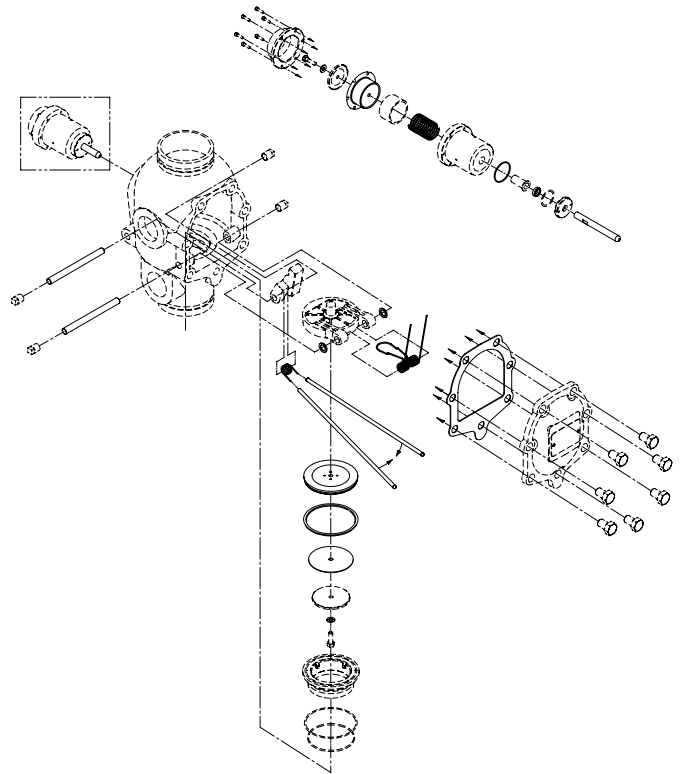


5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758



WARNING

WARNING	
	<p>Failure to follow instructions and warnings can cause product failure, resulting in serious personal injury and property damage.</p> <ul style="list-style-type: none"> • Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products. • Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products. • Wear safety glasses, hardhat, and foot protection.
	<p>If you need additional copies of any literature, or if you have any questions concerning the safe use of this product, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, USA, Telephone: 1-800 PICK VIC, e-mail: pickvic@victaulic.com.</p>

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

TABLE OF CONTENTS

Hazard Identification 1
 Contents of Rebuild Kit 1
 Removing the System from Service 2
 Instructions for Replacing Internal Components of the Valve
 (Items 1 - 10 on page 2) 3
 Instructions for Replacing Internal Components of the Piston 9
 Piston Components 9
 Disassembly of Piston 9
 Replacing the Shaft Seal in the Cylinder 11
 Re-Assembly of the Piston 13

HAZARD IDENTIFICATION



Definitions for identifying the various hazard levels are provided below. When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

WARNING

- The use of the word “WARNING” identifies the presence of hazards or unsafe practices that could result in death or serious personal injury if instructions, including recommended precautions, are not followed.

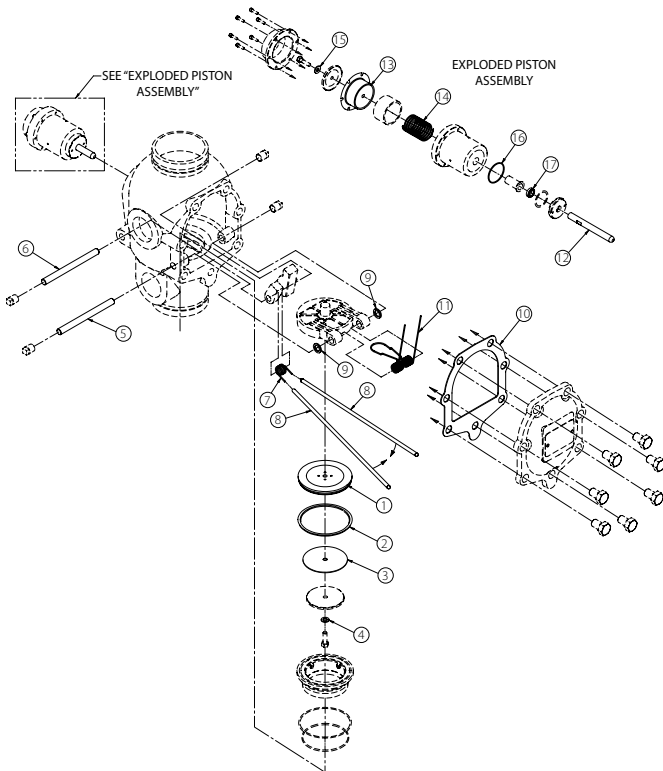
CAUTION

- The use of the word “CAUTION” identifies possible hazards or unsafe practices that could result in personal injury and product or property damage if instructions, including recommended precautions, are not followed.

NOTICE

- The use of the word “NOTICE” identifies special instructions that are important but not related to hazards.

CONTENTS OF REBUILD KIT



Internal Components of the Valve

Item	Qty.	Description
1	1	Clapper Seal
2	1	Seal Ring
3*	1	Seal Washer
4	1	Bolt Seal
5	1	Clapper Shaft
6	1	Latch Shaft
7	1	Latch Spring
8	2	Latch Spring Insertion Tool
9	2	Spacer
10	1	Cover Plate Gasket
11	1	Clapper Spring

Internal Components of the Piston

Item	Qty.	Description
12	1	Piston Shaft
13	1	Diaphragm
14	1	Compression Spring
15	1	Washer for Piston Shaft Retaining Bolt
16	1	O-Ring
17	1	Shaft Seal

Additional Items Included with Kit (Not Shown in Drawing)

Item	Qty.	Description
–	1	Piston Shaft Protective Sleeve
–	1	Nye® Lubricants, Inc. 8531R Grease for Piston Shaft

* Item #3 is not applicable for 1½ – 2-inch/48.3 – 60.3-mm valve sizes.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

REMOVING THE SYSTEM FROM SERVICE

⚠ WARNING



- Depressurize and the piping system before attempting to disassemble any Victaulic piping products.

Failure to follow this instruction could result in serious personal injury and/or property damage.

⚠ WARNING



- Any activities that require taking the valve out of service may eliminate the fire protection provided.
- Before servicing or testing the system, notify the authority having jurisdiction.
- Consideration of a fire patrol should be given in the affected areas.

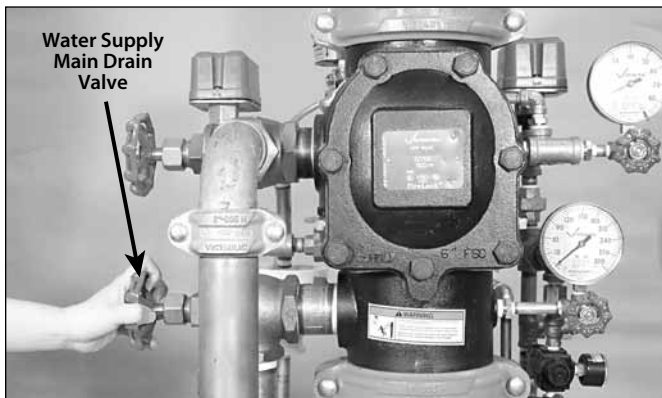
Failure to follow these instructions could result in serious personal injury and/or property damage.

1. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the system is being taken out of service.



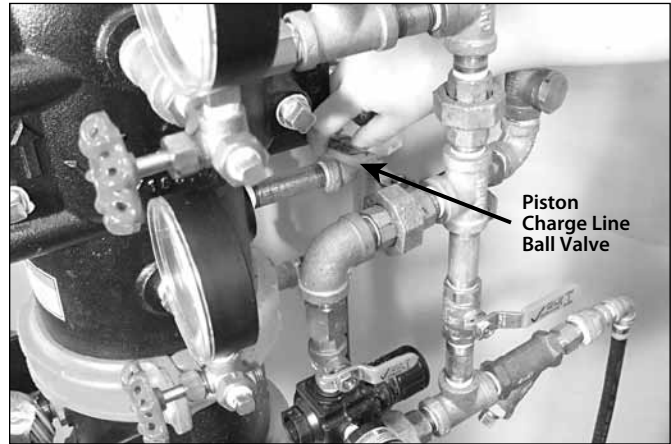
Water Supply's
Main Control
Valve

2. Close the water supply's main control valve to take the system out of service.



Water Supply
Main Drain
Valve

3. Open the water supply main drain valve, as shown above.
4. Confirm that no water is flowing from the water supply main drain.



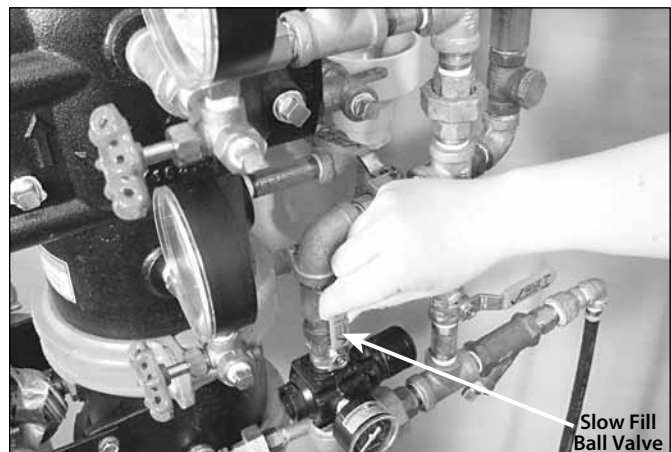
Piston
Charge Line
Ball Valve

5. Close the piston charge line ball valve.



System Main
Drain Valve

6. Open the system main drain valve to drain any water that has accumulated and to release system air pressure. **NOTE:** If the system has operated, open the remote system test valve (inspector's test connection) and any auxiliary drain valves.



Slow Fill
Ball Valve

7. Close the slow fill ball valve on the Air Maintenance Trim Assembly (AMTA).

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

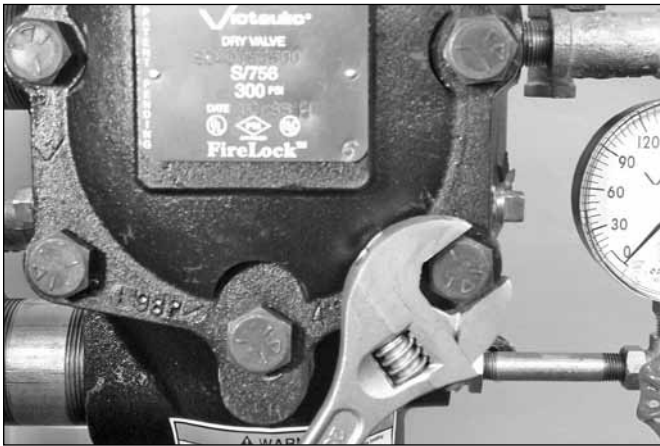
INSTRUCTIONS FOR REPLACING INTERNAL COMPONENTS OF THE VALVE (ITEMS 1 - 10 ON PAGE 1)

⚠ WARNING



- Make sure valve is depressurized and drained before removing cover plate bolts.
- The cover plate will blow off if these bolts are removed while the valve is pressurized, resulting in serious personal injury and/or property damage.

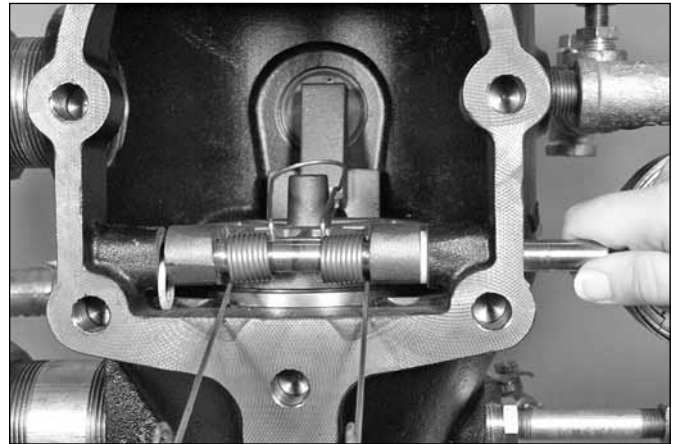
1. Make sure all instructions in the "Removing the System from Service" section have been followed.



2. After all pressure is released from the system, loosen the cover plate bolts. Remove the cover plate, and discard the cover plate gasket.



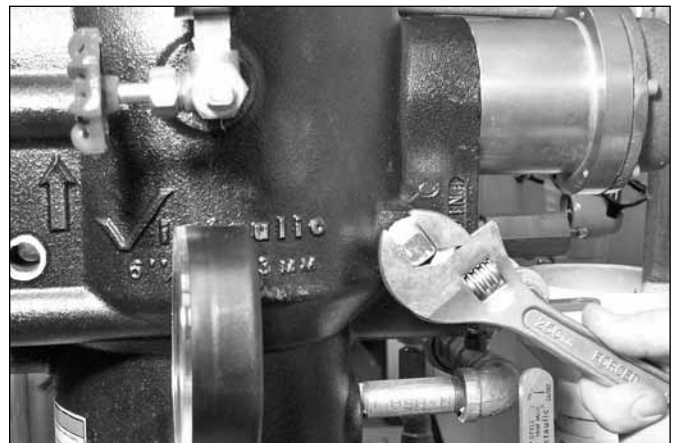
3. Remove the clapper-shaft retaining plugs from the valve body.



4. Remove the clapper shaft, as shown above. **NOTE:** As the shaft is being removed, the two spacers and clapper spring will drop out of position. Discard the two spacers and the clapper spring.



5. Remove the clapper assembly from the valve body.



6. Remove the latch-shaft retaining plugs from the valve body.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

⚠ WARNING

- **DO NOT** allow the latch to drop onto the valve-body seat ring. Failure to follow this instruction will damage the valve-body seat ring and cause improper valve operation, resulting in serious personal injury and/or property damage.



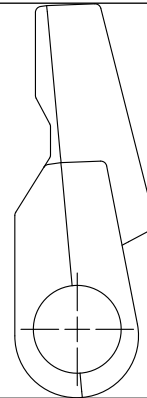
7. Remove the latch shaft. **NOTE:** As the latch shaft is being removed, the latch and latch spring will drop out of position. **BE PREPARED TO SUPPORT THE LATCH AND LATCH SPRING DURING REMOVAL OF THE LATCH SHAFT. DO NOT ALLOW THE LATCH TO DROP ONTO THE VALVE-BODY SEAT RING.** Discard the latch shaft and latch spring. Save the latch for re-installation.

⚠ WARNING

- **Make sure** the latch is re-installed in the correct orientation. Failure to re-install the latch in the correct orientation could cause improper valve operation, resulting in serious personal injury and/or property damage.



This Side Must
Face Toward
Piston



This Side Must
Face Toward
Outside of Valve

8. Insert the new latch shaft (supplied with the kit) through the valve body and into the first arm of the shaft. **MAKE SURE THE FLAT, ANGLED SIDE OF THE LATCH IS FACING OUTWARD, AS SHOWN ABOVE. THE SIDE OF THE LATCH THAT CONTAINS A RECESS MUST FACE THE PISTON.**



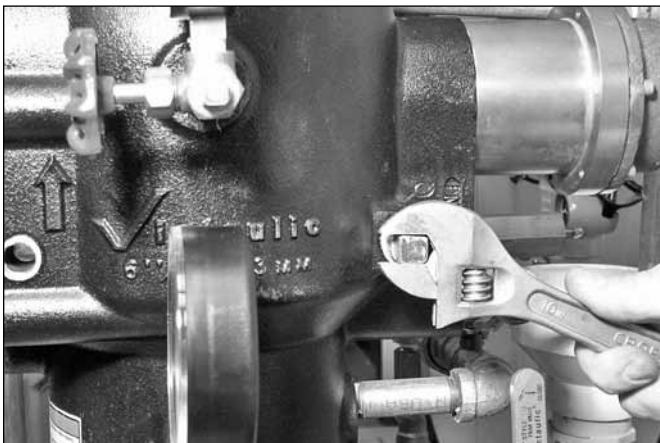
9. Place a spring insert tool (supplied with the kit) onto each arm of the new latch spring (supplied with the kit). Using the spring insert tool to close the latch spring arms together slightly, install the latch spring onto the latch shaft, as shown above.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

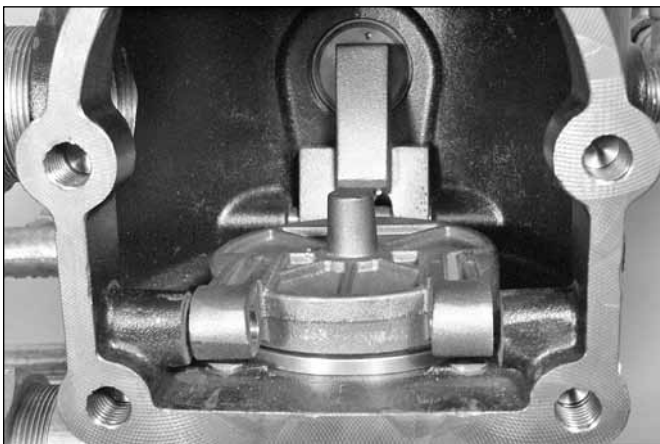
SERIES 756 AND 758



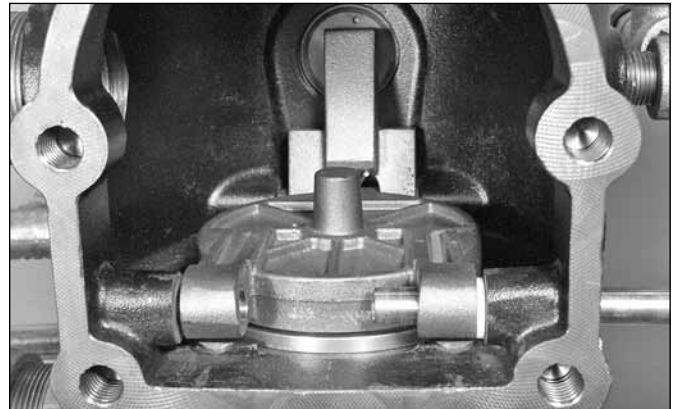
10. Continue to pass the latch shaft through the other arm of the latch and valve body.
11. **REMOVE THE SPRING INSERT TOOLS FROM THE ARMS OF THE LATCH SPRING.**



12. Apply thread sealant to the threads of the latch-shaft retaining plugs. Install the latch-shaft retaining plugs into the valve body.



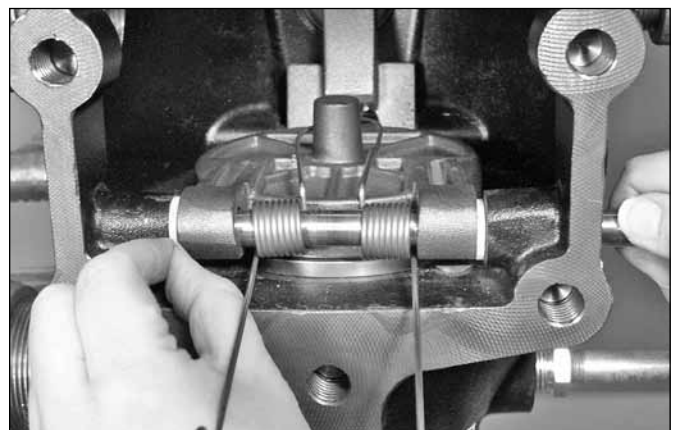
13. Place the clapper assembly onto the valve-body seat ring so that the holes in the clapper arms align with the holes in the valve body, as shown above.



14. Start the new clapper shaft (supplied with the kit) into the valve body, and place one new spacer (supplied with the kit) between the clapper and valve body, as shown above.



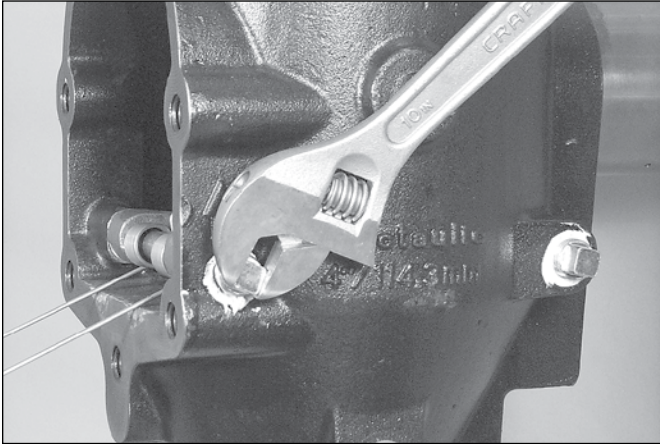
15. Install the new clapper spring (supplied with the kit) onto the clapper shaft. Make sure the large loop is facing toward the clapper, as shown above. The two small loops on the other end of the spring must face upward.



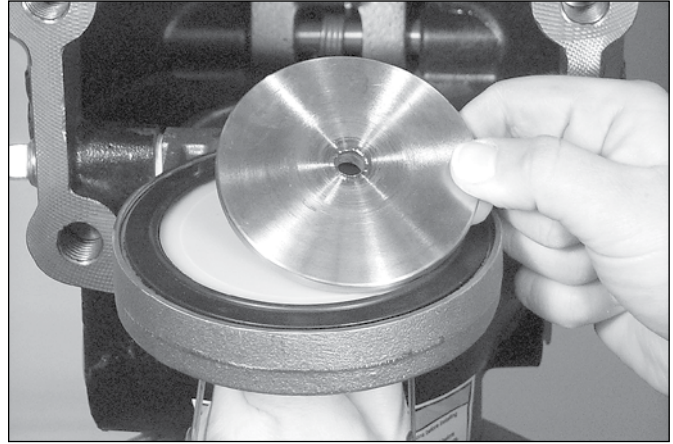
16. Place the other new spacer (supplied with the kit) between the other clapper arm and valve body, as shown above. Finish inserting the clapper shaft through the clapper arm and valve body. **NOTE:** To prevent damage to the spacers, care must be taken during alignment.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

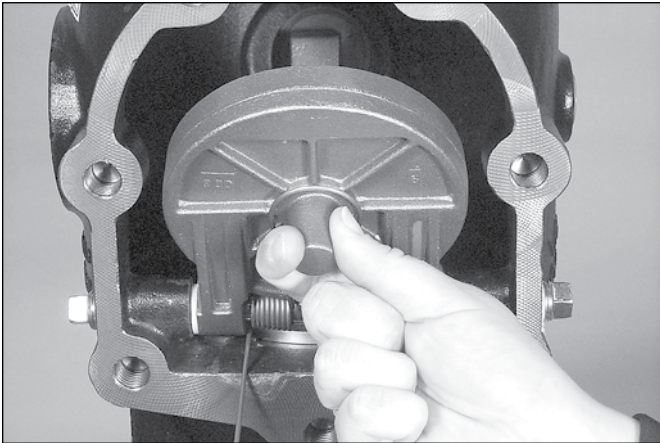
SERIES 756 AND 758



17. Apply thread sealant to the threads of the clapper-shaft retaining plugs. Install the clapper-shaft retaining plugs into the valve body.



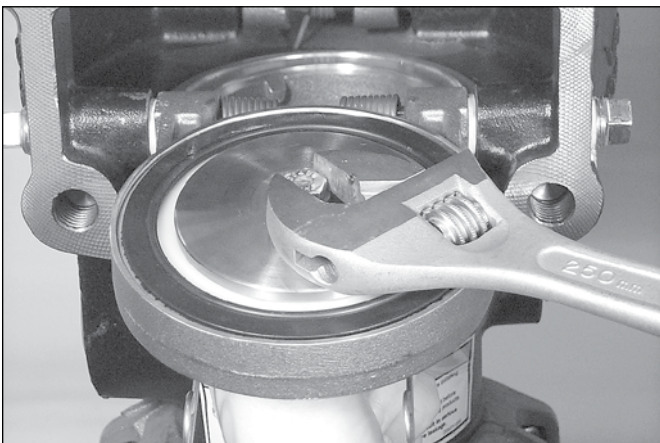
20. Remove the seal-retaining ring. Save the seal-retaining ring for re-installation.



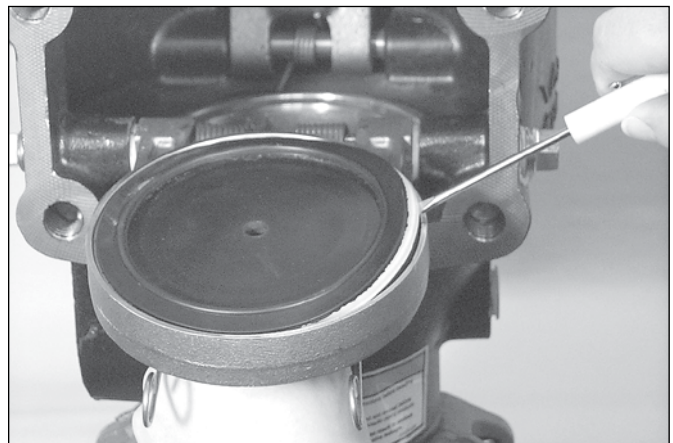
18. Check the clapper for freedom of movement.



21. Pry the edge of the old seal washer from inside the clapper seal. Remove and discard the seal washer.



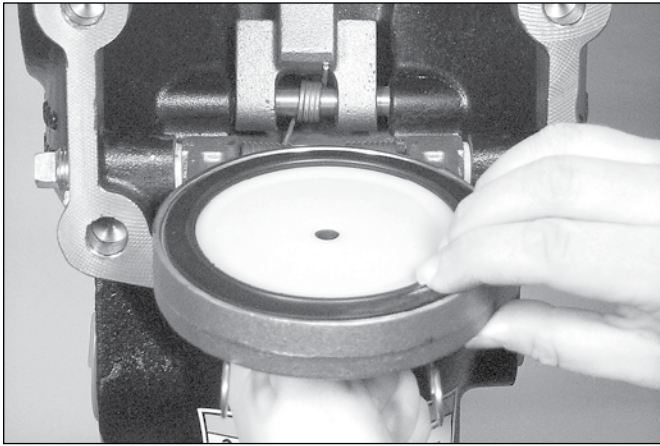
19. Rotate the clapper out of the valve body. Remove the seal-assembly bolt/bolt seal from the clapper seal, as shown above. Save the seal assembly bolt for re-installation. Discard the bolt seal.



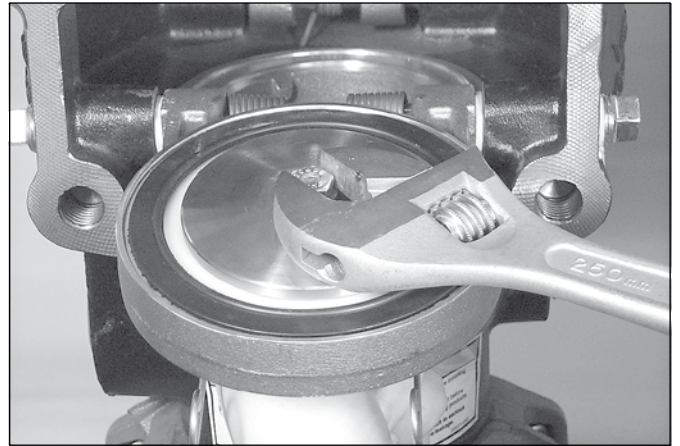
22. Pry the old clapper seal, along with the seal ring, out of the clapper. Discard the clapper seal and seal ring.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

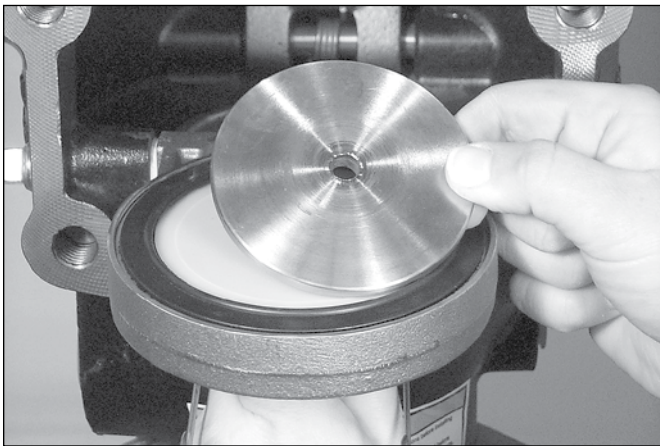
SERIES 756 AND 758



23. Install the new clapper seal assembly (supplied with the kit) into the clapper carefully. Make sure the seal ring snaps into the clapper completely.



26. Install the seal-assembly bolt/bolt seal through the seal-retaining ring and clapper. Tighten the seal-assembly bolt/bolt seal to the torque value, listed in the table below, to ensure a proper seal.



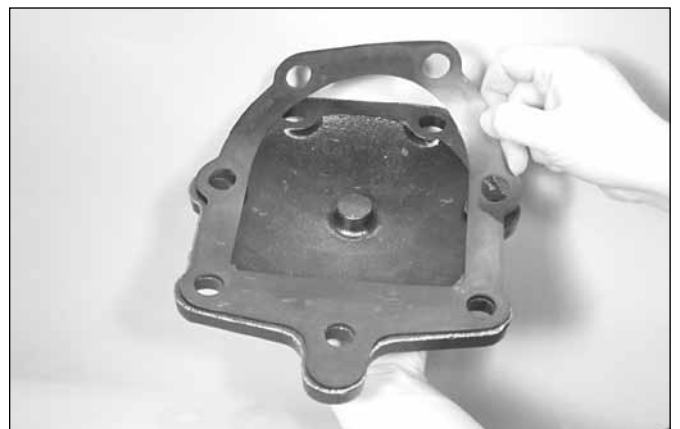
24. Place the seal-retaining ring onto the seal washer of the clapper seal.

REQUIRED SEAL-ASSEMBLY BOLT/BOLT SEAL TORQUES

Size		Torque
Nominal Size inches	Actual Outside Diameter inches/mm	inch-lbs N•m
1 ½	1.900 48.3	40 5
2	2.375 60.3	40 5
2 ½	2.875 73.0	90 10
76.1 mm	3.000 76.1	90 10
3	3.500 88.9	90 10
4	4.500 114.3	110 12
165.1 mm	6.500 165.1	160 18
6	6.625 168.3	160 18
8	8.625 219.1	160 18



25. Install the new bolt seal (supplied with the kit) onto the seal-assembly bolt.



27. Align the holes of the new cover plate gasket (supplied with the kit) with the holes in the cover plate.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

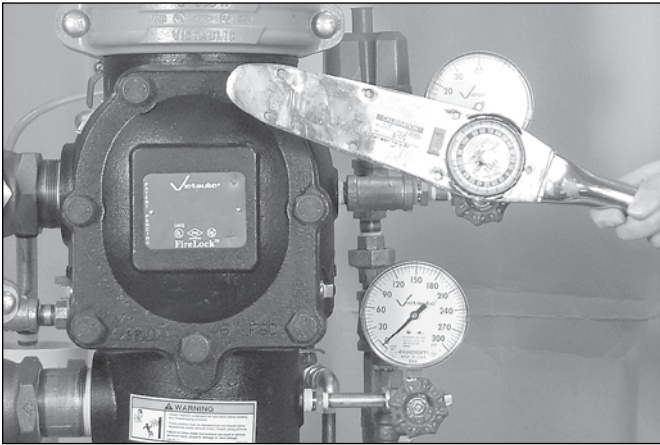
SERIES 756 AND 758



28. Insert one cover plate bolt through the cover plate and cover plate gasket to ease alignment.

CAUTION

- **DO NOT over-tighten the cover plate bolts.**
Failure to follow this instruction could cause damage to the cover plate gasket, resulting in valve leakage.



29. Align the cover plate/cover plate gasket to the valve. Make sure the clapper spring's arms are rotated to their installed position. Tighten all cover plate bolts into the cover plate/valve body.
- 29a. Torque all cover plate bolts in an even, crossing pattern. Refer to the "Required Cover Plate Bolt Torques" table on this page for the required torque values. **DO NOT** over-tighten the cover plate bolts.

Required Cover Plate Bolt Torques

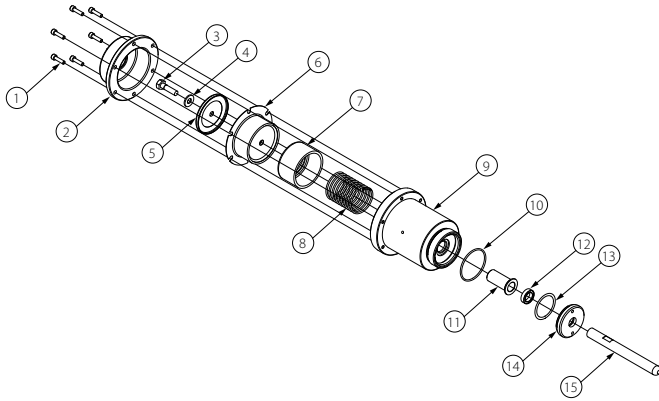
Size		Torque
Nominal Size inches or mm	Actual Outside Diameter inches mm	ft-lbs N•m
1 ½	1.900	30
	48.3	41
2	2.375	30
	60.3	41
2 ½	2.875	60
	73.0	81
76.1 mm	3.000	60
	76.1	81
3	3.500	60
	88.9	81
4	4.500	100
	114.3	136
165.1 mm	6.500	115
	165.1	156
6	6.625	115
	168.3	156
8	8.625	100
	219.1	136

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

INSTRUCTIONS FOR REPLACING INTERNAL COMPONENTS OF THE PISTON

PISTON COMPONENTS



Item	Description
1	Socket Head Cap Screw
2	Bonnet
3	Piston Shaft Retaining Bolt
4*	Washer for Piston Shaft Retaining Bolt
5	Diaphragm Retainer
6*	Diaphragm
7	Piston
8*	Compression Spring
9	Cylinder
10*	O-Ring
11	Bearing
12*	Shaft Seal
13	O-Ring
14	Seal Retainer
15*	Piston Shaft

* Components denoted with an asterisk are provided in the kit.

DISASSEMBLY OF PISTON

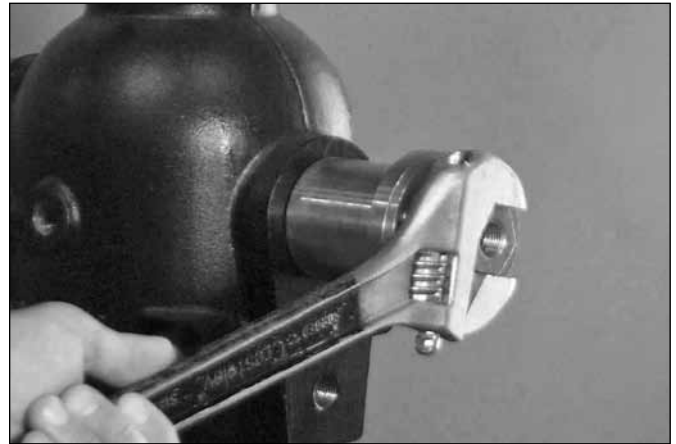
⚠ WARNING

- **Make sure the valve is depressurized and drained before attempting to remove any trim from the valve.**

Failure to depressurize and drain the valve before removing any trim from the valve could cause serious personal injury and/or property damage.

If the system is in service, follow the “Removing the System from Service” section.

1. Disconnect the trim from the piston.



2. Remove the piston from the valve body.

⚠ CAUTION

- **Wear safety glasses when performing the following steps. The piston contains a compression spring, which may release when the bonnet is removed.**

Failure to follow this instruction could result in personal injury.



3. Remove the six socket head cap screws from the bonnet. Save the six socket head cap screws for re-installation. **NOTE:** Since the piston contains a compression spring, be prepared to support the bonnet when the last socket head cap screw is removed.

Socket Head Cap Screw Sizes

Valve Size		
Nominal Size inches	Actual Outside Diameter inches/mm	Socket Head Cap Screw Size
1½ – 4	1.900 – 4.500 48.3 – 114.3	8 – 32 x ¾
6 – 8	6.625 – 8.625 168.3 – 219.1	¼ – 20 x ¾

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758



4. Remove the bonnet from the cylinder to expose the internal assembly. Save the cylinder for re-installation.



7. Remove the washer from the piston-shaft retaining bolt. Discard the washer.



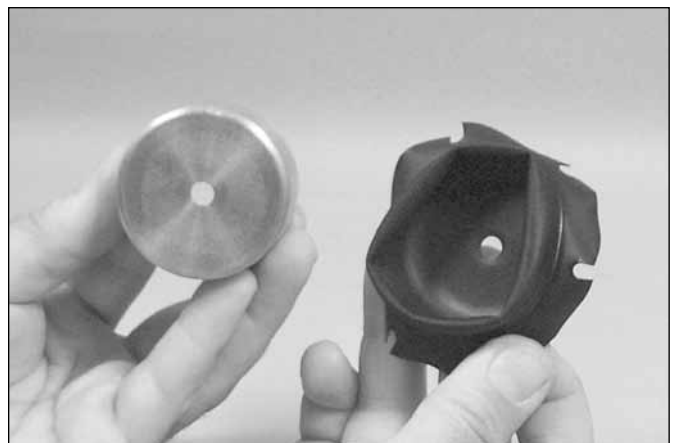
5. Remove the compression spring and bonnet. Save the bonnet for re-installation. Discard the compression spring.



8. Remove the diaphragm retainer. Save the diaphragm retainer for re-installation.



6. Using a wrench on the flats of the piston shaft, remove the piston-shaft retaining bolt from the diaphragm retainer, as shown above. Save the piston-shaft retaining bolt for re-installation. Discard the piston shaft.



9. Remove the diaphragm from the piston. Save the piston for re-installation. Discard the diaphragm.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

REPLACING THE SHAFT SEAL IN THE CYLINDER



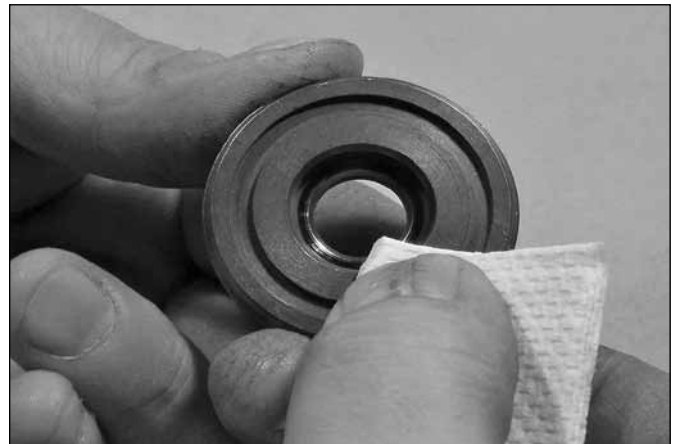
1. Using a spanner wrench or similar device, remove the seal retainer from the cylinder. **NOTE:** For smaller-size pistons, a spanner wrench may need to be modified to fit into the holes of the seal retainer.



2. Remove the o-ring from the seal retainer. Save the o-ring for re-installation.



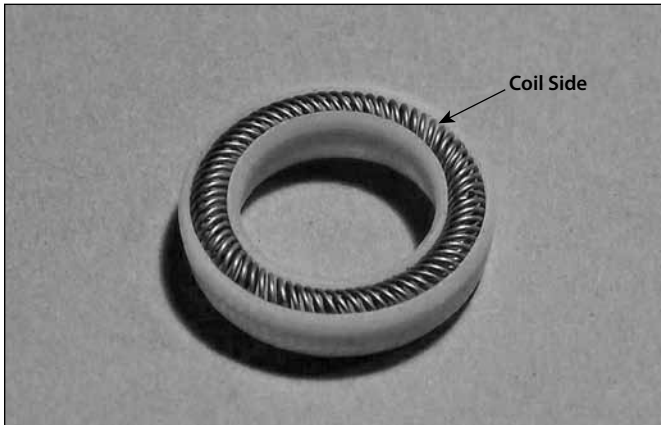
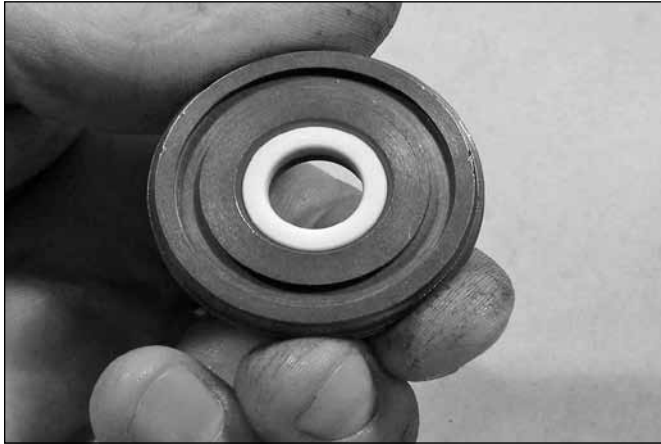
3. Remove the shaft seal from the seal retainer. Discard the shaft seal.



4. Clean the area of the seal retainer where the shaft seal and o-ring seat.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758



5. Install the new shaft seal (supplied with the kit) into the seal retainer. Make sure the coil side of the shaft seal faces the seal retainer, as shown above.



6. Re-install the o-ring into the seal retainer.

CAUTION

- **DO NOT** turn the seal retainer upside down to place it inside the cylinder.

The shaft seal and o-ring could fall out of position and become damaged during re-assembly, resulting in piston leakage.



7. While holding the seal retainer with the shaft seal and o-ring facing up, place the cylinder on top of the seal retainer. **DO NOT** turn the seal retainer upside down to place it inside the cylinder. The shaft seal and o-ring could fall out of position and become damaged during re-assembly. Maintain this position until the seal retainer is tightened completely into the cylinder in the next step.



8. Using a spanner wrench or similar device, re-install the seal retainer into the cylinder and tighten completely.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

RE-ASSEMBLY OF THE PISTON



1. Turn the new diaphragm (supplied with the kit) inside out so that the smooth, rubber side is facing outward and the fabric side is facing inward (toward the piston).



2. Place the new diaphragm over the piston. **MAKE SURE THE FABRIC SIDE OF THE DIAPHRAGM CONTACTS THE PISTON.**



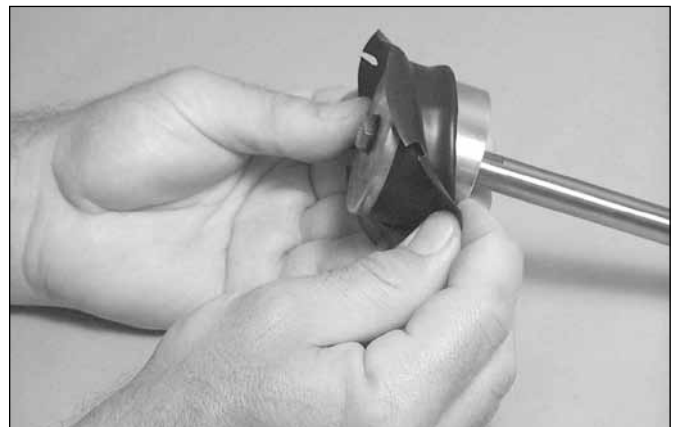
3. Install the new washer (supplied with the kit) onto the piston-shaft retaining bolt.



4. Install the diaphragm retainer onto the piston with the piston-shaft retaining bolt. Install the new piston shaft (supplied with the kit) onto the piston-shaft retaining bolt.



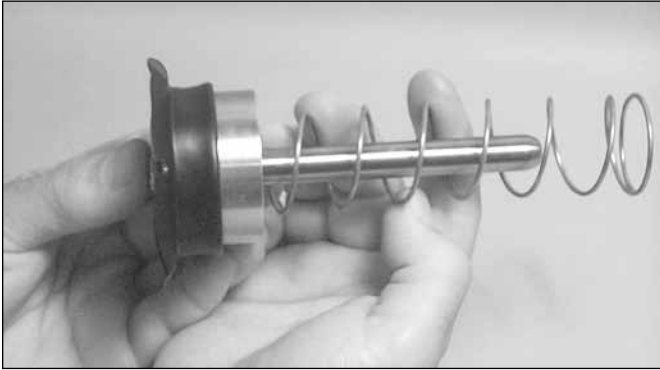
5. Using a smooth-sided wrench on the flats of the piston shaft for support, tighten the piston-shaft retaining bolt, as shown above. Be careful not to damage the piston shaft. **DO NOT** use a pipe wrench, vise grips, or any other tool that contains teeth on the piston shaft.



6. Fold the diaphragm so that the lip is flush with the end of the diaphragm retainer, as shown above.
7. **LUBRICATE THE PISTON SHAFT WITH THE GREASE PROVIDED IN THE KIT (Nye® Lubricants, Inc. 8531R Grease).**

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758



8. Install the new compression spring (supplied with the kit) over the piston shaft so that the compression spring seats within the piston.

CAUTION

- **DO NOT** damage the shaft seal during assembly.
- Damage to the shaft seal could cause the piston to operate improperly, resulting in property damage.



9. Install the piston assembly into the cylinder so that the diaphragm retainer is flush with the end of the cylinder. Be careful not to damage the shaft seal.



10. While holding the piston assembly in position, install the piston-shaft protective sleeve (supplied with the kit) over the end of the piston shaft, as shown above. This protective sleeve will prevent damage to the piston shaft during the next few steps.



11. Using a pair of vise grips, maintain the extended position of the piston shaft, as shown above. Tighten the vise grips just enough to hold the extended position. DO NOT over-tighten the vise grips.



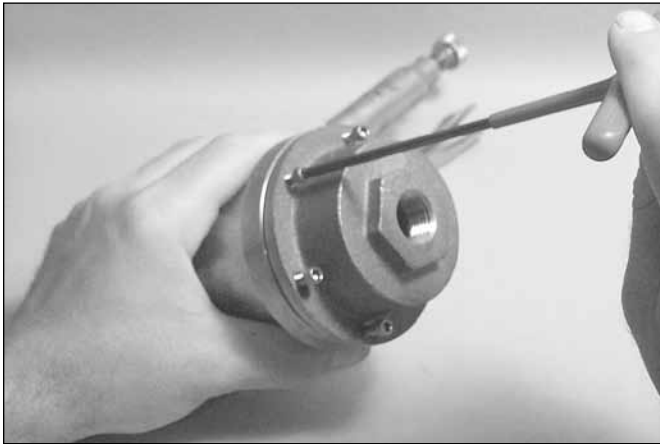
12. Make sure the holes in the diaphragm align with the holes in the cylinder, as shown above.



13. Align the holes of the bonnet with the holes of the cylinder/diaphragm.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758



14. Install the six socket head cap screws into the bonnet/cylinder. Tighten the screws evenly in a crossing pattern.



15. Remove the vise grips from the piston shaft. **NOTE:** The piston shaft will retract to its normal position. Make sure the piston-shaft protective sleeve is removed from the end of the piston shaft.

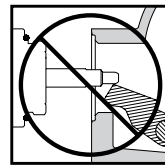
⚠ CAUTION

- **DO NOT** extend the piston manually. Manually extending the piston could damage the internal diaphragm.
- Failure to follow this instruction could cause improper valve operation, resulting in property damage.



16. Remove the o-ring from the piston. Discard the old o-ring, and replace it with the new o-ring (supplied with the kit).
17. Clean the back of the valve body to remove any debris that may interfere with proper piston seating.
18. Re-install the piston into the back of the valve body. Tighten the piston until it comes into metal-to-metal contact with the valve body.

⚠ CAUTION



- **Make sure the piston is assembled and installed correctly.**
- Failure to follow this instruction could improve valve operation, resulting in property damage.

19. Re-attach the trim. Refer to the applicable trim drawing for complete details.
20. Place the system back in service by following the "Placing the System in Service" section in the applicable installation, maintenance, and testing manual for the valve.

5-Year Rebuild Kit Instructions for FireLock® Dry, Deluge, and Preaction Valves

SERIES 756 AND 758

For complete contact information, visit www.victaulic.com

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