**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](https://jameshalderman.com/a8_vid_lib_page/)

5. Animations: [(A8) Engine Performance Animations](https://jameshalderman.com/a8_anim_lib_page/)

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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:**

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