Procedures for Injecting VAL-TEX Valve Flush Into Ball Valves

1. If possible, operate the valve and determine its' condition. Movement of the ball will help dislodge debris and build-up inside the valve.

2. Place the valve in either the fully open or the fully closed position.

3. Determine the number of sealant injection ports on the valve seats. Normally there are either 2 or 4 injection ports.

4. Find the type, size and capacity of your valve on the Capacity Card. The total capacity of the valve is the minimum amount of Valve Flush to be injected.

5. Divide the capacity of the valve by the total number of sealant injection fittings (access ports) found on both seat rings. You should inject the Valve Flush through the sealant ports on one seat ring. Then follow these same procedures to flush the other seat ring. Remember to use the markings on the handle of the hydraulic lubrication gun to keep track of the amount you are injecting. Measuring from the threaded end of the gun handle, every 1 1/8 inches = 1 ounce of material.

If the valve is buried, the capacity of the riser pipe or extension must be added to the amount calculated for each sealant injection fitting.

Inside Diameter	Ounces Per Foot
1/4"	0.5
3/8"	1.3
1/2"	2.0
3/4"	4.0

6. Use a slow and steady pressure to inject Valve Flush. This will help insure consistent flow and distribution. Rapid injection can cause the material to dump past the rear or trash seal or deform an "O" ring. In many ball valves the trash seal is not designed to hold pressure. A lubrication gun equipped with a 15,000 PSI gauge should be used.

7. While injecting, try to maintain at least 1000 PSI over line pressure. However, anytime O-rings are used as seals, you must be careful not to over-pressure and extrude them. High injection pressures may represent trash or debris lodged in the seat ring. Consult your manufacturer's catalog to identify any special considerations that you must keep in mind when working on the valve.

8. If you cannot maintain the pressure desired, there is a possibility that the material being injected is dumping to the line without reaching the problem area. Consider the following options:

   - Attempt to create a false blockage by injecting lube sealant (10 to 20% of the valves' capacity) to temporarily plug the point of escape and give you a chance to build pressure against the areas that are still clogged. Try the flushing procedure again until the full amount of Valve Flush has been injected.

9. There is no set time limit for letting the "Valve Flush" remain in the seat ring area. You will normally find that by the time you inject material in all sealant injection ports it is time to continue. A good general minimum time frame is approximately 30 minutes, although this time may vary depending upon the condition of the valve. "Valve Flush" will not harm the valve or its' seals and may be left in place for as long as required.

   Note: Please keep in mind that VAL-TEX "Valve Flush" is biodegradable and free of acids, caustics and solvents that can be dangerous to you, your personnel or your equipment.

10. Operate the valve approximately 10 times to move the seat ring and work the "Valve Flush" around the ball. Any valve that cannot be completely cycled should be cycled as far as possible. This will help dislodge any remaining debris.

11. If necessary, return to step 4 and repeat the process.

Houston, Texas
Email: help@valtex.com
www.valtex.com

1-800-627-9771
1-281-530-4848

VALVE LUBE SEALANT CAPACITY IN OUNCES

These minimum capacities are provided by the manufacturer.
Twice the minimum capacity may be required to achieve the desired result.

SIZE	CAMERON BALL VALVE	GROVE-PBV BALL VALVE	PLUG VALVE
1/2	–	–	1/2 oz.
3/4	–	–	1/2 oz.
1	–	–	1 oz.
1 1/2	–	–	1 oz.
2	2 oz.	–	3 oz.
3	2 oz.	–	4 oz.
4	3 oz.	–	5 oz.
6	4 oz.	3 oz.	9 oz.
8	6 oz.	3 oz.	11 oz.
10	6 oz.	4 oz.	14 oz.
12	10 oz.	4 oz.	17 oz.
14	10 oz.	4 oz.	32 oz.
16	12 oz.	5 oz.	40 oz.
18	18 oz.	5 oz.	56 oz.
20	20 oz.	8 oz.	72 oz.
22	22 oz.	10 oz.	80 oz.
24	24 oz.	10 oz.	88 oz.
26	26 oz.	12 oz.	96 oz.
28	26 oz.	13 oz.	–
30	30 oz.	14 oz.	112 oz.
32	–	14 oz.	–
34	34 oz.	15 oz.	–
36	42 oz.	16 oz.	–
38	–	16 oz.	–
40	64 oz.	18 oz.	–
42	68 oz.	18 oz.	–
48	102 oz.	22 oz.	–

When using **Valve Flush** it may be necessary to perform the **flushing procedure twice.** ***See instructions on reverse side.***

LUBRICATION PROCEDURE FOR PLUG VALVES

1. Make sure the valve is in the full open position.
2. Load the gun with the proper amount of lube sealant called for on the capacity chart. Return the piston in the hydraulic gun to the desired depth using the markings on the gun handle. Do not force the stick into the barrel. If the stick is out of round, before unwrapping, roll it in your hands and reduce the diameter. Rewrap any unused portion.
3. Pump the lube sealant into the valve.

CAUTION: Do not exceed 4000 PSI on valves 4" or smaller and 6000 PSI on valves 6" and larger. Consult your manufacturer's catalog and assess the general condition of your valve to determine a safe injection pressure.

NOTE: It takes approximately 350 strokes of a hydraulic gun to pump 8 ounces of material.

REMEMBER THESE TWO POINTS

ROUTINE MAINTENANCE WITH THE PROPER LUBE SEALANT IS YOUR BEST ASSURANCE OF TROUBLE FREE VALVES.

SOLID FILLERS IN YOUR LUBRICANTS OR SEALANTS ARE A MAJOR CAUSE OF VALVE MALFUNCTIONS.

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Houston, Texas
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www.valtex.com

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THE PROPER USE OF "VALVE FLUSH" ON PLUG VALVES

1. Before using "VALVE FLUSH" try to turn the valve. This could loosen some of the particles that are binding the plug.
2. Make sure that the valve is in the full open position.
3. Tighten the bonnet bolts snugly with a box or open end wrench. Use a crisscross method to insure even tightening.
4. Add "VALVE FLUSH" equal to the sealant capacity listed for the valve.
5. Load the required amount of "VALVE FLUSH" into the gun and pump it into the valve. We recommend that you do not exceed an injection pressure of 4000 PSI for valves 4" and smaller and 6000 PSI on valves 6" or larger. Please consult your manufacturer's catalog or assess the general condition of your valve to determine a safe injection pressure.

   NOTE: Remember to use the markings on the gun handle to determine how far to push the piston down. It will be your measuring stick. Each mark is 1 1/8 inch and is equal to approximately one ounce.

6. If the gun will not build pressure, check the following:

   a. Seepage around the fitting: Inspect the coupler washer and the fitting for defects or trash.

   b. Leakage around the bonnet: Tighten the bonnet bolts again.

7. Try to keep the pressure above 1000 PSI. If the pressure drops rapidly or never builds (after following procedures in number 6) you are probably relieving in one or two veins only.

   NOTE: You can try to build a false blockage by injecting a small amount of lube sealant (approx. 10 to 20% of its capacity) to temporarily plug the open veins and allow the "VALVE FLUSH" to build pressure against the veins that are still clogged.

8. After injecting "VALVE FLUSH" let it soak for 30 minutes or as long as possible to allow it time to soften the hardened deposits.

   CAUTION: Never remove the coupler before opening the bleeder valve on the gun. Keep your hand away from the coupler and wiggle the hose to release trapped pressure.

9. Flex the valve approximately 10 times by turning it from an open to a closed position. Any valve that cannot be closed completely should be closed as much as possible.
10. Tighten the bonnet bolts again.
11. If required repeat the procedure from step 2.

Riser Pipe/Extension Calculation

Inside Diameter	Ounces Per Foot
1/4"	.5
3/8"	1.3
1/2"	2.0
3/4"	4.0

Fitting Reference