

# Automotive Technology 6<sup>th</sup> Edition

## Chapter 122 – Hydraulic Power Steering Systems

### Lesson Plan

#### **CHAPTER SUMMARY:**



1. Hydraulic power steering systems, power steering pump and reservoir, and integral power steering
  2. Variable-effort steering, power steering diagnosis, and power steering fluid
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#### **OBJECTIVES:**



1. Describe the operation of hydraulic power steering hydraulic systems.
  2. Discuss the components and operation of power steering pumps.
  3. Explain the purpose and function of integral power steering.
  4. Discuss the purpose and function of variable effort steering systems.
  5. Discuss power steering diagnosis and troubleshooting.
  6. Describe service of power steering components and fluid.
  7. This chapter will help prepare for Suspension and Steering (A4) ASE certification test content area “A” (Steering Systems 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-4) P-2, (A4-B-5) P-2: Steering Gear Diagnosis
  2. Task Sheet ASE (A4-B-9) P-1, (A4-B-10) P-2: Power Steering Fluid
  3. Task Sheet ASE (A4-B-11) P-1: Diagnose Power Steering Fluid Leakage
  4. Task Sheet ASE (A4-B-12) P-1: Power Steering Pump Belt
  5. Task Sheet ASE (A4-B-13) P-1, (A4-B-14) P-2: Service Power Steering Pump
  6. Task Sheet ASE (A4-B-15) P-2: Inspect Power Steering Hoses and Fittings
  7. Task Sheet ASE (A4-B-20) P-2: Power Steering System Pressure Test
  8. Chapter PowerPoint
  9. Chapter Crossword Puzzle and Word Search
  10. Videos: [\(A4\) Suspension and Steering Videos](#)
  11. Animations: [\(A4\) Suspension and Steering Animations](#)
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#### **ACTIVITIES:**



1. Task Sheet ASE (A4-B-4) P-2, (A4-B-5) P-2: Have students complete Steering Gear Diagnosis Task Sheet.
  2. Task Sheet ASE (A4-B-9) P-1, (A4-B-10) P-2: Have students complete Power Steering Fluid Task Sheet.
  3. Task Sheet ASE (A4-B-11) P-1: Have students complete Diagnose Power Steering Fluid Leakage Task Sheet.
  4. Task Sheet ASE (A4-B-12) P-1: Have students complete Power Steering Pump Belt Task Sheet.
  5. Task Sheet ASE (A4-B-13) P-1, (A4-B-14) P-2: Have students complete Service Power Steering Pump Task Sheet.
  6. Task Sheet ASE (A4-B-15) P-2: Have students complete Inspect Power Steering Hoses and Fittings Task Sheet.
  7. Task Sheet ASE (A4-B-20) P-2: Have students complete Power Steering System Pressure Test 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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