



Triple R Specialty

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Is My Test Pump Working?

This is a very good question and one unfortunately most people don't know how to answer. Knowing how to determine if your test pump is working properly can save you and your company a lot of time and expense. Basically all Hydrostatic Test Pumps work the same, they pump water into a piping system at higher than normal pressure in order to be sure that the system is not leaking and will not fail.

Hydrostatic test pumps consist of two main components, 1) the pump and 2) whatever is being used to power the pump. There are basically three ways to power a pump, a gas engine, an electric motor, or by hand. Motor size, (HP) will be determined by the amount of pressure (pounds per square inch or PSI) and volume (gallons per minute or GPM) that is required. Even though pressure is important, in reality the (GPM) will determine how long it will take to get the job done. Since most tests are done at 200 psi or less, having a higher GPM will save time and money. A pump that is rated for 2.0 GPM @ max pressure of 500 PSI will take more than twice the time to do the job of a pump rated for 4.5 GPM @ max pressure of 400 PSI.

If you think that testing is taking too long and are not sure that the pump you are using is working properly, you need to be able diagnose the problem in the field rather than taking it in for repair, only to find out that there really is nothing wrong with the pump. One question to ask is, "am I filling the system using the pump?" (Remember the test can't be done until the system is full of water) If so, then the system capacity will determine your test time. Your pump will only flow the GPM it is rated for and no more. So divide the system capacity by the pump GPM flow to get the time it will take to first fill the system.

To test your pump, follow these instructions.

- Turn off your water supply.
- Disconnect your pump from the system you are testing.
- Leave the hose connected to the pump and install a ball valve to the end of the hose that was connected to the system. Leave the valve open for now.
- Turn on your water supply, and wait for the water to flow out of the ball valve. If you don't have water coming out of the hose at this point there is a problem with the water supply, such as an obstruction in the supply line or a clogged inlet filter. Once you have water flowing through the pump and out of the valve, turn the pump on.
- As you watch the gauge, begin to **SLOWLY** restrict the flow by slowly closing the valve (DO NOT CLOSE THE VALVE ALL THE WAY). The gauge should start to show pressure building. Never exceed the pressure that the pump is designed to pump. Damage may result to the pump, motor, or hoses.

If the pump is generating pressure using this method then it's working the way it's designed and the problem is elsewhere.

Common problems to look for: air in the system, leaks or the capacity of the system is large.