

# Testing Procedures & Trouble Shooting Guide



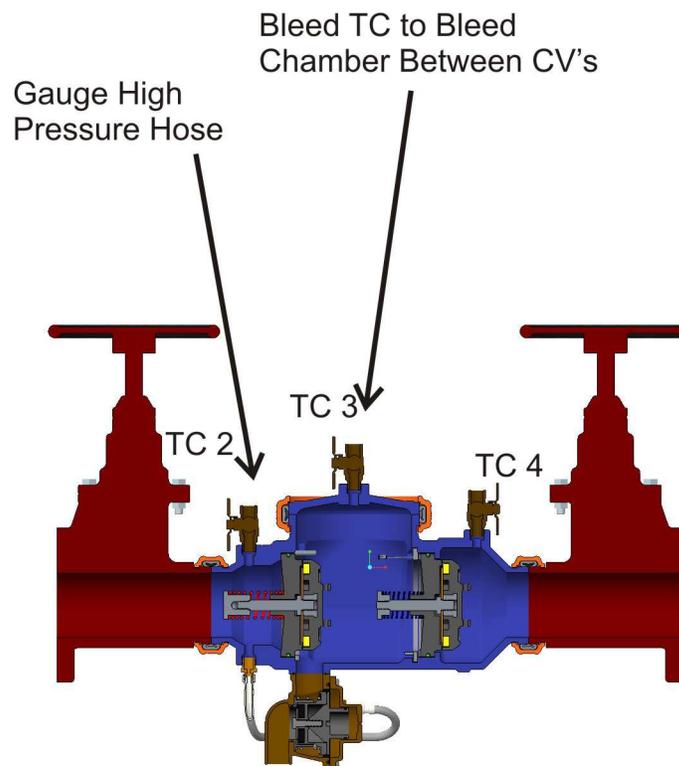
Reduced Pressure Zone Assembly

(2 1/2", 3", 4", & 6")

Reduced Pressure Zone Detector Assembly (-RPDA)

(2 1/2", 3", 4" & 6)

## First Check Valve Test



1) Bleed all test cocks. First open test cock 4, make sure it is slightly open and water is flowing. Then open TC3, then TC2, then TC1 until they are completely bled. Close all TC's in the reverse order.

2) Attach test gauge high pressure hose (red hose) to test cock 2 (TC2).

3) Attach test gauge low pressure hose (green hose) to test cock 3 (TC3). Attach a bypass hose to the low side bleed needle valve.

4) Open TC3 fully, then open the low side needle valve and let the water run out.

5) Open TC2 and pressurize the test kit.

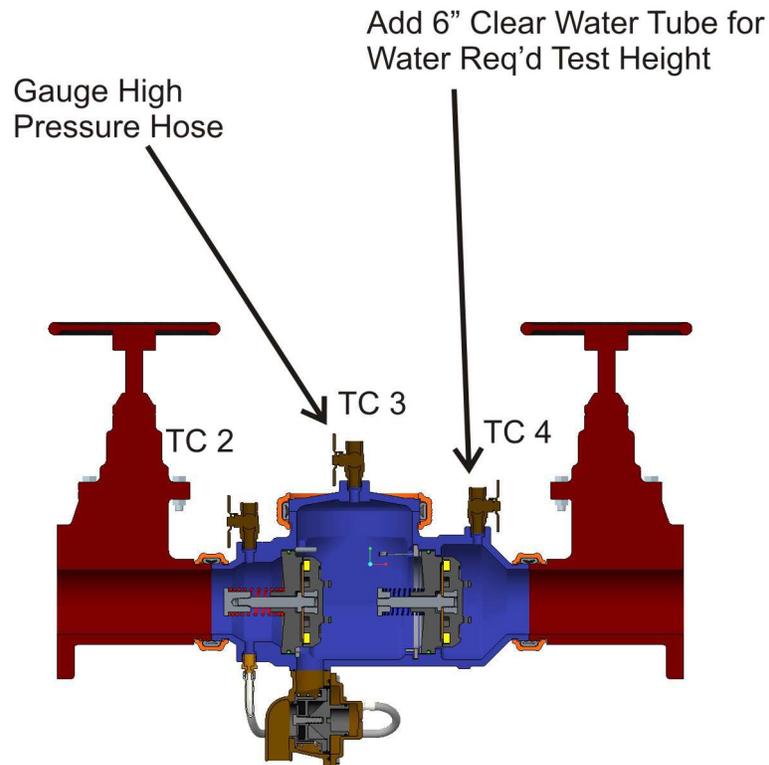
- 6) Attach a bypass hose from the high side bleed needle valve to TC4. Open TC4.
- 7) Open the low side bleed needle valve. Allow the pressure to build and close the low side needle valve. When the reading settles, this is the pressure differential across CV1, record the value.

## **Relief Valve Test**

- 1) Bleed all test cocks. First open test cock 4, make sure it is slightly open and water is flowing. Then open TC3, then TC2, then TC1 until they are completely bled. Close all TC's in the reverse order.
- 2) Attach test gauge high pressure hose (red hose) to test cock 2 (TC2).
- 3) Attach test gauge low pressure hose (green hose) to test cock 3 (TC3). Attach a bypass hose to the low side bleed needle valve.
- 4) Open TC3 fully, then open the low side needle valve and let the water run out.
- 5) Open TC2 and pressurize the test kit.
- 6) Open the high side needle valve and bleed the high side hose.
- 7) Close SOV2.
- 8) Close the high side needle valve. Once the test kit has pressurized, slowly close the low side needle valve.
- 9) If test kit pressure drops and the relief valve opens, CV1 is leaking. If the Test kit pressure holds, proceed to step 10.
- 10) Attach a bypass hose from the low side bleed needle valve to the high side bleed needle valve.
- 11) Open the high side needle valve one turn, then slowly open the low side needle valve one-quarter turn. Record the pressure when the water begins to discharge from the relief valve.

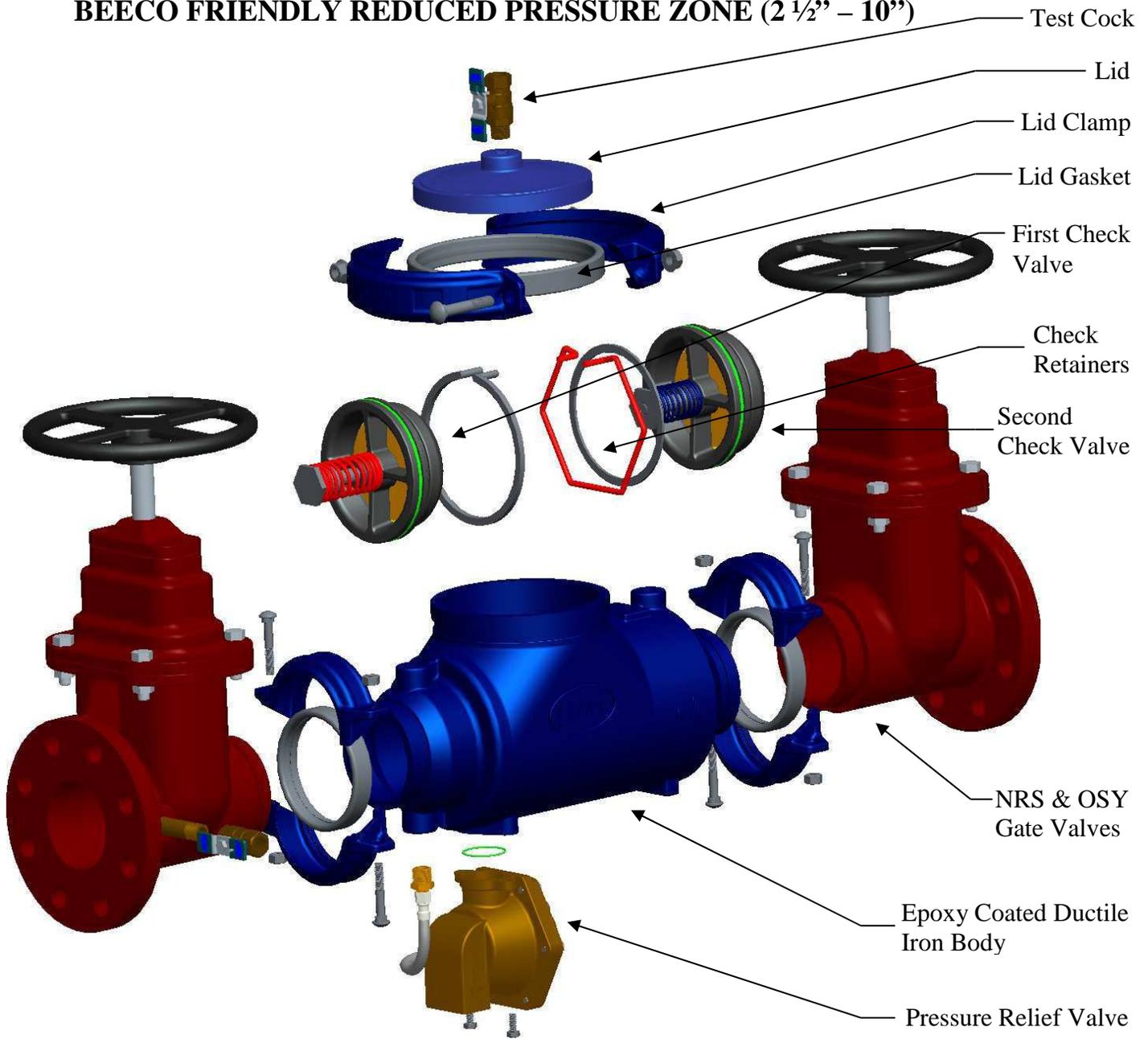
## **Second Check Valve Test**

- 1) Bleed all test cocks. First open test cock 4, make sure it is slightly open and water is flowing. Then open TC3, then TC2, then TC1 until they are completely bled. Close all TC's in the reverse order.
- 2) Attach test gauge high pressure hose (red hose) to test cock 2 (TC2).

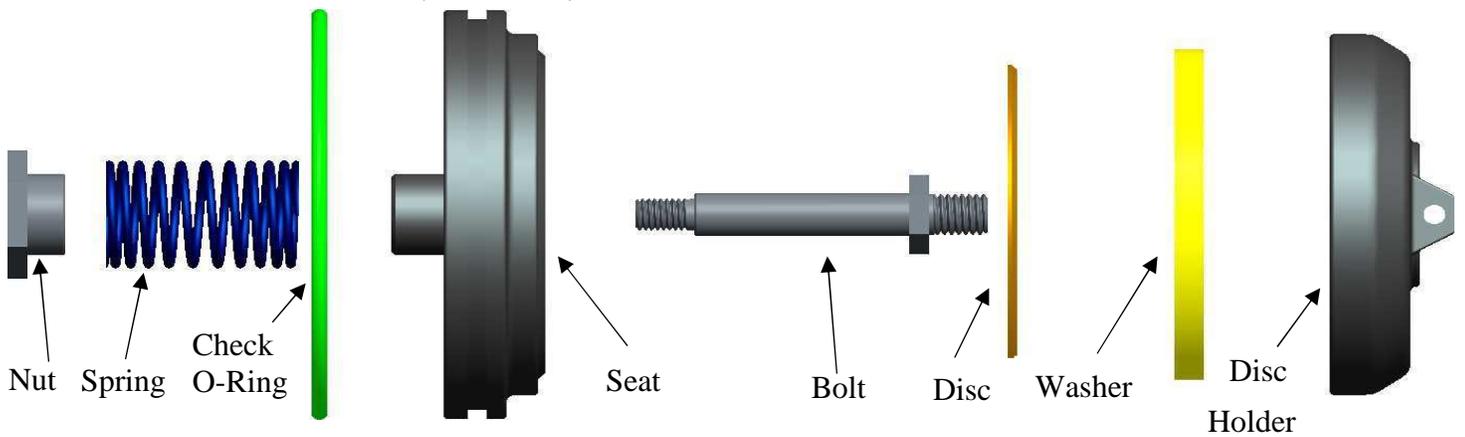


- 3) Attach test gauge low pressure hose (green hose) to test cock 3 (TC3). Attach a bypass hose to the low side bleed needle valve.
- 4) Open TC3 fully, then open the low side needle valve and let the water run out.
- 5) Open TC2 and pressurize the test kit.
- 6) Open the high side needle valve and bleed the high side hose.
- 7) Close SOV2.
- 8) Attach a bypass hose from the high side bleed needle valve to TC4. Open TC4.
- 9) Open the low side bleed needle valve. Allow the pressure to build beyond the recorded differential for CV1 and close the low side needle valve.
- 10) Open the high side bleed needle valve. If the pressure holds, CV2 is sealed properly.

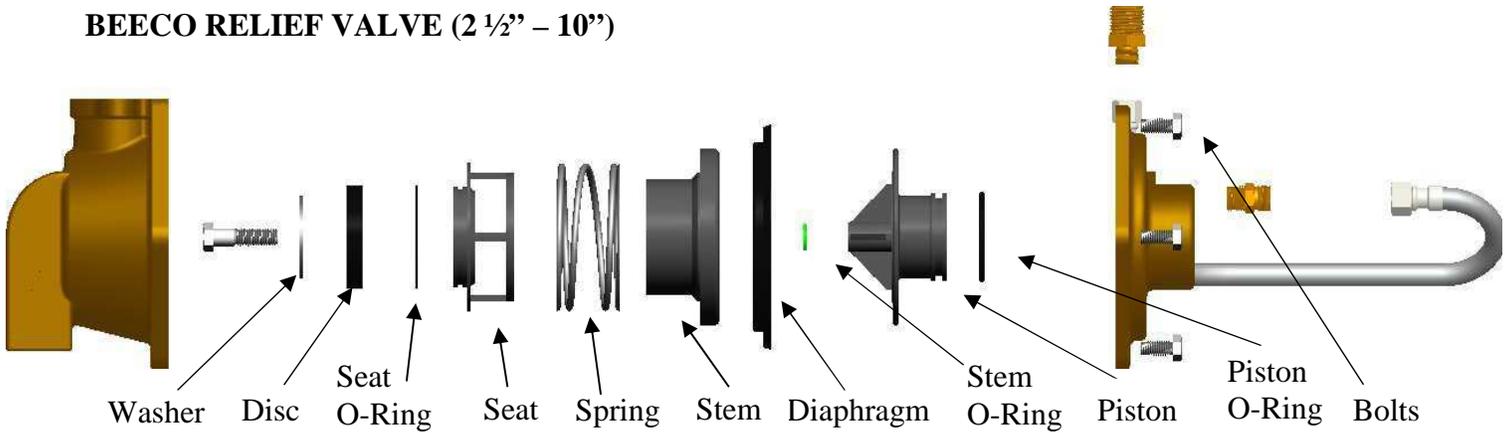
**BEECO FRIENDLY REDUCED PRESSURE ZONE (2 1/2" – 10")**



**BEECO CHECK VALVE (2 1/2" – 10")**



**BEECO RELIEF VALVE (2 1/2" – 10")**



# Trouble Shooting Guide

Problem	Probable Causes
No flow	Device installed backwards.
	Upstream or downstream gate valves not open.
	Clogged strainer or clogged device.
Low flow	Low supply pressure.
	Pressure drop through the device.
	Device's gate valves not opened completely.
Leaking Check Valves	Debris on seat area or seal
	Damaged seat area
	Damaged seal
Constant drip or drain from vent	If occurs when no call for water only, indicates fouled first check valve.
	If under flow, indicates that either relief valve mechanism is malfunctioning or first check is fouled. Can be verified by test.
Relief valve fails to open during test	Blockage in relief valve supply tubing or internal passage.
	Physical blockage of relief valve.
	Device is in a flow condition due to leaking downstream gate valve.
	Relief valve mechanism is malfunctioning.
Intermittent drip or "dump" from vent	Fluctuating supply pressure.