

Automotive Technology 7th Edition
Chapter 16: Diesel Engine Parts, Operation, and Aftertreatment
Short Answer Quiz

Name:

Date:

1. Describe the main difference between the Diesel Exhaust Particulate Filter (DPF) and a typical catalyst filter in terms of structure and exhaust gas flow.
2. Explain the significance and potential health implications of very small soot particles when inhaled by humans.
3. What are the two main types of DPF regeneration and under what conditions do they typically occur?
4. What is the primary function of the Diesel Oxidation Catalyst (DOC) and what are its main components?
5. What role does the DPF differential pressure sensor play in diesel engine after-treatment, and where are its pressure sample lines located relative to the DPF?

Automotive Technology 7th Edition
Chapter 16: Diesel Engine Parts, Operation, and Aftertreatment
Short Answer Quiz

Name:

Date:

6. In what year did Rudolf Diesel perfect the compression ignition engine?

7. Describe the difference between an indirect injection (IDI) diesel engine and a direct injection (DI) diesel engine.

8. What is the primary method by which power and speed are controlled in a diesel engine, and how does this differ from a gasoline engine?

9. How does a high-pressure common rail (HPCR) design function in modern diesel engines?

10. What are the potential consequences of accidentally adding gasoline to diesel fuel in a diesel engine, and how can one detect this contamination?