

Automotive Technology 6th Edition

Chapter 101 – Brake Bleeding Methods and Procedures

Lesson Plan



CHAPTER SUMMARY:

1. Brake bleeding, brake bleeder valve loosening methods, and bleeding sequence
 2. Manual bleeding, vacuum bleeding, gravity bleeding, and pressure bleeding
 3. Hydraulic ABS service and brake fluid replacement/flushing
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OBJECTIVES:

1. Discuss the need for brake bleeding.
 2. Discuss the various methods of loosening the brake bleeder valve.
 3. Describe the bleeding sequence for most vehicles.
 4. Describe the manual bleeding procedure.
 5. Discuss how to vacuum bleed and gravity bleed the hydraulic brake system.
 6. Discuss how to pressure bleed the hydraulic brake system.
 7. Describe how to service the hydraulic ABS and flush brake fluid.
 8. This chapter will help prepare for the Brakes (A5) ASE certification test content area “A” (Hydraulic, Power Assist, and Parking Brake Systems Diagnosis and Repair).
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A5-B-12) P-1:** Brake Bleeding
 2. Chapter PowerPoint
 3. Chapter Crossword Puzzle and Word Search
 4. Animations: Bleeding Brakes and Air, Bleeding Brakes, Gravity, and Bleeding Brakes - Pressure Bleeder
 5. Animations: Bleeding Brakes - Reverse Injection and Bleeding Brakes - Vacuum
 6. Videos: See list at the end of the lesson plan.
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ACTIVITIES:

1. **Task Sheet ASE (A5-B-12) P-1:** Have students complete Brake Bleeding 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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Videos: (at <http://www.jameshalderman.com>)

Brake bleeding (time 6:00)
Master cylinder bleeding (time 8:02)
Master cylinder installation (time 4:50)
Hydraulic brakes part 1 (time 24:44)
Master cylinder replacement (time 9:57)
Brake bleeder screw (time 4:47)
Master cylinder (time 3:15)
Bench bleed a master cylinder (time 2:17)
Brake pressure concerns (time 4:02)
Brake fluid fill (time 2:19)
How to do a Complete Brake Flush and Bleed (time 12:52)