

# Automotive Technology 6<sup>th</sup> Edition

## Chapter 29 – Engine Cleaning and Crack Detection

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Mechanical cleaning and chemical cleaners
  2. Spray and steam washing, thermal cleaning, tank and vapor cleaning
  3. Ultrasonic and vibratory cleaning
  4. Crack detection and repair
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#### **OBJECTIVES:**

1. Explain the mechanical cleaning procedure of engines.
  2. Discuss chemical cleaners.
  3. Compare spray and steam washing, thermal cleaning, tank and vapor cleaning, and ultrasonic and vibratory cleaning.
  4. Explain crack detection and crack repair.
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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A1-B-2) P-1, (A1-C-3) P-2:** Cleaning and Crack Detection
  2. Chapter PowerPoint
  3. Chapter Crossword Puzzle and Word Search
  4. Animations: Magnetic Crack Detection
  5. Videos: Cracked Cylinder head (time 2:41)
  6. Videos: Aluminum Block Crack Detection (time 1:31)
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#### **ACTIVITIES:**

1. **Task Sheet ASE (A1-B-2) P-1, (A1-C-3) P-2:** Have students complete Cleaning and Crack Detection 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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