**Advanced Engine Performance Diagnosis 7th Edition**

**Chapter 13 –** **Starting and Charging System Diagnosis**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Batteries, Battery Construction Types, Battery Testing, and Battery Drain Test

2. Battery Charging, Battery Registration, Cranking Systems, and Stop/Start Systems

3. Charging Circuit

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**OBJECTIVES:**

1. Describe the purpose, function, and types of batteries.

2. Discuss methods for checking the condition of a battery.

3. Describe how to perform a battery drain test and isolate a problem.

4. Explain battery charging and coding.

5. Describe the components and operation of cranking systems.

6. Describe the purpose and operation of stop/start systems.

7. List the steps necessary to perform a voltage-drop test.

8. Explain how to test the charging circuit.

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**RESOURCES:** [(All resources may be found at jameshalderman.com)](https://jameshalderman.com/)

1. Task Sheet: Starting and Charging System

2. Chapter PowerPoint

3. [Crossword and Word Search Puzzles (A6)](https://jameshalderman.com/a6_puzzles_lib_page/)

4. [Crossword and Word Search Puzzles (A8)](https://jameshalderman.com/a8_puzzles_lib_page/)

5. [Videos: (A6) Electrical/Electronic Systems](https://jameshalderman.com/a6_vid_lib_page/)

6. [Videos: (A8) Engine Performance](https://jameshalderman.com/a8_vid_lib_page/)

7. [Animations: (A6) Electrical/Electronic Systems](https://jameshalderman.com/a6_anim_lib_page/)

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

**ACTIVITIES:**

1. Task Sheet: Starting and Charging System

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**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.

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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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