

“Vehicle Voltage Drop” How much do you know about it?

1. Open circuit voltage testing is the best way to find a voltage drop? T F
2. A voltage drop will only occur when current is flowing. T F
3. If source voltage appears on the input pin of any load tested, if the load is good, it will work as designed. T F
4. The ground side of any circuit is not real critical when it comes to voltage drop because the ground return is common to all frame and sheet metal and shared by all components. T F
5. When troubleshooting voltage drops, knowing where the “last parallel splice” in a parallel circuit is located can help direct your troubleshooting. T F
6. Using any clean bare sheet metal as a ground for troubleshooting rather than having to always go back to the battery negative terminal not only saves time, but will be as valid a grounding point as the battery negative terminal itself. T F
7. When piercing wires to find a voltage source, a small pinhole can be left unsealed as the insulation around the wire will re-seal itself due to engine heat. T F
8. A “case grounded” component (load) cannot develop a voltage drop on its ground side because the metal in the case is attached to the common ground of the vehicle. T F
9. Continuity testing with an Ohmmeter is a valid way to find out if the wire being tested can carry the engineered load current. T F
10. There are no “engineered voltage drops” on any vehicle designed after the introduction of OBDII. T F
11. The term “shared current paths” is more important to understand when you are using a “current probe”, rather than when you are doing “voltage drop testing”. T F
12. If you are using a “digital volt/ohm meter” in the volt range, polarity of probe placement relative to battery polarity is not critical because you will read the same voltage value regardless of probe position. T F
13. A voltage drop test across fuses is a valid way to find parasitic draw. T F
14. For voltage drop testing, using a digital volt meter with 1% accuracy in the volt range is acceptable on today’s computer controlled vehicles. T F
15. If you suspected an “intermittent” voltage drop, using a “min-max” feature on a digital volt meter would be a good way to try to find it. T F
16. The maximum allowable voltage drop between the battery post and the battery cable clamp around the post while the starter is cranking is $\frac{1}{2}$ V (.500V) (500mV). T F
17. The maximum allowable voltage drop between the battery’s positive (+) post and the input pin to a rear tail light is 2.0V. T F
18. Read this statement: “Cinder blocks for home building are engineered to a standard size. You would not purchase them in random sizes if you expected all of your foundation walls to be the same height. Why accept less than an engineered standard as a starting point for the “base system” of shared current paths that provides the foundation for the electrical / electronic integrity of the vehicle you are about to troubleshoot?” answer this question: The “base system” of shared current paths mentioned in the above statement has no bearing on vehicle voltage drop testing. T F
19. The accuracy of a voltmeter used to do vehicle voltage drop testing is not critical when you are looking for “voltage” because once the voltage value is present at the point in the circuit tested, that value will register on the meter in use. T F
20. Voltage drop testing has been around since Henry Ford’s day. Because of the modern chassis dipping and sealing processes that Henry did not use, vehicle voltage drop problems are a thing of the past. T F
21. Using a digital voltmeter set in the mV range would be useful to locate the amount of voltage available to the input pin of a fuel pump. T F
22. Using a digital voltmeter set in the Volt range would be useful to fine the exact amount of voltage drop occurring on the ground side of a control module.
23. When testing for voltage drop on the ground side of a case grounded component, one voltmeter probe is on the battery (-) negative terminal and the other probe is always placed within $\frac{1}{2}$ ” of the metal case against a clean spot on the metal to which the component case is attached. T F

Email: CD@Vestest.com for the correct answers.