

Automotive Technology 7th Edition

Chapter 120 – Alignment Diagnosis and Service

Lesson Plan



CHAPTER SUMMARY:

1. Alignment Purpose and Prealignment, Lead/Pull, Memory Steer, and Torque Steer
2. Alignment Specifications, Alignment Setup Procedures, and Measuring Camber, Caster, SAI, Toe, and Toot
3. Diagnostic Angles, Types of Alignments, and Rear Wheel Adjustments
4. Front Camber/Caster Adjustment Methods, Setting Toe, and Centering the Steering Wheel
5. Tolerance Adjustment Procedure, and Reset Steering Angle Sensor (SAS)



OBJECTIVES:

1. Explain the purpose of an alignment and discuss the various checks that should be performed before aligning a vehicle.
2. Explain the diagnosis of lead/pull.
3. Explain the diagnosis of memory steer.
4. Explain the diagnosis of torque steer.
5. Describe alignment specifications.
6. Describe alignment setup procedures.
7. Discuss how to measure camber, caster, SAI, toe, and TOOT.
8. Explain diagnostic angles.
9. List the types of alignments.
10. Discuss rear wheel adjustments.
11. Describe how to adjust front camber/caster.
12. Discuss setting toe.
13. Discuss centering the steering wheel.
14. Discuss the tolerance adjustment procedure.
15. Explain how to reset the steering angle sensor (SAS).



RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Pre-Alignment Inspection
2. Task Sheet: Diagnose Alignment Related Faults
3. Task Sheet: Alignment Angle Readings
4. Task Sheet: TOOT and SAI
5. Task Sheet: Four-Wheel Alignment
6. Crossword Puzzle and Word Search
7. Chapter PowerPoint
8. Videos: [\(A4\) Suspension and Steering Videos](#)
9. Animations: [\(A4\) Suspension and Steering Animations](#)



ACTIVITIES:

1. Task Sheet: Pre-Alignment Inspection
2. Task Sheet: Diagnose Alignment Related Faults
3. Task Sheet: Alignment Angle Readings
4. Task Sheet: TOOT and SAI
5. Task Sheet: Four-Wheel Alignment
6. Crossword Puzzle and Word Search

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ASSIGNMENTS:

1. Chapter crossword and word search puzzles from the website.
2. Complete end of chapter quiz from the textbook.
3. Complete multiple choice and short answer quizzes downloaded from the website.



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.



NOTES AND EVALUATION:
