

# Automotive Technology 7<sup>th</sup> Edition

## Chapter 38 – Series, Parallel, and Series-Parallel Circuits

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Series Circuits, Ohm's Law and Series Circuits, Kirchhoff's Voltage Law, and Series Circuit Laws
2. Parallel Circuits, Kirchhoff's Current Law and Parallel Circuit Laws
3. Determining Total Resistance in a Parallel Circuit, and Series-Parallel Circuit
4. Solving Series-Parallel Circuit Problems



#### **OBJECTIVES:**

1. Define series circuits.
2. Discuss Ohm's law and series circuits.
3. Explain Kirchhoff's voltage law.
4. Explain series circuit laws.
5. Define parallel circuits.
6. Discuss Kirchhoff's current law.
7. Discuss parallel circuit laws.
8. Determine the total resistance of a parallel circuit.
9. Define series-parallel circuits.
10. Explain how to solve series-parallel problems.



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

1. Task Sheet: Series Circuit Task Sheet #1
2. Task Sheet: Series Circuit Task Sheet #2
3. Task Sheet: Series Circuit Task Sheet #3
4. Task Sheet: Parallel Circuit Task Sheet #1
5. Task Sheet: Parallel Circuit Task Sheet #2
6. Task Sheet: Parallel Circuit Task Sheet #3
7. Task Sheet: Series-Parallel Circuit Task Sheet #1
8. Task Sheet: Series-Parallel Circuit Task Sheet #2
9. Task Sheet: Series-Parallel Circuit Task Sheet #3
10. Chapter PowerPoint
11. Crossword Puzzle and Word Search
12. Videos: [\(A6\) Electrical/Electronic Systems Videos](#)
13. Animations: [\(A6\) Electrical/Electronic Systems Animations](#)



#### **ACTIVITIES:**

1. Task Sheet: Series Circuit Task Sheet #1
2. Task Sheet: Series Circuit Task Sheet #2
3. Task Sheet: Series Circuit Task Sheet #3
4. Task Sheet: Parallel Circuit Task Sheet #1
5. Task Sheet: Parallel Circuit Task Sheet #2
6. Task Sheet: Parallel Circuit Task Sheet #3
7. Task Sheet: Series-Parallel Circuit Task Sheet #1
8. Task Sheet: Series-Parallel Circuit Task Sheet #2
9. Task Sheet: Series-Parallel Circuit Task Sheet #3
10. Crossword Puzzle and Word Search

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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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