

# Automotive Electricity and Electronics

## Chapter 9 – Circuit Testers and Digital Meters

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Fuse Jump Wire, Test Lights, Logic Probe, Digital Multimeters, and Inductive Ammeters
  2. Diode Check, Duty Cycle and Frequency, 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. Describe the uses of digital multimeters and inductive ammeters.
  3. Discuss diode check and frequency.
  4. Describe the prefixes used with electrical units and how to read digital meters.
  5. Explain how to safely use a digital meter to read voltage, resistance, and current, and compare to factory specifications.
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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: Test Light Usage
  3. Task Sheet: Circuit Testing Using a Fused Jumper Wire
  4. Chapter PowerPoint
  5. [Crossword and Word Search Puzzles \(A6\)](#)
  6. [Videos: \(A6\) Electrical/Electronic Systems](#)
  7. [Animations: \(A6\) Electrical/Electronic Systems](#)
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#### **ACTIVITIES:**

1. Task Sheet: Digital Multimeter Use for Electrical Problems
  2. Task Sheet: Test Light Usage
  3. 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:**

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