

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

## Chapter 20 – Turbocharging and Supercharging

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Forced Induction Principle, Superchargers, Turbochargers, Turbocharger Failures, and Boost Control
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#### **OBJECTIVES:**

1. Discuss airflow requirements and volumetric efficiency of engines.
  2. Explain forced induction principles.
  3. Discuss superchargers.
  4. Discuss turbochargers and turbocharger failures.
  5. Explain boost control.
  6. Describe the purpose of a nitrous oxide system.
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#### **RESOURCES:** ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Turbocharger & Supercharger Systems
  2. Chapter PowerPoint
  3. [Crossword Puzzle and Word Search \(A8\)](#)
  4. [Videos: \(A8\) Engine Performance](#)
  5. [Animations: \(A8\) Engine Performance](#)
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#### **ACTIVITIES:**

1. Task Sheet: Turbocharger & Supercharger Systems
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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:**

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