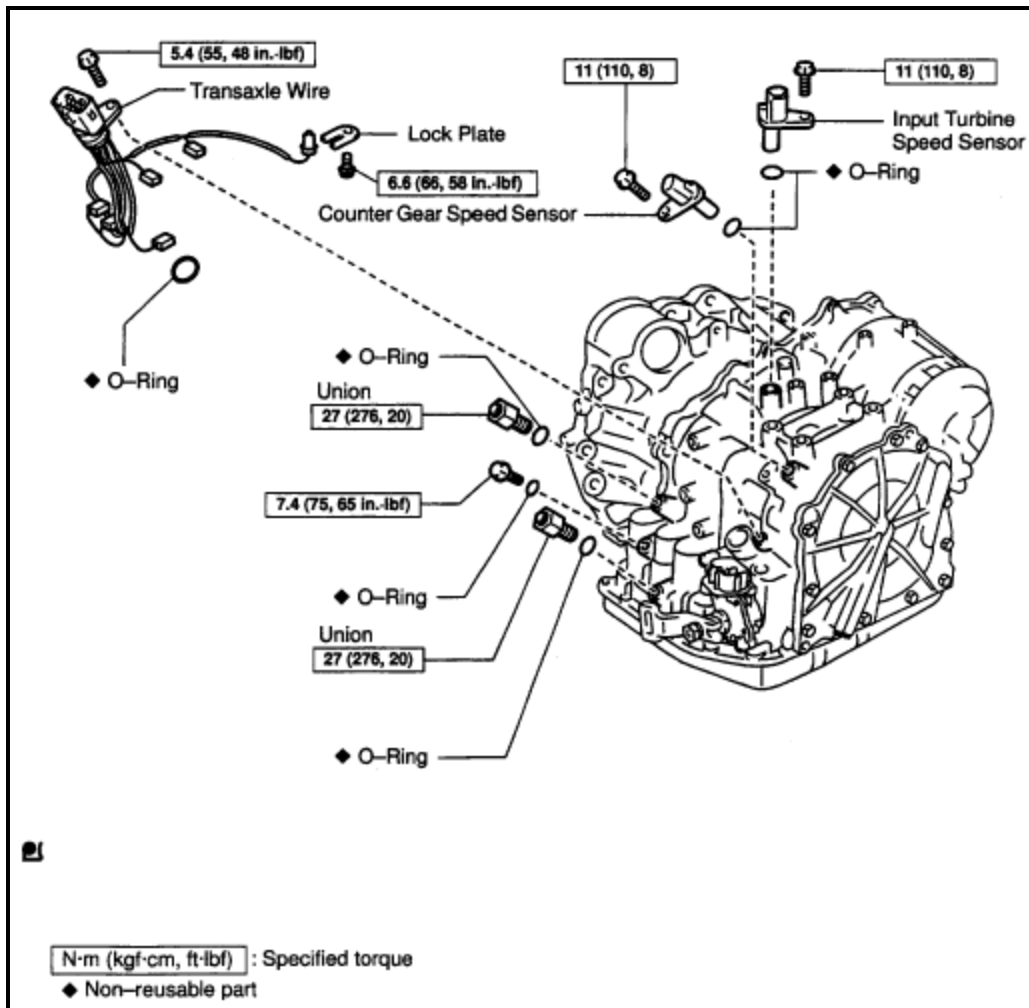
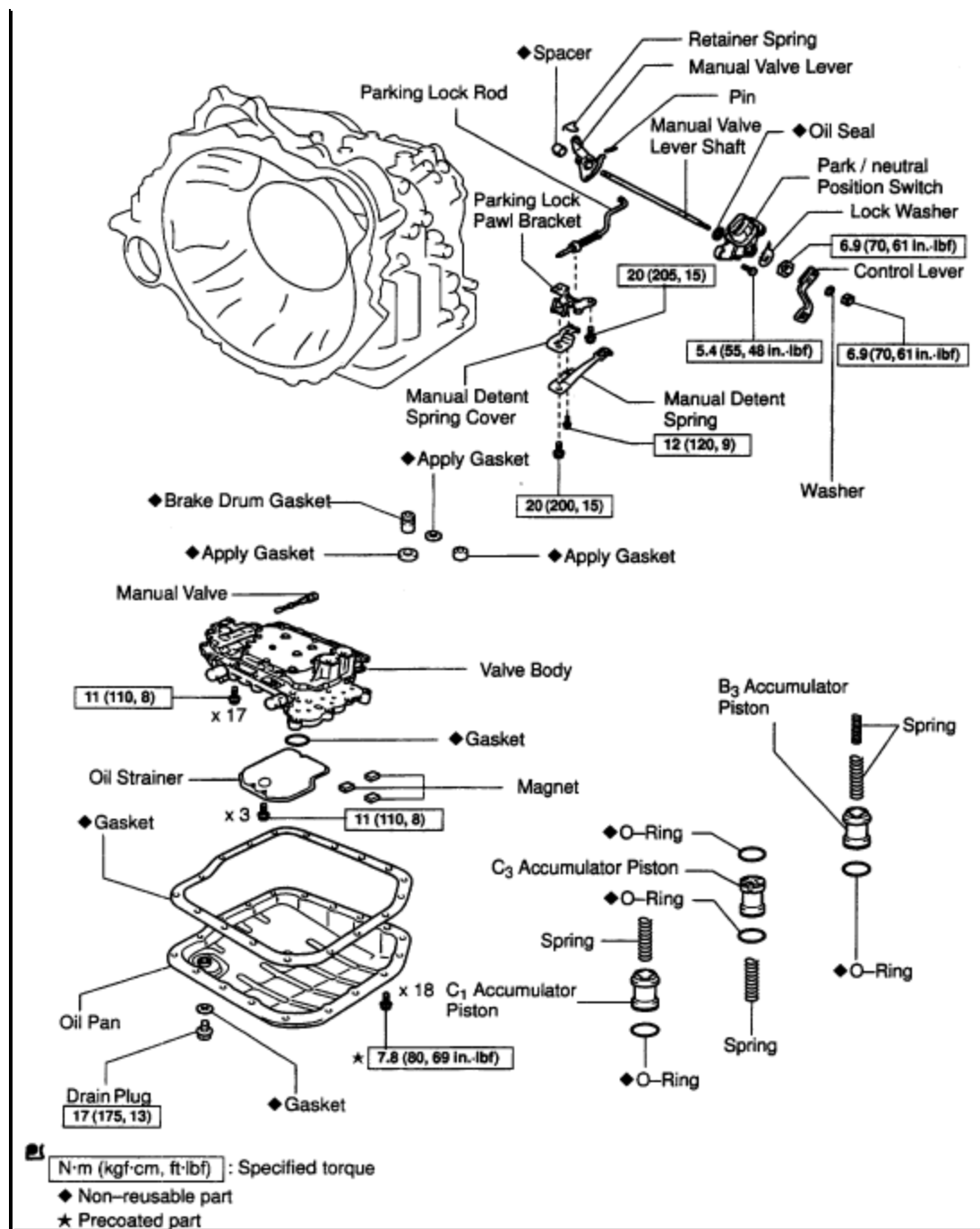


Part 2 of 3



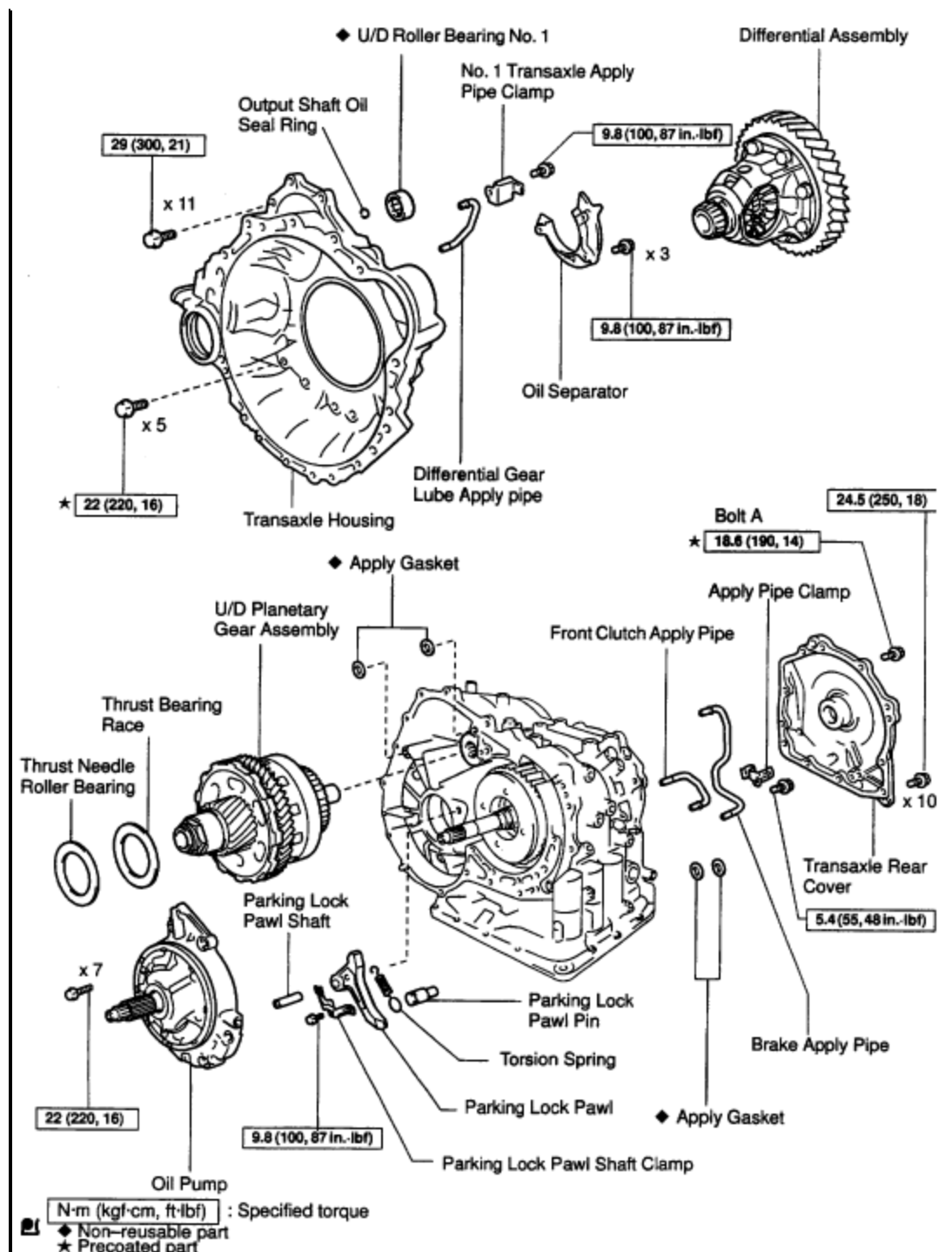
ZOOM

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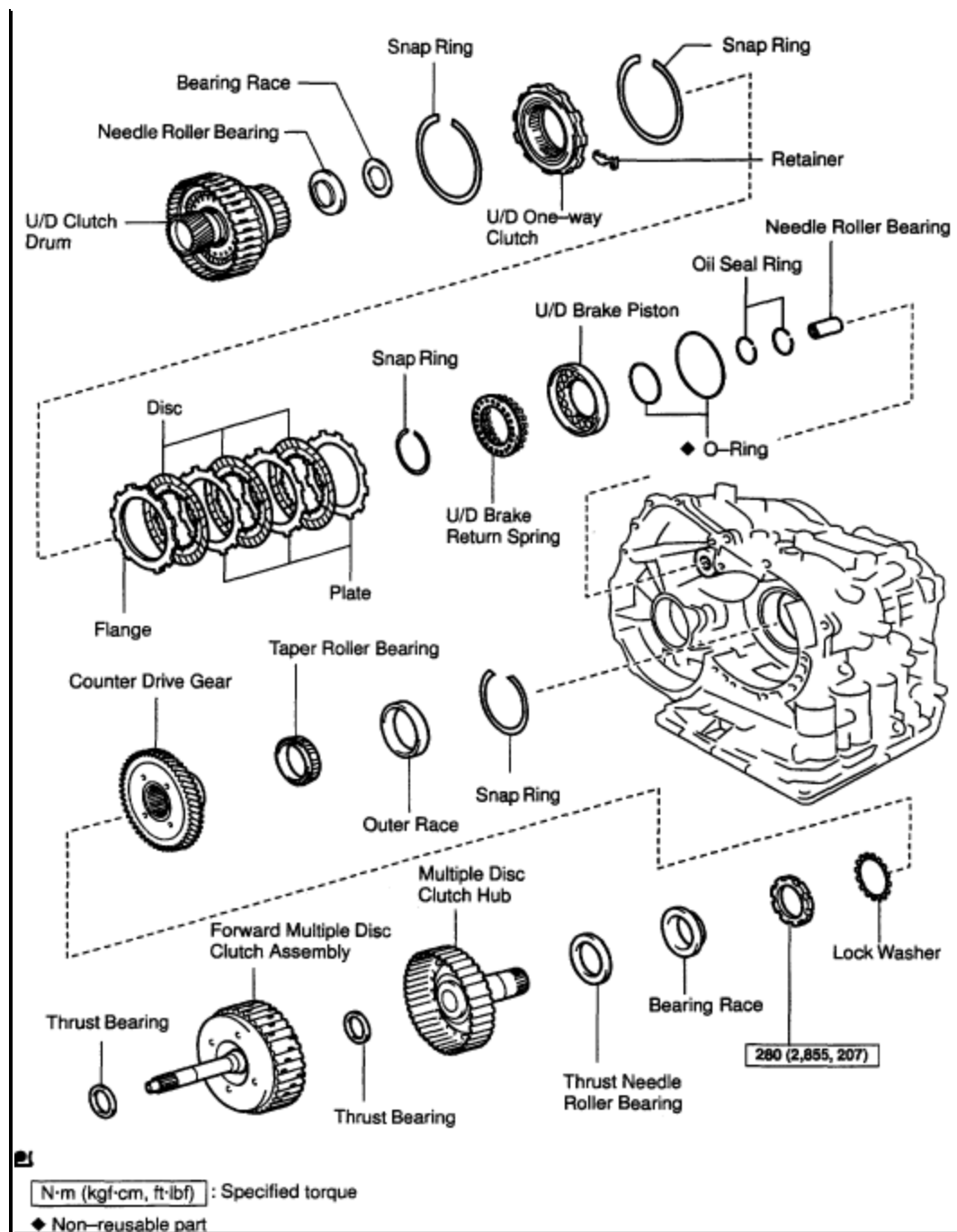
ZOOM

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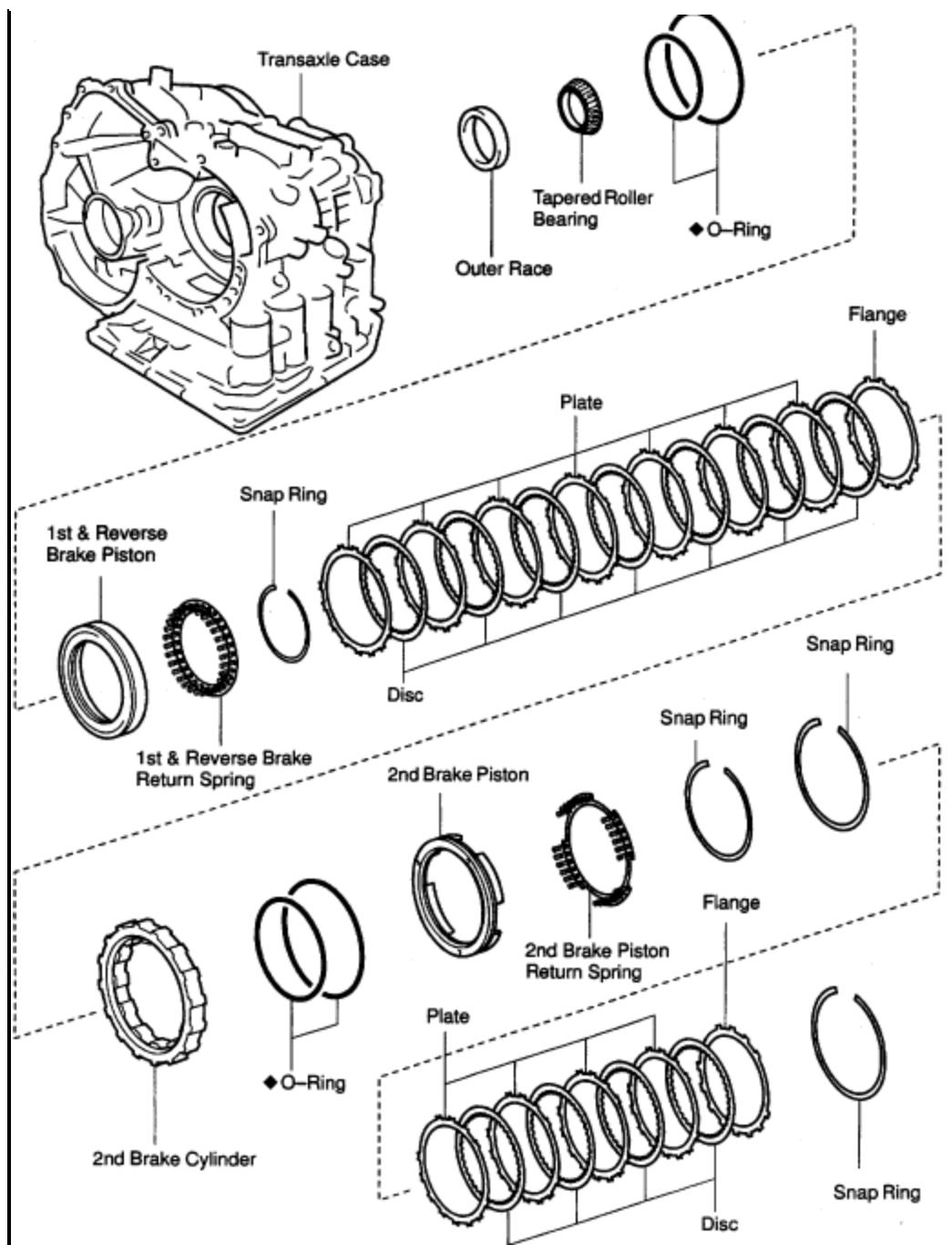
ZOOM

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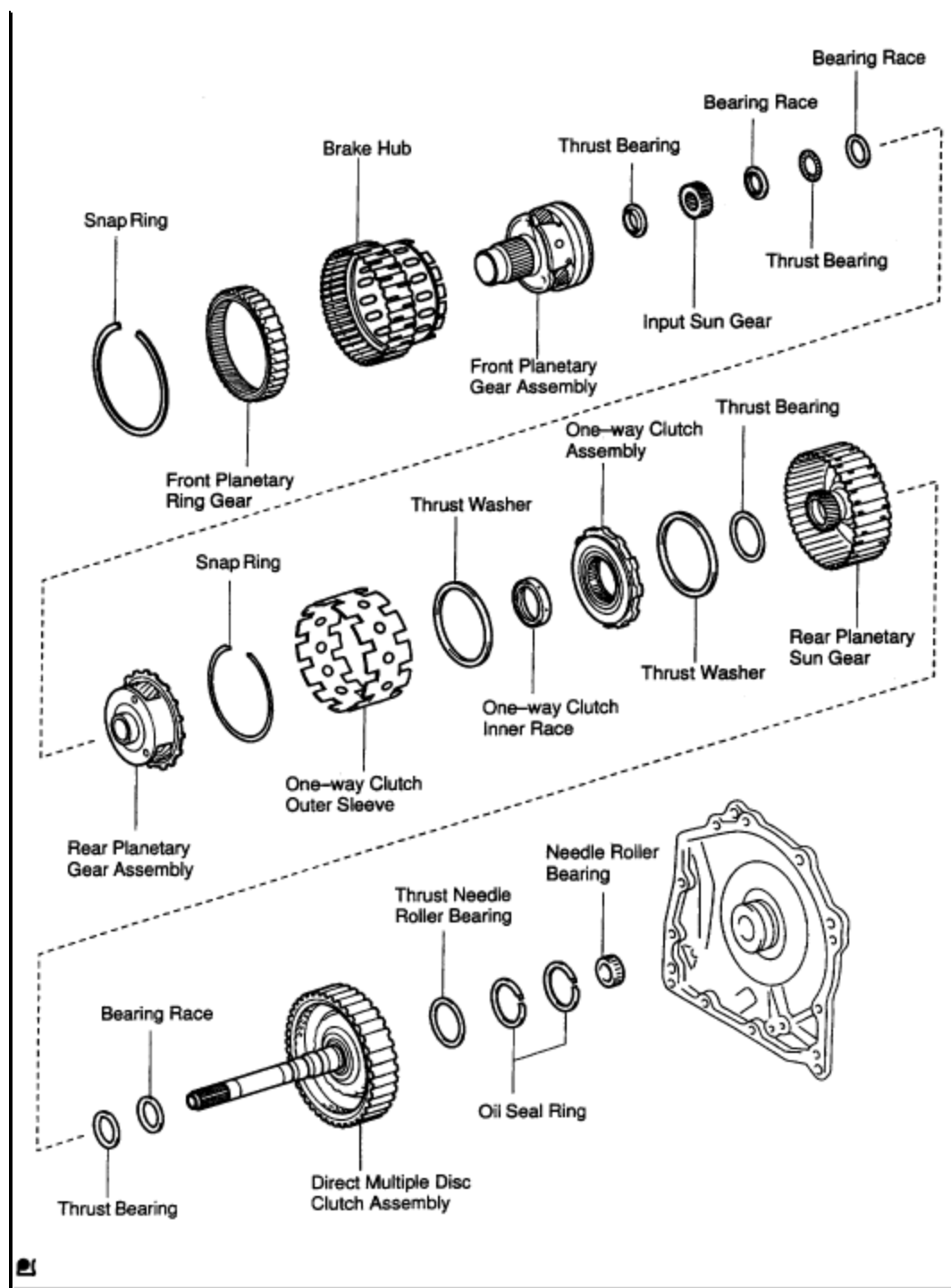
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ZOOM

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ZOOM

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REASSEMBLY**NOTICE:**

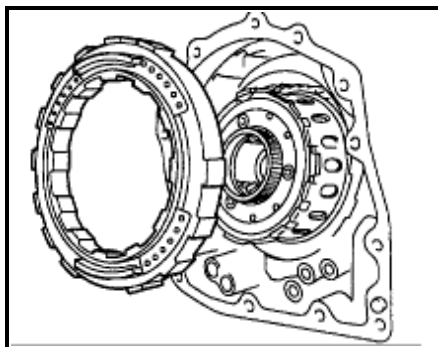
- The automatic transaxle is composed of highly precision-finished parts, necessitating careful inspection before reassembly because even a small nick could cause fluid leakage or affect the performance. The instructions here are organized so that you will work on only one component group at a time. This will help avoid confusion from similar-looking parts of different sub-assemblies being on your workbench at the same time. The component groups are

inspected and repaired from the converter housing side. As much as possible, complete the inspection, repair and reassembly before proceeding to the next component group. If a defect is found in a certain component group during reassembly, inspect and repair this group immediately. If a component group cannot be assembled because parts are being ordered, be sure to keep all parts of that group in a separate container while proceeding with disassembly, inspection, repair and reassembly of other component groups. Recommended [ATF](#): TYPE T-IV or equivalent

- All disassembled parts should be washed clean and any fluid passages and holes should be blown through with compressed air.
- Dry all parts with compressed air-never use shop rags.
- When using compressed air, always aim away from yourself to prevent accidentally spraying [ATF](#) or kerosene on your face.
- The recommended automatic transaxle fluid or kerosene should be used for cleaning.
- After cleaning, the parts should be arranged in the correct order for efficient inspection, repairs, and reassembly.
- When disassembling a [valve body](#), be sure to match each valve together with the corresponding spring..
- New discs for the brakes and clutches that are to be used for replacement must be soaked in [ATF](#) for at least 15 minutes before reassembly.
- All oil seal rings, [clutch discs](#), clutch plates, rotating parts, and sliding surfaces should be coated with [ATF](#) prior to reassembly.
- All gaskets and rubber O-rings should be replaced.
- Do not apply adhesive cements to gaskets and similar parts.
- Make sure that the ends of a snap ring are not aligned with one of the cutouts and are installed in the groove correctly.
- If a worn bushing is to be replaced, the sub-assembly containing the bushing must also be replaced.
- Check thrust bearings and races for wear or damage. Replace if necessary. Use petroleum jelly to keep parts in place.
- When working with Formed In Place Gasket (**FIPG**) material, you must observe the following: Using a razor blade and a gasket scraper, remove all of the old packing from the gasket surface.

Thoroughly clean all components to remove all of the loose material. Clean both sealing surfaces with a non-residue solvent. Parts must be reassembled within 10 minutes of application. Otherwise, the packing Formed In Place Gasket (FIPG) material must be removed and reapplied.

15. INSTALL 2ND BRAKE CYLINDER ASSEMBLY, ONE WAY [CLUTCH](#) NO.1 AND REAR PLANETARY SUN GEAR ASSEMBLY

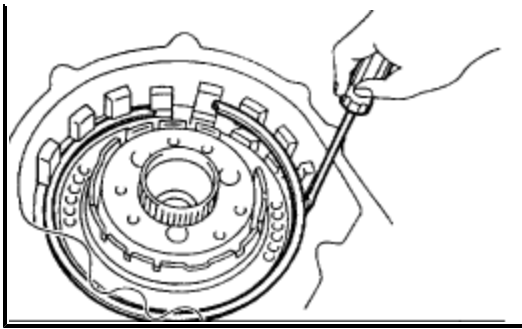


ZOOM

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- a. Install the 2nd brake cylinder assembly to the transaxle [case](#).

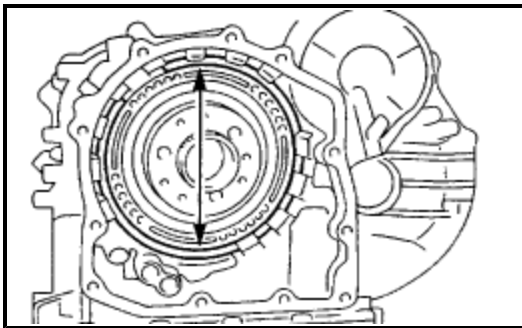




ZOOM

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- b. Using a screwdriver, install the snap ring.

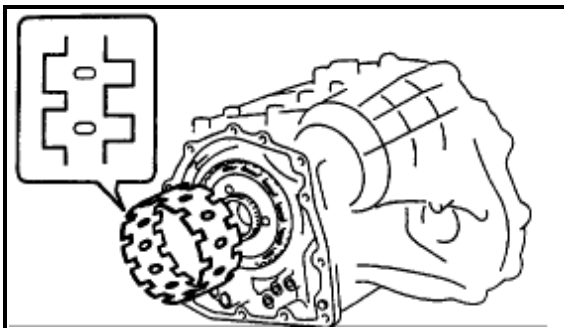


ZOOM

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- c. Using vernier calipers, measure the inside diameter. Inside diameter: More than **167 mm (6.57 inch)** **NOTICE:**

- Because the taper snap ring has the positioning direction, check it when installing.
- When the diameter does not satisfy the specified value, replace the snap ring with new one.

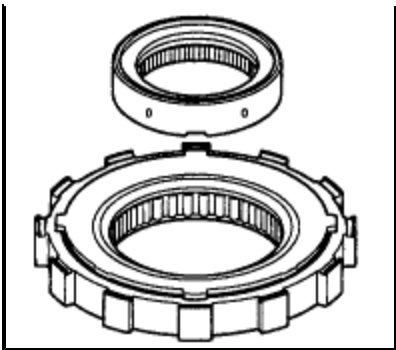


ZOOM

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- d. Install the one-way clutch outer race sleeve to the 2nd brake cylinder assembly. **NOTICE:** Check the positioning direction of the outer sleeve.

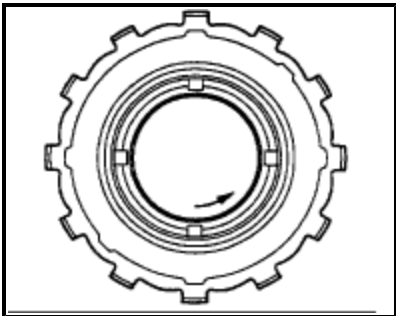




ZOOM

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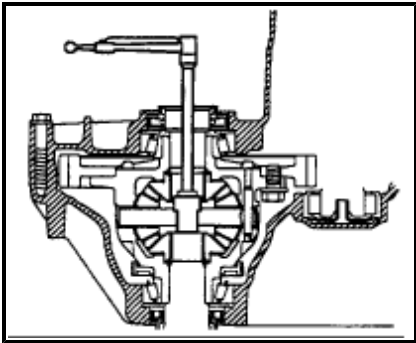
e. Install the inner race to the one-way clutch. **NOTICE:** Check the direction of the inner race.



ZOOM

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f. Check the rotating direction of one-way clutch for the lock or free operation as shown in illustration.



ZOOM

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g. Install the one-way clutch No. 1 and bearing to the one way [clutch](#) outer race sleeve.

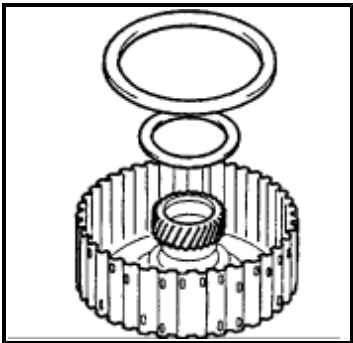
	Inside	Outside
Bearing	53.6 (2.110)	69.6 (2.740)

ZOOM

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Bearing diameter: mm (inch)

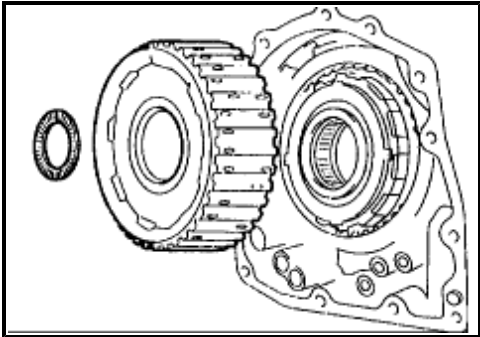
NOTICE: Install the thrust bearing properly so that the black race will be risible.



ZOOM

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- h. Install the thrust bearing.
- i. Coat the thrust washer No. 1 with petroleum jelly install it onto the rear planetary sun gear.



ZOOM

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- j. Coat the bearing with petroleum jelly and install it onto the rear planetary sun gear.

	Inside	Outside
Bearing	33.7 (1.327)	48.2 (1.898)

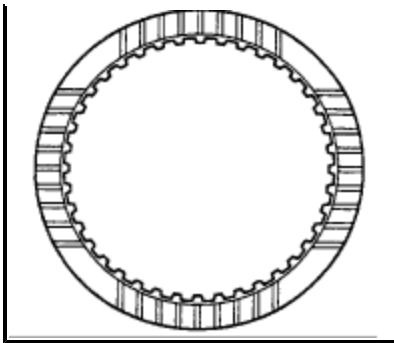
ZOOM

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Bearing diameter: mm (inch)

- k. Install the rear planetary sun gear assembly to the rear planetary gear.





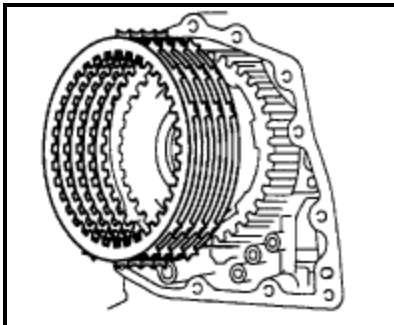
ZOOM

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16. INSPECT DISC AND FLANGE OF 2ND BRAKE 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 mark is defaced, replace all discs.
- Before assembling new discs, soak them in [ATF](#) for at least 15 minutes.

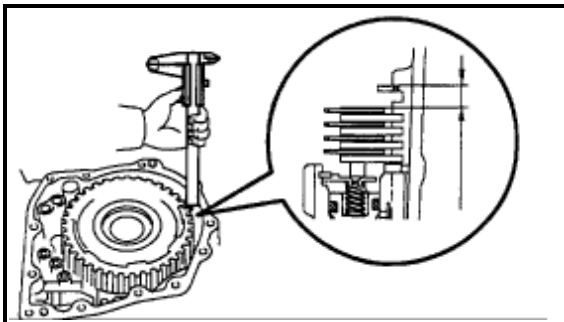
17. INSTALL 2ND BRAKE



ZOOM

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- a. Install the 4 discs and 4 plates to the transaxle [case](#).
- b. Temporarily install the snap ring.



ZOOM

SIZED FOR PRINT

- c. Using vernier calipers, measure the distance between the disk surface and snap ring surface.
- d. Select an appropriate flange so that the piston stroke will meet the specified value. Piston stroke: **0.62 - 0.73 mm**

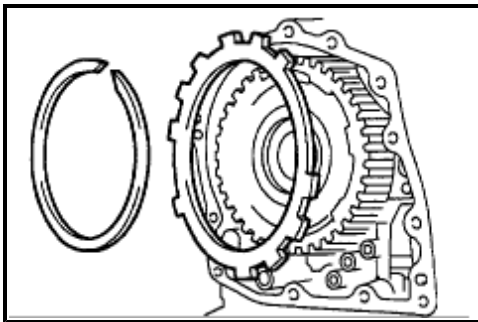
(0.0244 - 0.0287 inch) **HINT:** Piston stroke = Clearance - Flange thickness - Snap ring thickness **1.6 mm (0.063 inch)**.

Mark	Thickness	Mark	Thickness
1	3.0 (0.118)	5	3.4 (0.134)
2	3.1 (0.122)	6	3.5 (0.138)
3	3.2 (0.126)	7	3.6 (0.142)
4	3.3 (0.130)	—	—

ZOOM

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Flange thickness: mm (inch)

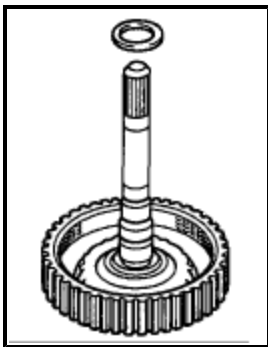


ZOOM

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- e. Temporarily remove the snap ring, attach the selected flange and restore the snap ring. **NOTICE:** Secure the snap ring so that its end gap is visible through the groove of the transaxle [case](#).

18. INSTALL [DIRECT CLUTCH](#) ASSEMBLY



ZOOM

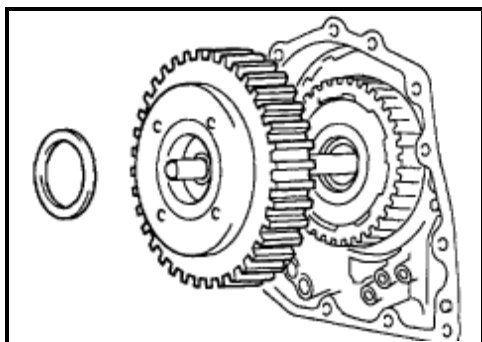
SIZED FOR PRINT

- a. Install the bearing race to the [direct clutch](#).

	Inside	Outside
Bearing race	30.3 (1.193)	46.0 (1.811)

ZOOM

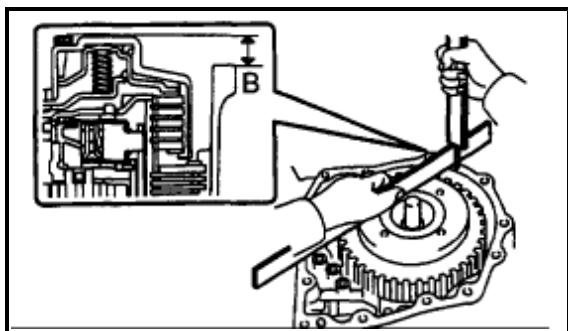
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Bearing race diameter:

ZOOM

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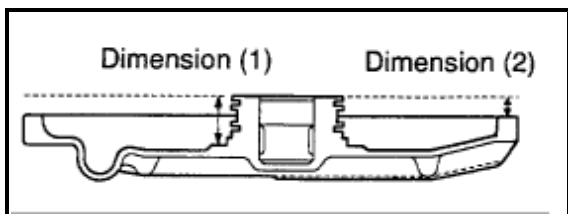
- b. Install [direct clutch](#) assembly and thrust bearing to the rear planetary sun gear assembly. **NOTICE:** The disk in the [direct clutch](#) should completely mate with the hub attached outside the rear planetary sun gear. Otherwise, the rear cover can not be installed.



ZOOM

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- c. Clean the connected part of the transaxle [case](#) and rear cover.
- d. As shown in the illustration, place a straight edge on the [direct clutch](#) drum and measure the distance between the transaxle [case](#) and the straight edge using vernier calipers (Dimension B).



ZOOM

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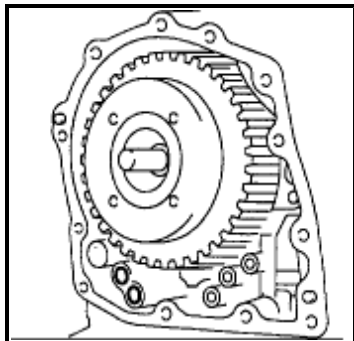
- e. Measure the 2 places of the rear cover as shown in the illustration and calculate a dimension C using the following formula. **HINT:** Dimension C = Dimension (1) - Dimension (2)
- f. Calculate the end play value using the following formula. Select a thrust bearing which satisfies the end play value and install it. End play: **0.2 - 0.9 mm (0.008 - 0.035 inch)** **NOTICE:** Make sure that the black race side is facing the

rear cover. **HINT:** End play = Dimension C - Dimension B

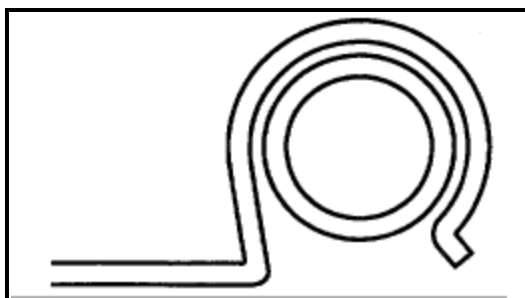
Thickness	Inside	Outside
3.55 (0.1397)	53.6 (2.110)	69.6 (2.740)
3.85 (0.1515)	53.6 (2.110)	70.18 (2.763)

[ZOOM](#)[SIZED FOR PRINT](#)

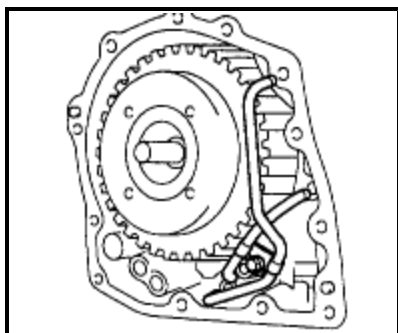
Bearing thickness and diameter: mm (inch)

[ZOOM](#)[SIZED FOR PRINT](#)

19. INSTALL 2 NEW APPLY GASKETS
20. INSTALL APPLY TUBE

[ZOOM](#)[SIZED FOR PRINT](#)

- a. Install the clamp to the apply pipe. **NOTICE:** Make sure to install the clamp to the apply pipe before installing the apply tube to the transaxle [case](#). This prevents the apply pipe from being deformed or damaged.

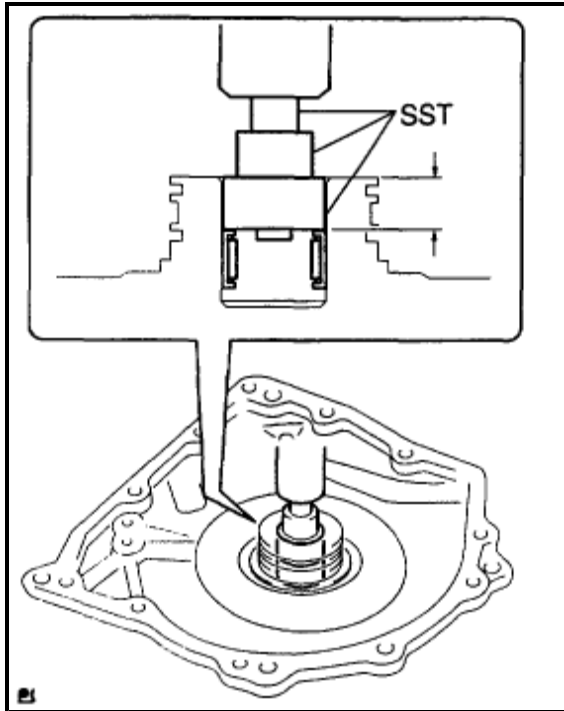


ZOOM

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- b. Install the 2 apply pipe and a bolt to the transaxle [case](#). Torque: **5.4 Nm (55 kgf-cm, 48 inch lbs.)** **NOTICE:** Each pipe is securely inserted until it reaches the stopper.

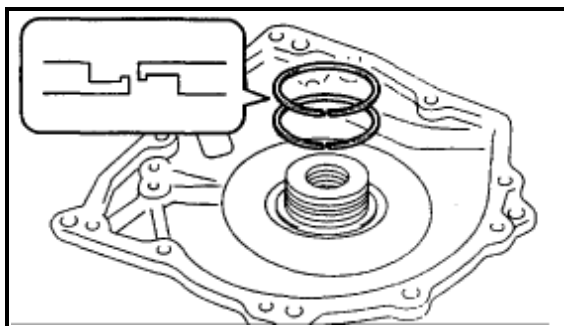
21. INSTALL TRANSAXLE REAR COVER



ZOOM

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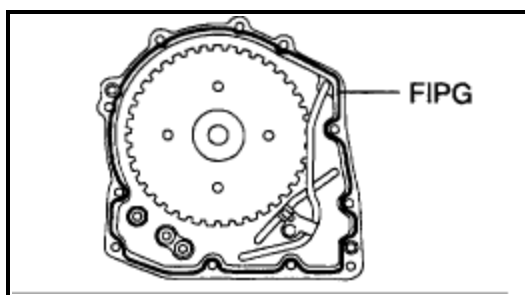
- a. Using SST and a press, install the bearing. SST 09950-60010 (09951-00230, 09951-00350) Press fit depth: **12.05 - 12.75 mm (0.4744 - 0.5020 inch)** **NOTICE:**
- Face the inscribed mark side of the bearing race up.
 - Repeat the press fit until the specified value is obtained.



ZOOM

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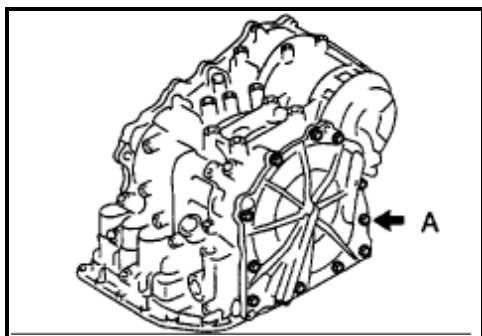
- b. Coat 2 oil seal rings with [ATE](#), install them to the transaxle rear cover.



ZOOM

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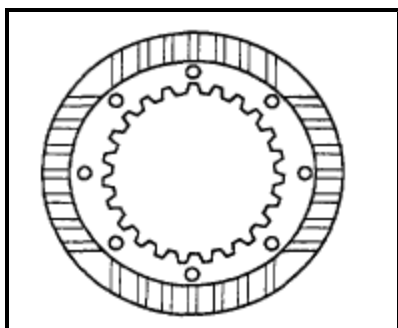
- c. Remove any packing material and be careful not to get oil on the contacting surfaces of the transaxle rear cover or the transaxle [case](#).
- d. Apply FIPG to the rear cover. FIPG: Part No. 08826-00090, THREE BOND 1281 or equivalent.
- e. Coat a needle roller bearing with [ATF](#).



ZOOM

SIZED FOR PRINT

- f. Apply liquid sealer to the "A" bolt threads. Sealant: Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent.
- g. Install the 11 bolts. Torque: A bolt: **18.6 Nm (190 kgf-cm, 14 ft. lbs.)** Other bolt: **24.5 Nm (250 kgf-cm, 18 ft. lbs.)**

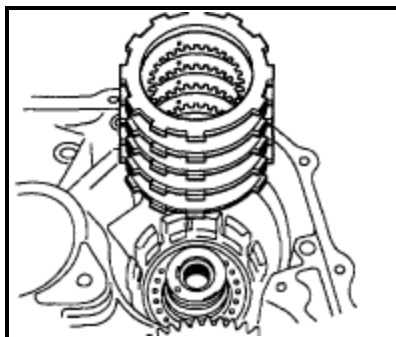


ZOOM

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22. INSPECT DISC AND FLANGE OF U/D BRAKE Check to see if the sliding surface of the disc, plate and flange are worn or burnt. if necessary, replace them. **HINT:**
- o If the lining of the disc is peeling off or discolored, or even if a part of the printed mark is defaced, replace all discs.
 - o Before assembling new discs, soak them in [ATF](#) for at least 15 minutes.

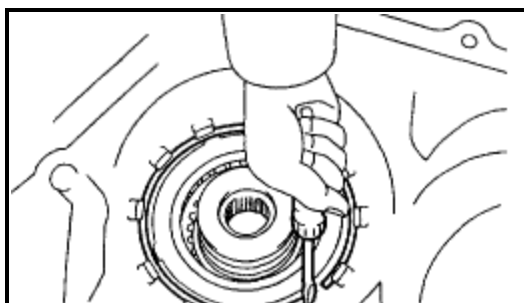
23. INSTALL U/D BRAKE



ZOOM

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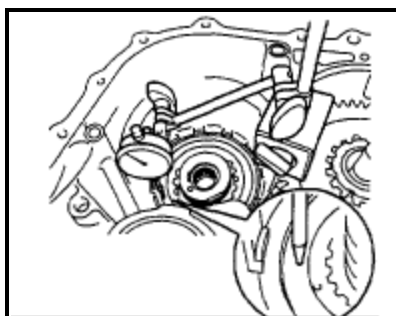
- a. Install the 3 discs and 3 plates to the transaxle [case](#).



ZOOM

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- b. Using a screwdriver, install the snap ring.



ZOOM

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- c. Using a dial indicator, measure the U/D brake piston stroke while applying and releasing compressed air (**392 kPa, 4.0 kgf/cm², 57 psi**). Piston stroke: **1.87 - 2.08 mm (0.0736 - 0.0819 inch)** **HINT:** Select an appropriate flange from the table so that it will meet the specified value.

Mark	Thickness	Mark	Thickness
1	3.0 (0.118)	3	3.4 (0.134)
2	3.2 (0.126)	—	—

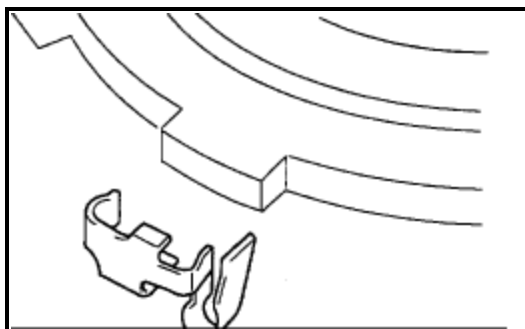
ZOOM

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Flange thickness: mm (inch)

- d. Temporarily remove the snap ring and attach the flange. Restore the snap ring.

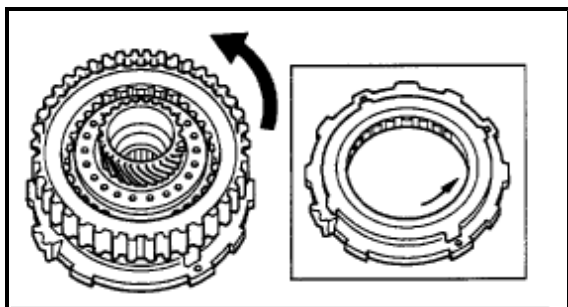
24. INSTALL ONE-WAY CLUTCH NO.2



ZOOM

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- a. Install the outer race retainer to the one-way clutch No.2.

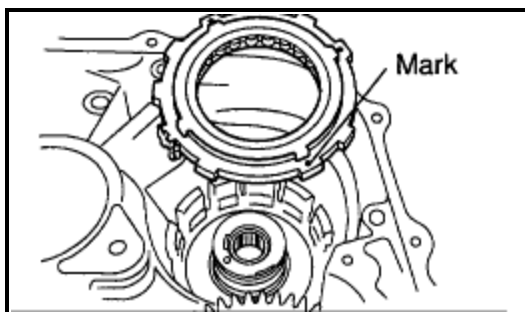


ZOOM

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- b. Install the U/D [clutch](#) assembly to the one-way clutch. Rotate the U/D clutch assembly to check the rotating direction for the lock or free operation.

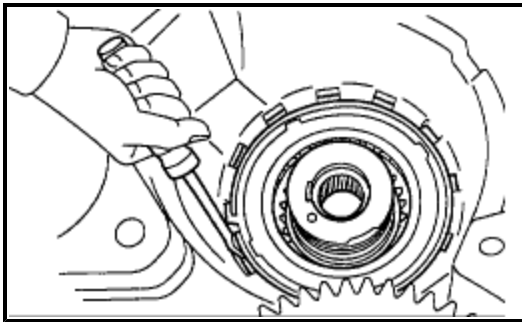
25. INSTALL ONE-WAY CLUTCH NO.2



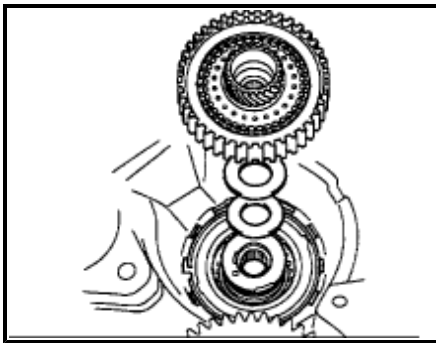
ZOOM

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- a. Install the one-way clutch No.2 to the transaxle [case](#). **NOTICE:** Make sure that the mark on the one-way clutch outer race is visible.

[ZOOM](#)[SIZED FOR PRINT](#)

- b. Using screwdriver, install the snap ring to the transaxle [case](#).

[ZOOM](#)[SIZED FOR PRINT](#)

26. INSTALL U/D [CLUTCH](#) ASSEMBLY

- a. Coat the bearing and bearing race with petroleum jelly and install it onto the U/D [clutch](#).

	Inside	Outside
Bearing	37.73 (1.4854)	58.0 (2.283)
Race	29.9 (1.177)	55.5 (2.185)

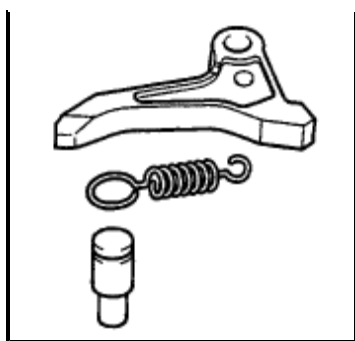
[ZOOM](#)[SIZED FOR PRINT](#)

Race diameter: mm (inch)

- b. Install the U/D [clutch](#) assembly to the transaxle [case](#).

27. INSTALL U/D PLANETARY GEAR ASSEMBLY AND [DIFFERENTIAL](#) ASSEMBLY

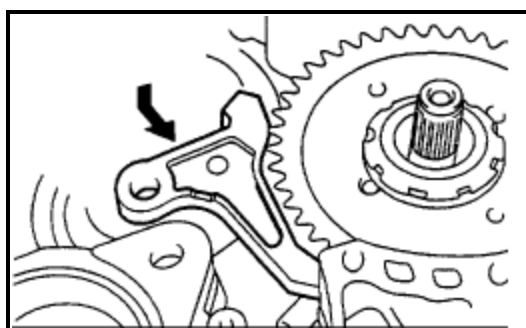




ZOOM

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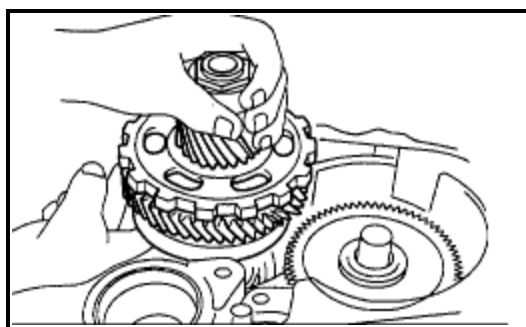
- a. Install the pawl pin and spring to the parking lock pawl.



ZOOM

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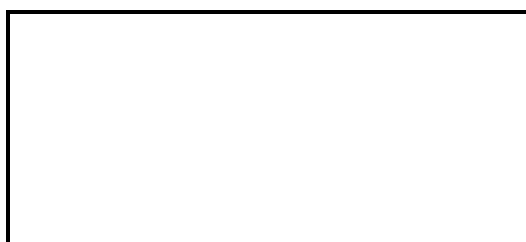
- b. Temporarily install the parking lock pawl, shaft and spring to the transaxle [case](#) as shown in the illustration.

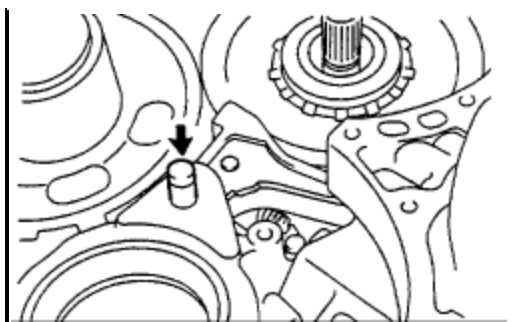


ZOOM

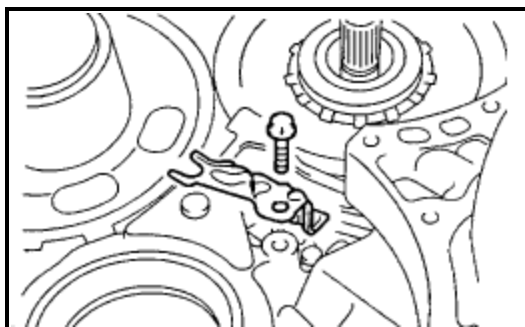
SIZED FOR PRINT

- c. Install the U/D planetary gear assembly to the transaxle [case](#). **NOTICE:** Engage all the discs of U/D [clutch](#) and hub spline of the U/D planetary gear assembly firmly and assemble them securely.

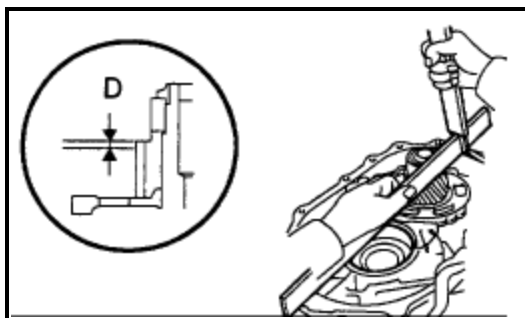


[ZOOM](#)[SIZED FOR PRINT](#)

- d. Install the parking lock pawl shaft.

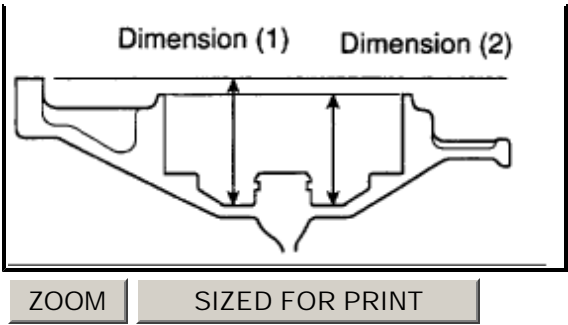
[ZOOM](#)[SIZED FOR PRINT](#)

- e. Install the pawl shaft with the bolt. Torque: **9.8 Nm (100 kgf-cm, 7 ft. lbs.)**

[ZOOM](#)[SIZED FOR PRINT](#)

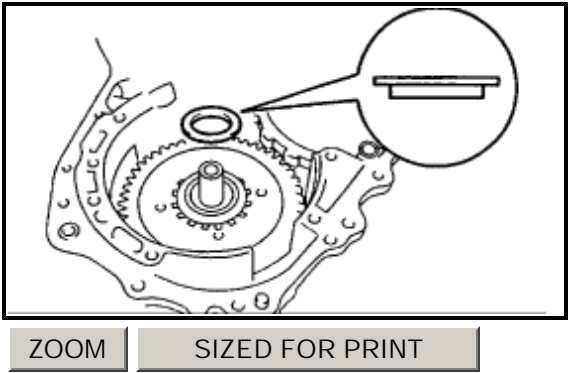
- f. Using a straight edge and vernier calipers as shown in the illustration, measure the gap between the top of the [differential](#) drive pinion in the U/D planetary gear and contact surface of the transaxle [case](#) and housing. (Dimension D) **NOTICE:** Note down the dimension D as it is necessary for the following process.





- g. As shown in the illustration, measure the 2 places of the transaxle housing. Calculate the dimension E using the formula. **NOTICE:** Note down the dimension E as it is necessary for the following process. **HINT:** Dimension E = Dimension (1) - Dimension (2)

28. INSTALL MULTIPLE DISC CLUTCH HUB

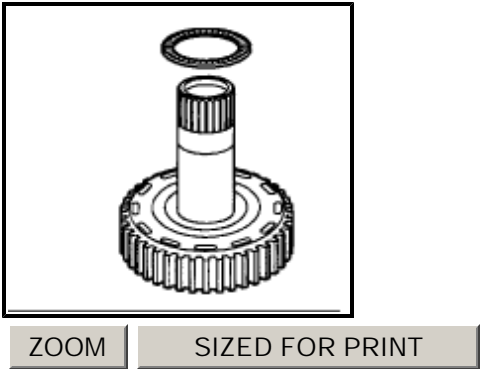


- a. Install the bearing race to the transaxle while checking its direction.

	Inside	Outside
Bearing race	34.5 (1.358)	48.5 (1.909)

ZOOM SIZED FOR PRINT

Bearing race diameter: mm (inch)

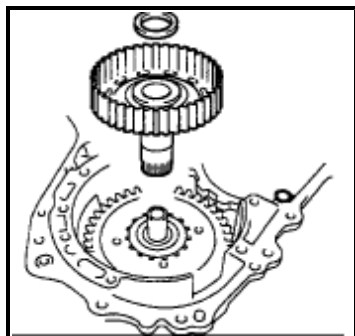


- b. Coat the thrust bearing and race with petroleum jelly and install them onto the multiple disc clutch hub.

	Inside	Outside
Bearing	36.3 (1.429)	52.2 (2.055)

[ZOOM](#)[SIZED FOR PRINT](#)

Thrust bearing and race diameter: mm (inch)

[ZOOM](#)[SIZED FOR PRINT](#)

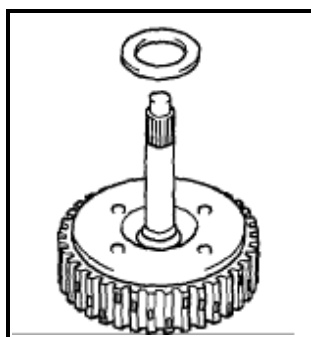
- c. Install the bearing to the multiple clutch hub.

	Inside	Outside
Bearing	23.5 (0.925)	44.0 (1.732)

[ZOOM](#)[SIZED FOR PRINT](#)

Bearing diameter: mm (inch)

- d. Install the [forward clutch](#) hub to the transaxle [case](#).

[ZOOM](#)[SIZED FOR PRINT](#)

- e. Install the thrust bearing to the [forward clutch](#).

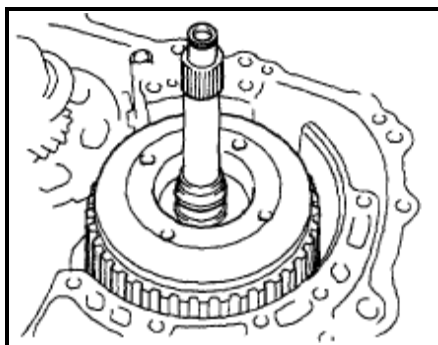
	Inside	Outside
Bearing	33.85 (1.3327)	52.2 (2.055)

ZOOM

SIZED FOR PRINT

Bearing diameter: mm (inch)

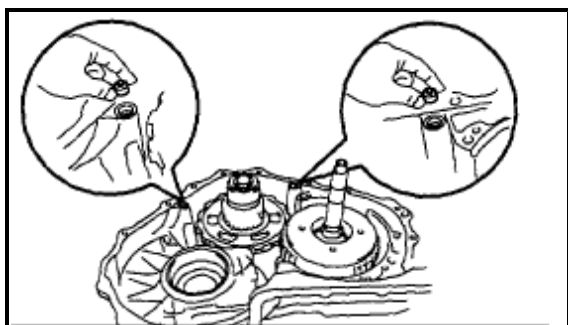
NOTICE: Install the thrust bearing properly so that the black race will be visible.



ZOOM

SIZED FOR PRINT

- f. Install the [forward clutch](#) to the multiple clutch hub. **NOTICE:** Align the splines of all discs in the [forward clutch](#) with those of multiple clutch hub to assemble them securely.



ZOOM

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29. INSTALL 2 NEW APPLY GASKET