

# Electric & Hybrid Electric Vehicles 1st Edition

## Chapter 1 – Hybrid and Electric Vehicle Safety

### Lesson Plan

#### **CHAPTER SUMMARY:**



1. High-Voltage Safety, Electric Shock Potential, and Electric Vehicles in the Service Area
2. Personal Protective Equipment (PPE) and High-Voltage Tools and Equipment
3. Safety Interlock System, Depowering the High Voltage System, and Hoisting a Hybrid or EV
4. Moving a Hybrid or Electric Vehicle Around the Shop

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#### **OBJECTIVES:**



1. Explain the need for caution around the high-voltage system.
2. Describe the differences between a CAT I, CAT II, CAT III, and CAT IV multimeter.
3. Explain the difference between yellow/blue and orange high-voltage cables.
4. List the types of personal protective equipment.
5. Describe the process for testing rubber gloves before use.
6. Explain the purpose of the safety interlock system.
7. Describe the process for depowering the high-voltage system.

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#### **RESOURCES:** ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))



1. Task Sheet: High Voltage Circuit Identification
2. Task Sheet: Hybrid/Electric Vehicle HV Circuit Disconnect
3. Chapter PowerPoint
4. [Crossword Puzzle and Word Search \(L3\)](#)
5. [Videos: \(L3\) Light Duty Hybrid Electric](#)
6. [Animations: \(L3\) Light Duty Hybrid Electric](#)

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#### **ACTIVITIES:**



1. Task Sheet: High Voltage Circuit Identification
2. Task Sheet: Hybrid/Electric Vehicle HV Circuit Disconnect

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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. Review and group discussion of the five (5) chapter [Review Questions](#).

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#### **NOTES AND EVALUATION:**

