

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

## Chapter 64 – Refrigerants and Refrigerant Oils

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Refrigerants, Legislation, Environmental Issues, HFO-1234yf, and Carbon Dioxide as a Refrigerant
2. Alternative Refrigerants, Non-Condensable Gas, Refrigerant Safety, and Refrigerant Oils



#### **OBJECTIVES:**

1. List the different types of refrigerants and refrigerant containers.
2. Explain the impact of legislation related to automotive A/C systems.
3. Explain the impact of environmental issues related to automotive A/C systems.
4. Discuss HFO-1234yf refrigerant.
5. Describe carbon dioxide as a refrigerant.
6. Describe alternate refrigerants.
7. Explain how to check for non-condensable gases.
8. Describe refrigerant safety precautions.
9. Discuss the different types and viscosities of refrigerant oils.



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

1. Task Sheet: Checking Refrigerant for Contamination
2. Task Sheet: Refrigerant Oil Inspection
3. Chapter PowerPoint
4. Crossword Puzzle and Word Search
5. Videos: [\(A7\) Heating & Air Conditioning Videos](#)
6. Animations: [\(A7\) Heating & Air Conditioning Animations](#)



#### **ACTIVITIES:**

1. Task Sheet: Checking Refrigerant for Contamination
2. Task Sheet: Refrigerant Oil Inspection



#### **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.



#### **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](#).



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