

# Advanced Engine Performance Diagnosis 8<sup>th</sup> Edition

## Chapter 15 – Variable Valve Timing and Displacement Systems

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Variable Valve Timing, Diagnosis of Variable Valve Timing
  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.
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#### **RESOURCES:** (All resources may be found at jameshalderman.com)

1. Task Sheet: Variable Valve Timing Identification
  2. Task Sheet: Variable Valve Timing System Diagnosis
  3. Chapter PowerPoint
  4. Crossword and Word Search Puzzles
  5. Videos: (A1) Cylinder Head and Valve Train Diagnosis and Repair
  6. Animations: (A1) Cylinder Head and Valve Train Diagnosis and Repair
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#### **ACTIVITIES:**

1. Task Sheet: Variable Valve Timing Identification
  2. Task Sheet: Variable Valve Timing System Diagnosis
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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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