**Manual Drivetrains and Axles 9th Edition**

**Chapter 12 –** **Drive Axles and Differentials**

**CHAPTER SUMMARY:**

1. Drive Axle Terminology, Drive Axle Assembly, Axle Designs, and Ring and Pinion Gears

2. Differential Carriers, Differentials, and Limited Slip Differentials

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**OBJECTIVES:**

1. Discuss the different drive axle designs.

2. Explain the features of ring and pinion gears.

3. Discuss the types of differential carriers.

4. State the purpose of differentials and identify the parts of a differential assembly.

5. Identify the different types of limited slip differentials. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Task Sheet: Drive Axle Identification

2. Chapter PowerPoint

3. Crossword Puzzle and Word Search

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

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

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**ACTIVITIES:**

1. Task Sheet: Drive Axle Identification

2. Crossword Puzzle and Word Search

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**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.

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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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