

## Automotive Electrical and Engine Performance 9th Edition



## ACROSS

- 1 Paths within a parallel circuit that allow current to flow independently of other legs.
- 8 \_\_\_\_\_ circuit: A circuit that includes both series and parallel components, also known as a series-parallel circuit.
- 10 Series-\_\_\_\_\_circuits: Circuits that combine both series and parallel elements. These circuits are also referred to as compound circuits.
- 11 Kirchhoff's \_\_\_\_\_ law: A law stating that the sum of the voltage drops in a closed circuit is equal to the total voltage supplied by the source.
- 12 Separate paths in a parallel circuit that split and meet at junction points, allowing current to flow through multiple legs or shunts.

## DOWN

- 2 \_\_\_\_\_ circuit: A circuit where all components are connected end-to-end in a single path, and current flows through all components. If any part of the circuit breaks, current flow stops.
- 3 Low-resistance paths in a circuit that allow current to bypass certain sections, often used to redirect current flow.
- 4 \_\_\_\_\_ circuit resistance: The combined resistance of all components in a circuit. In a parallel circuit, the total resistance is lower than the smallest individual resistance.
- 5 \_\_\_\_\_ circuit: A circuit with more than one path for current to flow through. If one leg of the circuit opens, the remaining legs can still conduct current.
- **6** \_\_\_\_\_ current law: A law stating that the total current entering a junction in a circuit equals the total current leaving the junction.
- 7 \_\_\_\_\_ circuit: Another term for a combination or series-parallel circuit that includes both series and parallel segments.
- **9** Voltage \_\_\_\_\_: The reduction in voltage across a component or resistor in a circuit, proportional to the resistance according to Ohm's law.