Abridged Version of the NEWWA Backflow Prevention Device Assembly Test Procedures for a RPZ Utilizing a 3 Valve Test Kit

(RPZ) Reduced Pressure Principle Backflow Prevention Assembly (tS TT 2 1)
Test Check Valve Number One for Tightness (small t) and Differential Pressure (Minimum 5 PSID)
1. Close the downstream shut-off valve - if there is no discharge from the relief valve, the first check is holding tight. Verify upstream shut-off valve is open. 2. Orientate the test kit - Close high and low control valves. Open the vent control valve. 3. Connect the high pressure hose to test cock #2 and the low pressure hose to test cock #3. 4. Open test cocks #2, #3 and bleed air from the test kit high and low control valves. 5. Record the differential pressure gauge reading. It should be a minimum of 5 PSID.
Test Check Valve Number Two to insure that the second check valve is tight against backpressure. (T)
6. Bleed the vent hose and connect it to test cock #4; open test cock #4. 7. Open the test kit high control valve. The second check valve is considered tight if the differential pressure gauge remains steady and no water is discharging from the relief valve. Proceed to step 8. If the differential pressure gauge reading drops and water discharges from the relief valve, the second check is recorded as leaking. Since water is discharging from the relief valve the downstream shut-off valve cannot be tested but can be considered tight. The relief valve can still be tested. Close test cock #4 and proceed to step 9. If the differential pressure gauge reading increases, close test cock #4.
No-Flow Tightness Validation Test (T)
8. Close test cock #2. The device is in a no-flow condition if the differential pressure gauge reading holds steady. Open test cock #2 and proceed to step 9. If the gauge drops to zero, the device is in a flow condition and the downstream shut-off valve is recording as leaking. Invalid test. Terminate test until a no-flow condition can be established or utilize alternative procedures.
Test the relief valve opening differential pressure. (2)
9. Slowly open the low control needle valve on the test kit ¼ **turn**. 10. Record the differential pressure gauge reading at the point when water initially drips from the relief valve opening. The differential pressure gauge reading should be a minimum of 2 PSID.
Test Check Valve Number Two for Differential Pressure Across Second Check Valve (Minimum 1 PSID)
11. Connect the high pressure hose to test cock #3 and the low pressure hose to test cock #4. 12. Open test cocks #3, #4 and bleed air from the test kit high and low control valves. 13. Record the differential pressure gauge reading. It should be a minimum of 1 PSID. If the gauge reading is 0 PSID, the downstream shut-off valve may be leaking and a backpressure condition may exists. 14. Close tests cocks #3 and #4. Disconnect the hoses.

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