

# Automotive Electrical and Engine Performance - 9th edition

## Ch7: Automotive Wiring and Wire Repair

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Automotive Wiring, Ground Wires, Battery Cables, Jumper Cables
2. Fuses and Circuit-Protection Devices, Terminals and Connectors, Wire Repair, and Electrical Conduit

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#### **OBJECTIVES:**



1. Explain automotive wiring and wire gauge systems.
2. Explain the purpose of ground wires.
3. Explain the purpose of battery cables.
4. Explain the purpose of jumper cables.
5. Describe how fuses, fusible links, circuit breakers, and PTC devices protect circuits and wiring.
6. List the steps for removing a terminal from a connector.
7. List the steps for performing each method of wire repair.
8. Explain the types of electrical conduit.

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



1. Task Sheet: Inspect Wiring and Connectors
2. Task Sheet: Solder Wire Repair
3. Task Sheet: Wire Harness and Connector Repair
4. Crossword Puzzle and Word Search
5. Videos: (A6) Electrical/Electronic Systems Videos
6. Animations: (A6) Electrical/Electronic Systems Animations

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#### **ACTIVITIES:**



1. Task Sheet: Inspect Wiring and Connectors
2. Task Sheet: Solder Wire Repair
3. Task Sheet: Wire Harness and Connector Repair
4. Chapter PowerPoint
5. Crossword Puzzle and Word Search

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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. Ten (10) question end of Chapter Quiz.
3. Five (5) end of chapter Review Question for class discussion.

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#### **NOTES AND EVALUATION:**

