

Automotive Engines Theory and Servicing 10th Edition

Chapter 34 – Engine Assembly and Dynamometer Testing

Lesson Plan



CHAPTER SUMMARY:

1. Details, Details, Details, Short Block Preparation, Cylinder Head Preparation, and Trial Assembly
 2. Final Short Block Assembly, Installing the Camshaft, Piston/Rod Installation, and Cylinder Head Installation
 3. Torque-To-Yield Head Bolts, Valve Train Assembly, Final Assembly, and Dynamometer 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 jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Remove and Replace Cylinder Head
 2. Task Sheet: Bore to Piston Clearance
 3. Task Sheet: Piston Ring Installation
 4. Chapter PowerPoint
 5. [Crossword Puzzle and Word Search \(A1\)](#)
 6. [Videos: \(A1\) Engine Repair](#)
 7. [Animations: \(A1\) Engine Repair](#)
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ACTIVITIES:

1. Task Sheet: Remove and Replace Cylinder Head
 2. Task Sheet: Bore to Piston Clearance
 3. Task Sheet: Piston Ring Installation
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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:
