

# Automotive Technology 7<sup>th</sup> Edition

## Chapter 9 – Hand and Power Tools

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Wrenches, Ratchets, Sockets, Extensions, Screwdrivers, Hammers and mallets, Pliers, and cutters
2. Punches, Chisels, Removers, Hacksaws, and Recommended Hand Tool List,
3. Safety Tips for Using Hand Tools, Hand Tool Maintenance, and Air Compressor
4. Air and Electrically Operated Tools, Shop Equipment, and Care and Maintenance of Shop Equipment



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#### **OBJECTIVES:**

1. Compare the different types of wrenches.
2. Discuss the purpose of ratchets, sockets, and extensions.
3. Discuss the purpose of screwdrivers.
4. Discuss the purpose of hammers and mallets.
5. Discuss the purpose of pliers.
6. Explain the characteristics of cutters.
7. Discuss the purpose of punches and chisels.
8. Discuss the purpose of removers.
9. Discuss the purpose of hacksaws.
10. List the basic tools a service technician should possess.
12. List safety tips for using hand tools.
13. Describe hand tool maintenance.
14. Describe the purpose of the air compressor.
15. Describe the purpose of air and electrically operated tools.
16. Discuss the use of shop equipment, including grinders, bench vises, hydraulic presses, portable cranes and chain hoists, and engine stands.
17. Discuss the care and maintenance of shop equipment.



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#### **RESOURCES:** (All resources may be found at jameshalderman.com)

1. Task Sheet: Hand Tool Identification
2. Task Sheet: Power and Shop Equipment Safety Survey
3. Chapter PowerPoint
4. Crossword Puzzle and Word Search
5. Videos: [\(A0\) Automotive Fundamentals Videos](#)
6. Animations: [\(A0\) Automotive Fundamentals Animations](#)



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#### **Activities:**

1. Task Sheet: Hand Tool Identification
2. Task Sheet: Power and Shop Equipment Safety Survey
3. 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. Review and group discussion of the five (5) chapter Review Questions.
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#### **NOTES AND EVALUATION:**

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