

Automotive Technology 6th Edition

Chapter 131 – Four-Wheel Drive and All-Wheel Drive

Lesson Plan



CHAPTER SUMMARY:

1. Four-wheel-drive systems, all-wheel drive, and front and rear differential ratios
 2. Transfer case, interaxle differential, and four-wheel-drive axles
 3. Transfer case service and problem diagnosis and diagnosis and servicing locking hubs
 4. Transfer case service
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OBJECTIVES:

1. Explain the operation of four-wheel-drive and all-wheel-drive systems.
 2. Describe the components of a transfer case.
 3. Discuss the purpose and function of an interaxle differential.
 4. Describe the different types of four-wheel-drive axles.
 5. Describe the procedure to diagnose and service transfer cases and locking hubs
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>) Internet access required to hyperlink.

1. Task Sheet ASE (A3-F-1) P-3: Inspect and Adjust Shifting Controls
 2. Task Sheet ASE (A3-F-2) P-3: Inspect Front Locking Hubs
 3. Task Sheet ASE (A3-A-2) P-1, (A3-F-3) P-3: Transfer Case Lube Level Check
 4. Task Sheet ASE (A3-F-4) P-2, (A3-F-5) P-3: Four-Wheel Drive Diagnosis
 5. Task Sheet ASE (A3-F-7) P-2: Transfer Case Replacement
 6. Task Sheet ASE (A3-F-6) P-3: Transfer Case Electrical Components
 7. Task Sheet ASE (A3-F-7) P-2: Transfer Case Disassembly and Reassembly
 8. Chapter PowerPoint
 9. Chapter Crossword Puzzle and Word Search
 10. Videos: [\(A3\) Manual Drive Train Axles Videos](#)
 11. Animations: [\(A3\) Manual Drive Train Axles Animations](#)
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ACTIVITIES:

1. Task Sheet ASE (A3-F-1) P-3: Have students complete Inspect and Adjust Shifting Controls Task Sheet.
 2. Task Sheet ASE (A3-F-2) P-3: Have students complete Inspect Front Locking Hubs Task Sheet.
 3. Task Sheet ASE (A3-A-2) P-1, (A3-F-3) P-3: Have students complete Transfer Case Lube Level Check Task Sheet.
 4. Task Sheet ASE (A3-F-4) P-2, (A3-F-5) P-3: Have students complete Four-Wheel Drive Diagnosis Task Sheet.
 5. Task Sheet ASE (A3-F-7) P-2: Have students complete Transfer Case Replacement Task Sheet.
 6. Task Sheet ASE (A3-F-6) P-3: Have students complete Transfer Case Electrical Components Task Sheet.
 7. Task Sheet ASE (A3-F-7) P-2: Have students complete Transfer Case Disassembly and Reassembly Task Sheet.
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ASSIGNMENTS:

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