FOAMPRO®

P3000

Installation and Operating Manual

Contents

Introduction

The FOAMPRO® P3000 is designed for quick setup, ease of use and minimal maintenance.
A complete FOAMPRO® P3000 system includes:

- Installation and Operating Manual.
- P3000 dispenser.
- Heating Console.
- Pressure gauge/regulator assembly.
- Red “A” hose assembly.
- Blue “B” hose assembly.
- Replacement Parts Kit.
- Solvent Cup.
- Hose Hanger Assembly.
- Tool Balancer.
- Calibration Scale (optional).
- Solvent (1 quart).

Shown are the P#000 dispenser, the replacement parts kit, the optional calibration scale, Universal heater and some paper cups used for checking the A/B ratio.

Above is the nitrogen bottle gauge and valve manifold with supply hoses.

Installation

• A 20 amp 115 volt dedicated power source should be located where the control box will be installed.

• Locate the system in a well ventillated area.

• An outlet for Plant air (100-125 psi) should be located near the system to supply air for the dispenser. NOTE: If Plant air is not available, the dispenser can optionally be operated from Nitrogen (contact Polyfoam Products).

• Install the heater control box within 6 feet of the tank location and approximately 5 feet above the floor. The controls should be visible to the operator and out of harm's way.

• Install the line balancer above the work station on a solid mounting.

• Mount the solvent cup in a location that is a natural resting point for the dispenser when not in use.

• Uncoil the dispenser/hose assembly and place the hoses in the hose rack, using the removable pins. Re-install the pins and attach the line balancer to the center pin of the hose rack.

• Connect the heater console control wires to the hose assemblies, being sure to connect the wire with the red tape to the red hose assembly, and the wire with the blue tape to the blue hose assembly. (Do not energize console before hose assemblies are filled with chemical system.

Above is the Universal Heater control box. Mount within 6 feet of the tank location and high enough for good operator visibility.

Installation (cont.)

• Place the chemical tanks in a position where the hoses can be connected without strain. CAUTION: BE SURE THAT ALL TANK VALVES AND HOSE VALVES ARE CLOSED BEFORE CONNECTING OR DISCONNECTING HOSES AND TANKS! Remove the plugs and caps from hoses and tanks. KEEP THE CAPS AND PLUGS WHERE THEY CAN BE REFITTED TO THE TANKS AND HOSES! Connect the RED hose assembly to the "A" tank. Connect the BLUE hose assembly to the "B" tank. The "A" tank has a MALE fitting and the "B" tank has a FEMALE fitting.

• Place the nitrogen bottle in a convenient location near the chemical tanks, and chain it to a secure support. Connect the nitrogen regulator assembly to the tank. The "A" regulator is on the left, facing the gauges, and the "B" regulator is on the right. Connect the RED-marked "A" hose to the fitting on the "A" tank. Connect the BLUE-marked "B" hose to the fitting on the "B" tank.

• Connect the dispenser air line to a plant air regulator (100 to 125 psi).

• Recheck all hose and wire connections.

Startup

• Be sure that all valves are closed and power to the heater control box is off.

• Turn on plant air to the dispenser and check for leaks. Trigger the dispenser several times to be sure that it operates properly.

• Open the valve on the nitrogen bottle, and check for leaks.

• Adjust the “A” regulator to 200 psi.*

• Adjust the “B” regulator to 140 psi.*

• Open the nitrogen valves to both tanks. Check for leaks.

• Open the chemical valves to both tanks. Check for leaks.

• Open the valves to the hose assemblies. Check for leaks.

• Position a garbage can with a plastic liner at the workstaion.

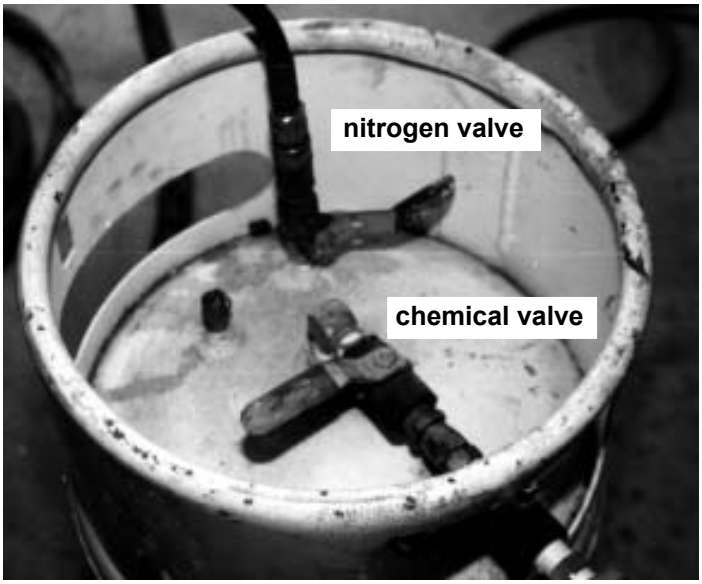
• Open the red and blue valves on the dispenser.

• Trigger the dispenser into the trash can liner for about 30 seconds to flush air out of the lines.

• Turn on the heater control box and adjust the setting to Position 4.

• Allow 20 minutes for the system to heat up.

* Suggested starting pressures. Unit must be calibrated to achieve proper foam consistency.



Above is a typical cylinder showing the nitrogen supply valve and the chemical supply valve locations. In this photo both valves are in the closed position.

Calibration

• Make sure that the system is at proper operating temperature (120 to 130 ˚F).

• Make sure that the chemical tanks are at the proper operating pressures (200 psi “A”; 140 psi “B”).

• Weigh and tare (or record) the empty weight of a paper cup.

• After checking that both valves on the dispenser are closed, open the “A” valve only.

• Dispense for a timed period (usually 3 to 5 seconds) into the paper cup.

• Open the “B” valve and make a short purge shot into a trash container.*

• Close the “A” valve in the dispenser.

• Reweigh the paper cup and record the weight.

• Repeat this procedure for the “B” valve only, weighing, dispensing and reweighing as before.

• Open the “A” valve and make a short purge shot into a trash container.*

• The proper chemical mix ratio should be maintained between 1.08-1.12 “A” to 1.00 “B”.

• *If the mix ratio is not within this range:* increase or decrease the “B” tank pressure to achieve the proper ratio.**

THE QUALITY OF THE FOAM AND PERFORMANCE OF THE FOAMPRO EQUIPMENT WILL CONSISTENTLY BE AT ITS HIGHEST WHEN USED AND MAINTAINED ACCORDING TO FACTORY SPECIFICATIONS.

With only the “A” valve open, dispense a brief timed shot into a paper cup or bag. Then repeat the procedure for the “B” component.

*** Purge shot during calibration prevents potential foam buildup in cartridge orifice.**

****Less than 1.08:**

Decrease “B” pressure by 10 psi and recheck. Continue this procedure until proper ratio is reached.

****More than 1.12:**

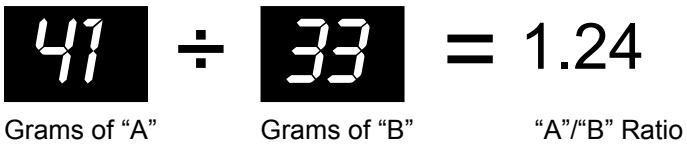
Increase “B” pressure by 10 psi and recheck. Continue this procedure until proper ratio is reached.

Ratio Calculation

Below are a few examples illustrating how the chemical ("A"/"B") ratio is calculated.

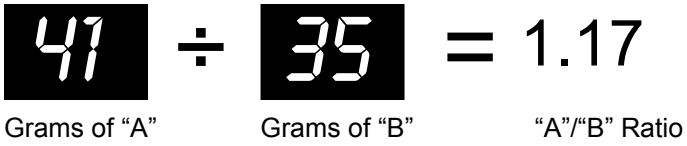
Example #1:

"A", 200 psi, 3 secs. = 41 gm.
"B", 130 psi, 3 secs. = 33 gm.
41 / 33 =1.24 "A"/"B" ratio
Too much "A"



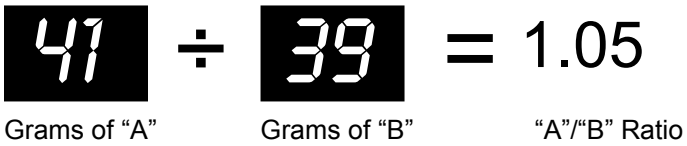
Example #2:

"A", 200 psi, 3 secs. = 41 gm.
"B", 140 psi, 3 secs. = 35 gm.
41 / 35 = 1.17 "A"/"B" ratio
Too much "A"



Example #3:

"A", 200 psi, 3 secs. = 41 gm.
"B", 150 psi, 3 secs. = 39 gm.
41 / 39 = 1.05 "A"/"B" ratio
System is in ratio and ready to dispense material.



CALCULATING THROUGHPUT FOR TIMER:
(Using figures from Example #3 above)

Total material in 3 secs.:
41 + 39 = 80 gm.

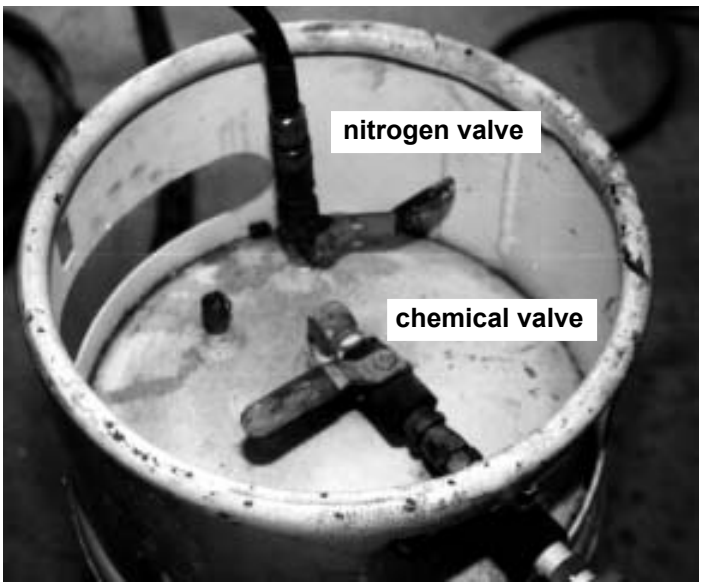
Total material in 1 sec.:
80 / 3 = 26.67 gm.

Convert to pounds by dividing by 453.6:
26.67 / 453.6 = .058 pounds per sec.

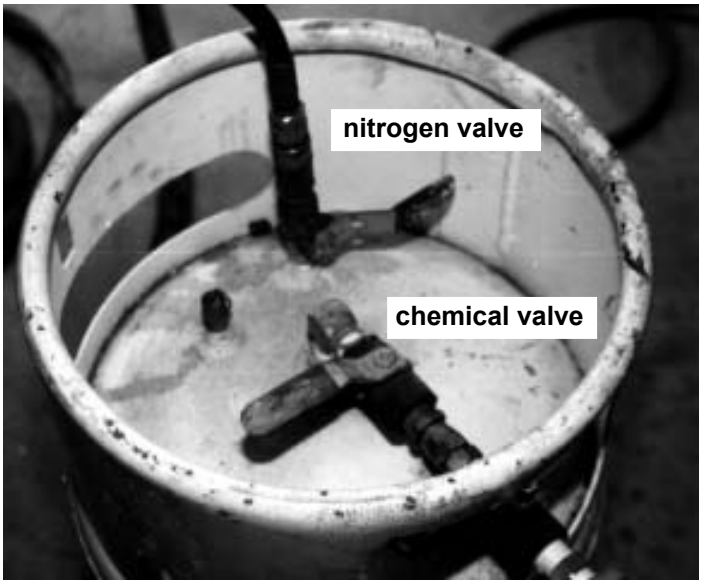
Shutdown and Storage

- Close all chemical valves.
- Close nitrogen valves and nitrogen cylinder valve.
- Shut off power to heating console.
- Store the end of the dispenser in solvent cup provided.

DO NOT ATTEMPT TO FLUSH MATERIAL HOSES. IT IS NOT NECESSARY.



Changing Cylinders



• When a cylinder becomes empty, the dispenser will begin to spray a mixture of chemical and nitrogen, similar to running out of product in an aerosol paint dispenser. When this happens, shut off all valves on the dispenser and cylinders, and turn off power supply to console immediately.

• Turn off:

Dispenser valves (red and blue)
Nitrogen tank
Chemical valves on the cylinders
Chemical valves on the hoses
Nitrogen valves on the cylinders
Heating console

CAUTION: SAFETY GLASSES, GLOVES AND PROTECTIVE CLOTHING SHOULD BE WORN WHENEVER CYLINDER HOSES ARE CONNECTED AND DISCONNECTED!

• Disconnect the nitrogen hoses from the cylinders by removing the quick-disconnect couplings.

• Be sure all the valves are closed!

• Place a paper towel under each cylinder-to-hose assembly swivel fitting, and CAREFULLY unscrew the fitting. Replace the safety cap (“A” cylinder) and safety plug (“B” cylinder) IMMEDIATELY.

SAFETY CAUTION: THE SAFETY CAPS AND PLUGS ON THE CYLINDERS ARE CRITICAL TO PREVENTING A CHEMICAL SPILL IF A VALVE IS ACCIDENTALLY OPENED! CYLINDERS MUST HAVE CAPS AND PLUGS INSTALLED BEFORE SHIPPING THEM BACK FOR REFILLING.

• Replace the empty cylinders with full ones. Be sure all valves are closed on the new cylinders.

Changing Cylinders (cont.)

• Remove the safety cap from the “A” cylinder. Connect the RED hose assembly to the “A” cylinder.

• Remove the safety plug from the “B” cylinder. Connect the BLUE hose assembly to the “B” cylinder.

• Attach the RED-marked “A” nitrogen hose to the “A” cylinder. Attach the BLUE-marked “B” nitrogen hose to the “B” cylinder.

• Follow normal start-up procedures and inspect for leaks.

• Replace cap and plug in empty cylinders.

Troubleshooting

CONDITION:	CAUSE / ACTION:
• Cured material is too soft, sponge-like feel:	Off ratio; not enough “A” component. Check ratio.
• Cured material is too hard, brittle:	Off ratio; not enough “B” component. Check ratio.
• Unable to ratio; not enough “A” component flow:	Check for blockage in “A” filter chamber and “A” orifice in cartridge.
• Unable to ratio; not enough “B” component flow:	Check for blockage in “B” filter chamber and “B” orifice in cartridge.

Mini-Timer

• Does not dispense when trigger depressed:	Timer must be in “Auto” or “Man” selection to activate.
• Red power indicator light is not illuminated:	Timer must be in “Auto” or “Man” selection. If light is not on, check power supply. AC transformers must output 14 to 17 volts. DC operation is 12 to 14 volts.
• Does not dispense in Auto selection when trigger is depressed and held:	Depress trigger only briefly when in “Auto” mode for operation. Holding trigger is a safety default mode and will cancel shot.

Maintenance

MIXING CARTRIDGE

• The mixing cartridge cannot be rebuilt.

• Do not remove orifices from the cartridge body.

• Do not remove the valve rod from the cartridge body.

MIXING CARTRIDGE CLEANING

Component orifices may be cleaned:

• Close material valves on product containers.

• Close the RED and BLUE plug valves on the gun carriage located to the sides of the cartridge.

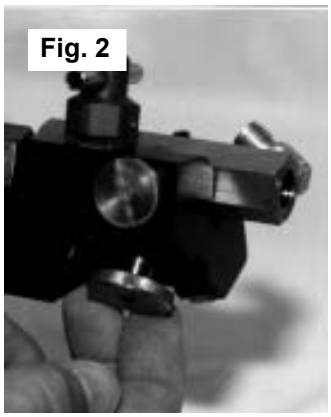
• Activate the gun and disconnect the air supply allowing the unit to remain in the open or shot position.

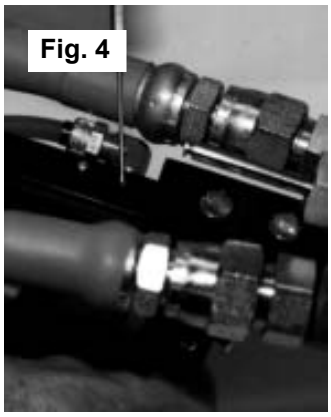
• Remove air cylinder by removing thumb screw (Fig. 1).

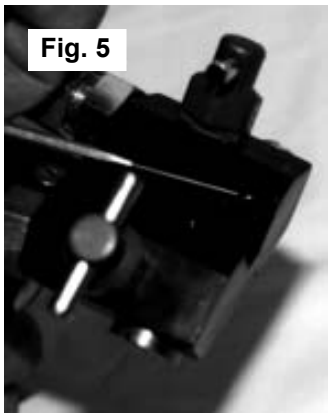
• Remove cartridge by removing thumb wheel from cartridge stud (Fig. 2).

• Using foam pick in spare kit, clean orifices of any material (Fig. 3).

• Reassemble in reverse order. Be sure to observe and insure o-rings are in place under the cartridge and air cylinder during reassembly (Figs. 4 & 5).



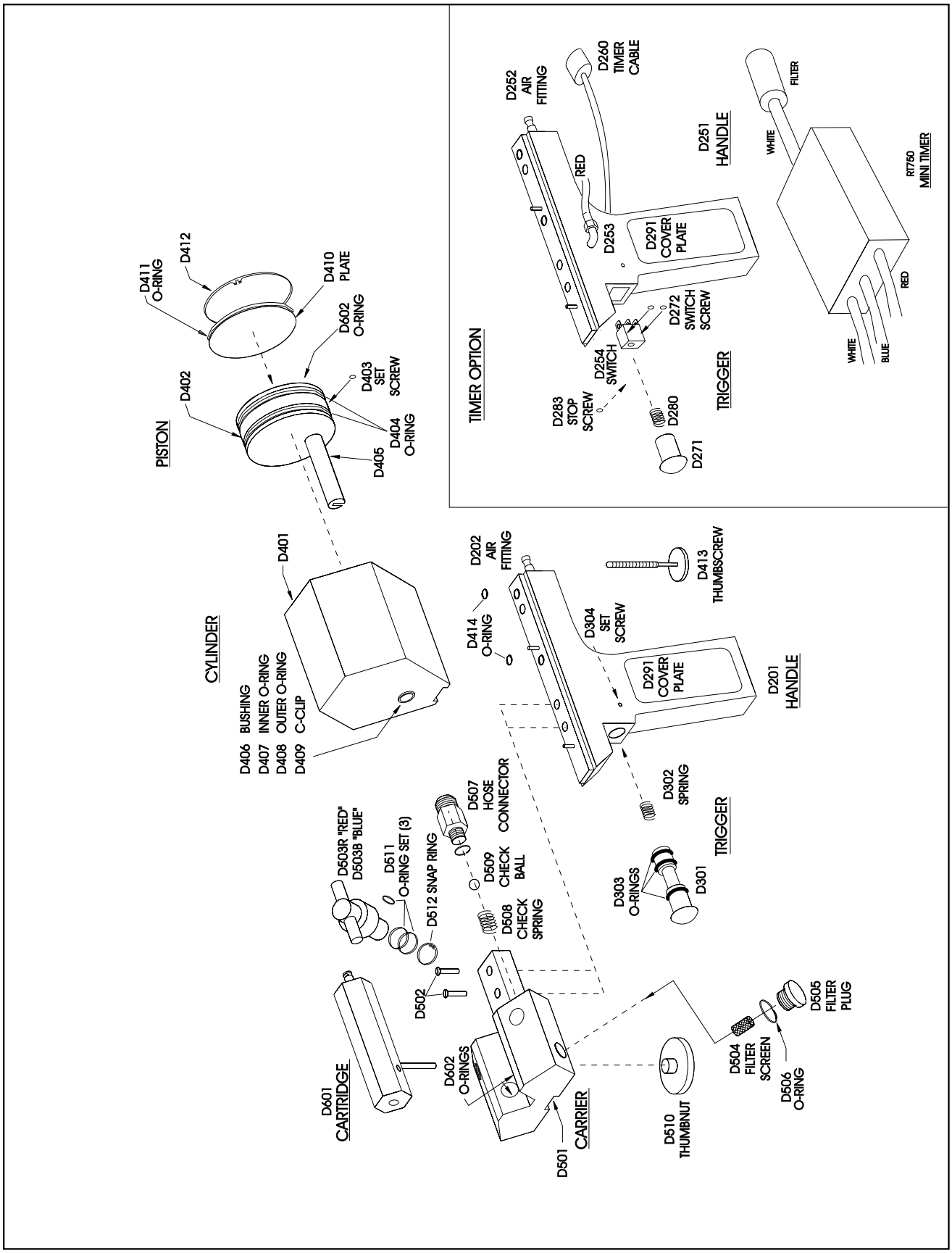




Maintenance Record

Date: **Operator:** **Maintenance Performed:** **Comments:**

P3000



Replacement Parts List

ASSEMBLY	PART DESCRIPTION	SUB-ASSY#	PTS REQD	PART #	
DISPENSER		**FP100**			
HANDLE		**D200**			
	HANDLE		1	D201	
	AIR FITTING 1/8"		1	D202	
TIMER HANDLE		**D250 OPTIONAL**			
	HANDLE(TIMER)		1	D251	
	TRIGGER SWITCH		1	D270	
	TRIGGER		1	D271	
	TIMER CABLE		1	D260	
	TRIGGER SPRING		1	D280	
	TRIGGER STOP SCREW		1	D283	
	1/8" NIPPLE		1	D273	
	1/8" 90 DEG TUBE FITTING		1	D274	
	HANDLE COVER PLATE		1	D291	
TRIGGER		**D300**			
	TRIGGER		1	D301	
	SPRING		1	D302	
	O-RINGS -011		3	D303	sold in sets of 10
	SET SCREW		1	D304	
AIR CYLINDER		**D400**			
	CYLINDER BODY		1	D401	
	PISTON		1	D402	
	SET SCREW		1	D403	
	PISTON O-RINGS -224		2	D404	sold in sets of 5
	CONNECTING ROD		1	D405	
	BUSHING		1	D406	
	INSIDE BUSHING O-RING -012		1	D407	sold in sets of
	OUTSIDE BUSHING O-RING -014		1	D408	sold in sets of 10
	BUSHING C-CLIP		1	D409	
	BACK PLATE		1	D410	
	BACK PLATE O-RING -032		1	D411	sold in sets of 5
	BACK PLATE C-CLIP		1	D412	
	THUMBSCREW		1	D413	
	CYL/HANDLE O-RINGS -008		2	D414	

Replacement Parts List (cont.)

ASSEMBLY	PART DESCRIPTION	SUB-ASSY#	PTS REQD	PART #	
CARRIER (ASSEMBLED)		**D500**			
	CARRIER BODY		1	D501	
	ATTACH SCREWS		2	D502	
	RED “A” VALVE UNIT		1	D503R	
	BLUE “B” VALVE UNIT		1	D503B	
	FILTER SCREENS		2	D504	
	FILTER PLUGS		2	D505	
	FILTER PLUG O-RING -012		2	D506	
	HOSE CONNECTOR		2	D507	
	CHECK SPRING		2	D508	
	CHECK BALL		2	D509	
	THUMBNUT		1	D510	
	VALVE O-RING KIT		1	D511	
	VALVE SNAP RING		1	D512	
CARTRIDGE					
	CARTRIDGE		1	D601	
	O-RINGS		2	D602	sold in lots of 10
CONSOLE					
	HEATER CONTROL		1	FP700	
	TIMER CONTROL		OPT-1	FP750	
HOSE SYSTEM					
	HEATER WIRE ASSEMBLY		2	H802	
	JUNCTION TEE		2	H803	
	MALE HOSE CONNECT		2	H804	
	CLOSE NIPPLE 1/2"		4	H805	
	FILTER UNIT		2	H806	
	1/2" VALVE		2	H807	
	FEMALE “A” TANK FITTING		1	H808	
	MALE “B” TANK FITTING		1	H809	
	HOSE FILTER SCREEN		1	H810	
	HOSE SET (20 FT.)		1	H811	
	MALE DISPENSER - NITROGEN		1	H812	
	FEMALE DISPENSER - NITROGEN		1	H813	

Replacement Parts List (cont.)

ASSEMBLY	PART DESCRIPTION	SUB-ASSY#	PTS REQD	PART #
REGULATOR ASSEMBLY		**FP900**		
	REGULATOR ASSEMBLY (NO HOSES)		1	R901
	GAUGE - 5000 PSI		1	R906
	GAUGE - 300 PSI		1	R907
	RED NITROGEN HOSE (10 FT.)		1	R908R
	BLUE NITROGEN HOSE (10 FT.)		1	R908B
	TANK PRESSURE CONNECTOR		2	
ACCESSORIES				
	TOOL BALANCER		1	A1001
	HOSE RACK		1	A1002
	PAD/SOLVENT CUP		1	A1004
	CLEANING PADS		4	A1005
	EMPTY SOLVENT BOTTLE		1	A1006
	SOLVENT - QUART		1	A1007
	SOLVENT - GALLON (SOLD IN 1 OR 5 GALLONS)		1	A1008
	PORT CLEANING PICK		1	A1009
	MANUAL		1	A1010
	ROLL POLYFILL (36")		1	A1011
	36" CUTTER BAR		1	A1012
	SMALL GRAM SCALE		1	A1020
	SPRAY NOZZLE		1	N100
	POUR NOZZLE		1	N200
	TIE STRAPS - SMALL		1	A1021
	TIE STRAPS - LARGE		1	A1022
	O-RING LUBRICANT		1	A1055