**Automotive Technology 6th Edition**

**Chapter 27 –** **In-Vehicle Engine Service**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Thermostat replacement and water pump replacement

2. Intake manifold inspection/replacement and timing bel belt replacement

3. Engine mount replacement

4. Hybrid engine precautions

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**OBJECTIVES:**

1. Explain thermostat replacement and water pump replacement in engines.

2. Discuss intake manifold gasket inspection and replacement.

3. Describe the steps for timing belt replacement.

4. Describe the steps for engine mount replacement.

5. Discuss hybrid engine precautions.

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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>) Internet access required to hyperlink.

**1.** **Task Sheet ASE (A1-D-5) P-2:** Water Pump Replacement

**2.** **Task Sheet ASE** **(A8-A-11) P-1, (A1-B-5) P-1, (A1-A-6) P-2**: Timing Belt/Chain Replacement

**3.** **Task Sheet ASE (A1-B-4) P-3**: Adjust Valves

4. Chapter PowerPoint

5. Chapter Crossword Puzzle and Word Search

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

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

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**ACTIVITIES:**

**1. Task Sheet ASE (A1-D-5) P-2:** Have students complete Water Pump Replacement Task Sheet.

**2.** **Task Sheet ASE** **(A8-A-11) P-1, (A1-B-5) P-1, (A1-A-6) P-2**: Have students complete Timing Belt/Chain Replacement Task Sheet.

**3.** **Task Sheet ASE (A1-B-4) P-3**: Have students complete Adjust Valves Task Sheet.

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**ASSIGNMENTS:**

1. Chapter crossword and word search puzzles.

2. Complete end of chapter 10 question quiz.

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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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