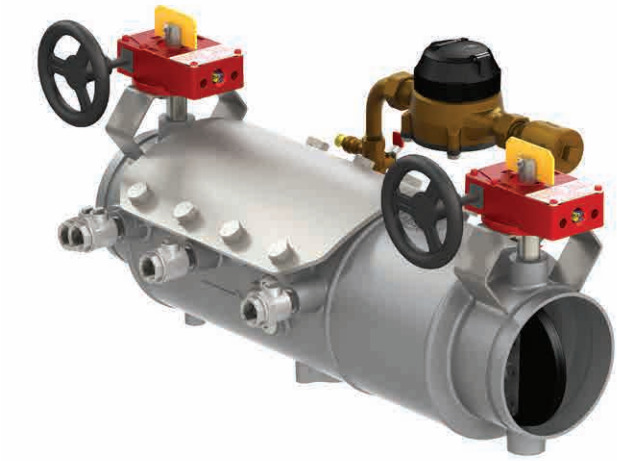
Installation, Operation and Maintenance Manual

Deringer™ 30/50

Deringer Type II Bypass Testing and Maintenance

Size: 2½" – 4"



⚠ WARNING

Read this manual BEFORE using this equipment.

Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.

Keep this manual for future reference.

⚠ WARNING

You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

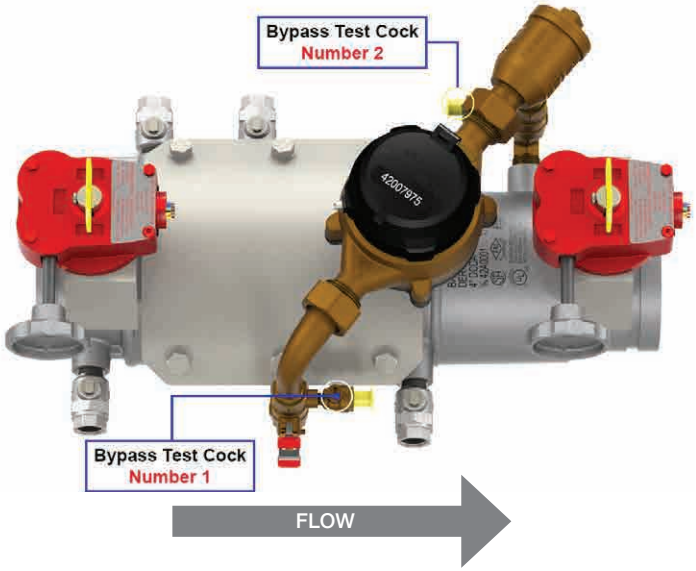
Tools Required

This list is the recommended tools for installation. Other versions of the same tool can be used. For example, allen wrenches instead of allen drive sockets.

#2 Flathead Screwdriver

Field Test Kit

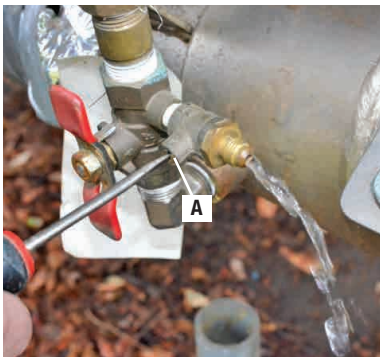
Bypass Test Cock Locations

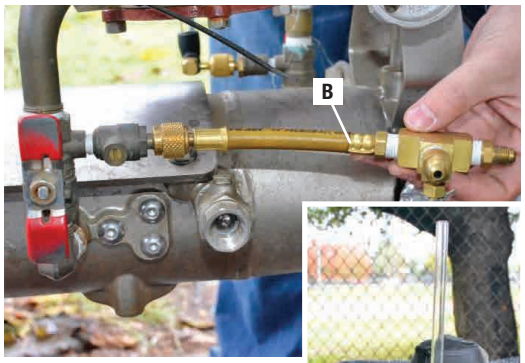


AMES
FIRE & WATERWORKS
A WATTS Brand

Opening Bypass Test Cocks and Bleeding Before Testing

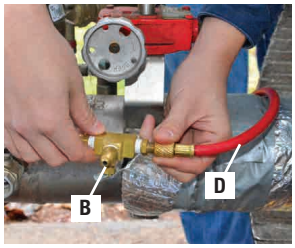
1. Open both bypass test cocks to bleed any air left in the valve [A], and to release any debris that may have collected inside the test cocks.
2. Install the bleed off valve arrangement on bypass test cock number 1 (upstream) [B].
3. Install the sight tube onto bypass text cock number 2 (downstream) [C].

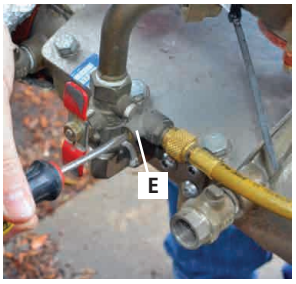


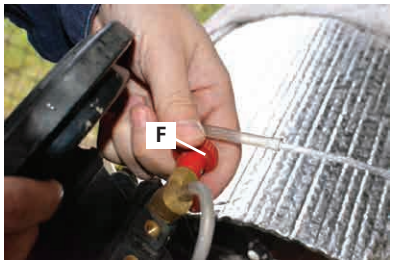


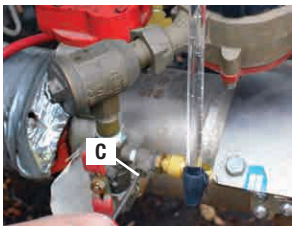
Connecting the Bypass Gauge

1. Connect the differential gauge to the bypass assembly by connecting the high pressure hose [D] to the bleed off valve arrangement on bypass test cock number 1 [B].
2. Pressurize the gauge by opening the number 1 test cock [E].
3. Bleed all air from the gauge by opening the high bleed needle valve [F]. Once the air has been cleared from the gauge close the high bleed needle valve [F].
4. Fill sight tube with water by opening bypass test cock number 2 [C]. Close bypass test cock number 2 when sight tube is full.



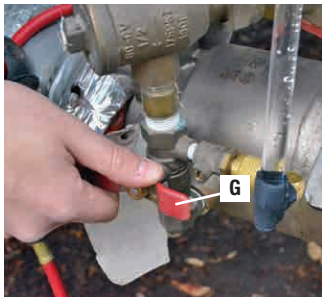


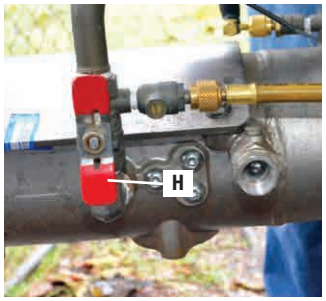




Testing the Bypass

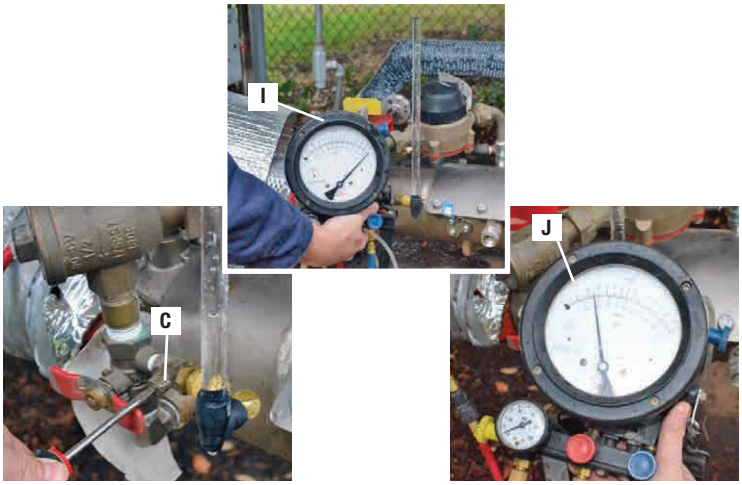
1. Turn the number 2 ball valve (downstream) [G] to the closed position.
2. Turn the number 1 ball valve (upstream) [H] to the closed position.





Testing the Bypass (continued)

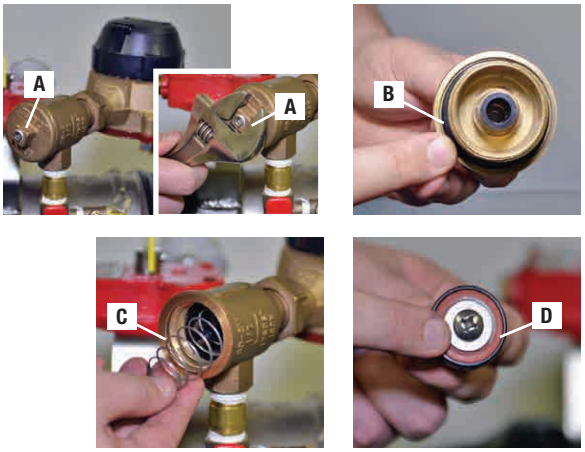
1. Make sure the gauge [I] is placed at the appropriate elevation (level with the valve) next to the valve to be certain the readings on the gauge are correct.
2. Open the number 2 bypass test cock [C], as water begins to flow out of the test cock the needle in the gauge will begin to drop.
3. Once the gauge needle settles [J] and the water flowing from the top of the sight tube is down to a slight drip or stops, record the reading. If the reading is below 1.0 psi the valve will have to be opened to look for damage or debris on the check valve components (see page 8 for bypass and check valve maintenance).
4. Record the reading on the backflow test report, disconnect the gauge, and close the bypass test cocks.
5. Open the number 1 ball valve and then open the number 2 ball valve to restore water to the backflow device and to the application it is feeding.



Disassembly and Maintenance of Bypass Check Valve

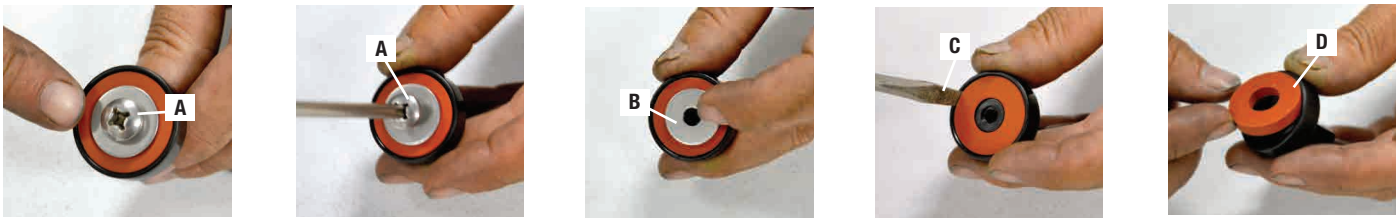
Part 1

1. Use an adjustable wrench to rotate check cover (A) counterclockwise to remove.
2. Examine cover plate O-ring (B) for damage or fouling.
3. Remove spring (C).
4. Remove check poppet assembly (D) and examine for damage or fouling.
5. Examine seat cage, located inside the check valve body, for damage or fouling to the sealing seat. Do not remove unless the seat cage is being replaced.
6. Reverse the order of above instructions to reassemble bypass check valve.



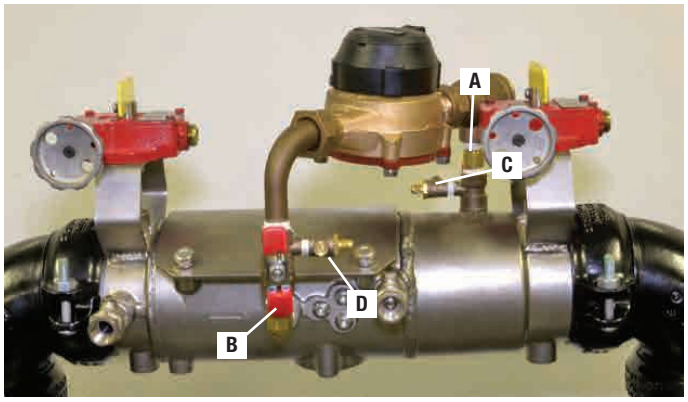
Part 2

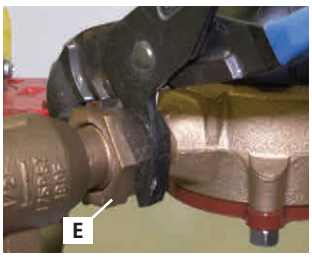
1. To replace a damaged red silicone poppet disk, use a #2 phillips head screwdriver to remove the disk retaining screw (A).
2. Remove disk retaining washer (B).
3. Use a flathead screwdriver to remove the gasket from poppet cavity (C).
4. Install new red silicone poppet disk (D).
5. Reverse the order of the above instructions to reassemble check poppet assembly.
6. Reverse the order of the instructions on the previous page to reassemble bypass check assembly.

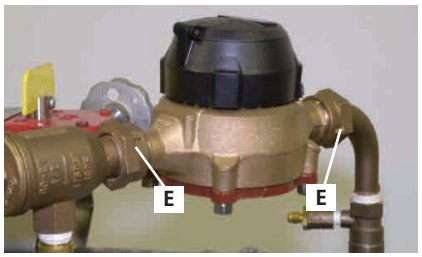


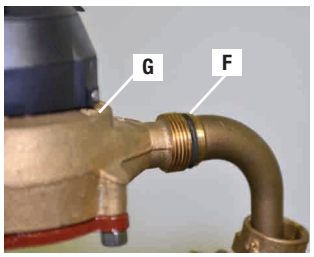
Removing Bypass Meter

1. Using the ball valve handles close the #2 bypass ball valve (A) and then #1 bypass ball valve (B). (Ball valve is closed when “T” handle is perpendicular to water flow through ball valve).
2. Using a #2 flathead screwdriver open bypass test cock #2 (C) and then open bypass test cock #1 (D). (Test cock is open when screwdriver slot is parallel to water flow through test cock).
3. Using large adjustable pliers or a wrench, unscrew and retract bypass meter coupling nuts (E). Remove the gaskets (F) on both sides of bypass meter.
4. Gently remove bypass meter (G) from line. It is OK if the bypass fittings move slightly during the removal process.
5. Reverse order of above instructions to reinstall bypass meter. Remember install gaskets (F) before threading meter coupling nuts into place.









AMES
FIRE & WATERWORKS

A WATTS Brand

USA: Backflow T: (978) 689-6066 • F: (978) 975-8350 • AmesFireWater.com
USA: Control Valves T: (713) 943-0688 • F: (713) 944-9445 • AmesFireWater.com
Canada: T: (888) 208-8927 • F: (888) 479-2887 • AmesFireWater.ca
Latin America: T: (55) 4122-0138 • AmesFireWater.com

