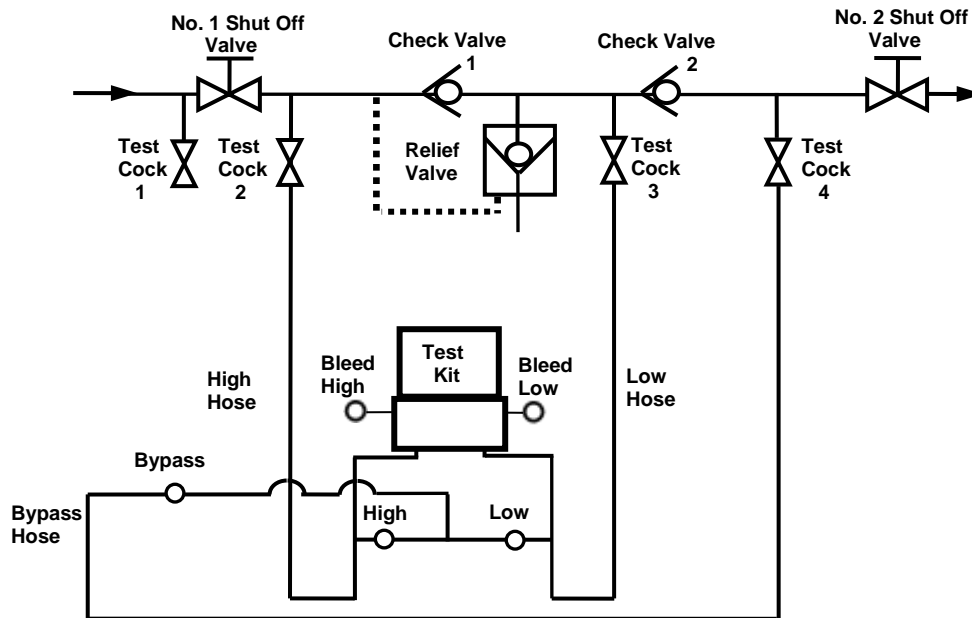


MID-WEST INSTRUMENT – MODEL 855 TEST KIT

TEST PROCEDURE – REDUCED PRESSURE PRINCIPLE ASSEMBLIES

NOTE: IT IS THE TESTER'S RESPONSIBILITY TO DETERMINE IF THIS PROCEDURE IS ACCEPTED BY LOCAL AUTHORITIES.



TEST SET UP:

1. Obtain permission to shut of the water supply.
2. Determine the direction of flow.
3. Identify all 4 test cocks.
4. All test kits valves are closed.

TEST NO. 1 - DOES THE DIFFERENTIAL PRESSURE RELIEF VALVE OPERATE TO MAINTAIN THE "ZONE" BETWEEN THE TWO CHECK VALVES AT LEAST 2 PSI LESS THAN THE SUPPLY PRESSURE.

1. Open test cock 4 to establish flow through the RP. Flush test cocks taking care not to dump the relief valve; open test cock 3, **SLOWLY** open test cock 2, open test cock 1. Close test cocks 1, 2, 3 and 4. Install appropriate adapters in all test cocks.
2. Connect the red hose between test cock 2 and the high side (middle) connection on the test kit.
3. Connect the blue hose between test cock 3 and the low side (right) connection on the test kit.
4. Slowly open test cock 3. Bleed the low side by opening the bleed low (top, right) valve.
5. Slowly open test cock 2. Bleed the high side by opening the bleed high (top, left) valve.
6. Close No. 2 shutoff valve.
7. Close the bleed high valve. After the ΔP reaches the upper part of the scale, close the bleed low valve.
8. Observe the pressure drop across check valve 1. Should the pressure drop until the relief valve discharges continuously, check valve 1 is leaking and must be repaired before continuing.
9. Open the high (bottom, middle, red) valve.
10. Open the low (bottom, right, blue) valve **slowly** no more than one quarter (1/4) turn.
11. Watch the ΔP drop **slowly** to the relief valve opening point – click "CAPTURE" to record the reading. (If the ΔP does not drop to the relief valve opening point, close the high and low valves and go to step 13.)
12. Close the high and low valves and go to Test No. 2.
13. No. 2 shutoff valve may be leaking. Reopen and close No. 2 shutoff valve to attempt a better shutoff. Repeat steps 9 through 11. If the relief valve does not open, a bypass hose is required. (Large leaks may require a garden hose.)

14. Attach a hose (not supplied with Test Kit) to test cock 1. Bleed hose by opening test cock 1. Close test cock 1.
15. Connect the hose from test cock 1 to test cock 4.
16. Open test cock 1 to pressurize the hose.
17. Slowly open test cock 4. Repeat steps 9 through 11. If the relief valve does not open, the leaky No. 2 shutoff valve must be repaired.

TEST NO. 2 – IS CHECK VALVE 2 PRESSURE TIGHT AGAINST BACK PRESSURE.

NO BYPASS HOSE USED IN TEST 1.

1. Connect the yellow hose to the bypass (left) connection on the test kit.
2. Bleed bypass hose by opening the high (bottom, middle, red) and bypass (bottom, left, yellow) valves. Close the bypass valve.
3. Attach the bypass hose to test cock 4.
4. Open test cock 4.
5. Open the bleed low (top, right) valve allowing the ΔP to reach the upper part of the scale. Close the bleed low valve.
6. Open the bypass (bottom, left, yellow) valve.
 - If the differential pressure stabilizes above the relief valve opening point, check valve 2 is recorded as “tight”. Slide the toggle button to from “Leaking to “Closed Tight” (Proceed to Test No. 3.)
 - If the reading falls to the relief valve opening point open the bleed low valve until the reading rises above the apparent No. 1 check valve pressure drop. Close the bleed low valve.
 - If the reading stabilizes above the relief valve opening point, slide the toggle button to from “Leaking to “Closed Tight” (proceed to Test No. 3).
 - If the reading falls to the relief valve opening point again, leave the toggle button in the “Leaking” position and test No. 3 cannot be completed.

BYPASS HOSE USED IN TEST 1.

1. Leave the bypass hose connected between test cocks 1 and 4.
2. Leave test cocks 1 and 4 open.
3. Open the bleed low (top, right) valve allowing the ΔP to reach the upper part of the scale. Close the bleed low valve.
4. If the differential pressure stabilizes above the relief valve opening point, Slide the toggle button from “Leaking to “Closed Tight”. (Proceed to test No. 3.) If the reading falls to the relief valve opening point, leave the toggle button in the “Leaking” position, and test No. 3 cannot be completed.

TEST NO. 3 – IS THE STATIC PRESSURE DROP ACROSS CHECK VALVE 1 AT OR ABOVE 5 PSID?

1. Open the bleed low (top, right) valve allowing the ΔP to reach the upper part of the scale. Close the bleed low valve.
2. Allow the ΔP reading to stabilize. Click “CAPTURE” to record the static pressure drops across check valve 1.
3. Close all test cocks. Open the No. 2 shutoff valve. Remove all test equipment.

OPEN ALL TEST KIT VALVES TO DRAIN TEST KIT.

Values recorded from Tests #'s 1, 2 & 3

Acceptable Results

Test No. 1: Relief Valve Opening Point = _____.

2.0 PSID or higher

Test No. 2: Check Valve No. 2 – Closed Tight / Leaking

Closed Tight

Test No. 3: Check Valve No. 1 = _____.

5.0 PSID or higher

If the test results are acceptable, slide the toggle button from “Failed” to “Passed”.

You may note in the comments that the number 2 check valve was backpressure tested.