

Automotive Electrical and Engine Performance - 9th edition

Ch27: Gasoline, Diesel, and Alternative 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, Deisel Fuel, and Biodiesel
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OBJECTIVES:

1. Discuss the characteristics of gasoline and refining of gasoline.
 2. Discuss the volatility of gasoline.
 3. Explain air–fuel ratios.
 4. Explain normal and abnormal combustion.
 5. Explain octane rating.
 6. Discuss gasoline additives.
 7. Discuss testing gasoline for alcohol content.
 8. Discuss general gasoline recommendations.
 9. Discuss E85.
 10. Discuss alternative fuel vehicles.
 11. Discuss propane.
 12. Discuss compressed natural gas fuels.
 13. Discuss diesel fuel.
 14. Discuss biodiesel.
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RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Alcohol Content in Gasoline
 2. Task Sheet: Fuel Inspection
 3. Task Sheet: Diesel/Biodiesel Fuel
 4. Crossword Puzzle and Word Search
 5. Videos: (A8) Engine Performance Videos
 6. Animations: (A8) Engine Performance Animations
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ACTIVITIES:

1. Task Sheet: Alcohol Content in Gasoline
 2. Task Sheet: Fuel Inspection
 3. Task Sheet: Diesel/Biodiesel Fuel
 4. Crossword Puzzle and Word Search
 5. Chapter PowerPoint
 6. 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. Ten (10) question end of Chapter Quiz.
3. Five (5) end of chapter Review Question for class discussion.

NOTES AND EVALUATION:

