

Automotive Technology 6th Edition

Chapter 102 – Wheel Bearings and Service

Lesson Plan



CHAPTER SUMMARY:

1. Antifriction bearings, bearing greases, seals, and bearing diagnosis
 2. Wheel bearing service, sealed bearing replacement, and rear drive classifications
 3. Rear axle bearing and seal replacement and bearing failure analysis
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OBJECTIVES:

1. Describe the types of antifriction bearings, bearing greases, and seals.
 2. Explain the diagnosis of defective wheel bearings.
 3. Describe wheel bearing service and sealed bearing replacement.
 4. Discuss rear drive axle classifications.
 5. Describe rear axle bearing and seal replacement.
 6. State the reasons for bearing failure.
 7. This chapter will help prepare for suspension and steering (A4) ASE certification test content area “C” (related suspension and steering service).
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A5-F-1) P-1:** Wheel Bearing Diagnosis
 2. **Task Sheet ASE (A5-F-2) P-2:** Wheel Bearing Service
 3. **Task Sheet ASE (A5-F-6) P-3, (A4-D-2) P-1:** Wheel Bearing and Race Replacement
 4. **Task Sheet ASE (A5-F-8) P-1:** Inspect and Replace Wheel Studs
 5. **Task Sheet ASE (A5-F-7) P-1, (A3-D-3) P-1:** Sealed Wheel Bearing Replacement
 6. Chapter PowerPoint
 7. Chapter Crossword Puzzle and Word Search
 8. Animations: Wheel Bearing Assembly and Wheel Bearing Hub Replacement
 9. Videos: See list at the end of the lesson plan.
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ACTIVITIES:

1. **Task Sheet ASE (A5-F-1) P-1:** Have students complete Wheel Bearing Diagnosis Task Sheet.
 2. **Task Sheet ASE (A5-F-2) P-2:** Have students complete Wheel Bearing Service Task Sheet.
 3. **Task Sheet ASE (A5-F-6) P-3, (A4-D-2) P-1:** Have students complete Wheel Bearing and Race Replacement Task Sheet.
 4. **Task Sheet ASE (A5-F-8) P-1:** Have students complete Inspect and Replace Wheel Studs Task Sheet.
 5. **Task Sheet ASE (A5-F-7) P-1, (A3-D-3) P-1:** Have students complete Sealed Wheel Bearing 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:

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

- Front wheel bearing replacement (time 3:46)
- Wheel bearing adjustment (time 3:44)
- How to check a wheel bearing assembly (time 6:51)
- Front wheel bearing replacement part 1 (time 10:00)
- Front wheel bearing replacement part 2 (time 8:02)
- Tapered wheel bearings (time 1:22:15)
- Timken tapered wheel bearing service (time 55:56)
- Tapered wheel bearing (time 0:24)
- Rear wheel bearing (time 3:59)
- Wheel bearing press (time 3:14)
- Wheel bearing (time 0:45)
- Pressed on axle bearings (time 6:46)
- Rear wheel bearing Jeep Cherokee (time 6:43)
- Axle bearing and seal (time 8:11)
- Wheel bearing noise diagnosis (time 6:56)
- Wheel bearing race removal (time 1:37)
- Hub bearing replacement (time 7:53)
- Wheel bearing noise (time 1:39)
- Wheel hub replacement (time 3:56)
- How to Replace a Front Wheel Bearing (time 16:25)
- Common brake problems and solutions (time 6:44)