

Name _____

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

1) What is the difference between direct injection and indirect injection?

2) What exhaust after-treatment is needed to achieve exhaust emission standards for vehicles 2007 and newer?

3) Why are glow plugs kept working after the engine starts?

4) What are the three phases of diesel ignition?

5) What are the two most commonly used types of diesel injection systems?

Answer Key

Testname: INTRO_SHORT15

1) A direct injection diesel engine uses an injector that squirts fuel directly into the combustion chamber. An indirect injection diesel engine uses an injector that squirts fuel into a pre-combustion chamber next to the combustion chamber.

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2) Exhaust after treatment devices include:

1. Diesel particulate filter (DPF)
2. Diesel oxidation catalyst (DOC)
3. Selective catalytic reduction (SCR)

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3) The glow plugs are kept working to help reduce noise, white exhaust smoke (unburned fuel), and to improve idle quality

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4) The three phases of diesel ignition are:

- a. Ignition delay
- b. Rapid combustion
- c. Controlled combustion

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5) The two most commonly used diesel injection systems are the distribution and high-pressure common rail. Another less commonly used system uses high pressure engine oil to create the high pressure for fuel injectors and is called a HEUI system.

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