

Automotive Technology 7th Edition
Chapter 76: Gasoline Direct-Injection Systems
Short Answer Quiz

Name:

Date:

1. How does the gasoline direct injection (GDI) system's method of fuel delivery into the combustion chamber differ from traditional port fuel injection systems?

2. What are the specific advantages of using a GDI system over a port fuel injection system in terms of engine efficiency and emissions?

3. Describe the different piston top designs used in GDI systems and how they influence combustion.

4. Explain the various modes of operation for a GDI system and how they adjust the air-fuel mixture and injection timing to optimize engine performance.

5. Discuss the role of the high-pressure fuel pump in a GDI system and how its pressure is regulated.

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6. What are the reasons for using a stratified charge mode during cold-start warm-up in GDI systems?

7. Describe the issues related to carbon accumulation in GDI systems and the typical locations where carbon builds up.

8. What are the recommended service precautions when working with high-pressure components in a GDI system?

9. Explain the function and importance of the Teflon seal in GDI injectors.

10. Discuss the combined use of port fuel injectors and direct-injection injectors in some modern engines and the benefits of such a system.