



TEST PROCEDURE FOR PRESSURE VACUUM BREAKER ASSEMBLY (PVB)

USING A 5 – VALVE DIFFERENTIAL PRESSURE GAUGE TEST KIT

Test Objective: To determine if and at what PSID the air inlet opens, to determine if the check valve will close tight and measure the static PSID across the check valve.

Location of Equipment: Hold test gauge and all unused hose level with the center of the PVB.

Test of Air Inlet Valve

1. Remove the air inlet cover.
2. Connect the high side hose of the test gauge to test cock # 2. Test gauge valves should be open.
3. Close the high side control valve.
4. Open test cock # 2 purging air from the high side of the test gauge.
5. Close the high side bleed valve, the needle will peg at the high end of the scale.
6. Close shutoff valve # 2 slowly to prevent water hammer.
7. Close shutoff valve # 1.
8. Open high side bleed valve slowly observing the needle on the test gauge. As the needle falls to the low end of the scale, observe the PSID at which the air inlet opens.
9. If the air inlet valve opens at 1 PSID or above, record the PSID. **Note:** If the air inlet valve does not open at 1 PSID or above, you must record the actual PSID or that the air inlet valve did not open. The PVB just failed the performance test.

Test of Check Valve

10. Close test cock # 2.
11. Open the high side bleed valve and remove the hose from test cock # 2.

12. Open shutoff valve # 1 and re-pressurize the assembly.
13. Connect the high side hose to test cock # 1.
14. Open test cock # 1 purging air from the high side of the test gauge.
15. Close the high side bleed valve, the needle will peg at the high end of the scale.
16. Close shutoff valve # 1.
17. Open test cock # 2, water will flow out allowing the air inlet valve to open.
18. Observe the needle on the test gauge, when the water stops flowing from test cock # 2 the needle will fall to the low end of the scale.
19. If the needle holds steady at 1 PSID or above, record the check valve as "closed tight." Also record the static PSID observed on the test gauge. **Note:** If the needle does not hold steady at 1 PSID or above, you must record the check valve as "leaked." The PVB has just failed the performance test.

If either the air inlet valve or check valve fails the initial performance test, you must clean and repair the PVB and conduct the final performance test.

Return to Service

20. Close test cock # 1.
21. Close test cock # 2.
22. Open all valves on test kit.
23. Remove the high side hose from test cock # 1.
24. Drain the hose and test kit to prevent freezing.
25. Open shutoff valve # 1.
26. Open shutoff valve # 2.
27. Dry the entire PVB and inspect for any leakage from the test cocks, air inlet valve and shutoff valve packing. The PVB must be holding pressure with no leakage when you are finished testing.
28. Replace the air inlet cover.
29. Complete, sign and distribute the cross connection control assembly performance test forms.