

Table B-2 RPBA/RPDA test reporting

Relief valve [ $\geq 2.0$ psid]	Dripped at: or failed to open? ____ (check)	___ . __ psi
	Continued to open?	yes ____, no ____
Check valve #2 [Holds tight]	Pressure drop: Valve tight against backpressure?	yes ____, no ____
Check valve #1 [5.0 psid]	Pressure drop: valve tight?	___ . __ psi yes ____, no ____
Air gap distance approved?		yes ____, no ____
Test cock #4 opened, meter moved?		yes ____, no ____
Detector meter reading: _____		

## Test Procedures for Double Check Valve and Double Check Detector-type Assemblies using a Differential Pressure Gauge Test Kit

### Check Valve #1 and Check Valve #2

**Performance Criteria:** The check valves shall be loaded internally so that when the supply pressure is at least 1 psi and the outlet pressure is atmospheric, each check valve will be drip-tight in the normal direction of flow. [AWWA C510 Sec. 4.3.2.1]

**Test Objective, Method and Reporting Requirements:** To test check valve #1 and check valve #2 for tightness in the direction of flow and determine the static pressure drop across each check valve using a differential pressure gauge test kit. This is accomplished by

- Connecting the differential pressure gauge to the upstream side of the check valve being tested. The test gauge center line must be held at the same level as the downstream test cock reference point (outlet of the test cock or the water level if a sight tube is used).
- Closing both shut-off valves on the DCVA to isolate the pressure within the assembly.
- Releasing water downstream of the check valve so the pressure is reduced to atmospheric.
- When flow from the downstream test cock ceases and the differential pressure gauge reading has stabilized, record the psid across the check valve.
- The check valve holding tight at a minimum of 1.0 psid or greater.

**Record "tight" or "leaked" on the test report form for check valve #1 or check valve #2 along with the psid values for each check valve. Note: leaked indicates the gauge reading dropped to 0.**

When testing a DCVA, the *differential pressure gauge reading* being measured is the difference between the supply pressure on the upstream side of the check valve and the atmospheric pressure on the downstream side of the check valve.

When water flow stops from the downstream check valve test cock and the gauge reading has *stabilized*, record the check valve as closed tight at the psid reading on the gauge.

### Bypass Meter on DCDA

**Performance Criteria:** The bypass meter should register any flow (e.g., 3 to 5 gallons) that occurs through the assembly (mainline or bypass). However, it is not necessary that the meter accurately register the flow.

**Test Objective, Method and Reporting Requirements:** Partially open the mainline assembly's Test Cock #4. Observe the bypass meter; meter dial should move to register flow.

In addition, if test cock #4 of the mainline assembly is located on the bypass piping (rather than on the body of the main line assembly), close shutoff valve #2 on the bypass assembly and partially open test cock #4. If flow continues from the test cock, this indicates the bypass connection to the body of the mainline assembly is not restricted.

**Record on the test report form that the "detector" meter registered flow (if required by the administrative authority). (Table B-3)**

#### Observe and verify that the DCVA/DCDA

- Is designated as an approved assembly by the administrative authority.
- Is installed in the approved orientation.
- Provides the correct protection for the potential hazard (the water supplier has the responsibility to verify the proper assembly was installed for protection from the degree of hazard).
- Is correctly installed with approved clearances for testing and maintenance.
- Test results are properly documented on a test report form:
  - Check valve #1: holds tight at 1.0 psid or greater
  - Check valve #2: holds tight at 1.0 psid or greater
  - Detector meter: registers flow and record the bypass meter reading (if required)

### Test Procedures for Pressure Vacuum Breaker Assemblies using a Differential Pressure Gauge Test Kit

#### air inlet valve (PVBA)

**Performance Criteria:** The air inlet valve will initially open when the differential pressure in the body is no less than 1.0 psi above atmospheric pressure. The air inlet valve will also continue to open fully when water has drained from the body of the assembly.

**Table B-3 DCVA/DCDA test reporting**

Check valve #1 [ $\geq$ 1.0 psid]	Pressure drop:	___ . ___ psi
	Valve tight?	yes ____, no ____
Check valve #2 [ $\geq$ 1.0 psid]	Pressure drop:	___ . ___ psi
	Valve tight?	yes ____, no ____
Test cock #4 opened, metered moved?		yes ____, no ____
Detector meter reading: _____		