

FEBCO FACTORY REPAIR INFORMATION

The following pages are excerpts from literature the manufacturers print to help repair their assemblies. This information is provided to assist in repairing their assemblies but should not be considered all the information needed to repair all situations.

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MODEL 765

A. MODEL 765 - 1/2" through 1 1/4" sizes

1. Disassembly Bonnet/Poppet

- a. Close outlet gate valve then close inlet gate valve. Bleed residual pressure by opening No. 2 testcock.
- b. Remove canopy nut and canopy.
- c. Unscrew bonnet assembly from valve body by hand. (If necessary, use appropriate size wrench on outside diameter of bonnet. However, this may cause damage and require replacement of the bonnet assembly.)
- d. Remove poppet/seal assembly from body.

2. Check Valve Removal

- a. Evenly depress retaining bracket approximately 1/4 inch, and rotate bracket 90°.
- b. Remove the bracket, spring and check assembly.

3. Check Valve Seal Replacement

- a. Remove screw holding the guide, and lift the seal from its holder. **CAUTION:** Do not damage the guide legs or the guide pin of the holder.
- b. Insert seal disc into holder, position guide in center of seal and thread the retaining screw through the guide into the holder.
- c. Lightly tighten the screw to hold the guide from rotation. **CAUTION:** Over-tightening may cause distortion of the guide legs.

4. Assembly

To reassemble the device use the reverse procedure described above along with the following special instructions.

- a. Position check assembly into valve body. Position spring into recessed area on top side of check assembly. **NOTE:** In some cases it may be easier to position the spring on the check assembly prior to positioning in the valve body.
- b. When installing the retaining bracket, insure the spring is centered around the boss of the bracket.
- c. To ease assembly of the bonnet into the valve body, apply a thin coating of Vaseline on the o-ring.

DO NOT USE ANY OTHER LUBRICANT.

- d. Insure the guide pin of the bonnet correctly enters the hole in the poppet.
- e. Thread the bonnet into the valve body by hand until the bonnet flange bottoms on top surface of valve body. **DO NOT OVER-TIGHTEN.**
- f. Tighten canopy nut only until canopy cannot turn freely.
- g. Rapidly open inlet gate valve to minimize spillage through the air vent. Slowly open outlet gate valve.
- h. Test unit to insure proper operation.

B. MODEL 765 - 1 1/2" through 2" sizes

1. Disassembly

- a. Close outlet gate valve then close inlet gate valve. Bleed residual pressure by opening No. 2 testcock.
- b. Remove the six bonnet bolts and lift the bonnet from valve body. Remove poppet and remove seat disc.
- c. To replace poppet spring: unscrew nut, unscrew guide pin and remove spring. Use caution to avoid damage to guide pin. Install new spring and reassemble.
- d. Remove the spring retaining web, spring and check assembly.

2. Check Valve Seal Replacement

- a. Remove guide retaining nut and guide, lift seal from holder.
- b. Insert new seal, position guide in center of holder/seal and thread nut to retain guide. Lightly tighten nut to hold the guide from rotating.

3. Assembly

- a. Position the check valve assembly, spring and retaining web into valve body. Insure the arms of the retaining web are aligned with the guide and supports in the valve body.
- b. Position the poppet in the retaining web. Place the bonnet on the valve body. Insure the retaining web is properly supported by the three cast bosses inside the bonnet.
- c. Insert the bonnet bolts and tighten.
- d. Rapidly open inlet gate valve to minimize spillage the air vent. Slowly open outlet gate valve.
- e. Test unit to insure proper operation.

1. Disassembly - Check Valves

- a. Close inlet and outlet gate valves. Bleed residual pressure by opening No. 2,3 and 4 testcocks.
- b. Unscrew bonnet using appropriate size wrench.

- c. Using pliers (or similar tool), grasp the retainer either by the center boss or cross support member (depends on device size).

Lift upstream edge above its positioning groove and pull in the upstream direction to free the positioning tab from its groove.

While pulling in an upstream direction to slightly compress the spring, pivot the retainer out of the valve body.

- d. Remove the spring and check assembly.

2. Check Valve Seal Replacement

- a. Hold check assembly in one hand and rotate the disc retainer until the cutouts are aligned with the tabs on the guide and remove. **CAUTION;** The use of pliers or other tools may damage the parts and require unnecessary replacement.

- b. Remove old seal and install new.

NOTE: On 3/4" and 1" sizes the seal is not symmetrical and can only be installed in one direction.

- c. Position disc retainer on guide and rotate to locked position.

Insure the seal is properly seated and has not been lifted during disc retainer installation.

3. Assembly - Check Valves

- a. Use reverse procedure for assembly with the following special instructions.
- b. After positioning the check assembly, insert the spring into the recessed area of the check assembly. Hold the other spring end, bending slightly upward and position the retainer over the spring end. Insert the retainer into position. Insure the spring is straight and properly seated. The use of a screw driver to pull/push on the spring is helpful to align the spring.
- c. To ease bonnet installation, apply a thin coating of o-ring lubricant or white petroleum jelly to the o-ring prior to assembly.
- d. Test unit to insure proper operation.

1. Check Valve Disassembly

- a. Close outlet gate valve then close inlet gate valve. Bleed residual pressure by opening No. 2,3 and 4 testcocks.

- b. Remove cover bolts and cover.

- c. Lift inlet side of the spring retainer slightly above the top surface and pull in the upstream direction to free the positioning tab from its groove. Pivot the retainer out of the valve body. It is advisable to wear gloves during this operation to avoid accidental injury to hands.

- d. Remove spring and check assembly.

- e. Remove guide retaining screw, guide and seal disc

2. Check Valve Assembly

- a. Use reverse procedure for assembly.

- b. When positioning the check assembly, care should be exercised to avoid damage to the valve body seal edge.

- e. Position spring around the raised area of check assembly. While holding spring in position, pivot the retainer into the valve body. Insure the spring is centered and straight.

- d. After completing assembly, open the inlet gate then the outlet gate valve. Bleed air from device

1. Disassembly - Check Valves

- a. Close inlet and outlet gate valves. Bleed residual pressure by opening No. 2, 3 and 4 testcocks.
- b. Unscrew bonnet using appropriate size wrench.

- c. Using pliers (or similar tool), grasp the retainer either by the center boss or cross support member (depends on device size).

Lift upstream edge above its positioning groove and pull in the upstream direction to free the positioning tab from its groove.

While pulling in an upstream direction to slightly compress the spring, pivot the retainer out of the valve body.

- d. Remove the spring and check assembly.

2. Check Valve Seal Replacement

- a. Hold check assembly in one hand and rotate the disc retainer until the cutout are aligned with the tabs on the guide and remove. CAUTION: The use of pliers or other tools may damage the parts and require unnecessary replacement.

- b. Remove old seal and install new.

NOTE: On 3/4" and 1" sizes the seal is not symmetrical and can only be installed in one direction. Slanted surface must be facing out.

- c. Position disc retainer on guide and rotate to locked position.

Insure the seal is properly seated and has not been lifted during disc retainer installation.

3. Assembly - Check Valves

- a. Use reverse procedures for assembly with the following special instructions.

- b. NOTE: Insure the heavy check spring is installed in the No. 1 check valve.

After positioning the check assembly, insert the spring into the recessed area of the check assembly. Hold the other spring end, bending slightly upward and position the retainer over the spring end. Insert the retainer into position. Insure the spring is straight and properly seated. The use of a screw driver to pull/push on the spring is helpful to align the spring.

- c. To ease bonnet installation, apply a **thin** coating of o-ring lubricant or white petroleum jelly to the o-ring prior to assembly.

4. Relief Valve Disassembly

- a. Remove copper tubing.
- b. Unscrew relief valve body from check valve body and remove seat ring and o-ring gasket.
- c. Remove capscrews, diaphragm cover, and diaphragm.
- d. Remove diaphragm button and spring by unscrewing flat head screw
- e. Push main stem out the seat ring end of body.
- f. Remove disc washer and seat disc by unscrewing screw)
- g. Remove o-ring from body.

5. Relief Valve Assembly

- a. Use reverse procedure from assembly.

NOTE: Lubricate o-ring and main stem using silicone based o-ring lubricant.

- b. To ease assembly of spring and diaphragm button support main stem in wide open position.
- c. To install diaphragm hold main stem in closed position center diaphragm, put cover in place, and
- d. After completing assembly, open inlet gate valve then bleed air from each check valve chamber. Open outlet gate valve.
- e. Test device to insure proper operation.

SERVICE PROCEDURE 825Y (3/4"-2")

805Y - 805YR - 845 - 865 - 825Y - 825YR

1. Check Valve Inspection/Repair Model 825Y (3/4"-2")

a. Close inlet and outlet shut-off valves. Bleed residual pressure by opening first the #4 testcock, then the #3 and #2 testcocks.

b. Unscrew Cap using appropriate size wrench. **CAUTION: Cap is spring loaded. First check spring force on 3/4" to 1 1/2" is 10 lb. First check spring force on 1 1/2" to 2" is 28 lb. Retain cap with appropriate amount of hand force to avoid injury. Second check spring force is approximately 1/4 of the first check spring.**

c. Remove the spring and disc holder assembly.

d. Inspect guiding bore of the cap and poppet stem for any build-up of calcium or other mineral deposits. If this condition exists, it may be removed with the careful use of an appropriate size reamer or a thin blade knife. 3/4"-1 1/4" cap --5/8" (.6250) reamer 1 1/2"- 2" cap --7/8" (.8750) reamer.

e. Check disc holder and stem movement in the guide to insure they move freely. Debris can inhibit proper movement.

2. Check Valve Seat Replacement Model 825Y (3/4"-2")

a. Hold disc holder assembly in one hand and remove screw and disc washer.

CAUTION: The use of pliers or other tools may damage the guiding surfaces and require unnecessary replacement. Do not scratch or mark sealing or guiding surfaces.

b. Inspect seat disc for wear or cuts. Remove old seat disc and install new, or turn used disc over if new seat disc is not available.

c. If the seat disc has been severely cut along the seat ring diameter, the assembly is being subjected to extremely high back pressure from thermal water expansion, water hammer or other causes of excessive water pressure. Seat discs damaged in such a manner should be replaced and not turned over to be re-used.

3. Check Valve Reassembly Model 825Y (3/4"-2")

a. Position the disc in the cleaned holder and retain with disc washer and screw. **CAUTION: DO NOT OVERTIGHTEN SCREW, SECURE WITH APPROXIMATELY 12 INCH-LBS.**

b. Position the spring around the centering ring of the disc holder and reinsert the disc holder assembly into the check body.

NOTE: Insure the heavy check spring is installed in the No. 1 check valve or the valve will not operate properly and a continuous discharge may occur.

c. Apply a thin coating of FDA approved lubricant on the o-ring in the cap and thread cap onto the check valve body using the appropriate sized wrench.

d. Close the #4, #3, and #2 testcocks and slowly open first the inlet and then outlet shut-off valves and return the assembly to service.

e. Test the assembly to insure it is operating properly.

4. Relief Valve Inspection/Repair Model 825Y (3/4"-2")

a. Slowly close the inlet and outlet shut-off valves and bleed off the residual pressure by opening first test cocks #4, then #3 and #2.

b. Remove capscrews, diaphragm cover, diaphragm and port bushing of relief valve.

c. Remove the integral relief valve assembly by pulling straight out of the body to remove the internal

d. Remove the disc washer and seat disc by unthreading the screw.

e. To remove spring and/or mainstem from the guide, keep unit compressed and remove the screw (item 18) located in the center of the button. Push the mainstem through the guide and remove the o-ring from the mainstem. Inspect and clean or replace o-ring and seat disc as required. Clean all parts thoroughly with clean water before re-assembly.

5. Relief Valve Seat Removal Model 825Y (3/4"-2")

Standard only on units manufactured after October of 1988 with serial numbers higher than listed below.

Serial Numbers of New Model 825Y with Replaceable Relief Valve Seat Ring

Size	Serial Number
3/4"	Serial No. S6528 and above
1"	Serial No. S6163 and above
1 1/2"	Serial No. S5710 and above
2"	Serial No. S5089 and above

a. While relief valve is disassembled, remove the two allen head socket capscrews using the appropriate sized allen head wrench. (3/16" allen head wrench for 3/4" and 1" assemblies, and 1/4" allen head wrench for 1 1/2" and 2" assemblies.)

b. Pull the relief valve body from the main valve body. Pull the discharge shield from the seat ring.

c. Remove seat ring with the appropriate sized socket. Use care to avoid damage to the seat edge. Replaceable relief valve seat is standard only on units manufactured after October of 1988.

d. Inspect seat ring, o-rings, bushings, and gasket seals for damage. Rinse all parts with clean water before reassembly.

c. Carefully place the relief valve body over the bushing and tighten the two capscrews to retain the relief valve body to the main valve body. New capscrew sealing washers should be installed to avoid leakage.

d. Lubricate the o-rings and mainstem using FDA approved lubricant. Place the mainstem and spring into the guide and replace the flat-head screw located at the center button.

e. Place the disc washer and seat disc in position and retain with machine screw. Depress the diaphragm button to insure it is free moving.

f. Place the relief valve module into the relief valve body and mount the diaphragm. Be careful to position the diaphragm over the port bushing. Replace the relief valve cover and tighten the capscrews.

g. After completing reassembly, slowly open the inlet shut-off valve. Then bleed air from each chamber and from the relief valve cover by opening testcocks #4, #3, and #2. Slowly open outlet shut-off valve and return the valve to service.

h. Test the assembly to insure it is operating properly.

6. Relief Valve Re-assembly Model 825Y (3/4"-2")

a. Lubricate the seat ring o-ring with FDA approved lubricant and thread seat ring into the valve body until seated. Do not over tighten. (Replaceable relief valve seat ring standard on units manufactured after October of 1988.)

b. Position the discharge shield over the seat ring diameter and, taking care not to damage the two flow passages, reinstall o-rings and guide bushings.

SERVICE PROCEDURES

Models

805Y, 805YD, 806, 806YD, 825, 825D, 825YD (2 1/2" - 3")

1. Check Valve Disassembly Model 825, 825D and 825YD (Sizes 2 1/2" - 3")

a. Slowly close outlet shut-off valve and inlet shut-off valve. Bleed residual pressure by opening #4, #3, and #2 testcocks.

b. Remove cover bolts uniformly while holding cover in place. Remove cover.

CAUTION: Spring is retained in body by cover.

c. Lift check assembly from body being careful not to damage internal epoxy coating.

d. If necessary, unthread bushing (item 4A) from cover.

2. Check Assembly Repair Models 825, 825D and 825YD (Sizes 2 1/2"-3")

a. Unthread nut on stem and remove disc washer and seat disc.

b. Inspect seat disc for wear or damage. Replace with new seat disc or turn used disc over if new disc is not available.

NOTE: The discs are symmetrical. It is usually possible to turn the disc over and obtain an effective seal.

c. If the seat disc has been severely cut along the seat disc ring diameter, the assembly is being subjected to extremely high back pressure from thermal water expansion, water hammer, or other causes of excessive water pressure. A disc damaged in such a manner should be replaced and not turned over to be re-used.

3a. Valve Seat Removal (Sizes 2 1/2"-3") Threaded-in Seat Ring Type Models Model 825

1. Remove seat ring by unthreading in counter-clockwise direction being careful not to damage the internal epoxy coating in valve. A tool to aid in this process is available.

2. Remove bushing and bushing nut (item 2A & 2B).

3. Remove o-ring.

3b. Valve Seat Removal (Sizes 2 1/2"-3") Bolted in Seat Ring Type Models Models 825D & 825YD

1. Remove the three capscrews and washers retaining the seat ring.

2. Pull the seat ring from the valve body being careful not to damage the internal epoxy coating of valve.

3. If necessary, unthread the bushing (item 2A) from the seat ring.

4. Remove the o-ring.

4a. Valve Seat Reassembly (Sizes 2 1/2"-3") Threaded-in Seat Ring Type Models Model 825

1. Lubricate o-ring with FDA approved lubricant and replace on seat ring.

2. Reinsert bushing into seat ring center.

3. Thread seat ring into valve body in clockwise direction being careful not to damage the internal epoxy coating of valve.

4b. Valve Seat Reassembly (Sizes 2 1/2"-3") Bolted-in Seat Ring Type Models Model 825D & 825YD

1. Lubricate o-ring with FDA approved lubricant and replace in seat ring.

2. Thread bushing into seat ring.

3. Place the seat ring carefully into body and retain with three capscrews and washers being careful not to damage the internal epoxy coating of valve.

5. Check Valve Reassembly (Sizes 2 1/2"-3")

a. Position the disc in the cleaned holder and retain with disc washer. Insert stem into disc holder, replace the nut on stem and tighten.

NOTE: On older Model 825 valves, the disc holder is sealed to the stem with a sealant. If the seal is broken, the stem and holder must be cleaned and new sealant applied. Newer valves, Models 825D and 825YD, use an o-ring so a sealant is not required.

b. Thread bushing into cover.

SERVICE PROCEDURES

Models - 805Y, 805YD, 806, 806YD, 825, 825D, 825YD

c. Carefully place stem of check assembly into seat ring bushing. Replace spring centering diameter on the disc washer. **NOTE: Be sure the heavier spring (6 PSI) is placed in first check and lighter spring (2 PSI) is placed in second check or the unit will not operate properly and discharge from the relief valve could occur.** The wire diameter is visibly thicker on the heavier spring and thinner on the lighter spring. Care should be taken to avoid damaging internal epoxy coating of valve.

d. Place cover on check body securing spring and stem into cover.

e. Bolt cover onto check body while holding cover in place with appropriate hand force. Spring will be retained in body by cover.

f. Slowly open inlet shut-off valve. Bleed air from valve by opening first the #4 testcock, then the #3, #2 and #1 testcocks and air bleeds on all covers.

g. Slowly open outlet shut-off valve and return the valve to service.

h. Test the assembly to insure it is operating properly.

(4" - 10")

1. Check Valve Disassembly (Sizes 4"-10")

a. Slowly close outlet gate valve then slowly close inlet gate valve. Bleed residual pressure by opening first the #4 testcock, then #3, and #2 testcocks.

b. Remove cover bolts and cover. Unscrew bolts uniformly to avoid binding of the cover. The spring will push the cover approximately 1/2 inch off the top of the valve body.

2. Seat Disc Removal (Sizes 4"-10")

CAUTION: The newer model 825 cast iron units have threaded disc holders with four (4) cast lugs, (6 lugs on 10" assemblies), 1/2" high located on back side, outside the spring diameter. If the Model 825 you are servicing does not have these lugs, **SPRING TENSION MUST BE RELEASED BY USING THE SPRING REMOVAL TOOL BEFORE FURTHER DISASSEMBLY. DO NOT ATTEMPT TO REMOVE SPRING TENSION ON OLDER MODEL 825'S WITHOUT THE USE OF THIS TOOL. SEE SPRING REMOVAL INSTRUCTIONS.** Newer Models 825, 825D and 825YD assemblies have the disc holder threaded on the stem. Therefore, the seat disc can be removed without releasing spring tension on these newer models.

a. Unthread retaining nut from stem and remove disc washer and seat disc.

b. Inspect seat disc for wear or damage. Replace with new seat disc or turn used disc over if new disc is not available.

NOTE: The discs are symmetrical. It is usually possible to turn the disc over and obtain an effective seal.

c. If the seat disc has been severely cut along the seat disc ring diameter, the assembly is being subjected to extremely high back pressure from thermal water expansion, water hammer, or other causes of excessive water pressure. A seat disc damaged in this manner should be replaced and not turned over for re-use.

d. Remove disc holder from stem.

NOTE: On older Model 825 valves, the disc holder is sealed to the stem with a sealant. If the seal is broken, the stem and holder must be cleaned and new sealant applied. Newer valves, Models 825D and 825YD use an o-ring so a sealant is not required.

3. Spring Removal (Sizes 4"-10")

CAUTION: TO AVOID POSSIBLE INJURY, DO NOT ATTEMPT TO REMOVE SPRING TENSION WITHOUT THE USE OF THE SPRING REMOVAL TOOL.

ON OLDER MODEL 825 VALVES, IT IS NECESSARY TO REMOVE THE SPRING BEFORE THE RUBBER SEAT DISC CAN BE REMOVED.

a. Leave check assembly in body.

b. Install long studs in body 180 degrees apart.

SERVICE PROCEDURES

Models

805Y, 805YD, 806, 806YD, 825, 825D, 825YD

c. Place spring removal tool over stud and retain with nuts.

d. Unthread capscrew (Item 7A) using 9/16" hex socket.

e. Release spring tension by unthreading nuts on long studs. Use alternating turns to keep tool parallel to valve body.

f. Remove spring guide and stem assembly.

g. Remove guide bushing by unthreading.

4a. Valve Seat Removal (Sizes 4"-10") Threaded-in Seat Ring Type Model 825

1. Remove check valve as described above.
2. Remove seat ring by unthreading in the counter-clockwise direction.
3. Remove bushing and bushing nut if used (bushing and nut is used on older Model 825).
4. Remove o-ring.

4b. Valve Seat Removal (Sizes 4"-10") Bolted in Seat Ring Type Model 825D or 825YD

1. Remove check valve as described above.
2. Remove the three capscrews and washers retaining the seat ring.
3. Pull the seat ring from the valve body.
4. Unthread the bushing (Item 2A) from the seat ring.
5. Remove the o-ring.

5a. Valve Seat Reassembly (Sizes 4"-10") Threaded-in Seat Ring Type Models Model 825

1. Lubricate o-ring with FDA approved lubricant. Reposition the o-ring in the seat ring groove.
2. Replace the bushing and bushing nut (if used) in the seat ring (the bushing and nut is used on older Model 825).
3. Thread the seat ring into the seating area in a clockwise direction. Be careful not to damage internal epoxy coated surfaces.

5b. Valve Seat Reassembly (Sizes 4"-10") Bolted-in Seat Ring Type Models Models 825D & 825YD

1. Lubricate o-ring with FDA approved lubricant. Reposition the o-ring in the seat ring groove.
2. Thread the bushing into the seat ring.
3. Place the seat ring carefully into the valve body and retain with three capscrews and washers being careful not to damage the internal epoxy coated surfaces.

6. Check Valve Reassembly Models 825, 825D, and 825YD

- a. Use reverse procedure for assembly.
- b. Make sure the o-ring is properly placed in the groove. Do not force the cover into the body.
- c. Do not damage epoxy coated surfaces.
- d. Test unit to insure proper operation.

SERVICE PROCEDURES

RELIEF VALVE

MODELS 825, 825D

1a. Relief Valve Disassembly Non-Modular Type Relief Valve Models 825 & 825D

1. Remove copper tubing from relief valve body.
2. Unthread the relief valve completely from the check valve body, leaving the seat ring in the check valve body. NOTE: If the seat ring is removed with the relief valve, the seat ring must be unthreaded from the relief valve diaphragm plate, being careful not to damage the seat ring threads and seating surface.
3. Remove cover bolts and nuts, diaphragm cover and spacer from the relief valve assembly.
4. Turn the relief valve upside down, unthread screw (Item 35) using a 9/16 hex socket, and remove diaphragm assembly, spring button and spring.
5. Unthread screw (Item 48) and remove diaphragm washer and diaphragm from diaphragm button.
6. Push main stem out of bottom of relief valve body.
7. Remove o-ring from body.

SERVICE PROCEDURES • RELIEF VALVE

825 825D 825YD

2a. Relief Valve Reassembly Non-Modular Type Relief Valve Model 825 and 825D

1. Assemble washer, outer diaphragm, spacer, diaphragm button, inner diaphragm and washer by securing with capscrews to form diaphragm assembly. When installing diaphragms, make sure side of diaphragm marked "button side" (fabric side) is toward diaphragm button and that diaphragm is not pinched.

2. Lubricate mainstem o-ring with FDA approved lubricant. Place seat disc on main stem and place disc washer on seat disc.

3. Slide main stem bolt through main stem assembly and place inside relief valve body cavity with main stem bolt protruding.

4. Position spring over bolt and fit diaphragm assembly over spring. Compress diaphragm assembly into spring until main stem bolt threads into diaphragm assembly. Secure using a torque wrench. **DO NOT TIGHTEN MAINSTEM BOLT BEYOND 15 INCH-LBS. OR DISTORTION OF THE MAIN STEM (ITEM 30) WILL**

OCCUR.

5. Thread seat ring into main valve body and thread relief valve into seat ring.

6. Reconnect copper tubing to relief valve.

7. Slowly open inlet shut-off valve and bleed air by opening first testcock #4, then testcocks #3, and #2 and all air bleeds.

8. Slowly open outlet shut-off valve and return the valve to service.

9. Test the assembly to insure it is operating properly.

3a. Relief Valve Seat Disc Replacement Modular Type Relief Valve Model 825YD

1. Disconnect sensing tubing. Remove relief valve cover (Item 21) by loosening cover bolts (Item 25) and remove the outer diaphragm (Item 26).

2. Grasp the relief valve button (Item 24) with one hand. Insert fingers into the rectangular relief valve port on the bottom of the relief valve and apply force to the seat disc. Pull the relief valve module straight out from the body. **DO NOT TWIST.**

3. Place the relief valve module on a flat surface. Holding the mainstem with one hand, loosen and remove the lower guide (Item 35) and disc washer (Item 33). Remove the rubber seat disc (Item 32) and turn over or replace as required. Inspect all parts and clean using clean water. Refer to section 5a on replacing relief valve diaphragms if this procedure is necessary.

4. Replace the disc washer and lower guide and tighten. Lubricate the o-ring (item 31a), with FDA approved lubricant. Insert the relief valve module into relief valve body, using your fingers to help guide the lower guide into the bushing (item 36a) on the relief valve seat ring. Push the module straight in. **DO NOT TWIST.**

5. If the relief valve module does not have a center label piece covering the screw (item 48), inspect the screw for burrs. If a burr is visible, remove or cover burr with a piece of flexible tape. This will protect the surface of the diaphragm.

6. Replace the diaphragm, placing the fabric side against the button. Work the rolled edge into the space between the module and the body making sure it is not pinched or buckled.

7. Replace the cover, tighten the cover bolts, and reconnect the sensing tubing. Return to service and test the assembly to insure proper operation.

4a. Relief Valve Seat Ring Replacement Modular Type Relief Valve Model 825YD

1. Disconnect sensing tubing. Loosen and remove the four mounting bolts (Item 38) from the adapter. Remove the relief valve.

2. Pull the seat ring (Item 36) out from the relief valve body and inspect for damage. Replace as required.

3. Reposition the relief valve to the adapter insuring the o-ring (item 36b) is properly positioned. Tighten the mounting bolts.

4. Reconnect the sensing tubing. Return to service and test the assembly to insure proper operation.

5a. Relief Valve Inner Diaphragm Replacement / Modular Type Relief Valve Model 825YD

1. Disconnect the sensing tubing. Remove the cover (Item 21) by loosening and removing cover bolts (Item 25).

2. Remove the outer diaphragm (Item 26). Grasp the relief valve button (Item 24) with one hand. Insert your fingers into the rectangular relief valve port on the bottom of the relief valve and apply force to the seat disc. Pull the relief valve module straight out **DO NOT TWIST.**

3. Remove the lower guide (item 35) and disc washer (item 33). Place the relief valve module upside down on a clean flat surface. Remove the center label piece protecting the screw head and save this piece for reassembly. With one hand apply force sufficient to hold the button against the mainstem. Keep the spring (item 28) compressed (spring is approximately 35 lbs.) while unscrewing the pan head screw (item 48). Remove the screw and relieve the spring tension. Remove the button and spring.

4. Remove the main stem and unthread the retainer (item 34) from the upper guide (Item 32). Remove the slip ring (item 27a) and inner diaphragm (item 27). Inspect, clean and replace parts as required.

5. To reassemble, position the bead on the inner diaphragm into the groove of the upper guide. Place the slip ring over the diaphragm. Lubricate the retainer threads using an FDA approved lubricant and thread the retainer onto the upper guide. Tighten to 60 inch-lbs. of torque.

6. Insert the mainstem into the diaphragm and "roll" the diaphragm into position by grasping the end of the diaphragm and mainstem with one hand and push the upper guide towards your other hand.

825YD

7. Test to make sure diaphragm is positioned properly by sliding the upper guide back and forth through the full travel. It must move freely and easily.

8. Once the inner diaphragm has been rolled, force the end of the mainstem snug against the end of the inner diaphragm. The screw hole in the end of the mainstem should be visible.

9. Replace the spring and button and tighten the screw while holding the button in place.

10. Make sure the screw (item 48) is free of burrs that may cut the outer diaphragm. Reposition the center label piece, that you have saved during disassembly, over the screwhead.

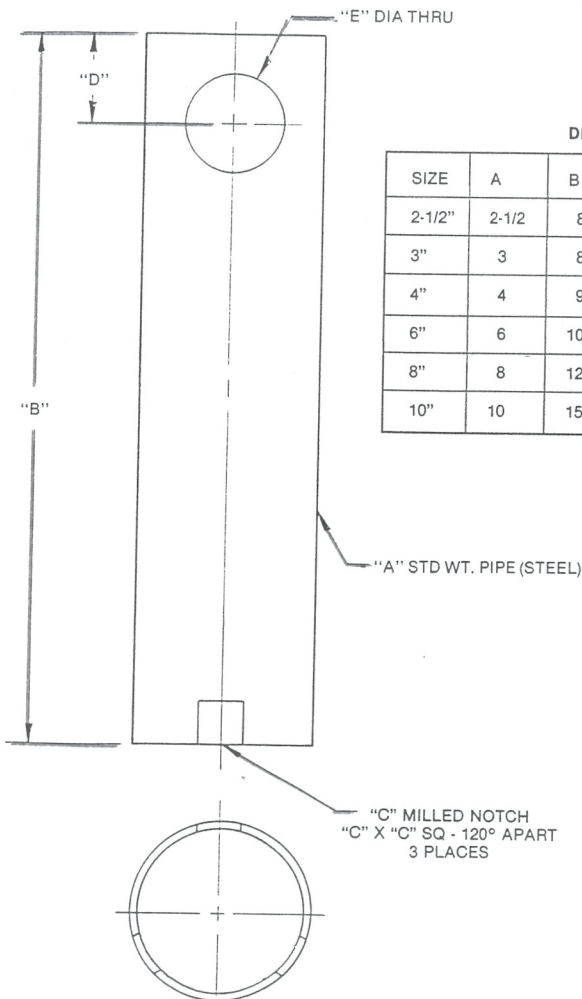
11. Replace the disc washer and lower guide insuring that the seat disc is clean and in position. Lubricate the upper guide o-ring (item 31a) using an FDA approved lubricant, to ease installation. **DO NOT USE LUBRICANT ON ANY OTHER PART.**

12. Position the relief valve module back into the body using your finger to help guide the lower guide into the relief valve seat ring bushing. Push the module straight in. **DO NOT TWIST.**

13. Replace the outer diaphragm, placing the fabric side against the button. Work the rolled edge into the space between the module and the body, making sure it is not pinched or buckled.

14. Replace the cover, tighten the cover bolts, and reconnect the sensing tubing. Return the valve to service and test to insure proper operation.

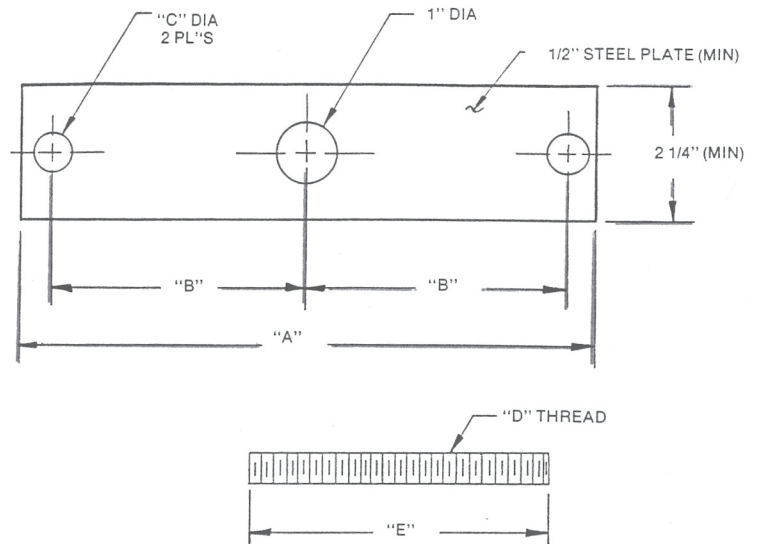
CHECK SEAT RING TOOL



DIMENSIONS

SIZE	A	B	C	D	E
2-1/2"	2-1/2	8	1/2	1	1
3"	3	8	1/5	1	1
4"	4	9	1/2	1	1
6"	6	10	5/8	1	1
8"	8	12	5/8	1	1
10"	10	15	5/8	1	1

CHECK SPRING REMOVAL TOOL



DIMENSIONS					
VALVE SIZE	A	B	C	D	E
4"	9 1/2	4 1/4	5/8	1/2-13	5 1/2
6"	12 1/2	5 5/8	3/4	5/8-11	5 1/2
8"	14 1/4	6 3/8	7/8	3/4-10	7
10"	16 1/2	7 1/2	7/8	3/4-10	7

NOTE: This information is provided to expedite servicing of FEBCO products. One tool may be fabricated for use on all required sizes by drilling all holes at appropriate dimensions in a single steel plate of maximum required length.

CAUTION: To avoid possible injury during use, do not fabricate tool from lesser strength material or to smaller dimensions than minimums shown.

IS-F-825-DIAPH-SMALLRV

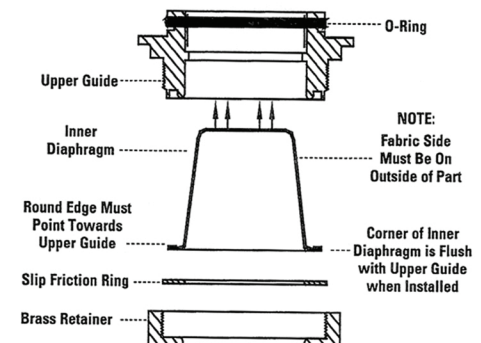
INSTALLATION INSTRUCTIONS

825 YD, 860, 880, 880V

Relief Valve Sizes: 2 1/2" - 10" (65 - 250mm)

Proper installation of FEBCO Type 825 YD, 860, 880, 880V Relief Valve Inner Diaphragm into the Relief Valve Upper Guide

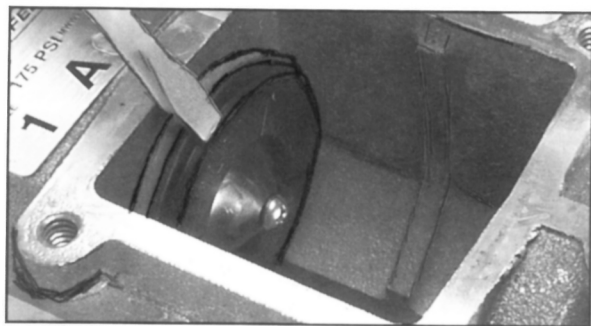
Failure to install inner diaphragm in this method will result in the inner diaphragm bursting after installation.



Model 850/850U 1/2" through 2"

CHECK MODULE DISASSEMBLY

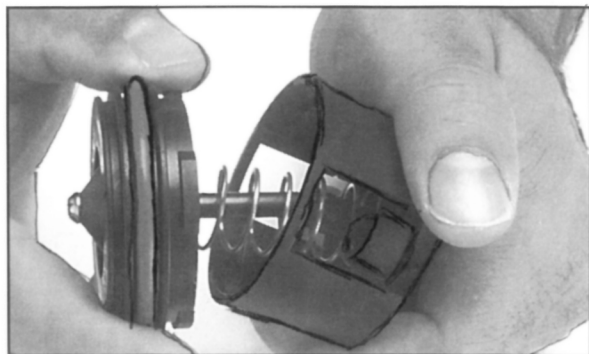
1. Slowly close inlet and outlet ball valves. Bleed residual pressure by opening #2, #3, and #4 test cocks. Allow the test cocks to remain open until the reassembling is completed. Test cock #1 should remain closed.
2. Remove the cover bolts (item 21) using the appropriate size wrench.
3. Remove spacer (item 8) by grasping the flanged end of the spacer and pulling straight up.
4. Remove the inlet check assembly by pulling it in the direction of flow out from the body bore until it is completely exposed then lift out of the body.
5. Remove the outlet check assembly by placing the tip of a medium size flat nose screw driver in the slot of the seat (item 3) and prying the check assembly back until the red o-ring (item 3.1) is exposed. Then, using your fingers, pull it out from the body bore until it is completely exposed then lift out of the body.



SEAL REPLACEMENT

Both check assemblies are disassembled and reassembled in the same manner. To service the checks you may replace the check modules with new ones by using check module assembly kits available from FEBCO. Or, you may also replace the rubber components in the check modules by using the replacement rubber parts kits available from FEBCO.

1. To disassemble, grasp the seat section (item 3) in one hand and the guide section (item 7) in the other hand and then rotate in a counter clock wise direction (approx. 1/8 turn) until the two parts disengage.

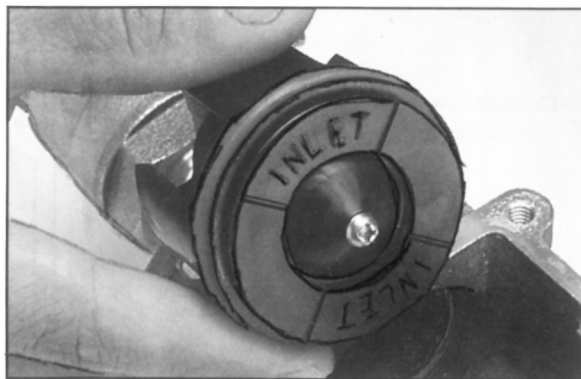


2. Remove retaining screw (item 5.2) and disc retainer (item 5.1) so the rubber disc is fully exposed. Carefully pry out the rubber disc from poppet. Be careful not to damage the poppet when removing the disc. Rinse poppet in clean water and replace the old rubber disc with new rubber disc. If the rubber disc is not damaged it can be reversed and reinstalled when a new disc is not available. Rinse all other internal components with clean water. Replace disc retainer and secure with retaining screw (item 5.2).
3. Reassemble check module in the reverse manner as indicated in above. When reassembling the check module be sure to insert the poppet stem into the guide hole and keep fingers clear of the slots in the module.

CHECK MODULE RE-ASSEMBLY

Use reverse procedure for assembly with the following special instructions.

1. Inspect the check module o-ring (item 3.1) for damage and replace if necessary. To ease assembly, apply a thin coating of FEBCO factory supplied petroleum jelly (food grade) to the o-ring (item 3.1) prior to installing in body. **CAUTION:** Excess lubricant may cause foreign debris to collect on internal components which could foul the check assembly and result in a test failure.
2. The word **INLET** is inscribed on the end of each module. That end should face the inlet of the valve.



3. When replacing spacer (item 8) between the two check assemblies be sure that the flanged end of the spacer is touching the back side of the inlet check assembly so that the cover will fit properly. Next, replace cover making sure #3 test cock is on the upstream side. Do not over tighten cover bolts (Approximately 35 inch-pounds is sufficient).
4. After reassembling, close test cock #2, #3 and #4 (test cock #1 should already be closed), slowly open inlet ball valve. Bleed air from the unit by opening and closing test cock #2, then #3 and finally #4.
5. Check for external leaks and repair if necessary. Slowly open outlet ball valve.
6. Test assembly in accordance with the locally approved test methods.

CHECK VALVE DISASSEMBLY AND REASSEMBLY

1. SPRING MODULE REMOVAL

- a. Slowly close outlet shut-off valve and inlet shut-off valve. Bleed residual pressure by opening #4, #3, and #2 test cocks

- b. Remove cover bolts, removing the two bolts last that are located next to the retainer pin. Remove cover.

NOTE: Spring module is positioned in the body by the cover. Spring module is captured.

- c. Remove pivot bearing (13) from the upper spring retainer of the spring module. Inspect pivot bearing (13) and bearing socket (15). Small hole in bearing socket indicates replacement is required. Remove retaining clip (5.1) from groove on one end of the load pin (7). Hold spring module with one hand while sliding out load pin (7) from arm (4). Lift out spring module and inspect for wear or damage. Replace spring module if necessary.

2. CHECK DISK REMOVAL

- a. Remove jam nut (16) and washer (17) from check disc stem threads. Lift the arm and remove the check disc (6). Inspect sealing surface for debris or damage. Replace check disc if necessary.

NOTE: When jam nut (16) is tight, check disc is designed to "wobble."

3. SEAT RING ASSEMBLY REMOVAL

NOTE: Remove the seat ring assembly only if the seat ring (3) or arm (4) appear to be worn or damaged.

- a. Remove locknuts (3.4) and washers (3.3) (see Figure No. 7).

NOTE: When reassembling, tighten locknuts to 12-15 ft/lbs. If leaking occurs around bolt, further tighten until leaking stops.

- b. Remove seat ring assembly.
- c. Remove retaining clip (5) from one end of the swing pin (4.2). Hold arm (4) while sliding out swing pin (4.2). Inspect bushings (4.1) and pin (4.2) for wear or damage. Replace if necessary. Inspect gasket (3.1) for debris and/or damage. Replace if necessary.

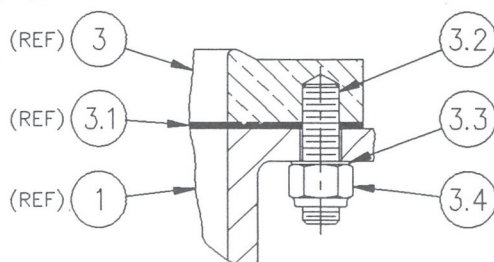
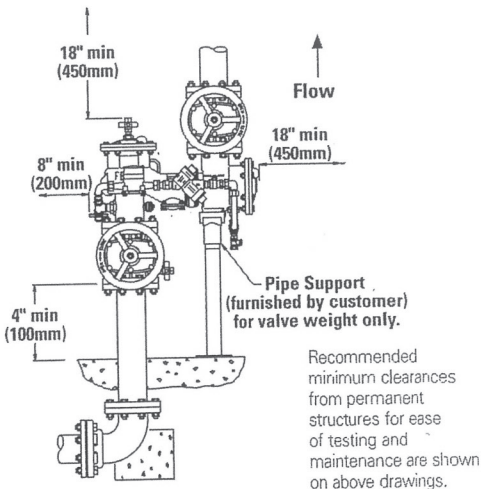
NOTE: Reverse the procedure above, to reassemble the components. Seat ring will only fit into body one way. Check alignment of seat ring if studs don't align with body holes. Gasket is also non-symmetric. Both seat ring and gasket have a notch that indicates non-symmetric hole. Clean all parts thoroughly with clean water before reassembly. Reassemble and bleed test cocks #4, and #3. Repressurize the assembly and test to ensure proper operation.

SEAT RING

FIGURE NO. 7

**Service
procedures
850, 856,
870, 870V,
876 and 876V**

2 1/2- 10"



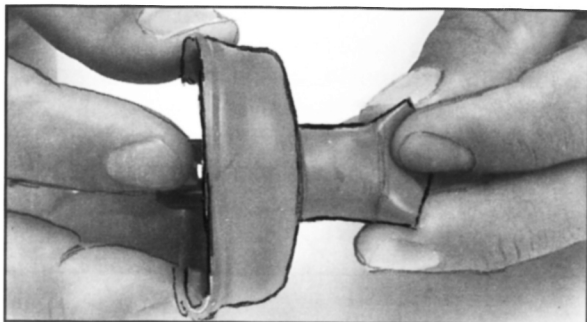
Model 860/860U 1/2" through 2"

Check Assemblies

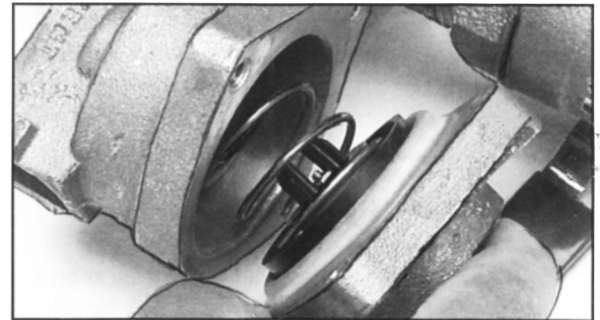
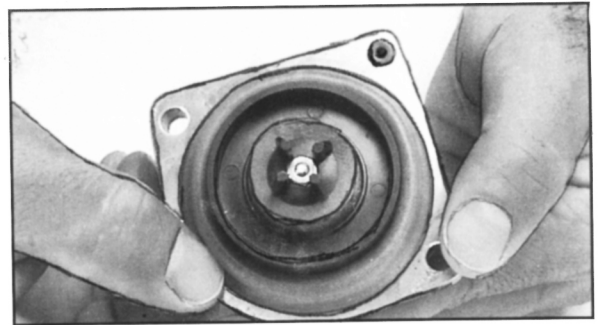
Utilize same procedures as the model 850/850U. Be sure to keep the spring with the higher load in the first check and the lighter loaded spring in the second check.

RELIEF VALVE REPAIR

1. Slowly close inlet and outlet ball valves. Bleed off air from the unit by opening and closing test cock #2, then #3, and finally #4. Test cock #1 should remain closed.
2. Loosen brass cylinder in center of relief valve cover (item 18) by unscrewing 1/4 turn (Counter-clockwise). Remove the relief valve cover bolts (item 21) and relief valve cover (item 19).
3. The internal relief valve assembly module will be attached to the relief valve cover. Unscrew the brass cylinder and remove from cover. Grasp the outer diameter of the large outer diaphragm (item 15) and pull away from the cover until the small outer diaphragm (item 16) comes out through the relief valve cover hole and is completely separated from the relief valve cover. Discard old internal relief valve assembly module. Remove the plastic slip rings (item 18.1) and discard. Slide out the seat ring (item 12) and seat gasket ring (item 12.1) from the relief valve body and discard.
4. Apply a thin film of petroleum jelly (food grade), supplied in the repair kit to both sides of the new seat gasket ring (item 12.1) and slide it on the short end of the new seat ring (item 12). Slide the short end of the new seat ring into the hole of the relief valve body. (The adhesion from the lubricant will hold the seat ring in place during the rest of the assembly process.)
5. Before installing the new internal relief valve assembly module, apply a thin coating of petroleum jelly (food grade) to both sides one of the slip rings (item 18.1) and insert it into the top of the relief valve cover. Install the new internal relief valve assembly module by grasping the outside of the outer diaphragm in one hand and the smaller diaphragm in the other hand. Then pull upward gently on the small outer diaphragm (item 16) so that it forms the shape of a tulip. Hold the small diaphragm so that it maintains this "tulip" shape while sliding it through the relief valve cover hole and plastic diaphragm gasket.



6. Apply a thin coat of petroleum jelly (food grade) to both sides of the slip ring (item 18.1) and place it over the top of the small diaphragm making sure the outer diaphragm (item 16) is not folded or creased under the slip ring. Push the slip ring down flat until the adhesion from the grease holds the small diaphragm in place. Thread the brass cylinder (item 18) into the relief valve cover and hand tighten.
7. Replace o-ring (item 20) in relief valve cover. Make sure the round bead on the large diaphragm is properly seated in the counterbore of the relief valve cover. Position spring (item 13) over the seat ring in the relief valve body and hold in place while inserting the guide end (item 23) of the relief valve assembly module and relief valve cover. Position the assembly so the o-ring aligns with the sensing hole in the body and the guide slides into the seat ring. Replace relief valve cover bolts and tighten to approximately 35 inch pounds. **Do not over tighten.** Tighten the brass cylinder (item 18) in the relief valve cover to approximately 30 feet pounds of torque. **Do not over tighten.**



8. After reassembly, with all test cocks closed, slowly open inlet ball valve and bleed air from the unit by opening and closing test cock #2, then #3 and finally #4. NOTE: During the bleeding process the relief valve may discharge a high volume of water until all test cocks have been closed and pressure has been stabilized.
9. Check for external leaks and repair if necessary. Slowly open outlet ball valve.
10. Test assembly in accordance with the locally approved test method.

860, 866, 880, 886 and 880V (2 1/2" - 10")

CHECK VALVE

SPRING MODULE REMOVAL

1. Slowly close outlet shut-off valve and inlet shut-off valve. Bleed residual pressure by opening #4, #3, and #2 test cocks.

2. Remove cover bolts, removing the two bolts last that are located next to the retainer pin. Remove cover.

NOTE: Spring module is positioned in the body by the cover. Spring module is captured.

3. Remove pivot bearing (13) from the upper spring retainer of the spring module. Inspect pivot bearing (13) and bearing socket (15). Small hole in bearing socket indicates replacement is required. Remove retaining clip (5.1) from groove on one end of the load pin (7). Hold spring module with one hand while sliding out load pin (7) from arm (4). Lift out spring module and inspect for wear or damage. Replace spring module if necessary.

CHECK DISK REMOVAL

1. Remove jam nut (16) and washer (17) from check disc stem threads. Lift the arm and remove the check disc (6). Inspect sealing surface for debris or damage. Replace check disc if necessary.

NOTE: When jam nut (16) is tight, check disc is designed to "wobble."

SEAT RING ASSEMBLY REMOVAL

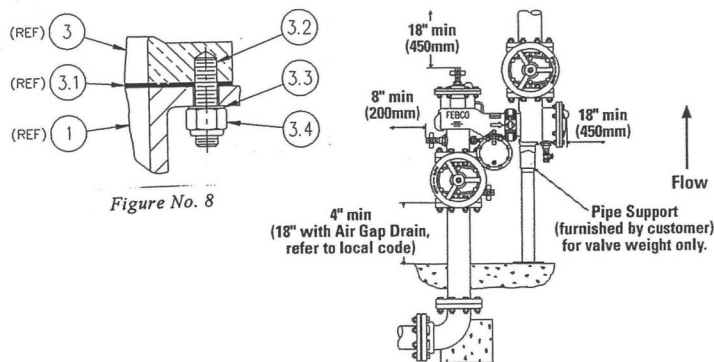
NOTE: Remove the seat ring assembly only if the seat ring (3) or arm (4) appear to be worn or damaged.

1. Remove locknuts (3.4) and washers (3.3). (See Figure No. 8 below.)
2. Remove seat ring assembly.

NOTE: When reassembling, tighten locknuts to 12 - 15 ft/lbs. If leaking occurs around bolt, further tighten until leaking stops.

3. Remove retaining clip (5) from one end of the swing pin (4.2). Hold arm (4) while sliding out swing pin (4.2). Inspect bushings (4.1) and pin (4.2) for wear or damage. Replace if necessary. Inspect gasket (3.1) for debris and/or damage. Replace if necessary.

NOTE: Reverse the procedure above, to reassemble the components. Seat ring will only fit into body one way. Check alignment of seat ring if studs don't align with body holes. Gasket is also non-symmetric. Both seat ring and gasket have a notch that indicates non-symmetric hold. Clean all parts thoroughly with clean water before reassembly. Reassemble and bleed test cocks #4, and #3. Repressurize the assembly and test to ensure proper operation.



Recommended minimum clearances from permanent structures for ease of testing and maintenance are shown on above drawings.

RELIEF VALVE

RELIEF VALVE REMOVAL (See Figure No.'s 9 - 14.)

1. Remove capscrews (24), washers (24.1) and nuts (25) at base of relief valve body and hydraulic sensing port. Remove relief valve seat ring (34) from bottom of relief valve. Inspect seat ring (34), seat disc (32), and guide (33) for debris, wear, or damage. Replace as necessary.

RELIEF VALVE SEAT DISC REPLACEMENT

1. Separate relief valve from elbow and sensing line flange. Remove cover bolts (22) and cover (20).
2. Lift out diaphragm (37) and inspect for damage. Replace if necessary.
3. Grasp spring button (28) and pull out relief valve module.
4. Turn over relief valve assembly module so that guide (33) stem is facing up. Use tabs on guide (33) to loosen guide. Unscrew guide and replace seat disc (32).

REASSEMBLE IN REVERSE ORDER.

RELIEF VALVE DISASSEMBLY

1. Remove o-ring (34.1) and rv seat ring (34) from the bottom of rv body.
2. Remove rv cover (20) from rv body by removing eight capscrews (22).
3. Remove diaphragm from rv body. Remove rv assembly module from rv body (21).
4. Loosen tabs on guide (33) and remove guide and seat disc (32), remove instruction label (28.2) from center of button, covering flow screw (28.1).
5. Loosen flow screw (28.1) **CAUTION** spring is captured. Remove spring (29) from main guide (31), remove flow washer (30) from top of diaphragm (37).
6. Remove stem (30) and stem washer (30.1), on end of stem, from diaphragm guide assembly.
7. Unscrew retainer from main guide (31) and remove slip ring (38.1) from retainer.
8. Remove small diaphragm (37) from main guide (31).

RELIEF VALVE ASSEMBLY

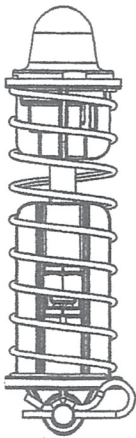
NOTE: Clean all parts thoroughly with clean water before reassembly.

1. Place small diaphragm (37) into main guide (31) with beaded side of flange pointed down.
2. Drop slip ring (38.1) into retainer (38) and screw retainer into main guide (31) as shown, being careful not to bind the diaphragm's cup shape with your finger.
3. Place stem washer (30.1) on end of stem (30) and insert stem into diaphragm guide assembly. When the stem is fully inserted it does not bottom out against diaphragm, so do the following: Press diaphragm against stem with your thumb and forefinger and slowly pull the stem back out with the diaphragm. Place stem guide assembly on bench with diaphragm pointed up.
4. Place flow washer (39) on top of diaphragm (37) with slots facing up and with holes lining up. Set spring (29) on main guide (31) and compress spring with button (28). With spring fully compressed insert and tighten down flow screw (28.1), being careful not to twist button or assembly which will distort the diaphragm.
5. Stick instruction label (28.2) in center of button, covering flow screw (28.1). Install seat disc (32) into stem (30) and install guide (33) to retain disc. Using tabs on guide, tighten until shoulder on guide contacts stem.
6. Lubricate o-ring (31.1) with Dow Corning 111 Valve Lubricant & Sealant, or a design engineering approved equivalent, and install on main guide (31).
7. Install assembly into rv body (21). Place large diaphragm (27), with cap facing down, into rv body and fold over stem assembly button. Pull diaphragm flange up onto rv body flange.
8. Assemble rv cover (20) to rv body using eight capscrews (22) and tighten to 120 inch-pound torque wrench limit.
9. Insert rv seat ring (34) into bottom of rv body (aligning it with guide 33) and install o-ring (34.1).

N-SHAPE ONLY - Assemble complete relief valve assembly to valve body as shown with o-ring (35) and back-up ring (35.1), using four capscrews (24), eight washers (24.1) and four nuts (25). Tighten to 120 inch-pounds torque wrench limit. Attach sensing line flange cover (36).

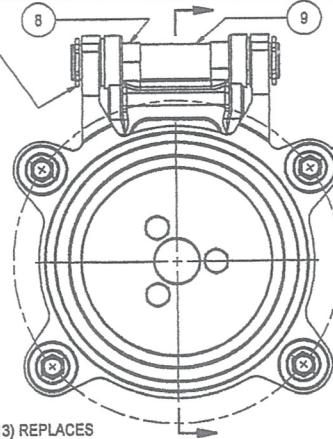
IN-LINE ONLY - Assemble completed unit to valve body and elbow with gasket (26) install with screen facing valve body) using six capscrews (24), twelve washers (24.1) and six nuts (25). Tighten to 120 inch-pounds torque wrench limit.

Check Valve Service Procedures (2 1/2"-10") for (2 1/2"-10") LF850, LF 870V, LF856, LF876V



NOT SHOWN:
- SEAT RING O-RING - QTY 1
- STUD O-RINGS - QTY 4
- REPLACES GASKET *

NOTE: THE SINGLE DISC SA (ITEMS 2, 3, 11, 12 & 13) REPLACES ALL VARIETIES OF THE OLD OVERMOLDED DISCS.



Check Mechanism

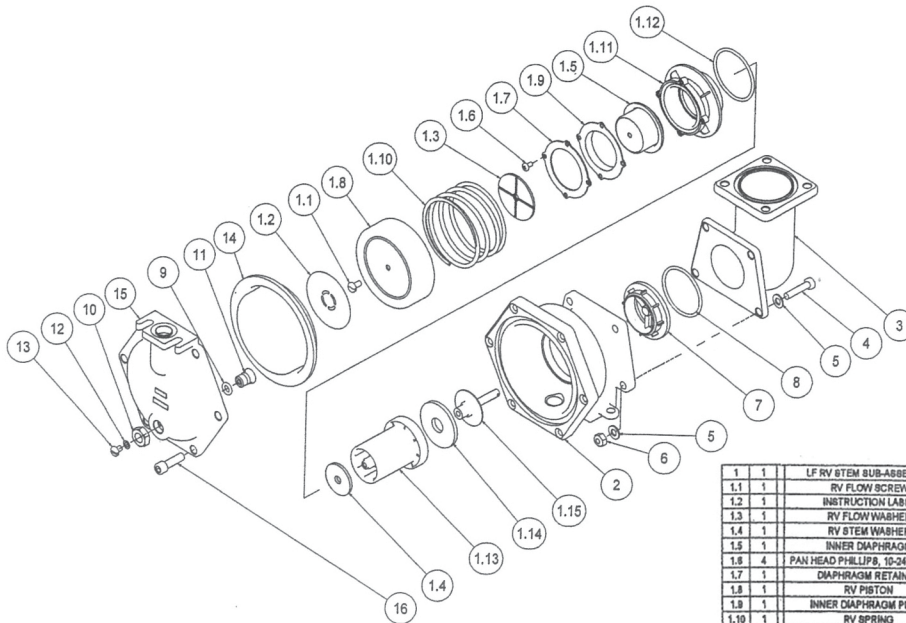
ITEM	DESCRIPTION
1	SEAT RING 2-1/2" & 3"
2	DISC HOLDER 2-1/2" & 3"
3	DISC 2-1/2" & 3"
4	ARM 2-1/2" & 3"
5	HHCS 3/8-16UNC-2Bx.50
6	WASHER, .375 ID X .75 OD X .041
7	HAIRPIN CLIP
8	BUSHING-SWING PIN
9	SWING PIN
10	HEX STUD 5/16-18 x 1-1/4
11	DISC RETAINER 2-1/2" & 3"
12	#10 SPLIT LOCK WASHER
13	HH MACH SCREW #10-24UNCx3/8

Check Valve Disassembly

1. Close the outlet shutoff valve, then close the inlet shutoff valve. Bleed residual pressure from the assembly by opening the #4, #3, and #2 test cocks in this sequence.
2. Remove the cover bolts/nuts and lift the cover from the body. The springs are retained and the cover should be pushed away from the body approximately 1/4 inch.

3. Inspect/clean debris from the disc and seat ring. Replace worn or damaged parts as required.
4. Replace the cover, ensure the spring assembly is positioned in the pivot socket. If necessary, apply FDA approved grease to the O-ring groove in the body to keep the O-ring in position while installing the cover.
5. Install the bolts and nuts and tighten.

Relief Valve Service Procedures (2 1/2"-10") for LF860, LF 880V, LF866, LF886V



Relief Valve Disassembly

1. Remove the capscrews holding the cover to the relief valve body, and remove the cover.
2. Remove the diaphragm and pull the internal assembly from the body. It may be helpful to push the internal assembly with your fingers through the discharge opening.
3. Inspect for debris, damage or fouling of the seat disc. Clean or replace parts as required. Reassemble in the reverse order of disassembly.

1	1	LF RV STEM SUB-ASSEMBLY
1.1	1	RV FLOW SCREW
1.2	1	INSTRUCTION LABEL
1.3	1	RV FLOW WASHER
1.4	1	RV STEM WASHER
1.5	1	INNER DIAPHRAGM
1.6	4	PAN HEAD PHILLIPS, 10-24 x .375 LG
1.7	1	DIAPHRAGM RETAINER
1.8	1	RV PISTON
1.9	1	INNER DIAPHRAGM PLATE
1.10	1	RV SPRING
1.11	1	RV UPPER GUIDE
1.12	1	O-RING-228
1.13	1	RV MAINSTEM
1.14	1	RV SEAT DISC
1.15	1	RV LOWER GUIDE
2	1	RV BODY
3	1	RV ELBOW 880
4	4	5/16-18 X 1-1/2 HHB
5	8	5/16 FLAT WASHER TYPE A
6	4	5/16-18 UNC ELASTIC STOP NUT
7	1	RV SEAT RING
8	1	O-RING-228
9	2	O-RING-224
10	2	HEX NUT
11	2	RV DRAIN PLUG SLEEVE
12	2	GASKET
13	2	PAN HD SCREW
14	1	OUTER DIAPHRAGM
15	1	RV COVER
16	8	BHCS 3/8-16 X 1.25
ITEM	QTY	DESCRIPTION

INSTALLATION INSTRUCTIONS

LF860, LF866, LF880V, LF886V

Relief Valve
Size: 2 1/2" - 10"

WARNING



**THINK
SAFETY
FIRST**

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.

Proper installation of FEBCO Relief Valve Inner Diaphragm into the Relief Valve Upper Guide for Models LF860, LF866, LF880V, LF886V

NOTICE

Failure to install inner diaphragm in this method will result in the inner diaphragm bursting after installation.

