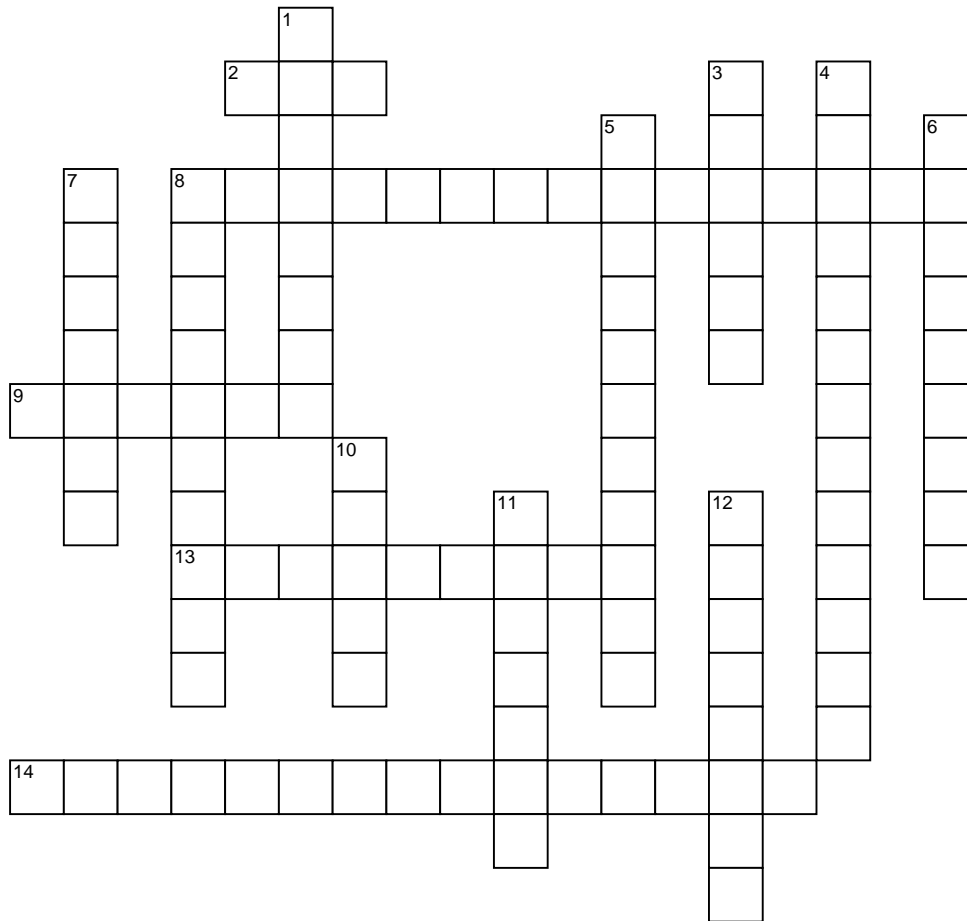


Hydraulic Control Valves and Solenoids

Chapter 5



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ACROSS

- 2 Pressure control solenoids usually have a _____ resistance of one to four ohms and operate at high frequency with varying duty cycles.
- 8 Electronic automatic transmissions/transaxles regulate hydraulic system pressure using a _____ solenoid (PCS).
- 9 _____ solenoids operate using a PWM control to cause the plunger inside the solenoid to move in or out depending on the amount of the applied current.
- 13 At rest or very slow speeds, the spring moves the valve to the _____ position.
- 14 The _____ monitors engine vacuum by a rubber vacuum hose, which is connected to the engine intake manifold.

DOWN

- 1 The _____ is connected to the output shaft and regulates hydraulic pressure based on vehicle speed.
- 3 The higher the load on the engine, the _____ the transmission will hold a gear before shifting to the next one.
- 4 The _____ (TV) monitors the position of the gas pedal through a cable or rod that runs from the gas pedal to the throttle valve in the valve body.
- 5 An _____ is tied hydraulically to a clutch or band servo, and absorbs fluid during the pressure build-up stage when a clutch or band applies.
- 6 If the accumulator piston bottoms out before the shift is complete, there will be a sudden pressure increase that will cause a _____ - _____ shift.
- 7 An _____ is simply a small hole, usually in the separator plate. An orifice produces a resistance to fluid flow and therefore causes a pressure drop as long as fluid is flowing through it.
- 8 Some automatic transmission solenoids are _____ - _____ modulated (PWM), which means that they are energized at a fixed rate (frequency) the amount of time it is "on" is controlled by the PCM/TCM.
- 10 To shift from one gear range to another, transmissions apply and release clutches or _____.
- 11 When the pulse width is high, the apply pressure to the TCC is at a _____.
- 12 A _____ is a type of an electromagnetic switch that uses a movable core.