

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

## Chapter 67 – Gasoline, Alternative Fuels, and Diesel Fuels

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Gasoline, Volatility, Air-Fuel Ratios, Normal and Abnormal Combustion, and Octane Rating
2. Gasoline Additives, Testing Gasoline for Alcohol Content, and General Gasoline Recommendations
3. E85, Alternative Fuel Vehicles, Propane, Compressed Natural Gas, Diesel Fuel, and Biodiesel



#### **OBJECTIVES:**

1. Discuss the characteristics of gasoline, refining of gasoline, and volatility of gasoline.
2. Explain air-fuel ratios, normal and abnormal combustion, and octane rating.
3. Discuss gasoline additives and testing gasoline for alcohol content.
4. Discuss general gasoline recommendations.
5. Discuss E85 and alternative fuel vehicles.
6. Discuss propane and compressed natural gas fuels.
7. Compare diesel fuel and biodiesel.



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

1. Task Sheet: Flexible Fuel Vehicle Identification
2. Task Sheet: Alternative Fuel Power and Economy Specifications
3. Task Sheet: Alcohol Content in Gasoline
4. Chapter PowerPoint
5. Crossword Puzzle and Word Search
6. Videos: [\(A8\) Engine Performance Videos](#)
7. Videos: [\(A9\) Light Diesel Videos](#)
8. Animations: [\(A8\) Engine Performance Animations](#)
9. Animations: [\(A9\) Light Diesel Animations](#)
10. Animations: [Environmental Animations](#)



#### **ACTIVITIES:**

1. Task Sheet: Flexible Fuel Vehicle Identification
2. Task Sheet: Alternative Fuel Power and Economy Specifications
3. Task Sheet: Alcohol Content in Gasoline
4. Crossword Puzzle and Word Search



#### **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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