

# OPERATING INSTRUCTIONS

SINGLE CHAMBER BLASTERS

WITH MANUAL CONTROLS

P-100

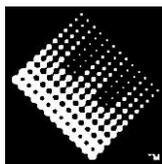
P-150

P-300

WITH REMOTE CONTROL

P-150

P-300



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## **INTRODUCTION**

This booklet covers the operation and general maintenance of the P-100, P-150 and P-300 blasters. Read it carefully and keep it handy for future reference. If you have any questions regarding the operation and maintenance of your equipment, please contact your Empire representative who is qualified to assist you with service and offers a complete stock of replacement parts.

**NOTE:** Accessories such as optional air-fed hoods and purifiers have separate installation and operating instructions and are not included in this booklet.

## **WARRANTY**

All parts and equipment are guaranteed against defects in material and workmanship under normal use and service for one year from the date of installation. Material found to be defective within this one-year period will be replaced at no charge. This warranty does not apply to the normal wear items such as nozzles, blast hoses or other components exposed to or in direct contact with the blasting operation.

## **IMPORTANT NOTICE FOR U.S.A. USERS:**

For maximum safety, use protective equipment. NIOSH requires the use of an air-fed hood with purifier, remote controls, canvas jacket, pants and leather gloves. It is recommended that a (Carbon Monoxide) monitor be used. Always use "Safety Wires" when joining blast hose or air hose couplings. Make sure there is adequate air supply to both the operator's hood and the blaster.

### **1.0 SET-UP P-100 WITH MANUAL CONTROLS (FIGURE 1-pg. 15)**

- A. Attach handle (1) and wheel bracket (16) with hardware provided.
- B. Install side piping, grit valve, and attach air hose as shown on Figure 1. Use pipe connections.
- C. Install pressure gauge (11) onto tee as shown.
- D. Attach blast hose (22) to tank coupling (20). Use coupling safety wires.
- E. Insert nozzle (25) and nozzle washer (24) into adapter.
- F. Attach nozzle adapter with nozzle and washer to hose coupling (23).

### **1.1 SET-UP P-150 AND P-300 WITH MANUAL CONTROLS (FIGURE 2-pg. 15)**

- A. Attach handle (1) with hardware provided.

- B. Attach blast hose (22) to tank coupling (20). Use safety wires to secure coupling halves.
- C. Install pressure gauge (11) onto TEE as shown.

## 1.2 **SET-UP P-150 AND P-300 WITH 680 REMOTE CONTROLS**

- A. Attach handle (1) with hardware provided.
- B. Located under your blaster is a manual Sure-Flo \* grit valve (32) with tank coupling (20) installed. When connecting matching hose couplings be sure to use washer between couplings and safety wires.
- C. Install washer (24) between nozzle (25) and nozzle coupling (23). Thread nozzle into the threaded nozzle coupling on the end of the blast hose.
- D. 680 Pneumatic Remote Control (Figure 3) is supplied with 30' of dual line remote control hose (30). Connect one end to fittings on blast piping string. Connect black hose of dual line to fitting on elbow next to gauge. Connect yellow hose of dual line to fitting under ¼" pipe cross. Attach 77-SAF-STOP pneumatic control handle (31) just behind nozzle coupling (23). Attach loose ends of dual line hose to fittings on handle.
- E. 680-E Electric Remote Control (Figure 3A) is supplied with two lengths of electric cord extending from the pilot valve assembly (34) on the blaster. Connect the 20' cord to your 12 volt D.C. supply (24 volt optional). Plug one end of the 30' control line (35) into the pilot valve receptacle (34).  
Attach 77 SAF-STOP electric handle (33) just behind nozzle coupling (23) with electrical plug pointed away from nozzle (25). Attach remaining end of extension cord to handle. Tape control line to blast hoses every 5 feet.

## 2.0 **OPERATION P-100 WITH MANUAL CONTROLS (FIGURE 1-pg. 15)**

- A. Fill the blaster with dry grit through the 2" opening in the top. Grit level should not go above the bottom of the sealing plunger (2). Overfilling may prevent the sealing plunger from closing properly and cause needless wear.
- B. Connect your air hose to the compressor and the air inlet on your blaster. If "quick disconnect" type couplings are used, make sure these couplings have "Safety Wires" inserted so the couplings cannot be disconnected accidentally.
- C. Make sure operator is equipped with the recommended protective clothing.
- D. Prior to opening compressor air valve, close pot main air valve (19) and grit valve (19b).
- E. Open the air valve on the air compressor.

**IMPORTANT:** When the operator is ready to blast, open the main air valve (19), the machine will pressurize.

- F. While holding the nozzle, gradually open the bottom grit valve (19b) for the proper. Air/grit mix. The best setting is when the blast stream coming from the nozzle is just barely visible. Choke valve (19a) should always be fully open during normal blasting.

**NOTE:** For best results, the operator should hold the nozzle at a 90° angle and approximately 12” from the surface being blasted. The reading on the air pressure gauge should be approximately 90 to 100 PSI for most effective blasting.

- G. To stop blasting and depressurize pot, close main air valve (19) and allow pot to depressurize. When plunger (2) falls to open position, CLOSE AIR VALVE ON COMPRESSOR.
- H. Condensation can occur overnight. Therefore, always empty the blaster and blast hose of grit at the end of each day. The most efficient method is to do this through normal blasting. However, if you want to empty the blaster and blast hose quickly, the following should be done. First, remove the nozzle (25) and nozzle adapter (26), next close the side choke valve (19a), lastly fully open the bottom grit valve or (19b). While the operator firmly holds the end of the blast hose, gradually open the main air valve (19). The compressed air will force grit out of the blaster and through the blast hose very quickly. When the blaster has been emptied, close the main air valve (19), return the bottom grit valve (19b) to its normal position, and re-install the nozzle (26), nozzle washer (24) and nozzle adapter (26).

2.1 **OPERATION P-150 AND P-300 WITH MANUAL CONTROLS AND ½” OR 1” PIPING (FIGURE 2-pg. 15)**

- A. Fill the blaster with dry grit through the 2” opening on the top. Media level should not go above the bottom of the sealing plunger (2). Over filling may prevent the sealing plunger from closing properly and cause needless wear.
- B. Connect your air hose to the compressor and the air inlet on your blaster. If “quick disconnect” type couplings are used, make sure these couplings have “Safety Wires” inserted so the couplings cannot be disconnected accidentally.
- C. Make sure the operator is equipped with the recommended protective clothing.
- D. Prior to opening compressor air valve, close pot main air valve (19) grit valve (19b) or (27) and exhaust valve (16).
- E. Open the air valve on the compressor.

**IMPORTANT:** When the operator is ready to blast, open the main air valve (19), the machine will pressurize.

- F. While holding the nozzle, gradually open the bottom grit valve (19b) or (27) for the air/grit mix. The best setting is when the blast stream coming from the nozzle is just barely visible. (Choke valve (19a) should always be fully open during normal blasting).

**NOTE:** For best results, the operator should hold the nozzle at a 90° angle and approximately 12” from the surface being blasted. The reading on the air pressure gauge should be approximately 90 to 100 PSI for most effective blasting.

- G. To stop blasting and depressurize pot, shut off main air valve (19), open exhaust valve (16) to evacuate pot. Pot is depressurized when plunger (2) falls to open position. Close compressor air valve.
- H. Condensation can occur overnight, therefore, always empty the blaster and blast hose of grit at the end of each day. The most efficient method to do this is through normal blasting. However, if you want to empty the blaster and blast hose quickly, the following should be done. First, remove the nozzle (25) and nozzle adapter (26); next close the side choke valve (19a). Lastly, fully open the bottom grit valve (19b) or (27). While the operator firmly holds the end of the blast hose, gradually open the main air valve (19). The compressed air will force or “pump” the grit out of the blaster and through the blast hose very quickly. When the blaster has been emptied, close the main air valve (19). Return the bottom grit valve (19b) or (27) to its normal position, and reinstall the nozzle (25), nozzle washer (24) and nozzle adapter (26).

## 2.2 **OPERATION P-150 OR P-300 WITH 680 PNEUMATIC OR ELECTRIC REMOTE CONTROLS (FIGURE 3 OR 3A-pg. 15)**

- A. Pressurize the airline to the blaster.
- B. Pressurized until the 77 SAF-STOP II handle is depressed.
- C. When the operator depresses the 77 SAF-STOP handle, air but no grit will come from the nozzle.
- D. While the operator holds the nozzle, the pot tender should open the Sure-Flo grit valve for the proper air/grit mix. Generally the best setting is when the blast stream coming from the nozzle is just barely visible.

**NOTE:** For best results, the operator should hold the nozzle at a 90° angle and approximately 12” from the work piece. Overlapping strokes are best, however, the “dwell time” depends on the final finish required. Example, the operator moves the nozzle faster for a “brush-off” finish than for a “white-metal” finish.

- E. Shut-Down-Release the SAF-STOP handle. The tank will depressurize. Close the main air inlet valve (19).

**IMPORTANT:** Never turn off the compressor before depressurizing the blaster. Condensation can occur overnight so empty grit in blaster at the end of each day. The most efficient method to empty the blaster quickly, the following should be done: first remove the nozzle and washer. Close the choke valve and open the Sure-Flo grit valve. Open the main air valve. Depress the operator control. When the blaster has been emptied, close the main air valve, release the handle on the operator control, which will exhaust the blaster of compressed air.

### 3.0 DAILY MAINTENANCE

- A. Open the bottom drain cock on the moisture separator to eliminate any accumulation of moisture – make sure this drain cock is returned to the closed position.
- B. Check to see all rubber washers on nozzle, blast hose, tank and airline couplings are in place and in good condition.
- C. Check to see the operator's protective equipment, such as blasting hood, windows, gloves, jacket and pants are in good operating condition.
- D. All couplings must be equipped with "Safety Wires".
- E. Check to see the nozzle adapter (26) is tightly secured. Do not use the nozzle without a washer (24).
- F. Check to see the air pressure gauge (11) is in good condition.
- G. Remote Control Blasters: Dual line hose or electrical cord must be in good operating condition and tightly secured at the operator's control handle and at the blaster.

### 4.0 WEEKLY MAINTENANCE

- A. Perform a daily maintenance check (3.0).
- B. Check the nozzle (25) for wear. A nozzle is considered worn when it wears to half again its original size.

Example: 3/32" nozzle increases to 5/32"  
1/8" nozzle increases to 3/16"

A drill bit can be used to measure the nozzle inside opening. Blasting with a worn nozzle can cause wear on the air compressor and may reduce operating pressure which will reduce blasting speed.

- C. The specially constructed blasting hose should be checked for signs of wear. Replace if any soft spots are found.
- D. Inspect the sealing "O" ring (3) and the sealing plunger (2) for signs of wear. To replace, remove the three bolts (5) and the sealing ring cap (4).
- E. Check the main air valve (19) and choke valve (19a).
- F. For 680 Series Remote Control Blasters, the rubber diaphragms and the diaphragm seat on the exhaust valve must be in good condition. An adjustable wrench is required to remove the exhaust cover to inspect the valve interior.
- G. On 680 Remote Control Blasters, the filter must be clean and in good operating condition. Remove the bronze element inside the filter and clean it on a regular basis with a good grease-cutting solution. If this is not done on a regular basis, you may have to soak this element overnight.
- H. All rubber diaphragms in the air control valve must be in good operating condition.

## 4.1 MONTHLY (OR EVERY 200 HOURS OPERATION) MAINTENANCE FOR BLASTERS WITH 1" PIPING ONLY.

Check metering tube (as described below) in the Sure-Flo grit valve for wear or Ruptures. Replace if defective.

**WARNING:** Sure-Flo Grit Valves should not be disassembled while the blaster is under pressure.

**IMPORTANT:** This metering tube has been designed of a specific abrasive resistant material. To insure you're warranty and top blasting performance, use only EMPIRE approved replacement parts.

Figure 7 shows the manual Sure-Flo Valve. To remove the tube for inspection, disconnect blast hose from the tank coupling. Disconnect side flexible hose assembly from grit valve. Back handle (5) and bolt (2) off to relieve pressure on the metering tube.

**NOTE:** It is not necessary to remove handle and bolt completely. Remove four carriage bolts (9) that hold top and bottom of valve together. Remove valve body (3) with metering tube (7). Remove old tube and install new metering tube into valve body. Assemble bottom half of valve to top using four carriage bolts. Make sure that lock washers are in place before tightening nuts. Turn handle and bolt clockwise the same number of turns (approximately 6). Fine adjustments can be made by turning the handle.

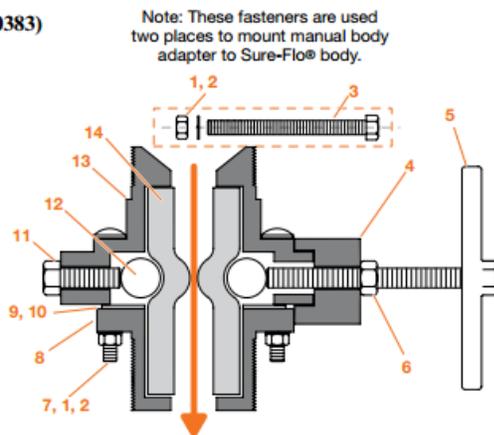
**Figure 7:**

**Manual Sure-Flo® Media Regulator (Part Number 290383)**

Item	Description	PART NUMBER
1	Hex nut, 3/8" - 16 (6 required)	552542
2	Lock washer, 3/8" ID (6 required)	552762
3	Hex bolt, 3/8" - 16 x 3" (2 required)	551902
4	Adapter, manual body, Sure-Flo	753372
5	Handle assembly, 1/2" - 13 x 4"	290384
6	Jam nut, 1/2"	552672
7	Carriage bolt, 3/8" - 16 x 2 1/2" (4 required)	552052
8	Flange, 2" MPT	753292
9 †	Roller stop, holder	753092
10	Screw, 8 - 32 x 1/2" (2 per assembly)	551352
11	Bolt, 7/16" - 14 x 1 1/4"	552222
12 †	Pinch roller (2 per assembly)	753632
13	Valve body, 2" MPT	753692
14 *	Metering tube, 3/4" ID (See below.)	523592

\* Recommended spare part—Consumable wear item

† Essential component to prevent downtime



For details on the Automatic Sure-Flo® (PN 290215), see page A73.

Sure-Flo® metering tubes are available in six sizes for work with differing media types and nozzle sizes.

Metering Tube ID	Nozzle Size	Grit Range	Comments	PART NUMBER
3/8"	Small	Fine	Back out roller bolt 1/2"	525451
1/2"	Small-medium	Fine-medium	Back out roller bolt 1/2"	525782
3/4"	Medium-large	Medium	Supplied as standard	523592
3/4"	Medium	Medium	Use below 32° F. (red)	523512
5/8"	Medium	Medium-coarse		525792
7/8"	Large	Coarse	For high-production	525802

## 5.0 **PROBLEM – POOR PRODUCTION**

- A. Air pressure is an extremely important factor. In most cases, poor production problems can be traced to lack of compressed air.

This is generally caused by the following:

- a. The compressor is too small for the nozzle being used.
  - b. The I.D. size of the airline is too small. Generally  $\frac{3}{4}$ " I.D. air hose should be used for blasters with  $\frac{1}{2}$ " piping, and  $1\frac{1}{4}$ " hose should be used for blasters with 1" piping.
- B. Operating with the nozzle too close to the surface being cleaned. The closer the nozzle end is to the surface being cleaned, the smaller the blasting pattern diameter.
- C. Operating with a small orifice. The smaller the orifice, the smaller the blasting pattern diameter.
- D. Grit size too small. A general rule to remember – “The thicker the material being removed, the coarser or larger the grit particle size should be”.
- E. Blast treating a part which is oily or wet – the surface must be absolutely dry and free of any oil, grease, water etc.
- F. Operating with an improper setting at the grit valve. If the grit mixture is either too rich or too lean it will affect your operator’s performance.

## 6.0 **PROBLEM – PULSATING OR SURGING OF GRIT FROM THE NOZZLE**

**NOTE:** When blasting first starts, there will be an initial surge of grit from the nozzle. This is caused by grit in the blast hose. After a few seconds, normal flow of grit should resume. If not, check the following:

- A. Operating with the choke valve (19a) partially closed. This valve must be fully opened during blasting operations.
- B. Operating with an improper setting on the grit valve. If the grit mixture is too rich, it will pulsate. Gradually reduce the flow of grit.
- C. Operating with damp grit. Grit must be absolutely dry to flow evenly through the grit valve and/or blast hose. On humid days, or when using an older compressor, it may be required to operate with the drain cock on the optional filter slightly opened.
- D. Operating with the blasting hose I.D. too large for the nozzle orifice size. (For Example: If you use a  $\frac{3}{16}$ " nozzle with  $1\frac{1}{4}$ " blasting nose, you will have a pulsating effect. Reduce the blasting hose I.D. size to 1" or  $\frac{3}{4}$ ".)

7.0 **PROBLEM: NO AIR OR GRIT FLOWS OUT OF THE NOZZLE WHEN OPERATOR DEPRESSES CONTROL (BLASTERS WITH 680 CONTROLS ONLY.)**

**PNEUMATIC SYSTEM (FIGURE 3-pg. 15)**

- A. Depressurize tank and check nozzle for obstruction.
- B. Make sure ¼ petcock (29) is open.
- C. Remove the in the ¼” pipe cross under the automatic air valve. When operator’s handle is depressed, air should escape (a gauge screwed into this opening should show minimum 60 PSI with 90 PSI supply).

If no air escapes (or if pressure is less than 60 PSI) check dual lines and fittings for kinks or leaks. Trace control air through system as follows: Remove black line at handle – air should escape. Reconnect black line and remove yellow line at handle – air should escape when handle is depressed. By tracing airflow in this manner, location of obstruction or leak can be determined.

If control air of adequate pressure is reaching automatic air valve, problem is ruptured diaphragm in this valve.

**NOTE:** A small volume of air bleeding from the stem of the automatic air valve will be noticed when valve control line is pressurized. This bleed is a safety feature, which shuts down the system if hoses should be accidentally crimped.

**ELECTRIC SYSTEMS (FIGURE 3A-pg. 15)**

Check to see if leads to pilot valve are energized when control handle is depressed.

1. If leads are not energized, check for dead battery, breaks in control cord or faulty control switch.
2. If leads are energized when control is depressed, pilot valve is faulty.

8.0 **PROBLEM – UNABLE TO PRESSURIZE TANK (FIGURE 3 AND 3A-pg. 15)**  
**For blasters with 680 Remote Controls Only**

- A. When hand pressure is applied to operator’s control, control air passes through the operator’s handle returns to the blaster through the yellow control line and opens the automatic air valve, letting compressed air into the tank. The exhaust valve

should close allowing the tank to seal. If the tank does not seal, the problem is in the exhaust valve.

B. Check the exhaust valve for the following:

1. Ruptured rubber diaphragms.
2. Worn valve ball
3. Worn inlet cover
4. A foreign object wedged between the valve ball and valve ball seat. This can be checked by disassembling valve.

9.0 **PROBLEM – FLOW OF COMPRESSED AIR THOROUGH THE NOZZLE, BUT LITTLE OR NO FLOW OF GRIT. (FIGURE #1, 2 OR 3-pg. 15)**

- A. Operating with an improper setting at the grit valve. If the mixture is too lean, little or no grit will be supplied to the nozzle.
- B. Clogged nozzle. Sometimes a clogged nozzle will allow air to pass but little or no grit. Remove the nozzle and inspect.

**IMPORTANT:** DO NOT REMOVE NOZZLE WHEN BLASTER IS UNDER PRESSURE.

- C. Blaster is empty – refill with grit.
- D. Contaminated grit – grit contaminated with moisture or foreign material will interrupt the grit flow.
- E. Clogged grit valve – adjust the grit valve to the full open position. While the machine is pressurized, close the choke valve (19a) for a few seconds, then open it fully. Doing this three or four times should clear any temporary blockage. Reset the grit valve and continue blasting.

**10.0 SUGGESTED SPARE PARTS FOR 1500 BLASTING HOURS (REFER TO FIGURE 1, 2, OR 3 TO DETERMINE WHICH PARTS LISTED BELOW APPLY TO YOUR BLASTER).**

<u>QUANTITY</u>	<u>ITEM NO (Fig. 1, 2 or 3)</u>	<u>Empire PART NO.</u>	<u>DESCRIPTION</u>
2	19b	517412	Grit valve
2	25	See Pg. 12-14	Di-Carb nozzle *
150	25	See Pg. 12-14	Ceramic nozzles*
1	24	See Pg. 12-14	Di-Carb nozzle washers (box of 10)
1	24	See Pg. 12-14	Ceramic nozzle washers (box of 10)
1	22	520792	½" I.D. blast hose (specify footage)
3	21	505222	QC ½" hose couplings
1	-	525102	Coupling washers (box of 25)
2	23	505232	NC ½" nozzle couplings
2	26	504912	Nozzle adapters
2	3	523942	Rubber sealing ring
1	2	751312	Sealing plunger
2	-	504612	Air filter insert
-	-	504652	Air filter (complete)
1	11	550242	Pressure gauge

\*Select the nozzle type and size, which best suits you particular blasting needs.

-	-	-----	Protective equipment**
2	-	523592	Sure-Flo tube
1	34	290334	Electric pilot valve assembly
1	38	517582	1" Automatic air valve repair kit
-	-	517592	1 1/4" Automatic air valve repair kit
1	-	290353	Electric switch assembly

\*\*It is difficult to estimate the number of hoods, hood windows, gloves, etc. you will need for blasting hours. Please consult with your equipment salesman before ordering this material.

11.0 NOZZLE MOUNTING ASSEMBLIES FOR 1/2" PIPING STRING (FIG. #4)

<u>QUANTITY</u>	<u>ITEM NO.</u>	<u>EMPIRE PART NO.</u>	<u>DESCRIPTION</u>
1	1	505232	NC 1/2 nozzle couplings
1 pkg.	2	524041	NW-5 nozzle washer for Ceramic (package of 10)
1 pkg.	3	525272	NW-2 nozzle washer for Di-Carb (package of 10)
1 each	4	502362	CN3- 3/16" I.D. Ceramic nozzle
		502372	CN 3-4 1/4" I.D. Ceramic nozzle
		502382	CN 3-5 5/16" I.D. Ceramic nozzle
1 each	5	501282	DC2F-3 3/16" I.D. Di-Carb nozzle
		501292	DC2F-4 1/4" I.D. Di-Carb nozzle
		501302	DC2F-5 5/16" I.D. Di-Carb nozzle
1	6	504912	Nozzle adapter

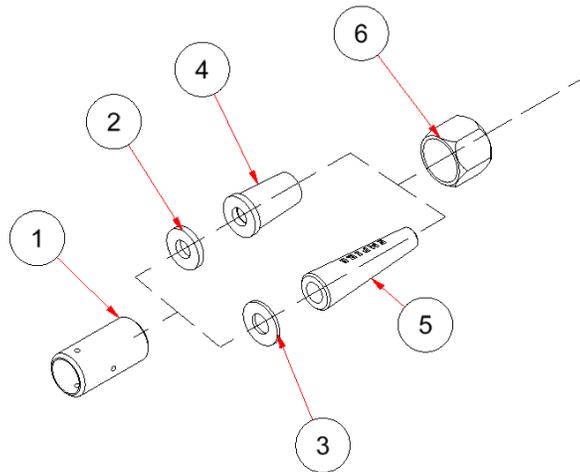


Figure 4

FOR 1" PIPING STRING (FIG. #5)

1	1	753212	NC 3/4 nozzle coupling
1 pkg.	2	524041	NW-5 nozzle washer for Ceramic (package of 10)
1 pkg.	3	525272	NW-2 nozzle washer for Di-Carb (package of 10)
1 each	4	502362 502372 502382	CN3- 3/16" I.D. Ceramic nozzle CN 3-4 1/4" I.D. Ceramic nozzle CN 3-5 5/16" I.D. Ceramic nozzle
1 each	5	501282 501292 501302	DC2F-3 3/16" I.D. Di-Carb nozzle DC2F-4 1/4" I.D. Di-Carb nozzle DC2F-5 5/16" I.D. Di-Carb nozzle
1	6	504942	Nozzle adapter

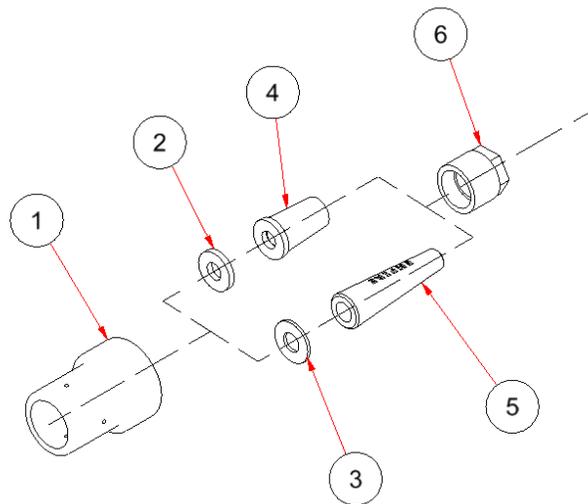


Figure 5

FOR 1" PIPING STRING WITH 680 REMOTE (FIG. #6)

<u>QUANTITY</u>	<u>ITEM NO.</u>	<u>EMPIRE PART NO.</u>	<u>DESCRIPTION</u>
1	1	753212	NC 3/4 nozzle coupling
1 pkg.	2	524062	NW-1 nozzle washers (package of 10)
1 each	3	501392	DC3-3 3/16" I.D. Di-Carb nozzle
		501402	DC3-4 1/4" I.D. Di-Carb nozzle
		501412	DC3-5 5/16" Di-Carb nozzle

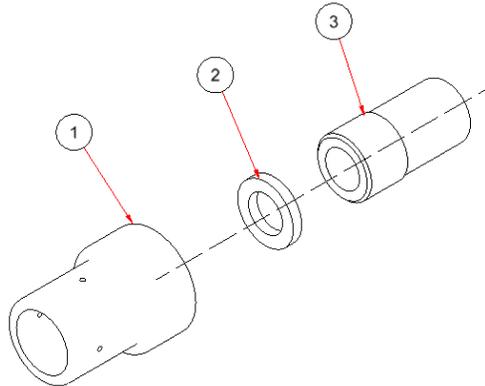


Figure 6

12.0 FIGURES 1, 2, 3 & 3A

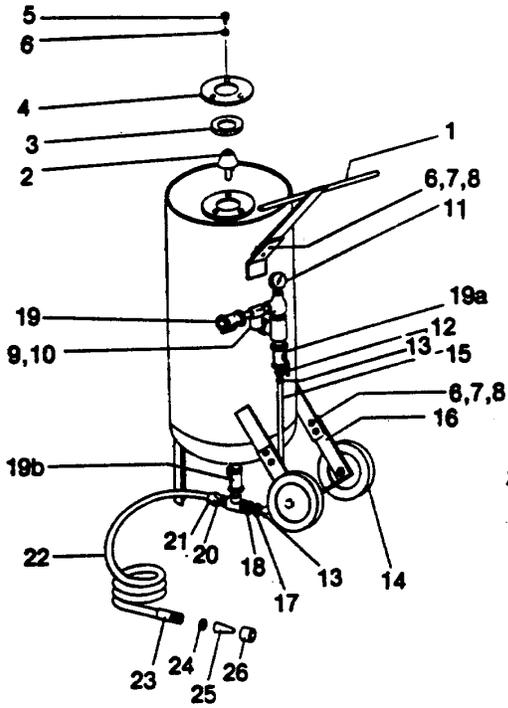


Figure 1  
P-100 with Manual Controls

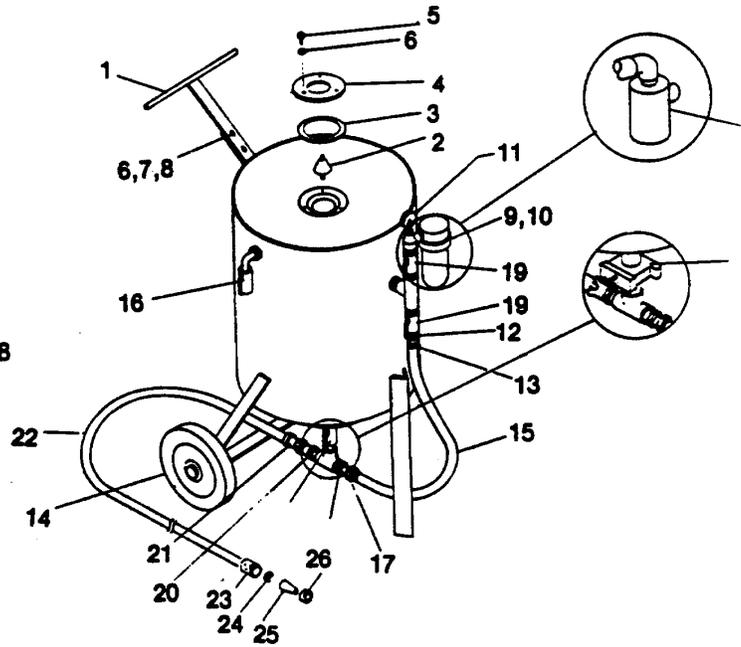


Figure 2  
P-100 & P-150 with Manual Controls

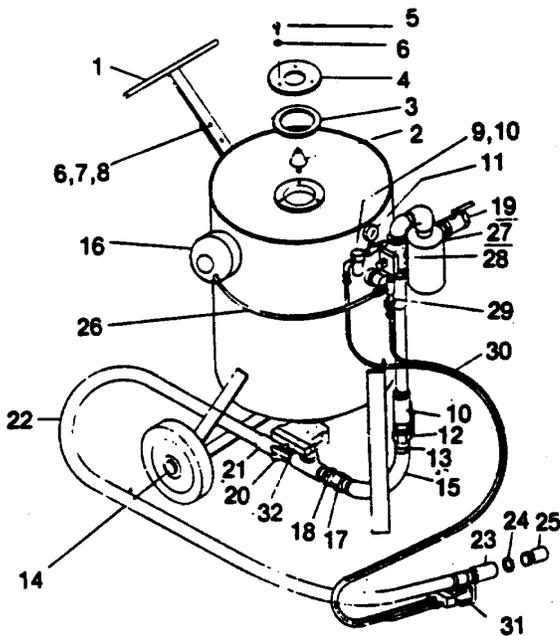


Figure 3  
P-150 & P-300 with Pneumatic Controls

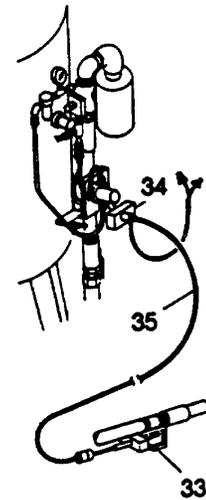
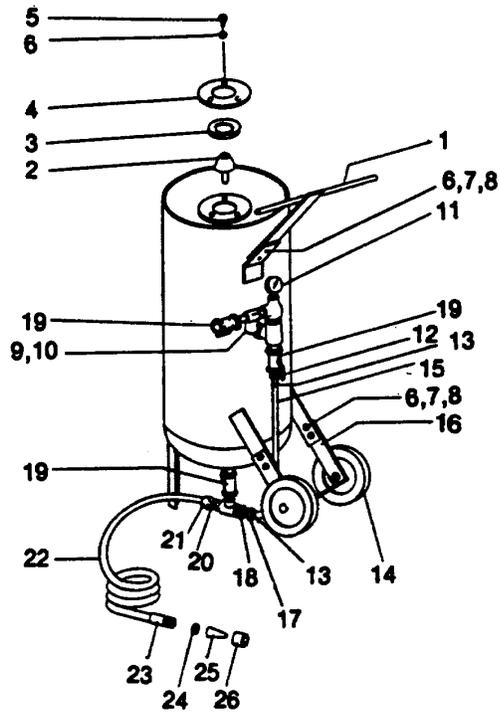


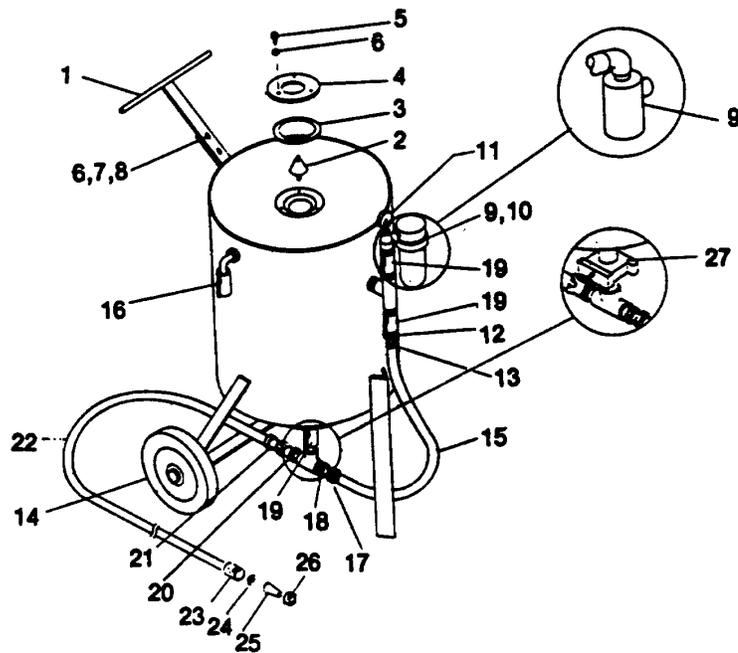
Figure 3A  
P-150 & P-300 with Electric Controls

13.0 PARTS LIST

P-100



P-150 & P-300



### 13.0 PARTS LIST continued

#### P-100, P-150 & P-300 Pressure Blasters

Part Number	Description	Net Wt.
(1) 763402	Handle for P-100 & P-150	1-1/2 lbs.
(2) 751312	Sealing Plunger	3/4 lb.
(3) 523942	Sealing Ring, grooved	3 ozs.
(4) 545142	Sealing Ring Cap	4 lbs.
(5) 551832	Hex Bolt, 3/8" - 16 x 3/4"	2 ozs.
(6) 552762	Lock Washer, 3/8"	1 oz.
(7) 551842	Hex Bolt, 3/8" - 16 x 1"	2 ozs.
(8) 552542	Hex Nut, 3/8" - 16	1 oz.
(9) 504652	Air Filter, 1/2" NPT for P-100, P-150 & P-300	5 lbs.
290191	W/1/2" piping DF-1 Manual Drain Separator, 1" NPT for P-150 & P-300 w/1" piping	22lbs.
(10) 504612	Air Filter Element for 504652	1/4 lb.
(11) 550242	Air Gauge	1/2lb.
(12) 520362	Barbed Fitting for P-100, P-150 & P-300 W/1/2" piping	6 ozs.
520181	Barbed Fitting for P-150 & P-300 w/1" Piping	8 ozs.
(13) 520502	Adjustable Clamp for P-100, P-150 & P-300 w/1/2" piping	2 ozs.
520581	Adjustable Clamp for P-150 & P-300 W/1" piping	3 ozs.
(14) 505042	Wheel, 6" for P-100	3lbs.
505052	Wheel, 10" for P-150 & P-300	6lbs.
(15) 522872	Air Hose, 1/2" ID for P-100 w/1/2" piping (23" w/male-female swivel)	1lb.
522882	Air Hose, 1/2" ID for P-150 w/1/2" piping (13" w/male-female swivel)	1 1/2 lbs.
522892	Air Hose, 1/2" ID for P-300 w/1/2" piping (33" w/male-female swivel)	2lbs.
522902	Air Hose, 1" ID for P-150 & P-300 w/1" Piping (19" w/male-female swivel)	2 lbs.
(16) 763612	Rear Leg for P-100	4lbs.
(17) 520402	Barbed Fitting for P-100, P-150 & P-300 W/1/2" piping	6 ozs.
(18) 520201	Swivel Adapter for P-100, P-150 & P-300 W/1/2" piping	5 ozs.
544512	Hex Blushing, 1 1/4" x 1" for P-150 & P-300 W/1/2" piping	8 ozs.

(19) 517412	Air Valve, ½” NPT for 100, P-150 & P-300	1lb.
	W/1/2” piping	
517442	Air Valve, 1” NPT for P-150 & P-300 w/1”	2lbs.
	Piping	
(20) 505212	Tank Coupling, ½” NPT for P-100, P-150 & ½ lb.	
	P-300 w/1/2” piping	
505782	Tank Coupling, 1” NPT UF-100 for P-150	1 1/4 lbs.
	& P-300 w/1” piping	
(21) -----	Hose Coupling	-----
(22) -----	Blast Hose	-----
(23) -----	Nozzle Coupling	-----
(24) -----	Washer	-----
(25) -----	Nozzle	-----
(26) 504912	NA-2 Nozzle Adapter for attaching CN-3,	-----
	DC2F and NN2F Nozzles to ½”	
	Blast Hose	2 ozs.
(27) 290383	Manual Sure-Flo Valve Assembly	25 lbs.

Consult Portable Parts Book (PPB) for additional information.

Fig. 1 - Drawing C-805686

Fig. 2 – Drawing C-805688

Fig. 3a and 3b – Drawing C-805687

Fig. 4-6 – A-800989

Fig. 7 – Drawing A-800943