# Automotive Electrical and Engine Performance - 9th edition Ch29: Ignition System Parts and Operation Lesson Plan

## **CHAPTER SUMMARY:**



- 1. Ignition Systems, Ignition Coils, Ignition Switching and Triggering, and Ignition System Operation
- 2. Waste-Spark Ignition Systems, Coil-On-Plug Ignition, Ignition Timing, Knock Sensors and Spark Plugs

### **OBJECTIVES:**



- 1. Discuss ignition systems.
- 2. Discuss ignition coils.
- 3. Discuss ignition switching and triggering.
- 4. Describe ignition system operation.
- 5. Describe the operation of waste-spark ignition systems.
- 6. Describe the operation of coil-on-plug ignition systems.
- 7. Discuss ignition timing.
- 8. Discuss knock sensors.
- 9. Describe the different types of spark plugs.



**RESOURCES:** (All resources may be found at jameshalderman.com)

- 1. Task Sheet: Ignition System Identification
- 2. Crossword Puzzle and Word Search
- 3. Videos: (A8) Engine Performance Videos
- 4. Animations: (A8) Engine Performance Animations

## **ACTIVITIES:**



- 1. Task Sheet: Ignition System Identification
- 2. Crossword Puzzle and Word Search
- 3. Chapter PowerPoint
- 4. Crossword Puzzle and Word Search

### **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.

## **CLASS DISCUSSION:**



- 1. Review and group discussion chapter <u>Frequently Asked Questions</u> and <u>Tech Tips</u> sections.
- 2. Ten (10) question end of Chapter Quiz.
- 3. Five (5) end of chapter Review Question for class discussion.

### **NOTES AND EVALUATION:**



