

Automotive Technology 6th Edition

Chapter 44 – Automotive Wiring and Wire Repair

Lesson Plan



CHAPTER SUMMARY:

1. Automotive wiring and ground wires
 2. Battery cables, jumper cables, and fuses and circuit protection devices
 3. Terminal 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, battery cables, and jumper cables.
 3. Describe how fuses, fusible links, circuit breakers, and PTC circuit protector protect circuits and wiring.
 4. List the steps for removing a terminal from a connector.
 5. List the steps for performing each method of wire repair.
 6. Explain the types of electrical conduit.
 7. This chapter will help you prepare for the ASE Electrical/Electronic Systems (A6) certification test content area “A” (General Electrical/ Electronic System Diagnosis).
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A6-A-9) P-1:** Fusible Links, Circuit Breakers, and Fuses
 2. **Task Sheet ASE (A6-A-10) P-1:** Inspect Wiring and Connectors
 3. **Task Sheet ASE (A6-A-12) P-1:** Wire Harness and Connector Repair
 4. **Task Sheet ASE (A6-A-10) P-1:** Solder Wire Repair
 5. Chapter PowerPoint
 6. Chapter Crossword Puzzle and Word Search
 7. Animations: Solder Wire Repair
 8. Videos: CAN/BUS wire install (time 3:42) and Soldering wire connection (time 2:20)
 9. Videos: Connector repair (time 4:43), Connector repair (time 4:43), and Wire connections (time 1:21)
 10. Videos: Fuse testing (time 3:01), Fused Jumper Wire (time 16:21), and Wiring Harness Repair (time 5:22)
 11. Videos: How to Replace a Fusible Link (time 6:57) and How To Safely Change A Blown Fuse (time 4:49)
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ACTIVITIES:

1. **Task Sheet ASE (A6-A-9) P-1:** Have students complete Fusible Links, Circuit Breakers, and Fuses Task Sheet.
 2. **Task Sheet ASE (A6-A-10) P-1:** Have students complete Inspect Wiring and Connectors Task Sheet.
 3. **Task Sheet ASE (A6-A-12) P-1:** Have students complete Wire Harness and Connector Repair Task Sheet.
 4. **Task Sheet ASE (A6-A-10) P-1:** Have students complete Solder Wire Repair Task Sheet.
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ASSIGNMENTS:

1. Chapter crossword and word search puzzles.
 2. Complete end of chapter 10 question quiz.
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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:
