

Automotive Technology 7th Edition

Chapter 92 – Fuel Cells and Advanced Technologies

Lesson Plan



CHAPTER SUMMARY:

1. Fuel-Cell Technology, Refueling with Hydrogen, and Fuel-Cell Vehicle Systems
2. Fuel-Cell Hybrid Vehicles, Hydrogen Storage, and Ultracapacitors



OBJECTIVES:

1. Explain how a fuel cell generates electricity and the types of fuel cells.
2. Discuss hydrogen refueling.
3. Discuss fuel cell vehicle systems.
4. Explain the purpose and function of fuel cell hybrid vehicles.
5. Explain the purpose and function of hydrogen storage.
6. Explain how ultracapacitors work in fuel-cell hybrid vehicles.
7. Describe the HCCI combustion process.



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

1. Task Sheet: Fuel Cell Identification
2. Crossword Puzzle and Word Search
3. Chapter PowerPoint
4. Videos: [\(L3\) Light Duty Hybrid Electric Videos](#)
- 5.. Animations: [\(L3\) Light Duty Hybrid Electric Animations](#)



ACTIVITIES:

1. Task Sheet: Fuel Cell Identification
2. 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.



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: