

Automotive Technology 7th Edition

Chapter 122 – Manual Transmissions/Transaxles

Lesson Plan



CHAPTER SUMMARY:

1. The Need for a Transmission, Gear Types, Gear Ratios, and Torque, Speed, and Power
2. Transmission Construction, Speed Gears, and Synchronizer Parts and Operation
3. Five-Speed Transmission Torque Flow, and Manual Transmission/Transaxle Construction and Service
4. Gear Lubrication



OBJECTIVES:

1. Discuss the need for a transmission.
2. Explain the different types of gears.
3. Discuss gear ratios.
4. Describe the relationship between torque, speed, and power.
5. Describe the construction of a transmission/transaxle.
6. Describe speed gears.
7. Explain the construction and operation of a synchronizer.
8. Describe the torque flow through a five-speed manual transmission.
9. Describe the procedure to diagnose, remove, disassemble, assemble, and install a manual transmission/transaxle.
10. Discuss manual transmission/transaxle lubricants.



RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Manual Transmission/ Transaxle Identification
2. Task Sheet: Diagnose Fluid Condition & Loss
3. Task Sheet: Drain and Fill Manual Transmission/Transaxle
4. Task Sheet: Remove and Replace Transmission/Transaxle
5. Task Sheet: Disassemble/Reassemble Transmission/Transaxle
6. Task Sheet: Manual Transmission Noise/Shifting Diagnosis
7. Task Sheet: Manual Transmission/Transaxle Linkage
8. Task Sheet: Transaxle Final Drive Noise Diagnosis
9. Crossword Puzzle and Word Search
10. Chapter PowerPoint
11. Videos: [\(A3\) Manual Drive Train Axles Videos](#)
12. Animations: [\(A3\) Manual Drive Train Axles Animations](#)



ACTIVITIES:

1. Task Sheet: Manual Transmission/ Transaxle Identification
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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.



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.



NOTES AND EVALUATION:
