

LOW CLUTCH

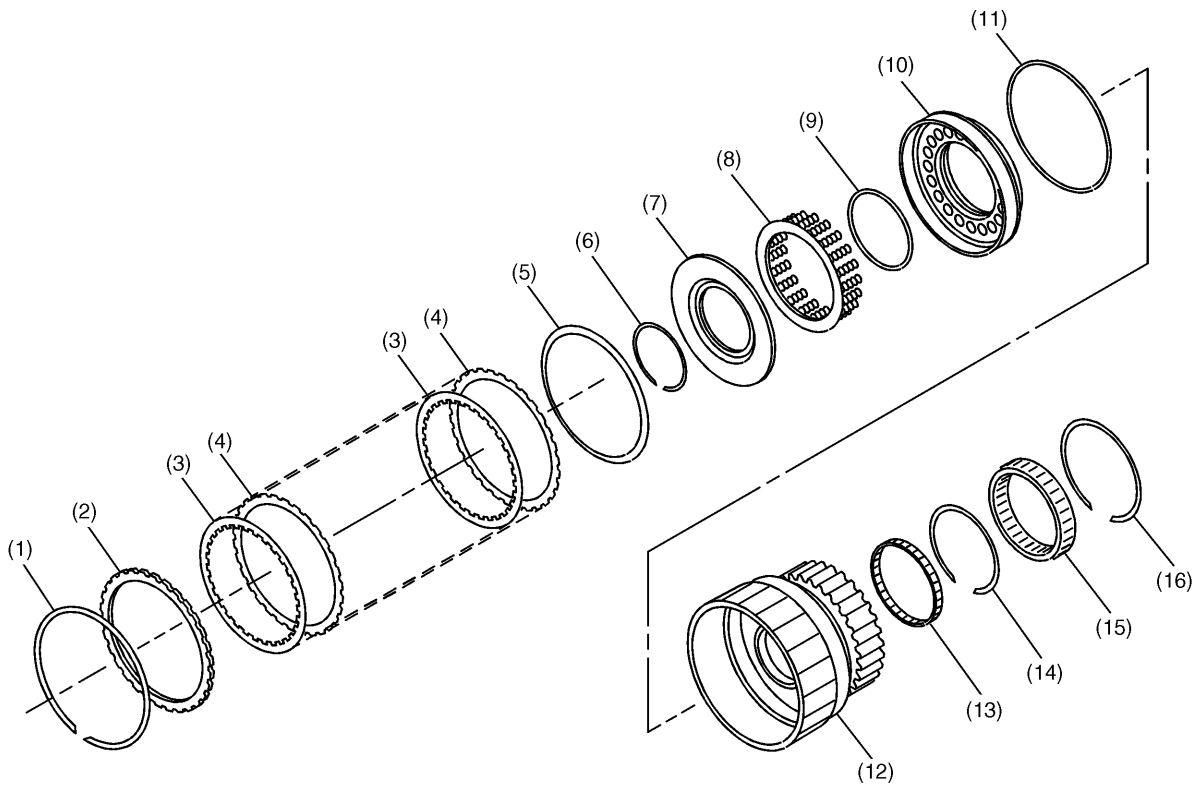
Automatic Transmission

6. Low Clutch

A: CONSTRUCTION

The low clutch consists of a drum, a piston, return springs, a cover, drive plates, driven plates, a one-way clutch, and other sealing and retaining elements.

The low clutch drum is made of a press-formed metal sheet. The drum's outer race and sleeve are welded together to the drum by an electron beam welding technique.



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|------------------|--------------------------|---------------------|
| (1) Snap ring | (7) Cover | (13) Needle bearing |
| (2) Retainer | (8) Spring retainer | (14) Snap ring |
| (3) Drive plate | (9) Lathe cut seal ring | (15) One-way clutch |
| (4) Driven plate | (10) Low clutch piston | (16) Snap ring |
| (5) Dish plate | (11) Lathe cut seal ring | |
| (6) Snap ring | (12) Low clutch drum | |

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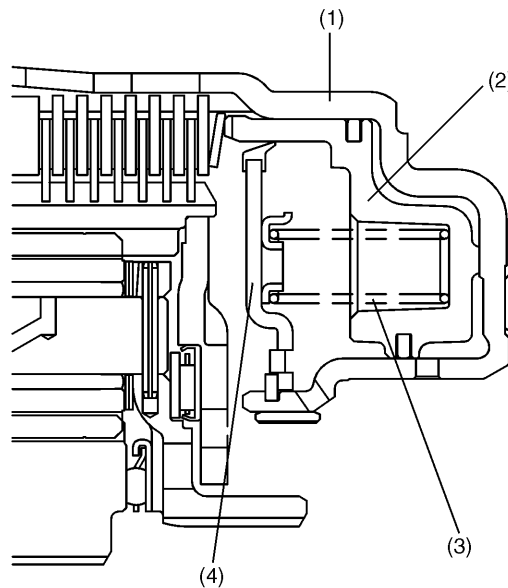
B: FUNCTION

The low clutch operates in the D range (1st, 2nd, and 3rd gears), 3 range (1st, 2nd, and 3rd gears), 2 range (2nd and 3rd gears), and 1 range (1st, 2nd, and 3rd gears).

This clutch engages when the hydraulic pressure from the transmission control valve is applied to its piston, transmitting the power to the reduction drive shaft.

A cover is placed inside the piston, and the space between the piston and the cover is filled with ATF. When the low clutch is not in engagement, the centrifugal force generated in the ATF inside the cover cancels out the centrifugal force generated in the ATF remaining behind the low clutch piston, thus preventing incomplete disengagement of the clutch.

When the low clutch is engaged, the pressure pushing the clutch piston is much larger than the counteracting force of the ATF in the cover, so the clutch remains engaged.



- (1) Low clutch drum
- (2) Low clutch piston

- (3) Spring retainer
- (4) Cover

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