Hydraulic Control Valves and Solenoids

Chapter 4

ACROSS

2 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.

7 A check __________ is the simplest device for controlling fluid flow.

8 The __________ is connected to the output shaft and regulates hydraulic pressure based on vehicle speed.

9 Some automatic transmission solenoids are pulse-width __________ (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.

DOWN

1 Observing the operation of an on-off type shift solenoid using a digital storage oscilloscope, (DSO), there usually appears to be a dip in the waveform about half or two thirds of the way up the ramp as current is flowing through the windings of the solenoid. This is called the pintle-__________.

2 _________ cushions shift by softening clutch or band apply.

3 _________ 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.

4 Linear _________ operate using PWM control to cause the plunger inside the solenoid to move in or out depending on the amount of the applied current.

5 The _________ valve monitors the position of the gas pedal through a cable or rod that runs from the gss pedal to the throttle valve in the valve body.