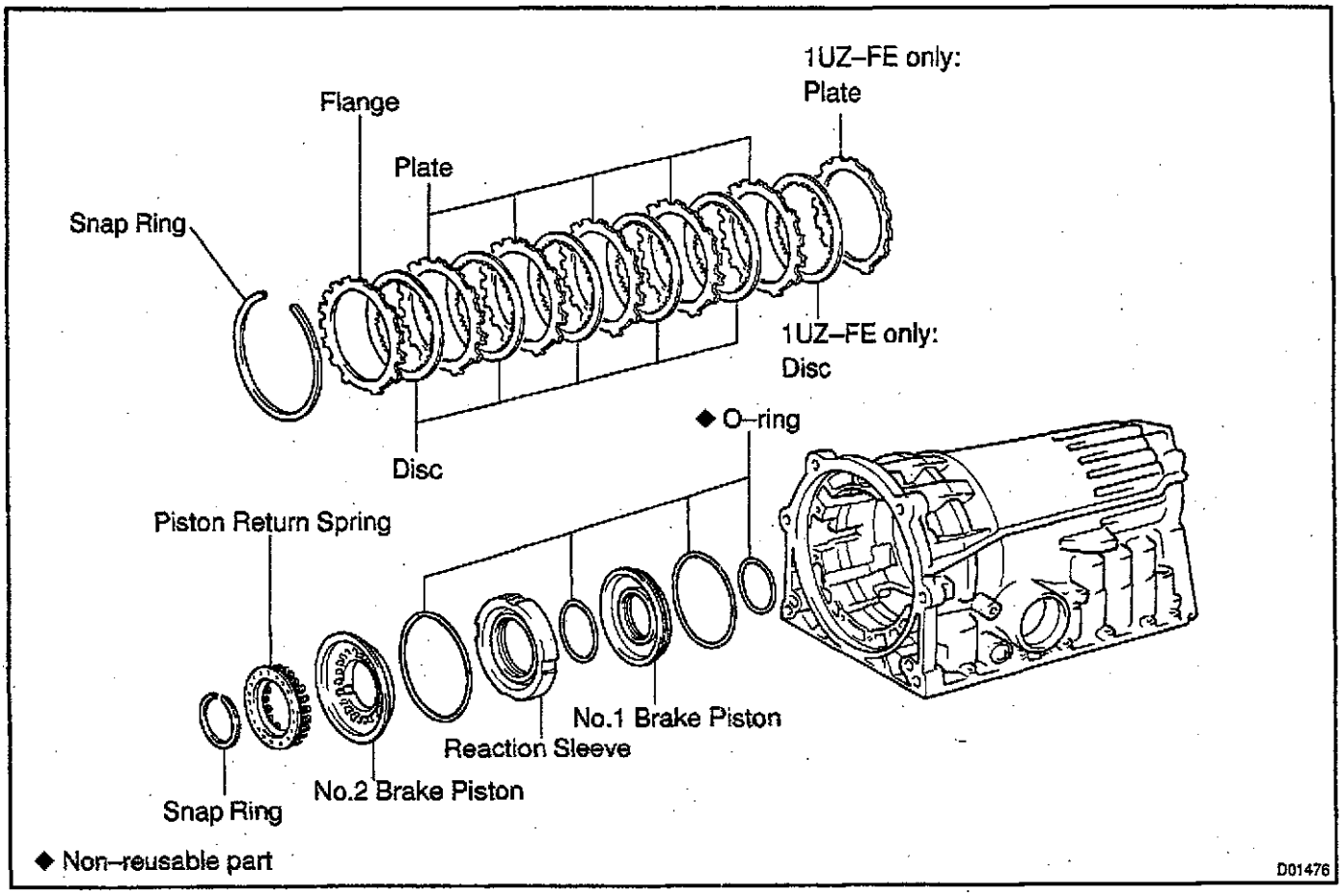
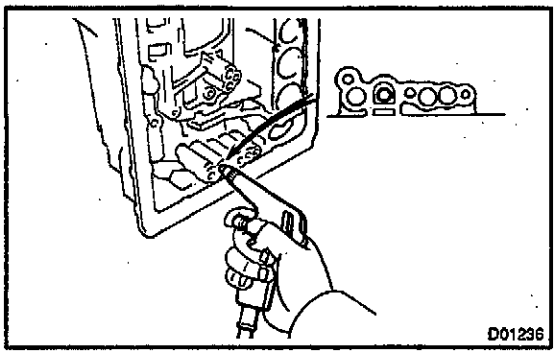
FIRST AND REVERSE BRAKE

COMPONENTS

AT03B–01



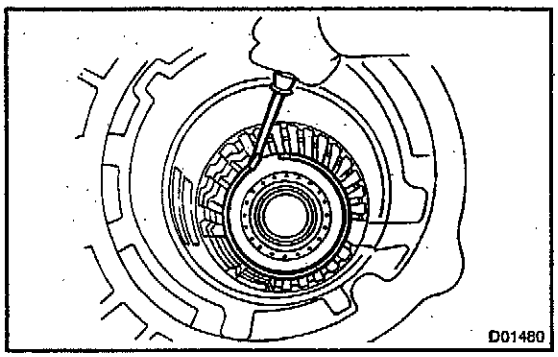


DISASSEMBLY

1. CHECK PACK CLEARANCE OF 1ST & REVERSE BRAKE

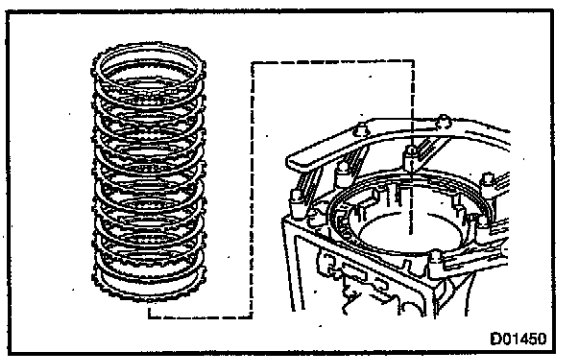
Make sure the 1st & reverse brake pistons move smoothly when applying and releasing the compressed air (392 kPa, 4 kgf/cm^2, 57 psi) into the transmission case.

Pack clearance:
1UZ–FE: 0.6 – 0.9 mm (0.024 – 0.035 in.)
2JZ–GE: 0.5 – 0.8 mm (0.021 – 0.031 in.)



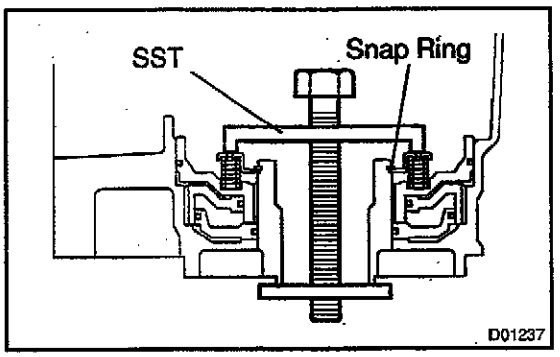
2. REMOVE DISC, PLATE AND FLANGE

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



(b) Remove the flange, discs and plates.

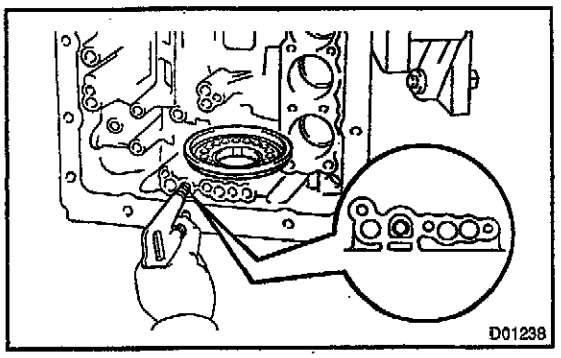
HINT:
1UZ–FE: 6 discs and 6 plates
2JZ–GE: 5 discs and 5 plates



3. REMOVE PISTON RETURN SPRING

(a) Place SST on the spring retainer and compress the return spring.
SST 09350–30020 (09350–07050)

(b) Using SST, remove the snap ring and return spring.
SST 09350–30020 (09350–07070)

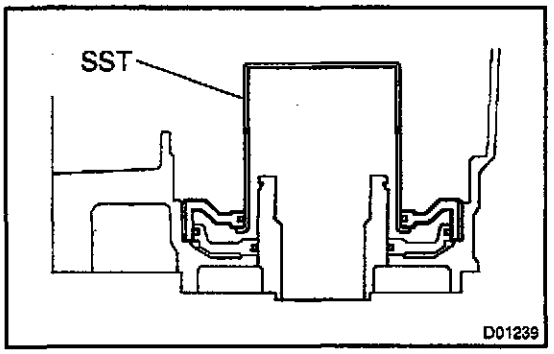


4. REMOVE NO.2 BRAKE PISTON

(a) Hold No.2 brake piston by hand, apply compressed air (392 kPa, 4 kgf/cm^2, 57 psi) to transmission case to remove No.2 brake piston.

HINT:
If the piston dose not pop out with compressed air, lift the piston out with needle–nose pliers.

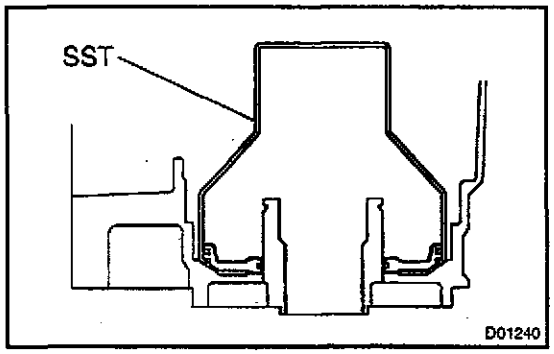
(b) Remove the O–ring from No.2 brake piston.



5. REMOVE REACTION SLEEVE

(a) Using SST, remove the reaction sleeve.
SST 09350–30020 (09350–07080)

(b) Remove the O–ring from the reaction sleeve.



6. REMOVE NO.1 BRAKE PISTON

(a) Using SST, remove the No.1 brake piston.
SST 09350–30020 (09350–07090)

(b) Remove the 2 O–rings from the No.1 piston.

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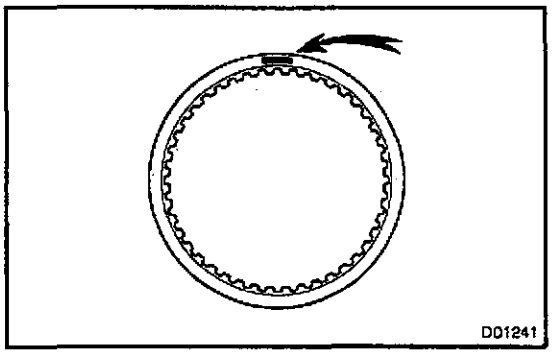


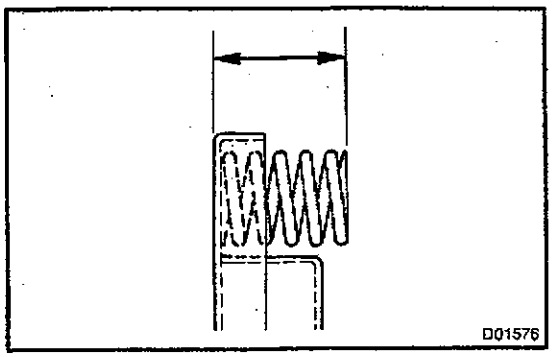
INSPECTION

1. CHECK 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.



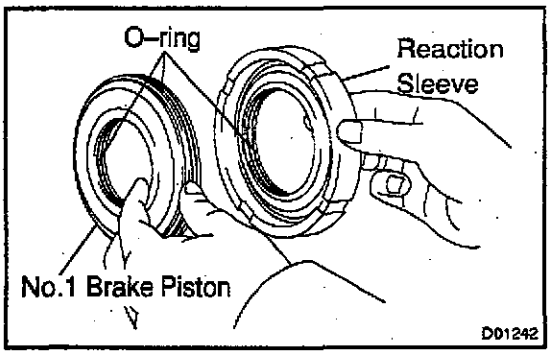
2. CHECK PISTON RETURN SPRING

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

Standard free length: 20.0 mm (0.787 in.)

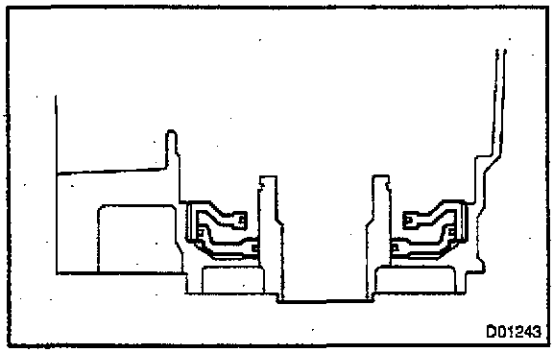
AT05E-01

REASSEMBLY



1. INSTALL NO.1 BRAKE PISTON

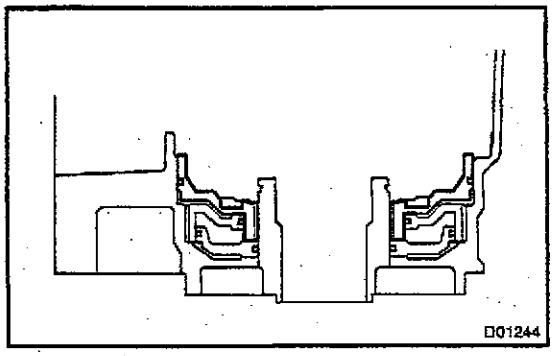
(a) Coat 3 new O–rings with ATF.
(b) Install the 2 O–rings on No.1 brake piston.
(c) Install the O–ring on the reaction sleeve.
(d) Install the No.1 brake piston to the reaction sleeve.



2. INSTALL REACTION SLEEVE AND NO.1 BRAKE PISTON TO TRANSMISSION CASE

With the No.1 brake piston underneath (the rear side), install the brake reaction sleeve and No.1 brake piston to the transmission case.

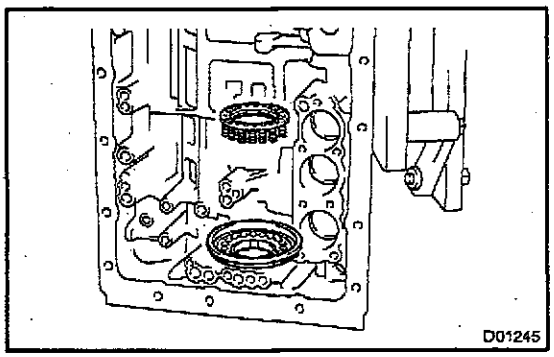
NOTICE:
Be careful not to damage the O–rings.



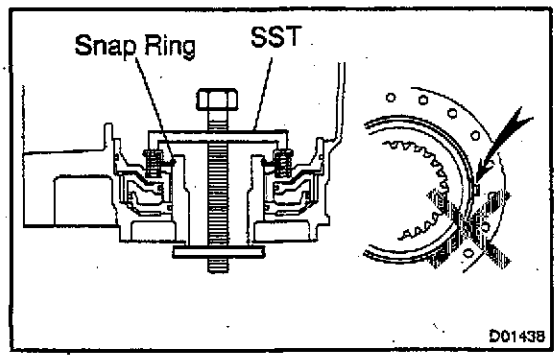
3. INSTALL NO.2 BRAKE PISTON

(a) Coat new O–ring with ATF.
(b) Install the O–ring on No.2 brake piston.
(c) With the spring seat of the piston upwards (the front side), place the piston in the transmission case.

NOTICE:
Be careful not to damage the O–ring.

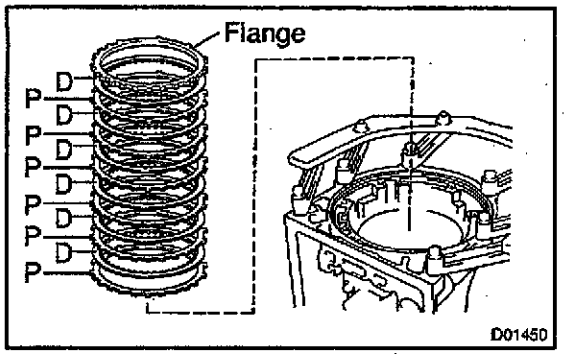


(d) Place the piston return spring onto the No.2 brake piston.



4. INSTALL PISTON RETURN SPRING

(a) Place SST on the spring retainer and compress the return spring.
SST 09350–30020 (09350–07050)
(b) Using SST, install the snap ring.
SST 09350–30020 (09350–07070)



5. INSTALL PLATE, DISC AND FLANGE

(a) Install the plates, discs and flange.

HINT:

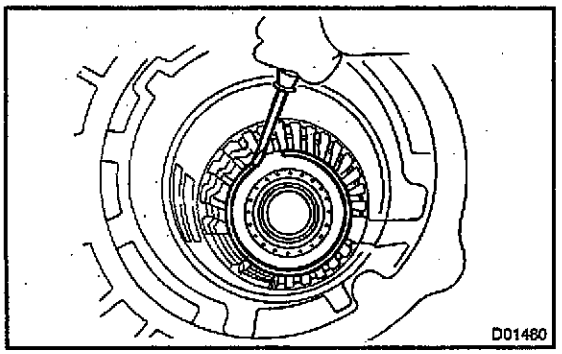
1UZ–FE: 6 plates and 6 discs

2JZ–GE: 5 plates and 5 discs

Install in order: P = Plate, D = Disc

1UZ–FE: P – D – P – D – P – D – P – D – P – D – P – D

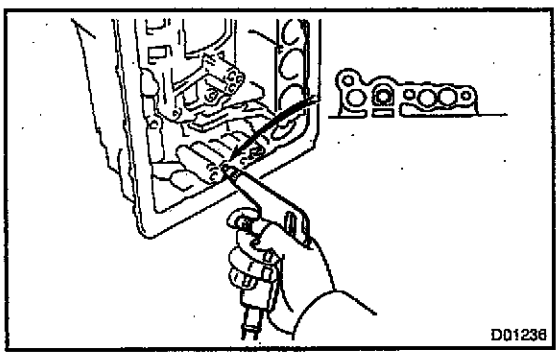
2JZ–GE: P – D – P – D – P – D – P – D – P – D



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

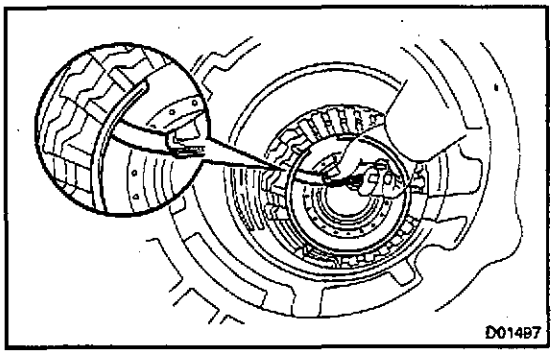
NOTICE:

Be sure the end gap of the snap ring is not aligned with the cutout portion of the case.



6. CHECK PACK OPERATION OF 1ST & REVERSE BRAKE

(a) Make sure the 1st & reverse brake pistons move smoothly when applying and releasing the compressed air (392 kPa, 4 kgf/cm^2, 57 psi) into the transmission case.



(b) Using feeler gauge, measure 1st & reverse brake pack clearance between the snap ring and the flange.

Pack clearance:

1UZ–FE: 0.60 – 0.90 mm (0.024 – 0.035 in.)

2JZ–GE: 0.50 – 0.80 mm (0.020 – 0.031 in.)

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

If the stroke is non–standard, select another plate.

HINT:

There are 13 different plates in thickness for the bottom plate. For the other plates, the thickness is 1.8 mm (0.071 in.).

Plate thickness: mm (in.)

No.	Thickness	No.	Thickness
01	1.8 (0.071)	08	2.5 (0.098)
02	1.9 (0.075)	09	2.6 (0.102)
03	2.0 (0.079)	10	2.7 (0.106)
04	2.1 (0.083)	11	2.8 (0.110)
05	2.2 (0.087)	12	2.9 (0.114)
06	2.3 (0.090)	13	3.0 (0.118)
07	2.4 (0.094)	–	–