

Automotive Electricity and Electronics

Chapter 2 – Tools and Safety

Lesson Plan



CHAPTER SUMMARY:

1. Threaded Fasteners, Hand Tools, Screwdrivers, Torx, Pliers, and Basic Hand Tool List
 2. Tool Sets and Accessories, Electrical Hand Tools, Hand Tool Maintenance, and Trouble Lights
 3. Air and Electricity Operated Tools, Personal Protective Equipment, and Safety Precautions
 4. Vehicle Protection, Safety Lifting (Hoisting a Vehicle), Jacks and Safety Stands, and Drive on Ramps
 5. Electrical Cord Safety, Jump Starting and Battery Safety, and Fire Extinguishers
 6. Fire Blankets, First Aid and Eye Wash Stations, and Hybrid Electric Vehicle Safety Issues
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OBJECTIVES:

1. Identify the strength ratings of threaded fasteners.
 2. Explain the difference between the brand name (trade name) and the proper name for tools.
 3. Describe what tool is the best to use for each job.
 4. Explain how to maintain hand tools.
 5. Identify the personal protective equipment (PPE) that all service technicians should wear.
 6. Discuss how to safely use hand tools.
 7. Describe how to safely hoist a vehicle.
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RESOURCES: ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Fire Extinguisher
 2. Task Sheet: Vehicle Hoisting
 3. Task Sheet: Safety Check
 4. Task Sheet: Temporary Disabling of an Airbag
 5. Task Sheet: High-Voltage Circuits Identification
 6. Task Sheet: Hybrid High-Voltage Disconnect
 7. Chapter PowerPoint
 8. [Crossword and Word Search Puzzles \(A0\)](#)
 9. [Videos: \(A0\) Automotive Fundamentals](#)
 10. [Animations: \(A0\) Automotive Fundamentals](#)
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ACTIVITIES:

1. Task Sheet: Fire Extinguisher
 2. Task Sheet: Vehicle Hoisting
 3. Task Sheet: Safety Check
 4. Task Sheet: Temporary Disabling of an Airbag
 5. Task Sheet: High-Voltage Circuits Identification
 6. Task Sheet: Hybrid High-Voltage Disconnect
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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: