

# Advanced Engine Performance Diagnosis 8<sup>th</sup> Edition

## Chapter 23 – Gasoline Direct-Injection (GDI) Systems

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Direct Fuel Injection, Direct-Injection Fuel Delivery System, and Modes of Operation
  2. Piston Top Design, Port- and Direct-Injection Systems, Engine Start System and GDI Issues
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#### **OBJECTIVES:**

1. Explain how a direct fuel-injection system works.
  2. Describe the direct-injection fuel delivery system.
  3. Describe modes of operation.
  4. Discuss GDI piston designs.
  5. Discuss port/direct injection systems.
  6. Discuss engine start systems.
  7. Discuss GDI service issues.
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#### **RESOURCES:** (All resources may be found at jameshalderman.com)

1. Task Sheet: Gasoline Direct Injection Identification
  2. Chapter PowerPoint
  3. Crossword and Word Search Puzzles
  4. Videos: (A8) Fuel, Air Induction, and Exhaust Systems Diagnosis and Repair
  5. Animations: (A8) Fuel, Air Induction, and Exhaust Systems Diagnosis and Repair
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#### **ACTIVITIES:**

1. Task Sheet: Gasoline Direct Injection Identification
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#### **ASSIGNMENTS:**

1. Chapter crossword and word search puzzles from the website.
  2. Complete end of chapter quiz from the textbook.
  3. Complete multiple choice and short answer quizzes downloaded from the website.
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#### **CLASS DISCUSSION:**

1. Review and group discussion chapter [Frequently Asked Questions](#) and [Tech Tips](#) sections.
  2. Review and group discussion of the five (5) chapter [Review Questions](#).
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#### **NOTES AND EVALUATION:**

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