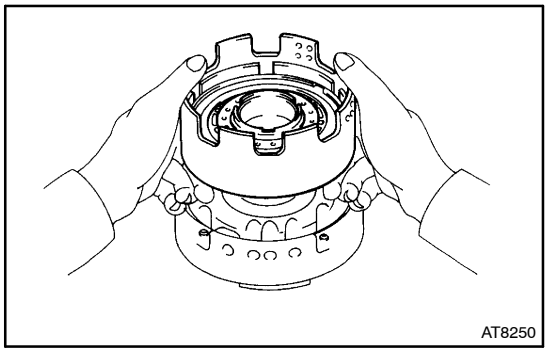
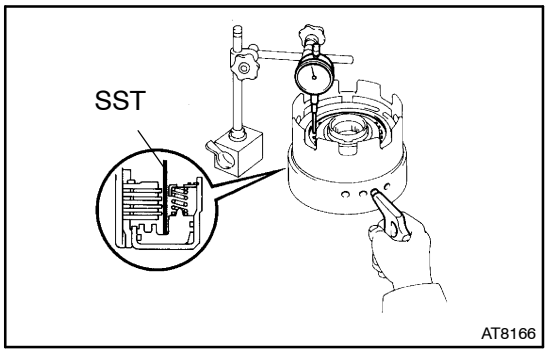
400X2–01

OVERHAUL



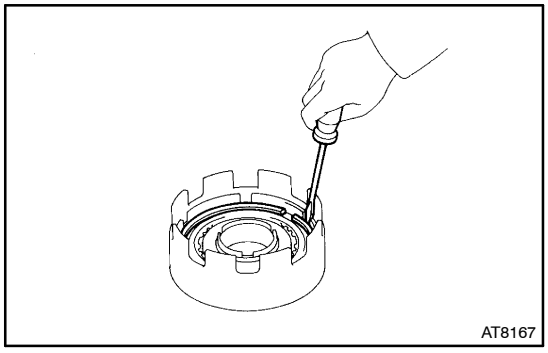
1. INSPECT PISTON STROKE OF DIRECT CLUTCH

(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 (392 – 785 kPa, 4.0 – 8.0 kgf/cm^2, 57 –114 psi).
SST 09350–30020 (09350–06120)
Piston stroke: 1.37 – 1.60 mm (0.0539 – 0.0630 in.)

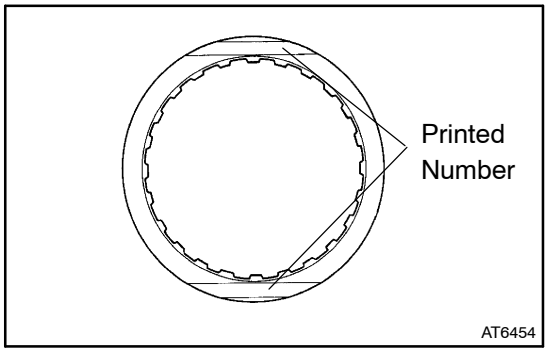
If the stroke is outside the standard, inspect the discs.



2. REMOVE FLANGE, DIRECT CLUTCH

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

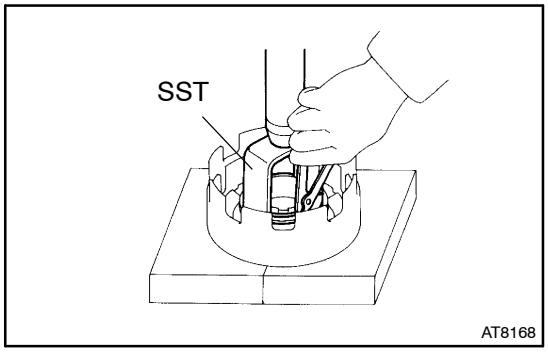
(b) Remove the flange, the plates and teh discs.



3. INSPECT FLANGE, DIRECT CLUTCH

(a) Check if the sliding surfaces of the disc, the plate and the flange are worn or burnt. If necessary, replace them.

HINT:
If the lining of the disc is peeled off or discolored, or even if only a part of the printed numbers is corroded, replace all discs.

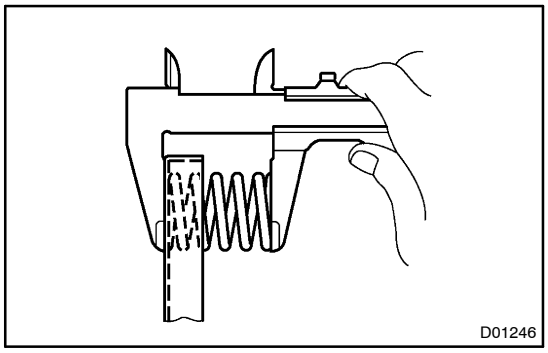


4. REMOVE DIRECT CLUTCH RETURN SPRING SUB–ASSY

(a) Place SST on the spring retainer, and compress the piston return spring with a press.
SST 09350–30020 (09350–07040, 09350–07070)

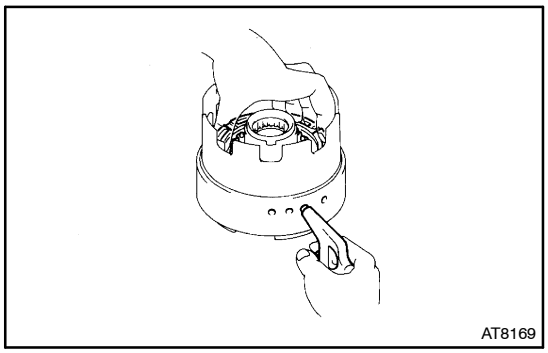
(b) Using snap ring expander, remove the snap ring.

(c) Remove the piston return spring.



5. INSPECT DIRECT CLUTCH RETURN SPRING SUB–ASSY

(a) Measure the free length of the spring together with the spring seat.
Standard free length: 21.32 mm (0.8394 in.)

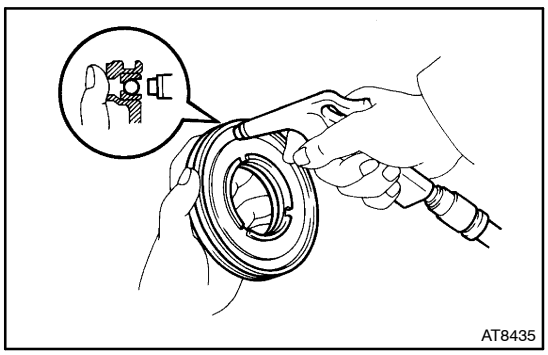


6. REMOVE DIRECT CLUTCH PISTON SUB–ASSY

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

(b) Hold the direct clutch piston, and apply compressed air to the O/D support to remove the direct clutch piston.

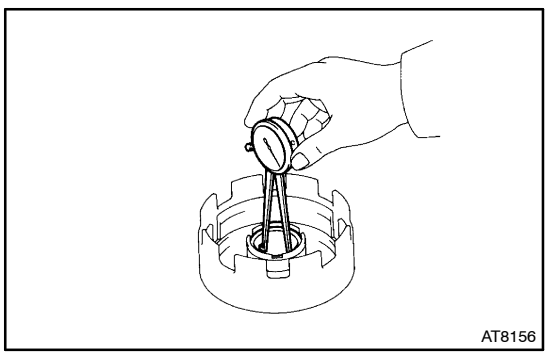
(c) Remove the 2 O–rings from the piston.



7. INSPECT DIRECT CLUTCH PISTON SUB–ASSY

(a) Check that the check ball is free by shaking the piston.

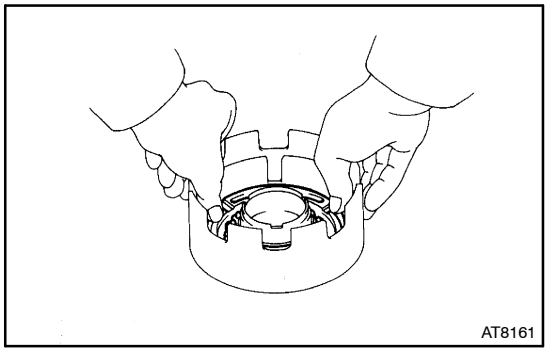
(b) Check that the valve does not have leaks by applying low–pressure compressed air.



8. INSPECT DIRECT CLUTCH DRUM SUB–ASSY

(a) Using a dial indicator, measure the inside diameter of the clutch drum bushing.
Maximum inside diameter: 53.99 mm (2.1256 in.)

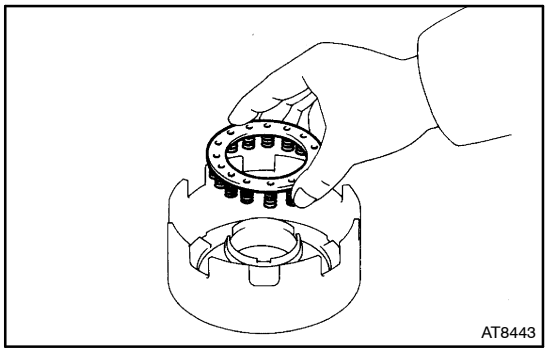
If the inside diameter is greater than the maximum, replace the clutch drum.



9. INSTALL DIRECT CLUTCH PISTON SUB–ASSY

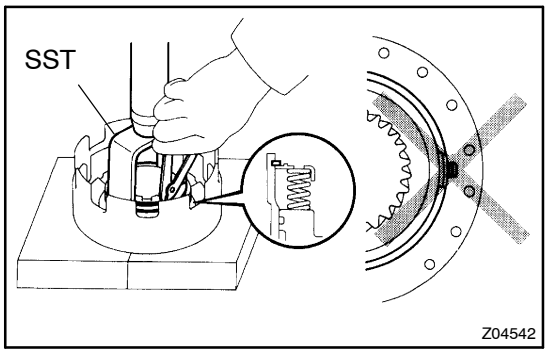
(a) Coat 2 new O–rings with ATF, and install them on the direct clutch piston.

(b) Be careful not to damage the O–rings, and press the direct clutch piston into the clutch drum with both hands.



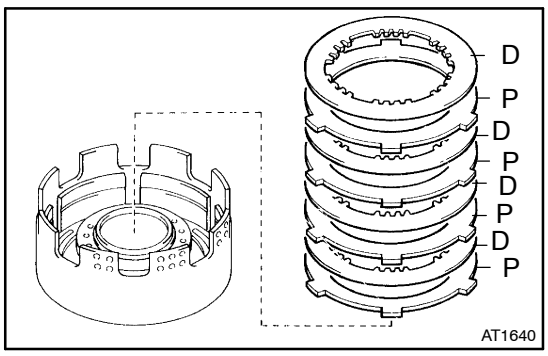
10. INSTALL DIRECT CLUTCH RETURN SPRING SUB–ASSY

(a) Install the piston return spring.



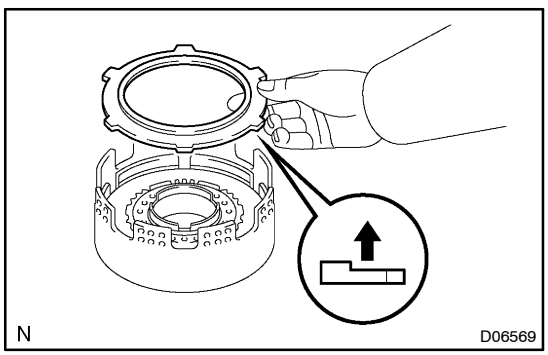
(b) Place SST on the spring retainer, and compress the return spring with a press.
SST 09350–30020 (09350–07040, 09350–07070)

(c) Install the snap ring with snap ring pliers. Be sure the end gap of the snap ring is not aligned with the spring retainer.

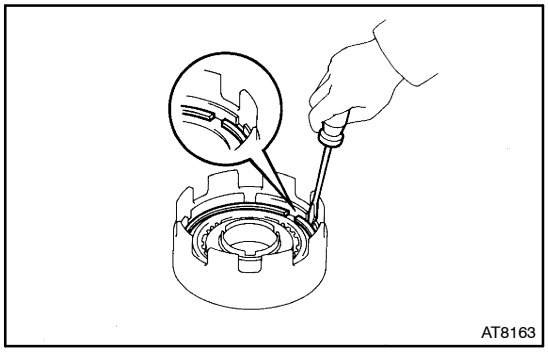


11. INSTALL FLANGE, DIRECT CLUTCH

(a) Install the 4 plates and the discs.
Install in order: P = Plate D = Disc
P – D – P – D – P – D – P – D



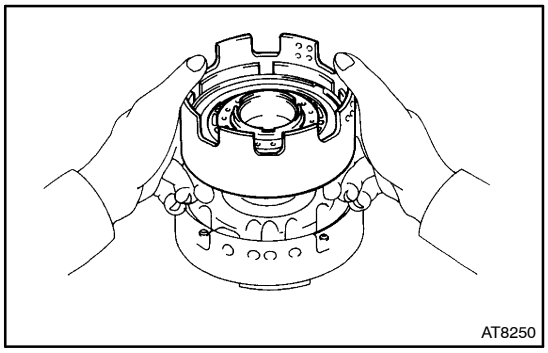
(b) Install the flange with the flat end facing downward.



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

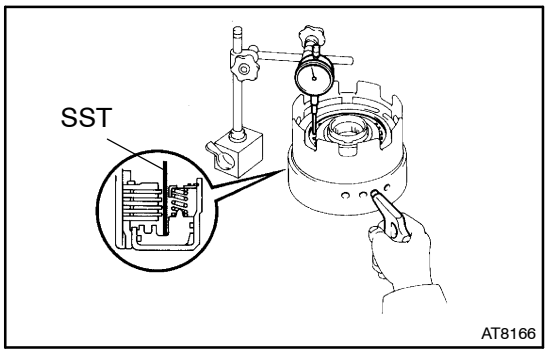
NOTICE:

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



12. INSPECT 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 (392 – 785 kPa, 4.0 – 8.0 kgf/cm^2, 57 –114 psi).

SST 09350–30020 (09350–06120)

Piston stroke: 1.37 – 1.60 mm (0.0539 – 0.0630 in.)

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

If the piston stroke is outside the standard, select another flange.

HINT:

There are 8 different thicknesses for the flange.

Flange thickness:

No.	Thickness	No.	Thickness
53	3.3 (0.130)	57	3.7 (0.146)
54	3.4 (0.134)	58	3.8 (0.150)
55	3.5 (0.138)	60	4.0 (0.157)
56	3.6 (0.142)	62	4.2 (0.165)