

# Automotive Technology 7<sup>th</sup> Edition

## Chapter 34 – Engine Assembly and 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, and Piston/Rod Installation
3. Cylinder Head Installation, Torque-to-Yield Head Bolts, and Valve Train Assembly
4. Final Assembly and Dynamometer Testing



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#### **OBJECTIVES:**

1. Describe steps to take when starting to assemble the engine.
2. Explain short block preparation.
3. Explain cylinder head preparation.
4. Discuss trial assembly.
5. Discuss final short block assembly.
6. Describe camshaft installation.
7. Describe piston/rod installation.
8. Explain the cylinder head installation procedure.
9. Discuss torque-to-yield head bolts.
10. Explain valve train assembly.
11. Explain final assembly of an engine.
12. Explain dynamometer testing.



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#### **RESOURCES:** (All resources may be found at jameshalderman.com)

1. Task Sheet: Assemble Engine Block
2. Chapter PowerPoint
3. Crossword Puzzle and Word Search
4. Videos: [\(A1\) Engine Repair Videos](#)
5. Animations: [\(A1\) Engine Repair Animations](#)



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#### **ACTIVITIES:**

1. Task Sheet: Assemble Engine Block
2. Crossword Puzzle and Word Search



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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:**