**Automotive Steering, Suspension & Alignment**

**Chapter 12 – Steering Columns and Gears**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Steering Wheels, Steering Wheel Removal, Steering Columns, and Conventional Steering Gears

2. Recirculation Ball Steering Gear, Steering Gear Adjustments, and Rack-And-Pinion Steering Gear

3. Rack-And-Pinion Adjustments

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**OBJECTIVES:**

1. Describe the purpose and function of a steering wheel.

2. Explain how to remove a steering wheel.

3. Discuss steering columns and intermediate shafts.

4. Explain the purpose and function of conventional steering gears.

5. Explain how a recirculating ball steering gear works.

6. Describe how a rack-and-pinion steering gear works.

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**RESOURCES:** [(All resources may be found at jameshalderman.com)](https://jameshalderman.com/)

1. Task Sheet: Electronic Airbag System and Steering Wheel Service

2. Task Sheet: Steering Column Related Diagnosis

3. Task Sheet: Steering Gear Adjustment/Replacement

4. Chapter PowerPoint

5. [Crossword and Word Search Puzzles (A4)](https://jameshalderman.com/a4_puzzles_lib_page/)

6. [Videos: (A4) Suspension and Steering](https://jameshalderman.com/a4_vid_lib_page/)

7. [Animations: (A4) Suspension and Steering](https://jameshalderman.com/a4_anim_lib_page/)

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**ACTIVITIES:**

1. Task Sheet: Electronic Airbag System and Steering Wheel Service

2. Task Sheet: Steering Column Related Diagnosis

3. Task Sheet: Steering Gear Adjustment/Replacement

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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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