

# Automotive Electrical and Engine Performance - 9th edition

## Ch25: 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 and Depowering the High-Voltage System
4. Hoisting Hybrid or Electric Vehicle and Moving a Hybrid or Electric Vehicle Around the Shop



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#### **OBJECTIVES:**

1. Discuss high-voltage safety, electric shock potential, and EV/HEV service areas.
2. Discuss electric shock potential.
3. Discuss EV/HEV service areas.
4. Describe the personal protective equipment (PPE) recommended for working on EV/HEV systems.
5. Explain the tools and equipment needed for working on high-voltage electrical systems.
6. Explain the purpose of the safety interlock system.
7. Describe the process for depowering the high-voltage system.
8. Discuss precautions that are needed when hoisting an EV/HEV in the shop.
9. Discuss precautions that are needed when moving an EV/HEV in the shop.



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

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



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#### **ACTIVITIES:**

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



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