Automotive Electrical and Engine Performance - 9th edition
Ch15: Charging System Parts and Operation
Lesson Plan

CHAPTER SUMMARY:

1. Principle of Alternator Operations, Alternator Construction, and Alternator Components and Operation
2. How an Alternator Works, Alternator Output Factors, and Alternator Voltage Regulation
3. Alternator Cooling and Computer-Controlled Charging Systems

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OBJECTIVES:

1. Explain why an alternator generates an AC and changes it to DC.
2. Describe an alternator's construction, including overrunning pulleys.
3. Describe the components and operation of an alternator.
4. Discuss how an alternator works.
5. List the factors determining an alternator's output voltage and current.
6. Explain how the voltage of an alternator is regulated.
7. Explain how the heat produced by an alternator is regulated.
8. Discuss computer-controlled alternators.

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

1. Task Sheet: Alternator Identification
2. Task Sheet: Alternator Drive Belt
3. Crossword Puzzle and Word Search
4. Videos: (A6) Electrical/Electronic Systems Videos
5. Animations: (A6) Electrical/Electronic Systems Animations

ACTIVITIES:

1. Task Sheet: Alternator Identification
2. Task Sheet: Alternator Drive Belt
3. Crossword Puzzle and Word Search
4. Chapter PowerPoint
5. 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 Frequently Asked Questions and Tech Tips sections.
2. Ten (10) question end of Chapter Quiz.
3. Five (5) end of chapter Review Question for class discussion.

NOTES AND EVALUATION:
