

INJECTOR OPTIMIZATION TOOL

TROUBLESHOOTING INSTRUCTIONS

BACKGROUND:

This tool is for initial setup and troubleshooting of Chem-Flex™ Injectors and an Aqua-Lab™ Chemical Dispensing System. In order for the injector to work properly and draw chemical this gauge must be in the **“GREEN”** section when installed immediately after an injector that is running. If the gauge is in the red you will either see: intermittent chemical, no chemical draw, or chemical being applied at a very low pressure.

Back pressure refers to the pressure in the solution output line. Excessive back pressure is the main reason that injectors will not draw. If there is ever any concern to why an injector is not drawing chemical, the best and easiest way to diagnose the problem is to check the back pressure. See instructions below:

STEPS:

1. Plug the optimization tool into the outlet line of injector and connect solution output line.
2. Turn on function from car wash controller to actuate Hydra-Cannon valve such that fluid is flowing through both the injector and injector optimization tool and out to the applicator.
3. Read injector optimization tool.
4. If the gauge is in the **“RED ZONE”** the back pressure of the outlet line is either too low or too high. See steps below to correct.

BACK PRESSURE TOO HIGH **(UPPER RED SECTION):**

(Back Pressure May Be Affected By One Or Several Of These Things)

1. Foam generators are clogged/degraded. Clean or replace media in generator.
2. Injector flow size is too large. Go down an injector size (less GPM).
3. Nozzle size on the arch is too small. Go up in nozzle size.
4. Check valves are dirty and or failing. Clean or replace check valves.
5. There is a kink in the line or excess fittings (elbows and reducers increase the back pressure). Check line and replace any kinked sections. Try to reduce fittings.
6. ID of tubing going out to the tunnel is too small. Go up a size in inside diameter.
7. Check valves have too high of cracking pressure. Replace check valve with lower pressure check valve.
8. Clean foot valve.

BACK PRESSURE TOO LOW **(LOWER RED SECTION):**

(Back Pressure May Be Affected By One Or Several Of These Things)

1. Injector flow too low. Increase injector size.
2. Nozzle size to large. Reduce nozzle size.

