

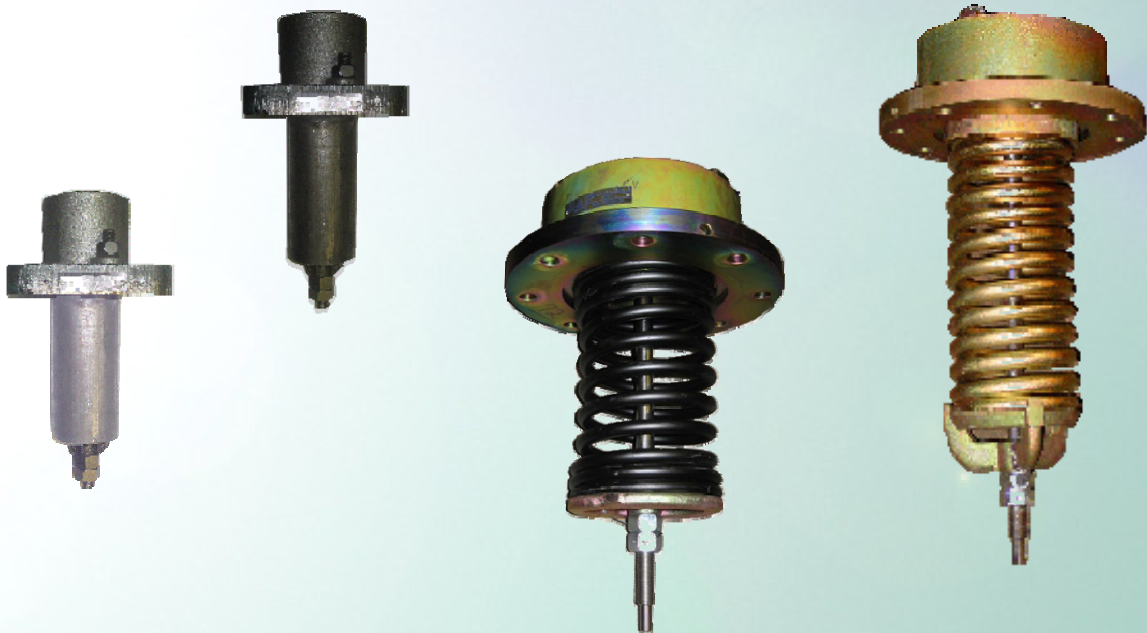


Safety Relief Valve

Product Literature & Maintenance Guidelines

Revision Jun 2008

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1.0 Internal Pressure Relief (Safety) Valves

- 1.1 Safety Valves are used to protect the tank from over-pressure in such events as an accident involving a fire. McKenzie Valve supplies both low-flow and high-flow capacity designs generally used for non-insulated non-pressure tank cars. The valve is available with either a 75 psi or a 165 psi start-to-discharge pressure.
- 1.2 The low-flow valve mounts on a standard 3-1/2" nozzle using (4) 3/4"-10 bolts on a 6-1/4" bolt circle as prescribed by AAR Fig E-21. The valves are constructed of either carbon steel or stainless steel with a stainless trim.
- 1.3 The high-flow valve mounts on a standard 6-1/2" nozzle using (8) 5/8"-11 bolts on a 10-1/4" bolt circle as prescribed by AAR Fig E-11. The valve is constructed of carbon steel with a stainless steel trim. Carbon steel components are fully plated for maximum corrosion protection.
- 1.4 The safety valves are available with the standard O-ring material options that are color coded and available at the base price. Alternate O-ring materials are also available as a special order. They will be supplied black unless otherwise specified.

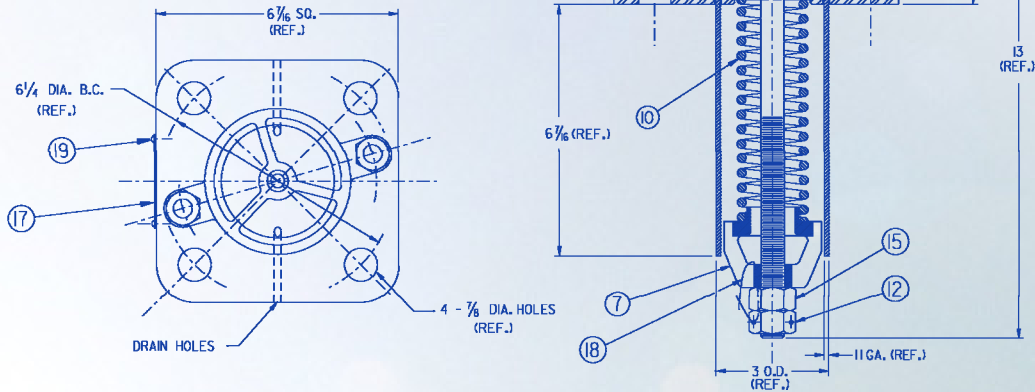
DESCRIPTION	PRESSURE SETTING	SPRING	(O-RING MATERIAL)**				AAR APPROVAL	FLOW RATING	
			VITON "A"	BUNA "N"	EPDM	NEOPRENE FOOD GRADE		CAPACITY (SCFM)*	PRESSURE (PSIG)
			BROWN	BLACK	PURPLE	WHITE			
75 psi CS SRV	75 psi	A228 MW	092420-01	092420-03	092420-04	092420-02	SRD-007069	1202	85
75 psi SS SRV	75 psi	A313 316SS	092534-01	092534-03	092534-04	092534-05	SRD-007068	1212	
75 psi High Flow Safety Valve	75 psi	Powder coated	085381-03	085381-01	085381-06	085381-02	PRD-057036	20508	
165 psi High Flow Safety Valve	165 psi	Zinc plated	501605-01	501605-02	501605-03	501605-04	SRD-987080	38902	181.5

*SCFM = Cubic Feet Per Minute of Air at Standard Conditions
 **See the website or Sales Literature for a more complete listing.

Table 1 – Standard Safety Relief Valve offerings



**75 psi Carbon and Stainless
Low-Flow Safety Relief Valve
(92420 and 92534)**



SYM	DESCRIPTION	MATERIAL		PART NO		REQ
		SS SRV	CS SRV	SS SRV	CS SRV	
1	GUIDE TOP	CAST SS	CAST CS	26041-01	15909-01	1
2	BUSHING	TEFLON®		15910-01		1
3	CAP	SS	CS	101152-01	101148-01	1
4	STEM	SS		101151-01		1
5 / 6	O-RING / O-RING					1 / 1
	used in 92420-11 and 92534-11	VITON® B		208-19992 / 208-19993		
	used in 92420-10 and 92534-10	VITON® EXTREME ETP		208-16008 / 208-16012		
	used in 92420-09 and 92534-09	VITON® GF-S		208-16007 / 208-16011		
	used in 92420-08 and 92534-08	CS5355		208-16006 / 208-16010		
	used in 92420-07 and 92534-07	CS4273B		208-16005 / 208-16009		
	used in 92420-06 and 92534-06	VITON® GFLT		208-19989 / 208-19990		
	used in 92420-05 and 92534-02	NEOPRENE FOOD GRADE		208-7322 / 207-7327		
	used in 92420-04 and 92534-04	EPDM		208-7323 / 208-7328		
	used in 92420-03 and 92534-03	BUNA-N		208-7324 / 208-7329		
	used in 92420-01 and 92534-01	VITON® A		208-7321 / 208-7326		
7	FOLLOWER SPRING	CAST SS	CAST CS	26049-01	15966-01	1
8	O-RING	BUNA "N"		208-7331		1
9	SAFETY VALVE FLANGE	SS	CS	503166-03	503166-04	1
10	SPRING	SS	CS MW	26044-01	26386-04	1
12	NUT, HEAVY HEX, 5/8-11 UNC-2B S.F. W/HOLES	A194 GR 6F		24178-03		1
13	STUD 1/2-13 UNC -2A x 2 1/8 LG	A320 316	A193 B7	09604-01	101214-01	2
14	NUT, LOCK 5/8 HEX ESNA	STEEL PLATED		304-8597		1
15	NUT, HEAVY HEX, 5/8-11 UNC-2B S.F.	A194 GR 6F		304-7091		1
16	NUT, HEAVY HEX, 1/2-13 UNC-2B S.F.	A194 GR 6F	A194 GR 2H	304-7055	304-7030	2
17	IDENTIFICATION PLATE	SS				1
18	SEAL WIRE & DISC	SS & LEAD		305-8425		1
19	SIZE #2 RD HD DRIVE SCREW	SS		304-8745		2

Table 2 – Low-Flow 75 psi Safety Relief Valve Components



**75 psi Carbon High-Flow
Safety Relief Valve
(85381)**

SYM	DESCRIPTION	MATERIAL	PART NO	REQ
1	SCREW, CAP, HEX HEAD 3/8-16 UNC-2A	J429 GR5	316-3850	1
2	COVER, SAFETY VALVE STEM	ALUMINUM	23716-01	1
3	SAFETY WIRE	302 SS	316-3810	1
4	SCREW, CAP, HEX HEAD 1/2-13 UNC-2A	J429 GR5	316-3860	3
5	WASHER, LOCK 1/2" EXTERNAL TOOTH	CS	316-4680	3
6	NOZZLE, DISCHARGE	A53	23710-01	1
8	PLATE, LABEL	SS		1
9	SIZE #2 RD HD DRIVE SCREW	SS	304-8745	2
10	FLANGE, BODY	A516-70	23697-01	1
11	SPRING	A401	105492-01	1
12	RETAINER, SPRING	A395	23704-01	1
13	NUT, HEAVY HEX, 3/4-10 UNC-2B	A194 GR2H	316-2850	1
14	LOCKNUT, HEAVY HEX, 3/4-10 UNC-2B	A194 GR2H	23703-01	1
15	SUPPORT, S/A BEARING		85385-01	1
16	VALVE, POPPET AND STEM S/A		506713-01	1
17	O-RING			1
	used in 85381-18	VITON® EXTREME ETP	208-16004	
	used in 85381-17	VITON® GF-S	208-16003	
	used in 85381-16	CS5355	208-16002	
	used in 85381-15	CS4273B	208-16001	
	used in 85381-14	VITON® GFLT	208-19991	
	used in 85381-13	CHEMRAZ 505	108-9799	
	used in 85381-12	VITON® B	308-6019	
	used in 85381-11	CERT VITON® A	208-19959	
	used in 85381-10	KALREZ 4079	308-9782	
	used in 85381-09	CERT VITON® B	708-9956	
	used in 85381-08	KALREZ	308-9792	
	used in 85381-06	EPDM	208-7471	
	used in 85381-04	BUTYL RUBBER	308-7413	
	used in 85381-03	VITON® A	308-7412	
	used in 85381-02	NEOPRENE	308-7472	
	used in 85381-01	BUNA-N	208-7469	
18	SCREW, CAP 5/16-18 UNC-2A	SAE 1035	316-3855	4
19	WASHER 11/16	BUNA N	305-8799	1
20	CAP POPPET	AISI C1018	23709-01	1
21	SEAL	LEAD	316-3900	1

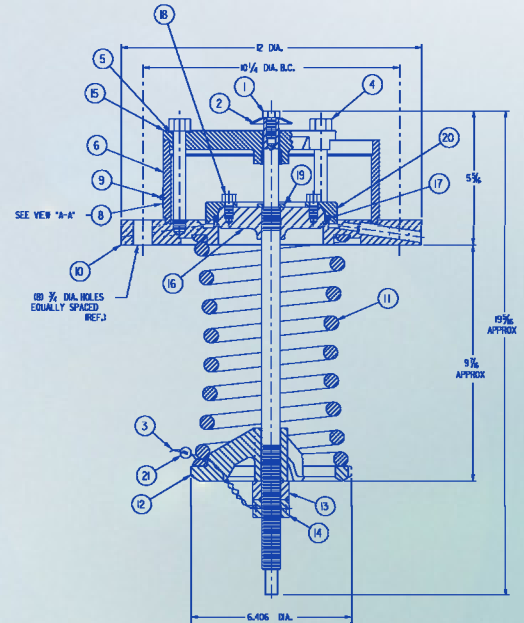


Table 3 – High-Flow 75 psi Safety Relief Valve Components



**165 psi Carbon High-Flow
 Safety Relief Valve
 (501605)**

SYM	DESCRIPTION	MATERIAL	PART NO	REQ
1	SCREW, CAP, HEX HEAD 3/8-16 UNC-2A	J429 GR5	316-3850	1
2	COVER, SAFETY VALVE STEM	ALUMINUM	23716-01	1
3	SAFETY WIRE	302 SS	316-3810	1
4	SCREW, CAP, HEX HEAD 1/2-13 UNC-2A	J429 GR5	316-3860	3
5	WASHER, LOCK 1/2" EXTERNAL TOOTH	CS	316-4680	3
6	NOZZLE, DISCHARGE	A53	23710-01	1
7	ADAPTER RING	A519 GR1026	106999-01	1
8	PLATE, LABEL	SS		1
9	SIZE #2 RD HD DRIVE SCREW	SS	304-8745	2
10	FLANGE, BODY	A516-70	23697-01	1
11	SPRING	A401	107001-01	1
12	RETAINER, SPRING	A395	107002-01	1
13	NUT, HEAVY HEX, 3/4-10 UNC-2B	A194 GR2H	316-2850	1
14	LOCKNUT, HEAVY HEX, 3/4-10 UNC-2B	A194 GR2H	23703-01	1
15	SUPPORT, S/A BEARING		85385-01	1
16	VALVE, POPPET AND STEM S/A		85386-01	1
17	O-RING			1
	used in 501605-14	VITON® EXTREME ETP	208-16004	
	used in 501605-13	VITON® GF-S	208-16003	
	used in 501605-12	CS5355	208-16002	
	used in 501605-11	CS4273B	208-16001	
	used in 501605-10	VITON® GFLT	208-19991	
	used in 501605-09	CHEMRAZ 505	108-9799	
	used in 501605-07	KALREZ 6375	208-7294	
	used in 501605-06	VITON® B	308-6019	
	used in 501605-05	KALREZ 4079	308-9782	
	used in 501605-04	FG NEOPRENE	308-7472	
	used in 501605-03	EPDM	208-7471	
	used in 501605-02	BUNA-N	208-7469	
	used in 501605-01	VITON® A	308-7412	
18	SCREW, CAP 5/16-18 UNC-2A	SAE 1035	316-3855	4
19	WASHER 11/16	BUNA N	305-8799	1
20	CAP POPPET	AISI C1018	107003-01	1
21	SEAL	LEAD	316-3900	1

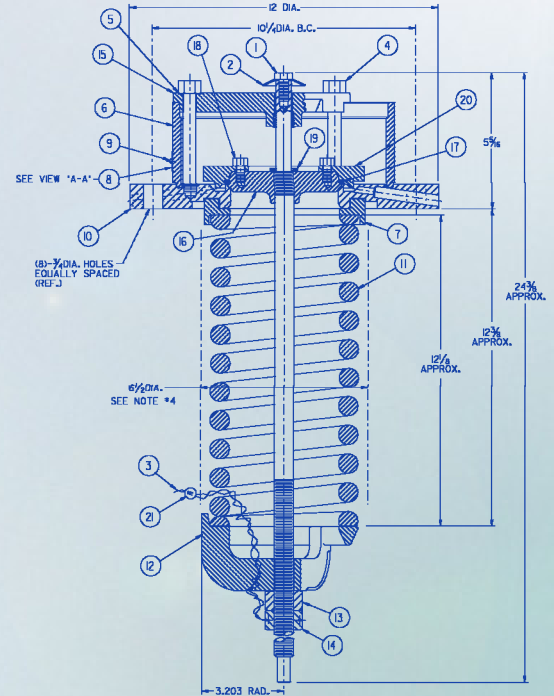


Table 4 – High-Flow 165 psi Safety Relief Valve Components



2.0 General Warnings and Disclosures:

- 2.1 The following guidelines describe McKenzie Valve and Machining Company's standard disassembly and reassembly instructions. These are not meant to conflict, override, supersede or be used in place of a company's safety, production, and engineering standards or government rules and regulations. All DOT, AAR, CTC, national, federal, local, and other regulations that apply must be followed.
- 2.2 Only trained, qualified personnel should perform any procedures described within this brochure.
- 2.3 Read and understand the entire procedure before attempting any service or inspection.
- 2.4 These valves are used in numerous services and complete information about the commodity should be obtained, verified, and reviewed before any inspection or maintenance is performed.
- 2.5 To avoid exposure to toxic or hazardous conditions and materials, ensure that the direct area and all components are free of hazardous materials before performing any maintenance.

During maintenance, use appropriate personal protection equipment based on the service in which the valve was used. Residual materials may still be in the valve, so appropriate precautions need to be taken.

During installation, take care to ensure the valve is in purchased condition; clean, free of debris, and free of scratches that can lead to leakage. Use appropriate gaskets, fasteners, torque, tools, and methods to install the valve.

- 2.6 To avoid physical harm, use appropriate equipment to handle the valves. The design of Safety Relief Valves (SRV) utilizes a compressed spring. These springs store potential energy that could be harmful if uncontrollably released.

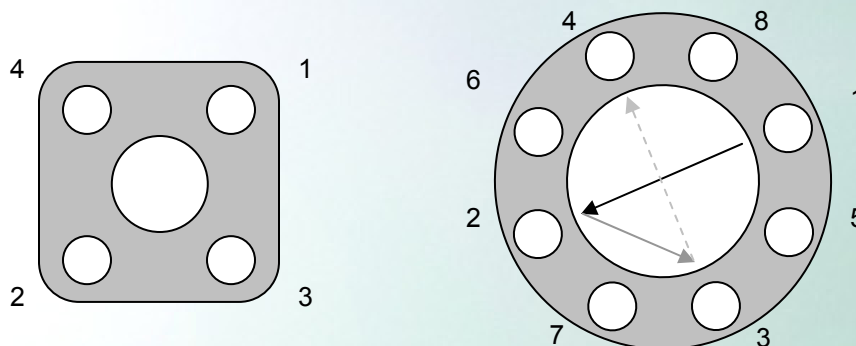
When transporting, removing, disassembling, assembling, or installing the valves, do not place any part of your body directly in front of the spring.

Handle the valves with care to avoid damage to the valve and any of its components which might lead to a discharge of this energy. Never try to manually actuate the valve.



3.0 SRV Installation:

- 3.1 McKenzie Valves are designed using standard mounting dimensions from the Association of American Railroads' (AAR) Manual of Standards and Recommended Practices, Section C-III, Safety and Operations Specifications for Tank Cars.
- 3.2 All new valves are set and tested at the McKenzie facility to ensure the quality of the valve. If the valve has remained in its original condition and is not more than six month old, the valve will not require new calibration or testing. Prior to installation, the valve should be handled appropriately and inspected to ensure that the gasket sealing surfaces are clean and undamaged. If the valve is more than six months old or damage is found, the valve will require maintenance.
- 3.3 As each manufacturer may impose different requirements based on service and design, install the valve using the tank car manufacturer's, or other end user's, specified materials and procedures.
- 3.4 The valve is designed to be installed with the spring inside the tank. Inspect the sealing surfaces and position the appropriate gasket between the valve and its mounting surface. Carefully lower the valve into position taking care to align the gasket, valve, and mounting surface.
- 3.5 Check to ensure that the fastener threads are clean. As the fasteners are installed, they should be equally tightened in increments to ensure proper alignment and even gasket compression. As a general rule, the increments should be hand tight, then one third of required torque, then two-thirds, then the complete torque. The fasteners should not be tightened in a circular, or rotational, pattern as this may distort the gasket and result in uneven sealing. A criss-cross, or star, pattern should be used. Once the fasteners are fully tightened, a circular pattern can be used to check the torques.



- 3.6 After the valve is installed, check for leakage around the newly installed gasket. If any leaks are detected, the valve should be removed, the valve and mounting surfaces should be inspected, and a new gasket must be installed.

4.0 SRV Operation:

- 4.1 The SRV is not meant to be manually operated. This valve is under spring force and is designed to operate when it is installed into a larger tank or container that experiences a pressure above the valve's rating. Do not attempt to manually actuate the valve, as side loading may occur which in turn may damage the valve.



5.0 Low Flow SRV Disassembly: (refer to Table 2 and accompanying figures)

- 5.1 Read and understand the entire procedure before attempting any service or inspection. Follow all safety procedures applicable.
- 5.2 Before disassembling the valve, measure the assembled height of the spring in the valve. This measurement will be used when assembling the valve.
- 5.3 Remove the seal disc and seal wire (18). If these are broken, note should be taken that the valve may have been adjusted and spring height may not be accurate.
- 5.4 Remove the fasteners (16) from the top guide (1) and remove the top guide. Application of a drop of oil to each of the bolts will help when loosening the fasteners.
- 5.5 Remove the jam nut (12) from the stem of the valve.
- 5.6 Measure the location of the adjusting nut on the stem. This measurement will be used when inspecting the concentricity of the stem.
- 5.7 Put the valve upside-down in a spring compression fixture. Apply just enough force to slightly compress the spring. The adjusting nut (15) should move easily. A light amount of oil may be required on the threads. If the valve is stainless steel, anti-seize may be used.
- 5.8 Carefully remove the adjusting nut (15).
- 5.9 Slowly and carefully release the force on the spring (10).
- 5.10 Remove the spring retainer (7) and the spring (10) from the valve.
- 5.11 Carefully remove the stem assembly (4) from the valve body (9).
- 5.12 Loosen the lock nut (14) holding the o-ring cap (3) on the stem (4).
- 5.13 Remove the cap (3).
- 5.14 Remove all seal materials (5, 6, 8) from the cap (3) and stem (4). A tool such as an o-ring pick may be needed. Avoid scratching or damaging any sealing surfaces.
- 5.15 Immediately, discard all seal materials (5, 6, 8).



6.0 High Flow SRV Disassembly: (refer to Table 3 & 4 and accompanying figures)

- 6.1 Read and understand the entire procedure before attempting any service or inspection. Follow all safety procedures applicable.
- 6.2 Before disassembling the valve, measure the assembled height of the spring in the valve. This measurement will be used when assembling the valve.
- 6.3 Remove the seal disc and seal wire (3, 21). If these are broken, note should be taken that the valve may have been adjusted and spring height may not be accurate.
- 6.4 Remove the screw (1) and cover (2) from the top of the stem (16)
- 6.5 Remove the fasteners (4, 5) from the top guide (15) and remove the top guide. Application of a drop of oil to each of the bolts will help when loosening the fasteners.
- 6.6 Remove the jam nut (14) from the stem of the valve.
- 6.7 Measure the location of the adjusting nut on the stem. This measurement will be used when inspecting the concentricity of the stem.
- 6.8 Put the valve upside-down in a spring compression fixture. Apply just enough force to slightly compress the spring. The adjusting nut (13) should move easily. A light amount of oil may be required on the threads. If the valve is stainless steel, anti-seize may be used.
- 6.9 Carefully remove the adjusting nut (13).
- 6.10 Slowly and carefully release the force on the spring (11).
- 6.11 Remove the spring retainer (12) and the spring (11) from the valve.
- 6.12 Carefully remove the stem assembly (16) from the valve body (10).
- 6.13 Loosen the cap screws (18) holding the o-ring cap (20) on the stem (16).
- 6.14 Remove the cap (20).
- 6.15 Remove all seal materials (17) from the cap (20) and stem (16). A tool such as an o-ring pick may be needed. Avoid scratching or damaging any sealing surfaces.
- 6.16 Immediately, discard all seal materials (17).



7.0 SRV Component Inspection:

- 7.1 When a SRV is removed from an existing application, it must be cleaned and inspected.
- 7.2 All gasket materials must be removed and discarded. While removing the gasket, do not use any tools that may cause scratches or grooves. Ensure that all existing gasket material is removed.
- 7.3 Inspect the sealing surfaces. For a flat face flange, inspect for scratches that can be detected by sliding a fingernail across. For tongue and groove surfaces, examine the sides of the tongue and groove, as well at the top of tongue and bottom of groove. These surfaces should be inspected for scratches as well as roll over material on the edges. If the tongue and groove dimensions have been distorted by shearing or warping, the joint may not properly align. Any pitting or irregularities, which can be seen or felt, may be cause for rejecting the part.
- 7.4 Replace the Cap, Body, and Stem/Plug as necessary. Do not attempt to remachine any sealing surfaces.
- 7.5 Clean all threads where oil was applied during disassembly. These may include top guide fasteners, adjusting nut threads on the stem, the lock nut threads on the stem, and cap screws that hold the o-ring cap.
- 7.6 Clean and inspect the body of the valve.
- 7.7 Inspect the "bowl area" for any corrosion and clean with a Scotch-Brite pad (or equivalent) or 400 grit emery cloth as needed. Bead blasting is an acceptable alternative.
- 7.8 Inspect the sealing area of the flange with a straight edge to verify that the area by the bolt holes is not bent. Inspect the bolt holes for any damage.
- 7.9 Inspect all threaded holes and chase with a tap as needed.
- 7.10 Inspect all mating surfaces between valve parts for corrosion, alignment, etc. Clean as needed with a Scotch-Brite pad (or equivalent).
 1. Stem and cap (or stem, retainer and plug)
 2. Top guide and body
 3. Stem, top guide and body
 4. Spring and body
 5. Spring and retainer (or spring, follower and guide)
 6. Seal retainer and body
- 7.11 Inspect Stem
 1. Wire brush the entire length of stem to remove scale, solidified product and any foreign matter.
 2. Visually inspect stem for defects and overall condition including threads and poppet for cracks, nicks, and/or pits caused by corrosion, etc., before continuing. Repair work is limited to cleaning and polishing.
 3. If the visual inspection is acceptable, perform a waterwashable liquid penetrant inspection, on the complete stem. Stems with crack like indications shall be replaced.
 4. If the threads are slightly galled, run the correct size thread die over the affected area. Stems with severely galled area of thread shall be replaced.



5. Perform stem concentricity inspection.

Equipment needed:

- 1) Dial indicator on a stand
- 2) Two v-blocks
- 3) End stop

Procedure

- 1) Place the top guide end of the stem in one v-block.
- 2) Place the other v-block at the location where the adjusting nut was measured before disassembly.
- 3) Place the dial indicator (as shown) on the outer edge of stem (poppet).
- 4) Rotate the stem 360°.
- 5) Observe the total dial indicator movement (maximum to minimum measurement), which will be the T.I.R. (total indicator reading).
- 6) The maximum T.I.R. shall be:
0.015 inches for the 092420 and 092534 designs
0.030 inches for the 085381 and 501605 designs

7.12 Inspect Spring

1. Wire brush the entire length of non-coated springs, as needed, to remove scale, solidified product and any other foreign matter.
2. Visually inspect the spring for damage or cracks. A crack in the spring is cause for rejection.
3. If visual inspection is acceptable perform a water-washable liquid penetrant inspection on the complete spring. Springs with crack like indications shall be replaced.

7.13 Visually inspect the follower for damage. Move the follower up and down the length of the stem and guide tube (if applicable). Ensure free movement of the follower.



8.0 SRV Assembly:

- 8.1 Inspect all components and ensure they are clean, free of nicks and scratches and are in proper condition for assembly.
- 8.2 Select the o-ring material per customer's requirements. Clean and inspect the oring(s) and then apply a very thin film of food grade silicone sealant compound to the o-ring(s).
- 8.3 Insert the o-ring(s) into the cap.
- 8.4 Press the cap and o-ring(s) into position on the stem.
- 8.5 Depending on the style of valve, either tighten the locknut or cap screws that hold the cap onto the stem.
 1. Locknuts should be torqued to 80 ft-lbs.
 2. Cap screws should be torqued to 175 in-lbs, using a criss-cross (star) pattern.
- 8.6 Place the stem assembly into a fixture with the threaded side up. Apply anti-seize compound on the threads of stainless steel stems.
- 8.7 Set the valve body assembly onto the stem assembly in the fixture. Insure that the valve body assembly is centered on the stem assembly and is supported squarely on the o-ring(s).
- 8.8 Place the spring and spring retainer over the stem.
- 8.9 Compress the spring until the adjusting nut can be started. Tighten the adjusting nut until the measured assembly height (from disassembly) is reached. If a compression fixture is available, compress the spring until the measured assembly height is reached and tighten the adjusting nut.
- 8.10 Remove the valve from the assembly fixture.
- 8.11 Install the top guide assembly and fasteners. The stem should not bind on the bushing in the top guide. If it binds, check the alignment of the stem assembly to the valve body assembly.
 1. Hex Nuts should be torqued to 75 ft-lbs
 2. Hex Head Capscrews should be torqued to 300 in-lbs



9.0 SRV Testing:

- 9.1 Install the pressure relief valve in the test well or equivalent fixture.
- 9.2 Cycle the valve by increasing the test well pressure until there is an audible release of air through the valve, and then reduce the pressure until the air flow stops. Cycling the valve helps provide consistency in test results between valves that have sat for varying lengths of time.
- 9.3 Plug the drain holes in the valve body (with putty, ear plugs, etc.) and fill the nozzle with water so the cap is covered.
- 9.4 Start-to-Discharge Pressure
 1. The AAR definition of start to discharge pressure (STD) is "the pressure, measured at the valve inlet, at which there is a measurable lift of the closure device on a safety relief valve, or at which discharge becomes continuous as determined by seeing, feeling or hearing."
 2. An effective indication of start to discharge pressure is when there is always a bubble of air rising in the water. A single bubble or intermittent bubbles do not constitute a start to discharge.
 3. Slowly increase the pressure in the test well.
 4. Measure and record the start to discharge pressure as defined above. The acceptable start to discharge pressure is defined in BOE-6000. "The tolerance for a reclosing pressure relief valve is ± 3 psi for valves with a start-to-discharge pressure of 100 psi or less and $\pm 3\%$ for valves with a start-to-discharge pressure greater than 100 psi." If the start to discharge pressure is outside the acceptable range the valve setting should be readjusted by tightening or loosening the spring retaining nut as needed.
- 9.5 Vapor-Tight Pressure
 1. The AAR definition of vapor tight pressure (VTP) is "the pressure, measured at the valve inlet after closing, at which no further fluid flow is detected at the downstream side of the seat of a safety relief valve."
 2. An effective indication of vapor tight pressure is when there are no more bubbles or at least a 10 second delay between bubbles.
 3. Slowly decrease the pressure in the test well.
 4. Measure and record the vapor tight pressure as defined above. The acceptable vapor tight pressure is defined in BOE-6000. "The vapor tight pressure of a reclosing pressure relief valve must be at least 80 percent of the start-to-discharge pressure." If the vapor tight pressure is below the minimum VTP the valve shall be rejected. The valve should be disassembled and all sealing surfaces closely checked before rebuilding.
- 9.6 Record the valve serial number, start to discharge pressure, and vapor tight pressure using the AAR certificate of test form, which must be signed and dated.
- 9.7 Remove the putty, etc from the drain holes and drain off any water. Remove the valve from the pressure test well.
- 9.8 Install the locking nut (or top nut) by using 2 wrenches to tighten it to 45 ± 15 ft-lbs. against the adjusting nut (or adjusting screw), without changing the adjusting nut position.
- 9.9 Install the safety wire(s) and lead seal(s) as required. Typical seal locations are: holes in the adjusting nuts, top guide fasteners, set screw, etc.



Appendix A : O-Rings

For 92420 and 92534 Low Flow 75 psi SRV/PRV

	SYM #5	SYM #6	SYM #8
BUNA-N	208-7324	208-7329	208-7331
BUTYL RUBBER	208-9672	208-9673	
CS 4273B	208-16005	208-16009	
CS 5355	208-16006	208-16010	
EPDM	208-7323	208-7328	
KALREZ 6375	208-7301	208-7302	
NEOPRENE	308-7333	308-7334	
NEOPRENE FOOD GRADE	208-7322	208-7327	
VITON A	208-7321	208-7326	
VITON B	208-19992	208-19993	
VITON EXTREME ETP	208-16008	208-16012	
VITON GFLT	208-19989	208-19990	
VITON GF-S	208-16007	208-16011	
CHEMRAZ 505		308-7318	

For 85381 and 501605 High Flow SRV/PRV

	SYM #17
BUNA-N	208- 7469
BUTYL RUBBER	308- 7413
CHEMRAZ 505	108- 9799
CHLOROBUTYL	308-7535
CS 4273B	208-16001
CS 5355	208-16002
EPDM	208- 7471
KALREZ 4079	308- 9782
KALREZ 6375	208- 7294
NEOPRENE FOOD GRADE	308- 7472
VITON A	308- 7412
VITON A - CERTIFIED	208-19959
VITON B	308- 6019
VITON EXTREME ETP	208-16004
VITON GFLT	208-19991
VITON GF-S	208-16003