

Automotive Technology 6th Edition

Chapter 71 – Ignition System Components and Operation

Lesson Plan

CHAPTER SUMMARY:



1. Ignition systems, ignition system operation, and ignition coils
 2. Ignition switching and triggering, primary circuit operation, and distributor ignition systems
 3. Waste-spark ignition systems, coil-on-plug ignition, and compression-sensing ignition
 4. Ion-sensing ignition, ignition timing, knock sensors, and spark plugs
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OBJECTIVES:



1. Explain how the ignition system and ignition coils work.
 2. Discuss crankshaft position sensor and pickup coil operation.
 3. Describe the operation of distributor ignition.
 4. Describe the operation of waste-spark and coil-on-plug ignition systems.
 5. Discuss ignition control circuits, compression-sensing and ion-sensing ignition, ignition timing, knock sensors, and spark plugs.
 6. This chapter will help prepare for Engine Repair (A8) ASE certification test content area “B” (Ignition System 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:** Ignition System Identification
 2. **Task Sheet ASE (A8-A-2) P-1:** Spark Plug Specifications
 3. Chapter PowerPoint
 4. Chapter Crossword Puzzle and Word Search
 5. Videos: [\(A8\) Engine Performance Videos](#)
 6. Animations: [\(A8\) Engine Performance Animations](#)
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ACTIVITIES:



1. **Task Sheet ASE (A8-A-2) P-1:** Have students complete Ignition System Identification Task Sheet.
 2. **Task Sheet ASE (A8-A-2) P-1:** Have students complete Spark Plug Specifications 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:


