



# SMC Model 555 Balanced Pressure Regulator

## FEATURES:

Simple construction. Minimum number of parts to wear. Seals, piston, and seat assembly easily replaced. Ideal for self service car wash installations, particularly those with trigger gun and weep systems also carpet cleaning machine and RO application. Can be used on multi-outlet systems with varying size nozzles. Working pressure is maintained in the system regardless of what percent of the liquid is bypassed. Off the line mounting - No pressure loss from valve restriction - Capacity to 10 G.P.M. In line mounting - Capacity to 7 G.P.M. Does not pulse or surge. Smooth gentle discharge Model 555 also is available in partial or all stainless steel.

## INSTRUCTIONS:

Mount **off-line** unit in a tee, off the discharge line or manifold, see Fig. #1. Mount **in line** unit, in-line - see Fig. #2.

Ideal for use in car wash or pressure wash application where a weep gun is used or bypass can be returned to a supply tank. When used on a pressure wash system where bypass is piped back to inlet and standard shut off gun is used it is advisable to install a thermal relief valve to insure that heat build up in the pump and short loop does not exceed a fixed temperature (160°-180°). Note: This can be done only if pump is pressure fed or has net positive suction head from gravity feed.

To increase pressure, turn adjusting cap clockwise. To reduce pressure turn adjusting cap counter-clockwise.

The SMC regulator is not preset for pressure. Start the pump with the spring in a relaxed position (7 threads showing). With the discharge gun open check gauge pressure as you turn the adjusting cap clockwise to increase the pressure to the desired operating range (2000 PSI max.). There may be some by-pass if the nozzle is undersize. Do not adjust above the working pressure as this will unnecessarily increase pressure when the gun is shut-off.

If used in a system that is equipped with more than one outlet gun set the valve pressure with one outlet gun open and again with all outlet guns open to verify proper setting.

If there is extreme pulsating in the system (single or two cylinder pump or a pump with mechanical valves) there may be a light trickle at the bypass. The addition of a pulsation damper you can set the valve slightly higher than normal to stop the trickle (there will be a slightly higher pressure rise than normal with all outlet guns shut-off).

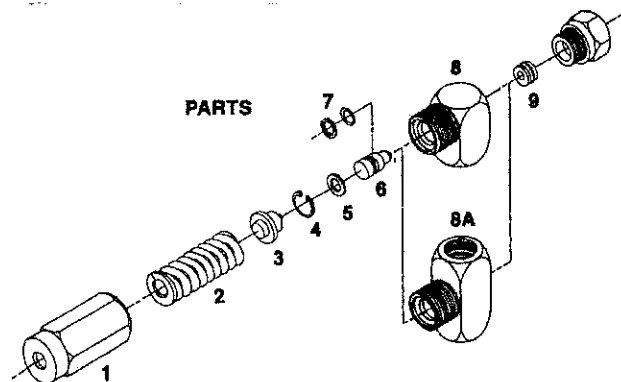
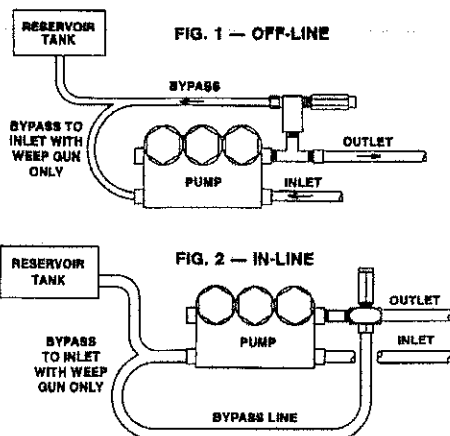
**NOTE:** Do not use Teflon Tape on threads. Please use a thread locker for best results. Teflon Tape ends up in piston bore causing regulator to be ineffective.

## PARTS LIST:

- |     |         |  |
|-----|---------|--|
| 1.  | 5550040 | CAP                                    |
| 2.  | 5550120 | Standard Spring, 200-2000 PSI          |
|     | 5550130 | Medium Spring, 100-900 PSI             |
|     | 5550140 | Low Spring, 50-500 PSI                 |
| 3.  | 5550390 | Thrust Plate                           |
| 4.  | 8200260 | Ring Retainer                          |
| 5.  | 5550370 | Brass Washer, Piston Retainer          |
| 6.  | 5550230 | Piston 316SS                           |
| 7.  | 5550490 | Seal Kit - Buna-N w/Teflon             |
|     | 5551690 | Seal Kit - Ethylene Propylene w/Teflon |
|     | 5551990 | Seal Kit - Fluroelastomer w/Teflon     |
| 8.  | 5550330 | Off Line Body Assembly                 |
| 8A. | 5550350 | In Line Body Assembly                  |
| 9.  | 5550590 | Kit Seat w/Buna-N O-Ring               |
|     | 5552090 | Kit Seat w/Ethylene Propylene O-Ring   |
|     | 5552190 | Kit Seal w/Fluroelastomer O-Ring       |

## SPECIFICATIONS:

- All Body Parts — Brass
- Piston and Seat — Hardened Stainless Steel
- O-Rings — Buna-N, Ethylene Propylene, or Viton
- Piston Seal — Buna-N, Ethylene Propylene, or Viton
- Seal Backup — Filled Teflon
- Adjusting Spring — Chrome Vanadium
- Porting — 3/8 F. N. P. T. Inlet (All Ports)
- Temperature Range — to 180° F
- Volume Range —
  - Off line Mount to 10 GPM
  - In Line Mount to 7 GPM
- Pressure Range —
  - Standard Spring, 200-2000 PSI
  - Medium Spring, 100-900 PSI
  - Low Spring, 50-500 PSI
- Weight — 12 oz.



PARTS BREAKDOWN FOR MODEL ST-312  
RICE HYDRO, INC.

PART NUMBER..	DESCRIPTION..	QTY REQ'D
UD04-0006.09	BEARING	1
UD04-0007.18	SEAL	3
UD02-0007.24	SEAL	1
UD04-0009.09	RETAINER CLIP	1
UD04-0014.20	PLUNGER ROD P SERIES	3
UD04-0023.22	SUPPORT RING	1
UD04-0031.84	CRANKSHAFT	1
UD04-0103.41	CONNECTING ROD P SERIES	3
UD04-0208.70	BEARING COVER	1
UD04-0208.72	BACK COVER P SERIES	1
UD04-0209.56	CRANKCASE P SERIES	1
UD04-0214.21	BEARING	1
UD04-0301.42	SLINGER RING	1
UD04-0303.18	PLUNGER NUT	1
UD04-0517.07	FLANGE P SERIES GAS	1
UD04-0602.76	GASKET	1
UD02-0605.09	GASKET	2
UD04-0605.33	PLUNGER WASHER	1
UD04-0605.49	WASHER	1
UD04-1101.A2	O-RING	6
UD04-1101.A3	VALVE O-RING	6
UD04-1101.A4	O-RING	1
UD04-1101.A6	O-RING	1
UD04-1101.A7	O-RING	1
UD04-1205.35	PLUNGER 15MM	3
UD04-1212.10	END PLATE	1
UD04-1411.01	WASHER P - PUMP	8
UD04-1502.15	CONNECTING ROD PIN	3
UD04-1506.26	SNAP RING	1
UD04-1603.64	DISCHARGE PLUG 3/8	2
UD02-1603.67	DRAIN PLUG	1
UD04-1603.69	SIGHT GLASS	1
UD04-1603.72	VALVE CAP P SERIES	6
UD04-1604.59	MANIFOLD P SERIES 15MM	1
UD04-1805.19	BOLT	4
UD04-1805.20	BOLT	8
UD04-1805.39	BOLT	8
UD04-6058.26	OIL VENT CAP P SERIES	1
 MISC PARTS..		
HONDA-GX200UT2-QX2	196 CC FLANGE MOUNT HONDA ENGINE	1
SPEC-PNL3.0/20-T	TRIPLEX PLUNGER PUMP	1
VALVE-RELIEF-2000PSI	200-2000 PSI PRESSURE REGULATOR	1
GAUGE-2000	0-2000 PSI GAUGE	1
BALLVALVE-3/4	3/4" BALLVALVE	1
BALLVALVE-3/8HP	3/8" HIGH PRESSURE BALLVALVE	1
CHECKVALVE-1/2M	1/2" MXM INLINE CHECKVALVE	1
LINESTRAINER-3/4-80	80 MESH LINESTRAINER ASSEMBLY	1
HYD-VALVE-SHORE	HYDRAULIC VALVE	1
TANK-B200-LD	TANK FOR SHORING UNIT	1
TANK-CAP-ASSY	LID, FLANGE, SCREWS & CHAIN	1
QC-BODY-1/4-2WAY	QUICK CONNECT ENDS OF HOSE	2
QC-PLUG-1/4-2WAY	QUICK CONNECT ON UNIT	1
HOSE-SHORING-ST312	1/4" 50 FOOT OUTLET HOSE	1
WHEEL	NO FLAT TIRES	4
LABEL-KIT-ST312	INSTRUCTION AND CAUTION STICKERS	1
 KITS..		
**KITS ARE ALL INCLUSIVE**		
UD04-KIT-UD1	VALVE KIT P-SERIES	1
UD04-KIT-UD7	SEAL KIT P 15MM	1
UD04-KIT-UD13	BRASS KIT P 15MM	1
UD04-KIT-UD20	PLUNGER O-RING KIT P 15MM	1