

# Manual Drivetrains and Axles 9<sup>th</sup> Edition

## Chapter 5 – Manual Transmissions Parts and Operation



### **CHAPTER SUMMARY:**

1. Purpose of Manual Transmissions, Construction, Reverse, Speed Hears, and Synchronizers
  2. Five-Speed Transmission Torque Flow, Shift Mechanisms, and Manual Transmission Gears
  3. Transmission Case and Bearing and Manual Transmission Lubrication
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### **OBJECTIVES:**

1. Explain the construction of a manual transmission.
  2. Discuss synchronizer operation.
  3. Explain five-speed transmission torque flow.
  4. Discuss shifter operation.
  5. Explain the construction of manual transmission gears.
  6. Discuss the purpose of transmission cases and bearings.
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### **RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>)

1. Task Sheet: Manual Transmission/ Transaxle Identification
  2. Chapter PowerPoint
  3. Crossword Puzzle and Word Search
  4. Videos: [\(A3\) Manual Drive Train Axles Videos](#)
  5. Animations: [\(A3\) Manual Drive Train Axles Animations](#)
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### **ACTIVITIES:**

1. Manual Transmission/ Transaxle Identification
  2. Crossword Puzzle and Word Search
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### **ASSIGNMENTS:**

1. Chapter crossword and word search puzzles.
  2. Complete end of chapter 10 question quiz.
  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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