

Automotive Technology 7th Edition

Chapter 51 – Charging System Parts and Operation

Lesson Plan



CHAPTER SUMMARY:

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



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. Chapter PowerPoint
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. 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. Review and group discussion of the five (5) chapter [Review Questions](#).



NOTES AND EVALUATION: