



To: Manufacturers of backflow prevention assemblies

From: Paul H. Schwartz, Chief Engineer

Date: 12 October 2012

Subject: Errata–Evaluation Policy 10-001-R1-Strength of Body Test

This memo is to notify the manufacturers of backflow prevention assemblies that the Foundation Engineering Staff is issuing an erratum (R1) of the Evaluation Policy 10-001. This revision is only being issued to correct clerical errors in Evaluation Policy 10-001, which addresses the body strength tests performed on double check detector assemblies (DCDA), reduced pressure principle detector assemblies (RPDA), double check detector assemblies-Type II (DCDA-II), and reduced pressure principle detector assemblies-Type II (RPDA-II).

The body strength tests had been added to the Manual of Cross-Connection Control 10th Edition to parallel the strength of body test contained in Section 5 of Underwriters Laboratory (UL) Standard 1469. The Foundation was informed by UL that Standard 1469 was revised on 19 March 2010. The revised Standard 1469 removed the four or five times hydrostatic pressure, and replaced it with a four times only requirement for all sizes. It also changed the requirement of this test from one (1) minute to five (5) minutes.

Additional clarification for this body strength test had been added regarding the seals and gaskets used during this test.

The subject tests in the 10th Edition had been updated with Evaluation Policy 10-001 which was implemented on 1 August 2010. However, the time requirement of five (5) minutes was inadvertently left out of the attached laboratory protocol. In addition, duplicate text has been removed from 10.1.2.10.3.5.a. Both are indicated with ~~double strikethrough~~.

Should you require any additional information, please contact our Laboratory Staff.

DCDA - 10.1.2.6.3.5 (Manual 10th Ed - page 384)

Purpose: To determine the capability of the assembly to withstand the body strength test pressure.

Requirement: All components of the assembly shall withstand a hydrostatic pressure of:

~~For line sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP for a period of one five minutes without any structural damage which allows leakage.~~

Steps:

- a. Plug the inlet and outlet of line-size assembly. With both shutoff valves open on the line size assembly and all of the air bled from the assembly, a hydrostatic pressure of the following shall be supplied through the No. 2 test cock of the line-size assembly for a period of ~~one~~ five minutes:
 - ~~For line sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~
 - ~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP.~~

The bypass piping shall be open and the water meter shall be permitted to be removed and replaced with a section of equally sized piping.

- b. Any evidence of leakage from structural damage shall be cause for rejection.

Note: Leakage of seals or gaskets at flanges or threaded joints shall not be cause for rejection. Seals and gaskets made out of other materials, or reinforced, may be substituted.

RPDA - 10.1.2.7.3.5 (Manual 10th Ed - page 388)

Purpose: To determine the capability of the assembly to withstand the body strength test pressure.

Requirement: All components of the assembly shall withstand a hydrostatic pressure of: ~~For line~~

~~sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP for a period of one five minutes without any structural damage which allows leakage.~~

Steps:

- a. Plug inlet and outlet of line-size assembly. With both shutoff valves open on the line-size assembly and all of the air bled from the assembly, a hydrostatic pressure of the following shall be supplied through the No. 2 test cock of the line-size assembly for a period of ~~one~~ five minutes:

~~For line sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP.~~

The bypass piping shall be open and the water meter shall be permitted to be removed and replaced with a section of equally sized piping.

- b. Any evidence of leakage from structural damage shall be cause for rejection.

Note: Leakage of seals or gaskets at flanges or threaded joints shall not be cause for rejection.

Seals and gaskets made out of other materials, or reinforced, may be substituted. If the differential pressure relief valve discharges during the test, it shall be permitted to block the relief valve closed.

DCDA-II - 10.1.2.9.3.5 (Manual 10th Ed - page 400)

Purpose: To determine the capability of the assembly to withstand the body strength test pressure.

Requirement: All components of the assembly shall withstand a hydrostatic pressure of: ~~For line~~

~~sizes up to 6 inch (150mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP.~~

for a period of ~~one~~ five minutes without any structural damage which allows leakage.

Steps:

- a. Plug inlet and outlet of line-size assembly. With both shutoff valves open on the line-size assembly and all of the air bled from the assembly, a hydrostatic pressure of the following shall be supplied through the No. 2 test cock of the line-size assembly for a period of ~~one~~ five minutes:

~~For line sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP.~~

The bypass piping shall be open and the water meter shall be permitted to be removed and replaced with a section of equally sized piping.

- b. Any evidence of leakage from structural damage shall be cause for rejection. Note: Leakage of seals or gaskets at flanges or threaded joints shall not be cause for rejection. Seals and gaskets made out of other materials, or reinforced, may be substituted.

RPDA-II - 10.1.2.10.3.5 (Manual 10th Ed - page 405)

Purpose: To determine the capability of the assembly to withstand the body strength test pressure.

Requirement: All components of the assembly shall withstand a hydrostatic pressure of: ~~For line~~

~~sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP.~~

for a period of ~~one~~ five minutes without any structural damage which allows leakage.

Steps:

- a. Plug inlet and outlet of line-size assembly. With both shutoff valves open on the line-size assembly and all of the air bled from the assembly, a hydrostatic pressure of the following shall be supplied though the No. 2 test cock of the line-size assembly for a period of ~~one~~ five minutes:

~~For line sizes up to 6 inch (150 mm), the greater of 875 psi (6,032 KPa) or five times the maximum working water pressure (MWWP).~~

~~For line sizes 8 inch (200 mm) and larger, the greater of 700 psi (4,825 KPa) or four times the MWWP~~

~~shall be supplied though the No. 2 test cock of the line-size assembly for a period of one minute.~~

The bypass piping shall be open and the water meter shall be permitted to be removed and replaced with a section of equally sized piping.

- b. Any evidence of leakage from structural damage shall be cause for rejection. Note: Leakage of seals or gaskets at flanges or threaded joints shall not be cause for rejection. Seals and gaskets made out of other materials, or reinforced, may be substituted. If the differential pressure relief valve discharges during the test, it shall be permitted to block the relief valve closed.