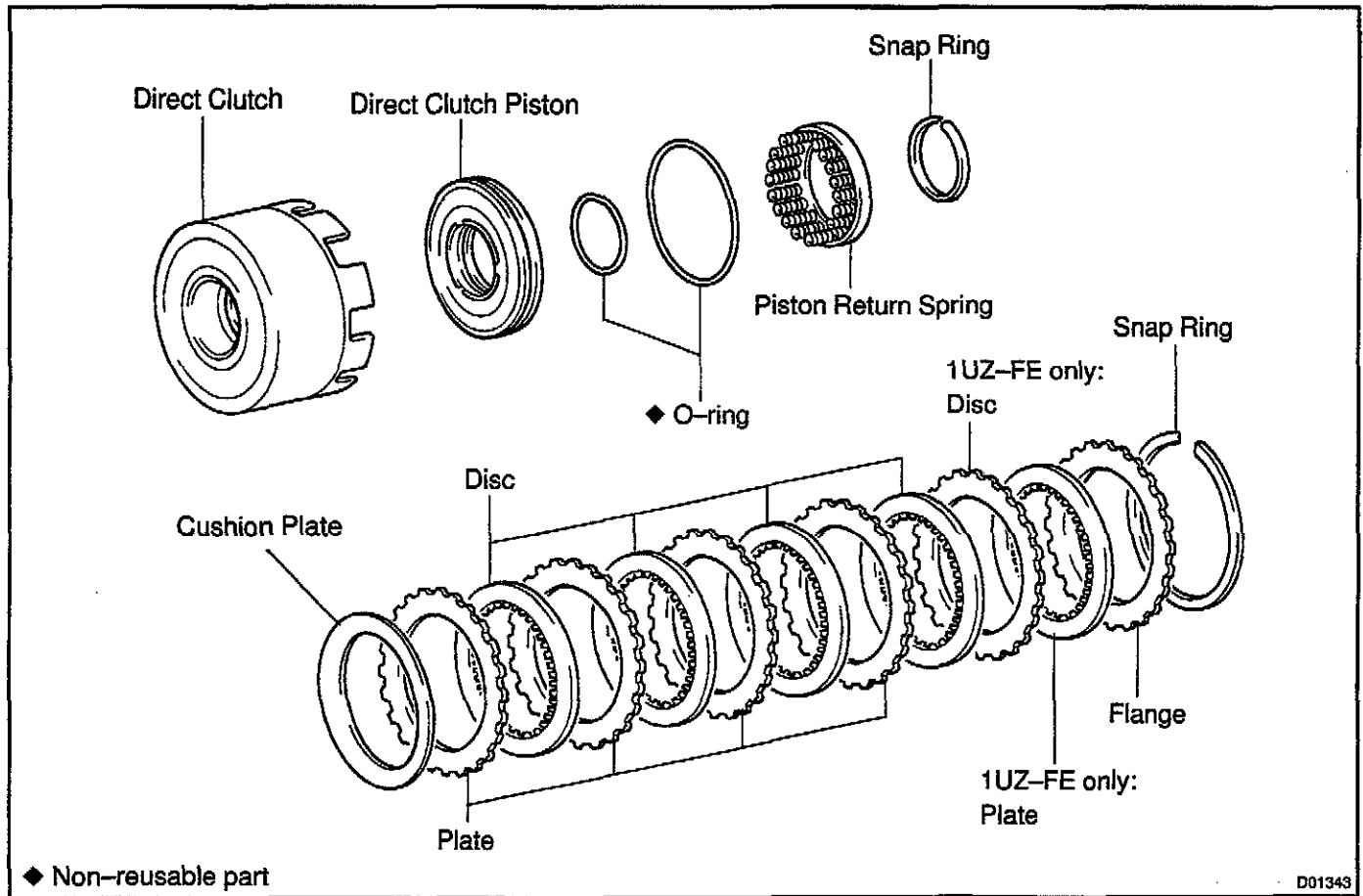
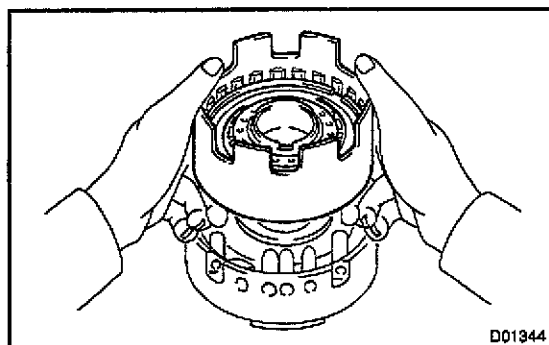


DIRECT CLUTCH COMPONENTS

AT04R-01

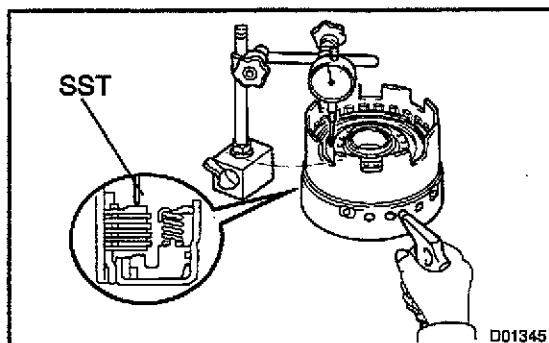




DISASSEMBLY

1. CHECK PISTON STROKE OF DIRECT CLUTCH

- (a) Place the direct clutch assembly onto the O/D support assembly.



- (b) Using SST and a dial indicator, measure the direct clutch piston stroke while applying and releasing compressed air (186 – 206 kPa, 1.9 – 2.1 kgf/cm², 27 – 30 psi).

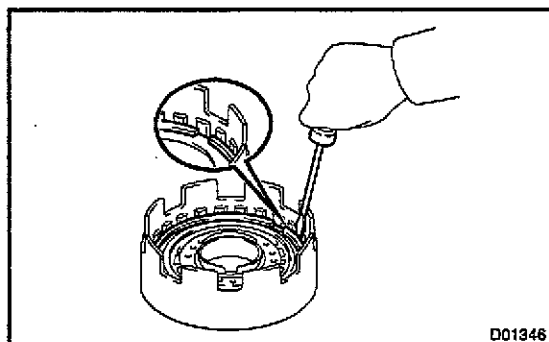
SST 09350-30020 (09350-06120)

Piston stroke:

1UZ-FE: 0.50 – 0.80 mm (0.020 – 0.032 in.)

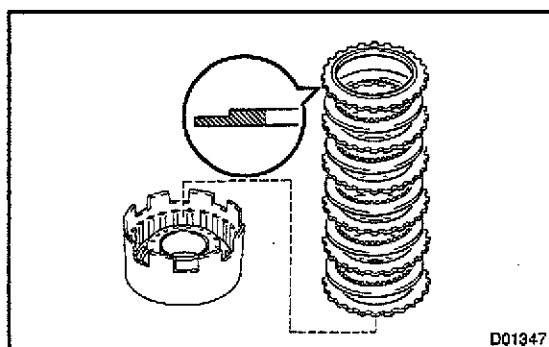
2JZ-GE: 0.40 – 0.70 mm (0.016 – 0.028 in.)

If the clearance is non-standard inspect the discs.



2. REMOVE FLANGE, PLATE AND DISC

- (a) Using a screwdriver, remove the snap ring from the direct clutch drum.



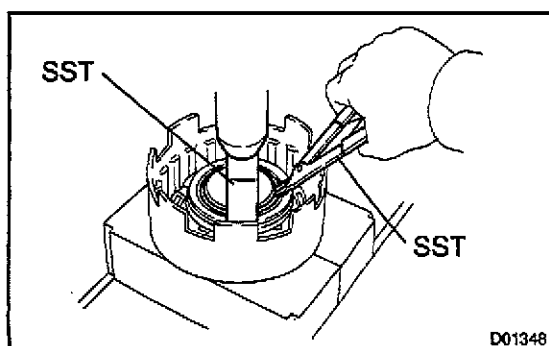
- (b) Remove the flanges, plate and discs.

HINT:

1UZ-FE: Flange, 5 plates and 5 discs

2JZ-GE: Flange, 4 plates and 4 discs

- (c) Remove the cushion plate.



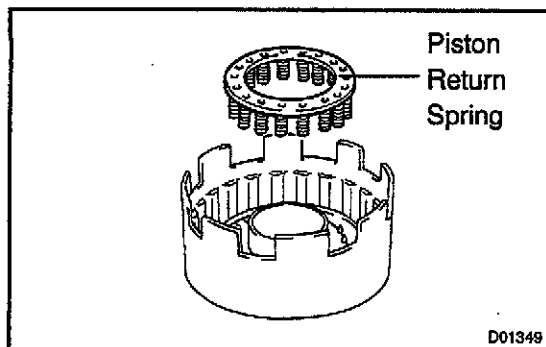
3. REMOVE PISTON RETURN SPRING

- (a) Place SST on the piston return spring and compress.

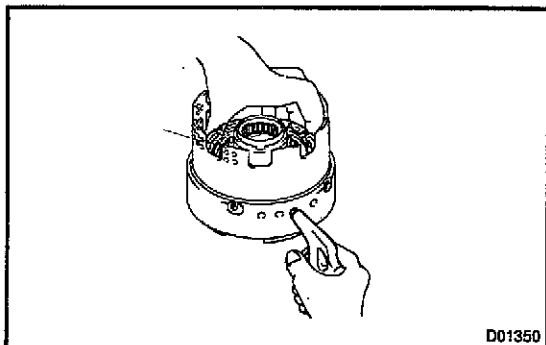
SST 09350-30020 (09350-07040)

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

SST 09350-30020 (09350-07070)



- (c) Remove the piston return spring.



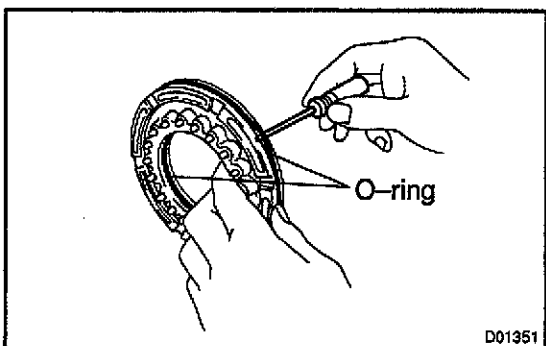
4. REMOVE DIRECT CLUTCH PISTON

- (a) Place the direct clutch drum onto the O/D support.
(b) Hold the direct clutch piston and apply compressed air (186 kPa, 1.9 kgf/cm², 27 psi) to the O/D support to remove the direct clutch piston.

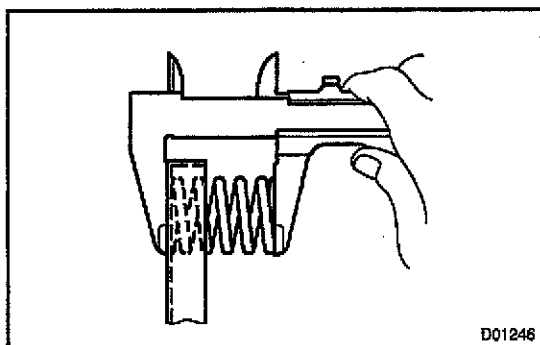
HINT:

Make sure the direct clutch piston squares in the drum before applying compressed air

- (c) Remove the direct clutch piston.



- (d) Using a small screwdriver, remove the 2 O-rings from the piston.



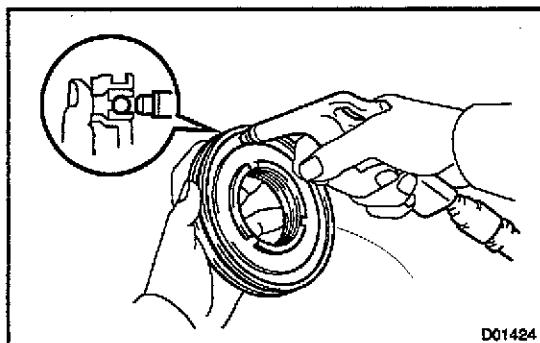
D01246

INSPECTION

1. CHECK DIRECT CLUTCH PISTON RETURN SPRING

Measure the free length of the spring together with the spring seat.

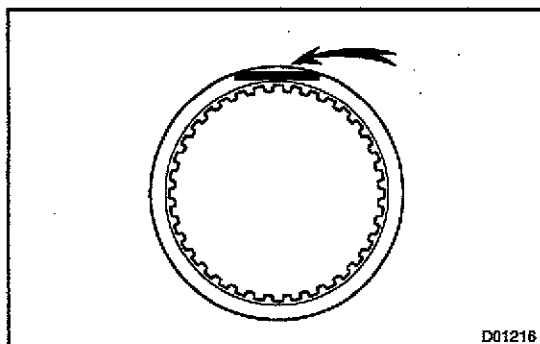
Standard free length: 23.25 mm (0.915 in.)



D01424

2. CHECK DIRECT CLUTCH PISTON

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



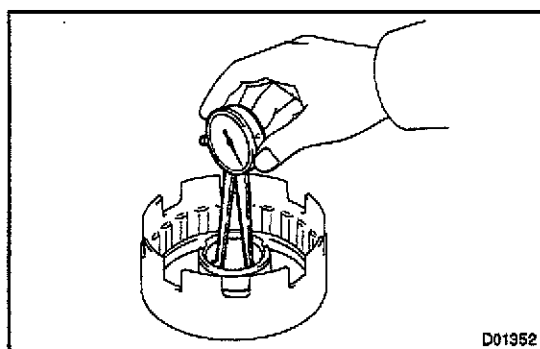
D01216

3. INSPECT DISC, PLATE 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 a part of the printed numbers is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.



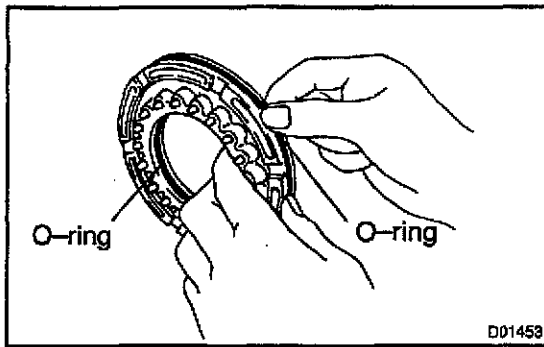
D01352

4. CHECK DIRECT CLUTCH BUSHING

Using a dial indicator, measure the inside diameter of the clutch drum bushing.

Maximum inside diameter: 53.97 mm (2.1248 in.)

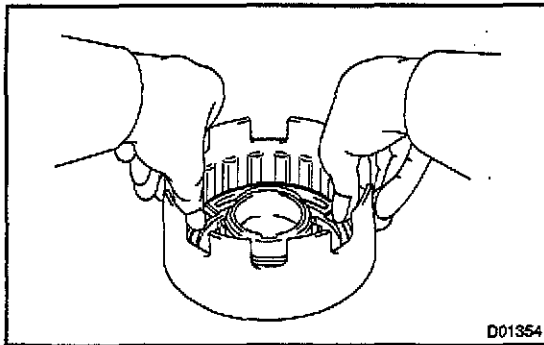
If the inside diameter is greater than the maximum, replace the clutch drum.



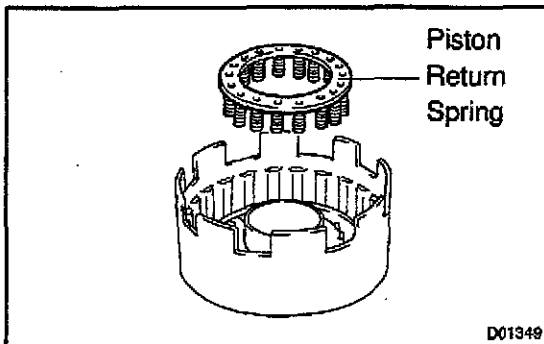
REASSEMBLY

1. INSTALL DIRECT CLUTCH PISTON TO DIRECT CLUTCH DRUM

- (a) Coat 2 new O-rings with ATF and install them in the direct clutch piston.

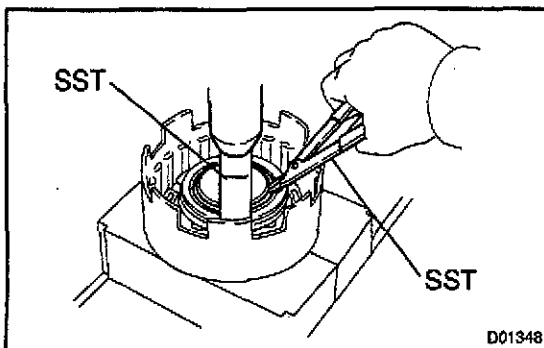


- (b) Being careful not to damage the O-rings press in the direct clutch piston into the clutch drum with both hands.



2. INSTALL PISTON RETURN SPRING

- (a) Install the piston return spring.



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

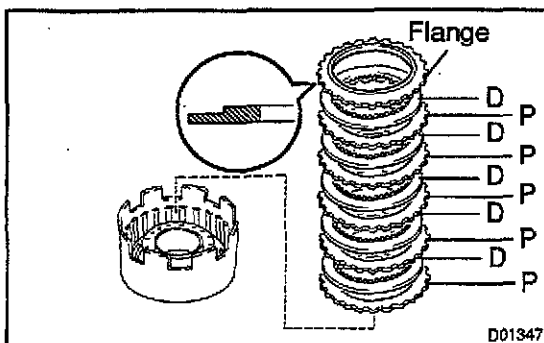
SST 09350-30020 (09350-07040)

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

SST 09350-30020 (09350-07070)

NOTICE:

Be sure the end gap of the snap ring is not aligned with the spring retainer claw.



3. INSTALL PLATE, DISC AND FLANGE

- (a) Install the cushion plate.

- (b) Install the plates and discs.

HINT:

1UZ-FE: 5 plates and 5 discs

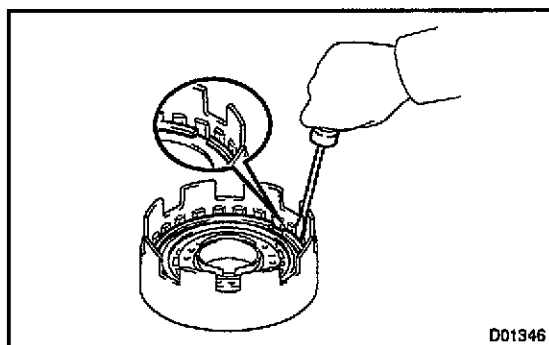
2JZ-GE: 4 plates and 4 discs

Install in order: P = Plate, D = Disc

1UZ-FE: P - D - P - D - P - D - P - D - P - D

2JZ-GE: P - D - P - D - P - D - P - D

- (c) Install the flange, the flat end facing downward.

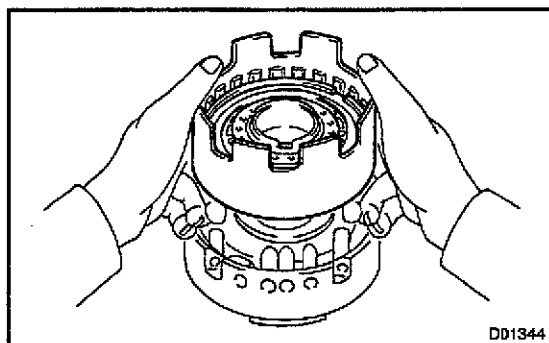


D01346

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

NOTICE:

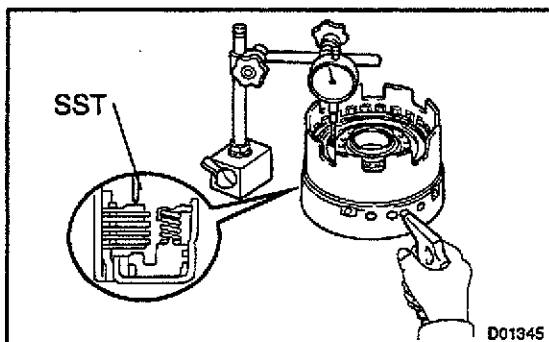
Be sure the end gap of the snap ring is not aligned with the cutout portion of the direct clutch drum.



D01344

4. CHECK PISTON STROKE OF DIRECT CLUTCH

(a) Place the direct clutch assembly onto the O/D support assembly.



D01345

(b) Using SST and a dial indicator, measure the direct clutch piston stroke while applying and releasing compressed air (186 kPa, 1.9 kgf/cm², 27 psi).

SST 09350-30020 (09350-06120)

Piston stroke:

1UZ-FE: 0.50 – 0.80 mm (0.020 – 0.032 in.)

2JZ-GE: 0.40 – 0.70 mm (0.016 – 0.028 in.)

If the pack clearance is less than the limit of piston stroke, parts may have been assembled incorrectly, so check and reassemble again.

If the clearance is non-standard, select another flange.

HINT:

There are 9 different flanges in thickness.

Flange thickness: mm (in.)

No.	Thickness	No.	Thickness
33	3.3 (0.130)	38	3.8 (0.150)
34	3.4 (0.134)	39	3.9 (0.154)
35	3.5 (0.138)	40	4.0 (0.157)
36	3.6 (0.142)	41	4.1 (0.161)
37	3.7 (0.146)	—	—

HINT:

No.33 flange is only used for the vehicle with 1UZ-FE.