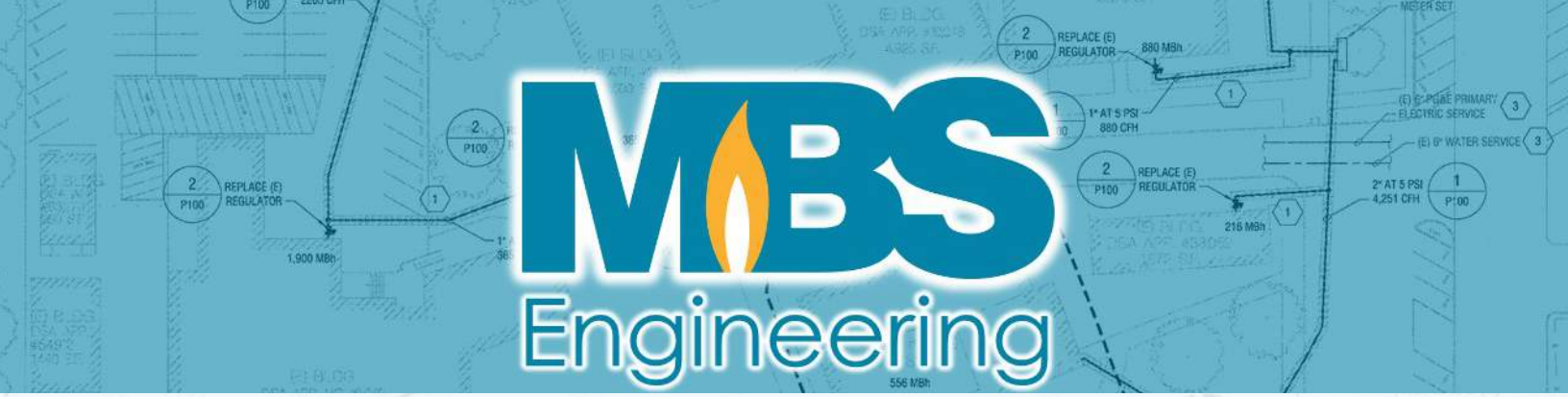


# 5 Things That Can Go Wrong With Pressure Regulators

Gas Pressure Regulators are an essential component for all Natural Gas Systems. They are a safety device used to control higher gas pressures down to a desired lower pressure. While residential properties typically are fed with a workable pressure for gas appliances to use, commercial properties are generally given medium pressure gas which would need to be regulated down to a gas pressure which downstream equipment can operate with. Gas Pressure Regulators should be regularly maintained and checked to ensure a gas system is working efficiently and safely. If gas regulators do fail, downstream equipment can in turn be damaged, incurring large replacement costs. Here are 6 things that can go wrong if a gas regulator is not properly maintained.

1.) Gas Pressure Regulator Releasing Gas from Vent – There are multiple reasons why this can occur, but this is a typical issue that arises. Gas Pressure Regulators typically have an internal relief mechanism that releases gas in the event of over-pressurization. This is a safety feature to protect equipment downstream and indicates something is wrong with the regulator.

2.) Regulator not Properly Set – Gas Pressure Regulators have a pre-determined set pressure when they are installed. This is typically a range from a lower pressure to a higher pressure with a desired set point somewhere in between. These are best set when installed in the gas system using a pressure gauge and adjusting to the proper pressure. If this is not set correctly, it can cause problems within the gas system.

3.) Valve Seat Damaged – The internal valve seat in a gas pressure regulator is the main component that allows a gas regulator to shut off gas or open more to allow more gas. If this is damaged in anyway, it can cause fluctuations from a desired outlet pressure as well as allow gas to flow downstream when it should be stopped. Debris in the gas line is typically the reason behind a damaged valve seat.

4.) Outlet Piping Does Not Work – Gas Pressure Regulators are usually sized according to a few important aspects including total gas demand, inlet gas pressure, outlet gas pressure and line size. The line size where the regulator is installed could differ from downstream piping directly after the regulator. If there are large changes in this downstream piping, pressure losses can occur and cause the regulator to not control properly. Ensure gas pressure regulators are sized for not only the application conditions, but also the configuration of piping in the gas system.

5.) Ruptured or Torn Internal Diaphragm – The internal diaphragm of a regulator is another important component. It is used as barrier between the gas and the spring of a regulator. It is flexible in nature to be able to move up and down when pressure conditions change. If the diaphragm is torn or rup tured, you will see gas being released from a pressure regulator through the vent. This is typically caused when an isolation valve on the inlet or outlet side of the gas regulator is open or closed too quickly. Ensure when regulators are installed or replaced that gas pressure is slowly introduced and valves in turn are opened or closed slowly.