

# Automotive Technology 6<sup>th</sup> 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 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 <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](#)
  5. Animations: [\(A1\) Engine Repair Animations](#)
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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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