

33. Install the new O-ring on the vacuum unit and install the vacuum unit in the case hand tight.
34. Install the downshift solenoid in the case hand tight (Fig. 6).
35. Using a new pan gasket, secure the pan to the transmission case and torque the attaching bolts to specifications.

CONTROL VALVE BODY ASSEMBLY

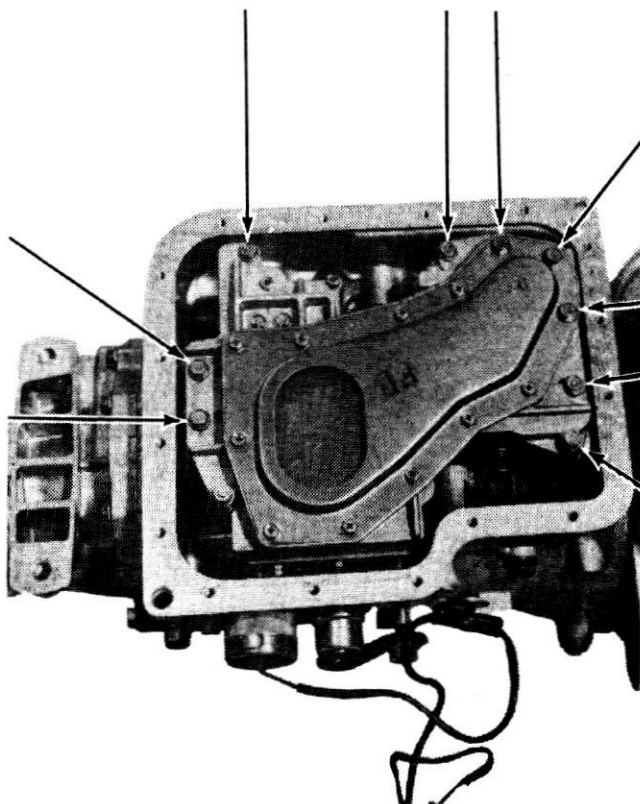
Disassembly

1. Remove the oil screen—to control valve attaching bolts and remove the screen (Fig. 21).
2. Remove the attaching bolts from the upper and lower valve bodies. Separate the lower valve body and separator plate from the upper valve body. Be careful not to lose the lower valve body check valves and springs (Fig. 22) when separating the upper and lower valve bodies.
3. Slide the manual valve out of the valve body (Fig. 21).
4. Remove the 1-2 shift valve and 2-3 shift valve cover plate from the body.
5. Remove the 1-2 shift valve and spring from the body.
6. Remove the 2-3 shift valve, spring, and plug from the body.

7. Remove the throttle modulator valve and spring from the body.
8. Remove the downshift valve cover plate from the body.
9. Remove the downshift valve and spring from the body.
10. Remove the throttle back-up valve spring and valve from the body.
11. Remove the throttle valve from the body.
12. Remove the 2-3 timing valve spring and valve from the body.
13. Remove the pressure regulator valve cover plate from the body.
14. Remove the pressure regulator valve sleeve, plug, spring seat, spring and pressure regulator valve.
15. Remove the second lock valve and spring from the body.

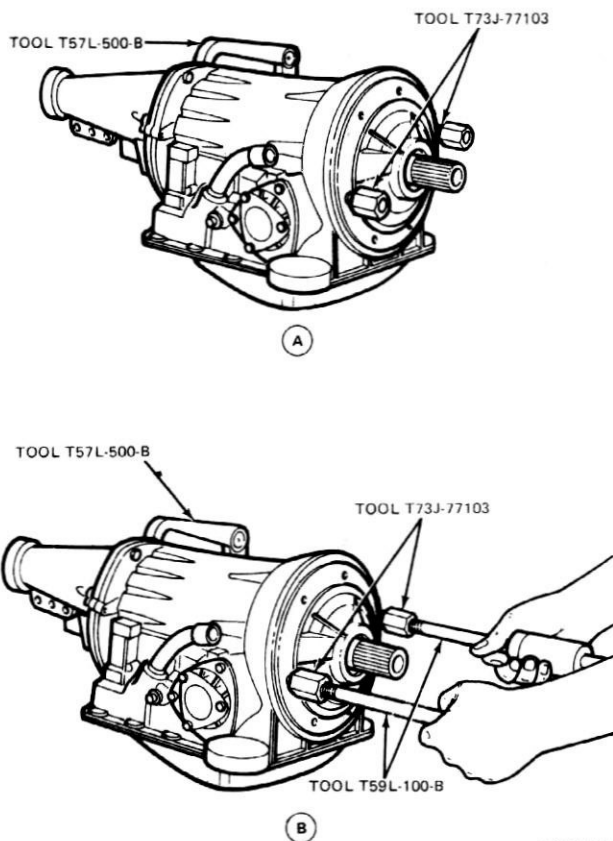
Assembly

1. Place the second lock valve and spring in the body (Fig. 21).
2. Place the pressure regulator valve, spring, spring seat, plug and sleeve in the body.
3. Secure the pressure regulator valve cover plate to the body with the three attaching bolts. Tighten the bolts to 2-3 ft-lbs torque.
4. Place the 2-3 timing valve and spring in the body.



D2925-1A

FIG. 7 Location of Valve Body Attaching Bolts



D2951-1A

FIG. 8 Removing Oil Pump

5. Place the throttle valve in the body.
6. Place the throttle back-up valve and spring in the body.
7. Place the downshift valve spring and valve in the body.
8. Secure the downshift valve cover plate to the body with the three attaching bolts. Tighten the bolts to 2-3 ft-lbs torque.
9. Place the throttle modulator valve spring and valve in the valve body.
10. Place the 2-3 shift plug, spring and 2-3 shift valve in the body.
11. Place the 1-2 shift valve spring and valve in the valve body.
12. Secure the 1-2 shift valve and 2-3 shift valve cover plate with the three attaching bolts. Tighten the bolts to 2-3 ft-lbs torque.
13. Place the check valve and springs in the upper body (Fig. 22).
14. Position the separator plate on the lower body and place the lower body and plate assembly on the upper valve body. Install and tighten the attaching bolts to 2-3 ft-lbs torque.
15. Position the oil screen to the valve body and install the attaching bolts. Tighten the bolts to 2-3 ft-lbs torque.
16. Slide the manual valve into the valve body (Fig. 21).

SERVO

Disassembly

1. Apply air pressure to the part in the servo retainer to remove the piston (Fig. 23).
2. Remove the seals from the retainer (Fig. 24).
3. Remove the seal from the piston.

Assembly

1. Dip the new seals in transmission fluid.
2. Install new seals on the servo retainer and piston (Fig. 24).
3. Dip the piston in transmission fluid and install it in the retainer.

GOVERNOR

Disassembly

1. Remove the governor housing-to-distributor attaching bolts. Remove the governor from the oil distributor (Fig. 25).
2. Remove the secondary governor valve retainer plate and remove the secondary valve and spring from the housing.
3. Remove the primary governor valve retainer plate and remove the primary spring and valve from the housing.

Assembly

1. Install the primary governor valve and spring in the housing and install the retainer plate (Fig. 25).
2. Install the secondary governor valve spring and valve in the housing and install the retainer plate.
3. Install the governor assembly on the oil distributor and torque the attaching bolts to specification.

OIL PUMP

Disassembly

1. Remove the four seal rings from the stator support (Fig. 26).
2. Remove the large seal ring from the OD of the pump housing.
3. Remove the five bolts that attach the pump cover to the pump housing. Remove the pump cover from the housing.
4. Mark the front face of the pump inner and outer gears with prussian blue or a felt-tip marking pen to assure correct assembly. **DO NOT SCRATCH THE GEARS.** Remove the inner and outer gears from the pump housing (Fig. 26).

Assembly

1. Install the inner and outer gears in the pump housing. Align the mating marks made during disassembly.
2. Lubricate the gears with clean automatic transmission fluid. Install the pump housing on the oil pump aligning Tool T73J-77108 (Fig. 27). Position the pump cover and gasket to the pump housing and install the five attaching bolts. Torque the bolts to specification and remove the oil pump assembly from the aligning tool.
3. Carefully install four new seal rings on the stator support. Install a new seal ring on the OD of the pump housing (Fig. 26).
4. If the front pump seal must be replaced, use a suitable tool and remove it from the housing. Install a new seal using Tool T73J-77248 (Fig. 28).

REVERSE AND HIGH CLUTCH

Disassembly

1. Remove the clutch pressure plate snap ring (Fig. 29).
2. Remove the pressure plate, friction plates and steel plates and dished plate from the clutch hub (Fig. 29).
3. Install a T65L-77515-A spring compressor tool and remove the coil spring retainer snap ring. Remove the tool, the coil spring retainer and 10 coil springs.
4. Apply air pressure to the clutch piston pressure hole in the clutch hub (Fig. 30) and remove the piston.
5. Remove the piston outer seal from the piston and the inner seal from the clutch drum (Fig. 29).

Assembly

1. Dip new seals in transmission fluid and install one on the drum and one on the piston.
2. Lubricate the piston and install the clutch piston into the clutch hub. Position the 10 coil springs in the piston and spring retainer on the springs. Install the clutch spring compressor tool and compress the springs. Install the snap ring and remove the tool.
3. Dip the clutch plates in clean transmission fluid. Install the dished plate. Install the clutch plates alternately, starting with a steel plate.
4. After all clutch plates have been installed, position the pressure plate in the clutch drum. Install the pressure plate snap ring.

5. With a feeler gauge, check the clearance between the pressure plate and snap ring (Fig. 31). The clearance should be 0.062-0.071 inch. If the clearance is not within specification, selective pressure plates are available in the following thicknesses: 0.283, 0.291, 0.299, 0.307, 0.315 and 0.323 inch. Install the correct size pressure plate and recheck the clearance.

FORWARD CLUTCH

Disassembly

1. Remove the clutch pressure plate snap ring (Fig. 31).
2. Remove the pressure plate, friction plates and steel plates and dished plate from the clutch hub (Fig. 33).
3. Install spring compressor Tool T65L-77515A and remove the coil spring retainer snap ring. Remove the tool, the coil spring retainer and 10 coil springs.
4. Apply air pressure to the clutch piston pressure hole in the clutch hub (Fig. 33) and remove the piston.
5. Remove the piston outer seal from the piston and the inner seal from the clutch drum (Fig. 32).

Assembly

1. Dip the new seals in transmission fluid and install one on the drum and one on the piston.
2. Lubricate the piston and install the clutch piston into the clutch hub. Position the 10 coil springs in the piston and the spring retainer on the springs. Install the clutch spring compressor tool and compress the springs. Install the snap ring and remove the tool.
3. Dip the clutch plates in clean transmission fluid, install the dished plate. Install the clutch plates alternately starting with a steel plate.
4. After all clutch plates have been installed, position the pressure plate in the clutch drum. Install the pressure plate snap ring.

INPUT SHELL AND SUN GEAR

Disassembly

1. Remove the external snap ring from the sun gear (Fig. 34).
2. Remove the thrust washer from the input shell and sun gear.

3. From inside the input shell, remove the sun gear. Remove the internal snap ring from the sun gear.

Assembly

1. Install the internal snap ring on the sun gear (Fig. 34). Install the sun gear in the input shell.
2. Install the thrust washer on the sun gear and input shell.
3. Install the external snap ring on the sun gear.

REVERSE RING GEAR AND HUB

Disassembly

1. Remove the hub retaining snap ring (Fig. 35) from the ring gear.
2. Lift the hub from the ring gear.

Assembly

1. Position the hub in the ring gear.
2. Secure the hub with the snap ring (Fig. 35). Make sure that the snap ring is fully engaged in the groove.

ONE-WAY CLUTCH

Disassembly

1. Remove the snap ring from each end of the one-way clutch and remove the clutch (Fig. 36).
2. Remove the snap ring securing the outer race to the connecting drum and remove the race.

Assembly

1. Position the outer race in the connecting drum (Fig. 36).
2. Secure the outer race with the snap ring. Make sure the snap ring is fully seated in the groove.
3. Install a snap ring in the forward snap ring groove of the connecting drum.
4. Install the one-way clutch on top of the snap ring. **BE SURE THE ARROW STAMPED ON THE ONE-WAY CLUTCH IS POINTED TOWARD THE FRONT OF THE TRANSMISSION.**
5. Install the remaining snap ring at the rear of one-way clutch to secure the assembly.

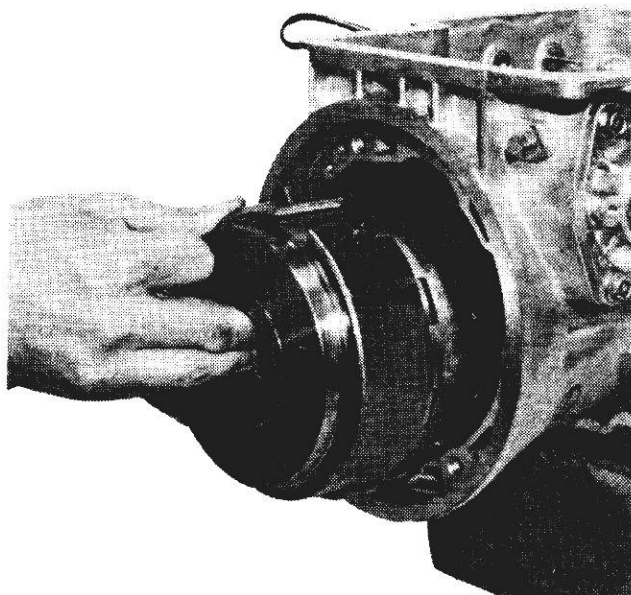


FIG. 9 Removing or Installing Forward Part of Gear Train

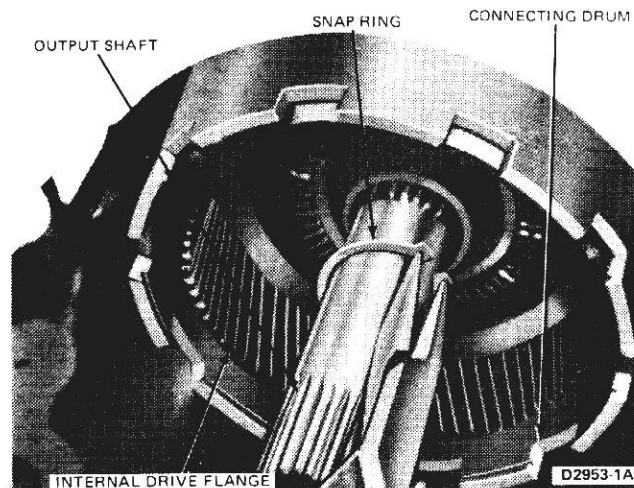
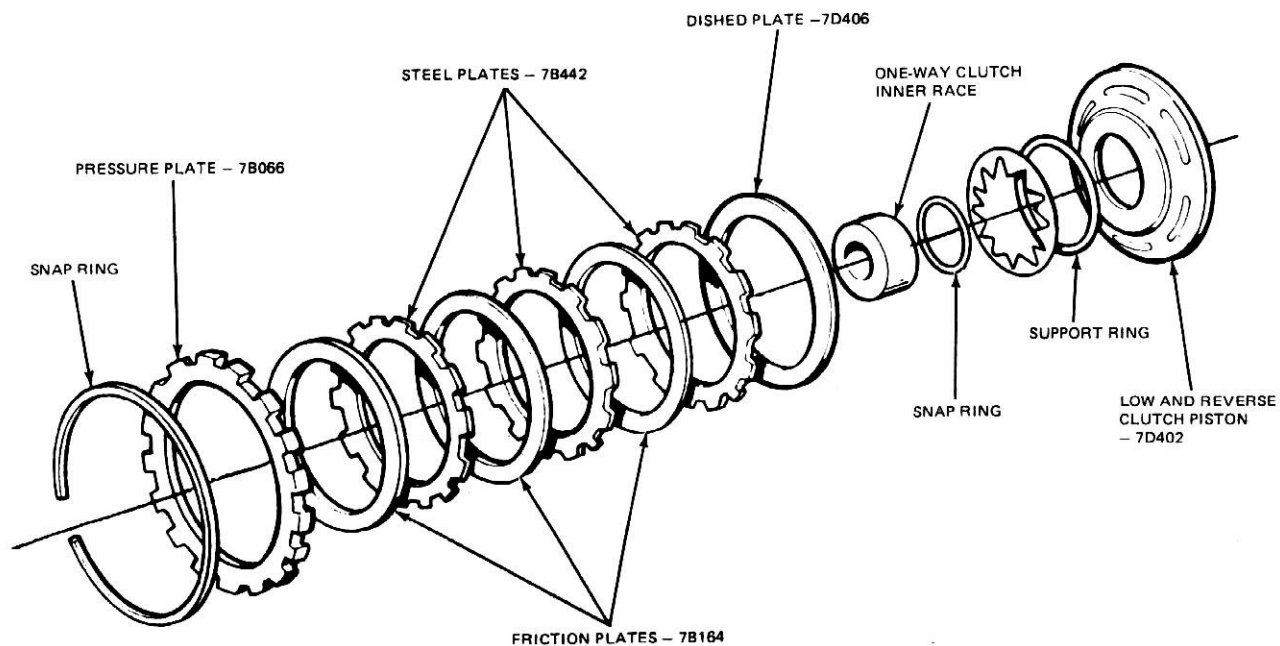
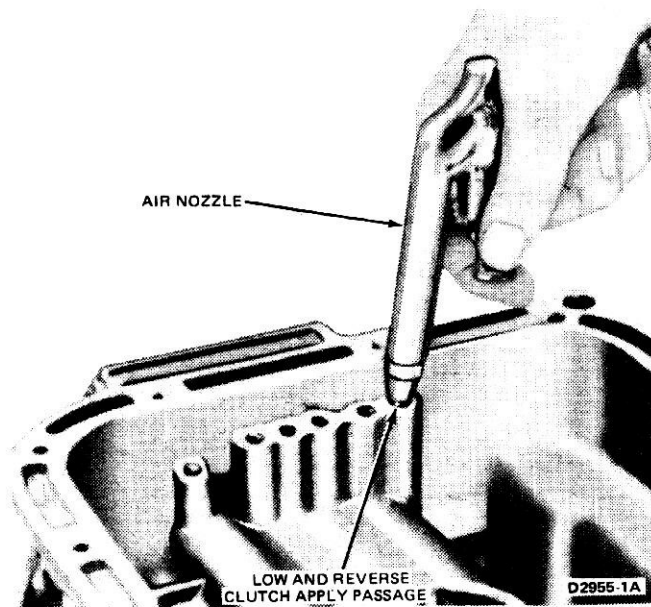


FIG. 10 Removing Internal Drive Flange



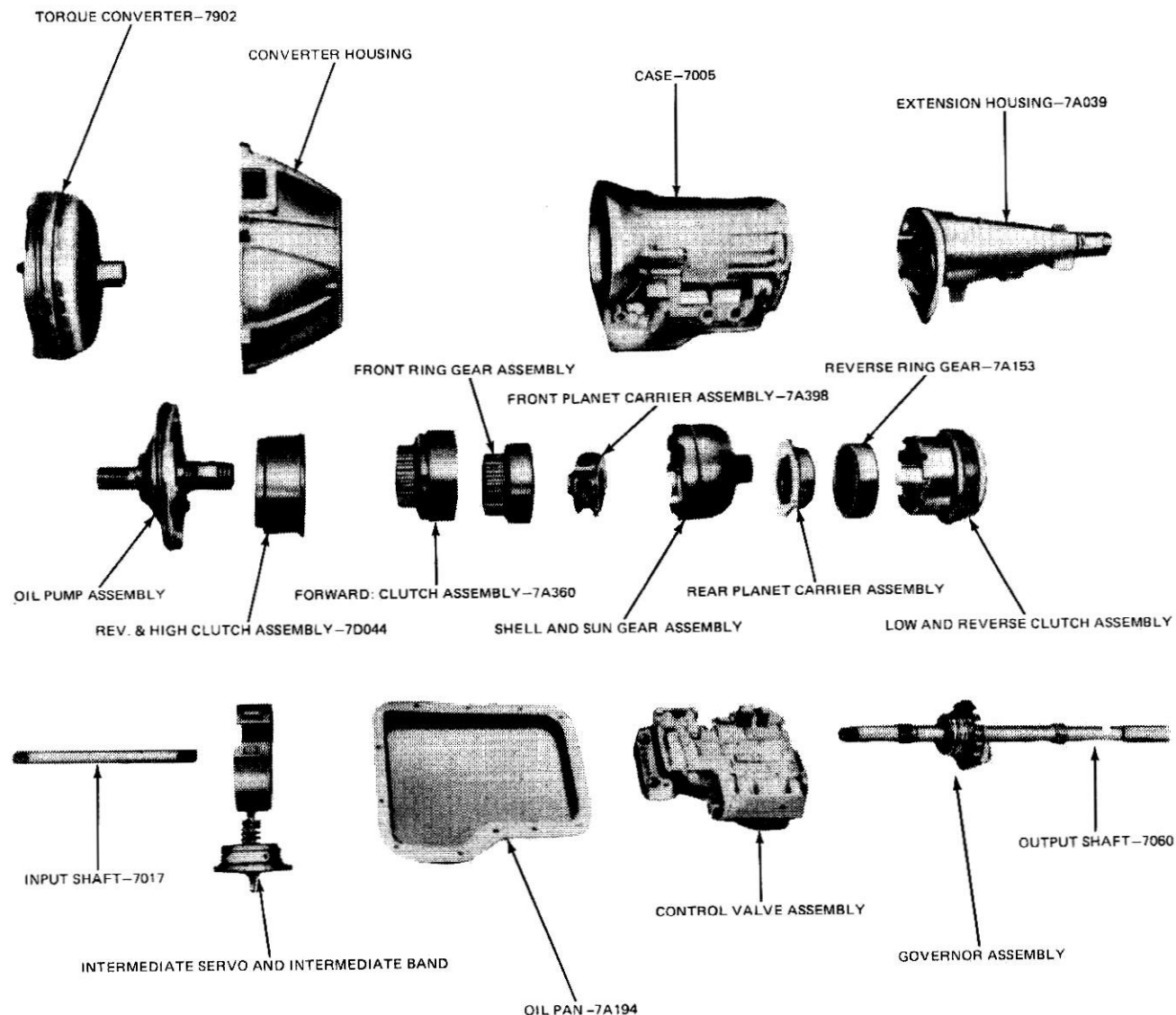
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FIG. 11 Low and Reverse Clutch and One-Way Clutch Exploded View



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FIG. 12 Removing Low and Reverse Clutch Piston



D2956-2A

FIG. 13 Transmission—Disassembled View

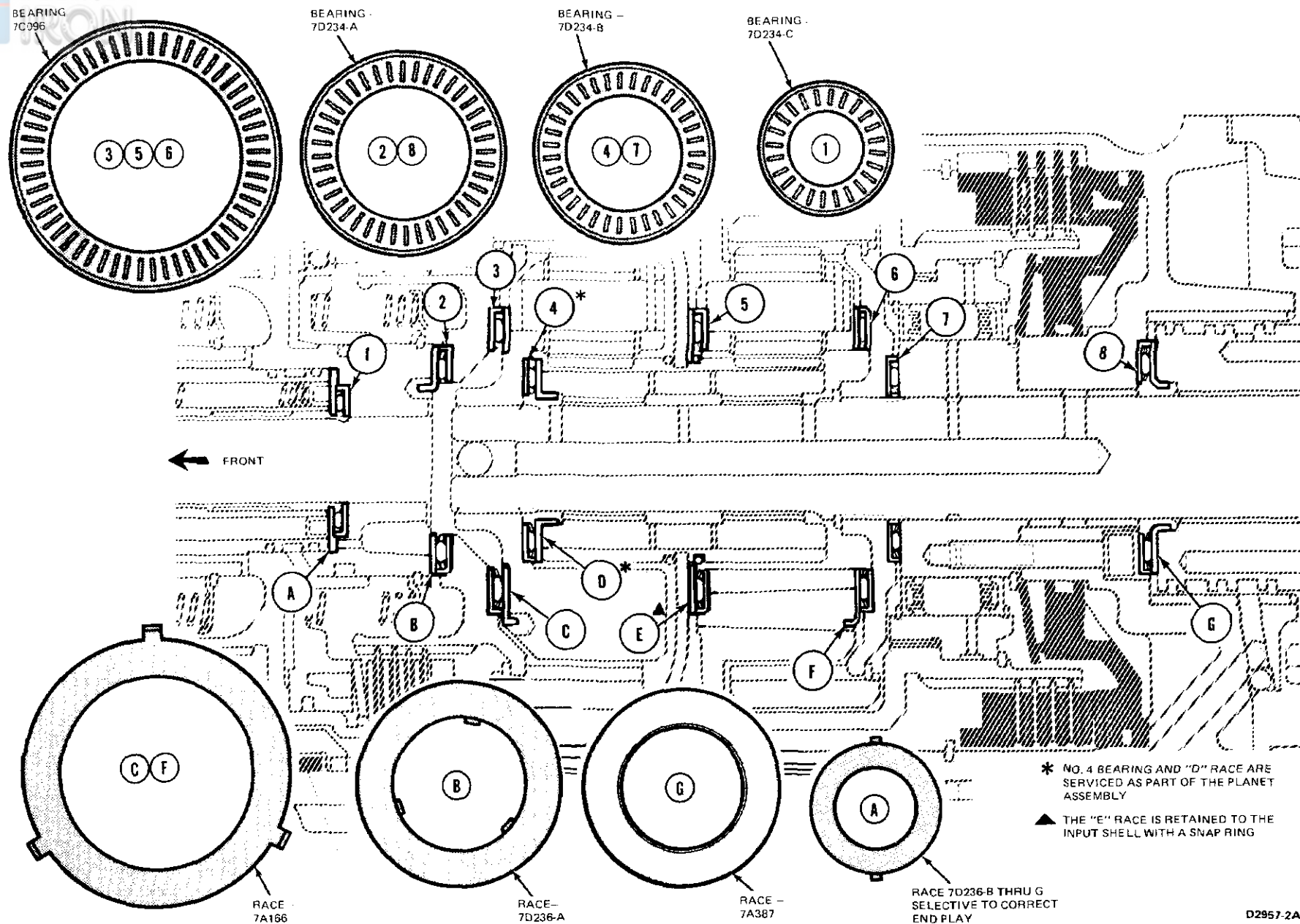
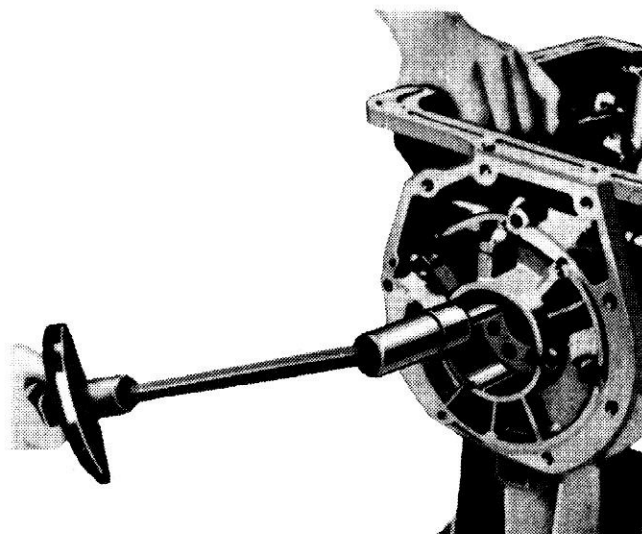
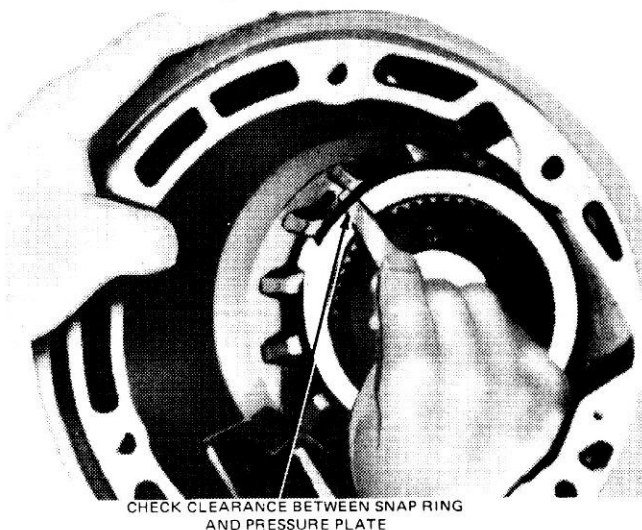


FIG. 14 Location and Identification of Thrust Bearings and Races



D2958-1A

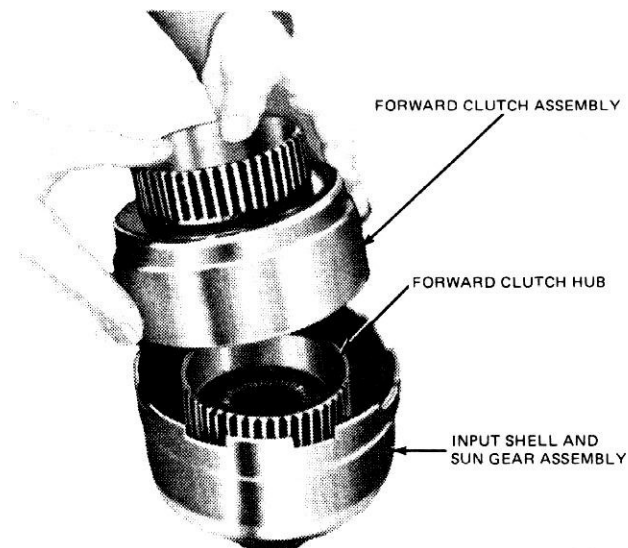
FIG. 15 Installing One-Way Clutch Inner Race Attaching Bolts



CHECK CLEARANCE BETWEEN SNAP RING
AND PRESSURE PLATE

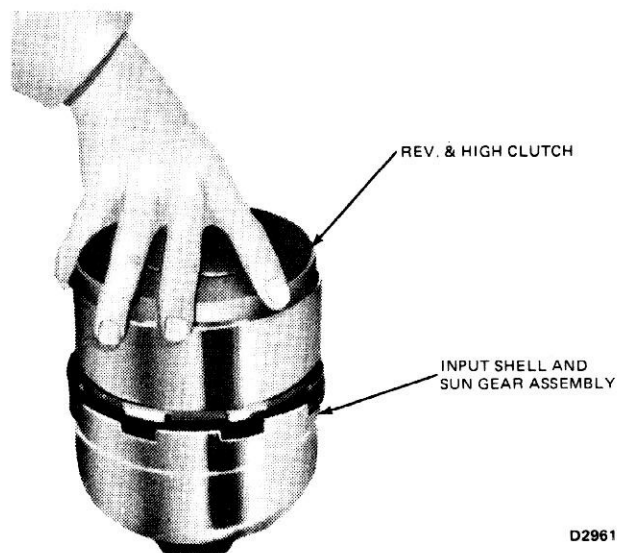
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FIG. 16 Checking Reverse Clutch Clearance



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FIG. 17 Installing Forward Clutch Assembly



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FIG. 18 Installing Reverse and High Clutch Assembly