

Automotive Technology 6th Edition

Chapter 113 – Tires and Wheels

Lesson Plan



CHAPTER SUMMARY:

1. Introduction to tires, parts of a tire, tire molding, and service description
 2. High-flotation tire sizes, load index and equivalent loads, and speed ratings
 3. Tire pressure and traction, rim width and tire size, and uniform tire quality grading system
 4. All-season tire designation, DOT tire code, tire concicity and ply steer
 5. Vehicle handling and tire slip angle, spare tires, run-flat tires, and GM TPC rating
 6. Tire selection considerations, wheels, tires valves, unsprung weight, and lug nuts
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OBJECTIVES:

1. Explain the purpose and functions of tires.
 2. Identify the parts of a tire and describe how it is constructed.
 3. Discuss tire sizes, load index, ratings, specifications, and grading.
 4. Discuss tire concicity and vehicle handling.
 5. Describe spare tires and run-flat tires.
 6. Describe tire selection considerations.
 7. Explain the construction and sizing of steel and alloy wheels and attaching hardware.
 8. This chapter will help prepare for ASE suspension and steering (A4) certification content area “E” (Wheel and Tire Diagnosis and Repair).
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A4-A-2) P-1:** Tire Identification
 2. Chapter PowerPoint
 3. Chapter Crossword Puzzle and Word Search
 4. Animations: Tire Pressure and Bulge, Tire Pressure and Temperature, and Tire Lateral Runout
 5. Animations: Tire Radial Runout, Tires, Air Vs N₂, a, Wheel Identification Bolt Pattern, and Tire Noise Insert
 6. Videos: Wheels (time 10:34), Wheel bolt circle ID (time 1:23), and Tire siping (time 2:14)
 7. Videos: Wheel manufacturing (time 6:18) and How steel wheels are made (time 5:07)
 8. Videos: Importance of tire balance (time 3:39) and How to interpret tire ratings (time 1:22)
 9. Videos: Tires 101 (time 8:09) and Hydroplaning (time 4:14)
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ACTIVITIES:

1. **Task Sheet ASE (A4-A-2) P-1:** Have students complete Tire Identification 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:
