

# Automotive Technology 6<sup>th</sup> Edition

## Chapter 68 – Gasoline

### Lesson Plan

#### **CHAPTER SUMMARY:**



1. Gasoline, refining, and volatility
  2. Combustion process, normal and abnormal combustion, and octane rating
  3. High-altitude octane requirements, gasoline additives, blending, and reformulated gasoline
  4. Testing gasoline for alcohol content
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#### **OBJECTIVES:**



1. Explain the chemical composition of gasoline and the process of refining gasoline.
  2. Discuss how volatility affects drivability.
  3. Describe the gasoline combustion process, normal versus abnormal combustion, and octane ratings and requirements.
  4. Discuss the benefits of using gasoline additives, blending gasoline, and reformulating gasoline.
  5. Describe the procedure to test gasoline for alcohol content.
  6. List gasoline recommendations for maintaining proper engine operation and minimizing fuel costs.
  7. This chapter will help prepare for Engine Repair (A8) ASE certification test content area “A” (General Engine Diagnosis).
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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>) Internet access required to hyperlink.



1. **Task Sheet ASE (A8-D-2) P-2:** Fuel-Related Scan Data
  2. **Task Sheet ASE (A8-D-2) P-2:** Alcohol Content in Gasoline
  3. Chapter PowerPoint
  4. Chapter 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 ASE (A8-D-2) P-2:** Have students complete Fuel-Related Scan Data Task Sheet.
  2. **Task Sheet ASE (A8-D-2) P-2:** Have students complete Alcohol Content in Gasoline Task Sheet.
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#### **ASSIGNMENTS:**



1. Chapter crossword and word search puzzles.
  2. Complete end of chapter 10 question quiz.
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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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