

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What is the purpose of an accumulator?

2) What is used to measure vehicle speed in a hydraulically controlled automatic transmission?

3) What is the difference between a synchronous and an asynchronous transmission?

4) What are the component names used that control mainline pressure in an electronically-controlled automatic transmission/transaxle?

5) What is a pulse-width modulated solenoid?

6) What is used to measure engine load in a hydraulically controlled automatic transmission?

Answer Key

Testname: ATT7_SHORT4

- 1) An accumulator is tied hydraulically to a clutch or band servo, and absorbs fluid during the pressure build-up stage when a clutch or band applies. This has the effect of slowing the pressure increase and lengthening the time it takes for the friction device to complete the shift.
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- 2) The governor is connected to the output shaft and regulates hydraulic pressure based on vehicle speed. As the vehicle speed (output shaft) increases, centrifugal forces a pair of weights against pull- back springs.
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- 3) Some transmissions are designed to apply a clutch or a band without having to release another one. These are called nonsynchronous or asynchronous transmissions. Synchronous transmissions require a clutch or band to release during the clutch or band apply for the next gear range, and these must be carefully synchronized.
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- 4) Electronic automatic transmissions/transaxles regulate hydraulic system pressure using a pressure control solenoid (PCS) that may also be called:
 - Electronic pressure control (EPC)
 - Pressure control (PC)
 - Variable force solenoid (VFS)
 - Force motorPage Ref: 49-50
- 5) Some automatic transmission solenoids are pulse-width 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. The ratio of on/off time is called the duty cycle and ranges from 0% (completely de- energized) to 100% (fully energized).
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- 6) There are two types of devices that serve the purpose of monitoring the engine load and just one of the following is used, not both:
 - Throttle Valve (TV)
 - Vacuum ModulatorPage Ref: 43