

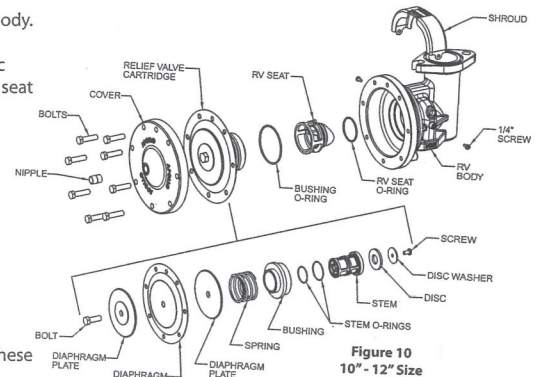
D. Relief Valve Maintenance 10 – 12”

NOTE: See Figure 10.

1. Unscrew the sensing hose from the relief valve (RV) cover nipple (sensing hose is not shown).
2. The RV can be serviced while still attached to the valve or it can be removed (rarely needed). To remove the RV, unscrew the two 3/4” bolts securing the RV to the valve body. NOTE: When removing the RV from the valve body, take care not to damage flow divider (See Figure 10). The shroud does not need to be removed to service the RV.
3. Remove the RV cover by removing the eight (8) 1/2” bolts.
4. Remove the RV cartridge by grasping the diaphragm plate and pulling straight out. A bushing o-ring may remain in the body. Ensure this o-ring is not damaged.
5. Inspect the RV seat disc for debris or damage. To clean or replace the RV seat disc, remove the 3/8” screw on the seat disc washer, the RV disc may be flipped over for a temporary repair, but should be replaced if damaged. Replace the seat disc, seat disc washer, and 3/8” screw.
6. Insert the RV module into the valve body.
7. Replace cover and bolts.
8. Inspect sensing hose and replace if damaged.
9. Reinstall sensing hose to RV cover nipple.

If it is necessary to disassemble the RV module and/or remove the RV seat:

1. Remove the RV module as described above.
2. Remove the 5/8” screw on the diaphragm plate. Use caution as this will disengage the spring.
3. Remove the 3/8” screw on the seat disc washer.
4. Inspect all components for damage, paying particular attention to the diaphragm, seat disc, o-rings, and stem. If any of these components are worn or damaged, they should be replaced.
5. Lubricate the stem, stem o-ring, and RV seat o-ring with Apollo supplied lubricant, DOW 111 or equal. Reassemble RV cartridge.
6. Remove the RV seat by grasping the cage and pulling straight out. A flat screwdriver may be necessary to aid in removal.
7. Inspect the seat and seat o-ring for damage. If damaged, they should be replaced.
8. Insert the seat into the RV body. Ensure that it is fully seated and that the seat's tab aligns with the notch in the RV body.
9. Ensure the bushing o-ring is positioned in the RV body, then insert the assembled RV cartridge into the valve body.
10. Replace cover and bolts.
11. Inspect sensing hose and replace if damaged.
12. Reinstall sensing hose to RV cover nipple.



4A-500 / PVB4A Series 1/2 - 2”

A. Disassembly

1. Close #2 shut-off valve, then close #1 shut-off valve.
2. Bleed pressure from device by opening test cocks #1 and #2.
3. Remove the air inlet canopy by loosening the two screws, rotating the canopy to the left, and lifting up.
4. Unscrew and remove the bonnet and float assembly. **DO NOT USE CANOPY TO UNSCREW BONNET! DAMAGE TO THE CANOPY MAY OCCUR.**
5. Remove float cage.
6. Push down and turn the spring retainer 90 degrees to remove. Remove the spring. Remove the poppet from the check seat.

CAUTION: Do not use pliers or other tools, which may damage or scratch the plastic stem.

7. Holding the poppet assembly in one hand, remove screw and retaining washer.
8. Remove the seat disc.
9. All parts should be carefully inspected for any damage or excessive wear and thoroughly rinsed in clean water prior to reassembly. Replace worn parts as necessary.
10. Normally, the check seat need not be removed. If removal is required, rock it back and forth while pulling outward.

B. Assembly

1. If the check seat was removed, install the new o-ring and lubricate with Apollo supplied lubricant, DOW 111, or equal. Line up the seat with the bore and push it firmly into place.
2. Install new disc in poppet and secure with washer and screw.
3. Place and center the poppet assembly in the check seat.
4. Install the spring onto the poppet, ensure that it is centered around the raised spring pad.
5. Install the spring retainer onto the spring by pushing down into the grooves of the check seat and turning 90 degrees. Ensure spring retainer pops up about .1” and locks into the lugs. **CAUTION: Ensure the spring retainer orientation matches that in the parts list drawing or the device's flow will be significantly restricted.**
6. Install float cage and float. See drawing for correct orientation.
7. Apply a thin coat of Apollo supplied lubricant, DOW 111, or equal onto o-ring, screw bonnet into body.
8. Test device to insure proper installation.
9. Install air inlet canopy.

