

TEST NO. 1

PRESSURE VACUUM BREAKER ASSEMBLY (PVB)

**TEST OBJECTIVE:**

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

LOCATION OF TEST EQUIPMENT:

Hold the test kit and unused hoses level with the center of the PVB.

USING A 3-VALVE DIFFERENTIAL PRESSURE GAUGE TEST KIT**Test of Air Inlet Valve**

1. Remove the air inlet cover.
2. Connect the high side hose of the test kit to test cock No. 2. Test kit valves should be open.
3. Close the low side control valve (B).
4. Open test cock No. 2 purging air from the high side of the test kit.
5. Close the bypass control valve (C). The needle will peg at the high end of the scale.
6. Close shut-off valve No. 2 slowly to prevent water hammer.
7. Close shut-off valve No. 1.
8. Open the low side control valve (B) slowly, observing the needle on the test kit. 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 opened 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 that it opened, or that the air inlet valve did not open. The PVB has just failed the performance test.

Test of Check Valve

10. Close test cock No. 2.
11. Open the bypass control valve (C) and remove the hose from test cock No. 2.
12. Open shut-off valve No. 1 and re-pressurize the assembly.
13. Connect the high side hose to test cock No. 1.
14. Open test cock No. 1 purging air from high side of test kit.
15. Close the high side control valve (A). The needle will peg at the high end of the scale.
16. Close shut-off valve No. 1.
17. Open test cock No. 2, water will flow out allowing the air inlet valve to open.

(continued on next page)

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LOCATION OF TEST EQUIPMENT:

Hold the test kit and unused hoses level with the center of the PVB.

Test of Check Valve

18. Observe the needle on the test kit when water stops flowing from test cock No. 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 kit. Note: If the needle does not hold steady at 1 PSID or above, you must record the actual PSID observed and that the check valve “leaked.” The PVB just failed the performance test.

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

20. Close test cock No. 1.
21. Close test cock No. 2.
22. Open all valves on test kit.
23. Remove the hose from test cock No. 1.
24. Drain the hoses and test kit to prevent freezing.
25. Open shut-off valve No. 1.
26. Open shut-off valve No. 2.
27. Dry the entire PVB and inspect for leakage from the test cocks, air inlet valve and the shut-off valve packings. 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 device performance test form.