**Automotive Technology 7th Edition**

**Chapter 86 – 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, Hoisting a Hybrid or Electric Vehicle

4. Moving a Hybrid or Electric Vehicle Around the Shop

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**RESOURCES:** (All resources may be found at 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

5. Videos: [(L3) Light Duty Hybrid Electric Videos](https://jameshalderman.com/l3_vid_lib_page/)

6. Animations: [(L3) Light Duty Hybrid Electric Animations](https://jameshalderman.com/l3_anim_lib_page/)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTIVITIES:**

1. Task Sheet: High Voltage Circuit Identification

2. Task Sheet: Hybrid/ Electric Vehicle HV Circuit Disconnect

3. 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.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Automotive Technology 7th Edition**

**Chapter 86 – Hybrid and Electric Vehicle Safety**

**Lesson Plan**

**NOTES AND EVALUATION:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_