**Automotive Technology 7th Edition**

**Chapter 29 – Variable Valve Timing and Displacement Systems**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Variable Valve Timing and Diagnosis of Variable Valve Timing Systems

2. Variable Valve Timing and Lift Electronic Control and Variable Displacement Systems

3. Variable Displacement System Diagnosis

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**OBJECTIVES:**

1. Explain the purpose and function of variable valve timing (VVT).

2. List the steps involved when diagnosing a VVT system.

3. Describe how a variable valve timing and lift electronic control (VTEC) system works.

4. Explain the operation of variable displacement systems.

5. Explain the diagnosis of variable displacement systems. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Task Sheet: VVT Inspect and Replace Timing Chain(s) and Gears

2. Task Sheet: Variable Valve Timing System Diagnosis

3. Chapter PowerPoint

4. Crossword Puzzle and Word Search

5. Videos: [(A1) Engine Repair Videos](https://jameshalderman.com/a1_vid_lib_page/)

6. Animations: [(A1) Engine Repair Animations](https://jameshalderman.com/a1_anim_lib_page/)

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**ACTIVITIES:**

1. Task Sheet: VVT Inspect and Replace Timing Chain(s) and Gears

2. Task Sheet: Variable Valve Timing System Diagnosis

3. 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.

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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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