

# Automotive Technology 6<sup>th</sup> 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](#)
  7. Animations: [\(A4\) Suspension and Steering Animations](#)
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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.
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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:**

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