

# Automotive Technology 7<sup>th</sup> Edition

## Chapter 131 – EV and HEV Transmissions

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Transmissions and Transaxles, Principles Involved, HEV Transmissions, and GM Parallel Hybrid Truck (PHT)
2. GM Two-Mode Hybrid Transmission, Ford/Lincoln 10R80 MHT, and Toyota/Lexus Power-Split System
3. Hybrid Transmission Diagnosis, and Electric Vehicle Transmissions



#### **OBJECTIVES:**

1. Describe the powertrain configuration.
2. Explain the principles involved with vehicle transmissions/transaxles.
3. Describe the function of a hybrid electric vehicle (HEV) transmission.
4. Discuss the transmission in GM parallel hybrid trucks (PHTs).
5. Discuss the GM two-mode hybrid transmission.
6. Discuss the Ford/Lincoln 10R80 MHT.
7. Discuss the Toyota/Lexus power-split system.
8. Discuss the diagnosis of an HEV transmission.
9. Describe the transmissions used in electric vehicles (EVs).



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

1. Task Sheet: Hybrid Vehicle Drivetrain
2. Crossword Puzzle and Word Search
3. Chapter PowerPoint
4. Videos: [\(A2\) Automatic Transmissions and Transaxles Videos](#)
5. Animations: [\(A2\) Automatic Transmissions and Transaxles Animations](#)



#### **ACTIVITIES:**

1. Task Sheet: Hybrid Vehicle Drivetrain
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:**