

sTEM-at-Work (Puzzle #26): Diagnostic Expectation from an Inductance Test

A technician is working with a vehicle diagnostic system to determine if a subsystem in the vehicle is operating correctly. The technician uses the diagnostic system to compare the flow of charge, the current, in the subsystem's electronic circuit to the energy divided by the amount of charge, the voltage, required if the subsystem is operating correctly.

The subsystem under test has a current voltage behavior that is characteristic of an inductor. For this type of subsystem, the voltage needed is proportional to rate the current changes with time. The technician recorded values of current (the orange dotted curve) and voltage (the blue solid curve) verses time for the subsystem circuit being tested and examined the graphs of that data for an expected pattern.

The vehicle subsystem is operating correctly. (yes or no). Submit your answers at www.fl-ate.org.

