

Automotive Technology 6th Edition

Chapter 108 – Machining Brakes Drums and Rotors

Lesson Plan



CHAPTER SUMMARY:

1. Brake drums, brake drum and rotor damage, and brake drum distortion
 2. “Machine to” versus “discard”, machining brake drums, and disc brake rotors
 3. Disc brake rotor distortion, carbon-ceramic rotors, and disc brake rotor thickness
 4. When the rotors should be machined, rotor finish, qualifying a brake lathe
 5. Machining a disc brake rotor and on-the-vehicle rotor machining
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OBJECTIVES:

1. Describe the types of brake drums.
 2. Explain the factors that cause rotor damage.
 3. Discuss brake drum distortion and removal.
 4. Explain how to machine a brake drum and when a brake drum should be discarded.
 5. Explain the procedure for machining disc brake rotor.
 6. Discuss disc brake rotors and causes of rotor distortion.
 7. This chapter will help prepare for the Brakes (A5) ASE certification test content area “C” (Drum Brake Diagnosis and Repair) and “D” (Disc Brake Diagnosis and Repair).
 8. Explain when to machine a disk brake rotor, and discuss rotor thickness and finish.
 9. Explain the procedure for qualifying a brake lathe.
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)

1. Task Sheet ASE (A5-C-2) P-1, (A5-C-3) P-1: Brake Drum Service
 2. Task Sheet ASE (A5-D-6) P-1, (A5-D-7) P-1, (A5-D-8) P-1, (A5-D-9) P-1: Brake Rotor Service
 3. Chapter PowerPoint
 4. Chapter Crossword Puzzle and Word Search
 5. Animations: Brake Drum Micrometer and Micrometer Metric
 6. Animations: Micrometer Metric and Rotor Thickness Measurements
 7. Videos: See list at the end of the lesson plan.
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ACTIVITIES:

1. Task Sheet ASE (A5-C-2) P-1, (A5-C-3) P-1: Have students complete Brake Drum Service Task Sheet.
 2. Task Sheet ASE (A5-D-6) P-1, (A5-D-7) P-1, (A5-D-8) P-1, (A5-D-9) P-1: Have students complete Brake Rotor Service 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:



Videos: (at <http://www.jameshalderman.com>)

- On car brake machining (time 19:13)
- Tapered wheel bearing rotors (time 33:08)
- Replace a wheel stud (time 2:09)
- Turn a rotor (time 7:14)
- Machine a brake rotor (time 4:52)
- On car brake lathe (time 3:04)
- Rotor machining (time 9:19)
- Rotor machining (time 7:49)
- On car brake lathe (time 15:18)
- Machining a brake drum (time 21:54)
- Brake drum measurement (time 5:20)