

Advanced Engine Performance Diagnosis 7th Edition

Chapter 3 – Circuit Testers and Digital Meters

Lesson Plan



CHAPTER SUMMARY:

1. Fused Jumper Wire, Test Lights, Logic Probe, and Digital Multimeters
 2. Inductive Ammeters and Diode Check, Duty Cycle, and Frequency
 3. Electrical Unit Prefixes and How to Read Digital Meters
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OBJECTIVES:

1. Discuss how to safely set up and use a fused jumper wire, a test light, and a logic probe.
 2. Explain how to safely and properly use a digital meter to read voltage, resistance, and current.
 3. Describe the purpose and function of inductive ammeters.
 4. Describe diode check, duty cycle, and frequency.
 5. List the electrical unit prefixes used by digital multimeters.
 6. Explain the procedure for safely using and reading a digital multimeter.
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RESOURCES: ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Digital Multimeter Use for Electrical Problems
 2. Task Sheet: Measure Voltage Using a Voltmeter
 3. Task Sheet: Measuring Current Using an Ammeter
 4. Task Sheet: Check Electrical Circuits Using an Ohmmeter
 5. Task Sheet: Test Light Usage
 6. Task Sheet: Circuit Testing Using a Fused Jumper Wire
 7. Chapter PowerPoint
 8. [Crossword and Word Search Puzzles](#)
 9. [Videos: \(A8\) Engine Performance](#)
 10. [Animations: \(A8\) Engine Performance](#)
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ACTIVITIES:

1. Task Sheet: Digital Multimeter Use for Electrical Problems
 2. Task Sheet: Measure Voltage Using a Voltmeter
 3. Task Sheet: Measuring Current Using an Ammeter
 4. Task Sheet: Check Electrical Circuits Using an Ohmmeter
 5. Task Sheet: Test Light Usage
 6. Task Sheet: Circuit Testing Using a Fused Jumper Wire
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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:
