

Advanced Engine Performance Diagnosis 8th Edition

Chapter 11 – Battery, Starting and Charging Diagnosis, and Stop-Start

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. Cranking Circuit Voltage Drop Testing and Charging Circuit
-



OBJECTIVES:

1. Describe the purpose, function, and types of batteries.
 2. Describe the types of battery construction.
 3. Describe methods for checking the condition of a battery.
 4. Describe how to perform a battery drain test and isolate a problem.
 5. Explain battery charging and coding.
 6. Explain the purpose of battery registration.
 7. Describe the components and operation of cranking systems.
 8. Describe the purpose and operation of stop-start systems.
 9. List the steps necessary to perform a voltage-drop test.
 10. Explain how to test the charging circuit.
-



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

1. Task Sheet: Alternator Rotor Testing
 2. Task Sheet: Alternator Stator Testing
 3. Task Sheet: Battery and Capacity Tests
 4. Task Sheet: Battery Specifications
 5. Task Sheet: Charging System Diagnosis
 6. Task Sheet: Charging Circuit Voltage Drop
 7. Task Sheet: Starting and Charging System
 8. Task Sheet: Starter Voltage Drop/Current Draw Tests
 9. Chapter PowerPoint
 10. Crossword and Word Search Puzzles
 11. Videos: (A6) Battery and Starting System Diagnosis and Repair
 12. Videos: (A6) Charging System Diagnosis and Repair
 13. Videos (A8) Ignition System Diagnosis and Repair
 14. Animations: (A6) Battery and Starting System Diagnosis and Repair
 15. Animations: (A6) Charging System Diagnosis and Repair
 16. Animations: (A8) Ignition System Diagnosis and Repair
-

Advanced Engine Performance Diagnosis 8th Edition

Chapter 11 – Battery, Starting and Charging Diagnosis, and Stop-Start

Lesson Plan



ACTIVITIES:

1. Task Sheet: Alternator Rotor Testing
 2. Task Sheet: Alternator Stator Testing
 3. Task Sheet: Battery and Capacity Tests
 4. Task Sheet: Battery Specifications
 5. Task Sheet: Charging System Diagnosis
 6. Task Sheet: Charging Circuit Voltage Drop
 7. Task Sheet: Starting and Charging System
 8. Task Sheet: Starter Voltage Drop/Current Draw Tests
-



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: