

Automatic Transmissions and Transaxles 8th Edition

Chapter 12 – EV and HEV Transmissions

Lesson Plan



CHAPTER SUMMARY:

1. Transmission and Transaxles, Principles Involved, HEV Transmissions, and GM Hybrid Truck (PHT)
2. GM Two Hybrid Transmission, Toyota/Lexus Power-Split System, and Toyota Hybrid eCVT Transmission
3. Hybrid Electric Rear Axle, Hybrid Transmission Diagnosis, and Electric Vehicle Transmissions

OBJECTIVES:



1. Describe the function of a hybrid electric vehicle (HEV) transmission.
2. Understand the relationship required between the ICE and electric motor(s).
3. Explain the purpose of an auxiliary electric pump or hydraulic impulse storage generator.
4. Describe the difference between a power-split system and an eCVT in a hybrid vehicle.
5. Discuss the operation of a transmission in a fully electric vehicle.
6. Explain the operation of a two-speed gearing in an electric vehicle

RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)



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

ACTIVITIES:



1. Task Sheet: Hybrid Vehicle Drivetrain
2. Crossword Puzzle and Word Search

ASSIGNMENTS:



1. Chapter crossword and word search puzzles.
2. Complete end of chapter 10 question quiz.
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:

