

Automotive Technology 7th Edition
Chapter 105: ABS Components and Operation
Short Answer Quiz

Name:

Date:

1. Explain the function of the ABS hydraulic control unit's pump motor during the hold-release-reapply cycle.
2. Describe the role of the electronic brake control module in the hill start assist feature and how it determines when to activate this feature.
3. What is the significance of the electronic front-to-rear proportioning control, and how does it differ from a mechanical proportioning valve?
4. How does the ABS/TCS module use wheel speed sensors to maintain vehicle stability during braking in cornering maneuvers?
5. Discuss the differences between a four-channel, three-channel, and single-channel ABS configuration and the implications for wheel speed sensor requirements.

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6. What is the purpose of the modulator valves in the hydraulic modulator assembly, and how do they contribute to preventing wheel lockup during hard braking?

7. Explain the ABS control pressure stages and the role of the pressure reduction solenoid in these stages.

8. What are the components of the automatic emergency braking (AEB) system, and how does it respond to potential collision scenarios?

9. How do active and passive wheel speed sensors differ in their operation and application in ABS systems?

10. Under what conditions might a vehicle equipped with ABS stop in a shorter distance without the system than with it?