## **Diesel Engine Electronics** Chapter 17



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## ACROSS

- 4 A short circuit in which the current bypasses some or all the resistance of the circuit and flows to ground. Because ground is usually steel in automotive electricity, a \_\_\_\_\_ is a "copper-to-steel" connection.
- are materials with more than four electrons in their atom's 7 outer orbit. Because they have more than four electrons in their outer orbit, it becomes easier for these materials to acquire (gain) electrons than to release electrons.
- 8 The metal end of a wire that fits into a plastic connector and is the electrical connection part of a junction is called a \_
- The movement of free electrons from one atom to another is called 9
- 11 has the ability to generate a voltage signal in semiconductor material (gallium arsenate crystal) by passing current through it in one direction and applying a magnetic field to it at a right angle to its surface. 14
- \_\_\_\_\_ is a unit of measurement for resistance.
- 15 It was once thought that electricity had only one charge and moved from positive to negative. this theory of the flow of electricity through a conductor is called the \_\_\_\_\_ theory of current flow.
- 18 An \_\_\_ is used to measure electrical current.
- 19 \_\_\_\_\_ are a unit of measurement for electrical pressure.
- \_ is a break or interruption in a circuit that will not allow 20 An current to flow.
- The discovery of the electron and its negative charge led to the 21 theory, which states that there is electron flow from negative to positive.



- 22 A device that uses a small current to control a large current is called a
- 23 An element with exactly four elections in its outer orbit is called a

## DOWN

- are material that conducts electricity and heat. A metal that 1 contains fewer than four electrons in its atom's outer shell.
- 2 A \_\_\_\_\_ can measure voltage.
- 3 A 3-terminal variable resistor that varies the voltage drop in a circuit is called a \_\_\_
- has multiple functions for measuring electrical 5 A activity and uses a digital read out.
- 6 A type of electrical connector that has glue inside which provides a weather-proof seal after it is heated \_\_\_\_ \_\_ connectors.
- 10 A \_\_\_\_\_-meter that has multiple functions for measuring electrical activity and uses a digital read out. Also called a  $\ensuremath{\mathsf{DMM}}$
- 12 The term \_\_\_\_\_ usually refers to the plastic portion that snaps or connects together, thereby making the mechanical connection.
- 13 a wiring diagram showing components and connecting wires is called a
- \_ measures the resistance in ohms of a component or circuit 16 An section when no current is flowing through the circuit.
- 17 The unit of measurement for electric flow.