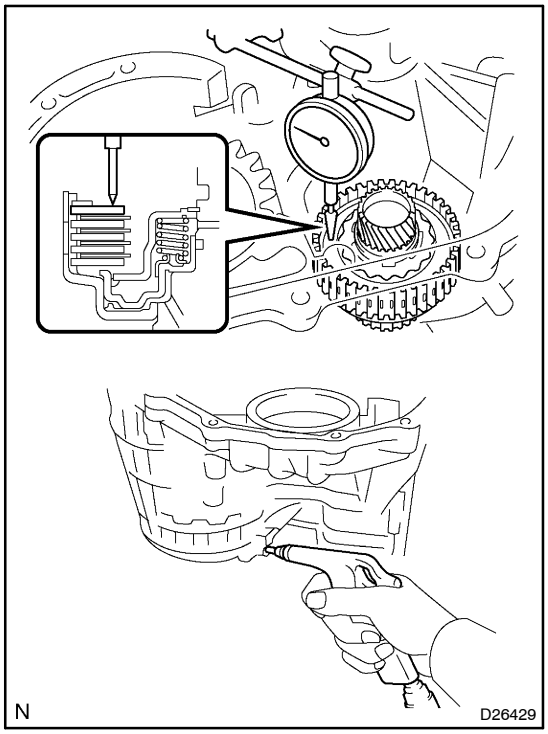
UNDERDRIVE CLUTCH ASSY (U151E/U151F)

400H3–02

OVERHAUL



1. INSPECT UNDERDRIVE PACK CLEARANCE

(a) Install the underdrive clutch to the transaxle case.

NOTICE:

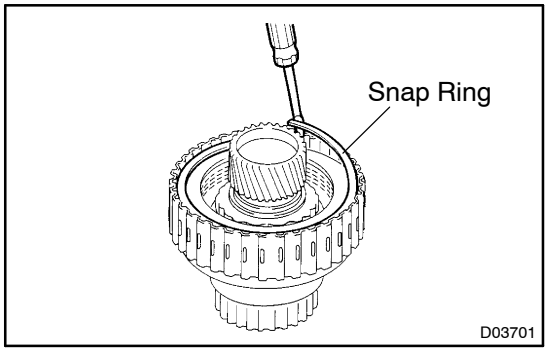
Be careful not to damage the oil seal rings.

(b) Install a dial indicator as shown in the illustration.

(c) Measure the underdrive clutch pack clearance while applying and releasing compressed air (392 kPa, 4.0 kgf/cm^2, 57 psi).

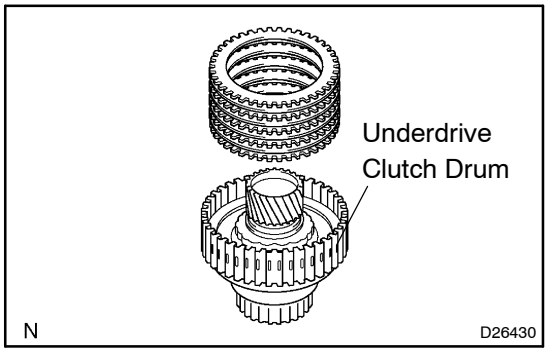
Pack clearance: 1.51 – 1.71 mm (0.0594 – 0.0673 in.)

If the pack clearance is not within standard, inspect the discs, plates and flange.



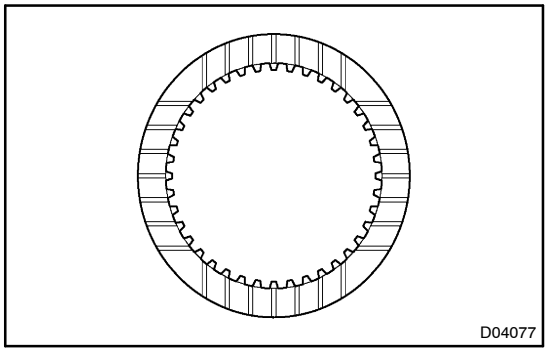
2. REMOVE UNDERDRIVE CLUTCH FLANGE NO.2 HOLE SNAP RING

(a) Using a screwdriver, remove the underdrive clutch flange No.2 snap ring.



3. REMOVE UNDERDRIVE CLUTCH DISC NO.1

(a) Remove the flange, 4 discs and 4 plates from the underdrive clutch drum.

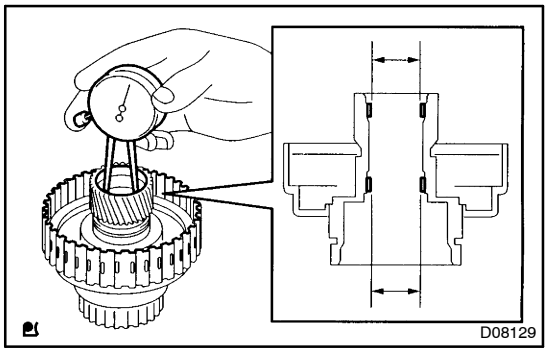


4. INSPECT UNDERDRIVE CLUTCH DISC NO.1

(a) 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 comes off or discolors, or even if a part of the groove is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.

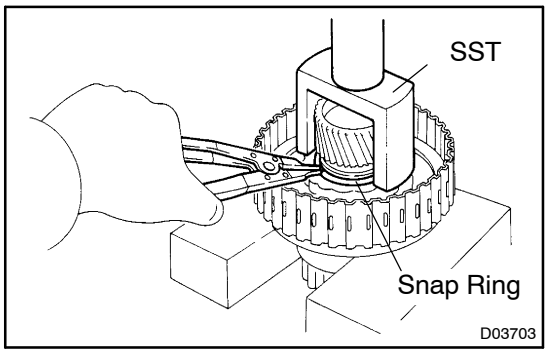


5. INSPECT UNDERDRIVE CLUTCH DRUM SUB–ASSY

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

Standard drum bushing:
37.06 – 37.08 mm (1.4591 – 1.4598 in.)
Maximum drum bushing: 37.13 mm (1.4618 in.)

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



6. REMOVE UNDERDRIVE CLUTCH RETURN SPRING SUB–ASSY

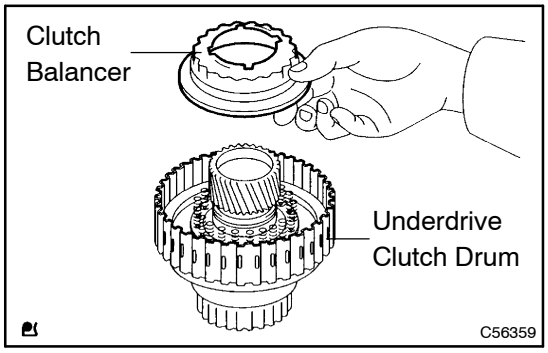
(a) Place SST on the clutch balancer and compress the spring with a press.

SST 09350–32014 (09351–32070)

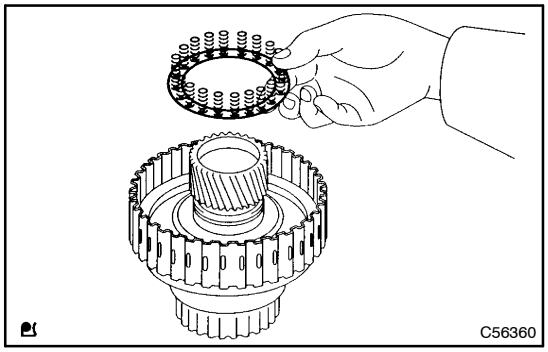
(b) Using a snap ring expander, remove the snap ring.

NOTICE:

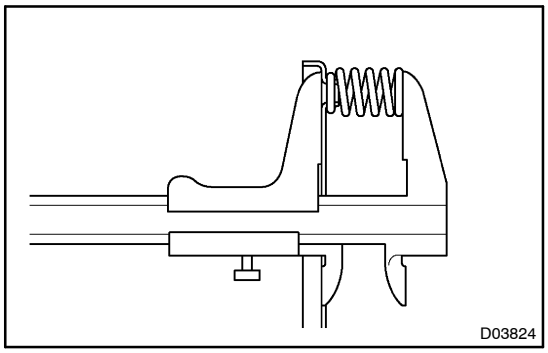
- **Stop the press when the spring sheet is lowered to the place 1 – 2 mm (0.039 – 0.078 in.) from the snap ring groove.**
- **This prevents the spring sheet from being deformed.**
- **Do not expand the snap ring excessively.**



(c) Remove the clutch balancer from the underdrive clutch drum.

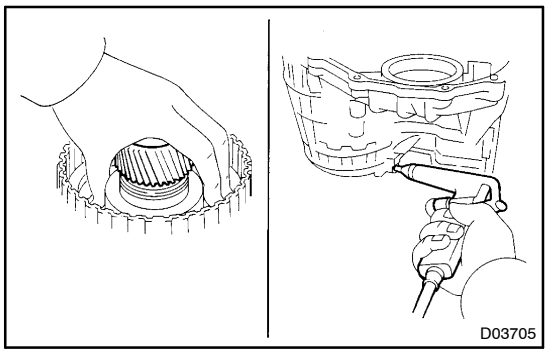


(d) Remove the return spring from the underdrive clutch drum.



7. INSPECT UNDERDRIVE CLUTCH RETURN SPRING SUB–ASSY

(a) Using a vernier calipers, measure the free length of the spring together with the spring seat.
Standard free length: 17.14 mm (0.6752 in.)



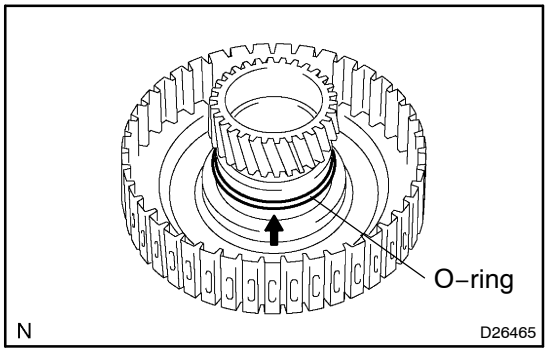
8. REMOVE UNDERDRIVE CLUTCH PISTON SET

(a) Install the underdrive clutch to the transaxle case.

NOTICE:

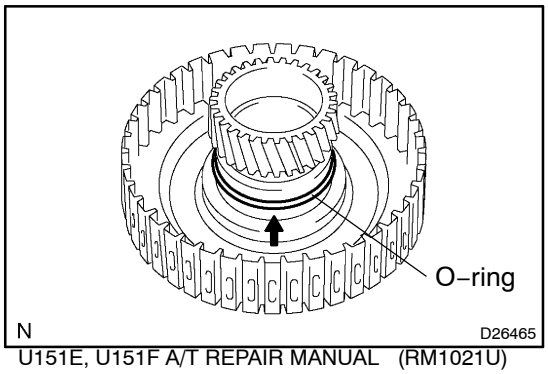
Be careful not to damage the oil seal ring.

(b) Holding the underdrive clutch piston by hand, apply compressed air (392 kPa, 4.0 kgf/cm^2, 57 psi) to the transaxle case to remove the underdrive clutch piston.



9. REMOVE UNDERDRIVE CLUTCH DRUM O–RING

(a) Using a screwdriver, remove the O–ring from the underdrive clutch drum.

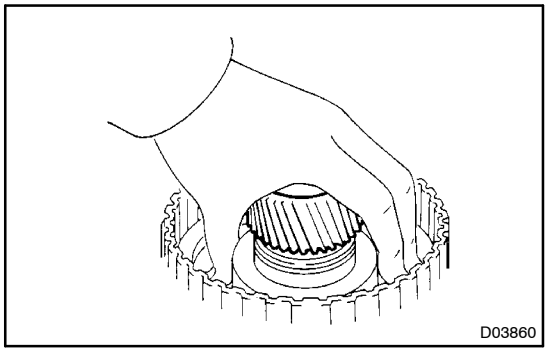


10. INSTALL UNDERDRIVE CLUTCH DRUM O–RING

(a) Apply the new O–ring with ATF, install it to the underdrive clutch drum.

NOTICE:

Assemble the O–ring carefully not to have a twist and a pinching.

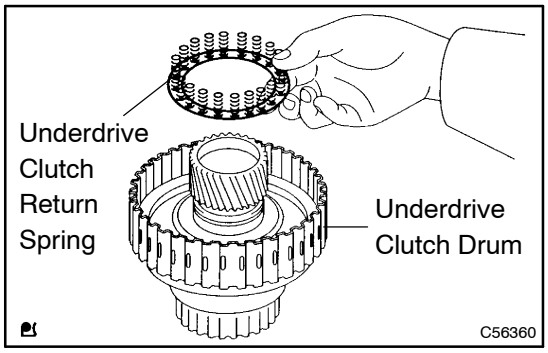


11. INSTALL UNDERDRIVE CLUTCH PISTON SET

(a) Coat the underdrive clutch piston with ATF, install it to the underdrive clutch piston drum.

NOTICE:

- **Be careful not to damage the O–ring.**
- **Be careful not to damage the lip seal of the piston.**



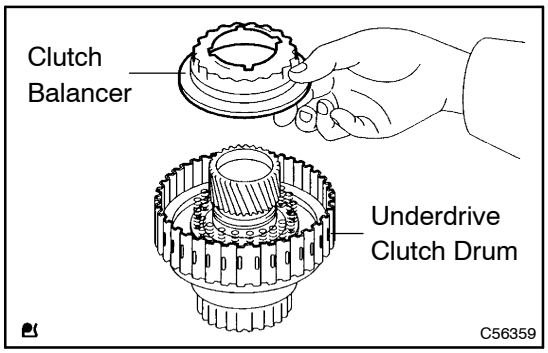
12. INSTALL UNDERDRIVE CLUTCH RETURN SPRING SUB–ASSY

(a) Install the return spring to the underdrive clutch drum.

NOTICE:

Installing the spring sub–assembly, check all of the springs are fit in the piston correctly.

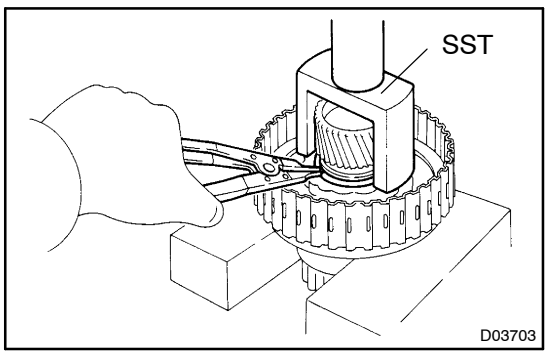
(b) Coat the clutch balancer with ATF.



(c) Install the clutch balancer to the underdrive clutch drum.

NOTICE:

Be careful not to damage the lip seal of the clutch balancer.



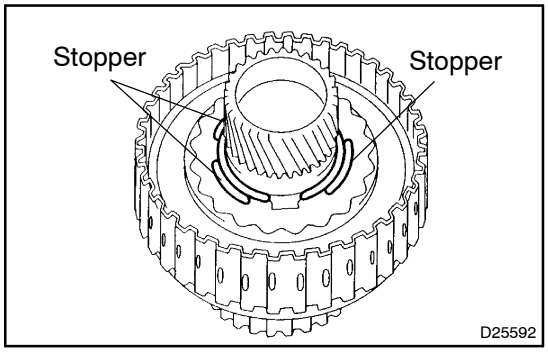
(d) Place SST on the clutch balancer and compress the piston return spring with a press.
SST 09350–32014 (09351–32070)

(e) Using a snap ring expander, install the snap ring to the underdrive clutch drum.

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

NOTICE:

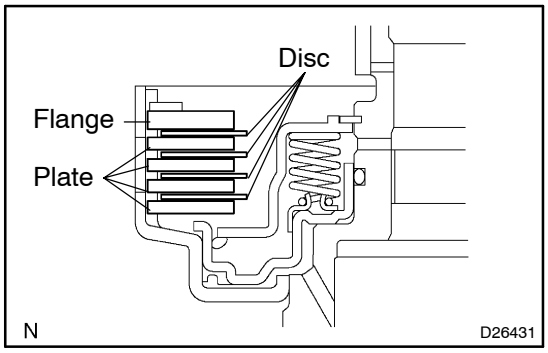
- **Stop the press when the spring sheet is lowered to the place 1 – 2 mm (0.039 – 0.078 in.) from the snap ring grove.**
- **This prevents the spring sheet from being deformed.**
- **Do not expand the snap ring excessively.**



(g) Set the end gap of the snap ring in the underdrive clutch drum shown in the illustration.

NOTICE:

The end gap of the snap ring should not coincide with any of the stopper.



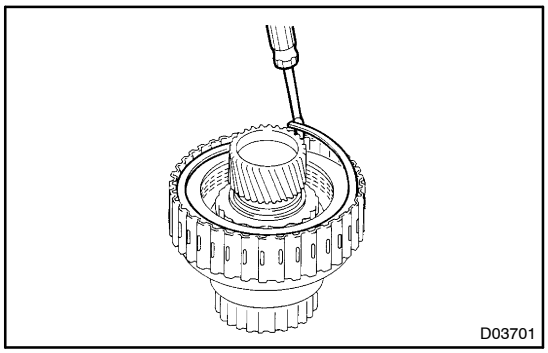
13. INSTALL UNDERDRIVE CLUTCH DISC NO.1

(a) Apply the 4 discs with ATF.

(b) Install the 4 plates, 4 discs and flange to the underdrive clutch drum.

NOTICE:

Be careful about the order of discs, plates and flange assembly.



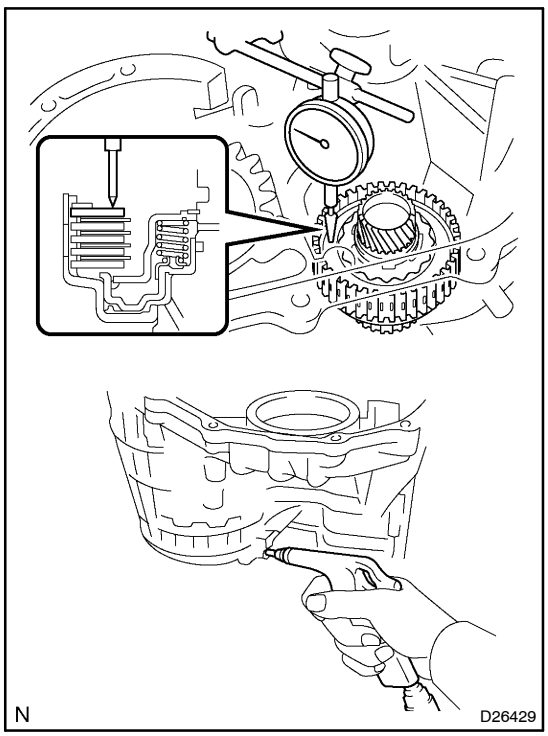
14. INSTALL UNDERDRIVE CLUTCH FLANGE NO.2 HOLE SNAP RING

(a) Using a screwdriver, install the underdrive clutch flange No.2 hole snap ring.

(b) Check that the end gap of snap ring is not aligned with one of the cutouts.

NOTICE:

The snap ring should be fixed certainly in the groove of the drum.



15. INSPECT UNDERDRIVE PACK CLEARANCE

(a) Install the underdrive clutch to the transaxle case.

NOTICE:

Be careful not to damage the oil seal ring.

(b) Set a dial indicator as shown in the illustration.

(c) Measure the underdrive clutch piston stroke while applying and releasing compressed air (392 kPa, 4.0 kgf/cm^2, 57 psi).

Park clearance: 1.51 – 1.71 mm (0.0594 – 0.0673 in.)

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

If the pack clearance is not within standard, select another flange.

HINT:

There are 5 flanges in different thickness.

Flange thickness: mm (in.)

Mark	Thickness	Mark	Thickness
1	3.0 (0.118)	4	3.1 (0.122)
2	3.2 (0.126)	5	3.3 (0.130)
3	3.4 (0.134)	–	–