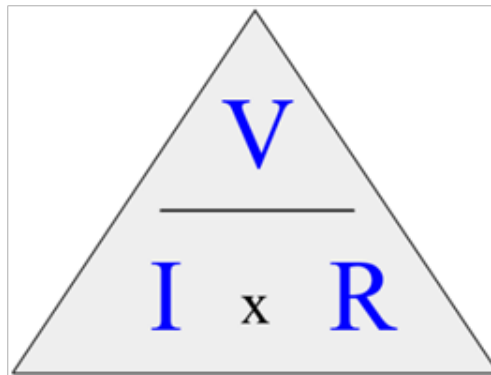


How Does Voltage Impact Compressor Function in the A/C System?

Voltage drop can impact the air conditioning system, but could be disguised as another problem and can be misdiagnosed. Incorrect voltage or voltage drop to a compressor coil will have an impact on how it operates.

What is voltage drop? Voltage drop is the amount of voltage loss that occurs through all or part of a circuit due to a resistance. If you think of it like a garden hose, with the tap open, the water flows freely, but if you place a nozzle on it, it restricts or stops the flow of water.

Calculating the Resistance; Ohm's Law expresses the relationship between the electrical current (amps), electromotive force (volts) and the resistance. If you know the Volts and the amps, you can calculate the resistance.



As mentioned in previous tech tips, a slipping clutch can be the cause of over filling the system or high head pressures. If a compressor, fitted with a clutch, is not getting the correct voltage, it will slip. First, look for the easy solution, a cracked or bent clutch wire, or an issue with a relay or fuse.