

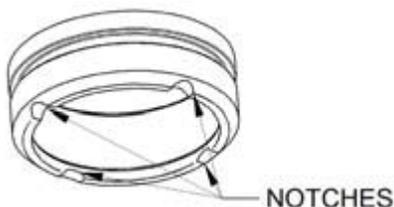
III. TROUBLESHOOTING

SYMPTOM	CAUSE	CORRECTIVE ACTION
Atmospheric vent valve fails to open as gauge drops to 0.0 psig.	<ol style="list-style-type: none"> 1. Air Inlet stuck to seat. 2. Air Inlet spring damaged or missing. 	<ol style="list-style-type: none"> 1. Clean vent seat and replace disc. 2. Check and/or replace spring.
Atmospheric vent fails to shut before check valve opens.	<ol style="list-style-type: none"> 1. Check O-ring damaged or bushing surface is dirty. 2. Initial start-up supply pressure applied too rapidly. 	<ol style="list-style-type: none"> 1. Inspect and/or replace check O-ring and bushing surface. 2. Open supply pressure valve slowly. Do not water hammer.
Check valve fails to hold 1 psig.	<ol style="list-style-type: none"> 1. Check valve fouled with debris. 2. Check valve seat damage. 	<ol style="list-style-type: none"> 1. Remove, clean, and/or replace check valve. 2. Replace seat

IV. MAINTENANCE INSTRUCTIONS

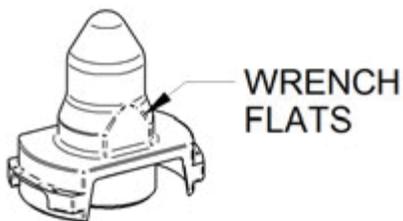
A. DISASSEMBLY

1. Shut the #2 shut-off valve, then the #1 shut-off valve.
2. Bleed pressure from the device by opening the test cock and the bleed screw.
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, float assembly and float spring. **DO NOT USE THE CANOPY TO UNSCREW BONNET! DAMAGE TO THE CANOPY MAY OCCUR!** If the float rubber disc appears worn or damaged peel it off of the float.
5. Remove the check guide and the check. The check may be grabbed with fingers and gently rocked back and forth to pull it out. **DO NOT USE PLIERS OR OTHER TOOLS WHICH MAY DAMAGE OR SCRATCH PLASTIC COMPONENTS!**
6. It is normally not necessary to remove the bushing. Should its removal be necessary there are 4 semi-circle notches in the bottom to place a hook under. Pull up a little bit under each notch going around to each one in turn until the bushing is free.



CAUTION: TAKE CARE TO NOT SCRATCH OR DAMAGE THE COATING OR THE INTERIOR SURFACE OF THE BUSHING!

7. To disassemble the check, hold the check in one hand and turn the spring retainer with an adjustable wrench using the two flats. Ensure the wrench is adjusted snugly to the flats to preclude rounding the edges of the post on the spring retainer. As the spring retainer rotation approaches 90°, its retaining tabs will lose engagement with the seat and if not constrained the spring retainer and spring will be ejected.

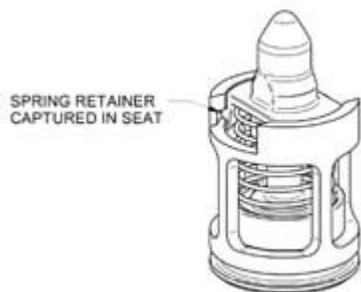


8. Remove the spring and poppet from the check seat.
9. Inspect the rubber seat disc in the poppet for wear or damage. To remove the seat disc, hold the poppet assembly in one hand and remove the screw, retaining washer and the seat disc.
10. Remove the vent screw and inspect the vent screw O-ring.
11. All parts should be carefully inspected for any damage or excessive wear and thoroughly rinsed in clean potable water prior to reassembly. Replace worn parts as necessary.

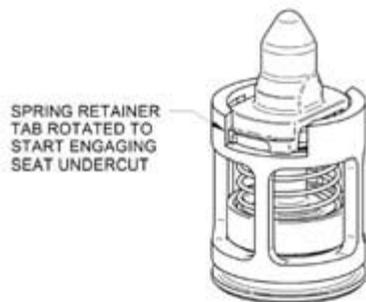
IV. MAINTENANCE INSTRUCTIONS

B. ASSEMBLY

1. If the bushing was removed, install the new O-ring and lubricate with Apollo supplied lubricant, DOW 111, or equal. Line up the bushing with the bore with the notches facing down and push into place.
2. If the rubber seat disc was removed, place a new disc in the poppet and secure with the washer and screw.
3. Place and center the poppet assembly in the seat.
4. Install the spring onto the poppet, ensure it is centered inside the pocket on top of the poppet.
5. Install the spring retainer onto the spring and push it compressing the spring until the spring retainer tabs butt up to the seat. Rotate the spring retainer until the tabs starts to engage the undercut of the seat and resistance to turning is felt.



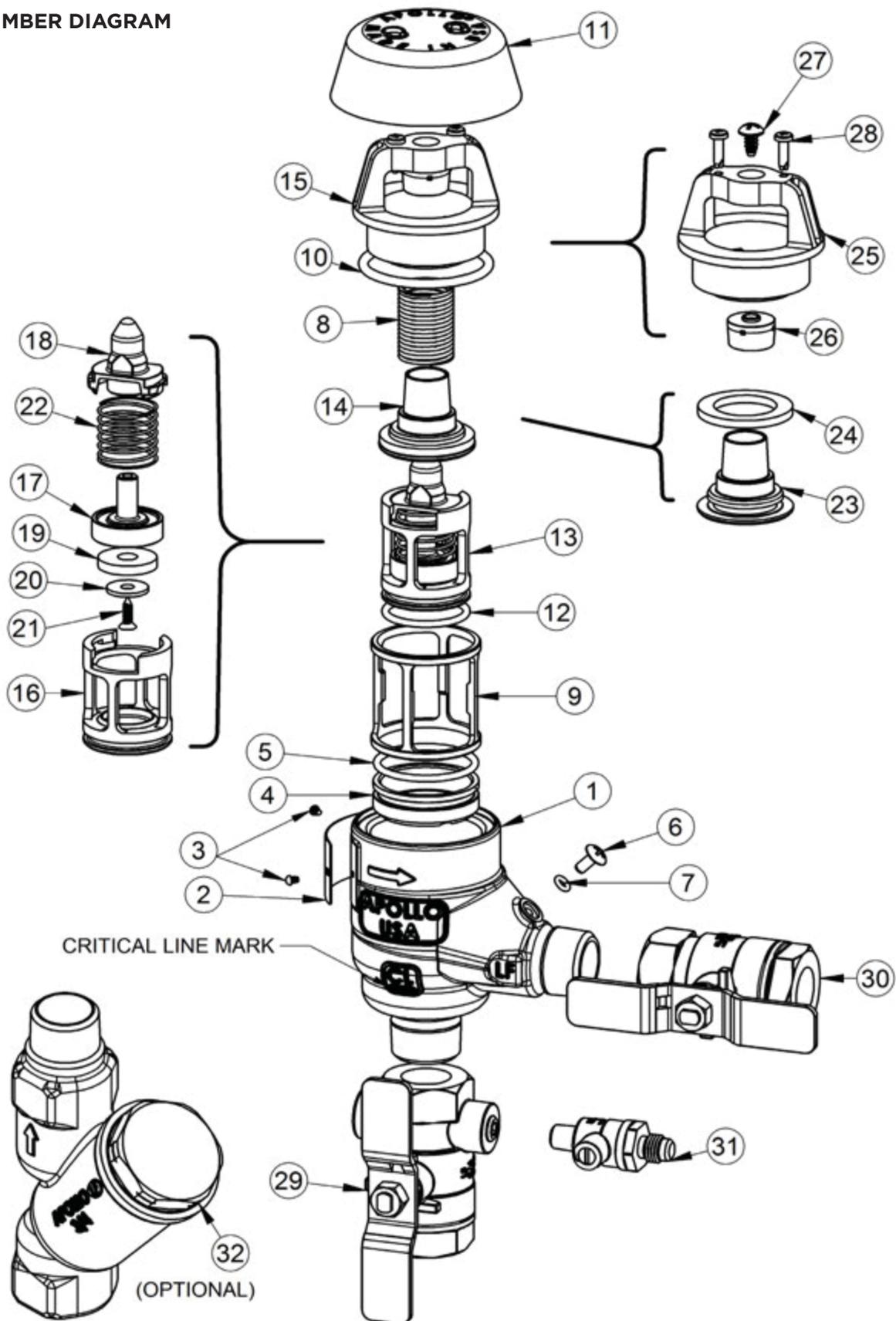
6. While holding the spring retainer in the seat to prevent rotation, use an adjustable wrench to continue turning the spring retainer until it locks into the undercut in the seat, which is after about 90° of total rotation. Ensure the wrench is adjusted snugly to the flats to preclude rounding the edges of the post on the spring retainer. When properly locked into place the spring retainer will be able to rotate easily by hand several degrees before heavier resistance is felt.



7. Replace the O-ring on the check seat and lubricate with Apollo supplied lubricant, DOW 111, or equal. Insert the check module assembly into the bushing until it is fully inserted.
8. Install the check guide, ensure it is centered and sitting square on top of the bushing.
9. Install the new float rubber disc on the float and set the float on top of the post on the check spring retainer.
10. Apply a thin coat of Apollo supplied lubricant, DOW 111, or equal, to the bonnet O-ring, screw the bonnet into the valve body.
11. Apply a thin coat of Apollo supplied lubricant, DOW 111, or equal, to the vent screw O-ring and screw the vent screw into the body.
12. Test the device to ensure proper installation.
13. Install the air inlet canopy, tighten the screws.

PART NUMBER DIAGRAM

FIGURE 4



REPAIR KITS

SVB COMPLETE INTERNALS KIT		QTY	SIZE	
ITEM #	REPAIR KIT MODEL NUMBER		3/4"	1"
	ORDERING NUMBER		RK4A34TSVB 4A-004-25	RK4A1TSVB 4A-005-25
not shown	O-Ring Lubricant	1	I-9016-00	
10	Bonnet O-Ring	1	D-4812-00	D-4883-00
5	Bushing O-Ring	1	D-5277-00	D-5033-00
12	Check Module O-Ring	1	D-5279-00	D-5280-00
13	Check Module S-Assy	1	W-9906-05	W-9907-05
14	Float S-Assy	1	W-2440-05	W-2441-05
8	Float Spring	1	A-2594-00	A-2595-00
9	Check Guide	1	F-4154-00	F-4155-00
4	Bushing	1	I-9542-15	I-9543-15
11	Canopy	1	F-3842-00	F-3838-00
15	Bonnet S-Assy	1	W-2437-05	W-2438-05
7	Vent Screw O-Ring	1	D-3294-00	
6	Vent Screw	1	B-3362-00	

SVB TOTAL RUBBER KIT		QTY	SIZE	
ITEM #	REPAIR KIT MODEL NUMBER		3/4"	1"
	ORDERING NUMBER		RK4A34TSVB 4A-004-25	RK4A1TSVB 4A-005-25
not shown	O-Ring Lubricant	1	I-9016-00	
10	Bonnet O-Ring	1	D-4812-00	D-4883-00
5	Bushing O-Ring	1	D-5277-00	D-5033-00
12	Check Module O-Ring	1	D-5279-00	D-5280-00
24	Float Seat Disc	1	D-4811-00	D-4784-00
19	Check Seat Disc	1	D-4771-00	D-4743-00
7	Vent Screw O-Ring	1	D-3294-00	