**Automotive Technology 7th Edition**

**Chapter 126 – Four-Wheel Drive and All-Wheel Drive**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Four-Wheel-Drive Systems, All-Wheel Drive, Transfer Case, and Interaxle Differential

2. Four-Wheel-Drive Axles, and Transfer Case Service and Problem Diagnosis

3. Diagnosing and Servicing Locking Hubs

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**OBJECTIVES:**

1. Explain the operation of four-wheel-drive systems.

2. Explain the operation of all-wheel-drive systems.

3. Discuss front and read differential axle ratios.

4. Describe the components of a transfer case.

5. Discuss the purpose and function of an interaxle differential.

6. Describe the different types of four-wheel-drive axles and drive axle ratios.

7. Describe the procedure to diagnose and service transfer cases.

8. Describe the procedure to diagnose and service locking hubs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Task Sheet: Four-Wheel Drive Identification

2. Task Sheet: Tire Circumference & Final Drive Ratio Variations

3. Task Sheet: Inspect and Adjust Shifting Controls

4. Task Sheet: Transfer Case Replacement

5. Task Sheet: Transfer Case Disassembly and Reassembly

6. Task Sheet: Inspect Front Locking Hubs

7. Task Sheet: Transfer Case Lube Level/Leak Check

8. Task Sheet: Transfer Case Electrical Components

9. Crossword Puzzle and Word Search

10. Chapter PowerPoint

11. Videos: [(A3) Manual Drive Train Axles Videos](https://jameshalderman.com/a3_vid_lib_page/)

12. Animations: [(A3) Manual Drive Train Axles Animations](https://jameshalderman.com/a3_anim_lib_page/)

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**ACTIVITIES:**

1. Task Sheet: Four-Wheel Drive Identification

2. Task Sheet: Tire Circumference & Final Drive Ratio Variations

3. Task Sheet: Inspect and Adjust Shifting Controls

4. Task Sheet: Transfer Case Replacement

5. Task Sheet: Transfer Case Disassembly and Reassembly

6. Task Sheet: Inspect Front Locking Hubs

7. Task Sheet: Transfer Case Lube Level/Leak Check

8. Task Sheet: Transfer Case Electrical Components

9. 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. Review and group discussion of the five (5) chapter Review Questions.

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**NOTES AND EVALUATION:**

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