

Automotive Technology 7th Edition
Chapter 117: Hydraulic Power Steering Systems
Short Answer Quiz

Name:

Date:

1. Describe the vane pump operation in the context of hydraulic power steering systems and explain the significance of cavity volume changes during the pump phases.

2. What is the purpose of the Power Steering Pressure (PSP) switch in the high-pressure line, and how does it interact with the powertrain control module to prevent engine stalling?

3. Discuss the common causes of a severe grinding noise in power steering systems and the diagnostic approach for identifying the issue.

4. Explain the function of the flow control valve in a hydraulic power steering system and its role in maintaining system pressure.

5. Describe the Two-Flow Electronic (TFE) system in power steering and the role of the solenoid-operated pintle valve in this system.

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6. How does the rotary valve in a power steering system work, and what are the components involved in its operation?

7. During a right turn in a vehicle with hydraulic power steering, how does the inner element of the steering system behave to provide assist?

8. What are the recommended practices for preventing power steering noise from being transferred to the passenger compartment?

9. How does the power steering system adjust to different vehicle speeds, and what components are responsible for this adjustment?

10. What are the implications of a defective power steering pressure switch, and how does it affect the vehicle's performance?