**Automotive Technology 6th Edition**

**Chapter 37 –** **Engine Assembly and Dynamometer Testing**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Short block preparation, cylinder head preparation, and trial assembly

2. Final short block assembly, installing a camshaft, and piston/rod installation

3. Cylinder head installation, torque-to-yield head bolts, and valve train assembly

4. Final assembly and dynameter testing

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**OBJECTIVES:**

1. Explain short block preparation and cylinder head preparation.

2. Discuss trial assembly and final short block assembly.

3. Describe camshaft installation and piston/rod installation.

4. Explain the cylinder head installation procedure.

5. Discuss torque-to-yield head bolts.

6. Explain valve train assembly and final assembly of an engine.

7. Explain dynamometer testing.

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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-C-14) P-1:** Engine Assembly

2. Chapter PowerPoint

3. Chapter Crossword Puzzle and Word Search

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

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

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**ACTIVITIES:**

**1.** **Task Sheet** **ASE (A1-C-14) P-1:** Have students complete Engine Assembly 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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