

Advanced Engine Performance Diagnosis 8th Edition

Chapter 7 – In-Vehicle Engine Service

Lesson Plan



CHAPTER SUMMARY:

1. Thermostat Replacement, Water Pump Replacement, and Intake Manifold Inspection
 2. Intake Manifold Gasket Replacement, Timing Belt Replacement, and Hybrid Engine Precautions
 3. Gasoline Direct Injection Concerns
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OBJECTIVES:

1. Explain thermostat replacement in engines.
 2. Explain water pump replacement in engines.
 3. Discuss intake manifold gasket inspection.
 4. Discuss intake manifold gasket replacement.
 5. Describe the steps involved in timing belt replacement.
 6. Discuss hybrid engine precautions.
 7. Discuss gasoline direct-injection engine concerns.
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RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Water Pump Diagnosis and Replacement
 2. Task Sheet: Camshaft Timing
 3. Task Sheet: Intake Manifold Gasket
 4. Task Sheet: Valve Adjustment
 5. Task Sheet: Timing Belt/Chain Replacement
 6. Task Sheet: Thermostat Replacement
 7. Task Sheet: Hybrid Engine Service Precautions
 8. Chapter PowerPoint
 9. Crossword and Word Search Puzzles
 10. Videos: (A8 and A1) General Engine Diagnosis
 11. Animations: (A8 and A1) General Engine Diagnosis
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ACTIVITIES:

1. Task Sheet: Water Pump Diagnosis and Replacement
 2. Task Sheet: Camshaft Timing
 3. Task Sheet: Intake Manifold Gasket
 4. Task Sheet: Valve Adjustment
 5. Task Sheet: Timing Belt/Chain Replacement
 6. Task Sheet: Thermostat Replacement
 7. Task Sheet: Hybrid Engine Service Precautions
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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:
