Splash N Dash

Coleman Hanna Carwash Systems, LLC.
Houston, Texas USA

www.colemanhanna.com
Splash N Dash Start-Up Procedure

Upon receiving the SND system the following procedures must be done.

1. Install the SND system on a level area by bolting down with 4 bolts.

2. Mount the Wand holder for the high-pressure gun to the right side of the SND.
3. Mount the Foam brush holder for the foam brush and handle to the left side of the SND.


Caution: Do Not Turn on Power
5. Connect water line to unit.

6. Turn water on and fill tank.
7. Install the high-pressure hose through the rubber grommet, located on the front of the unit, bottom right-hand side.

8. Connect to high pressure pump.
9. Connect the trigger gun to the high-pressure hose.

10. Put trigger gun and wand into wand holder.
11. Install the foam brush hose through the grommet, located on the front of the unit, bottom left-hand side.

12. Connect to foam generator, located inside cabinet.
13. Connect foam brush to foam brush handle.

14. Connect foam brush handle to foam brush hose.
15. Hang the foam brush and handle in the foam brush holder mounted to the left side of the SND.

16. Insert rotary switch through the front of the cabinet.
17. Install the Red selection knob.

18. Place chemical suction tube in the concentrated chemical container provided. (4 Req.)
19. Turn the power to unit on.
20. Turn the selection switch to the desired function.

It will take several minutes for chemical to appear.
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**READ MATERIAL SAFETY DATA SHEETS**

**BEFORE HANDLING PLUMBING CHEMICALS**
START- UP PROCEDURES
1) Connect 220 volts, 60 cycle, electrical service to the unit. Three-phase power is required on some units. Please check the nameplate for exact requirements. If your unit has a water heater then the total amp draw will be higher. Please refer to the chart below.

<table>
<thead>
<tr>
<th>Actual Amp Draw</th>
<th>Breaker Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 HP 3 Ø Motor &amp; Pump</td>
<td>9.5</td>
</tr>
<tr>
<td>3 HP 3 Ø with Water Heater</td>
<td>18</td>
</tr>
<tr>
<td>5 HP 3 Ø</td>
<td>14</td>
</tr>
<tr>
<td>5 HP 3 Ø with Water Heater</td>
<td>22</td>
</tr>
<tr>
<td>3 HP 1 Ø</td>
<td>17</td>
</tr>
<tr>
<td>3 HP 1 Ø with Water Heater</td>
<td>30</td>
</tr>
<tr>
<td>5 HP 1 Ø</td>
<td>25</td>
</tr>
<tr>
<td>5 HP 1 Ø with Water Heater</td>
<td>41</td>
</tr>
</tbody>
</table>

<<< CAUTION >>>
DO NOT TURN POWER ON

2) Connect a water line to the unit. Turn the water on, and fill the tank.

3) Install the high-pressure hose through the rubber grommet, located in front of the unit, bottom right-hand side. Connect the hose to the pressure pump.

4) Install the foam brush hose through the rubber grommet, located on the front of the unit, bottom left-hand side. Connect the hose to the foam generator.

5) Insert the rotary switch through the front of the cabinet, and install the selection knob.

6) Place the chemical suction tubes into the concentrated chemical containers.

7) Turn power to the unit on, and turn the selector knob to the desired function. It will take several minutes for chemical to appear. You will need to prime the low-pressure functions for proper operation.
SEQUENCE OF OPERATION

High Pressure Soap

1) The tank is full of water, and the low-water float switch is in the up position.
2) The rotary switch is turned to HIGH PRESSURE SOAP.
3) The large motor starter in the control panel is energized, starting the 3 HP motor.
4) The soap solenoid is energized, which opens the solenoid, allowing the pump to draw in chemical.
5) The water from the stainless-steel tank is drawn into the pump. Along with chemical, and is then pressurized to 900 psi.
6) The water/chemical combination is delivered through the safety trigger wand at 900 psi at 3.5 gallons per minute (GPM).

High Pressure Rinse

1) The tank is full of water, and the low-water float switch is in the up position.
2) The rotary switch is turned on to HIGH PRESSURE RINSE.
3) The large motor starter in the control panel is energized, starting the 3 HP motor.
4) The water from the stainless-steel tank is drawn into the pump, and is then pressurized to 900 psi.
5) The water is delivered through the safety trigger wand at 900 psi at 3.5 GPM.
High Pressure Wax

1) The tank is full of water, and the low-water float switch is in the up position.

2) The rotary switch is turned to HIGH PRESSURE WAX.

3) The large motor starter in the control panel is energized, starting the 3 HP motor.

4) The wax solenoid is energized, which opens the solenoid, allowing the pump to draw in chemical.

5) The water from the stainless-steel tank is drawn into the pump, along with chemical, and is then pressurized to 900 psi.

6) The water/chemical combination is delivered through the safety trigger wand at 900 psi at 3.5 GPM.

Low Pressure Tire & Engine Cleaner

1) The tank is full of water, and the low-water float switch is in the up position.

2) The rotary switch is turned to TIRE & ENGINE CLEANER. The small yellow relay in the control panel is energized starting up the Flojet pump and tire cleaner solenoid.

3) The tire cleaner solenoid allows water to pass into the Flojet pump.

4) The Flojet pump draws in water and chemicals into the suction of the pump. The pump will pump the water out the discharge and though a high-pressure check valve, located on the high-pressure pump.

5) On the discharge side of the Flojet pump is a small gray plastic primer valve. This valve should remain closed except to prime the pump upon start up.

<<< IMPORTANT NOTICE >>>

The Flo-Jet pump is equipped with a primer valve, located on the exhaust of the pump. Opening this valve upon start-up of this will allow the chemical to enter the system. Once the suction line is clear of air, the valve should be closed for standard operation.
1) The tank is full of water, and the low-water float switch is in the up position.

2) The rotary switch is turned to FOAMING BRUSH. The small yellow relay is energized in the control panel starting up the foam brush Flojet pump, air compressor, and foam brush solenoid.

3) The small relay in the control panel is energized, starting up the Flo-Jet pump.

4) The foam brush solenoid opens up allowing water from the tank to enter the Flojet pump.

5) The Flojet pump draws in water and chemical into the suction side of the pump. The pump will pump the water and chemical into the foam generator.

6) The mixture then goes to the foam generator, where it is mixed with air from the air compressor, creating foam.

7) The foam then travels down the hose, out the brush.

<<< IMPORTANT NOTICE >>>

The Flo-Jet pump is equipped with a primer valve, located on the exhaust of the pump. Opening this valve upon start-up of this pump will allow the chemical to enter the system. Once the suction line is clear of air, the valve should be closed for standard operation.
1. Rubber Coated Clamp
2. 5/16” Self-Tapping Screw
3. Foam Generator
4. ½” NPT x ½” Hose Barb
5. ½” NPT x ½” Brushing
6. ¼” Branch T
7. ¼” NPT x ¼” Polyflow
8. ¼” NPT x 90° ¼” Polyflow
9. 3/8” SAE Swivel x 3/8” Hose Barb
10. 3/8” NPT x 3/8” SAE Flare
11. ½” NPT x 90° ½” SAE Flare
12. ½” Swivel x ½” Hose Barb
13. 100 GPH Pro-Con Pump
14. 5/16” x ¾” Carriage Bolt
15. 5/16” Stainless Steel Flat Washer
16. 5/16” Stainless Steel Hex Nut Nylon Insert
17. Air Compressor
18. ¾” Close Nipple
19. ¼” Inline Low-Pressure Check Valve
20. 3 HP 1 PH or 5 HP 3PH Motor
21. Cat Pump
22. 0-2000 PSI Gauge ¼” Lower Stem Mount
23. 3/8” x ¼” Bushing
24. ¼” x 1” Nipple
25. ¼” High Pressure Check Valve
26. ¼” Coupling
27. ¼” Hex Nipple
28. 3/8” Branch T
29. 3/8” x 1/8” Bushing
30. ¼” x 12” Bypass Hose
31. 3/8” Hex Nipple
32. Paraplate Regulator
33. 8 Position Rotary Switch
PARTS BREAKDOWN (con’t.)

34. Selection Knob 72070
35. ½” Male Pipe Thread x 3/8” Hose Barb 22-30182-8-6B
36. ½” T 22-2203P-8
37. ½” Close Nipple 22-215PN-8
38. ½” 1/4 – Turn Ball Valve 22-V500P-8
39. ½” Hex Nipple 22-216P-8
40. Low Water Level Shut Off 72050
41. Stainless Steel Tank 1B003
42. 5” Copper Float 58031
43. ¼” x 12” Brass Rod 58035
44. ¼” Topaz Valve 58001
45. ¾” Brass 90 22-2200P-8-8
46. ¾” x 8” Brass Nipple 22-215PNL-8-80
47. ½” Shoulder Nipple Hex 22-216P-8
48. ½” Ball Valve 22-V500P-8
49. ½” Jam Nut Male Connector 22-48F-8-8
50. ½” Fiber Washer NOT AVAILABLE
51. PVC ½” St Ell 22407
52. PVC ½” Drain Pipe NO PART #
53. Motor Starter (Cat Pump) 60056
54. Motor Starter (Air Compressor & ¼ HP Motor) CALL FACTORY
55. Relay Base 40112-17
63a. SPDT Relay 40112
56. Transformer – 220V Primary, 24V Secondary 82066
57. 6 Pin Terminal Strip 40010-2
58. 3 Second Timer 60020-3
59. Nut for Solenoid Coil 64029
60. 24V Coil for Solenoid 64053
61. 2 Stage Solenoid Block 64025
62. ¼” NPT x 45° ¼” FPT 22-2214P-4-4
63. ¼” NPT x 3/8” Hex Nipple 22-216P-6-4
64. 3/8” MPT x 90° ¼” Polyflow 22-W169PL-6-4
65. 3/8” x ¼” Bushing 22-209P-6-4
66. ¼ NPT x 90° ¼” Polyflow 22-W169PL-4-4
67. Nut for Solenoid Coil DISCONTINUED
68. One Stage Solenoid Block 64071
69. ¼” NPT x 90° 22-W169PL-4-4
70. ¼” NPT x ¼” Polyflow 22-2200P-4-4
71. ¼” Branch T 22-W169PL-4-4
72. 1/8” NPT 2507 Spray Tip 84104
73. ¼” x 16” Galvanized Wand Tube 84012
## PARTS BREAKDOWN (con’t.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>Trigger Gun (Weep)</td>
<td>84006</td>
</tr>
<tr>
<td>75</td>
<td>¼” x 45’ Wire Braid Hose W/F</td>
<td>52393-1</td>
</tr>
<tr>
<td>76</td>
<td>3” x 9” Foam Brush</td>
<td>44006, 44004</td>
</tr>
<tr>
<td>77</td>
<td>½” Hex Nipple</td>
<td>22-216P-8</td>
</tr>
<tr>
<td>78</td>
<td>¾” PVC Foam Brush Handle</td>
<td>44000</td>
</tr>
<tr>
<td>79</td>
<td>½ x 45’ Foam Brush Hose</td>
<td>52393-4</td>
</tr>
<tr>
<td>80</td>
<td>Flo-Jet Pump (220 V)</td>
<td>57001</td>
</tr>
<tr>
<td>81</td>
<td>Capacitor for Compressor</td>
<td>DISCONTINUED</td>
</tr>
<tr>
<td>82</td>
<td>Check Valve</td>
<td>34000</td>
</tr>
<tr>
<td>83</td>
<td>3/8” NPT Hex to ¼” NPT</td>
<td>22-216P-6-4</td>
</tr>
<tr>
<td>84</td>
<td>Inductor Tip Holder</td>
<td>48054</td>
</tr>
<tr>
<td>85</td>
<td>¼” Female NPT to ¼” Male Flair 90°</td>
<td>22-149F-4-4</td>
</tr>
<tr>
<td>86</td>
<td>¼” NPT Piped to ¼” Male Flair 90°</td>
<td>22-48F-4-4</td>
</tr>
<tr>
<td>87</td>
<td>¼” NPT Plug</td>
<td>22-218P-4</td>
</tr>
</tbody>
</table>
## TROUBLESHOOTING GUIDE

<table>
<thead>
<tr>
<th>TROUBLE</th>
<th>POSSIBLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit will not operate on any function.</td>
<td>Power Source</td>
<td>Check the power to the unit. A tripped breaker or blown fuse may be the cause. Repair as necessary.</td>
</tr>
<tr>
<td></td>
<td>Faulty Transformer</td>
<td>Check for 24V output to the rotary switch. Replace the bad transformer. Check the incoming voltage before replacing.</td>
</tr>
<tr>
<td></td>
<td>Out of Water</td>
<td>Add water.</td>
</tr>
<tr>
<td>Unit will not operate on high pressure functions.</td>
<td>Motor</td>
<td>Check the thermal overload of the motor. The motor is possible tripped out.</td>
</tr>
<tr>
<td></td>
<td>Faulty Wiring</td>
<td>Check the connection from the motor starter to the motor.</td>
</tr>
<tr>
<td></td>
<td>Faulty Transformer</td>
<td>Check for 24V output to the rotary switch. Replace the bad transformer. Check the incoming voltage before replacing.</td>
</tr>
<tr>
<td>Low pressure chemical output is too watery.</td>
<td>Out of Chemical</td>
<td>Add Chemical.</td>
</tr>
<tr>
<td>Low Pressure Functions: Tire Cleaner</td>
<td>Foot Valve Strainer</td>
<td>Clean or replace the strainer.</td>
</tr>
<tr>
<td>Foam Brush</td>
<td>Air Compressor</td>
<td>Check the power to the air compressor. If the compressor is running, check that the air flow is sufficient. The air compressor may need to be replaced.</td>
</tr>
<tr>
<td>TROUBLE</td>
<td>POSSIBLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>No chemical output on high pressure functions.</td>
<td>Out of Chemical</td>
<td>Add chemical.</td>
</tr>
<tr>
<td>High Pressure Functions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot Valve Strainer</td>
<td>Filled with Trash</td>
<td>Clean or replace the strainer.</td>
</tr>
<tr>
<td>Pulsating pump or low pressure on high pressure functions.</td>
<td>Seals in Cat Pump</td>
<td>Replace the seals in the Cat pump. Refer to Cat pump</td>
</tr>
<tr>
<td></td>
<td></td>
<td>owner’s manual. Repair as necessary.</td>
</tr>
<tr>
<td></td>
<td>Paraplate Regulator</td>
<td>Remove the lid of the tank, and clean the strainer.</td>
</tr>
<tr>
<td></td>
<td>(High Pressure Water Regulator)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clogged Strainer in Stainless Steel</td>
<td>Remove the lid of the tank, and clean the strainer.</td>
</tr>
<tr>
<td></td>
<td>Tank</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stainless Steel Tank</td>
<td></td>
</tr>
<tr>
<td>Low pressure on tire cleaner of engine cleaner.</td>
<td>Faulty Flo-Jet Pump</td>
<td>This pump cannot be rebuilt. Replacement is necessary.</td>
</tr>
<tr>
<td></td>
<td>Unit Lost Prime When Chemical Drum</td>
<td>Open primer valve and reprime pump.</td>
</tr>
<tr>
<td></td>
<td>Ran Dry</td>
<td></td>
</tr>
<tr>
<td>Tank overflow.</td>
<td>Faulty Float Valve</td>
<td>Shut off water to the unit. Remove the float valve, and replace.</td>
</tr>
<tr>
<td>Leaking swivel.</td>
<td>Faulty Swivel</td>
<td>Replace the swivel.</td>
</tr>
</tbody>
</table>

For Additional Technical Support, Contact:

COLEMAN HANNA CARWASH SYSTEMS, LLC.  
5842 W. 34TH STREET  
HOUSTON, TEXAS 77092  
1.800.999.9878  
713.683.9878
SUN SEAL HYPER-CONCENTRAGE CHEMICAL USAGE

High Pressure Applications

950 psi at Pump Gauge
3.5GPM
# 7 Spray Tip

**High Pressure Wash**
Chemical: HP75/5 High Pressure Soap
Product diluted 8:1 before placing in Splash-N-Dash.
Concentrate Usage: 3/8 oz. per minute w/ pink tip
Chemical Cost: 5 gal. @ $121.82, or $.19 per oz.

**High Pressure Wax**
Chemical: HP73/5 Sun Seal
Product diluted 8:1 before placing in Splash-N-Dash.
Concentrate Usage: 1.3 oz. per minute w/ purple tip
Chemical Cost: 5 gal. @ $185.30, or $ .29 per oz.
Amount/Minute: 1.3 oz. per minute, or .04 per minute.
Cost After Dilution: 5 gal. @ $20.62, or $.032 per oz.

Low Pressure Applications

Flo-Jet Pump
# 7 Spray Tip

**Low Pressure Tire Cleaner**
Chemical: HP78/5 Whitewall Tire Cleaner
Chemical Cost: 5 gal. @ $102.09, or $.16 per oz.
Amount/Minute: .55 oz. per minute, or $.09 per minute.

**Foam Brush System**
Chemical: HP74/5 High Pressure Detergent
Same product as High Pressure Wash, diluted 8:1.
Chemical Cost: 5 gal. @ $121.82, or $.19 per oz.
Amount/Minute: 1 oz. per minute, or $.02 per minute.
Cost After Dilution: 5 gal. @ $131.51, or $.02 per minute.
HYDROMINDER TIP USAGE WITH FLO-JET PUMPS

PUMP 2100-689 WITH #1 CAM.

TIRE CLEANER

Flow Out of Tip: 40 Oz/Minute

<table>
<thead>
<tr>
<th>Hydrominder Tip</th>
<th>Chemical Drawn</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>14 oz.</td>
<td>2.8 to</td>
</tr>
<tr>
<td>Beige</td>
<td>12 oz.</td>
<td>3.3 to</td>
</tr>
<tr>
<td>Red</td>
<td>10 oz.</td>
<td>4 to</td>
</tr>
<tr>
<td>White</td>
<td>8 oz.</td>
<td>5 to</td>
</tr>
<tr>
<td>Blue</td>
<td>6 oz.</td>
<td>6.6 to</td>
</tr>
<tr>
<td>Tan</td>
<td>5 oz.</td>
<td>8 to</td>
</tr>
<tr>
<td>Green</td>
<td>4 oz.</td>
<td>10 to</td>
</tr>
<tr>
<td>Orange</td>
<td>3 oz.</td>
<td>13.3 to</td>
</tr>
</tbody>
</table>

FOAM BRUSH

Flow Out of Brush: 76 Oz/Minute

<table>
<thead>
<tr>
<th>Hydrominder Tip</th>
<th>Chemical Drawn</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>7 oz.</td>
<td>11 to</td>
</tr>
<tr>
<td>Brown</td>
<td>4 oz.</td>
<td>19 to</td>
</tr>
<tr>
<td>Yellow</td>
<td>3 oz.</td>
<td>25 to</td>
</tr>
</tbody>
</table>

It is recommended that the soap be diluted in the drum, 4 to 1, then fed into Flo-Jet Pump with a brown or yellow tip.
INSTALLATION INSTRUCTIONS
FOR U.S. PARA PLATE BY-PASS REGULATOR

SIZING  Size your regulator to meet or exceed pump pressure and capacity ratings.
MOUNTING  The preferred position is vertical, adjusting end up. You can fill the spring area with oil for continues spring protection. If other than vertical, periodic disassembly to grease the springs is recommended.
INSTALLATION POSITION  A common position is direct onto the pump manifold. The connecting pipe should be at least the size of the regulator inlet. The discharge connection must be at least the size of the valve connection. The discharge (by-pass) line can be pressure type.
RESTRICTION OF INPUT OR OUTPUT  Flow will greatly reduce performance and could result in premature valve wear.
DISCHARGE CONNECTION  The discharge hose can be returned to pump input, or to a holding tank. If returned to pump input, protective measures should be taken to avoid recirculation of fluids at high pressures for long periods which can cause excessive temperature buildup in the fluids. The condition can occur if nozzles plug, or if on-off nozzle control spray guns are used. The Para Plate will precisely maintain the desired operating pressure and will prevent spikes during the instant of nozzle plugging, or spray gun shutoff, but cannot prevent the system fluid from heating during recirculation. Back pressure should be avoided. See Back Pressure Table below.
PRESSURE ADJUSTMENT  The Para Plate is designed for continuous by-pass, and should be used to set and control system pressures. To properly control, a minimum of 10% of rated regulator capacity (minimum 0.5 GPM) must be by-pass at all times. For example, for a 5 GPM rated regulator, 0.5 GPM by-pass will allow effective pressure control.
WARNING  If your pump output flow in combination with nozzle size sets your pressure, you will not make effective use to the Para Plate. In addition, slight leakage through the Para Plate can cause the pressure to drop slightly below the desired operating pressures. Do not attempt to turn the Para Plate adjusting screw clockwise as an artificially high opening might result if nozzles plug.
You should determine pump output, then select a nozzle which will give you your desired set pressure and still allow a minimum by-pass (of regulator rating) by-pass. For example, a No. 8 nozzle and 3.4 GPM combine for a pressure of 700 psi. A No. 7 nozzle requires only 2.9 GPM to develop a 700-psi operating pressure. If your No. 7 nozzle begins to wear and pressure drops, you will not make effective use to the Para Plate. If pressure drops when control is opened, check nozzle size and make certain minimum by-pass requirement is met. In this way you avoid adjusting in artificially high opening pressures. Also, seat damage is avoided when a cushion of water is between piston and seat. You can check the amount of by-pass by disconnecting the output hose and taking a timing on fluid discharging into a measuring container.
Filtration  Any time you want a fluid control device to perform properly with minimum maintenance, some form of periodic system cleanup should take place. Pumps, spray guns, valves, regulators and swivels will work better and last longer if size and amount of contamination is kept to an absolute minimum.
IS PARA PLATE REGULATOR COMPLEX?  It is more complex because it is truly a regulating valve. It is not designed to be a normally closed pop valve or relief valve. After it is installed properly and fine tuned it will give years of trouble-free service and will provide overall benefits in pressure control and system reliability not available in the conventional valves used for regulating.

<table>
<thead>
<tr>
<th>FLOW (GPM)</th>
<th>MAXIMUM BACKPRESSURE (PSI)</th>
<th>HOSE I.D. VS. HOSE LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>50</td>
<td>0-8</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
<td>0-7</td>
</tr>
<tr>
<td>25</td>
<td>30</td>
<td>0-6</td>
</tr>
<tr>
<td>35</td>
<td>20</td>
<td>0-5</td>
</tr>
</tbody>
</table>

For service instructions on Para Plate regulator or other products, consult factory.

U.S. Para Plate Corporation
12810 Earhart Avenue
Auburn, CA 95602
Telephone: 530.885.8187
Fax: 530.885.8117
Web Site: www.usparaplate.com
Email: usparaplate.com
SERVICE HINTS

REPAIRING PARAPLATE
BR5 REGULATORS

Remove by-pass hose from the "L" shaped outlet elbow at the top of the regulator. Remove the regulator from the pump, or "T" or other installation point; place the bottom cap in a vise and take the regulator shell loose. (You can place the regulator shell in the vise and remove bottom with a 1/8" wrench or an adjustable wrench.) Be careful not to damage the shell. At this time, the piston head along with the stem and spring (washers) will come out. Notice the way the spring is put together. Clean the stem and spring and inspect the washers for a broken one. This seldom happens, but you would replace as needed. Clean the bottom cap and piston head surface to insure proper seating. The bottom cap is a flat surface and therefore can be lapped flat. The piston head is slightly tapered by design and it is very critical that the taper remain. The seal kit #40027 for all BR Series pressure ranges have four "O"-Rings and the Back-up Ring. A design change in 1982 caused the use of a thinner "O"-Ring in place of the flatter "O"-Ring at position Number 4. If you have an old valve (prior to '82) Dia. C is approximately 1 3/8" and you use the flatter "O"-Ring Number 5. All new valves are approximately 1 5/16" at Dia. C, and use the thinner "O"-Ring Number 4.

No. 1 is a very small "O"-Ring.
No. 2 is a split Back-up Ring.
No. 3 is a "flatter", medium diameter "O"-Ring.
No. 4 is a "thin", large diameter "O"-Ring.
No. 5 is a "fatter", large diameter "O"-Ring.

Note: If the gun or wand has a loss of pressure but is not leaking, the piston head and the bottom cap may have trash embedded which is causing complete by-pass when the trigger is pulled on.


By-Pass to pump suction or tank.

Outlet 1/4" Pipe
Do not allow leakage to continue at Point A. It can result in permanent housing damage at Point B where the "O"-Ring slides.

Spring Washer

Piston

Pressure Inlet 3/8" Pipe

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