**Automotive Technology 6th Edition**

**Chapter 120 –** **Steering Columns and Gears**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Steering wheels, steering wheel removal, steering columns, and conventional steering gears

2. Recirculating ball steering gear and steering gear adjustment

3. Rack-and-pinion steering gear and 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.

7. This chapter will help prepare for Suspension and Steering (A4) ASE certification test content area “A” (Steering System Diagnosis and Repair).

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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>) Internet access required to hyperlink.

**1.** **Task Sheet ASE** **(A4-B-1) P-1, (A4-B-2) P-1**: Airbag System and Steering Wheel Service

**2**. **Task Sheet ASE (A4-B-3) P-2, (A4-B-6) P-2**: Steering Column Related Diagnosis

**3**. **Task Sheet ASE (A4-B-7) P-2**: Steering Gear Adjustment and Replacement

4. Chapter PowerPoint

5. Chapter Crossword Puzzle and Word Search

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

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

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**ACTIVITIES:**

**1. Task Sheet ASE** **(A4-B-1) P-1, (A4-B-2) P-1**: Have students complete Airbag System and Steering Wheel Service Task Sheet.

**2**. **Task Sheet ASE (A4-B-3) P-2, (A4-B-6) P-2**: Have students complete Steering Column Related Diagnosis Task Sheet.

**3**. **Task Sheet ASE (A4-B-7) P-2**: Have students complete Steering Gear Adjustment and Replacement Task Sheet. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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:**

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