

INEX SUCTION BLAST CABINET With VACUUM COLLECTOR



Clemco Industries Corp. • One Cable Car Drive • Washington, MO 63090
Phone: (636) 239-4300 • Fax: (800) 726-7559
Email: info@clemcoindustries.com
www.clemcoindustries.com

NOTICE TO PURCHASERS AND USERS OF OUR PRODUCTS AND THIS INFORMATIONAL MATERIAL

The products described in this material, and the information relating to those products, is intended for knowledgeable, experienced users of abrasive blasting equipment.

No representation is intended or made as to the suitability of the products described herein for any particular purpose of application. No representations are intended or made as to the efficiency, production rate, or the useful life of the products described herein. Any estimate regarding production rates or production finishes are the responsibility of the user and must be derived solely from the user's experience and expertise, and must not be based on information in this material.

The products described in this material may be combined by the user in a variety of ways for purposes determined solely by the user. No representations are intended or made as to the suitability or engineering balance of the combination of products determined by the user in his selection, nor as to the compliance with regulations or standard practice of such combinations of components or products.

It is the responsibility of the knowledgeable, experienced users of the products mentioned in this material to familiarize themselves with the appropriate laws, regulations and safe practices that apply to these products, equipment that is connected to these products, and materials that may be used with these products.

It is the responsibility of the user to insure that proper training of operators has been performed and a safe work environment is provided.

Our company is proud to provide a variety of products to the abrasive blasting industry, and we have confidence that the professionals in our industry will utilize their knowledge and expertise in the safe efficient use of these products.

OWNER'S MANUAL

1.0 INTRODUCTION

1.1 Scope of Manual

1.1.1 These instructions cover set-up, operation, maintenance, troubleshooting, optional accessories, and replacement parts for INEX series suction blast cabinets with vacuum dust collector.

1.1.2 These instructions also contain important information required for safe operation of the cabinet. Before using this equipment, all personnel associated with the blast cabinet operation must read this entire manual, and all accessory manuals to become familiar with the operation, parts and terminology.

1.2 Safety Alerts

1.2.1 Clemco uses safety alert signal words, based on ANSI Z535.4-1998, to alert the user of a potentially hazardous situation that may be encountered while operating this equipment. ANSI's definitions of the signal words are as follows:



This is the safety alert symbol. It is used to alert the user of this equipment of potential personal injury hazards.

Obey all safety messages that follow this symbol to avoid possible injury or death.

CAUTION

Caution used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

CAUTION

Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING

Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

DANGER

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

1.3 General Description

1.3.1 See Figure 1 for arrangement of components. INEX blast cabinets enclose the blasting environment to provide efficient blast cleaning while maintaining a clean surrounding work area. Production rates are influenced by size of nozzle, compressor output, working pressure, type and size of media, angle and distance of the nozzle from the blast surface. INEX cabinets consist of two major components:

1. Cabinet Enclosure
2. Vacuum Collector

1.4 Theory of Operation

1.4.1 When the air supply is on, and the cabinet doors are closed, the cabinet is ready for operation by actuation of the foot pedal. Fully depressing the foot pedal causes air to flow through the blast gun. Air moving through the gun draws media into the blast gun mixing chamber. The media mixes with the air and is propelled out the nozzle. After striking the object being blasted, the heavier, reusable blast media, falls through the mesh work table, and into the cabinet hopper for reuse. Lighter weight dust and fines that would normally remain suspended, are drawn through the vacuum dust collector, which traps the dust and discharges clean air. When the foot pedal is released, blasting stops.

1.5 Nozzle Options

1.5.1 Unless otherwise specified at the time of order, cabinets are shipped with a 5/16" orifice ceramic nozzle and No. 5 (5/32" orifice) air jet. Optional more durable tungsten carbide and boron carbide nozzles are available and are shown under Accessories and Replacement Parts in Section 8.2. Use boron carbide nozzles when blasting with aggressive media, such as aluminum oxide and silicon carbide.

1.6 Media

1.6.1 INEX Suction Blast Cabinets utilize most common reusable media 25 mesh to 100 mesh, that is specifically manufactured for dry blasting. Several factors affecting the usable media size range are: nozzle orifice size, air pressure, media/air mixture, media friability, contamination of parts being cleaned, and humidity. Media sizes noted are intended as guidelines

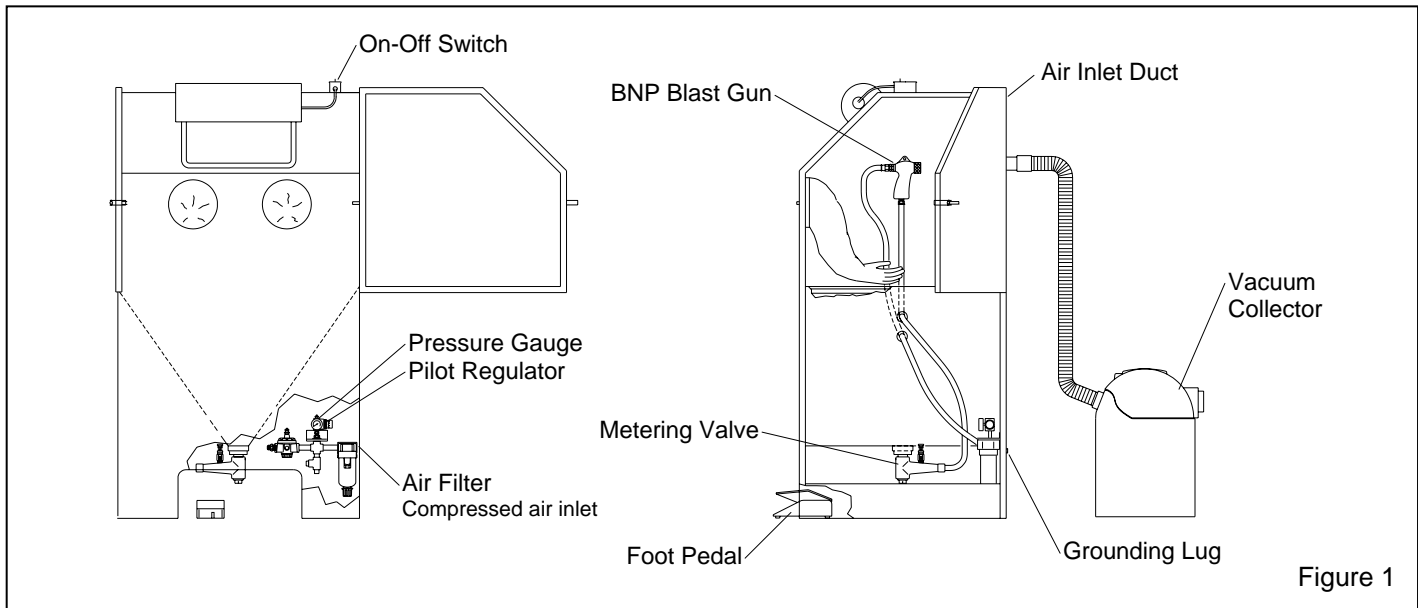


Figure 1

only, and are based on standard 5/16" orifice nozzle (5/32" air jet) and average conditions. As a rule, larger nozzles deliver more media, thus demand greater air movement through the cabinet. With larger nozzles, the maximum size of media decreases from those recommended. Media finer than those recommended may decrease visibility.

1.6.2 Steel: Fine steel grit or shot may be used. However, care must be taken to prevent ricocheting abrasive from peening the cabinet weldment.

1.6.3 Sand and Slag: Sand should never be used because of the respiratory hazards associated with media containing free silica. Slags are not recommended because they rapidly break down.

1.6.4 Silicon Carbide, Aluminum Oxide, and Garnet: These are the most aggressive, high volume abrasive in the blasting industry. Aggressive media such as these may be used, but the service life will be reduced on any equipment components which come in contact with the abrasive. To avoid unscheduled down time, periodically inspect the nozzle, media hose, conveying hose, and filter for abrasive wear. Nozzles lined with boron carbide are recommended to extend nozzle wear life. See Section 8.2.

1.6.5 Glass Bead: Most beads are treated to ensure free-flow operation even with moderately high humidity. Glass beads subjected to moisture may be reused after thorough drying and breaking up of any lumps.

1.7 Compressed Air Requirements

1.7.1 The size of the compressor required to operate the cabinet depends on the size of the air jet and

blasting pressure. Unless specified otherwise, cabinets are supplied with a No. 5 (5/32" orifice) jet. See table in Figure 2 to determine cfm requirements. Consult with a compressor supplier for suggested compressor size based on the air consumption.

BNP Gun	Jet	Nozzle	CFM	PSI
No. 4	1/8"	5/16"	21	80
No. 5	5/32"	5/16"	32	80
No. 6	3/16"	3/8"	47	80

Air Consumption in cfm

Figure 2

1.7.2 The air filter at the air inlet connection, reduces condensed water from the compressed air. Its use is especially important in areas of high humidity, or when fine-mesh media are used. Moisture causes media to clot and inhibits free flow through the feed assembly. If moisture problems persist, an air dryer may be required.

1.8 Electrical Requirements

1.8.1 The system requires 120-VAC, 1-Ph, 60-Hz, with 15 Amps service. A power cord is supplied. No additional wiring is required.

⚠ WARNING

Do not use electrical adaptors that eliminate the ground prong on 120-volt plugs. Doing so can cause electric shock and equipment damage.

2.0 INSTALLATION

2.1 General Installation Notes

2.1.1 See Figure 1 for the general arrangement. Place all components in a convenient location where compressed air and electrical services are available. The cabinet location must comply with OSHA and local safety codes. Allow for full access to all doors and service areas, and for efficient handling of large parts. Determine the best location, and position all units before final assembly.

2.2 Connect Compressed Air Supply Line

2.2.1 See the table in Figure 3 to determine the minimum ID of air supply line to the cabinet air inlet. A smaller diameter hose may reduce blasting efficiency.

Air Line Length	Jet Size		
	No. 4	No. 5	No. 6
25 feet	3/4"	3/4"	1"
50 feet	3/4"	3/4"	1"
75 feet	3/4"	1"	1"
100 feet	3/4"	1"	1"

Minimum compressed air line ID
Figure 3

2.2.2 Install an isolation valve at the air source to enable depressurization for service, and connect the air line from the air source to the air filter inlet located on the inside of the cabinet skirt.

⚠ WARNING

If twist-on type air hose couplings are used, they must be secured by safety pins or wires to prevent accidental disconnection while under pressure. Hose disconnection while under pressure could cause serious injury.

2.3 Connect Conveying Hose

2.3.1 Connect flexible conveying hose between the collector and exhaust tube, located on the outside rear wall of the cabinet.

2.4 Ground Cabinet

2.4.1 To prevent static electricity build up, attach an external grounded wire from an earth ground to the grounding lug on the left rear of the cabinet.

2.5 Final Assembly

2.5.1 Plug the collector's power cord into the socket on the cabinet light switch box. Turning the collector switch on will enable the light switch to control the collector motor.

2.5.2 Position the foot pedal on the floor at the front of the cabinet.

2.5.3 A package of 5 cover lenses is supplied with the cabinet. To install a cover lens, remove the adhesive backing and apply the lens to the clean, dry, inner surface of the view window per Section 5.3. When the cover lens becomes pitted or frosted, replace it.

2.5.4 Plug the cabinet power cord into a grounded, 120-volt outlet.

3.0 OPERATION

3.1 Media Loading and Unloading

3.1.1 Media Loading: Pour clean dry media directly through the crate, into the cabinet hopper. Do not load the hopper over 1/4 full. Use less media if the parts being blasted cause media to be quickly contaminated.

3.1.2 Media Unloading: Place an empty container under the metering valve and unscrew the plastic plug from the metering valve. If media doesn't flow, it has caked. Open the cabinet door and stir media until it starts to flow. Replace the plug when the cabinet is empty.

3.2 Loading and Unloading Parts

⚠ WARNING

Use solid fixturing to hold heavy parts in place. Do not remove lift equipment until the part is adequately supported to prevent movement. Moving heavy, unsupported parts may cause them to shift or topple, and cause severe injury.

3.2.1 Load and unload parts through either door.

3.2.2 Parts must be free of oil, water, grease, or other contaminants that will cause media to clump, or clog the filter.

3.2.3 When blasting very small parts, place an appropriately sized screen over the grate to prevent parts from falling into the hopper.

3.2.4 Close door. Be certain doors are sealed securely.

3.3 Blasting Operation

CAUTION

- **Always close cabinet doors before blasting. Keep doors closed during blasting.**
 - **Always wear blast gloves.**
 - **Avoid pointing the blast nozzle toward the view window.**
 - **After blasting, keep doors closed and exhauster on until the cabinet is clear of all airborne dust.**
 - **Stop blasting immediately if dust leaks are detected.**
-

3.3.1 Slowly open the air valve on the air supply hose to the cabinet. Check for air leaks.

3.3.2 Adjust the pilot pressure regulator located under the cabinet skirt, to the required blast pressure per Section 4.1.

3.3.3 Turn on the lights and collector. The on/off switch performs both functions.

3.3.4 Load parts.

3.3.5 Close door. Be certain doors are sealed securely.

3.3.6 Insert hands into gloves.

3.3.7 To blast; hold the gun firmly and apply pressure to the foot pedal; blasting will begin immediately.

3.3.8 When blasting very small parts, place an appropriately sized screen over the grate to prevent parts from falling into the hopper. Should an object fall through the grate, stop blasting immediately and retrieve it. Whenever possible avoid holding small parts that will require blasting into the glove.

3.4 Stop Blasting

3.4.1 To stop blasting, remove pressure on the foot pedal.

3.4.2 Allow the exhauster to clear the cabinet of airborne dust before opening the door.

3.4.3 Unload parts, shut off the air supply valve, drain the air filter, and switch off the lights and exhauster.

3.5 Blasting Technique

3.5.1 Blasting technique is similar to spray painting technique. Smooth continuous strokes are most effective. The distance from the part affects size of blast pattern. Under normal conditions, hold the nozzle approximately 3" to 6" from the surface of the part.

4.0 ADJUSTMENTS

4.1 Blasting Pressure

4.1.1 The pilot regulator, located under the cabinet skirt, enables the user to adjust blasting pressure to suit the application. The suitable pressure for most purposes is 80 psi. Lower pressures may be used for delicate work. In all cases, highest production can be achieved only when pressure is carefully monitored.

4.1.2 To adjust, unlock the knob, and turn it clockwise to increase pressure or counter-clockwise to decrease pressure. Pressure will usually drop from closed-line pressure when blasting is started. Once operating pressure is set, lock the knob to maintain the setting.

4.2 Air Jet Adjustment

4.2.1 The air jet should be screwed 4-1/2 to 5 full turns into the gun body. Doing so will leave 3-1/2 to 4 threads exposed past the lock nut. Tighten the lock nut to hold the jet in place. See Section 8.2 for optional adjusting tool.

4.3 Media/Air Mixture, Figure 4

4.3.1 Check the media stream for correct media/air mixture; media flow is smooth and appears as a light mist coming from the nozzle.

4.3.2 If media does not flow smoothly, loosen the locking nut, and adjust the metering screw until the upper holes in the metering stem are closed-off, and the lower holes are fully open. See Figure 4. This adjustment is a starting point.

4.3.3 If pulsation occurs in the media hose, either media is damp and caked, or not enough air is entering the media stream. While blasting, loosen the locking nut and slowly turn the adjusting screw out (counterclockwise when

viewed from the top) until the media flows smoothly. Tighten the locking nut finger-tight to maintain the setting.

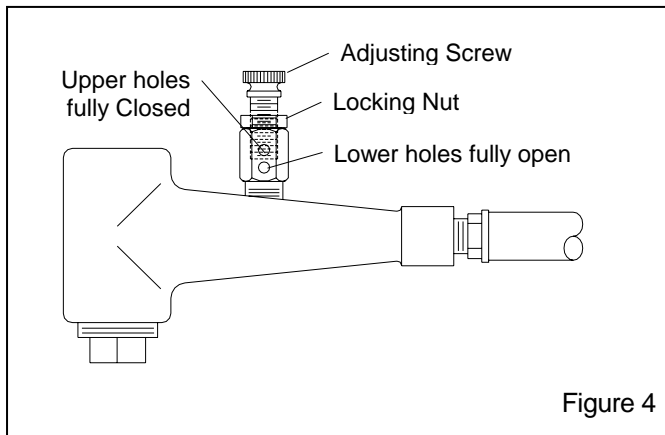


Figure 4

4.3.4 If media flow is too light, decrease air in the mixture by turning the metering screw in (clockwise when viewed from the top) covering more of the holes so less air enters the media hose. Tighten the locking nut finger-tight to maintain the setting.

5.0 PREVENTIVE MAINTENANCE

⚠ WARNING

Failure to wear approved respirators and eye protection when servicing dust-laden areas of the cabinet and vacuum collector, and when emptying the collector could result in serious eye irritation and lung disease or death. Toxicity and health risk vary with type of media and dust generated by blasting. The respirator must be approved for the type of dust generated. Identify all material being removed by blasting, and obtain a material safety data sheet for the blast media.

NOTE: To avoid unscheduled downtime, establish a weekly inspection schedule. Inspect all parts subjected to media contact, including; the gun, nozzle, media hose, and flex hose, plus all items covered in this section.

5.1 BNP Gun Assembly

5.1.1 Inspect the BNP gun for wear. Inspection and replacement of the air jet cover before it wears through will prolong the life of the jet.

5.2 Dust Filter

5.2.1 The filter collects dust on its outer surface. A high dust level in the cabinet indicates a dirty filter. Empty as frequently as necessary to maintain visibility in the cabinet, or daily and adjust frequency based on usage and breakdown rate of media. Dump the contents into a suitable disposal container.

NOTE: Blast media is usually non-toxic, however, some materials removed by the process may be. **Do not use the INEX cabinet for blasting toxic materials.** Use cabinets with reverse pulse dust collectors and HEPA filter for those applications.

5.2.2 Clean the filter by using a low pressure air blow-off nozzle. Direct the air inside the filter, blowing toward the outside or brush the outside of the filter with a soft bristle brush.

5.3 View Window Cover Lens

5.3.1 Rapid frosting of the view window can be avoided by directing ricocheting media away from the window, and by installing a cover lens on the inside surface of the window. Using cover lenses prolongs the life of the view window.

5.3.2 To install a cover lens, remove the adhesive backing and apply the lens to the clean, dry, inner surface of the view window. When the cover lens becomes pitted or frosted, peel it off and replace it.

5.4 Air Filter

5.4.1 The cabinet is equipped with a manual drain air filter. Drain the filter at least once a day, and more often if water is present. Moist air inhibits the flow of media. If moisture continues to be a problem, a dryer or after cooler may be required in the air supply line.

5.5 Media Hose

5.5.1 To avoid unscheduled down-time, periodically inspect the media hose for thin spots, by pinching it every 6 to 12 inches. Replace the hose when it becomes soft..

6.0 SERVICE MAINTENANCE

⚠ WARNING

Failure to wear approved respirators and eye protection when servicing dust-laden areas of the cabinet and collector, and when emptying the dust filter could result in serious eye irritation and lung disease or death. Toxicity and health risk vary with type of media and dust generated by blasting. Identify all material being removed by blasting, and obtain a material safety data sheet for the blast media.

6.1 Gloves

6.1.1 Special static-dissipating gloves are provided for operator comfort. It will be necessary to change gloves periodically as they wear. The first sign of deterioration may be excessive static shocks.

6.1.2 Gloves are held in place by metal bands on the inside of the cabinet. To replace, loosen the bands with a screwdriver, replace the gloves, and tighten the bands.

6.2 Nozzle

6.2.1 Replace the nozzle when its diameter has increased by 1/16", or when suction diminishes noticeably. To change the nozzle, unscrew the holding nut from the gun end, and pull the nozzle from the gun. Inspect the nozzle O-ring and replace if worn or damaged. Insert a new nozzle, placing the tapered end toward the jet. Screw the holding nut onto the gun.

6.3 View Window Replacement

⚠ WARNING

Do not use plate glass for replacement view windows. Plate glass shatters on impact and could cause severe injury. Use only genuine replacement parts.

6.3.1. Swing the light-shield up and tie it in place, as shown in Figure 5.

6.3.2. Remove the filler strip by pulling it out of the window molding, as shown if Figure 5.

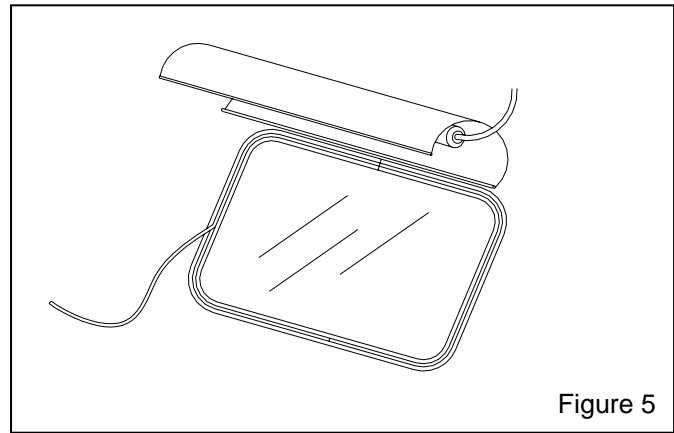


Figure 5

6.3.3. Place an arm into a glove, and push the bottom edge of the window out of the molding, as shown in Figure 6, while supporting the top of the window with the other hand.

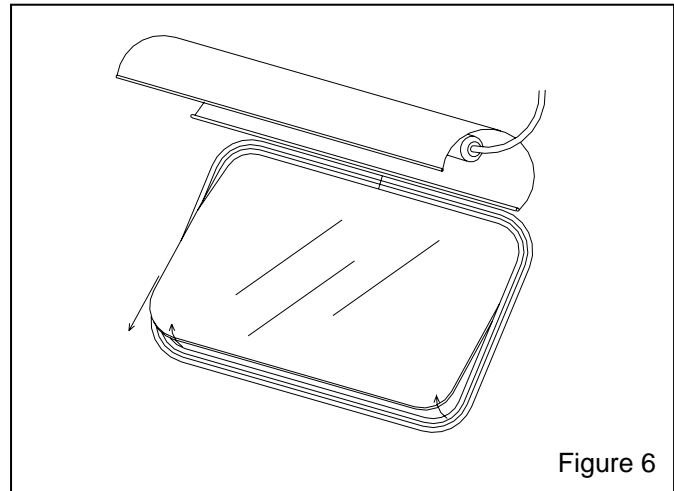


Figure 6

6.3.4. Pull the window downward to remove the window from the molding, as shown if Figure 7.

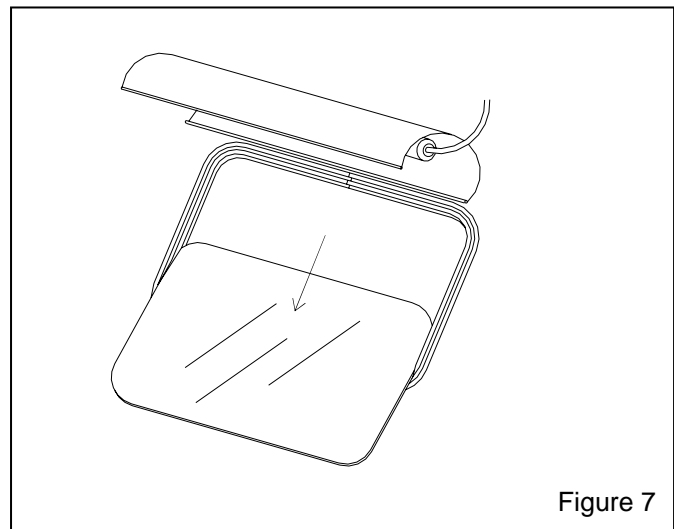


Figure 7

6.3.5. If the window molding needs replacing, replace it in the same order as the old; the narrow channel fits over the metal edge of the opening, as shown in Figure 8. The molding ends should meet in the middle of the top, straight section of the opening. Molding should be compressed so the ends are tightly sealed.

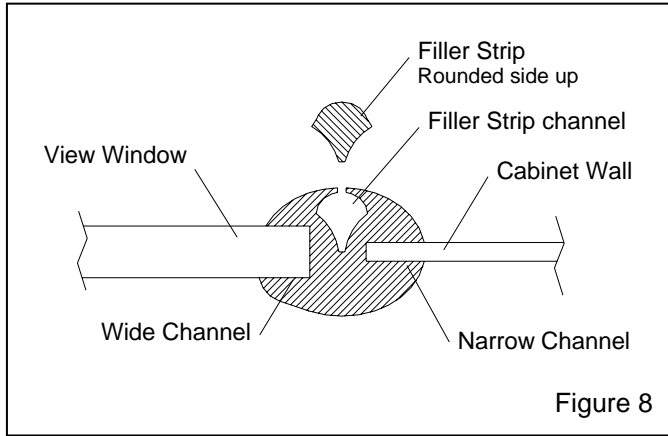


Figure 8

6.3.6. Spray silicone lubricant into the window channel (wide channel) on the molding, and slide the window into the channel, as shown in Figure 9. Place an arm into a glove to support the top edge of the bottom side of the window with one hand, while guiding the top edge into the molding with the other.

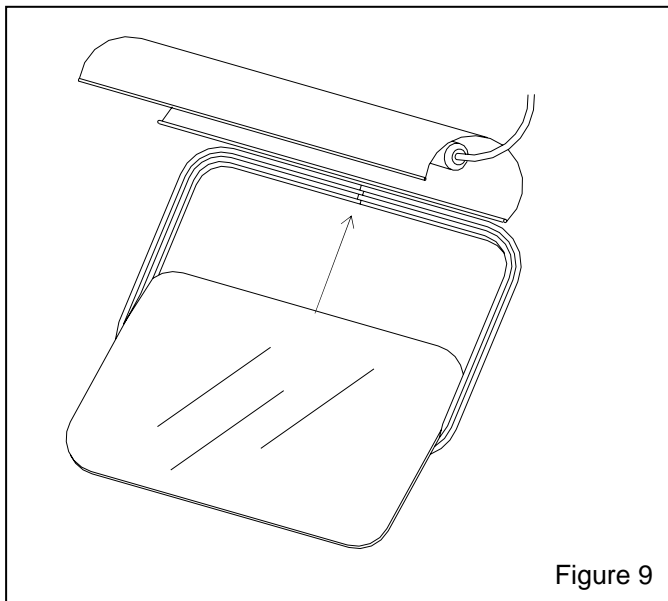


Figure 9

6.3.7. Use a nylon window stick, Stock No. 22933, as shown in Figure 10, and work the window channel lip over the glass. When this is done, the window should be entirely within the molding's window channel.

6.3.8. Wipe, or spray the filler strip with silicone lubricant to reduce friction. Thread about half of the strip into the installation tool, Stock No. 12176.

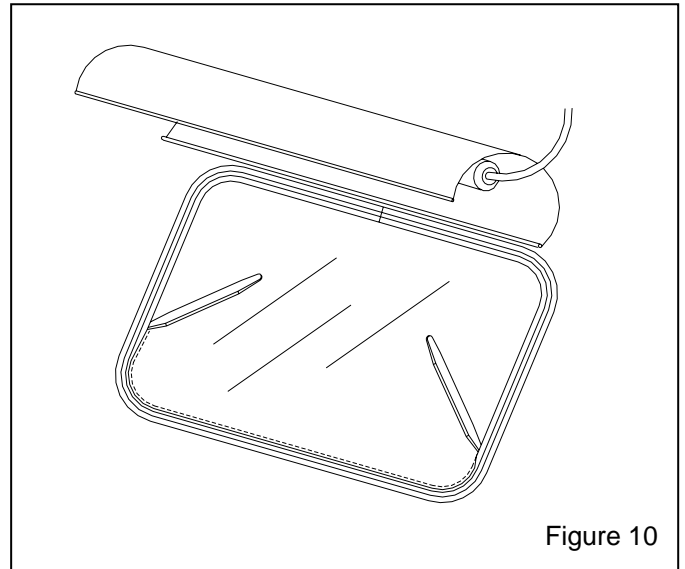


Figure 10

6.3.9. Insert the end of the installation tool and filler strip into the filler strip channel of the molding, about two inches to the left of the window molding ends, as shown in Figure 11. The rounded side of the filler strip faces up.

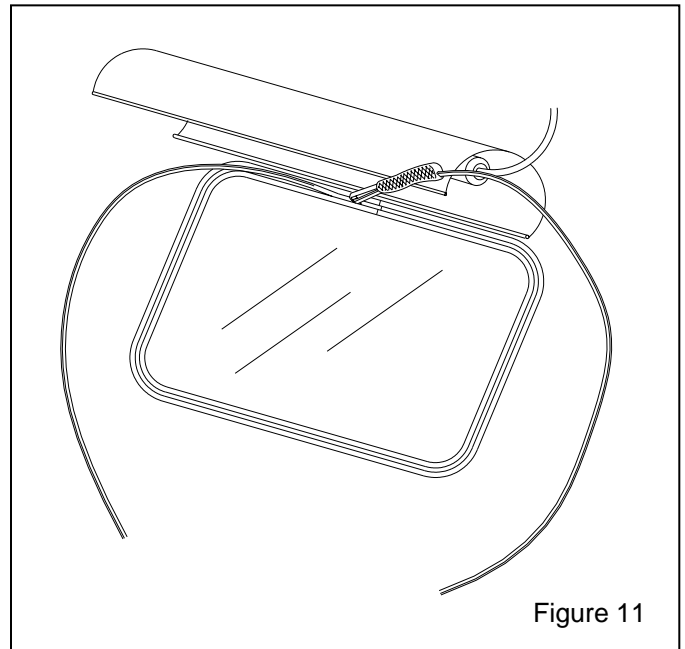


Figure 11

6.3.10. Feed the filler strip while pulling the tool through the top of the channel, down the side and across the bottom until that end of the strip is in place. Ref. Figure 12.

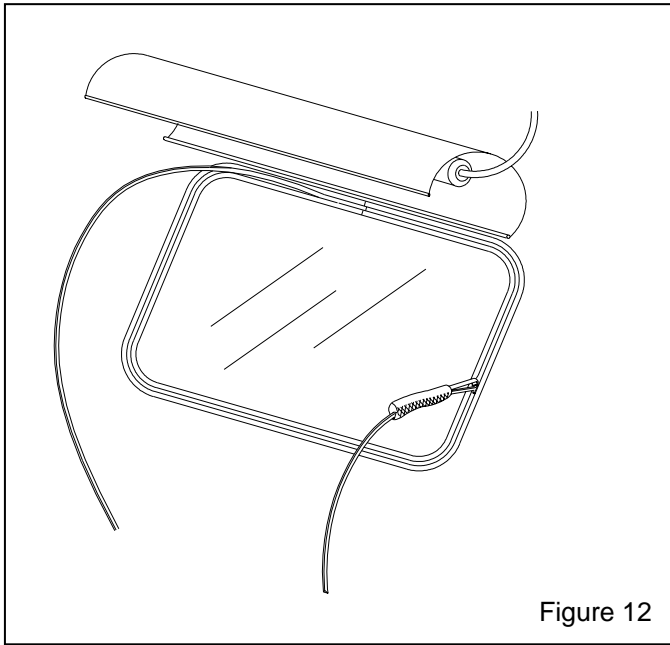


Figure 12

6.3.11. Repeat steps 6.3.9 and 6.3.10 on the other end of the filler strip. Use the window stick to push the filler strip into the molding at any spot the strip is not fully seated. Place the light-shield in its normal position.

7.0 TROUBLESHOOTING

⚠ WARNING

To avoid serious injury, observe the following when troubleshooting.

- **Turn off the air, and lock out and tag out the air supply.**
- **If checking the controls requires air, always enlist the aid of another person to: Hold the blast gun securely. Operate the foot pedal.**
- **Never bypass the foot pedal or wedge it in the operating position.**

7.1 Poor Visibility

7.1.1 Dirty filter. Clean filter, and empty dust collector canister regularly.

7.1.2 Using friable media that rapidly breaks down, or using media that is too fine or worn out.

7.1.3 Blocked air inlet duct. Blockage in the air intake ducts restricts incoming air and reduces air movement in the cabinet.

7.1.4 Hole worn in flex hose between cabinet back and canister inlet.

7.1.5 Obstruction in flex hose between the cabinet and canister inlet.

7.1.6 Paddle wheel worn. Check wheel for wear.

7.2 Abnormally High Media Consumption

7.2.1 Media may be too fine or worn-out.

7.2.2 Using friable media that rapidly breaks down.

7.2.3 Nozzle pressure too high for the media, causing media to break down.

7.3 Reduction In Blast Cleaning Rate

7.3.1 Low media level reducing media flow. Check and fill if low.

7.3.2 Incorrect metering valve adjustment. Adjust per Section 4.3.

7.3.3 Reduced air pressure. This may be caused by a malfunctioning regulator, a dirty filter element in the air filter, partially closed air valve, leaking air line, or other air tools in use.

7.3.4 Blockage in media line or gun. Blockage may occur as a result of foreign material from the blasting process, or incorrect metering valve adjustment permitting heavy media flow. See Section 4.3.

7.3.5 Worn gun parts such as nozzle or air jet. Inspect and replace all worn parts.

7.3.6 Worn media hose. Check hose for leaks and soft spots. Replace worn or damaged hose.

7.3.7 Air jet in gun out of adjustment. Check adjustment per Section 4.2.

7.3.8 Moist media. Frequent bridges or blockage in the area of the metering valve can be caused by moisture. See Section 7.5.

7.4 Plugged Nozzle

7.4.1 Foreign material in the nozzle. Clean and re-install.

7.4.2 Media mixture too rich. Adjust media/air mixture per Section 4.3.

7.5 Media Bridging

7.5.1 Frequent bridging or blockage in the media metering valve can be caused by damp media. Media becomes damp by blasting parts that are slightly oily, from moisture in the compressed air line, or from absorption.

7.5.2 To avoid contaminating media from the workpiece, all parts put into the cabinet should be clean and dry. If parts are oily or greasy, degrease and dry them prior to blasting.

7.5.3 Moist compressed air. This can be caused by a faulty compressor that overheats, or pumps oil or moisture into the air line, too long an air line permitting moisture to condense on the inside, or from high humidity. Drain the air filter and receiver tank regularly. If the problem persists, it may be necessary to change media more often, or install an aftercooler or air dryer.

7.5.4 Absorption. Some media tends to absorb moisture from the air, especially fine-mesh media in high humidity areas. Empty the media and store it in an airtight container when cabinet is not in use.

7.6 Neither Media Nor Air Comes Out The Nozzle When The Foot Pedal Is Pressed.

7.6.1 Blocked or leaking control lines. Check all urethane tubing for blockage or leaks.

7.6.2 Foot pedal valve malfunction. Check foot pedal alignment, and inlet and outlet lines for pressure.

7.6.3 Check that lines are not reversed on the foot pedal or pilot regulator. See schematic in Figure 18.

7.6.4 Pressure regulator may be turned down or off. Check pressure on pilot regulator.

7.6.5 Make sure that the air compressor is on and air supply valves are open.

7.6.6 Check the nozzle to see if it is plugged. See Section 7.4.

7.7 Blasting Does Not Stop When The Foot Pedal Is Released

7.7.1 Make sure that the 3-way valve in the foot pedal exhausts air when the pedal is released. If it does not, check the line for blockage, and check the switch for defect.

7.8 Blockage In Media Hose

7.8.1 Media obstructions. Usually caused when the media mixture is too rich. Adjust media/air mixture per Section 4.3.

7.8.2 Wet or damp media. See Section 7.5.

7.9 Media Surge

7.9.1 Heavy media flow. Adjust per Section 4.3.

7.10 Poor Suction In Media Hose

7.10.1 Inadequate air supply. Check the tables in Figures 2 and 3.

7.10.2 Air jet needs adjustment. Check adjustment per Section 4.2.

7.10.3 Nozzle is worn. Replace if worn 1/16" or more.

7.10.4 Blockage in media hose or nozzle. See Section 7.4 and 7.8.

7.10.5 Wrong size combination of air jet and nozzle. See table in Figure 2.

7.10.6 Air jet sleeve extends past end of air jet. Cut the sleeve to align with the air jet.

7.11 Blow-Back Through Media Hose

7.11.1 Blockage in nozzle. Remove the nozzle and check blockage.

7.11.2 Air jet may be too large for nozzle. See table in Figure 2.

7.12 Static Shocks

7.12.1 Cabinet and/or operator not grounded. Abrasive blasting generates static electricity. The cabinet must be grounded to prevent static buildup. See Section 2.4. If shocks persist, the operator may be building up static. Attach a small ground wire (such as a wrist strap), from the operator to the cabinet.

7.12.2 Avoid holding parts off the grate. Static will buildup in the part if not dissipated through the metal cabinet.

7.13 Dust Leaking From Collector Canister

7.13.1 Check for damaged or loose filter.

7.13.2 Check that upper and lower tube sheets are sealed on both sides, front, and rear.

8.0 REPLACEMENT ARTS

8.1 Vacuum Collector, Figure 13

Item	Description	Stock No.
(-).	Vacuum collector and hose assembly	.....20081
1.	Filter, replacement	
	w/ red stripe, current filter	.....20098
	w/ black stripe, previous filter	.....23757
2.	Hose, dust collector	.....23758

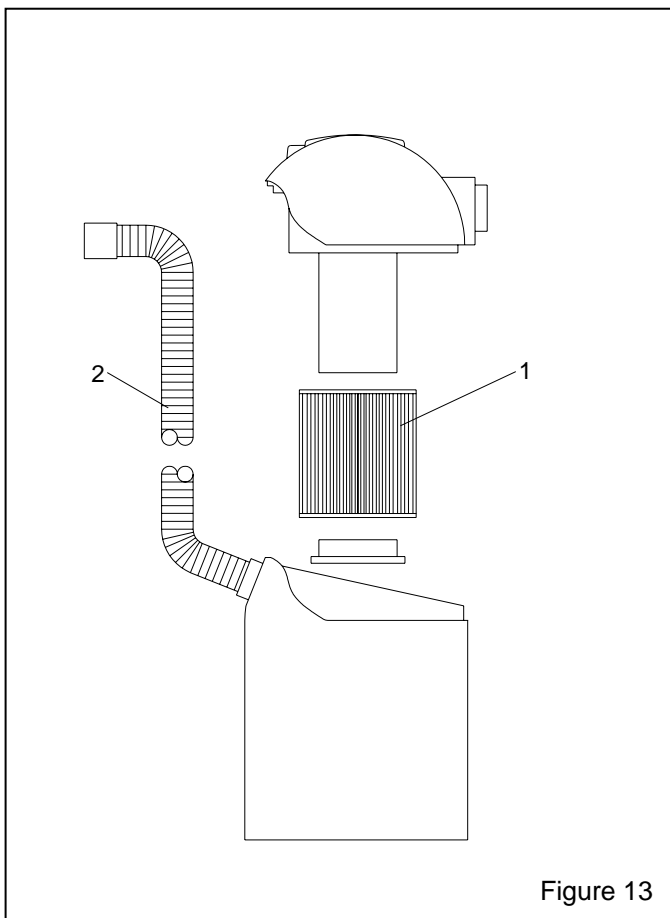


Figure 13

8.2 BNP Gun and Feed Assembly, Figure 14

Item	Description	Stock No.
(-)	BNP Gun assemblies less nozzle, includes items 1 (brass) through 7	
	No. 4 Gun	.....12301
	No. 5 Gun	.....12302
	No. 6 Gun	.....12303
1.	Nut, nozzle holding	
	Standard, knurled brass	.....11914
	Urethane covered	.....11574
2.	O-Ring	.....08975
3.	Gun body	.....11802
4.	Lock nut, air jet	.....11913
5.	Rubber sleeve	.....12097
6.	Air jet assembly w/ Item 5	
	No. 4	.....12342
	No. 5	.....12343
	No. 6	.....12344
7.	Hose end, 3/8" NPT x 1/2" barb	.....06369
8.	Hose end, 1/2" barb x 1/2" fem. swivel	.....15002
9.	Nozzle, ceramic	
	No. 5	.....11930
	No. 6	.....11931
	Nozzle, boron carbide	
	No. 5	.....11935
	No. 6	.....11936
	Nozzle, tungsten carbide, No. 5	.....13118
10.	Hose, 1/2" air, six feet required	.....12472
11.	Hose, 5/8" media, six feet required	.....04906
12.	Wide spray nozzle	
	Tungsten carbide, No. 6	.....11947
	Boron carbide, No. 6	.....11934
13.	Wide spray nozzle nut	
	Knurled brass	.....11916
	Urethane covered	.....12906
14.	Wide spray retaining ring	.....12038
15.	Wide spray nozzle guard	.....12295
16.	Orifice adjusting tool	.....19041

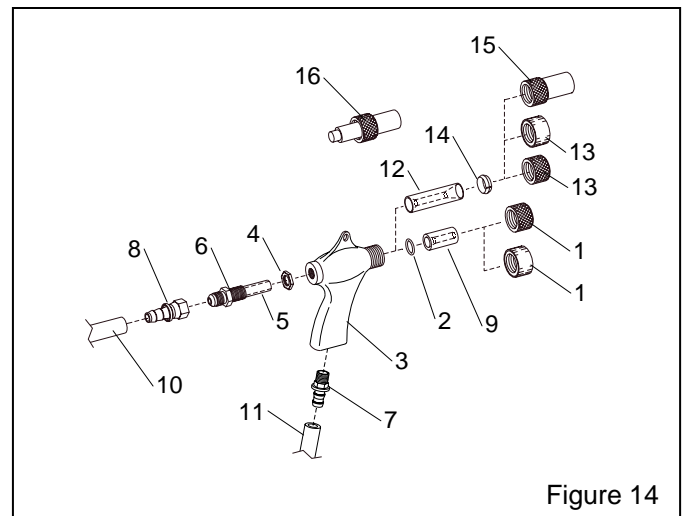


Figure 14

8.3 Cabinet Replacement Parts, Figure 15

Item	Description	Stock No.
1.	Gasket, door, adhesive backed, 10 ft. per door, specify feet required	00187
2.	Light shield	10767
3.	Window glass, 12.5" x 19.5"	12212
4.	Gasket, window, 6 ft. required	12435
5.	Filler strip, window gasket, 6 ft. required	12436
6.	Cover lens, pkg. of 5	06190
7.	Grate, 3048	10761
8.	Latch assembly, door	10908
9.	Glove set	11215
10.	Glove, left hand only	12710

11.	Glove, right hand only	12711
12.	Clamp, glove	11576
13.	Filter media, air inlet	14047
14.	Lamp, 13 watt florescent	11362
15.	Base adapter, lamp	11363
16.	Light fixture	12716
17.	Holder, light fixture	13112
18.	Trim edge, 2 ft. required	18460
19.	Foot pedal assembly, less tubing	20483
20.	Grommet, media/air hose, 2 required	11798
21.	Control switch/receptacle	10769
22.	Exhaust tube, 2"	20310
23.	Clamp, 2-1/2"	02817
24.	Vacuum collector assembly	20081

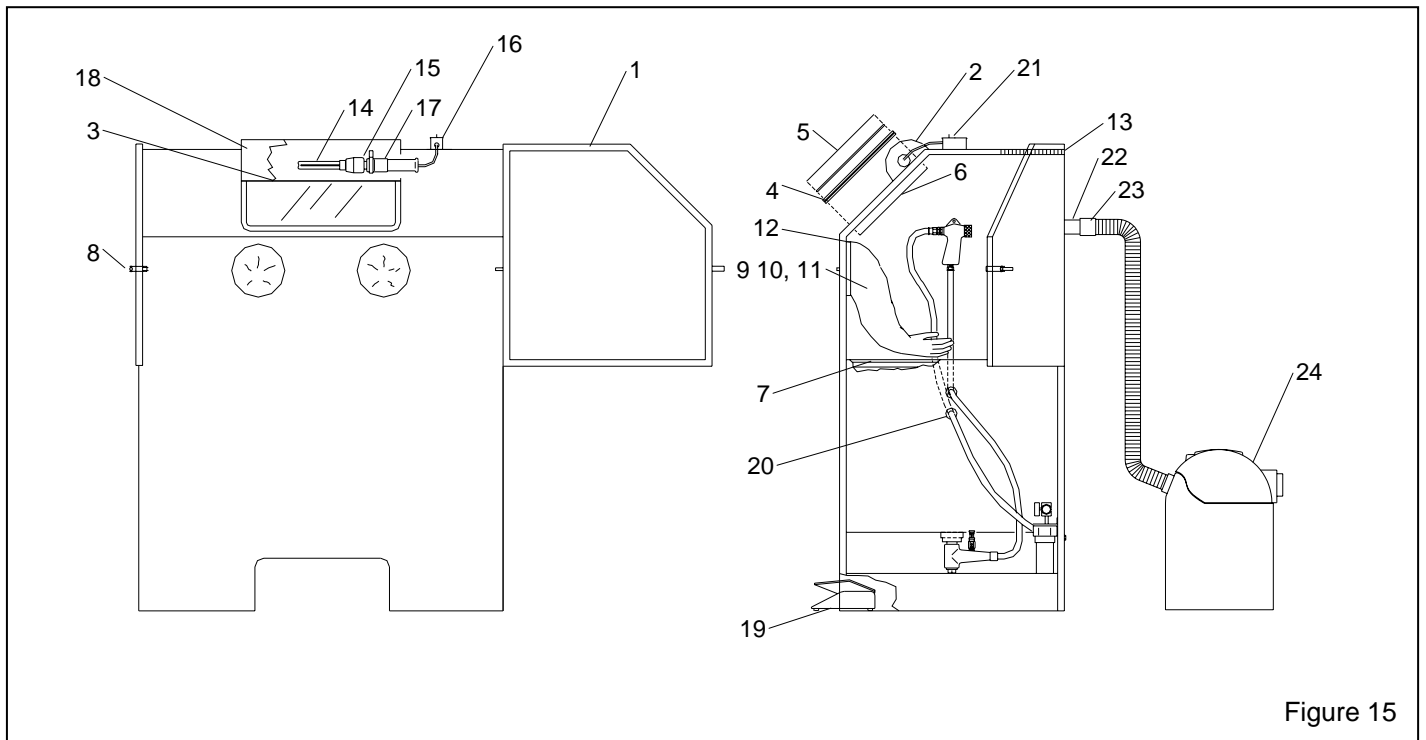


Figure 15

8.4 Foot Pedal Assembly, Figure 16

Item	Description	Stock No.
(-)	Foot pedal assembly, less tubing	20483
1.	Top, foot pedal	20017
2.	Base, foot pedal	19991
3.	Valve, 10-32, 3 way n/c	20026
4.	Drive pin, grooved	20109
5.	Screw, sh 1/4 NF x 3/4"	03086
6.	Screw, 10-32 x 1/2" fh	19571
7.	Adaptor, 10-32 thrd. x 1/8 barb	11731
8.	Spring, 1-1/4" x 3-1/2"	20121
9.	Screw, 8-32 x 3/8" thread cutting	11389
10.	Bumper, rubber (feet)	21522

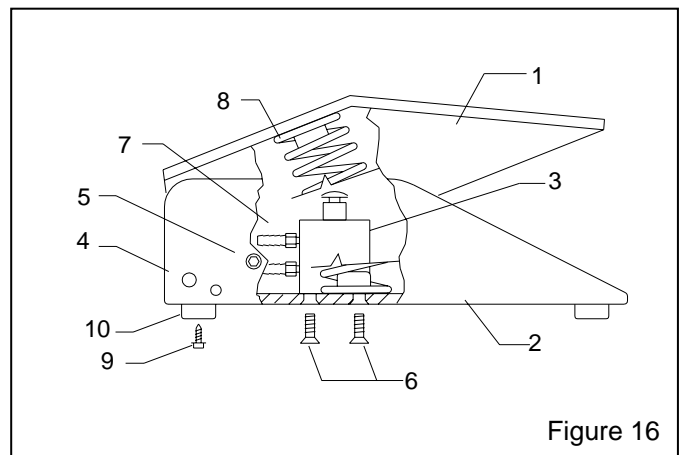


Figure 16

8.5 Metering valve assembly, Figure 17

Item	Description	Stock No.
(-)	Metering valve assembly	12417
(-)	Metering stem assembly (items 1, 2, & 3) .....	.23889
1.	Stem, metering adjusting	23097
2.	Screw, adjusting	23098
3.	Nut, adjusting stem lock	23099
4.	Body, metering valve	11532
5.	Fitting, hose, 3/8" NPT x 1/2" barb	06369
6.	Plug, metering valve	12011

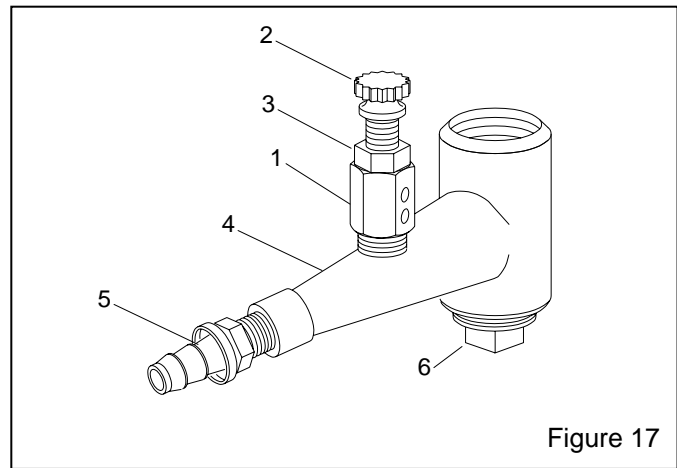


Figure 17

8.6 Cabinet Plumbing Assembly, Figure 18

Item	Description	Stock No.
1.	Adaptor, 1/8" NPT x 1/8" barb	11732
2.	Tubing, 1/8" urethane, specify ft. required	12475
3.	Foot pedal assembly, less tubing	20483
4.	Bracket, mounting	19231
5.	Filter, 1/2" manual drain	01308
6.	Adaptor, 1/2" NPT x 1/2" flare	11351

7.	Hose end, 1/2" barb x 1/2" female swivel .....	.15002
8.	Hose end, 1/2" barb x 3/8" male NPT.	06369
9.	Air hose, 1/2", specify ft. required	12472
10.	Gun assembly, BNP No. 5	12302
11.	Hose, clear urethane, specify ft. required	12476
12.	Regulator, 1/2" pilot operated	11345
13.	Regulator, 1/8" pilot	12715
14.	Gauge, pressure	11831
15.	Metering valve assembly	12417

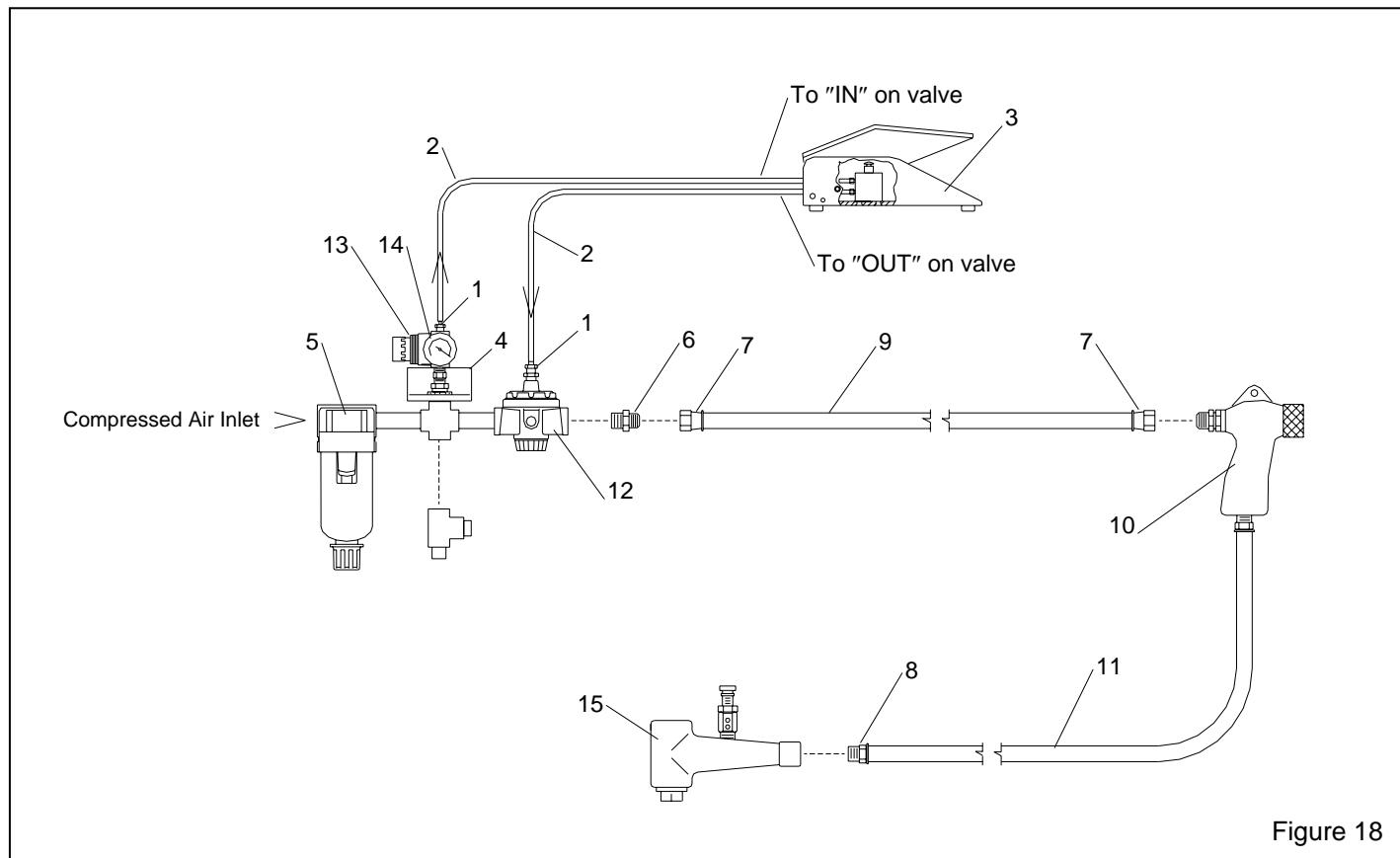


Figure 18