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BATalk - is an electronic newsletter sharing important certification program information with Washington's Backflow Assembly Testers (BAT).

IMPROPER TEST KIT PRACTICES

The increased popularity of the Midwest Model 845 test kits over the Model 830 has resulted in some cases of unique improper test kit use. Due to its smaller size & lighter weight, some testers may be inclined to hold the test kit from the bottom, unknowingly affecting the function of the gauge.

A differential pressure test kit contains an internal diaphragm connected to the differential pressure gauge that responds to water pressure. As pressure changes on one side of the diaphragm, the needle on the gauge moves accordingly. This is of particular importance when testing a DCVA, PVBA or SVBA as the test kit is only pressurized on the high side. In order for the test kit to function properly, the diaphragm must "breathe" through the low side hose connection.



Many testers find it more convenient to hold the test kit from the bottom, sometimes inadvertently covering the low side hose connection with the palm of their hand. This situation prevents the diaphragm from moving properly. Once the diaphragm is no longer allowed to "breathe" as the pressure decreases on the high side, a vacuum is created preventing the needle on the gauge to drop sufficiently to

provide an accurate reading. This discrepancy can be confirmed by noting an abnormally high differential pressure reading for a check valve, as well as a noticeable vacuum release, or "sucking sound" when the tester's hand is removed from the low side hose connection. Incidentally, this is also the reason that USC 10th Edition Field Test Procedures requires that all unused hoses must be kept at the same elevation as the test kit. If the low side hose is connected to the test kit and allowed to hang below the test kit, the difference in atmospheric pressure at the low side hose outlet will affect the gauge reading.

Proper handling of a Model 845 test kit is as important as proper test kit elevation when testing backflow assemblies. Just as improper test kit elevation can provide passing results for a component or assembly that would otherwise fail- improper hand placement when testing can also provide misleading test results. A Model 845 test kit may be held from the bottom while testing a DCVA, PVBA or SVBA provided that the low side hose connection is not covered. Many testers may find it easier to hold the test kit by the gauge face to eliminate the potential of contact with the hose connections on the bottom of the test kit.

Authored by Kelly Riehl, Washington Certification Services

MAINTAINING YOUR BACKFLOW TEST KIT

When in the field, it is vital for every BAT to have a fully functional backflow test kit. As an authorized backflow test kit service center, the professionals at Branom Instrument Company test and repair hundreds of test kits every year and regularly find common valve issues caused by normal wear and tear. Here are some troubleshooting tips to help keep you going until your next annual certification.

The three main valve issues we come across are seizing, loose knobs and leaking. For valve seizes, regardless of the severity, spray some lubricant onto the valve making sure it gets down the stem and turn the valve back and forth several times. You may need to repeat 2-3 times to get the valve to function normally.

When troubleshooting loose knobs, or if the knob contacts the gauge body or manifold, there is a simple solution. Use a 5/64" Allen wrench and loosen the set screw on the side. Remove the knob, realign it and tighten the set screw in the dimple of the stem. Unless the stem is damaged, this method should fix the problem.

Finally, leaky valves are generally caused by overtightening, which can wear down both the valve seat and the valve stem. If replacing the valve seat does not work, then you will need to replace the valve. Guidance on replacing these parts can be provided based on the specific model.

It is critical that a BAT keeps their instrument maintained, and the backflow test kit sales and service experts at Branom Instrument Company are here to help you.

Authored by Corey Porter of [Branom Instruments Co.](#)

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