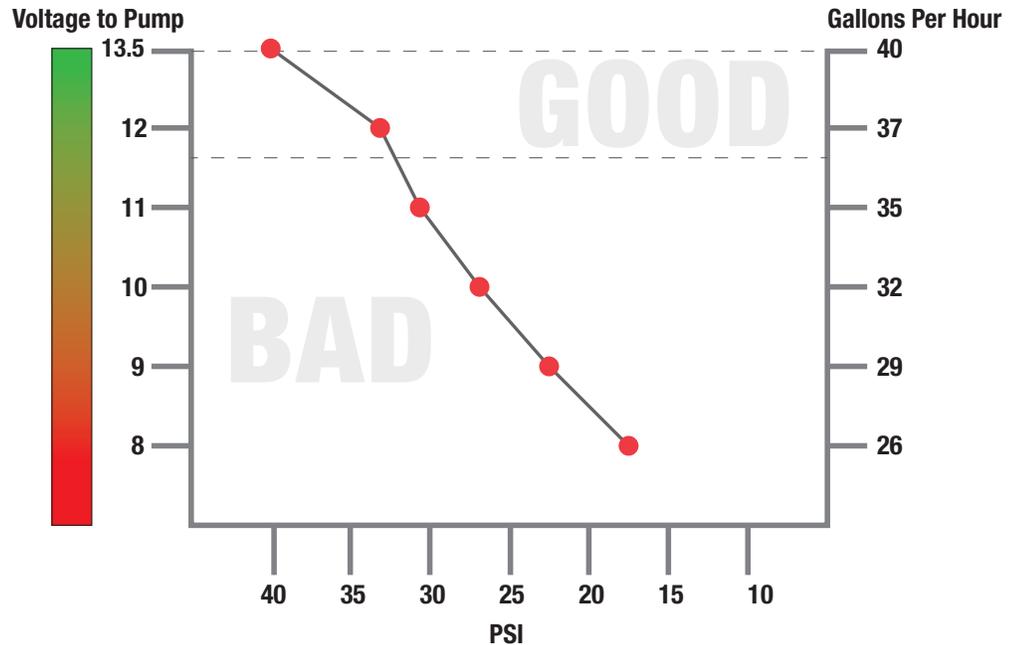




Better Pumps. Better Coverage.

TECHNICAL SERVICE BULLETIN – The Importance of Proper Fuel Pump Voltage

Have you ever heard this, “I checked the system pressure and it was below the vehicle spec. I know I have voltage at the pump because I can hear the pump run and I have pressure, just not enough. It’s got to be the pump.”



If so, you are probably not alone. While it may indeed be the pump, there is a good likelihood that something else may be causing the issue. It could be caused by a faulty fuel pressure regulator, clogged filter, etc. But what many technicians overlook is the electrical system. The heart of the fuel pump is an electric motor. The more voltage to the electric motor the faster it turns, the faster it turns the more pressure and flow it can create. So, let’s dig a little deeper to get a better understanding of what we are talking about.

A normal operating system typically runs at 13.5 volts. The fuel pump reaches its optimum capabilities at 13.5 volts. Any decrease in voltage to the pump will have a direct impact on the pumps ability to reach its full potential. In today’s vehicles, often times the pressure specification range is very narrow and only allows for a few PSI variance. Fall below the pressure spec threshold and you have drivability issues, including a no start condition. For example, a mere 2 volt loss at the pump can cause a 19% drop in fuel volume while at the same time create a 35% drop in pressure. Anything more than a 0.5 volt loss between system voltage and voltage at the pump should be investigated and corrected.

So, with all of this being said, what causes a voltage loss at the pump? The most common causes for voltage loss are a bad ground, frayed or damaged vehicle wiring harness, corroded connections and faulty relays. All easy fixes and all much cheaper than replacing a fuel pump.

To help in diagnosing this problem you can view our Voltage Drop video on YouTube at: <https://youtu.be/luPOZEHfDJ4>

