



# Technical Service Information

## FORD AX4N NO FOURTH GEAR

**COMPLAINT:** Ford Motor Company vehicles equipped with the AX4N Transaxle may exhibit a no fourth gear up-shift condition.

**CAUSE:** The cause may be, that the Forward Clutch Control Valve sticking in an up-shifted position.

**EXPLANATION:** At engine start-up, SS3 oil pushes the Forward Clutch Control Valve into an up-shifted position, allowing Main Line pressure to pass through the “K” orifice, through the Forward Clutch Control Valve, through the 3-4 and 1-2 Shift Valves, and into the Forward Clutch. Mainline Pressure from the OD D 2 L Circuit, passing through the 2-3 Shift Valve also acts upon the Forward Clutch Control Valve in First and Second Gear, to help keep the Forward Clutch Control Valve in an up-shifted position. When the 2-3 up-shift takes place, SS3 is energized, which cuts off the SS3 oil to the Forward Clutch Control Valve, and the OD D 2 L Circuit oil to the Forward Clutch Control Valve is cut off by the movement of the 2-3 Shift Valve. At this time, the Forward Clutch Control Valve Should move to a down-shifted position, allowing the Forward Clutch oil to exhaust through the 3-4 Shift Valve, and through the exhaust passage through the downshifted Forward Clutch Control Valve. If the Forward Clutch Control Valve sticks in the up-shifted position, Forward Clutch oil will still be present at the 3-4 Shift Valve, preventing the 3-4 Shift Valve from moving, and preventing a 3-4 up-shift from taking place.

**CORRECTION:** After all electrical systems have been checked and verified for proper operation, remove the Valve Body, check the Forward Clutch Control Valve for sticking, and for debris that may be obstructing the valve movement. See Figure 2. **Note:** The Forward Clutch Control Valve retainer may be bent or broken, which can cause the valve to stick. Replace if necessary. An updated retainer can be purchased from Ford, under part number **F8DZ-7F194-AA**. See Figure 1. If Shift Solenoid 3 does not energize, or is stuck off, you will not achieve a 3-4 upshift.

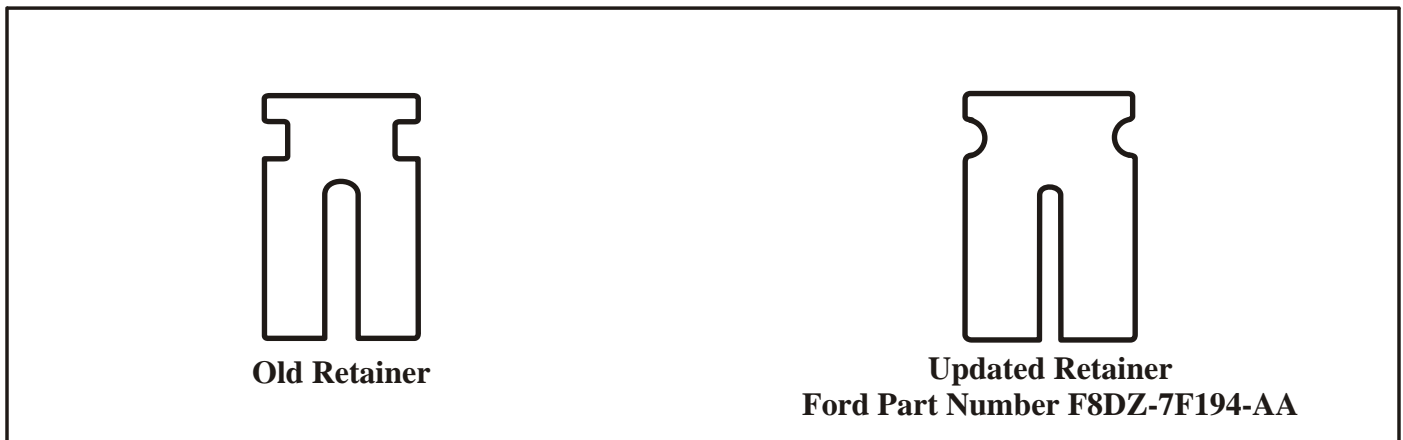


Figure 1

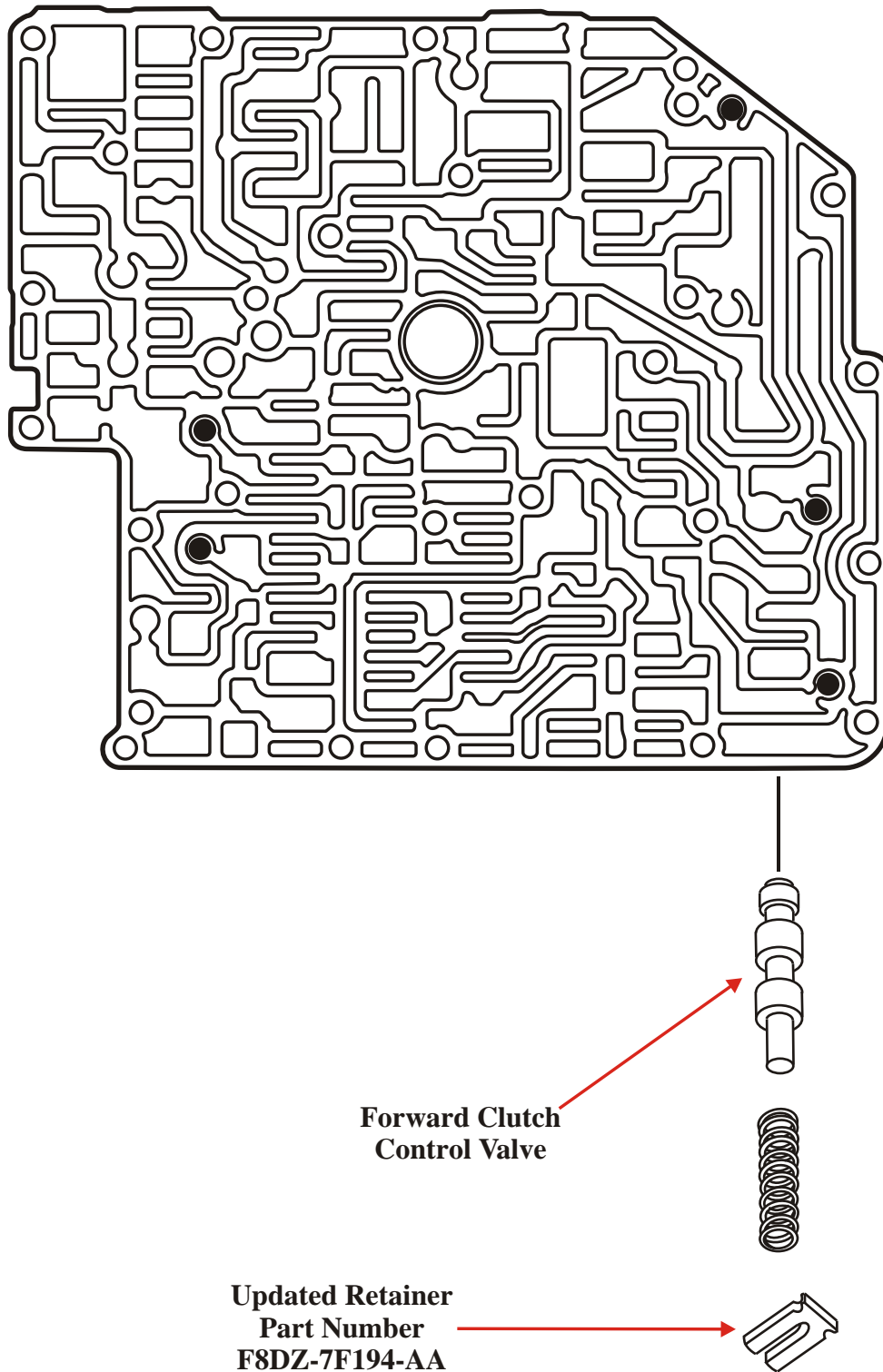


Figure 2