INTERMEDIATE SHAFT

COMPONENTS







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DISASSEMBLY

REMOVE REVERSE CLUTCH DISC

- (a) Using a screwdriver, remove the snap ring.
- (b) Remove the flange, 2 discs and 2 plates.
- 2. INSPECT REVERSE CLUTCH DISC (See page AX-216)

3. REMOVE DIRECT CLUTCH DISK

- (a) Using a screwdriver, remove the snap ring.
- (b) Remove the 3 plates, flange and 3 discs.
- 4. INSPECT DIRECT CLUTCH DISK (See page AX-216)

- 5. REMOVE DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY
 - (a) Using SST and a press, remove the snap ring and direct clutch return spring from the intermediate shaft.
- 6. INSPECT DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY (See page AX-217)

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REMOVE DIRECT CLUTCH PISTON SUB-ASSEMBLY

- (a) Install the direct and reverse clutch on the transaxle rear cover.
- (b) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the transaxle rear cover to remove the direct clutch drum and direct clutch piston.
 NOTICE:
 - Blowing air may cause the piston to jump out. When removing the piston, hold it with your hand using a waste cloth.

• Take care not to splash ATF when blowing air. HINT:

When the piston cannot be removed because it is slanted, either blow air again with the protruding side pushed, or remove the piston using needle nose pliers with vinyl tape on its tip.

8. INSPECT DIRECT CLUTCH PISTON SUB-ASSEMBLY (See page AX-217)







- (a) Put a matchmark on the direct clutch drum at the same position with the cutout of the intermediate shaft.
- (b) Apply compressed air into the oil hole shown in the illustration and remove the direct clutch drum from the intermediate shaft.
- **10. INSPECT INTERMEDIATE SHAFT SUB-ASSEMBLY** (See page AX-217)

11. REMOVE DIRECT CLUTCH PISTON O-RING

(a) Using a screwdriver, remove the 2 O-rings.

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- 12. REMOVE DIRECT CLUTCH DRUM O-RING
 - (a) Using a screwdriver, remove the 2 O-rings.







INSPECTION

INSPECT REVERSE CLUTCH DISC

- (a) Visually check if the sliding surface of the disc, plate and flange are worn or burnt. Replace as necessary. HINT:
 - If the lining of the disc peeling off or discolored, or even if a part of the printed mark is defaced, replace all discs.
 - Before assembling new discs, soak them in ATF • for at least 15 minutes.

INSPECT DIRECT CLUTCH DISK

- (a) Visually check if the sliding surface of the disc, plate and flange are worn or burnt. Replace as necessary. HINT:
 - If the lining of the disc peeling off or discolored, or even if a part of the printed mark is defaced, replace all discs.
 - Before assembling new discs, soak them in ATF for at least 15 minutes.









the spring together with the spring seat. Standard free length: 32.9 mm (1.2953 in.)

4. INSPECT DIRECT CLUTCH PISTON SUB-ASSEMBLY

- (a) Shake the direct clutch pin and check that a check ball is not stuck.
- (b) Apply low pressure air to the check ball with compressed air and check that no air leak is identified.

5. INSPECT INTERMEDIATE SHAFT SUB-ASSEMBLY

- (a) Shake the direct clutch pin and check that a check ball is not stuck.
- (b) Apply low pressure compressed air to the check ball and check that no air leak is identified.





REASSEMBLY

3.

1. INSTALL DIRECT CLUTCH DRUM O-RING

(a) Coat the 2 O-rings with ATF, and install it to the direct clutch drum.
 NOTICE:

Be careful not to damage the O-rings.

2. INSTALL DIRECT CLUTCH PISTON O-RING

(a) Coat the 2 O-rings with ATF, and install it to the direct clutch piston.
 NOTICE:
 Be careful not to damage the O-rings.

INSTALL DIRECT CLUTCH DRUM SUB-ASSEMBLY

(a) Coat the direct clutch drum with ATF.





(b) Aligning the cutout in the intermediate shaft with the matchmark on the direct clutch drum, install the direct clutch drum to the intermediate shaft. NOTICE:

Be careful not to damage the O-ring and the lip of the clutch drum.

INSTALL DIRECT CLUTCH PISTON SUB-ASSEMBLY

 (a) Coat the direct clutch piston with ATF, and install it to the intermediate shaft.
 NOTICE:

Do not damage the O-ring of the direct clutch piston.

- 5. INSTALL DIRECT CLUTCH RETURN SPRING SUB-ASSEMBLY
 - (a) Install the direct clutch return spring on the direct clutch piston.
 - (b) Place SST on the piston return spring and compress the springs with a press.

SST 09387-00020

- Using a snap ring expander, install the snap ring from the direct clutch drum.
 NOTICE:
 - Stop the press when the spring sheet is lowered to 1 to 2 mm (0.039 to 0.078 in.) from the snap ring groove, preventing the spring sheet from being deformed.
 - Do not expand the snap ring excessively.

INSTALL DIRECT CLUTCH DISK

- (a) Coat the 3 plates, 3 discs and flange with ATF, and install them to the intermediate shaft.
- (b) Install the snap ring.

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7. INSTALL REVERSE CLUTCH DISC

- (a) Install the 2 plates, 2 discs and flange.
- (b) Install the snap ring.

INSPECT PACK CLEARANCE OF REVERSE CLUTCH

- (a) Install the forward reverse clutch and thrust needle roller bearing on the transaxle rear cover.
- (b) Using a dial indicator, measure the reverse clutch pack clearance while applying and releasing

compressed air (392 kPa, 4.0 kgf/cm², 57 psi). **Standard pack clearance:**

0.86 to 1.26 mm (0.0339 to 0.0496 in.)

If the pack clearance is less than the limit of pack clearance, parts may have been assembled incorrectly. Check and reassemble. If the pack clearance is non-standard, select

another flange.

HINT:

There are 4 flanges with different thickness. **Standard flange thickness**

No.	Thickness	No.	Thickness
-	3.0 mm (0.118 in.)	2	3.4 mm (0.134 in.)
1	3.2 mm (0.126 in.)	3	3.6 mm (0.142 in.)

9. INSPECT PACK CLEARANCE OF DIRECT CLUTCH

- (a) Install the direct and reverse clutch and thrust needle roller bearing on the transaxle rear cover.
 - (b) Using a dial indicator and measuring terminal (SST), measure the forward clutch pack clearance while applying and releasing compressed air (392

kPa, 4.0 kgf/cm², 57 psi). SST 09350-36010

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The direct and reverse clutch will come out as you apply the compressed air. Therefore, while the checking is being done, press on the input shaft of the direct and reverse clutch using a stamping machine or equivalent so that the pressure is not applied on the direct and reverse clutch. **Standard pack clearance:**

0.62 to 1.02 mm (0.0244 to 0.0402 in.)

If the pack clearance is less than the limit of pack clearance, parts may have been assembled incorrectly. Check and reassemble. If the pack clearance is non-standard, select another flange.



HINT:

There are 4 flanges with different thickness. **Standard flange thickness**

No.	Thickness	No.	Thickness
-	3.0 mm (0.118 in.)	2	3.4 mm (0.134 in.)
1	3.2 mm (0.126 in.)	3	3.6 mm (0.142 in.)

