

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

Name: _____ Date: _____

Matching: Choose the item in column 2 that best matches each item in column 1.

- | | | |
|---------------------------------------|--|-----------|
| 1. High-Pressure Pump | A. A mode where a second fuel injection occurs after combustion to quickly warm the catalytic converter. | 1. _____ |
| 2. Stratified Mode | B. A mode of operation, used during high-speed or high-torque conditions, where the air-fuel mixture is the same throughout the cylinder. | 2. _____ |
| 3. Homogeneous Mode | C. Components controlled by the PCM using 50 to 90 volts to open. | 3. _____ |
| 4. Spray-Guided Combustion | D. A part that must be newly installed whenever a GDI fuel injector is removed or replaced to ensure a leak-free connection. | 4. _____ |
| 5. Carbon Issues | E. A single-barrel piston pump that is driven by the engine camshaft to generate fuel pressure up to 2,900 PSI. | 5. _____ |
| 6. GDI Fuel Injectors | F. A design where the injector is placed in the center of the combustion chamber and injects fuel into a dished-out portion of the piston. | 6. _____ |
| 7. Port- and Direct-Injection Systems | G. Components that must be replaced with a new part whenever removed because their ball-ends deform when tightened. | 7. _____ |
| 8. High-Pressure Fuel Lines | H. A common problem where deposits accumulate on the injector tip and the backside of the intake valves. | 8. _____ |
| 9. Teflon Seal | I. A system that combines injectors in the combustion chamber with injectors in the intake manifold, which helps keep intake valves clean. | 9. _____ |
| 10. Stratified Catalyst Heating Mode | J. A mode of operation where the air-fuel mixture is richer around the spark plug than it is in the rest of the cylinder | 10. _____ |

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Answer Key

Answer Key:

1. E
2. J
3. B
4. F
5. H
6. C
7. I
8. G
9. D
10. A