

Student Name \_\_\_\_\_

KEY

Date \_\_\_\_\_

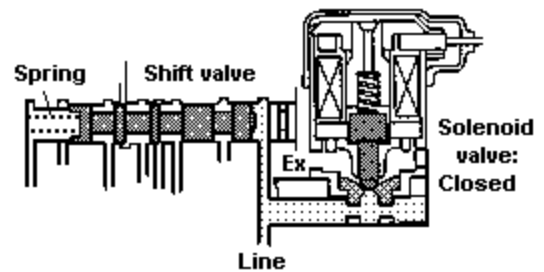
The solenoids that control the shifts and other operations in electronically-controlled transmissions can be arranged in various ways. They all use an electromagnet that is energized to operate a valve, and they all control the hydraulic flow through the valve.

1. The solenoid at the right is mounted close to a shift valve. It has a passage from line pressure at one end of the shift valve. There is a spring at the other end of the shift valve. With the solenoid de-energized (as shown), what is controlling the shift valve position?

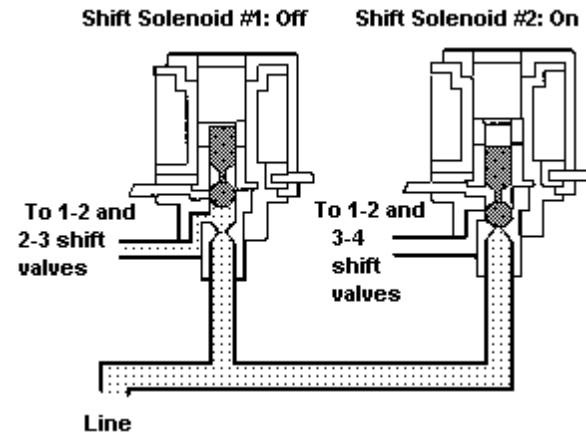
**Fluid pressure at the right end**

What will happen when the solenoid is energized?

**Line pressure at the right end will be released to exhaust, and the spring will move the valve to the right.**



2. The solenoids below are mounted remotely from the shift valves. Solenoid #1 is de-energized/off; what is occurring?



**Line pressure is allowed to flow to the 1-2 and 2-3 shift valves.**

Solenoid #2 is energized/on; what is happening here?

**Line pressure is blocked from flowing to the 1-2 and 3-4 shift valves.**

What will happen when Solenoid # 2 is turned off?

**Fluid pressure will flow to the 1-2 and 2-3 shift valves.**

3. These solenoid valves are operated by a stem coming from a solenoid. Solenoid S1 is de-energized; what is happening?

**Fluid is flowing to the underdrive clutch.**

What will occur when S1 is energized?

**Fluid flow will be blocked, and the fluid from the underdrive clutch will be vented.**

Solenoid S4 is energized; what is happening?

**It is blocking line pressure from flowing to the manual valve.**

What will occur when S4 is de-energized?

**Line pressure will flow to the manual valve.**

