

Automotive Technology 6th Edition

Chapter 81 – Gasoline Direct-Injection Systems

Lesson Plan



CHAPTER SUMMARY:

1. Direct fuel injection, direct-injection fuel delivery system, and gasoline direct-injection fuel injectors
 2. Modes of operation, piston top designs, and Port and direct injection systems
 3. Engine start systems, gasoline direct-injection issues, and GDI service
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OBJECTIVES:

1. List the advantages and disadvantages of direct fuel injection.
 2. Explain how a gasoline direct-injection system works.
 3. List the various modes of operation of a gasoline direct-injection system.
 4. Describe common piston top designs.
 5. Describe the differences between port fuel-injection and gasoline direct-injection systems.
 6. Discuss how to troubleshoot a gasoline direct-injection system.
 7. This chapter will help prepare for Engine Repair (A8) ASE certification test content area “C” (Fuel, Air Induction, and Exhaust Systems Diagnosis and Repair).
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>) Internet access required to hyperlink.

1. **Task Sheet ASE (A8-A-2) P-1:** Gasoline Direct Injection Identification
 2. Chapter PowerPoint
 3. Chapter Crossword Puzzle and Word Search
 4. Videos: [\(A8\) Engine Performance Videos](#)
 5. Animations: [\(A8\) Engine Performance Animations](#)
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ACTIVITIES:

1. **Task Sheet ASE (A8-A-2) P-1:** Have students complete Gasoline Direct Injection Identification Task Sheet.
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ASSIGNMENTS:

1. Chapter crossword and word search puzzles.
 2. Complete end of chapter 10 question quiz.
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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:
