

Automotive Technology 6th Edition

Chapter 69 – Alternative Fuels

Lesson Plan

CHAPTER SUMMARY:



1. Ethanol, cellulose ethanol, E85, and alternative-fuel vehicles
 2. Methanol, propane, and compressed natural gas (CNG)
 3. Liquefied natural gas (LNG) and synthetic fuels
 4. Safety procedures when working with alternative fuels
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OBJECTIVES:



1. Describe the sources of ethanol and compare E85 with gasoline.
 2. Discuss how alternative fuels affect driveability.
 3. Discuss methanol, propane, natural gas, and synthetic fuel options.
 4. Discuss safety precautions when working with alternative fuels.
 5. 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>)



1. **Task Sheet ASE (A8-A-2) P-1:** Flexible Fuel Vehicle Identification
 2. Chapter PowerPoint
 3. Chapter Crossword Puzzle and Word Search
 4. Animations: Fuel Mileage – Electric, Fuel Mileage – EREV, and Fuel Cell
 5. Videos: Alternative Fuel: Water Powered Cars Part 1 (time 10:25)
 6. Videos: Alternative Fuel: Water Powered Cars Part 2 (time 3:42) and Alternative Fuel Vehicles (time 2:55)
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ACTIVITIES:



1. **Task Sheet ASE:** Have students complete Flexible Fuel Vehicle Identification 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:

