

# Automotive Engines Theory and Servicing 10<sup>th</sup> Edition

## Chapter 4 – Fasteners and Thread Repair

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Threaded Fasteners, Metric Bolts, Grade of Bolts, Tensile Strength, Nuts, and Taps and Dies
  2. Thread Pitch Gauge, Sheet Metal Screws, Washers, and Snap Rings and Clips
  3. Broken Fastener Removal and Threaded Repair Insert
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#### **OBJECTIVES:**

1. Identify bolts and explain the strength ratings of threaded fasteners.
  2. Discuss the purpose of nuts, taps, dies, thread pitch gauges, screws, and washers.
  3. Discuss how snap rings and clips are used.
  4. Explain how to avoid broken fasteners.
  5. Compare the different types of thread repair inserts.
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#### **RESOURCES:** ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Thread Repair
  2. Chapter PowerPoint
  3. [Crossword Puzzle and Word Search \(A0\)](#)
  4. [Videos: \(A0\) Automotive Fundamentals](#)
  5. [Animations: \(A0\) Automotive Fundamentals](#)
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#### **ACTIVITIES:**

1. Task Sheet: Thread Repair
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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:**