**Automotive Steering, Suspension & Alignment**

**Chapter 19 – Wheel Alignment Principles**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Definition of a Wheel Alignment, Alignment-Related Problems, Caster, and Toe

2. Steering Axis Inclination, Included Angle, Scrub Radius, and Turning Radius (Toe-Out on Turns)

3. Setback, Thrust Angle, Tracking, and Four-Wheel Alignment

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**OBJECTIVES:**

1. Define wheel alignment and discuss alignment-related problems.

2. Define camber, caster, toe, and SAI.

3. Discuss included angle, scrub radius, turning radius, setback, thrust angle, and tracking.

4. Explain the importance of four-wheel alignment.

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**RESOURCES:** [(All resources may be found at jameshalderman.com)](https://jameshalderman.com/)

1. Task Sheet: Steering and Suspension Concerns

2. Task Sheet: Alignment Specification

3. Chapter PowerPoint

4. [Crossword and Word Search Puzzles (A4)](https://jameshalderman.com/a4_puzzles_lib_page/)

5. [Videos: (A4) Suspension and Steering](https://jameshalderman.com/a4_vid_lib_page/)

6. [Animations: (A4) Suspension and Steering](https://jameshalderman.com/a4_anim_lib_page/)

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**ACTIVITIES:**

1. Task Sheet: Steering and Suspension Concerns

2. Task Sheet: Alignment Specification

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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.

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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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