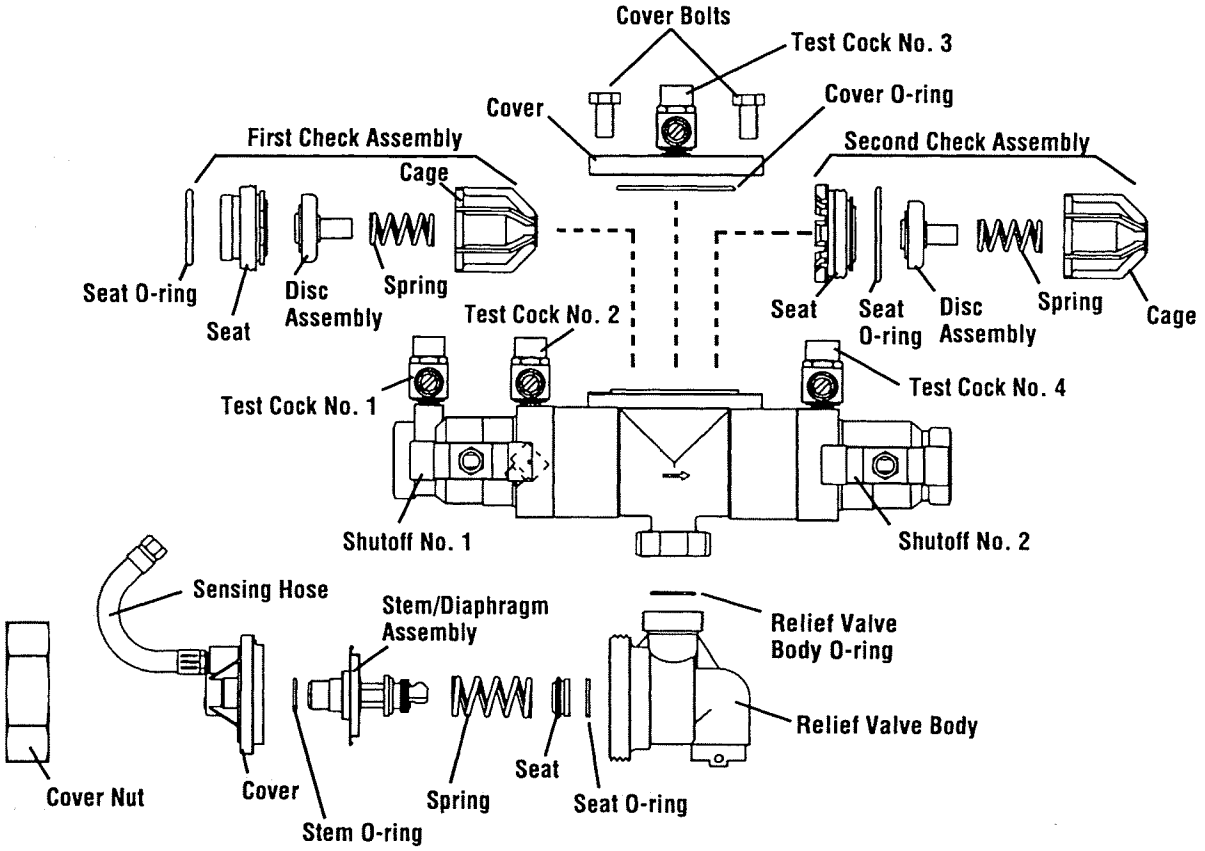
Servicing the First and Second Check Valves ½", ¾", and 1"

1. Close shutoff valves and open test cocks No. 2, 3 and 4 to relieve pressure from the body of the valve. Loosen cover bolts and remove cover. The check valve modules can now be removed from the valve by hand or with a screwdriver. Note: The first and second check assemblies are not interchangeable and the first check assembly must be removed prior to removing the second check assembly.
2. The check seats are attached to the cage with a bayonet type locking arrangement. Holding the cage in one hand, push the seat inward and rotate counterclockwise against the cage. The seat, cage, spring and disc assembly are now individual components. If the cage disengages prematurely, simply use the cage as a tool to screw the check valve seat from the valve body.
3. The disc assembly may now be cleaned and reassembled or, depending on its condition, it may be replaced with a new assembly from a repair kit. Seat o-ring should be inspected and replaced as necessary.
4. Reassemble the check module in the reverse order. Install the check modules into the valve body hand-tight. Replace the cover.



Servicing the Relief Valve ½", ¾", and 1"

1. Remove the relief valve cover nut by turning the nut counterclockwise
2. Remove the relief valve cover, stem/diaphragm assembly, and relief valve spring.
3. Inspect the relief valve diaphragm for wear and replace as needed.
4. The relief valve seat is located inside of the body and can be removed, if necessary, for cleaning/inspection. The seat is pressed into the body cavity and can be removed by inserting a finger in the center of the seat and pulling outwards. Inspect seat for nicks and replace as needed.
5. Inspect the disc rubber and clean or replace if required. The disc can be removed by screwing the white washer counterclockwise.
6. To reassemble the relief valve, press the seat firmly into place in the body, snap the spring onto the relief valve stem, center the spring on the seat, and insert the cover and stem/diaphragm assembly as a unit, into the body bore. The locating pin in the relief valve cover should be aligned with the corresponding locating notch in the top of the relief valve body.
7. Install relief valve cover nut and tighten.

Series 995/995RPDA

Reduced Pressure Zone Backflow Preventer, Reduced Pressure Detector Assemblies

Sizes: 3" - 6"

Servicing First and Second Checks

REMOVING CHECK ASSEMBLIES (Before servicing be sure shutoff valves are closed)

1. Slowly open all ball valves to relieve air and water pressure. After pressure is relieved, loosen bolts on groove coupler and remove groove coupler and cover plate from valve body.
2. Remove #1 Check Assembly. Do not use Check Arm as a handle to unscrew the Check. Insert lid bolts in 1st check seat ring (see fig. 1), insert a long screwdriver or pry bar between lid bolts. Gently apply pressure against the bolts and turn seat assembly counter clockwise moving bolts hole to hole to maintain turning leverage (two additional bolts will eliminate need to move lid bolts from hole to hole). Finish unscrewing by hand and remove through top access port. Unscrew #2 Check (turn counter-clock wise) by placing a long screwdriver across lid bolts inserted in holes located in the 2nd check seat ring, similar in method used to remove 1st check and applying pressure to loosen #2 Check. Finish unscrewing by hand.
3. To clean Check, locate the Check Arm opening stud on the out let flange of the valve assembly. Slide the Arm over the stud with the check threads facing downward **(fig. 2)**. Tighten 1/4" nut on stud to secure cam bar. Slowly pull the assembly out ward to open check allowing exposure of the seat and clapper contact area for cleaning. The assembly may be locked open by aligning the holes in the cam bar and hinge arms and inserting a rod (fig. 4).

Check Disassembly

Please use caution when disassembling check. The check is a spring-loaded mechanical device.

Figure 3

Press down on the check assembly to unload the cambar from hinge arms and roller. Then place a thin rod or screwdriver into a maintenance hole in one hinge arm.

Figure 4

Using your free hand, swing the clapper assembly away from the seat. Align (A) lockout holes.

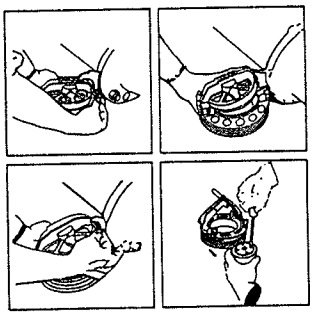


Figure 5

Remove 1 c-clip from the center pivot pin. Withdraw the center pivot pin from the clapper and the hinge arms. Remove the clapper assembly from the check assembly module. **Note: You may replace this item as an assembly or you may replace only the disc.**

Figure 6

Disassemble the clapper by removing 4 screws, disc retainer and the clapper disc. Disc may be flipped if sealing surface is damaged.

Figure 1

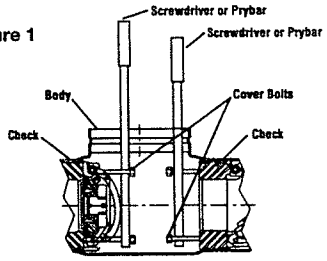
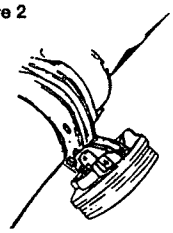


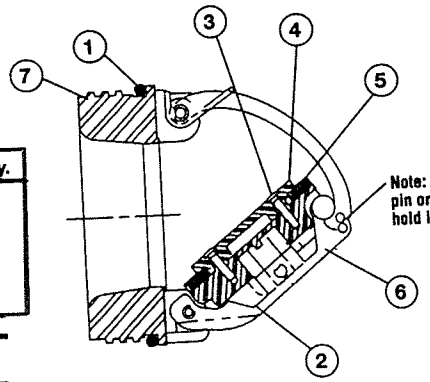
Figure 2



3", 4" & 6" RP 1st Check Assembly

Before reinstallation of check assembly, thoroughly clean O-ring groove and lubricate O-ring with F.D.A. approved lubricant.

Item	Part Description	Qty.
1.	1st Cam-Check O-ring (removable)	1
2.	Clapper Assembly (removable)	1
3.	Clapper Retaining Plate Screws (removable)	4
4.	Clapper Retainer Plate (removable)	1
5.	Clapper Disc (removable)	1
6.	Pivot Arm Pin (removable) 2 c-clips	1
7.	2nd Cam-Check O-ring (removable)	1



Note: Align holes and insert pin or small screwdriver to hold in open position.

Servicing the Relief Valve

RELIEF VALVE SERVICE INSTRUCTIONS

1. Prior to beginning any maintenance work, shut down the water supply to the unit and relieve any residual pressure in the valve by opening Test Cock (TC) #4.
2. The relief valve is an integral part of the lid assembly and may be serviced when the lid assembly is removed from the body of the valve.
3. The relief valve may be disconnected from the sensing line hose if desired to enable easier access to all parts of the assembly.

REPLACING THE SEALING DISC

1. Remove relief valve assembly from body.
2. Unscrew Seal Cup Lock Nut from the underside of the body
3. Remove Seal Cup and Gasket thru the body access port.
4. Install NEW Seal Cup and gasket in reverse order.
5. Reinstall Lock Nut. DO NOT CROSS THREAD.

COMPLETE DISASSEMBLY OF THE RELIEF VALVE

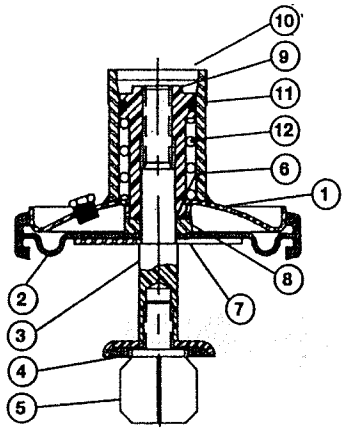
1. Remove Sensing line from "T" junction at TC #2.
2. Remove Relief Valve Assembly from body.
3. Where available, clamp the RV assembly at the center section of the shaft on to the jaws of a vise and tighten sufficiently to prevent turning during disassembly.
4. Unscrew the seat from the shaft by turning counter clockwise.
5. Remove lower spacer (**Note:** Chamber side should be down).
6. Remove dust cap.
7. Remove retaining nut (**Note:** Apply light downward pressure to prevent spring from POPPING off the spring guide and retaining washer).
8. Lift off the cover. All internal parts will be pulled off the shaft at the same time.
9. Remove Spacer (Note direction of chamber)
10. Remove the diaphragm (Note direction of roll/convalute for reinstallation)
11. Remove diaphragm support.
12. Remove shaft O-ring.
13. Remove Upper spacer (Note chamber side should be on the top)

RV STYLE:

After removing Dust Cap, inspect Retainer Nut

OLD STYLE: HEX molded in guide - Parts no longer available.

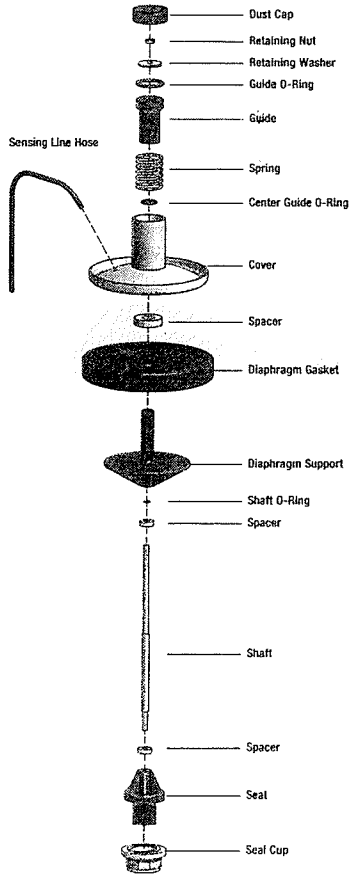
NEW STYLE: ⅜" Nylock HEX nut - Parts shown stainless.



Parts Table

Item	Part Description
1.	Cover
2.	Diaphragm/Gasket
3.	Shaft
4.	Sealing Disc
5.	Guide, Lower
6.	O-ring
7.	Support Disc
8.	Disc, Diaphragm Stop
9.	Guide, Upper
10.	Cover, Dust
11.	O-ring, Upper
12.	Spring

Old Style



New Style