

# Automotive Heating and Air Conditioning 9<sup>th</sup> Edition

## Chapter 16 – A/C System Diagnosis and Repair

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Diagnostic Procedure, Verify Customer Concern, Visual Inspection, and Check DTCs
  2. Check TSBs, Performance A/C Test, Root Cause, Addressing System Odors, and Noise Issues
  3. Repair the System and Retrofitting
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#### **OBJECTIVES:**

1. Prepare for the ASE Heating and Air Conditioning (A7) certification test content area “A” (A/C System Service, Diagnosis and Repair).
  2. Describe the eight-step diagnostic procedure for an A/C system.
  3. Explain how to perform a visual inspection of an A/C system.
  4. Discuss how to perform an A/C performance test.
  5. Describe how to determine the root cause of the problem in an A/C system.
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#### **RESOURCES:** ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Retrieve and Record Diagnostic Trouble Codes
  2. Task Sheet: Air Conditioning Noise Diagnosis
  3. Task Sheet: Performance Test Heating and A/C System
  4. Task Sheet: Evaporator Housing Drain
  5. Task Sheet: Remove and Install Evaporator
  6. Task Sheet: Identify Source of A/C Odors
  7. Chapter PowerPoint
  8. [Crossword Puzzle and Word Search \(A7\)](#)
  9. [Videos: \(A7\) Heating & Air Conditioning](#)
  10. [Animations: \(A7\) Heating & Air Conditioning](#)
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#### **ACTIVITIES:**

1. Task Sheet: Retrieve and Record Diagnostic Trouble Codes
  2. Task Sheet: Air Conditioning Noise Diagnosis
  3. Task Sheet: Performance Test Heating and A/C System
  4. Task Sheet: Evaporator Housing Drain
  5. Task Sheet: Remove and Install Evaporator
  6. Task Sheet: Identify Source of A/C Odors
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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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