

OPERATING INSTRUCTIONS

**for
Series 200 FaStrip
Dry Stripping Machines**

EMPIRE

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TABLE OF CONTENTS

- 1.0 Introduction
- 2.0 Installation
- 3.0 Operation
- 4.0 Equipment Adjustments
- 5.0 Preventive Maintenance
- 6.0 Repair Maintenance
- 7.0 Troubleshooting
- 8.0 Replacement Parts

DIAGRAMS

- Fig. 1 Overall layout drawing and parts list
- Fig. 2 Pneumatic layout
- Fig. 3 Pneumatic schematic
- Fig. 4 Pneumatic control handle
- Fig. 5a Automatic Sure-Flo (hardware)
- Fig. 5b Automatic Sure-Flo (internal parts)
- Fig. 5c Automatic Sure-Flo (spring diaphragm assembly)

1.0 INTRODUCTION

This manual will provide the user a basic background in the operation and maintenance of Empire Series 200 Fastrip Machines. These machines primary use is for high production dry stripping with reclaimable plastic media.

1.1 DESCRIPTION OF BASIC SYSTEM

Fastrip Series 200 Machines consist of a 3, 6 or 10 cubic feet capacity pressure blaster specially modified for use with plastic media. Each blaster is equipped with 50 feet (standard) of blasting hose and a Emcon production nozzle. Media is regulated by means of a Sure-Flo high production grit valve* and the exclusive Gritmizer ** remote control system.

* Patent No.

** Patent Pending

2.0 INSTALLATION

Packed in a separate container are the media hose and hopper, dust hose, blasting hose(s) and any optional items you may have ordered. Unpack these items.

2.1 RECLAIMER

If the reclaimer has been disassembled for shipment, reassemble it as shown on Figure 1 using the gasket and bolts provided. Note that there must not be any gaps where air could leak at the junction of the reclaimer and storage hopper.

After installing the reclaimer, connect the 10" diameter dust hose between the reclaimer outlet and dust collector inlet as shown in Figure 1. Use the worm gear clamps provided.

Connect the 4" diameter by 25'0" long conveying hose between the reclaimer inlet and the load hopper using the worm gear clamps provided

2.2 BLAST HOSE AND CONTROLS

Attach the blast hose coupling(s) (Item 2, Fig. 1) to the quick couplings (Item 1, Fig. 1) located on the Sure-Flo media regulator outlet(s).

Important: To assure that quick couplings cannot be accidentally disconnected, all Empire couplings have two "Safety Wire" openings which are furnished with Empire coupling pins (P/N 510511). Make sure that the coupling pins are in place before proceeding.

Install the remote control line(s) (Item 3 and 3A, Fig. 1) and handle(s) (Item 4, Fig. 1). The black and yellow pneumatic control lines should be connected to the labelled fittings on the Fastrip Control Panel (see Figure 2). Secure the control handle to the blast hose with the two adjustable hose clamps provided. Use friction tape or similar material and tape the control lines to the blasting hose(s) approximately every four feet.

2.3 ELECTRICAL CONNECTIONS

The pneumatic recovery system is powered by a 10 HP high pressure fan. A motor starter is provided for the fan motor. The supply wiring to the motor starter should be sized and wired by a qualified electrician in accordance with the standards outlined in the National Electric Code Article 430.

The motor starter furnished provides running overload and undercurrent protection for the fan motor. Supply wiring provided should also have:

- a. Branch circuit protection - fuses (NEC 430-52)
- b. A disconnect switch within sight of (but not more than 50 feet from) the fan motor (NEC 430-86).

Make sure that fan rotates in the direction shown on the decal on the side of the fan housing.

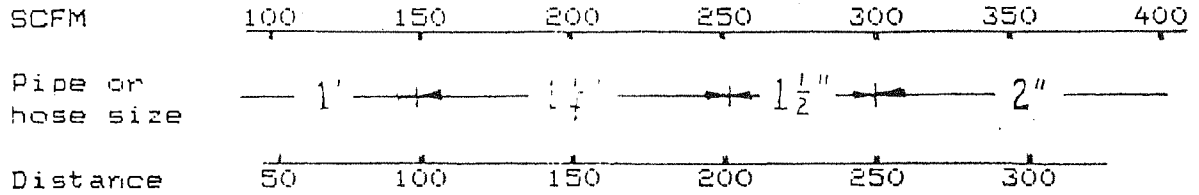
2.4 COMPRESSED AIR SUPPLY

The volume of air required for efficient operation of your Fastrip system depends on the size of the nozzle(s) being used and the desired blast pressure. The top numbers on the chart below show the minimum air requirements in SCFM for various nozzles and pressures. The bottom numbers (in parenthesis) show the pounds of plastic media consumed each hour at the indicated nozzle size and pressure. Flow rates are approximate since actual flow can vary depending on grit valve adjustment.

Nozzle Size	PSI						
	25	30	35	40	45	50	60
1/4	28 (78)	32 (89)	37 (103)	41 (114)	45 (125)	49 (136)	56 (156)
5/16	44 (122)	50 (139)	57 (158)	64 (178)	70 (194)	76 (211)	88 (244)
3/8	63 (176)	73 (203)	82 (228)	91 (252)	100 (277)	109 (303)	126 (350)
7/16	85 (236)	99 (275)	112 (311)	124 (344)	137 (381)	149 (414)	172 (473)
1/2	112 (311)	129 (353)	146 (406)	163 (453)	179 (497)	194 (539)	225 (625)

Keep in mind that for efficient operation your compressor must have capacity in excess of the actual requirement. Check with your compressor supplier for the recommended compressor size for a given air flow.

Connect your compressed air piping or hose to the threaded air inlet (Item 17 on Figure 1). If an undersize hose is used, the performance of your system will suffer. The minimum size of hose depends on the volume of compressed air being used as well as the distance to the compressor. The chart below indicates the minimum pipe or hose size which should be used:



Example: Air flow 200 SCFM, distance 100 ft. use 1 1/4 hose

IMPORTANT: For proper operation your system requires dry, clean air. Moisture or oil in your compressed air supply can contaminate abrasive and prevent it from flowing freely resulting in inefficient blasting. Your unit is equipped with a moisture trap which will help to remove water which may condense in the connecting air piping during shutdown, however, this trap is not designed to clean grossly contaminated air.

2.5 MEDIA LOADING

With the fan running load the initial charge of media into the recovery hopper. The amount of media required to fully charge your system is shown below:

System	Lb. Media
3 cubic foot	150
6 cubic foot	300
10 cubic foot	500

Media level in the storage hopper can be observed through the view window above the blaster.

Your Fastrip system is designed for use with plastic media in the 12 to 80 mesh sizes. Other media may cause operational problems - consult the factory prior to using any other kind of media.

3.0 OPERATION

Your Fastrip system is designed to allow one or two operators to blast within a confined area. As the operators are blasting (or afterward) spent media can be swept or shoveled from the floor into the low profile recovery hopper provided. (snow shovels are very efficient low cost tools for collecting media from the floor).

Media and dust are pneumatically conveyed to a cyclone separator where good media is reclaimed and dust is carried to the dust collector. Debris gathered up with the media is trapped on the recovery hopper screen. A second screen in the cyclone separator catches any debris which works its way through the first screen. Good media drops into the storage hopper above the blaster where it is held until recharging.

Keep in mind that the non-aggressive properties of plastic media can be defeated if the media becomes contaminated with harder materials such as sand. As media is blasted and recovered, it can become contaminated unless care is taken. The standard screens and cyclone separator of the Fastrip system are not designed to prevent this type of contamination.

3.1 STARTUP

IT IS STRONGLY RECOMMENDED THAT PRIOR TO STARTUP ALL BLASTING PERSONNEL BE TRAINED IN THE PROPER OPERATION AND MAINTENANCE OF THE FASTRIP SYSTEM. TRAINING BY QUALIFIED FACTORY PERSONNEL IS AVAILABLE PLEASE CONTACT US FOR FURTHER INFORMATION.

After the hoses, controls, power supply and compressed air supply are connected the system is ready for use. Double check all hose connections to be sure that they are tight and that safety wires have been installed in all quick couplings.

Once all equipment has been checked and the operator is positioned ready for blasting, the compressed air line from the compressor can be opened to pressurize the blaster. At this point, the operator can depress the remote control handle to begin blasting.

The system control panel under the access ladder (see figure 2) provides the following:

1. Blasting pressure regulator and gauge
2. Media flow control and indicator (do not set below 45 PSI)
3. On-Off control of blast

Blasting pressure will depend on the type of work being done. A normal operating range when using plastic media will be 20 - 60 PSI. Be aware that blasting at too high a pressure has the potential to cause surface damage and rapid media breakdown.

Media flow through the Sure-Flo grit valve is controlled by means of the panel regulator marked "Media Flow". When the media flow gauge reads approximately 45-50 PSI air but no media will flow. As the setting is increased above 50 PSI media flow will start and increase proportional to the pressure setting. Do not set the "media flow" gauge at less than 45 PSI as the controls will not operate.

The adjustment knobs on both the blast pressure and media flow controls can be removed to prevent unauthorized tampering.

An on/off switch is provided to shut down the blast. This switch can be used to signal the operator.

3.2 MEDIA RECOVERY

Media recovery can take place at the same time as blasting* if desired, or it can be done after blasting is completed. All that is required is to start the fan motor and then sweep or shovel media into the low profile recovery hopper. This hopper is designed to meter the media at a controlled rate so as not to overload the conveying system. In addition to the standard above floor hopper, optional hoppers designed for mounting in a shallow pot are also available.

The media recovery hopper is designed to be used with 25 feet of 4" diameter hose.

3.3 RECHARGE OF BLASTER

The length of time an operator can blast continuously without recharging will depend on the following factors:

- a. Nozzle size
- b. Blast pressure
- c. Size of blaster
- d. Number of operators

The continuous blasting time for a given system can be calculated by using the media flow rates in Section 2.4. For example a single operator using a 6 cubic foot capacity tank and a 5/16" diameter nozzle at 50 PSI can operate continuously for about $(211/600) \times 60 = 42$ minutes before shutting down to recharge. Since actual media flow rates can vary depending on how the media valve is adjusted, actual continuous blasting time can vary.

The recharging procedure is as follows:

- a. Turn off the blower
- b. Shut off the inlet valve (Item 20, Fig. 1)
- c. Open the exhaust valve (Item 9, Fig. 1)

Recharge time will be approximately 2 - 3 minutes. Once media from the storage hopper has drained into the blaster:

- a. Close the exhaust valve
- b. Open the inlet valve
- c. Turn on the blower

- * If the cleanup operator will be working at the same time as the blast operator(s), then he should be furnished with an approved air fed breathing system.

4.0 EQUIPMENT ADJUSTMENTS

4.1 FINE TUNING OF CYCLONE SEPARATOR

A key feature of the Fastrip system is its ability to separate unusable dust from good media. This improves visibility in the blasting area and increases the blast effectiveness since only good media is circulated. Dust can be removed by increasing the tuning band opening, however, this adjustment must be made cautiously since too much opening will cause good media to be carried to the dust collector. Decreasing the tuning band opening will allow smaller sized particles to be retained.

The proper opening for the tuning band (Item 23, Fig. 1) will vary depending on the type and size of media and the condition of the dust collector bags. The proper tuning band setting must be determined by trial and error. When a system is new, the tuning band may have to be adjusted periodically to make sure the proper sized media is retained. After the system is "broken in", it will be possible to "set and forget" the tuning band.

4.2 ADJUSTMENT OF BLOWER EXHAUST DAMPER

The purpose of the blower exhaust damper is to obtain the best possible media conveying with the least amount of media carry-over into dust collector. Valve should be open as far as possible for the best possible conveying. Approximate setting for damper is (4) notches from open.

4.3 ADJUSTMENT OF VIBRATING SCREEN

The screen below the cyclone reclaimer includes a pneumatic vibrator to assure that the lightweight plastic media will not pile up on the screen. The regulator (Item 26, Fig. 1) controlling the vibrator should be set at about 15 PSI in most instances. If media does not flow freely through the screen, this pressure can be increased as required.

A lubricator (Item 27, Fig. 1) is provided for the vibrator. The flow of oil (any lightweight machine oil is satisfactory) can be adjusted in turning the top knob adjustment. A flow of approximately 30 drops per hour is desirable.

The vibrating screen is powered only when the blower is running. A low pressure air signal from the blower outlet opens the air valve (Item 18, Fig. 1) to the vibrator.

5.0 MAINTENANCE

5.1 Every 4 hours of operation shake dust collector bags by pushing and releasing bag shake button (Item 12, Fig. 1) 10 - 15 times.

5.2 DAILY MAINTENANCE

- a. All rubber washers on nozzle, blasting hose, tank and air line couplings must be properly installed and in good condition.
- b. Check operator's protective equipment, such as blasting hood, window, gloves and protective clothing.
- c. All couplings must be equipped with "safety wires".
- d. The nozzle must be tightly secured to the nozzle coupling. Do not use the nozzle without a washer. This will cause premature wear to nozzle and coupling. For smooth flow the nozzle entrance I.D. and washer I.D. should be the same size.
- e. Open the drain valve on the moisture separator to remove any accumulation of moisture. The valve should be left slightly cracked to assure that accumulated moisture will be removed.
- f. Dual line hose must be in good operating condition and tightly secured at the operator's control handle and at the blaster.
- g. All manual valves must be in good operating condition and easy to open and close.
- h. Conveying hose in good condition and tightly secured.
- i. Clean screen in load hopper and below cyclone separator.
- j. Check oil level in lubricator and add oil if necessary.
- k. Empty dust from dust collector.

5.3 WEEKLY MAINTENANCE

- a. The specially constructed blasting hose should be checked for signs of wear. Replace if any soft spots are found.
- b. Inspect the sealing "O" ring and sealing plunger for signs of wear. Replace if worn. To replace "O" ring, pry old ring out with a screwdriver from the outside top of the filling head. Install a new ring by pressing it into groove. Ring must be "seated" properly.

Note: If "O" ring is difficult to install, use a lubricant such as petroleum jelly applied to the rubber "O" ring itself. To replace sealing plunger, remove the cover from the handhole to gain access to the blaster interior. Turn the plunger guide counter-clock-wise with vise-grip pliers. Remove plunger and guide. Slide new plunger over guide and install guide back onto tee. The guide need not be tightly seated, finger tight is adequate. The use of pipe tape on threads will permit easy removal of the guide in the future. Replace handhole cover - the gasket must be centered to prevent leakage.

- c. Check main air, choke and exhaust valves for good operating condition.

5.4 MONTHLY MAINTENANCE OR 200 HOURS OF OPERATION

- a. Check metering tube in the automatic Sure-Flo grit valve for wear or ruptures. In the automatic Sure-Flo grit valve, the tube is worn if air from the nozzle does not shut off completely when the remote control handle is released. Replace if defective. (see 6.2).

- b. Check rubber diaphragm in the automatic Sure-Flo grit valve to see that it is in good operating condition. Air leaking through or around a diaphragm will escape through the vent hose in the diaphragm cover. Replace diaphragm if defective (see Section 6.1 and figure #5B).

- c. Check the nozzle for wear. A nozzle is considered worn* when it wears to half again its original diameter. Example:

3/16" nozzle increases to 1/4"

1/4" nozzle increases to 3/8"

5/16" nozzle increases to 7/16"

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

- * Note that compressed air consumption increases as the square of nozzle diameter, i.e. a 3/8" diameter nozzle requires more than twice as much SCFM as a 1/4" nozzle. Compressor capacity may limit the amount which a nozzle is allowed to wear.

6.0 REPAIR AND MAINTENANCE

6.1 REPLACE DIAPHRAGM IN AUTOMATIC SURE-FLO (FIGURE 5A, 5B AND 5C)

Loosen jam nut (11B) and back spring tensioner (12B) with handle (9B) out approximately 1 1/2" from Sure-Flo spring enclosure (13B). It is not necessary to totally remove tensioner. Remove the six bolts holding spring enclosure (13B) to diaphragm cover (15B). Unscrew plunger (3C), remove steel washer (4C) and the spring and diaphragm assembly (7C). After replacing old diaphragm with a new one, re-install steel washer (4C), rubber washer (5C) and plunger (3C). Be sure washers are centered on spring retaining nut prior to tightening. Reassemble spring enclosure in reverse order.

IMPORTANT: NEVER DISASSEMBLE SPRING ASSEMBLY. The spring assembly is under compression. Removing components could cause injury. Replacement requires purchase of complete assembly (P/N 290296).

6.2 CHECKING OR REPLACING METERING TUBE (Figure #5B)

Shut off main air valve and depressurize blaster. Disconnect blast hose from tank coupling. Disconnect flexible choke line hose assembly from Sure-Flo. Disconnect 1/4" air control hose from adapter (18B) on Sure-Flo diaphragm cover (15B). Back jam nut (11B) spring tensioner (12B) and handle (9B) assembly out from spring enclosure (13B) (approximately 1 1/2"). It is not necessary to remove it completely from the Sure-Flo. Remove four carriage bolts holding lower flange (17B) to body (4B). Remove lower flange. Back bolt (3B) off to relieve pressure on the metering tube (2B). Remove old tube and install new metering tube. Reassemble bottom of Sure-Flo to top flange using four carriage bolts. Thread jam nut, spring tensioner and handle assembly back into Sure-Flo spring enclosure. Completely tighten bolt (3B). Adjust grit flow as described in 3.1.

WARNING: SURE-FLO GRIT VALVE 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 your warranty and to blasting performance, use only EMPIRE approved replacement parts.

7.0 TROUBLE SHOOTING

7.1 PROBLEM-POOR PRODUCTION

a. Air pressure is an extremely important factor. In most cases, poor production problems can be traced to lack of air. This is generally caused by the following:

1. The compressor is too small for the nozzle being used
2. The I.D. size of the air line is too small. (see chart in Section 2.4.) or restrictions caused by improper fittings.

Insufficient air supply or restrictions caused by undersized supply lines or improper fittings will cause a system to operate in the following way: When the blaster is pressurized but not blasting, the blaster pressure gauge will read full pressure. However, as soon as blasting starts, the pressure will rapidly drop to a much lower pressure.

3. Operating with a small diameter "whip" hose. Actual blasting pressure at the nozzle can be considerably less than the pressure indicated at the blaster if undersize blasting hose is used. In general, the blasting hose diameter should be at least three times the diameter of the nozzle. Actual pressure at the nozzle can be checked with an optional pressure tester (P/N 290187), an accessory we strongly recommend.

REMEMBER: AIR IS THE MAIN INGREDIENT IN PRODUCTION BLASTING

- b. Operating with a straight barrel nozzle instead of a production venturi barrel
- c. Operating with the nozzle too close to the surface being cleaned. The closer the nozzle is to the surface, the smaller the blasting pattern.
- d. Operating with a small nozzle orifice. The smaller the orifice, the smaller the blasting pattern.
- e. Grit size too small. A general rule to remember: "The thicker the coating being removed, the coarser or larger the grit particle size should be".
- f. Blast finishing a part which is oily or wet - the surface must be absolutely dry and free of any oil, grease, water, etc.
- g. Operating with an improper setting at the grit valve - if the mixture is either too rich or too lean it will affect the operator's performance.

- h. Too much dust in media. Adjust reclaimer tuning band as described in Section 4.1. Be sure operating pressure falls within the recommended range (Section 3.1). Replace broken down media with new media if necessary.

7.2 PROBLEM PULSATING OR SURGING OF GRIT FROM THE NOZZLE

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

- a. Operating with the choke valve partially closed. This valve must remain open during blasting operations. The choke valve is designed to help in removing most obstructions found in the pressure vessel and grit valve. By closing the choke valve, all the compressed air is forced into the pressure vessel helping to "push" the obstruction down into the tee at the bottom of the Sure-Flo, opening the choke valve permits air to flow through the line, pick up the debris or obstruction and carry it out the blast hose to the nozzle.
- b. Operating with an improper media flow setting. If the media mixture is too rich it will pulsate. Gradually reduce the flow of media.
- c. Operating with damp media. Media must be absolutely dry to flow evenly through the Sure-Flo and blast hose. On humid days, or when using an older compressor, it may be required to operate with the moisture separator drain cock slightly opened. If conditions persist, an air dryer may be required.
- d. Operating with the blasting hose I.D. too large for the nozzle orifice size, (for example: If you use a 3/16" nozzle with 1 1/4" blasting hose, you will have a pulsating effect. Reduce the blasting hose I.D. size to 1" or 3/4".)
- e. Nozzle attached to nozzle coupling with restrictive washer - washer opening should be same diameter as nozzle entrance

7.3 PROBLEM FLOW OF AIR THROUGH THE NOZZLE BUT LITTLE OR NO FLOW OF GRIT

- a. "Media Flow" gauge setting too low - if this gauge reads from about 45 - 55 PSI, the main air valve will be open but not the Sure-Flo grit valve. Raise setting until proper grit flow is obtained.
- b. Sure-Flo valve closed - during operation the tee handle on the Sure-Flo valve should be backed out all the way. To do this turn handle all the way CCW.
- c. Clogged nozzle. Sometimes a clogged nozzle will allow air to pass, but little or no grit. Remove the nozzle from the coupling and inspect.

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

- d. Blaster is empty. Refill with grit.
- e. Contaminated grit - Grit contaminated with moisture, excess fines, or foreign material can interrupt grit flow. This free flow is necessary for effective blasting.
- f. Clogged grit valve
 1. Adjust the grit valve to full open position. While the machine is blasting, close the choke valve 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.
 2. If Step #1 is not successful depressurize the blaster and back out the fixed bolt (item #1A on Fig. 5A) and spring tensioner (Item #12b on Fig. 5b) handle at least 2/3". This will relieve all pressure on the tube and allow it to open a full 3/4" in. Choke the machine as in Step 1.
 3. If Step 2 is not successful depressurize the blaster. Remove the lower flange housing from the regulator body (see 6.2). Inspect bottom opening of tank with a flashlight. Also, check metering tube in regulator. Remove foreign material causing blockage. Reassemble bottom half of regulator with metering tube to top flange. Continue blasting.
- g. Air leaks around Sure-Flo diaphragm assembly when pot when remote handle is depressed (ref., figure 5A, 5B and 5C).
 1. Tighten the 6 bolts around outside of spring enclosure. If this fails to stop air leaks proceed to next step.
 2. Disassemble spring enclosure (see 6.1), check diaphragm (14B and 6C), tightness of plunger (5B and 3C), and "O" rings (6B). Replace any worn part and retighten plunger (5B and 3C).
 3. Plunger (5B and 3C), frozen in the closed position. Disassemble diaphragm body (see 6.1). Inspect plunger and plunger guide, replace if scored or frozen. Note: A new "O" ring (2C) should be used and a light film of white grease applied during reassembly.

7.4 PROBLEM NO FLOW OF COMPRESSED AIR OR GRIT

- a. Control panel On/Off switch in "Off" position.
- b. "Media Flow" gauge setting too low -if this gauge reads less than about 45 PSI no air or grit will flow. Raise pressure.
- c. Clogged nozzle - Depressurize blaster and remove the nozzle from the coupling and inspect for any foreign material that may be lodged in the orifice opening. Important: Do not remove nozzle when blaster is under pressure.
- d. Clogged blasting hose. Remove the nozzle and washer from the coupling and while someone is firmly holding the blasting hose, do the following:
 1. Close the main air valve and the Sure-Flo grit valve.
 2. Turn on the air compressor.
 3. Close the exhaust valve
 4. Open the main valve

This will force the compressed air through your blasting hose and dislodge packed grit. You may have to disconnect the blasting hose and inspect the tank coupling for any foreign material.

7.5 PROBLEM - WHEN OPERATOR HANDLE IS FIRST DEPRESSED, GRIT AND AIR FLOW NORMALLY, BUT THEN GRIT FLOW GRADUALLY STOPS LEAVING ONLY AIR FLOW.

- a. Leak through or around Sure-Flo diaphragm. If air escapes through vent hole in Sure-Flo housing (Figure 5B, item 15B) the Sure-flo diaphragm is defective or its connecting hardware is not tightened properly. See Section 6.1.
- b. Undersized supply air line - size according to Section 2.4.

7.6 PROBLEM - UNABLE TO STOP THE FLOW OF COMPRESSED AIR

When hand pressure is removed from the operator's control, the compressed air should stop immediately. If the compressed air does not stop, the problem is in the automatic air valve or operator's control.

- a. Check for a sticking plunger in the operator's control handle. This can be done as follows. Remove the yellow return line just behind the operator's control handle, when the handle is depressed, air should flow from the disconnected fitting; when the handle is released, the flow of air should immediately stop. If flow does not stop, disassemble control handle and clean. Inspect plunger and "O" rings, replace if worn or frozen.
- b. Check that the plunger in the automatic air valve can move freely. After depressurizing the tank and shutting off the inlet air supply, remove the four bolts holding on the automatic air valve cover plate. It should be possible to move the center stem up and down. If stem does not move freely, disassemble and clean special wrenches are available to allow easy disassembly of automatic air valve plunger assemblies. - for 1" valve order P/N 518512, for 1 1/4" valve order P/N 518522.

7.7 PROBLEM - GRIT SURGING FROM NOZZLE WHEN POT IS PRESSURIZED AND CONTROL HANDLE NOT DEPRESSED. REF. FIGURE #5B.

- a. Operating with spring tensioner (12B) and/or bolt (3B) not fully seated against body. Turn in until fully seated as shown in Fig. #5B.
- b. Ruptured or worn metering tube (2B). Disassemble metering tube body (see 6.2). Inspect metering tube and replace if defective.
- c. Plunger (5B) frozen in the fully open or partially opened position. Disassemble diaphragm body (see 6.1).

Note: A new "O" ring (2C) should be used and a light film of white grease applied during reassembly.

7.8 PROBLEM - RAPID WEAR OF COMPONENTS

Using media other than plastic media - Fastrip systems are specially designed for use with plastic media. Using other medias may cause rapid wear of components. Consult with a factory representative prior to using media other than plastic.

7.9 PROBLEM - MEDIA NOT CONVEYING PROPERLY

- a. Fan rotation backwards - jog fan to check rotation.
- b. Fan silencer opening inadequate - the gap between the silencer lid and body should be at least 1/2 inch.
- c. Media hose plugged - lift hose to detect clog. If a clog occurs, entire conveying hose must be emptied prior to further operation.

7.10 PROBLEM - FAN MAKES UNUSUAL NOISE

Bad electrical connection - fan is single phasing. Stop fan immediately - electrician to check all incoming electrical connections.

7.11 PROBLEM - GOOD MEDIA CARRIED TO DUST COLLECTOR

- A. Tuning band open too far - adjust as described in 4.1.
- B. Bad gasket on reclaimer door - if air can enter the reclaimer through a faulty gasket or improperly fitting door good media can be carried through the reclaimer.
- C. Blower exhaust damper open too far, adjust as described in Section 4.2.

For answer to any additional questions you might have, contact your authorized EMPIRE Distributor. For complete parts information, refer to the EMPIRE Price/Parts List.

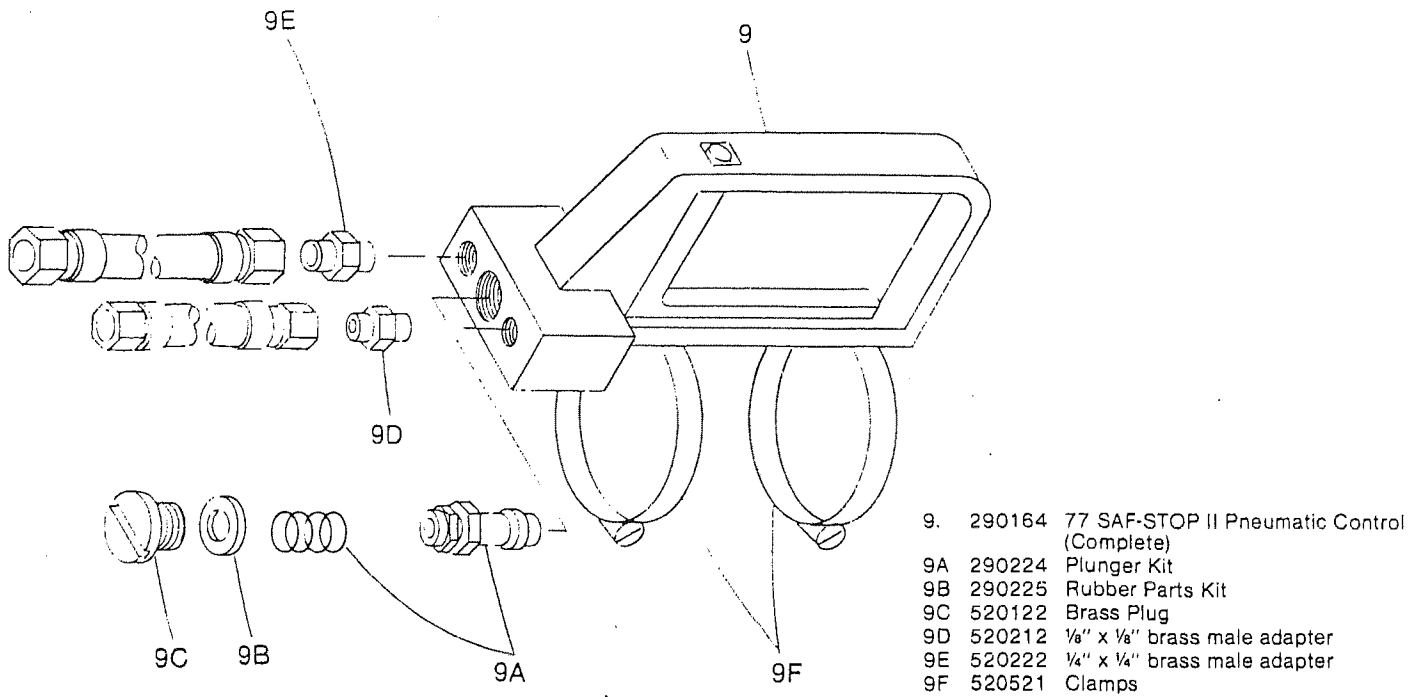


Figure 4 - PNEUMATIC CONTROL HANDLE

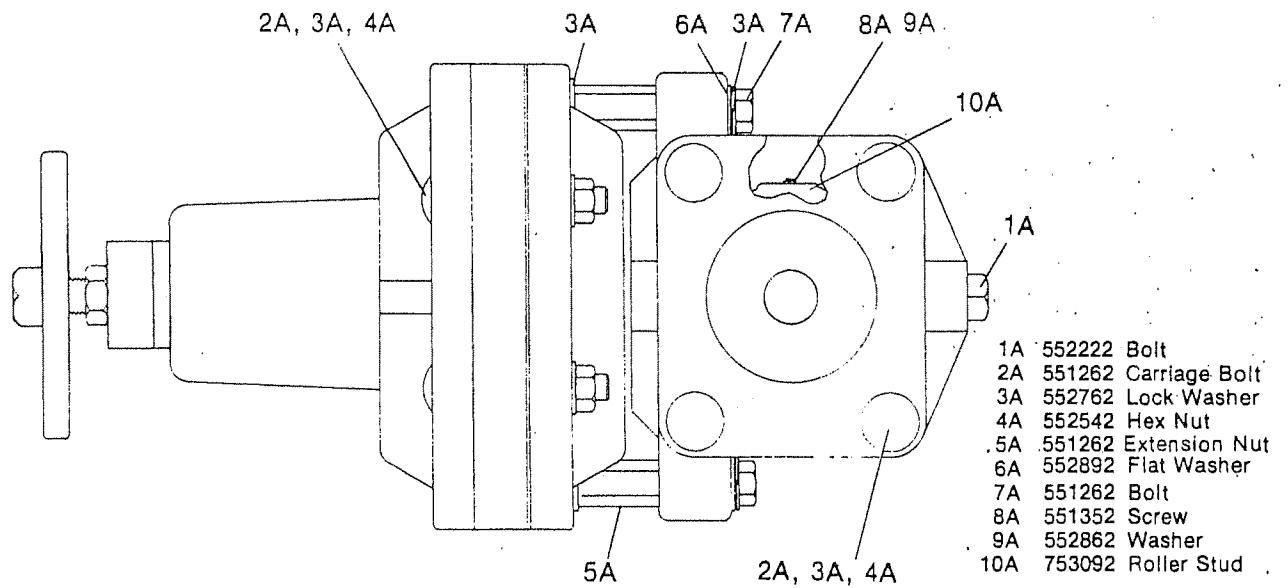
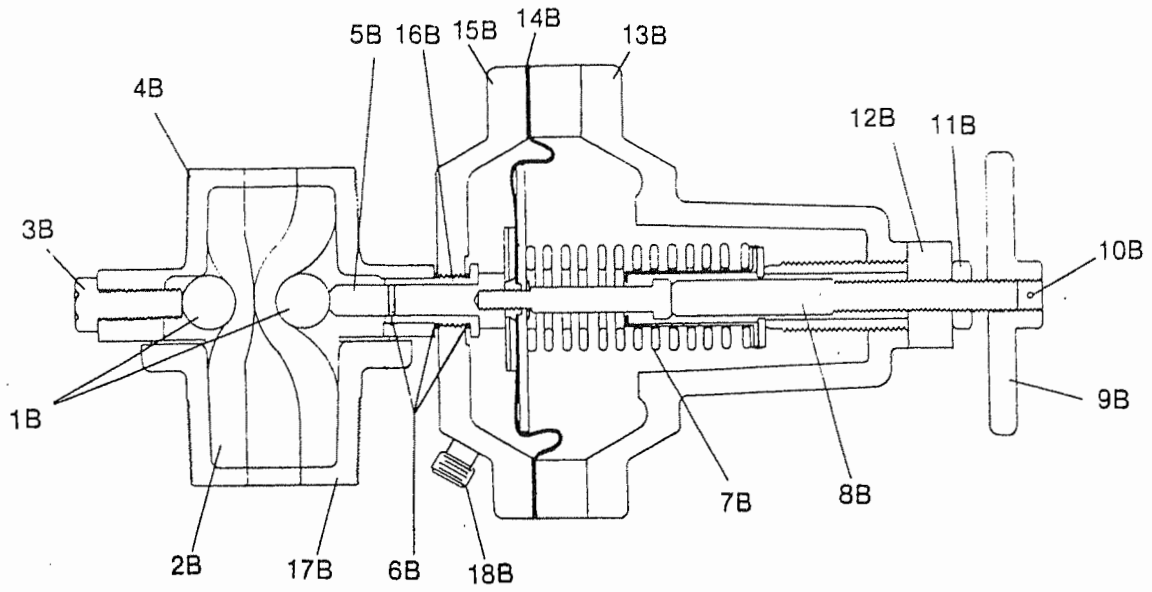
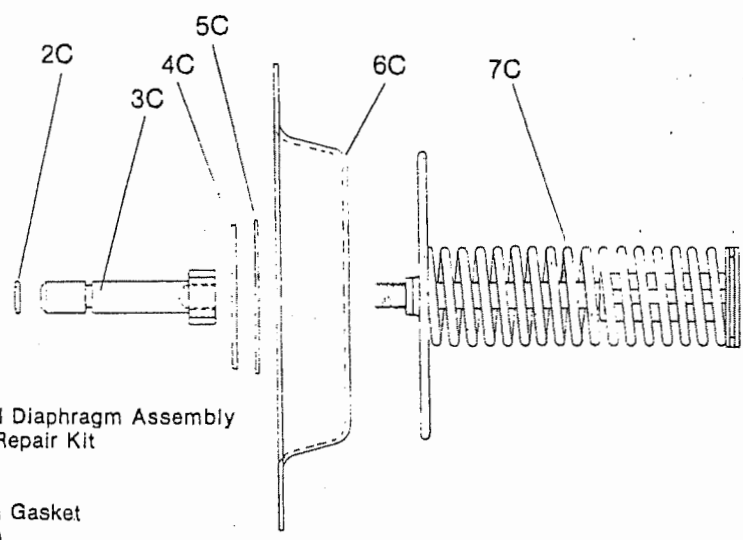


Figure 5A AUTOMATIC SURE-FLO [HARDWARE]



- | | | | | | |
|----|--------|---------------------|-----|--------|--------------------|
| 1B | 753632 | Pinch Roller | 10B | 551732 | N.Y. Loc Set Screw |
| 2B | 523592 | Metering Tube | 11B | 552672 | 1/2" Jam Nut |
| | 525802 | Metering Tube, 7/8" | 12B | 505832 | Spring Tensioner |
| 3B | 552222 | Bolt | 13B | 753682 | Spring Enclosure |
| 4B | 753692 | Valve Body | 14B | 525012 | Diaphragm |
| 5B | 505872 | Plunger w/o Ring | 15B | 753112 | Diaphragm Cover |
| 6B | 561422 | "O" Ring | 16B | 753462 | Plunger Guide |
| 7B | 290296 | Spring Assembly | 17B | 753292 | Upper Flange |
| 8B | 505812 | Handle Shaft | 18B | 520222 | Hose Adapter |
| 9B | 753622 | Handle | | | |

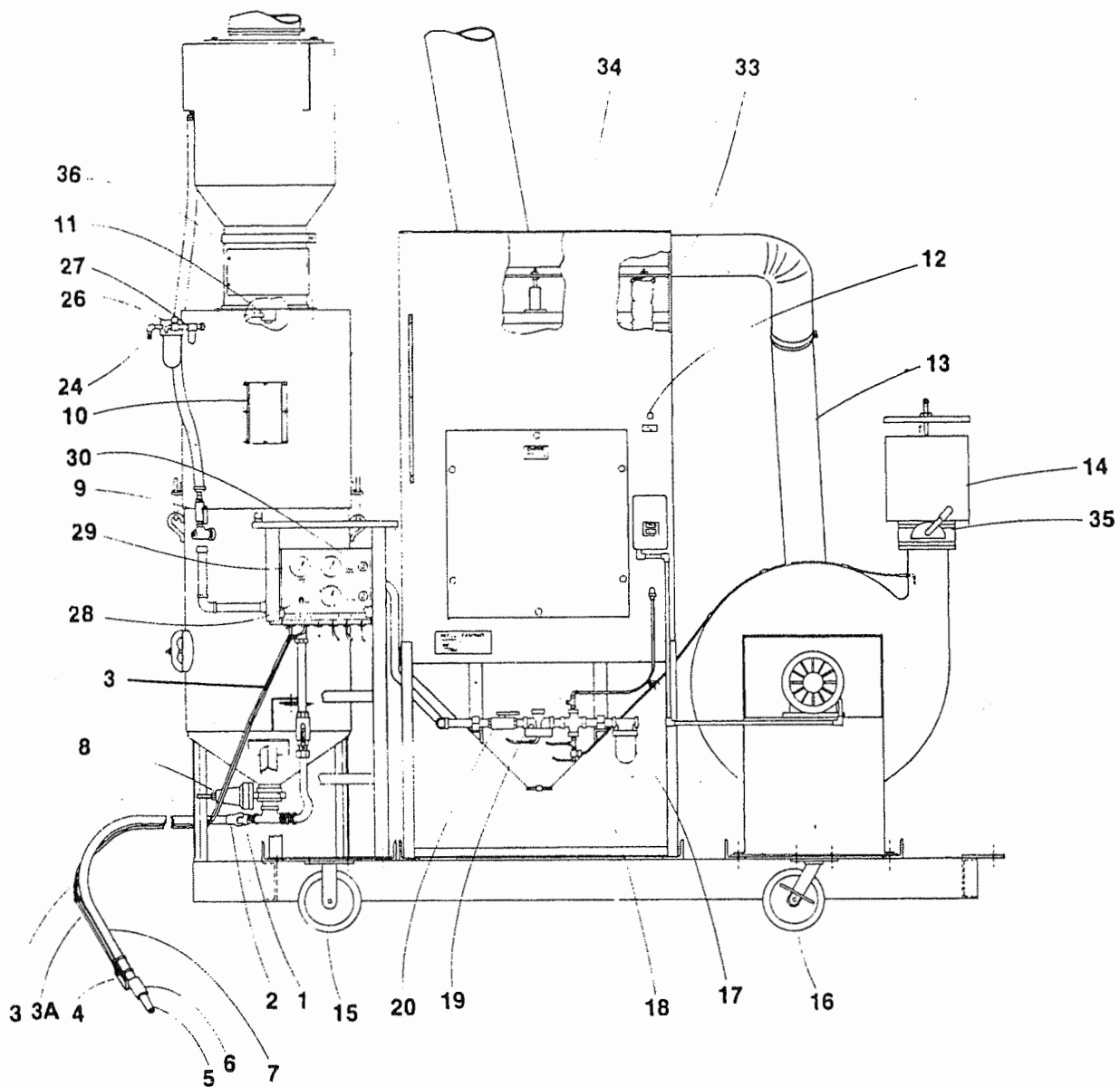
Figure 5B AUTOMATIC SURE-FLO [INTERNAL PARTS]



- | | | |
|----|--------|-------------------------------|
| 1C | 290296 | Spring and Diaphragm Assembly |
| 2C | 561422 | "O" Ring Repair Kit |
| 3C | 505872 | Plunger |
| 4C | 552902 | Washer |
| 5C | 525002 | Diaphragm Gasket |
| 6C | 525012 | Diaphragm |
| 7C | 290306 | Spring Assembly |

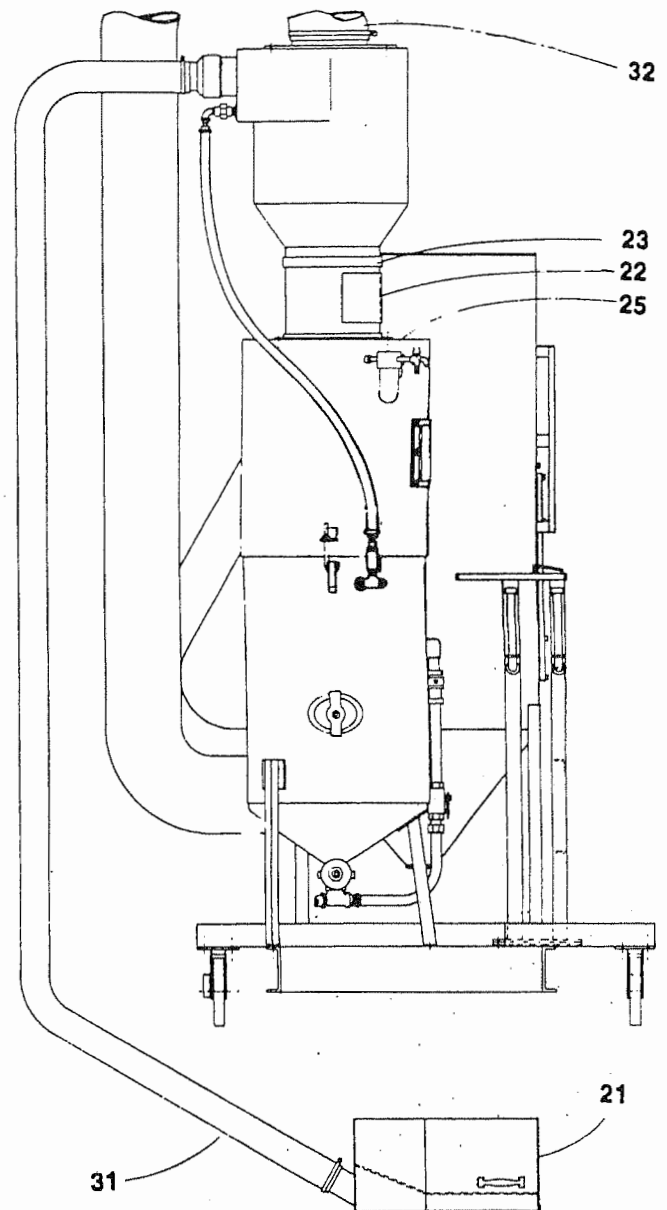
Figure 5C AUTOMATIC SURE-FLO [SPRING AND DIAPHRAGM ASS']

FaStrip Portable Plastic Media Systems



FaStrip Portable Plastic Media Systems (continued)

Part Number	Description
(1) 753262	Aluminum tank coupling
(2) 751102	Quick Snap Coupling
(3) 521892	Dual Line Hose with Fittings
(3A) 290432	Heavy Duty Dual Line Extension
(4) 290164	77 Saf-Stop II
(4A) 290224	77 Saf-Stop II Plunger Kit
(4B) 290225	77 Saf-Stop II Part Kit
(4C) 520122	77 Saf-Stop II Brass Plug
(4D) 520212	Male Adaptor 1/8 x 1/8 plug
(4E) 520222	Male Adaptor 1/4 x 1/4 plug
(4F) 520512	Adjustable Clamp (each)
(4G) 525112	Urethane Disc.
(5A) 502712	SCV-3 3/16" nozzle
(5B) 502722	SCV-4 1/4" nozzle
(5C) 502732	SCV-5 5/16" nozzle
(5D) 502742	SCV-6 3/8" nozzle
(5E) 502752	SCV-7 7/16" nozzle
(5F) 502762	SCV-8 1/2" nozzle
(6) 752232	Nozzle coupling
(6A) 554232	Screw Package for 753232
(7) 521842	Blast hose with fittings
(8) 290215	Automatic Sure-Flo Grit Valve
(9) 517442	Air Valve 1" NPT
(10) 526231	Access Window
(11) 517971	Ball Vibrator
(12) 517221	Air Valve 1/8" NPT
(13) 515631	6" diameter hose x 6' long
(14) 140537	Silencer
(15) 511521	Wheel
(16) 511511	Wheel Swivel with lock
(17) 504632	Air Filter 1-1/4" NPT
(18) 518701	Air Valve (low pressure)
(19) 518691	Pilot Regulator 1-1/4" NPT
(20) 517452	1-1/4" air valve manual
(21) 768211	Recovery hopper
(22A) 760721	Reclaimer Door
(22B) 524331	Gasket, reclaimer door
(23A) 760701	Tuning Band
(23B) 524341	Gasket, tuning band
(24) 506924	Muffler
(25) 511451	Filter (vibrating screen)
(26) 517611	Regulator 1/4" NPT
(27) 511461	Lubricator 1/4" NPT
(28) 518031	On/Off switch
(29) 550391	Air gauge liquid filled
(30) 518681	Regulator tamper proof
(31) 515911	4" diameter heavy duty recovery hose x 25 foot long
(32) 515931	10" diameter x 12' long dust hose
(33) 515521	Dust Bag, 6" dia. x 58" lg.
(34) 515981	Air Cylinder
(35) 518772	Blower Exhaust Damper
(36) 140419	Vibrating Screen Assembly, see page 36 (screen type) of Cabinet Parts Book



WARNING

1. INSPECT COUPLINGS AND LAST HOSE DAILY FOR SPLITS, BUBBLES, SOFT SPOTS, WEAR, ETC. MAKE SURE NOZZLE WASHERS ARE IN GOOD CONDITION AND SCREW HEADS ARE SNUG AGAINST COUPLINGS SURFACE. THE SAFETY PIN MUST BE IN PLACE TO PREVENT QUICK COUPLING DISCONNECTION.
2. WHEN ASSEMBLING COUPLINGS TO BLAST HOSE ONLY USE #8X5/8" LG. SELF-TAPPING SHEET METAL SCREW (P/N 554242) FOR CAST BRASS AND ALUMINUM COUPLINGS AND #8X3/8" LG. SELF-TAPPING SHEET METAL SCREW (P/N 554242) FOR ALL STEEL COUPLINGS.
3. USE OF OTHER TYPES OF SCREWS MAY CREATE A SAFETY HAZARD, EMPIRE WILL NOT WARRANT EQUIPMENT OR ASSUME RESPONSIBILITY FOR DAMAGE OR INJURY RESULTING FROM NEGLIGENCE OR USE OF IMPROPER PARTS.

FIGURE 2

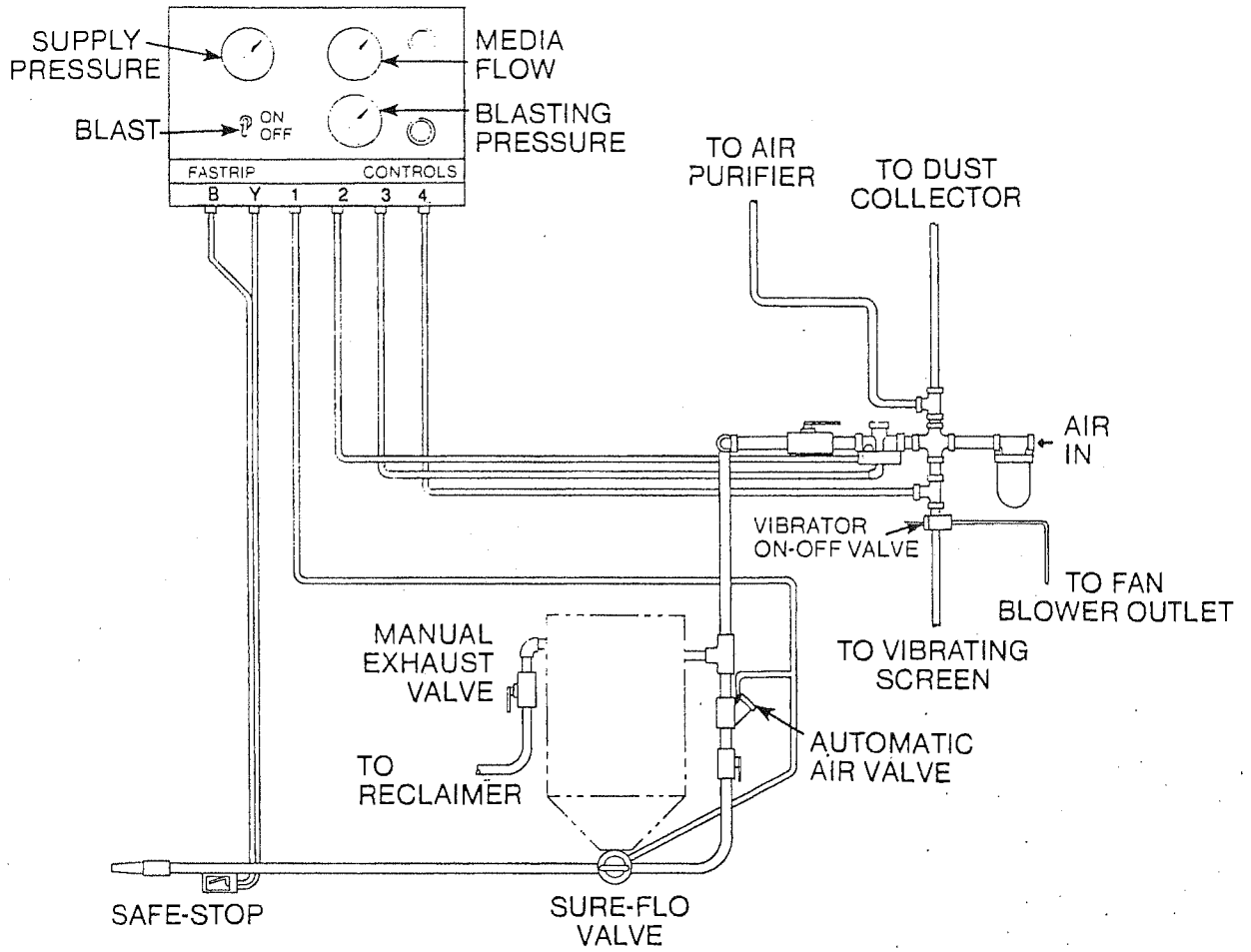
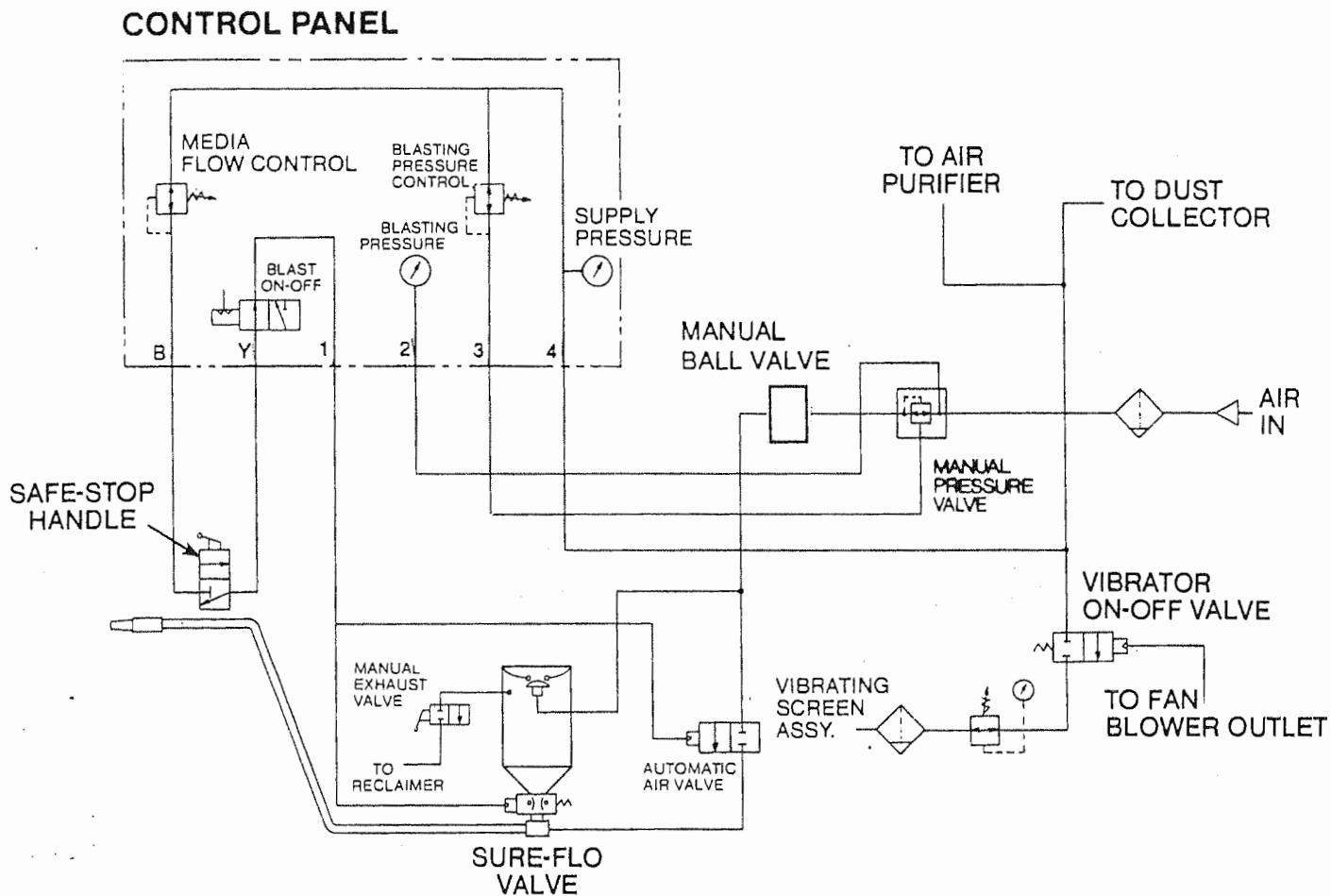


FIGURE 3



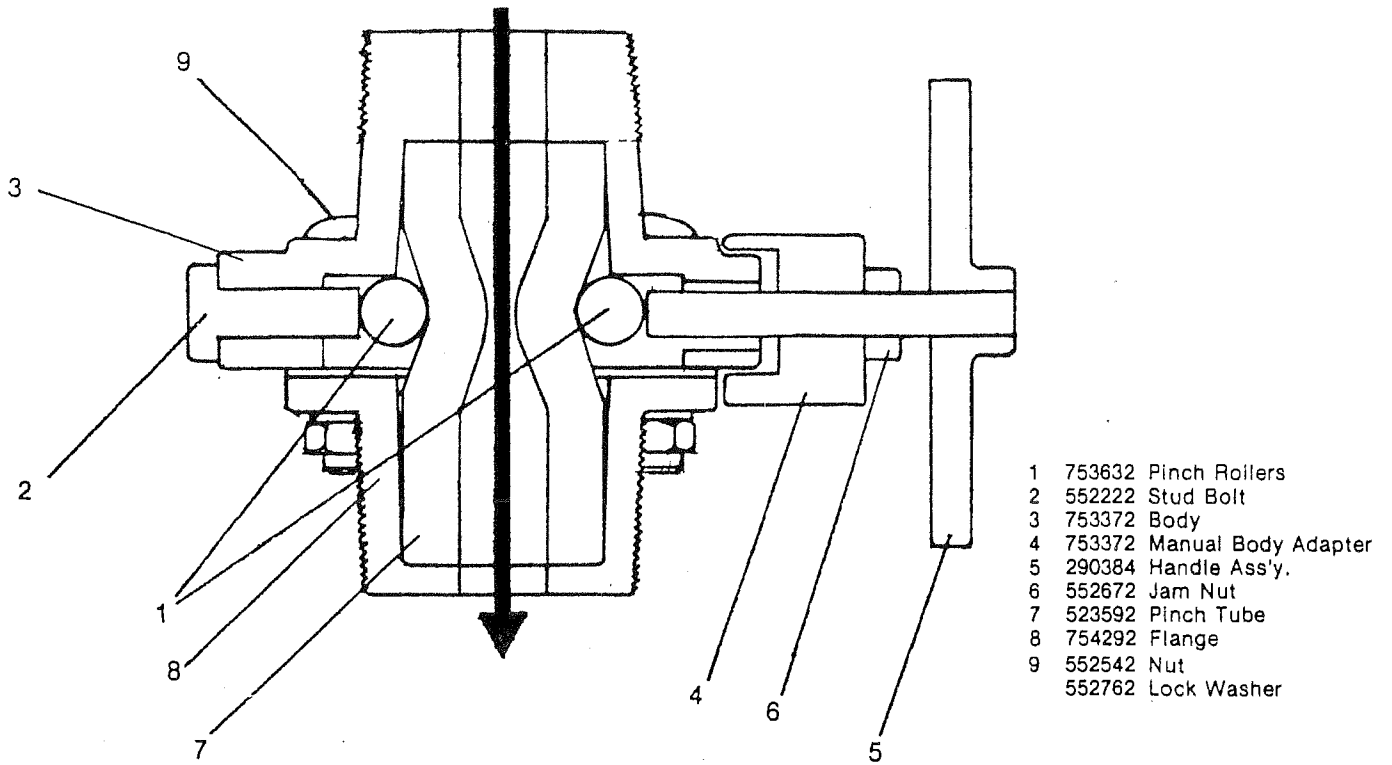


Figure 7 MANUAL SURE-FLO

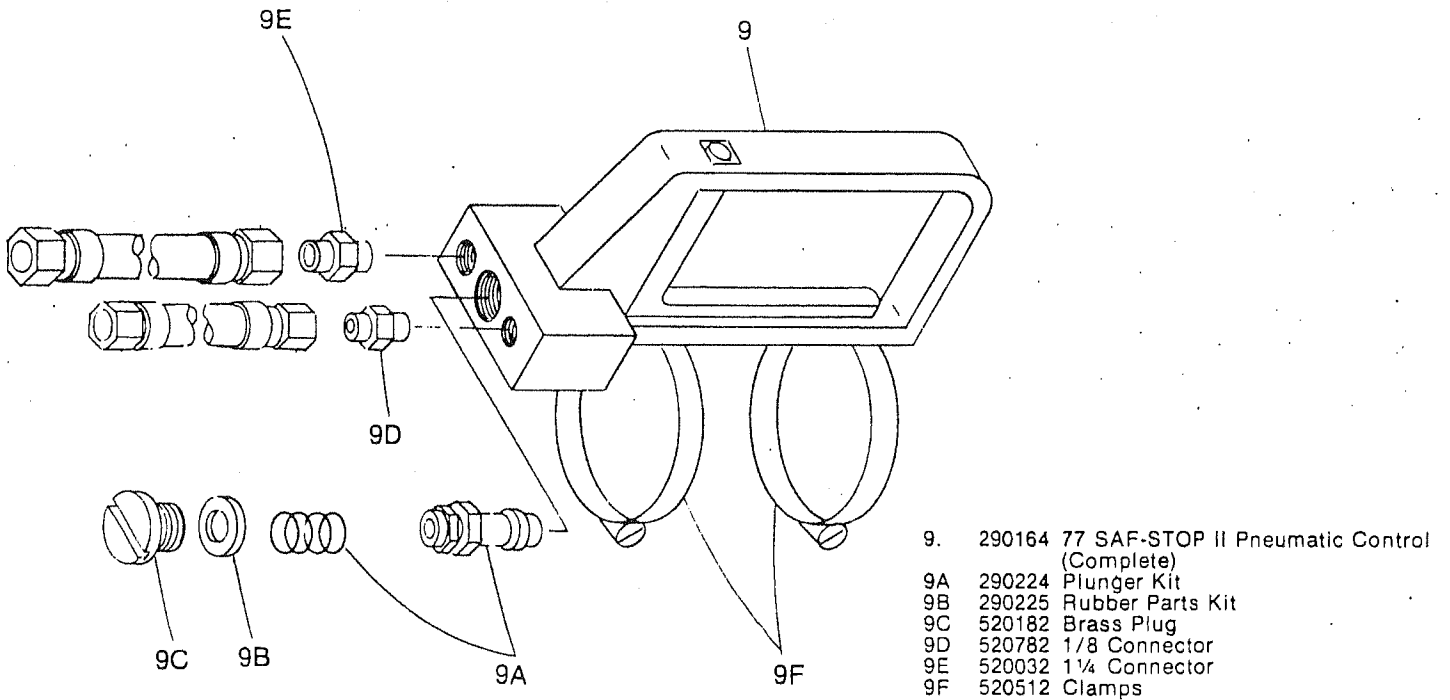


Figure 8 - PNEUMATIC CONTROL HANDLE

EMPIRE

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