AEROLYTE® DUAL STATION
Plastic Media Blast Cabinets
O. M. 23475

DATE OF ISSUE: 08/93
REVISION: C, 09/19

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The products described in this material and the information relating to these products are intended for knowledgeable, experienced users. It is the responsibility of the employer to ensure that proper training of operators has been performed and a safe work environment is provided.

No representation is intended or made as to the suitability of the products described here for any purpose or application, or to the efficiency, production rate, or useful life of these products. All estimates regarding production rates or finishes are the responsibility of the user and must be derived solely from the user's experience and expertise, not from information contained in this material.

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AEROLYTE® by Clemco Industries Corp. Systems

1.0 INTRODUCTION

1.1 Scope of Manual

1.1.1 These instructions cover setup, operation, maintenance, troubleshooting, optional accessories, and replacement parts for Aerolyte dual station dry stripping (non-aggressive media blasting) cabinets models 3672A and 40100A.

The instructions cover the operation of all pull-thru reclaimers and the installation of the dust collector. One of the following supplemental manuals is provided with the dust collector. Refer to the appropriate manual for operation and maintenance of the collector.

- CDC-1 Dust collectors, manual stock no. ... 28225
- RPC-2 Dust collector, manual stock no. 22788
- RPH Dust collectors, manual stock no. 21449

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

1.2 Safety Alerts

1.2.1 Clemco uses safety-alert signal words, based on ANSI Z535.4-2011, 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 you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

NOTICE

Notice indicates information that is considered important, but not hazard-related, if not avoided, could result in property damage.

⚠ CAUTION

Caution indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

⚠ WARNING

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

⚠ DANGER

Danger indicates a hazardous situation that, if not avoided, will result in death or serious injury.

1.3 Table of Contents

1.4 General Description

1.4.1 Aerolyte dry striping (non-aggressive media blasting) cabinet encloses the blasting environment to provide efficient blasting 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. Aerolyte cabinets consist of four major components:

- Cabinet Enclosure
- Reclaimer
- Media Chamber (blast machine)
- Dust Collector

1.4.2 Cabinet Enclosure: This manual covers two cabinet sizes. Each available from a choice of three dust collector options, as noted in Paragraph 1.1.1.

Model 3672**:**
Approximate work chamber dimensions:
72" wide x 35" deep x 37" high.

Model 40100**:**
Approximate work chamber dimensions:
100" wide x 39" deep x 43" high.

1.4.3 Refer to Figure 1 for arrangement of components with a CDC-1 dust collector. Figure 2 shows the arrangement with an RPC-2 reverse-pulse dust collector with dust drawer. The optional RPH-2 are set up the same way as the RPC-2, but includes a

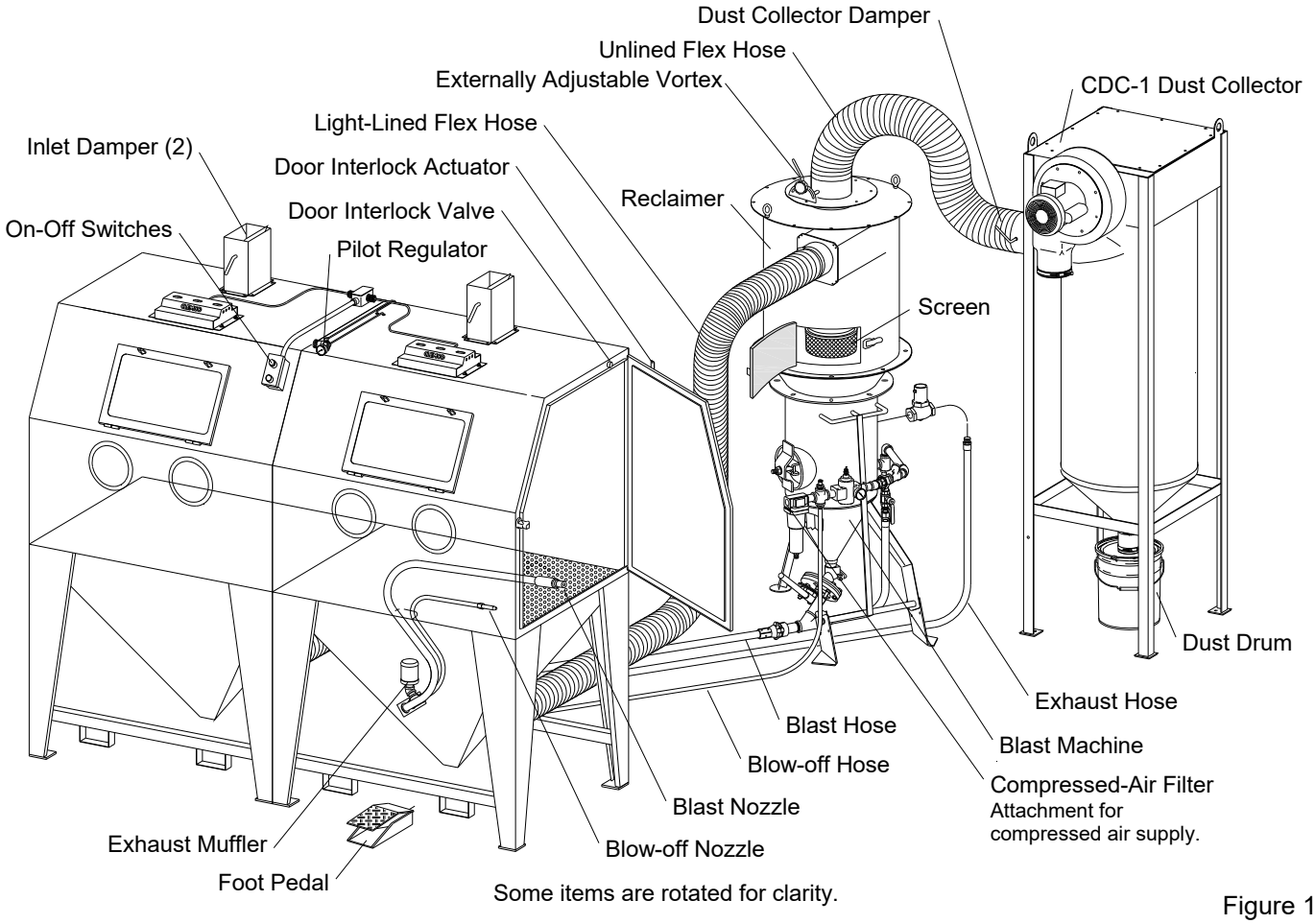
hopper for additional dust storage, and empties into a drum. The overall height of an RPH is approximately 10.5 ft and 12 ft when the top access door is open. To upgrade, an RPC-2 or RPH-2 collector may be added at any time.

1.5 Theory of Operation

1.5.1 Once the components are correctly set up and turned ON, the cabinet is ready for operation by actuation of the foot pedal. Fully depressing the foot pedal pressurizes the blast machine, causing media to be propelled through the blast hose and out the nozzle. After striking the object being media blasted, the media, fines, dust, and byproducts generated by blasting fall through the grate into the cabinet hopper. These particles are then drawn into the reclaimer for separation. Dust and fines are first separated from reusable media and pass into the dust collector. Next, reusable media is screened for oversize particles and returned to the reclaimer for reuse. Dust and fines entering the dust collector are removed from the air stream as they pass through the filters, discharging clean air. When the foot pedal is released, the blast machine depressurizes and blasting stops. Media stored in the reclaimer automatically refill the blast machine when blast machine pressure equalizes and the pop-up valve drops.

1.6 Blast Machine and Controls

1.6.1 Clemco certifies that its blast machines (pressure vessels) conform to the ASME (American Society of Mechanical Engineers) Boiler and Pressure Vessel Code, Section VIII, Division 1. It is the owner's responsibility to maintain the integrity of the vessel in accordance with state regulations. Regulations may include regular inspection and hydrostatic testing as described in National Board inspection code and jurisdictional regulations and/or laws.



Some items are rotated for clarity.

Figure 1

⚠ WARNING

Welding, grinding, or drilling on the blast machine can weaken the vessel. Compressed-air pressure can cause a weakened blast machine to rupture, resulting in death or serious injury. Welding, grinding, or drilling on the vessel without a National Board R stamp voids the Clemco ASME certification.

1.6.2 All welding repairs to the vessel must be performed by certified welders at shops holding a National Board R Stamp. Welding performed by any welder not properly qualified per the ASME code voids the Clemco ASME certification.

1.6.3 Do not exceed the maximum working pressure rating (PSI) of the blast machine. The maximum pressure rating is stamped into the ASME nameplate, which is welded to the side of the vessel.

⚠ WARNING

Excessive compressed-air pressure can cause a blast machine to rupture. To prevent serious injury or death, do not exceed the rated pressure of the blast machine.

1.6.4 The piping on the blast machine includes a relief valve that set to vent at 65 psi. Its only purpose is to serve as an audible signal that pressure is above normal pressure settings for nonaggressive media and delicate substrates.

1.6.5 OSHA does not require pressure relief valves on blast machines when air compressors supplying air to the blast machines are built to American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Division 1 and comply with OSHA regulation 29 CFR 1910.169, which refers to the ASME code when describing the necessity of pressure relief valves on compressed-air equipment. **DO NOT** operate blast machines with air compressors that are not equipped with properly functioning pressure-relief valves with maximum pressure less than or equal to the maximum allowable working pressure (MAWP) stamped on the vessel nameplate.

1.6.6 When the cabinet is set up, the blast machine is ready to blast by actuating the foot pedal. Pressing the foot pedal opens the normally closed main inlet regulator and closes the normally open outlet valve. The incoming air pressurizes the blast machine, and blasting begins. When pressure on the foot pedal is released, the blast machine depressurizes, and blasting stops.

1.7 Dust Collector Options

⚠ WARNING

All dust is hazardous to breathe. Emissions can occur from the dust collection system. Identify all materials that are to be removed by blasting; if any toxic materials such as lead dust or dust from other heavy metals and corrosives, or <u>any</u> other toxic materials are being removed, use a HEPA after filter to assist in maintaining inhalation hazards below the permissible exposure limits (PEL). Prolonged exposure to <u>any</u> dust can result in serious lung disease and death. Short-term ingestion of toxic materials can cause serious respiratory injury or death. Filtration may not be adequate in reducing all inhalation hazards. It remains the employer's or user's responsibility to assure all emissions are safe to breathe.

1.7.1 CDC-1 Dust Collectors: Shown in Figure 1, the collector is available in 900 cfm models. The single filter cartridge is cleaned by using a manually controlled pulse of compressed air. Dust collects in a 5-gallon dust drum, which must be frequently emptied. Refer to manual number 28225.

1.7.2 RPC-2 Dust Collectors: Shown in Figure 2, this collector is available in 900 cfm models. Dual filter cartridges are automatically cleaned by a timed, periodic pulse of compressed air. Dust collects in the drawer, and it must be frequently emptied. Refer to manual number 22788.

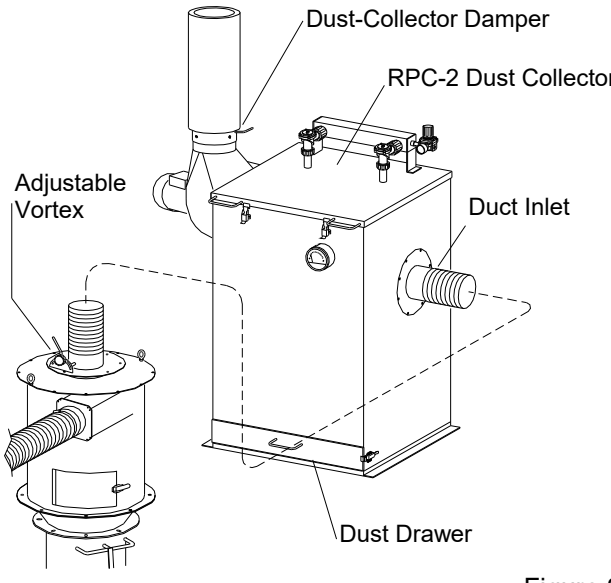


Figure 2

1.7.3 RPH Dust Collector: The RPH-2 is set up and operate the same as the RPC-2, as shown in Figure 2, but instead of a dust drawer, the collector sits atop a hopper, which provides additional dust storage, and empties into a 30-gallon drum. Refer to manual number 21449.

1.7.4 HEPA (high-efficiency particulate air) Filter: Optional HEPA afterfilters provide additional filtration and must be used with a reverse-pulse cartridge collector when removing toxic coatings, heavy metals, or any other toxic materials. Refer to the applicable dust collector manual noted in Paragraph 1.1.1, for the HEPA filter option.

1.8 Nozzle Options

1.8.1 Unless specified at time of order, cabinets are shipped with a 5/16" orifice, silicon carbide lined, short venturi nozzle. Optional 1/4" or 3/8" orifice nozzles are also available. 1/4" nozzles should be used only when the air supply is limited. Low nozzle velocity and non-aggressive media make 1/4" nozzles ineffective except for loose adhering coatings and low production dry stripping tasks. The table in Figure 3 shows cfm consumption when nozzles are new. Large nozzles (3/8" and in some cases larger), should be limited to tough stripping jobs. High nozzle velocity and high pressure will cause rapid media breakdown.

Nozzle	AIR PRESSURE (psi)					
Orifice	20	25	30	35	40	45
1/4"	25	29	32	36	40	43
5/16"	41	47	53	59	65	71
3/8"	57	66	75	83	92	100

COMPRESSED AIR CONSUMPTION *(cfm)

* Figures are approximate and for reference only, and may vary for different working conditions. Several variables, including media flow and nozzle wear affect cfm consumption

Figure 3

1.9 Blasting Media

1.9.1 Aerolyte Dry Stripping Cabinets are design to utilize plastic media specifically manufactured for dry stripping. Nozzle and reclaimer size will determine the usable media range. Media sizes range dependent on the reclaimer cleaning rate. Several conditions, such as air pressure, media/air mixture, media breakdown, contamination of parts being cleaned, effect the cleaning rate.

1.10 Compressed-Air Requirements

1.10.1 The size of the compressor required to operate the cabinet depends on the size of the nozzle and blasting pressure. Unless otherwise specified, cabinets are supplied with a 5/16" orifice short venture nozzle. The table in Figure 3 shows air consumption of nozzles when new. It does not show the recommended compressor size. As nozzles wear, they will consume up to 70% to 80% more air. Consult with a compressor supplier for a suggested compressor size based on the air consumption. **NOTE: A separate air line is required for the reverse-pulse dust collector.**

1.10.2 The manual-drain air filter at the blast machine inlet removes 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 clump and inhibits free flow through the metering valve. If the filter does not remove enough moisture to keep media dry and flowing, it may be necessary to install an air dryer or aftercooler in the air-supply line.

1.11 Electrical Requirements

All wiring external to the cabinet is provided by the user to comply with local electrical codes.

1.11.1 Electrical requirements depend on the size and phase of the dust-collector exhauster motor. NOTE: Full load amps (FLA) shown below are for the motor only; the lights draw less than one amp. Standard cabinets are supplied as follows:

900 cfm: 2 HP, 208/230/460V, 3-PH, 60 HZ
Supplied with 230-volt control panel unless 460-volt is specified at the time the order is placed.
FLA 208/5.5, 230/5.6, 460/2.8.

Additional wiring information is in Section 2.11.

2.0 INSTALLATION

2.1 General Installation Notes

2.1.1 Refer to Figure 1 (and Figure 2 for optional RPC-2 reverse-pulse collector) for the general arrangement and Figure 5 for the control line schematic. Select a location where compressed air and electrical service 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. Provide enough clearance in front of the dust collector to remove the dust drawer without tipping. Ideally, locate the blast machine directly behind the cabinet with the blast hose connection toward the

cabinet. The reclaimer may be rotated on the blast machine to allow for as few bends as possible to prevent wear. Determine the best location for all components and position them before making compressed-air connections, electrical connections, and attaching flex hose.

2.1.2 Refer to the dust-collector owner's manual to set up the dust collector and prepare it for operation.

2.2 Assemble Blast Machine and Reclaimer Figure 4

⚠ WARNING

Reclaimers weigh between 100 lbs. and 150 lbs, depending on the size. When installing or removing the reclaimer it must be adequately supported and secured to appropriate lift equipment. Failure to secure and use proper lift device can result in injury.

2.2.1 Apply adhesive-backed strip gasket to the top of the flange on the blast machine. Punch out an opening at each bolt hole.

2.2.2 If the optional storage segment is used, place it on the blast machine. The access door should be on the bottom, and rotated to allow access to the door. Bolt into place. Apply adhesive-backed gasket to the upper flange as described in Section 2.2.1.

2.2.3 Use a lift, raise the reclaimer over the blast machine assembly, and lower it in place. Attach with fasteners provided.

⚠ WARNING

Do not work under the reclaimer while it is hanging from the lifting device. Severe injury or death can occur if the reclaimer is released before it is secured to the blast machine.

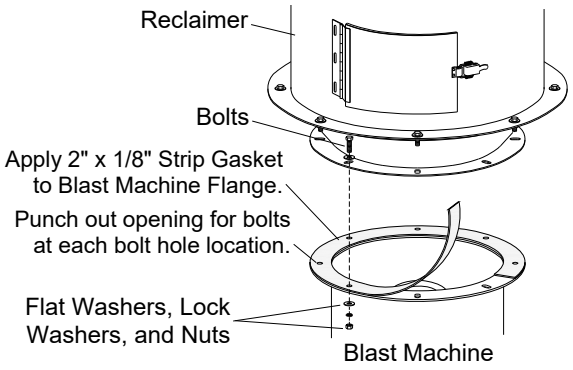


Figure 4

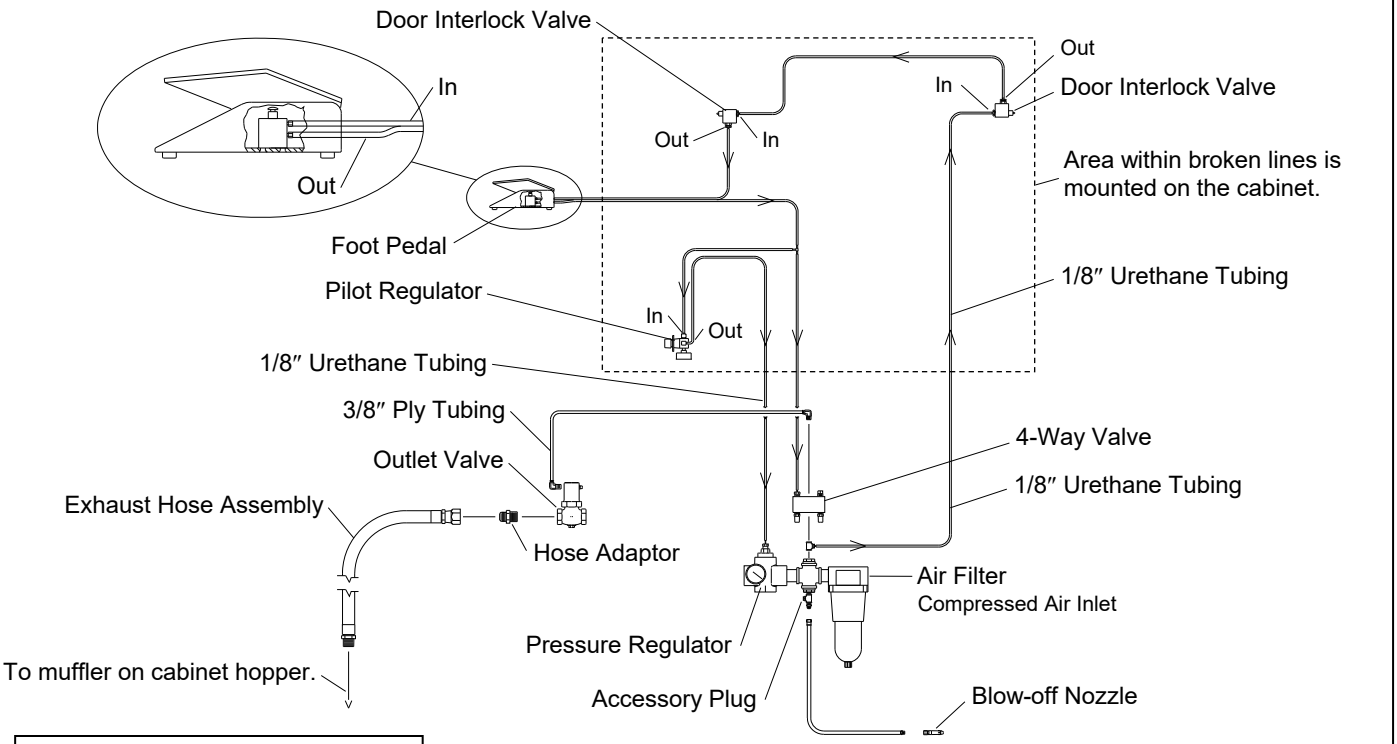


Figure 5

2.3 Support the Blast Machine

2.3.1 Use chains, cables, or other means to temporarily support the blast machine and reclaimer during final assembly until the machine can be anchored.

2.4 Connect Conveying (flex) Hoses – Figure 6

2.4.1 Connect the two smallest-diameter flexible conveying hoses between the cabinet hoppers and wye pipe adaptor. It is easier to slip the hose over the adaptor and to create a tighter seal if the first two or three inches of wire are removed from the inside of the hose. Use care not to damage the hose. **NOTE: The hose wire helps dissipate static electricity in the conveying hose and helps ground each segment. In order for the hose wire to dissipate static electricity, the wire must touch the metal of each segment.** Clamp the flex hose securely with worm clamps provided.

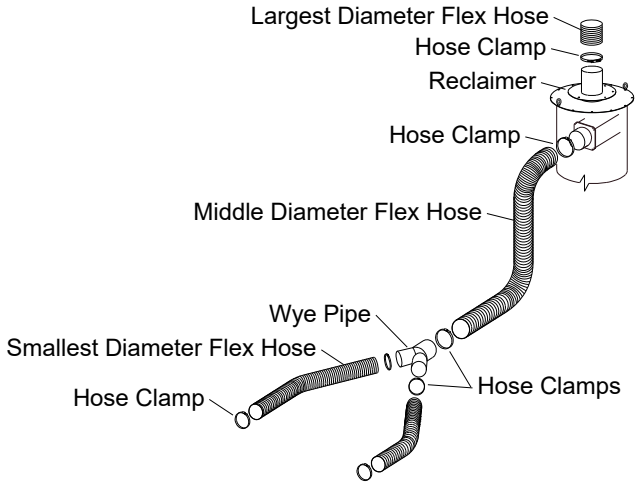


Figure 6

2.4.2 Connect the middle-diameter flex hose between the wye pipe and reclaimer inlet adaptor. Clamp the flex hose securely with worm clamps provided.

2.4.3 The largest-diameter hose attaches to the reclaimer outlet, which will be connected later.

2.5 Connect Blow-Off Hose

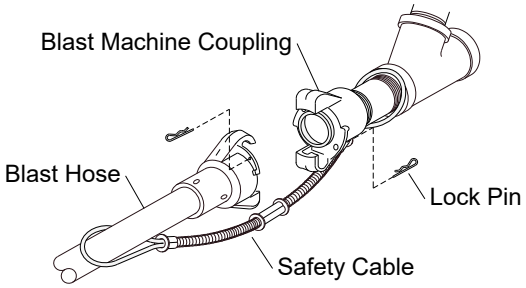
2.5.1 Attach the 1/2" blow-off hose coming from the cabinet hopper, to the compatible fitting on the blast machine piping, between the air filter and pressure regulator. Refer to the schematic in Figure 5.

2.6 Connect Blast Hose – Figure 7

⚠ WARNING

Hose disconnection while under pressure can cause serious injury or death. Use safety lock pins or safety wire to lock twist-on couplings together and prevent accidental separation, and also use safety cables to prevent hose from whipping should separation occur. Safety lock pins and safety cables are listed in *Section 9.1: Optional Accessories.*

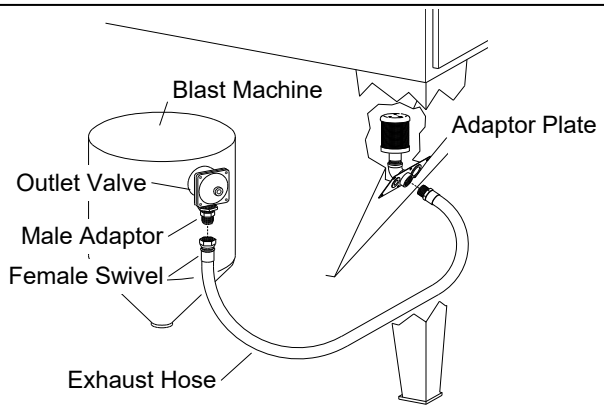
2.6.1 Connect the blast hose from the cabinet hopper to the coupling at the bottom of the blast machine. Make sure coupling gaskets are in place and couplings are secured with safety lock pins and that the hose is secured with a safety cable.



Once installed, remove slack from the safety cable.

Figure 7

2.7 Attach Blast-Machine Exhaust Hose – Figure 8



Some items removed or rotated for clarity.

Figure 8

2.7.1 Screw the male end of the exhaust hose into the 1" coupling in the hose adaptor plate, located on the cabinet hopper, turning the hose as required. Connect

the female swivel end to the male adaptor on the blast-machine outlet valve.

2.8 Connect Urethane Control Tubing

2.8.1 Uncoil the brown 1/8" urethane control tubing. From the cabinet. The end of each tubing is numbered 1, 2 or 3. Connect the tubing to the adaptor with the corresponding number on the top of the pressure regulator, piping, and 4-way air valve. Refer to the schematic in Figure 5 to confirm the connections.

2.9 Connect Compressed-Air Supply Line(s) Figure 9

A separate air line is required for the dust-collector pulse. Refer to the dust-collector owner's manual.

⚠ WARNING

Failure to observe the following before connecting the equipment to the compressed-air source can cause serious injury or death from the sudden release of compressed air:

- **Lockout and tagout the compressed-air supply.**
- **Bleed the compressed-air supply line.**

2.9.1 Apply thread sealant to the male threads of an air fitting that is compatible with the air-supply hose fitting, as noted in Section 2.9.2, and install it onto the 1"-NPT air filter located at the blast machine inlet, as shown in Figure 9. Note that the style of connection shown in Figure 9 is for reference only.

⚠ WARNING

Hose disconnection while under pressure can cause serious injury or death. Use safety lock-pins or safety wire to lock twist-on claw type couplings together and prevent accidental separation, and safety cables to prevent hose from whipping should separation occur.

2.9.2 Install an isolation valve at the air source to enable depressurization for service, and connect a 1" ID or larger air line from the air source to the air filter on the blast machine. A smaller diameter hose may reduce blasting efficiency.

⚠ WARNING

To avoid the risk of injury from compressed air, install an isolation valve and bleed-off valve where the air supply is tapped into the compressed air system. This enables depressurization of the compressed-air lines before performing maintenance.

2.9.3 Refer to the dust-collector owner's manual and connect a compressed-air line to the pulse manifold.

2.10 Ground Cabinet and Dust Collector

2.10.1 To prevent static electricity buildup, attach an external grounded wire from an earth ground to the grounding lug on the left rear of the cabinet. Refer to the dust-collector owner's manual and connect a ground wire to the dust collector.

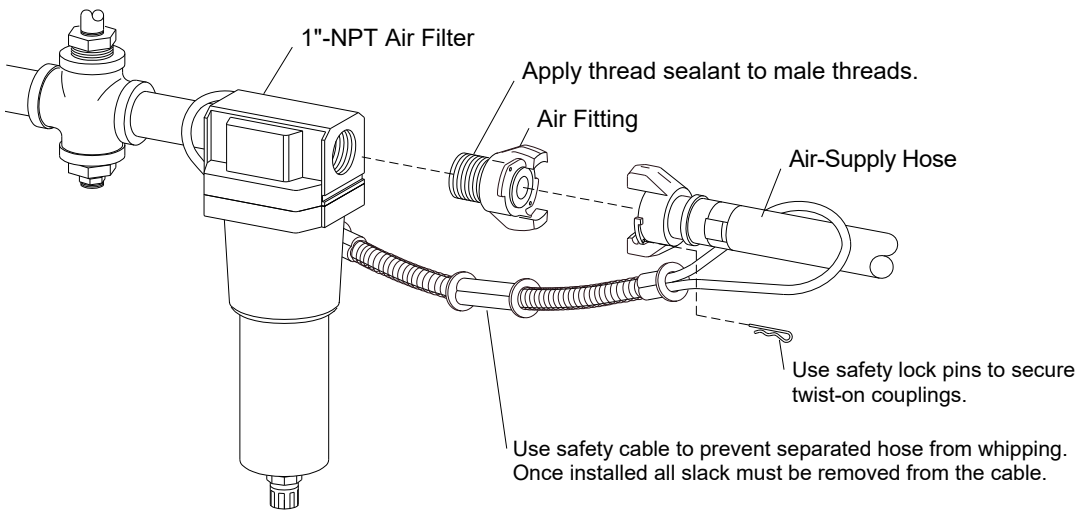


Figure 9

2.11 Connect Three-Phase Electrical Service

All wiring external to the cabinet is provided by the user to comply with local electrical codes.

⚠ WARNING

Shorting electrical components can result in serious electrical shocks, or equipment damage. Electrical power must be locked out and tagged out before performing any electrical work. All electrical work or any work done inside a control panel or junction box must be performed by a qualified electrician, and comply with applicable codes.

A wiring schematic is packed inside the cabinet's control panel. After wiring is completed, keep a copy of the schematic with the manual for future reference and for electrical replacement parts.

2.11.1 Refer to the wiring schematic stowed inside the control panel mounted on the cabinet and wire from the users disconnect to the panel and from the panel to the dust-collector motor, per instruction on the motor data-plate.

2.11.2 Check the dust-collector amperage on initial startup. If the motor draws excessive amperage, gradually close the dust-collector damper, located on the inlet on CDC dust collectors, and on the exhauster outlet on RPC and RPH dust collectors, until the amperage is within the specifications shown on the motor plate.

2.11.3 After wiring is completed, observe the warning that follows and check the motor rotation. To check rotation, turn the On-Off switch ON and quickly turn it OFF, causing the motor to rotate slowly. Look through the slots in the motor fan housing where rotation of the fan can easily be observed. Proper rotation is indicated by the arrow on the exhauster housing; the fan should rotate toward the exhauster outlet. If it rotates in reverse, change the wires, as noted on the motor plate to reverse rotation.

⚠ WARNING

Do not look into the exhauster outlet while the paddle wheel is turning. Injury to the eye or face can occur from objects being ejected from the exhauster.

2.12 Anchor Blast Machine

2.12.1 Anchor holes are located in the blast-machine leg pads. When all the components are in their permanent position, anchor through the holes to secure the machine to the floor and remove the temporary supports.

2.13 Set Air-Inlet Dampers – Refer to Figure 10

2.13.1 The air-inlet dampers are located on the top of the cabinet and must be set to match the cabinet dimensions and reclaimer size. The air-damper was preset prior to shipment; confirm the initial setting, as noted below.

2.13.2 The label on the damper show the settings in degrees. The initial setting should align the handle to 30 degrees.

2.13.3 Loosen the lock nuts and align the damper handle as noted. When correctly positioned, tighten the lock nuts to maintain the setting. Refer to Section 5.6 for adjustment procedure.

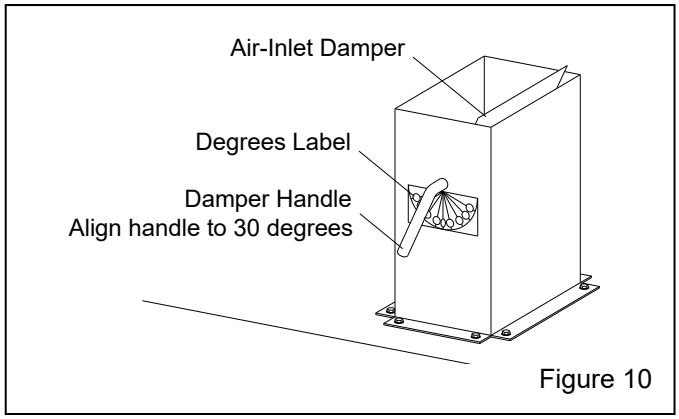


Figure 10

2.14 Final Assembly

2.14.1 Attach the remaining flex hose between the reclaimer outlet and dust collector inlet.

2.14.2 Position the foot pedal on the floor in front of operator station to be used.

2.14.3 A package of five view-window cover lenses is supplied with the cabinet. Install a cover lens per Section 7.3. When the cover lens becomes pitted or frosted, replace it.

3.0 FIELD INSTALLED ACCESSORIES

Optional accessories are shown in Section 9.1

3.1 Cabinet Curtain Installation

3.1.1 Match curtains to corresponding wall and doors.

3.1.2 Front and rear walls: Position the curtain on the wall to be protected. Using the curtains as templates, mark each mounting point through the grommet holes along the upper edge of the curtain. NOTE: When laying out the attachment points, the upper edge of the rear curtain should be below the bottom edge of the air-duct partition. Remove the curtains and drill a .187" (3/16") diameter hole at each point marked. Install the curtains using the fasteners provided (machine screw, 11/16″ OD flat washer, lock washer and nut) at each grommet. The flat washer is used between the screw head and the rubber curtain grommet on all curtains.

3.1.3 Doors: Using protectors against the curtains and outer doors, clamp the door curtains in place. NOTE: When laying out the attachment points, the upper edges of the door curtains should be even with the outer edges of the door's soundproofing panel. Insert a #10 self-drilling screw with an 11/16″ OD flat washer through the grommet holes. Use a screw gun with a 5/16" socket to drill and thread the screws through the door's inner wall at each grommet.

3.2 Manometer

The optional manometer kit is listed in Section 9.1.

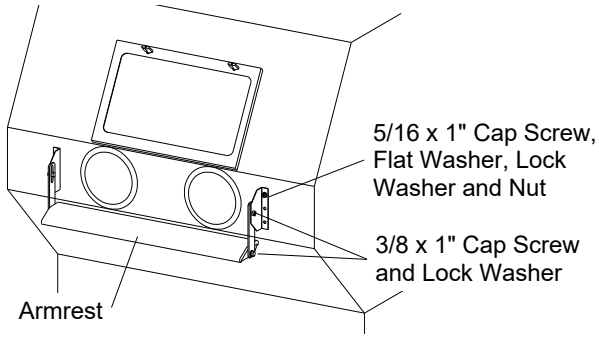
3.2.1 Consistent static pressure is necessary for precise media separation, as the reclaimer's efficiency is achieved by a centrifugal balance of air flow, particle weight, and size. The manometer measures static pressure. Reclaimer static pressure is set by adjusting the dust-collector damper. Refer to Section 5.3 to adjust static pressure. Refer to Section 5.7 for instructions on using the manometer.

3.3 Armrest

3.3.1 Assemble the armrest and mounting brackets, as shown in Figure 11.

3.3.2 Position the assembly so the armrest is about even with the bottom of the arm-port opening. Mark one hole location on the front of the cabinet at each mounting bracket.

3.3.3 Drill a 3/8" hole at both locations and mount the armrest using 5/16 cap screw, washers and nuts. Install the bolts from inside the cabinet to protect the threads from abrasion, should the armrest need to be removed later.



The cabinet model shown is for reference.

Figure 11

3.3.4 Match drill the remaining four bracket holes and install the remaining fasteners.

3.3.5 Loosen the fasteners on the slotted bracket and raise or lower the armrest to a comfortable position.

3.4 Turntable with Workcar and Track

Installation note: The track may be placed on either side of the cabinet, allowing entry through either the right side or left side door; the right side is shown in the illustrations. When installing the inside track, place it so the stops are opposite the entry door, as shown in Figure 12.

3.4.1 Components of the turntable and track assembly are shown in Figure 12. The assembly consists of:

1. The inside track assembly, which is placed inside the cabinet.
2. The hinged track extension attaches to the support table and swings up to clear the door.
3. Track support table.
4. Turntable and workcar assembly.

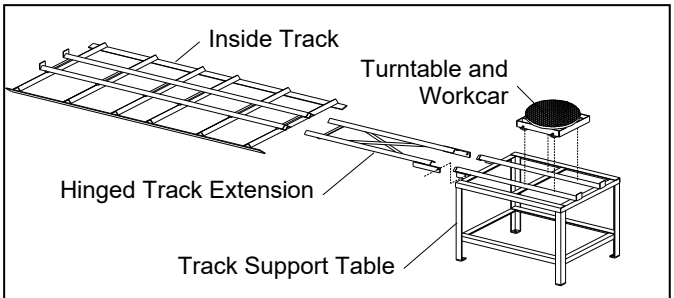


Figure 12

3.4.2 Place the inside track in the cabinet over the existing grate as shown in Figure 13.

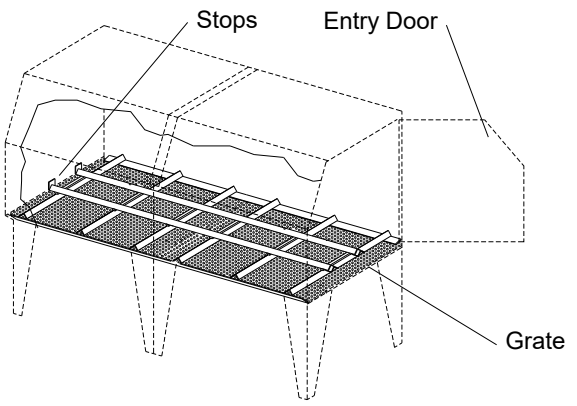


Figure 13

3.4.3 Position the track support table and extension as shown in Figure 14. When the hinged extension is lowered, the extension tracks must rest on the angled locating supports welded to the bottom of the inside tracks, and butt against the inside tracks.

3.4.4 Holes are provided on the track-table leg pads for anchoring.

3.4.5 Raise the track extension to allow opening and closing of the door.

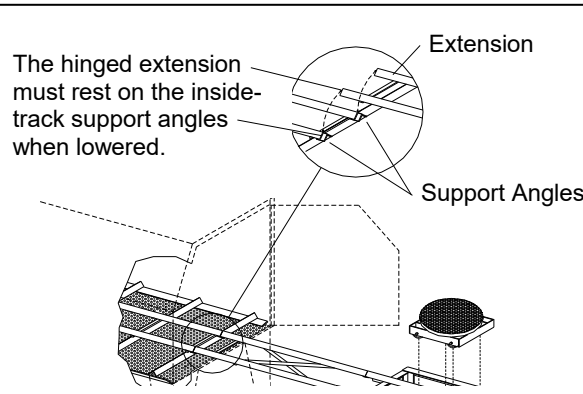


Figure 14

4.0 OPERATION

NOTICE

Do not pulse new dust collectors or replacement cartridges until the cartridges are properly seasoned, as instructed in the dust-collector operation manual. Pulsing unseasoned cartridges can decrease the efficiency of dust collector and cause premature cartridge failure.

4.1 Media Loading

4.1.1 Media Capacity: Media capacity is approximately 2,0 cubic feet. The machine is full when media reaches the level of the pop-up valve.

4.1.2 Media Loading: With the exhauster OFF, add clean dry media by pouring it into the reclaimer hopper through the reclaimer door. **Do not pour media directly into the cabinet hopper, as over filling may occur.** Overfilling will result in media carryover to the dust collector and possible blockage in the conveying hose. Refill only after all media has been recovered from the cabinet.

4.2 Media Unloading

4.2.1 To empty the cabinet and blast machine of media, turn the exhauster ON and blow-off the cabinet interior until all media is recovered from the cabinet. Reduce pressure to 40 psi. Place an empty container, such as a bucket, on the cabinet grate. Remove nozzle and nozzle washer, close the door, close the choke valve and press the foot pedal. Direct media flow into the container. Empty the container when full or before it is too heavy to manage, and repeat the process until the machine is empty. Return the choke valve to the full open position. Clean the nozzle holder threads and inspect the threads on the nozzle and nozzle holder before reinstalling the nozzle washer and nozzle. If complete purging of media is required, use a vacuum to clean media residue in cabinet hopper and blast machine head.

4.3 Loading and Unloading Parts

4.3.1 Parts must be free of oil, water, grease, or other contaminants that will clump media or clog filters. If parts are oily or greasy, degrease and dry them prior to blasting.

4.3.2 Load and unload parts through either door.

⚠ 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. This is especially important with the use of turntables.

4.3.3 When blasting small parts or objects having small pieces that could become dislodged and fall off, place an appropriately sized screen over the grate (or under the grate when frequently blasting small parts) to prevent parts from falling into the hopper. If an object should fall through the grate, stop blasting immediately and retrieve it.

4.3.4 Close door; the door interlock system will prevent blasting if either door is open.

4.4 Blasting Operation

⚠ WARNING

To avoid the inhalation of dust, which can cause respiratory illness from short-term ingestion or death from long-term ingestion.

- **Use the blow-off nozzle to blow media off parts before opening doors.**
- **After blasting, keep doors closed and exhauster running until the cabinet is clear of all airborne dust.**
- **Always close cabinet, reclaimer, and dust-collector doors before blasting. Keep all doors closed during blasting.**
- **Always wear blast gloves.**
- **Stop blasting immediately if dust leaks are detected. Refer to troubleshooting Sections 8.14 and 8.15 and identify source of leak.**

4.4.1 Slowly open the air supply to the blast machine. Check for air leaks on the initial startup and periodically thereafter.

4.4.2 Turn ON the lights and exhauster. The on/off switch performs both functions.

4.4.3 Load parts. If parts are oily or greasy, degrease and dry them prior to blasting.

4.4.4 Close door; the door interlock system will prevent blasting if either door is open.

4.4.5 Insert hands into rubber gloves.

4.4.6 To blast, hold the nozzle holder or hose just behind the nozzle holder, point the nozzle toward the object to be blasted, and apply pressure to the foot pedal; blasting will begin almost immediately.

⚠ WARNING

Shut down the cabinet immediately if dust leaks are detected from the dust collector or cabinet. Make sure the dust-collector filter(s) are correctly seated and not worn or damaged. Prolonged breathing of any dust can result in serious lung disease or death. Short-term ingestion of toxic dust such as lead, poses an immediate danger to health. Toxicity and health risk vary with type of media and dust generated by blasting. Identify all material being removed by blasting, and obtain a safety data sheet (SDS) for the blast media.

4.4.7 Adjust the pilot pressure regulator to the required blasting pressure, per Section 5.1. The regulator is located on the top-left side of the cabinet. **NOTE: Pressure registers on the gauge only while blasting.**

NOTICE

To prevent rapid frosting of the view window, avoid pointing the blast nozzle toward the window and install a view-window cover lens, per Section 7.3.

When holding parts off the grate, use a solid conductive backrest to support the part. Without this assist, especially with longer blasting operations, the operator will tire easily from resisting blast pressure, and static electricity could build up in the ungrounded part and cause static shocks. Whenever possible avoid holding small parts that require blasting into the glove.

4.4.8 If an object should fall through the grate, stop blasting immediately and retrieve it.

4.5 Operation and Function of the Choke Valve Figure 15

4.5.1 Always fully open the choke valve while blasting; open is when the handle is vertical and aligned with the piping, as shown in Figure 15.

4.5.2 Closing the choke valve while blasting lowers pressure in the pusher line from the pressure in the vessel. Closing the valve forces media through the metering valve to clear minor blockage, such as damp media, or it is used to rapidly empty the machine to change media.

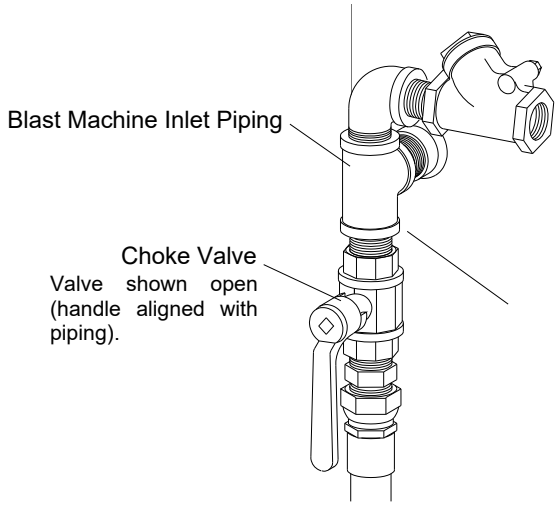


Figure 15

NOTICE

Do not blast with choke valve closed or partially closed. Prolonged blasting with the choke valve partially closed will accelerate wear on the metering valve.

4.6 Blasting Technique

4.6.1 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 6" from the surface of the part.

4.7 Stop Blasting

4.7.1 To stop blasting, remove foot pressure from the top of the foot pedal. The blast machine will depressurize each time the foot pedal is released

4.7.2 The blast machine refills with media stored in the reclaimer each time the foot pedal is released. Refilling takes approximately 15 seconds.

4.7.3 Use the blow-off nozzle to blow media off parts.

4.7.4 Keep doors closed and exhauster running until the cabinet is clear of all airborne dust.

4.7.5 Unload parts.

4.8 Shutdown

4.8.1 Shut off the air-supply valve, bleed the air-supply line, and drain the compressed-air filter and dust-collector pulse reservoir.

4.8.2 Switch OFF the lights and exhauster.

5.0 ADJUSTMENTS

5.1 Blasting Pressure (pilot regulator) – Figure 16

5.1.1 The pilot pressure regulator, located on the top front-edge of the cabinet, enables the user to adjust blasting pressure to suit the application. The suitable pressure for most purposes is about 80 psi. Lower pressures may be required on delicate substrates, and will reduce media breakdown. Higher pressure may be required for difficult blasting jobs on durable substrates, but will increase media breakdown. Optimal production can only be achieved when pressure is carefully monitored.

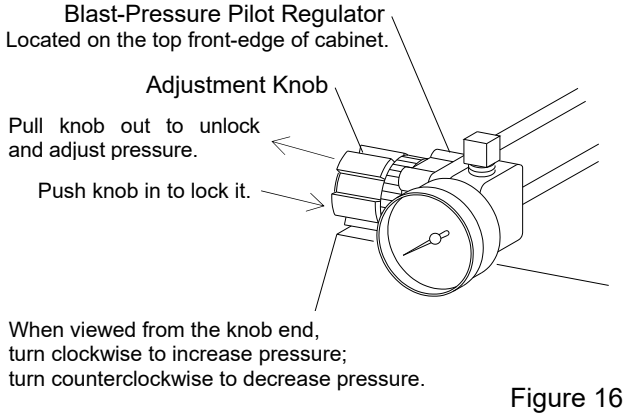


Figure 16

5.1.2 When blasting below 40 psi, first pressurize the blast machine at 40 psi, and then turn the pressure to the required setting before blasting the part. If the initial pressure is below 40 psi, the pop-up valve may not seal.

5.1.3 Pressure registers on the gauge only while blasting. While holding the nozzle securely, adjust air pressure at the pilot regulator.

5.1.4 To adjust pressure, unlock the knob by pulling it out, as shown in Figure 16, and turn it clockwise to increase pressure or counter-clockwise to decrease pressure. Once operating pressure is set, push the knob in to lock it and maintain the setting.

5.2 Media Metering (media flow) – Figure 17

NOTE: Make media adjustments with the machine in operation. Enlist the aid of a second person to adjust the metering valve while the operator operates the foot valve and holds the nozzle.

These instructions and the illustration in Figure 17 are for a standard cabinet with FSV Metering Valve. Optional metering valves may function differently, but the process is similar. Refer to the metering valve owner's manual for the operation of the optional valve provided.

5.2.1 Adjust media flow using the metering valve located at the bottom of the blast machine. Begin adjustments with the media valve closed; the valve is closed when the handle is fully turned to either side of center, as shown in Figure 17. To adjust, press the foot pedal and have someone increase media flow by turning the handle slowly toward center, no more than 1/4" at a time. Allow time for the flow to stabilize before readjusting. Optimum flow depends on the type and size of media and blasting pressure, and can best be determined by experience. Use as little media as possible to do the job while maintaining the best cleaning rate. Generally, with the correct mixture, media can be seen as light discoloration as it exits the nozzle.

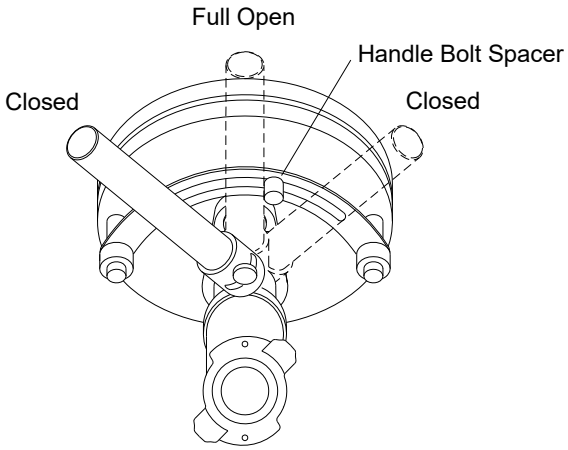


Figure 17

5.3 Reclaimer Static Pressure (dust-collector outlet damper)

5.3.1 Correct static pressure varies with the size of reclaimer and the size, weight, and type of media.

5.3.2 Adjust static pressure by opening (handle in line with air flow) or closing (handle perpendicular to air flow) the dust-collector damper. Refer to the dust-collector owner's manual; the damper is located on the exhauster outlet on RPH dust collectors. If the damper is not opened far enough, the reclaimer will not remove fines, resulting in dusty media, poor visibility, and possible media blockage in the conveying hose. If the damper is opened too far, it may cause carryover (usable media carried into the dust collector) and result in excessive media consumption. Open only as far as necessary to obtain a balance of maximum dust removal without good-media carryover.

5.3.3 A manometer is useful when adjusting or monitoring static pressure. The optional manometer kit is listed in Section 9.1: Optional Accessories. The static pressure starting point for plastic media and similar media should be 2-1/2" - 3". Static pressure may need to be lower with finer media and higher with coarser media. Run the media through several blast cycles, allowing the reclaimer to function with these settings. Inspect the media in the reclaimer and fines in the dust collector, as noted in Paragraph 5.3.2. Continue adjusting static pressure until optimum media cleaning without carryover is attained.

5.3.4 If the damper has been adjusted and carryover or excessive dust in the media continues, adjust the vortex cylinder per Section 5.4.

5.4 Externally Adjustable Vortex Cylinder

The vortex cylinder fine-tunes media separation. Before adjusting the cylinder, adjust the damper on the dust collector to increase or decrease static pressure, per Section 5.3. Once the damper is adjusted, adjust the cylinder.

5.4.1 The vortex cylinder is located atop the reclaimer where the flex hose connects. Adjustments are made by loosening the handle's tensioning knob and moving the handle to achieve the correct setting. When the correct setting is established, tighten the locking knob to prevent movement. Start with the lever slightly to the right (about 1 o'clock, as shown in Figure 18) of the vertical position.

5.4.2 To remove more fines: (Too much dust in media.) Raise the cylinder by moving the lever left toward "COARSE" in 1/4" increments at the indicator

plate. Allow the media to go through several blast cycles before determining if further adjustment is needed.

5.4.3 To remove fewer fines: (Excessive usable media is carried to the dust collector.) Lower the vortex cylinder by moving the lever right toward "FINE" in 1/4" increments at the indicator plate. NOTE: If the cylinder is lowered too far, the reclaimer will again begin to allow usable media to carry over and cause abnormally high static pressure.

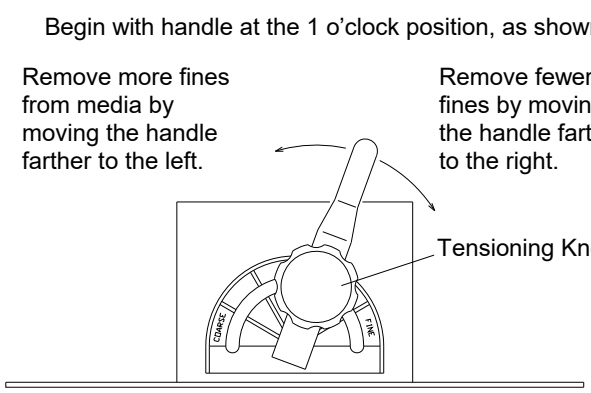


Figure 18

5.5 Door Interlocks – Figure 19

⚠ WARNING

Never attempt to override the interlock system. Doing so can result in injury from unexpected blasting.

5.5.1 The door interlocks disable the blasting control circuit when either door is open. To enable blasting, the door-interlock switch must be engaged when the doors are closed. The interlocks are set at the factory and do not normally require field adjustment unless parts are replaced. When adjustment is required, proceed as follows.

5.5.2 Close cabinet doors.

5.5.3 Loosen the actuator bracket screws and adjusting screw nut. Move the actuator bracket up or down, and the adjusting screw sideways, to center the screw on the over-travel stop. Tighten the bracket screws.

5.5.4 Turn the adjusting screw in or out as required to engage the switch without applying excessive pressure on it. Tighten the adjusting screw nuts.

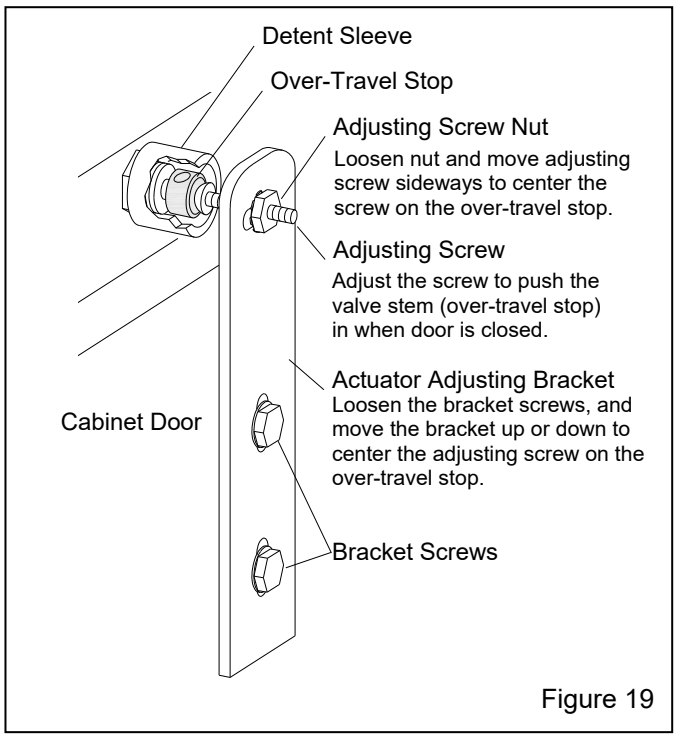


Figure 19

5.5.5 Test the operation with the doors open and then again closed. Negative pressure inside the cabinet may cause the doors to flex inward. Tests should be performed with the exhauster running. Point the nozzle away from the door during the tests, and open the door only enough to disengage the interlock switch. The interlocks should stop the blasting when either door is opened and permit blasting when the doors are closed.

5.6 Cabinet Air-Inlet Dampers

5.6.1 Once the inlet is initially set, per Section 2.13, it seldom requires readjustment. The initial setting produces approximately .5″ to .75″ of static pressure in the cabinet enclosure. **Do not confuse cabinet static pressure with reclaimer static pressure, which is controlled by the dust-collector damper, as noted in Section 5.3. Reclaimer pressure must be set before cabinet pressure.**

5.6.2 Using a manometer (as noted in Section 5.7 and listed in Section 9.1) is the most accurate method of monitoring and adjusting cabinet pressure. Following the instructions packed with the manometer, start the exhauster and insert the needle into a glove, and adjust pressure using the cabinet's air-inlet damper. Open the damper farther to decrease static pressure or close it farther to increase pressure.

5.6.3 If a manometer is not available, use the gloves as an indicator. With the exhauster running, the gloves should be inflated, but not elevated off the grate.

5.7 Optional Manometer

These instructions show several methods of taking static pressure readings (negative pressure) on reclaimers by using a flexible-tube manometer. Use the method best suited for the application. The instruction explains the processes for taking periodic readings and show how to permanently install the manometer for taking frequent readings. A fitting should be installed when the manometer installation is permanent, refer to Paragraph 5.7.6.3. Use silicone or other sealant around the fitting to prevent leaks. The fitting should be capable of being capped when the manometer tube is removed. A cap will prevent leaks that alter the reclaimer's separation efficiency. Taking readings at different locations could produce different readings. Static pressure readings at the door are generally 0.5" to 1" lower than readings taken above the reclaimer. The readings are reference points, so readings should be taken using the same method each time the reading is taken.

5.7.1 Refer to instructions packed with the manometer for preparing and operating the manometer.

5.7.2 Connect one end of the 3/16" ID tubing to one of the tubing connectors (elbow) at the top of the manometer by pushing it over the barbed adaptor.

5.7.3 Leave the needle protector on the needle and insert the needle into the other end of the tubing. The ends of the tubing must fit tight on the manometer and needle; leaks will cause inaccurate readings.

5.7.4 Open both manometer valves (elbows) per manometer instructions.

5.7.5 Magnets on the manometer hold it in position on the reclaimer or dust-collector body. The manometer must be vertical so the fluid is level on both sides.

5.7.6 Needle placement: Figure 20 shows the manometer setup for taking both periodic and frequent static pressure readings.

5.7.6.1 Taking readings in the flex hose: Remove the needle protector, and insert the needle into the flex hose approximately 8" above the top of the reclaimer.

5.7.6.2 Taking readings at the reclaimer door: Open the reclaimer fill door, remove the needle protector, and place the needle so the tip is inside the door opening. Carefully close the door on the needle. The side of the needle will embed into the rubber, creating an airtight seal.

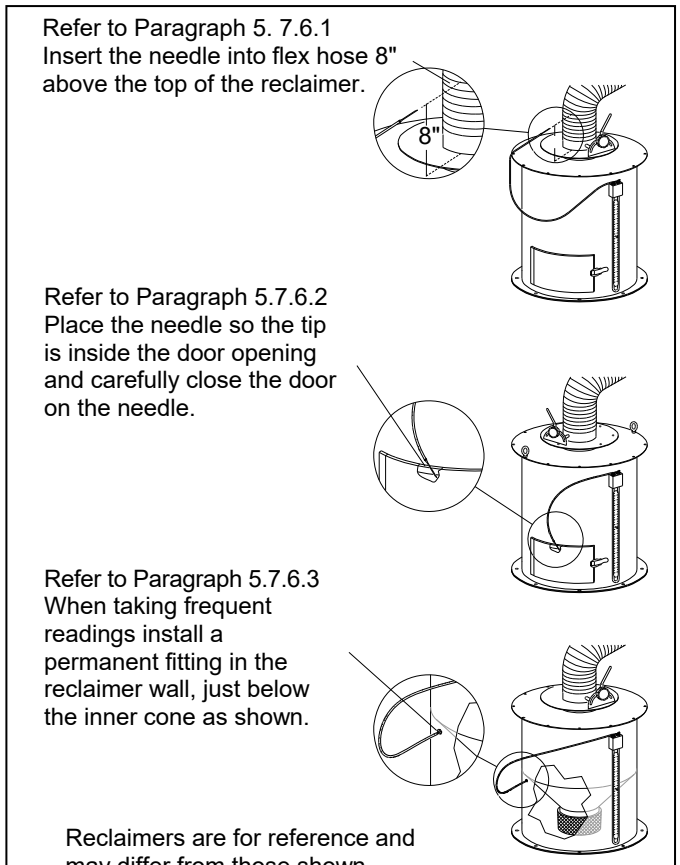


Figure 20

5.7.6.3 Taking frequent readings using a permanent fitting: A permanent fitting may be installed in the reclaimer wall, as shown in Figure 20 for taking frequent static pressure readings. Permanent fittings must have a barb to accommodate the 3/16" ID tubing and have a means of sealing the fitting when the manometer is not in use. Use silicone sealer or other sealant to seal around the fitting to prevent leaks. The fitting should be capable of being capped when the manometer tube is removed. Sealing the fitting will prevent leaks that alter the reclaimer's separation efficiency. Air drawn into the reclaimer will cause carryover of good media to the dust collector.

5.7.7 Adjust the slide rule to align the zero with the fluid level. Refer to the upper part of Figure 21

5.7.8 Open cabinet doors and turn the exhauster ON. The negative (static) pressure will move fluid in the tube. **NOTE: Readings must be taken with the cabinet doors open and with the exhauster running.**

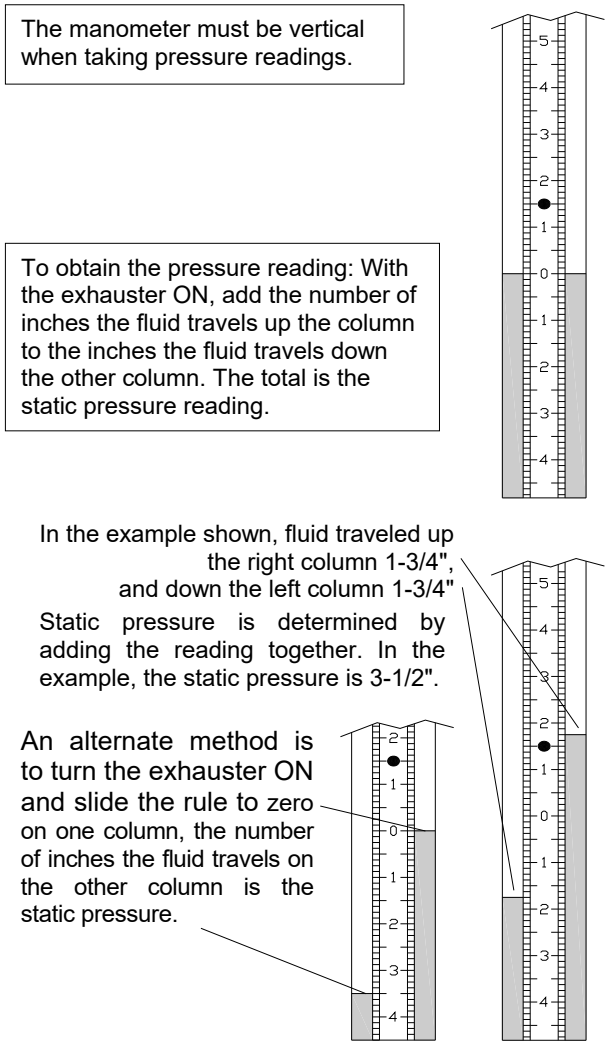


Figure 21

5.7.9 To find the static pressure, add the number of inches the fluid travels up one column to the inches the fluid travels down the other column. Refer to the example in Figure 21. **NOTE: An alternate method to take the reading is to turn the exhauster ON and slide the rule to zero on one column, the number of inches the fluid travels on the opposite column is the static pressure. Doing so eliminates the need to add the columns together.**

5.7.10 After taking the readings, replace the needle protector. Close the manometer valves and store the manometer in the original container in a clean area. NOTE: If the manometer installation is permanent, the manometer may remain on the reclaimer body after the valves are closed.

6.0 PREVENTIVE MAINTENANCE

⚠ WARNING

Failure to wear an approved respirator and personal protection when servicing dust-laden areas of the cabinet and dust collector, as well as when emptying the container, can result in lung disease, serious skin or eye irritation, or other health issues. 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 safety data sheet (SDS) for the blast media.

To avoid unscheduled downtime and to improve safety, establish an inspection schedule. Inspect all parts subjected to media contact, including the nozzle, blast hose, flex hose, wear plate, and all items covered in this section. Adjust frequency of inspections based on:

- **Usage:** Cabinets often used require more maintenance and inspections than those occasionally used.
- **Type of media:** Aggressive media wears parts faster than nonaggressive media.
- **Condition of parts being blasted:** Heavily contaminated parts require more maintenance to the cabinet's media recovery system and dust collector.
- **Friable media:** Media that rapidly breaks down require more maintenance to the cabinet media recovery system and dust collector.

6.1 Daily Inspection and Maintenance Before Blasting with the Air OFF

6.1.1 Check media level: Check media level through reclaimer door and refill as necessary, per Section 4.1.

6.1.2 Inspect reclaimer debris screen and door gasket: Check reclaimer debris screen for debris. The screen is accessible through the reclaimer door. With the exhauster OFF, remove the screen and empty it daily or when loading media. Empty the screen more often if part blasted causes excessive debris. Do not operate the machine without the screen in place, oversized byproduct from blasting could plug the nozzle. While the door is open, inspect the door gasket for wear or damage. Replace the gasket at the first sign of wear.

6.1.3 Compressed-air filter: Drain the filter at least once a day, and more often if needed. Moist air inhibits the flow of media. Drain the air line and receiver tank regularly. If the filter does not remove enough moisture to keep media dry and flowing, it may be necessary to install an air dryer or aftercooler in the compressed-air supply line.

6.1.4 Inspect couplings: Make sure air hose and blast hose couplings are sector and that lock pins and that safety cables are in place.

6.1.5 Inspect dust container: Refer to the dust-collector owner's manual and empty dust containers. Adjust intervals based on filling rate.

6.2 Daily Inspection During Blasting – Have Someone Do the Following:

6.2.1 Check cabinet for dust leaks: During operation, inspect cabinet door seals for media leaks. Dust leaking from the inlet damper or other places on the cabinet indicates saturated filter cartridge. Refer to the dust collector owner's manual.

6.2.2 Check dust-collector exhaust air for dust: Dust discharge at the dust-collector outlet indicates a leaking or damaged filter cartridge. Check immediately. Note that a small amount of dust egress is normal for a short time before a new cartridge is seasoned.

6.2.3 Inspect blast hose couplings and nozzle holder: Inspect blast-hose couplings, coupling gaskets, and nozzle holder for leaks.

⚠ WARNING

Leaks around couplings and nozzle holders indicate worn or loose-fitting parts. Nozzle holders and couplings that do not fit tightly on hose, as well as nozzles that do not fit tightly in nozzle holders, can disconnect while under pressure. Impact from objects (nozzles, couplings, hoses, or media) disconnected by pressure during operation can cause severe injury.

6.2.4 Inspect blast machine for leaks: Check the blast machine for air leaks. If leaks are found around the pop-up valve, inspection door, or pipe fittings at the bottom of the cone, stop blasting immediately and repair or replace worn parts.

NOTICE

If leaks are allowed to continue, abrasive erosion can cause extensive or irreparable damage to the blast machine.

6.2.5 Drain pulse reservoir: Refer to the dust-collector owner's manual and drain the pulse reservoir (manifold) at the end of each shift.

6.2.6 Cartridge pulsing: Refer to the CDC-1 Dust-Collector manual for pulsing instructions and pulse the cartridge at least every half hour of blasting and before turning OFF the exhauster. Dusty blasting conditions will require more frequent pulsing. RPC-2 and RPH-2 Dust Collectors are automatically pulsed at timed intervals.

6.3 Weekly Inspection and Maintenance Before Blasting with Air OFF

6.3.1 Inspect view-window cover lens: Inspect window cover lens and replace as needed, per Section 7.3.

6.3.2 Inspect gloves: Inspect gloves for wear. The first sign of deterioration may be excessive static shocks. Replace as needed, per Section 7.1.

6.3.3 Inspect blast hose and couplings

⚠ WARNING

Worn blast hose can suddenly burst while under blast pressure. Couplings and nozzle holders will not safely grip worn hose and can blow off under pressure. Compressed air and media escaping from a burst hose, or hose whipping from a disconnected coupling or nozzle holder can cause severe injury.

- Inspect blast hose for wear and soft spots by pinching it every 12 inches. Soft spots mean the hose is worn. The first sign of wear is usually along the outside radius where the hose bends just behind the nozzle holder. Replace the hose as soon as soft spots are noted.
- Make sure coupling gaskets are in good condition.
- Make sure coupling screws are fully seated in the coupling and that none are missing.
- Make sure that safety lock pins are inserted in all couplings.
- Make sure safety cables are attached at all blast-hose and air-hose connections and that all slack is removed from the cable.

6.3.4 Inspect Nozzle: Remove the nozzle and inspect nozzle for wear. Replace the nozzle when the orifice diameter is worn 1/16" larger than original size. Before replacing the nozzle, inspect the nozzle washer. Make sure the nozzle washer is in good condition, not worn or otherwise damaged, and in place before reattaching the nozzle.

⚠ WARNING

The threads on the nozzle and nozzle holder must be inspected each time the nozzle is secured to the holder. A loose-fitting nozzle can eject under pressure and cause severe injury. Check the threads for wear and make sure the nozzle holder securely holds the nozzle. The nozzle washer must also be inspected for wear. When nozzle washers are worn or missing, media can erode nozzle threads.

6.3.5 Inspect outlet valve: Inspect outlet valve diaphragm: Remove the four cap screws and inspect the diaphragm. Replace the diaphragm if worn or cracked. Continued use with a warn diaphragm will quickly wear the valve casting.

6.3.6 Optional differential pressure-gauge inline-filter: With the exhauster turned OFF, check the in-line dust filer for dust accumulation.

6.4 Weekly Inspection During Blasting – Have Someone do the Following:

6.4.1 Inspect blast machine plumbing: Inspect all external piping, hoses, valves, and couplings for air leaks. If leaks are found, repair immediately.

6.4.2 Inspect flex hoses: Inspect flex hoses for wear and negative pressure leaks.

6.5 Monthly Inspection and Maintenance

6.5.1 Reclaimer wear plate: Remove the flex hose from the reclaimer inlet and use a light to inspect the reclaimer wear plate for wear. If the rubber is worn through to the backing metal, replace the wear plate per Section 7.11.

6.5.2 Pop-up valve: Check the pop-up valve's urethane coating for cracks and grooves. Replace the pop-up valve at the first sign of wear, per Section 7.8.

6.5.3 Pop-up seal: Inspect the rubber pop-up seal and replace at the first sign of wear, drying, or cracking, per Section 7.9.

6.6 Dust Collector

Reverse-pulse dust collectors are covered in a separate manual. Refer to Section 1.1.1.

7.0 SERVICE MAINTENANCE

⚠ WARNING

Prior to doing any maintenance or opening the dust collector, the employer must meet required OSHA standards, including but not limited to 29 CFR 1910 for:

- **Appropriate Respirator**
- **Protective Clothing**
- **Toxic and Hazardous Substances**
- **Fall Protection**
- **Lockout and Tagout**

All dust is hazardous to breath; toxicity and health risk vary with type of dust generated by blasting. Prolonged exposure to <u>any</u> dust can result in serious lung disease and death. Short-term exposure to toxic materials, such as lead dust or dust from other heavy metals and corrosives, can cause serious injury or death. Identify all material that is being removed by blasting and obtain a Safety Data Sheet (SDS) for the blast media. Waste dust in the collector can cause serious injury or death through inhalation, absorption, or ingestion. The employer shall meet all OSHA requirements, including but not limited to those for confined space, combustible dust, fall protection, hazard communication, and lockout and tagout procedure for electrical and pneumatic supply.

7.1 Gloves

7.1.1 Special static-dissipating gloves are provided for operator comfort. Gloves need to be replaced periodically as they wear. The first sign of deterioration may be excessive static shocks.

7.1.2 Band-clamp type: Band-clamp type gloves are held in place by metal band clamps on the inside of the cabinet. To replace, loosen the clamps with a screwdriver, replace the gloves, and tighten the clamps.

7.1.3 Quick-change type, clampless installation: Quick-change gloves are held in place using spring rings sewn into to the attachment end of the glove. To

install, insert the glove into the arm port so that one spring is on the inside of the port and the other is on the outside, sandwiching the arm port between both spring rings.

7.2 Blast Hose and Nozzle – Figure 22

7.2.1 To remove old hose, disconnect hose from blast machine and remove nozzle holder or coupling, and then pull the hose through the hose support. Install new hose and couplings in reverse order.

7.2.2 When replacing blast hose, make sure the hose is square cut and that it is fully inserted into the nozzle holder and coupling until it sits tightly against the shoulder in the holder and coupling, as shown in Figure 22. Make sure correctly sized screws are used to secure the nozzle holder and blast-hose coupling. Screws should not penetrate the inside of the blast hose.

7.2.3 Replace the nozzle when its orifice (the smallest inside diameter) has increased by 1/16" or sooner if blast pressure noticeably diminishes. Make sure the nozzle washer is in good condition and in place before screwing the nozzle into the nozzle holder. Make sure the nozzle is screwed tightly into the nozzle holder; if nozzle is not tight against the nozzle washer, thread erosion will occur and nozzle will fuse to nozzle holder.

7.3 View-Window Cover Lens

7.3.1 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.

7.3.2 The best way to install a cover lens is to remove the window from the cabinet. If, for any reason, it is not practical to remove the window, the lens may be applied with the window glass in place.

7.3.3 To install a cover lens, carefully remove the adhesive backing making sure the adhesive remains on the lens, and apply the lens to the clean, dry, inner surface of the view window. When the cover lens becomes pitted or frosted, replace it.

7.4 View-Window Replacement

⚠ WARNING

Do not use plate glass for replacement view windows. Plate glass shatters on impact and can cause severe injury. Use only genuine ZERO® laminated replacement glass.

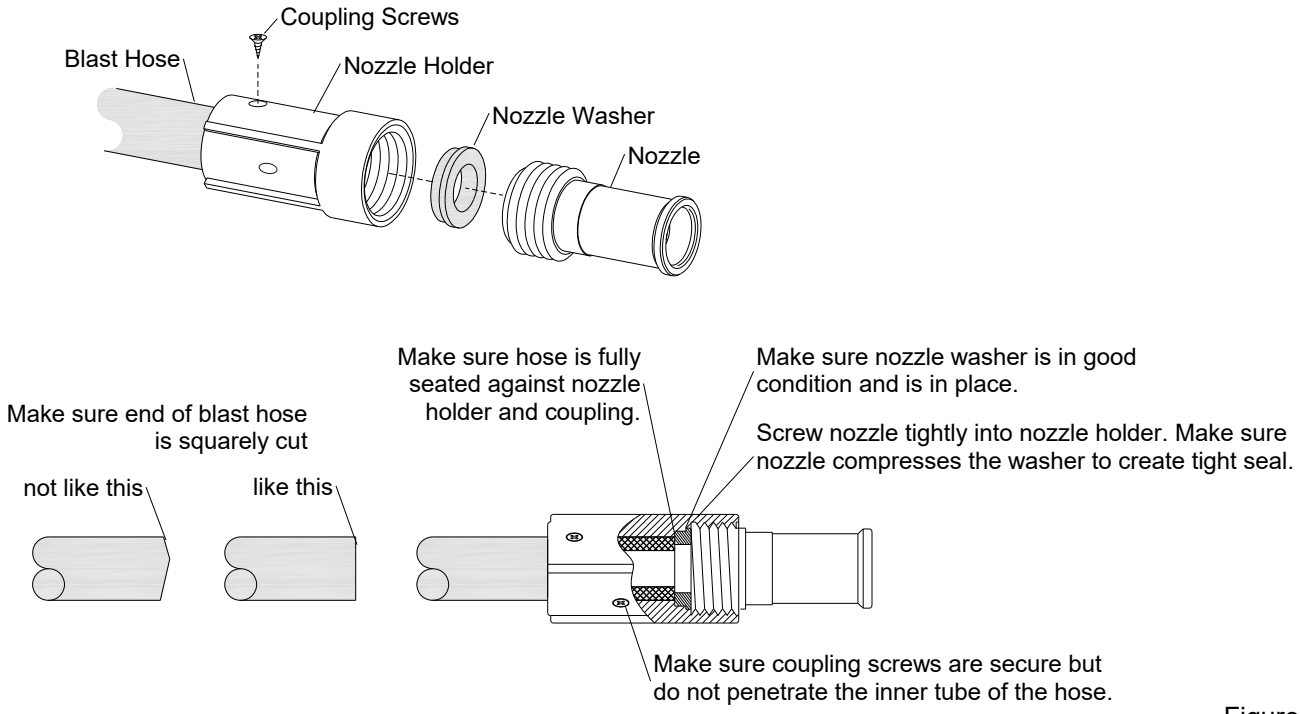


Figure 22

7.4.1 Remove the two window-frame nuts located on the upper edge of the window frame and swing the window frame open. If the frame is to remain open, for cleaning or other reasons, remove it, per Section 7.6.

7.4.2 Remove the old window.

7.4.3 Inspect the window frame gaskets, on both the window frame and on the cabinet. If either gasket is damaged, replace it, per section 7.5.

7.4.4 Install view-window cover lens, per Section 7.3.

7.4.5 Set the new window (cover lens down) squarely over the window opening, making sure that all edges of the window are centered and overlapping the window gasket, and that the window is resting on the window support tabs.

7.4.6 Swing the window frame into place and tighten the frame nuts.

7.5 Window-Gasket Replacement – Figure 23

7.5.1 Inspect the gaskets when changing the view window. Replace the window-frame gasket and cabinet window-opening gasket at the first sign of media leakage around the view window, or if gaskets are worn or otherwise damaged.

7.5.2 Remove the window and window frame, per Section 7.6.

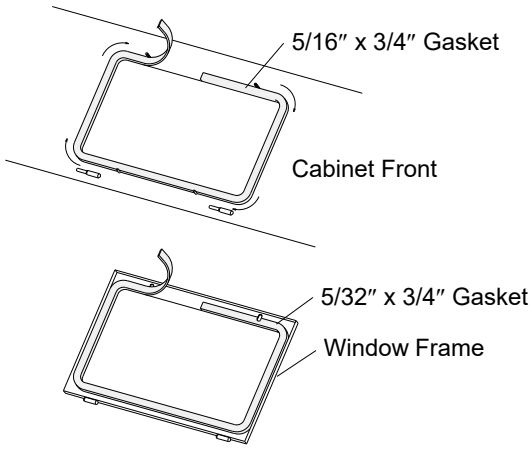


Figure 23

7.5.3 Remove all the old gasket material and clean the surfaces of the cabinet and window frame.

7.5.4 Peel a short section of adhesive backing from the 5/16″-thick strip gasket and adhere the gasket to the center of the top edge of the window opening, as shown in Figure 23. Peel additional backing as needed, and work the strip around the radius of each corner, pressing it firmly to bond. Trim the gasket to fit and compress the ends to seal.

7.5.5 Using 5/32″-thick strip gasket, repeat the process on the underside of the window frame.

7.5.6 Trim around window-frame bolt slots, as needed.

7.6 Window-Frame Removal – Figure 24

7.6.1 Remove the two window-frame nuts located on the upper edge of the window frame and swing the window frame open.

7.6.2 Remove the window to prevent breakage.

7.6.3 Pivot the window frame up or down until tension is off the frame hinges.

7.6.4 Slide the frame to the right, to remove. The hinges separate, as shown in Figure 24.

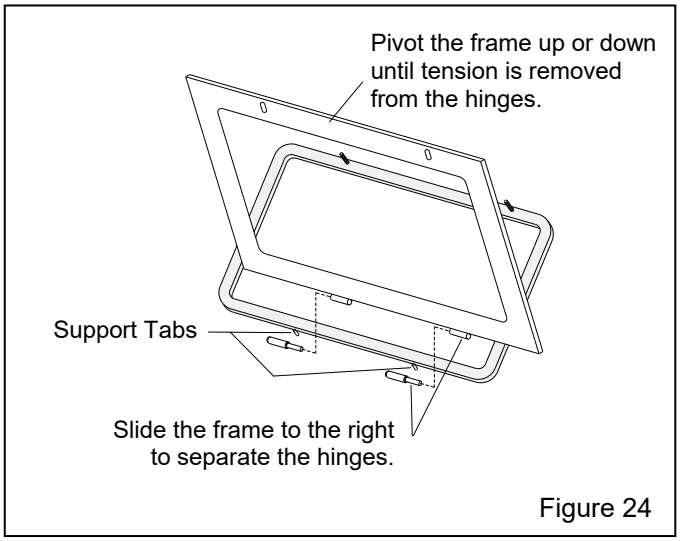


Figure 24

7.6.5 Replace the frame in reverse order. Slide the frame as necessary to align the top bolt holes with the bolts.

7.6.6 Set the window squarely over the window opening. Make sure that all edges of the window are centered, overlapping the window gasket, and that the window is resting on the window support tabs.

7.6.7 Swing the window frame into place and tighten the frame nuts.

7.7 LED Light Assembly

⚠ WARNING

Use an approved stepladder when servicing the light assembly. Do not climb on top of the cabinet. The cabinet top will not support the weight of a person. Failure can result in injury and property damage.

7.7.1 Remove light-mount cover

7.7.1.1 Turn OFF electrical power.

7.7.1.2 Remove the four nuts and washers that attach the light-mount cover to the cabinet and remove the cover, as shown in Figure 25.

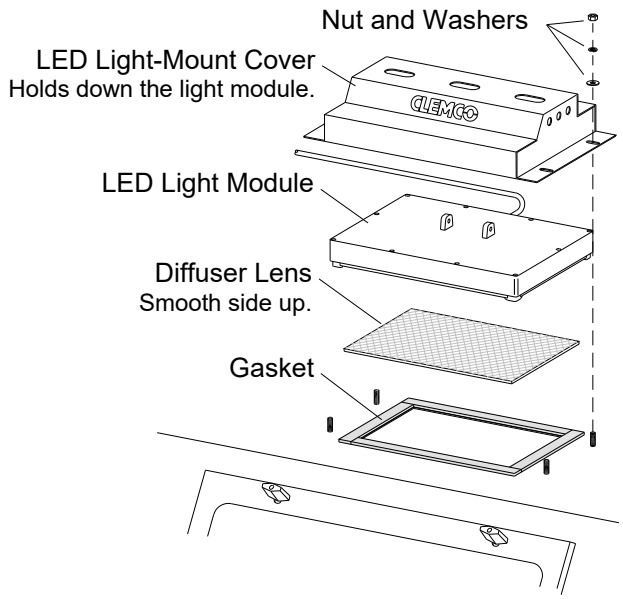


Figure 25

7.7.2 Gasket replacement

7.7.2.1 Remove the four nuts and washers that attach the light-mount cover to the cabinet and remove the cover, as noted in Section 7.7.1. Move the light module off the diffuser lens and remove the lens.

7.7.2.2 Remove all the old gasket material and clean the surface of the cabinet.

7.7.2.3 Lay a section of strip gasket along the edge of the opening and cut to length, allowing 3/4″ overlap on each end. Peel a short section of adhesive backing and adhere the strip gasket to the top edge of the light opening, as shown in Figure 25. Press the gasket to bond. Repeat the process for each side, compressing the ends to seal.

7.7.3 Diffuser lens replacement

7.7.3.1 Remove the four nuts and washers that attach the light-mount cover to the cabinet and remove the cover, as noted in Section 7.7.1. Move the light module off the diffuser lens and remove the lens. Inspect the gasket and replace it, per Section 7.7.2, if it is compressed or otherwise damaged, before centering the new diffuser (smooth side up) over the gasket.

7.7.3.2 Set the light module on the diffuser and reattach the cover.

7.7.4 LED light module replacement

7.7.4.1 Turn OFF electrical power and perform lockout and tagout procedure to power supply.

7.7.4.2 Remove the light-mount cover, per Section 7.7.1.

7.7.4.3 Remove the junction-box cover and note the wire connections. Current connections are as follows:

- Brown wire .....Hot
- Blue wire .....Neutral
- Yellow w/green stripe ..... Ground

If color coding is different from that shown above, make note of the color code before disconnecting the wires.

7.7.4.4 Loosen the strain-relief compression nut and remove the cord from the junction box.

7.7.4.5 Place the new module in position on the cabinet and route the cord through the strain relief and into the junction box.

7.7.4.6 Cut the cord to length and wire as follows:

- Brown wire ..... Hot
- Blue wire ..... Neutral
- Yellow w/green stripe ..... Ground

7.7.4.7 Apply power to test the light(s).

7.7.4.8 Tighten the strain-relief compression nut, set the light module on the diffuser, and reattach the cover.

7.8 Replacing Pop-Up Valve

7.8.1 Empty the machine of media as described in Section 4.2.

⚠ WARNING

Failure to observe the following procedure before performing any maintenance can cause serious injury or death from the sudden release of compressed air.

- **Depressurize the blast machine.**
- **Lockout and tagout the compressed-air supply.**
- **Bleed the air-supply line to the blast machine.**

7.8.2 Depressurize the blast machine, and lockout and tagout the compressed-air supply.

7.8.3 To gain access to the pop-up valve, remove the inspection door assembly as follows:

1. Loosen the inspection-door clamp nut enough to slide the clamp bolt from behind the bolt bracket. Then remove the clamp, bolt, and nut, as an assembly, as shown in Figure 26.

2. Push the inspection-door plate into the blast machine and rotate it so it can be removed through the inspection door. If the plate is stuck to the inspection-hole ring, rap the door with a rubber mallet or similar tool to loosen it. Remove the door gasket if it is cracked, dry, or otherwise damaged.

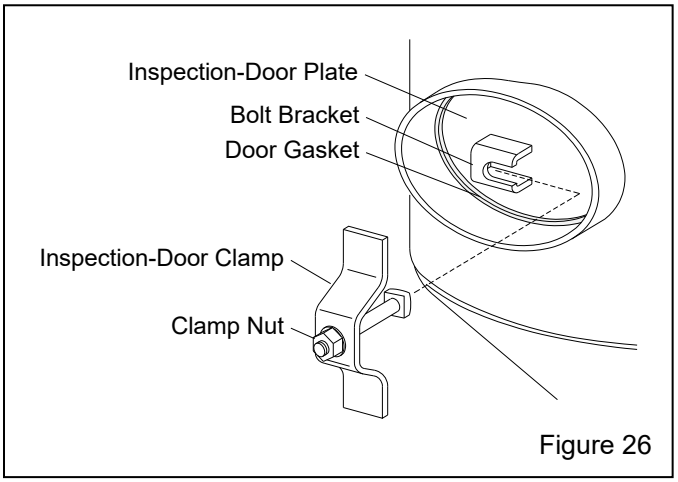


Figure 26

7.8.4 If the gasket requires replacement, use rubber-based glue to adhere it to the inspection-door plate. Allow the adhesive to cure before bolting the plate onto the machine.

7.8.5 Use a short pipe wrench to unscrew the pop-up valve guide from the elbow by turning it counterclockwise, as shown in Figure 27. Remove the pop-up valve and guide from the machine.

7.8.6 Slide the new pop-up valve over the guide and then screw the guide (with the pop-up valve on it) into position inside the machine. Tighten the guide wrench-snug, but not wrench-tight. Over tightening the guide will make it difficult to remove next time the pop-up valve needs replacement.

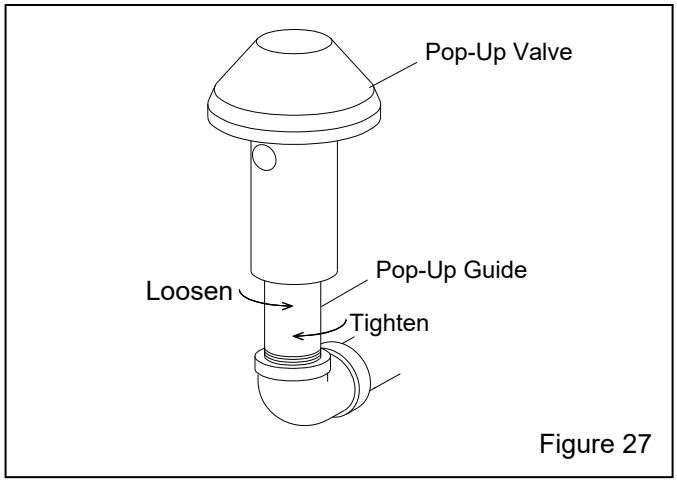


Figure 27

7.8.7 Bolt the plate onto the machine and tighten to approximately 55 ft lbs. Pressurize the vessel and check for air leaks. If leaks are noted, depressurize the machine and tighten the clamp nut.

7.9 Replacing Pop-Up Valve Seal – Figure 28

7.9.1 The easiest method to replace the rubber pop-up seal is through the reclaimer access door. If for any reason replacement cannot be made through the reclaimer, observe the warning in Section 7.8, empty media from the machine, and bleed the air-supply line. Remove the inspection door assembly, as noted in Section 7.8.3, and work through the opening.

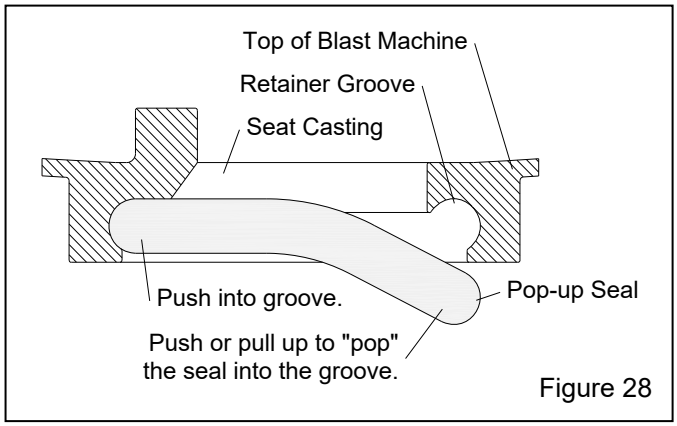


Figure 28

7.9.2 Remove the old seal by using a finger, screwdriver, or similar object to work the seal out of the retainer groove.

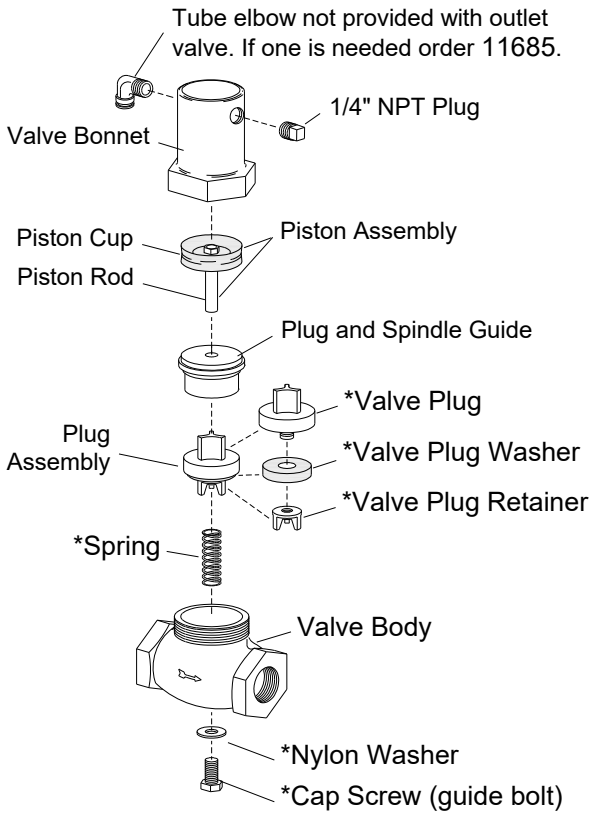
7.9.3 Push the new seal all the way through the port and then fit it into the groove. For the last few inches, pull up on the seal and allow it to "pop" into position.

7.10 Piston Outlet Valve – Figure 29

7.10.1 All service on the outlet valve must be done with the air OFF and the air supply locked out and tagged out. It is not necessary to remove the valve from the blast machine.

7.10.2 Remove the poly tubing from the valve bonnet's elbow adaptor. NOTE: The tubing elbow and 1/4-NPT plug do not need to be removed unless they need to be replaced.

7.10.3 Use a large wrench to loosen the bonnet from the valve body, until it can be removed by hand.



*Items included in service kit.
For replacement parts, Refer to Section 9.9.

Figure 29

7.10.4 To remove the bonnet, lift it straight up until the piston rod clears the spindle guide.

7.10.5 Remove the plug and spindle guide, plug assembly, and spring from the valve body.

7.10.6 Remove the piston from the bonnet by pulling the piston rod.

7.10.7 Inspect all parts for wear and damage as follows:

- Inspect the valve-plug washer, valve plug, and plug retainer for damage. Replace all damaged parts. When reassembling the valve-plug assembly tighten the retainer enough to compress the washer, but not so tight that it causes it to bulge.
- Examine the body casting for wear. If the body or the machined seat is worn, replace the body.
- Examine the spring guide bolt and nylon washer. If either is worn, replace both.
- The spring is approximately 1-5/8″ long; if it is abrasive worn, rusty, or compressed, replace it.
- The piston cup should fit snugly against the bonnet's cylinder wall. If it does not, replace the piston assembly.
- The piston rod should be free of deep abrasion and move freely in the spindle guide's bore. If it is badly abraded, drags in the bore, or is loose in the bore, replace the piston assembly.

7.10.8 Lubricate the cylinder wall and piston cup with lightweight machine oil or tool oil.

7.10.9 Install the piston into the bonnet's cylinder. Cocking the piston so it enters the bonnet at a slight angle and rotating it while applying pressure makes assembly easier. Do not push the piston fully into the bonnet; the rod should be flush with the opening.

7.10.10 Place the spring over the guide bolt and set the plug assembly (retainer down) on the spring. Note: the three prongs on the retainer fit over the end of the spring; make sure a prong does not slip inside the spring's coils.

7.10.11 Place the plug and spindle guide in the body the large opening faces down and fits over the plug's fins. The spindle shoulder will not rest on the valve body due to the force of the spring.

7.10.12 To assemble the bonnet to the valve body, first insert the piston rod into the spindle guide hole. While keeping the bonnet, spindle, and body aligned, screw the bonnet onto the body. If all parts are correctly aligned, the body will screw on hand-tight until it is seated. **NOTE: If the bonnet does not screw on hand-tight, do not force it. Recheck alignment and repeat assembly.**

7.10.13 After the bonnet is fully seated on the body tighten the assembly with a wrench.

7.10.14 Insert the poly tubing into the elbow adaptor on the bonnet, and tug on it to make sure it is seated.

7.11 Replacing Reclaimer Wear Plate – Figure 30

⚠ WARNING

Aerolyte reclaimers weigh approximately 250 lbs. When installing or removing the reclaimer it must be adequately supported and secured to appropriate lift equipment. Failure to secure and use proper lift device can result in injury or death. When using a ladder to service the reclaimer make sure it is approved for the application and that appropriate fall protection is used. Failure to use appropriate ladder and fall protection can result in injury.

Depending on conditions such as height and accessibility, it may be easier to replace the wear plate if the reclaimer is removed from the blast machine. Make sure enough 13089 - 2" adhesive-backed gasket is available to replace compressed or damaged gaskets on the reclaimer upper flange (and lower, blast machine flange if the reclaimer is removed from the blast machine).

- 900 cfm requires 7 feet for each flange.

7.11.1 Remove the flex hose from the reclaimer inlet.

7.11.2 Unbolt the reclaimer top and then remove the top, the inlet pipe adaptor, adaptor gasket, and old wear plate. The wear plate is held in place by screws attached from the outside of the reclaimer. Remove the screws and pull out the wear plate.

7.11.3 Remove remnants of old caulk that will prevent the new wear plate from seating against the reclaimer wall or top.

7.11.4 Angle the new wear plate into the reclaimer inlet and position it so the straight end is flush with the inlet. Use locking pliers, clamps, board (2 x 4), or other means where needed to pry the wear plate against the side of the inlet and inner wall. Make sure the leading edge of the wear plate is aligned with the reclaimer inlet and that the top edge is even with the top of the reclaimer.

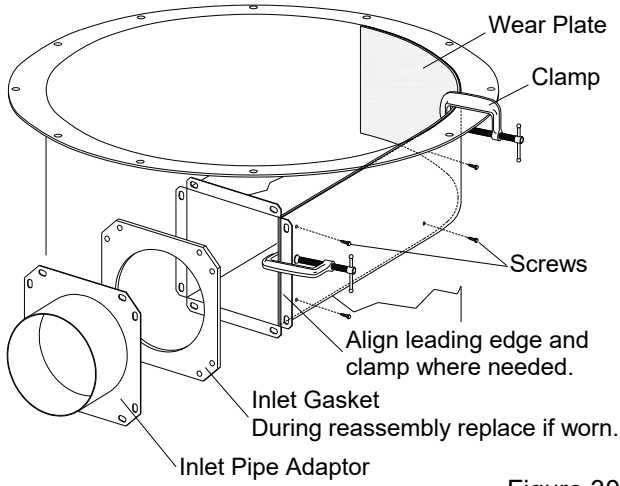


Figure 30

7.11.5 New self-drilling sheet metal screws are provided with the wear plate; match drill through each old screw hole into the wear plate to secure. Rearrange the clamp(s) as needed to press the wear plate against the reclaimer wall when installing.

7.11.6 Replace the upper flange gasket as needed and reattach the reclaimer top.

7.11.7 To avoid rapid wear, apply RTV caulk to fill gaps at the seams on the top and bottom of the wear plate.

7.11.8 Replace the lower flange gasket as needed and reattach the reclaimer to the blast machine.

7.11.9 Attach the inlet pipe adaptor, replacing the gasket if worn, compressed, or otherwise damaged.

7.11.10 Reconnect the flex hose.

7.11.11 Allow time for the caulking to cure before putting the reclaimer into service.

7.12 Reverse-Pulse Dust Collector

Reverse-pulse dust collectors are covered in a separate manual, refer to Section 1.1.1.

8.0 TROUBLESHOOTING

⚠ WARNING

To avoid serious injury, observe the following when troubleshooting:

- **Turn OFF the compressed-air supply, bleed the supply line and lockout, and tagout the air supply.**
- **If checking the controls requires air, always enlist the aid of another person to:**
  - **Hold the nozzle holder securely.**
  - **Operate the foot pedal.**
- **Never bypass the foot pedal or wedge it in the operating position.**
- **Never bypass the door interlock system.**
- **Follow all OSHA regulations including lockout and tagout procedures.**

8.1 Poor visibility

8.1.1 Dirty filter cartridge(s). Pulse cartridge and empty dust container regularly. Refer to the applicable dust-collector manual noted in Paragraph 1.1.1, to adjust pulse pressure and pulse sequence.

8.1.2 Exhauster motor not operating. Check voltage to motor and motor wiring.

8.1.3 Check rotation of exhauster motor; the motor should rotate as indicated by the arrow on the housing. If it does not rotate in the proper direction, **lockout and tagout electrical power** and switch the motor leads as shown on the motor plate. Refer to Section 2.11.

8.1.4 Using friable media that rapidly breaks down, or using media that is too fine or worn out. Check condition of media.

8.1.5 Dust-collector damper closed too far restricting air movement through the cabinet. Adjust static pressure, per Section 5.3.

8.1.6 Cabinet air-inlet damper closed too far restricting air movement through the cabinet. Adjust damper, per Section 2.13 and 5.6.

8.1.7 Reclaimer door open. Check door.

8.1.8 Hole worn in flex hose between cabinet hopper and reclaimer inlet or between the reclaimer and dust collector. Replace hose and route it with as few bends as possible to prevent wear.

8.1.9 Obstruction in flex hose between the cabinet hopper and reclaimer inlet. Inspect flex hose for blockage.

8.1.10 Nozzle worn. Replace the nozzle when its orifice diameter has increased by 1/16".

8.2 Abnormally high media consumption

8.2.1 Door on reclaimer open or worn door gasket. Air entering reclaimer around the door will cause media carryover to the dust collector. Inspect door gasket. DO NOT operate unless all doors are closed.

8.2.2 Dust-collector damper open too far. Adjust static pressure, per Section 5.3.

8.2.3 Media may be too fine or worn out. Check condition of media.

8.2.4 Using friable media that rapidly breaks down. Check condition of media.

8.2.5 Blast pressure too high for the media, causing media to break down. Check blast pressure and adjust as needed or switch media.

8.2.6 Hole worn in reclaimer, or leak in reclaimer seams. Check entire reclaimer for negative-pressure leaks.

8.2.7 Outlet valve not sealing. Inspect outlet valve.

8.2.8 Metering valve requires adjustment. Adjust media flow, per Section 5.2.

8.2.9 Externally-adjustable vortex cylinder requires adjustment, refer to Section 5.4.

8.3 Reduction in blast cleaning rate

8.3.1 Low media level. Check media level and replenish or replace as needed, per Section 4.1.

8.3.2 Media/air mixture out of adjustment. Adjust metering valve, per Section 5.2.

8.3.3 Reduced air pressure. This may be caused by the pressure regulator set to low, a malfunctioning regulator, a dirty filter element in air filter, partially closed air valve, leaking air line, or other air tools in use. Inspect all items.

8.3.4 Blockage or partial blockage in nozzle. Blockage may occur because of a missing reclaimer debris screen. Inspect reclaimer screen.

8.3.5 Moist media. Frequent bridging or blockage in the area of the metering valve can be caused by moisture. See Section 8.5.

8.3.6 Air leaking through the outlet valve, reducing blast pressure. Inspect outlet valve for leaks.

8.4 Plugged nozzle

8.4.1 A damaged or missing reclaimer screen will allow large particles to pass and block the nozzle. Replace or reinstall as necessary.

8.5 Media bridging

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

8.5.2 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.

8.5.3 Moist compressed air may be due to a faulty compressor that overheats or pumps oil or moisture into the air line, too long of an air line permitting moisture to condense on the inside, or from high humidity. Drain filters and receiver tank regularly. Ongoing problems with moist air may require the installation of an air dryer or aftercooler in the air-supply line.

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

8.5.5 A vibrator mounted either on the blast machine leg or on a bolt on the media metering valve may help to prevent bridging of fine-mesh media. **NOTE: To avoid the possibility of compressing media, a vibrator should be set up to start when the foot pedal is pressed and stop when the pedal is released.**

8.6 Media surge: A small amount of surge is normal at start-up.

8.6.1 Heavy media flow. Adjust media, per Section 5.2.

8.6.2 Empty the blast machine, depressurize the blast machine, and inspect the internal parts of the metering valve for wear.

8.7 Air only (no media) comes out the nozzle

8.7.1 Make sure the machine contains media.

8.7.2 Make sure the media metering valve is open and media flow is adjusted per Section 5.2.

8.7.3 Make sure the blast machine is pressurized. See Section 8.9.

8.7.4 Check for minor blockage in the media metering valve by fully opening the metering valve and closing the choke valve. Activate the foot pedal to blow out obstructions. If this procedure fails, depressurize the machine, remove the metering-valve inspection plate and check for foreign objects.

8.7.5 Check the muffler on the 4-way air valve. Air should exhaust from the muffler when the foot pedal is pressed. If air does not exhaust, remove the muffler and try again. If air exhausts now, the muffler is blocked. If air still does not exhaust, the 4-way valve may be faulty, refer to Paragraph 8.7.6 to check the 4-way valve.

8.7.6 Check the 4-way valve as follows: Depressurize the air-supply line. Remove the tubing leading to the outlet valve. Pressurize the air-supply line. No air should exhaust from the tube adaptor. Press the foot pedal; air should start exhausting at the adaptor, and stop when pressure on the pedal is released. If it does not operate accordingly, the 4-way valve is faulty or air supply is insufficient.

8.7.7 Outlet valve not sealing. Inspect outlet valve.

8.8 Neither media nor air comes out the nozzle when the foot pedal is pressed

8.8.1 Depressurize the blast machine. After the pop-up valve has dropped, remove the nozzle to see if it is plugged. See Section 8.4.

8.8.2 Make sure the blast machine pressurizes when the foot pedal is pressed. If it does not pressurize, refer to Section 8.9.

8.8.3 Make sure the media metering valve and the choke valve are open.

8.9 Blast machine does not pressurize

8.9.1 Make sure the air compressor is operating and air-supply valves are open.

8.9.2 Make sure the pressure regulator is not set too low of OFF. Minimum pressure is 40 psi. Refer to Section 5.1.

8.9.3 Door interlocks not engaging. Check door interlock adjustment, per Section 5.5.

8.9.4 Inadequate air supply. Refer to the cfm air consumption table in Figure 3.

8.9.5 Inspect the outlet valve for wear.

8.9.6 Inspect pop-up valve and seal for wear and misalignment.

8.9.7 Blocked or leaking control line. Check all fittings and urethane tubing for blockage or leaks.

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

8.9.9 Make sure the lines are not reversed on the foot pedal or pilot regulator. Refer to the schematic in Figure 5.

8.9.10 Check the 4-way valve for jamming, per Sections 8.7.5 and 8.7.6. When the foot pedal is pressed, the valve should shift, pressurizing the line to the outlet valve.

8. 9.11 Inspect the check valve (Figure 39 Item 18) for obstruction or broken flap.

8.10 Blast machine does not depressurize or depressurizes too slowly

8.10.1 Check for blockage in the 4-way valve mufflers.

8.10.2 Make sure the 3-way valve in the foot pedal exhausts air when the pedal is released. If it does not exhaust, check the inbound air line for blockage; if no blockage, replace the valve.

8.10.3 Check the outlet muffler that is located inside the cabinet, for blockage.

8.10.4 Check 4-way air valve for jamming, per Paragraphs 8.7.5 and 8.7.6.

8.11 Heavy media flow

8.11.1 Make sure the choke valve is open.

8.11.2 Media metering valve open too far. Adjust per Section 5.2. If adjusting the media valve does not regulate media flow, empty the machine, depressurize the machine, and inspect the internal parts of the valve for wear.

8.12 Media buildup in cabinet hopper; media does not convey to reclaimer

NOTE: Do not pour media directly into the cabinet hopper, as overfilling may occur. Overfilling will result in media carryover to the dust collector and possible blockage in the conveying hose.

8.12.1 Exhauster motor rotating backwards. The motor should rotate as indicated by the arrow on the exhauster housing. If it does not rotate in the proper direction, **lockout** and **tagout** electrical power and switch the motor leads, as shown on the motor plate. Refer to the system's wiring schematic. Refer to Sections 2.11.

8.12.2 Dust-collector damper closed too far restricting air movement through cabinet. Adjust static pressure, per Section 5.3.

8.12.3 Dust-collector filter cartridge(s) clogged. Refer to the dust-collector owner's manual.

8.12.4 Hole worn in flex hose between cabinet hopper and reclaimer inlet or between the reclaimer outlet and dust-collector inlet. Inspect hoses and replace them as needed, routing them with as few bends as possible to prevent wear.

8.12.5 Reclaimer door open. DO NOT operate unless door is closed.

8.12.6 Obstruction in flex hose. Remove hoses and check for blockage.

8.13 Static shocks

8.13.1 Cabinet and/or operator not grounded. Abrasive blasting creates static electricity. The cabinet must be grounded to prevent static buildup. See Sections 2.10 and 2.4.1. 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.

8.13.2 Gloves wearing thin. Inspect gloves and replace them as needed.

8.13.3 Avoid holding parts and blasting off the grate. Static will buildup in the part if not dissipated through the metal cabinet. If blasting parts off the grate cannot be avoided, attach a ground wire between the cabinet and the part.

8.14 Dust leaking from cabinet

8.14.1 Refer to Section 8.12.

8.15 Dust leaking from dust collector

8.15.1 Cartridge(s) not seasoned; refer to the dust-collector owner's manual to season cartridge(s)

8.15.2 Damaged or loose filter cartridge(s). Inspect filters, replace as needed.

Refer to the dust-collector owner's manual to service reverse-pulse dust collectors.

9.0 ACCESSORIES AND REPLACEMENT PARTS

9.1 Optional Accessories

Time delay door locks, double doors 25558
Lock pins (pkg of 25) for twist-on hose couplings . 11203
Safety cable, 1/2" OD to 1-1/4" OD blast hose 15012
Manometer kit 12528
Noise-reduction arm port covers, pair 24885
Anti-fatigue floor-mat, 2 ft x 3 ft, for front of cab. ... 24744
Armrest assembly 24900
Armrest, replacement 24899
Abrasive trap 02011

Curtain set, black w/mounting hardware
for 3672 23533
for 40100 23534
Back curtain, 2 required
for 3672 14243
for 40100 14247
Front curtain, 2 required
for 3672 14242
for 40100 14246
Door curtain, 2 required
for 3672 14244
for 40100 14245

Rubber curtains, white
Curtain set
for 3672 23543
for 40100 23544

Pass-thru door, with 15-inch square cut-out
Right door
for 3672 23610
for 40100 23612
Left door
for 3672 23611
for 40100 23613

Turntables and Turntables with Tracks

⚠ WARNING

Turntable capacities are based on concentric loading. Use solid fixturing to hold heavy parts in place. Do not remove lift equipment until the part is adequately supported to prevent movement. Moving or rotating heavy, unsupported or off-centered parts may cause them to shift or topple, and cause severe injury.

Fixed-Base Turntable Without Bearing

Description	Stock No.
20" diameter 25 lb capacity	12412

Fixed-base Turntable with Bearing, 500 lb. Capacity Figure 31

Item	Description	Stock No.
(-)	20" dia. assembly, 500 lb. capacity	12411
(-)	30" dia. assembly, 500 lb. capacity	14138
1.	Turntable, replacement	
	20" diameter 500 lb. capacity	18329
	30" diameter 500 lb. capacity	21390
2.	Bearing, 1-1/2" bore	11517
3.	Protector, bearing	13479
4.	Screw, 1/2-NC x 1-1/2" cap	03454
5.	Washer, 1/2" lock	03516
6.	Nut, 1/2-NC hex	03511

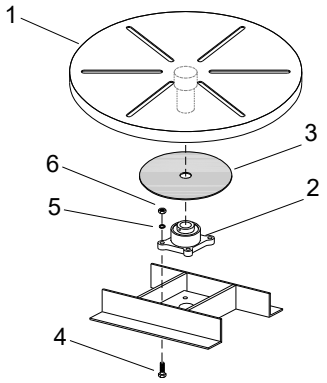


Figure 31

Turntable with Workcar and Track, 500 lb. Capacity Figure 32

Item	Description	Stock No.
(-)	20" diameter turntable and track assembly	
	for 3672	13899
	for 40100	21199
(-)	Turntable & workcar assembly, 20" diameter Includes items shown in Figure 32, less the track	24205
1.	Turntable replacement 20" diameter	18329
2.	Bearing, 1-1/2" bore	11517
3.	Protector, bearing	13479
4.	Screw, 1/2-NC x 1-1/2" cap	03454
5.	Washer, 1/2" lock	03516
6.	Nut, 1/2-NC hex	03511
7.	Caster, 4" V groove	11594

All other track items are special order. Contact distributor for price and availability.

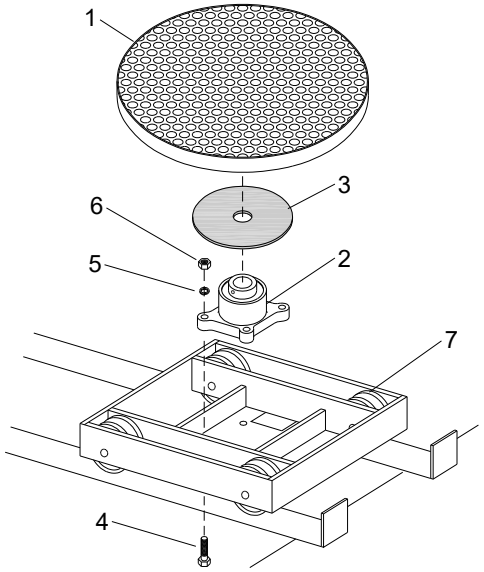


Figure 32

Abrasive Trap – Figure 33

Item	Description	Stock No.
(-)	Abrasive trap, complete	02011
1.	Screen (3)	02012
2.	O-Ring (2)	02013
3.	Cap	02014
4.	Body	02015
5.	Lock bar	02016
6.	Screw, 3/8" x 1" thumb	03289
7.	Shoulder screw, 3/8" x 3/8"	03291
8.	Gasket, screen (1)	02434
9	Nipple, 1 NPT x 3"	01703
10.	Decal (1)	02129
(-)	Service kit (items 1, 2, 8 & 10) Quantity shown in parentheses (-)	01925

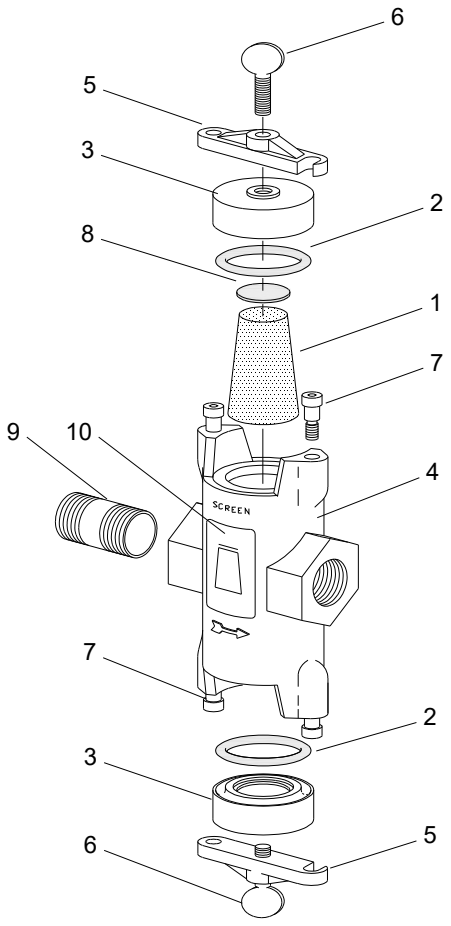
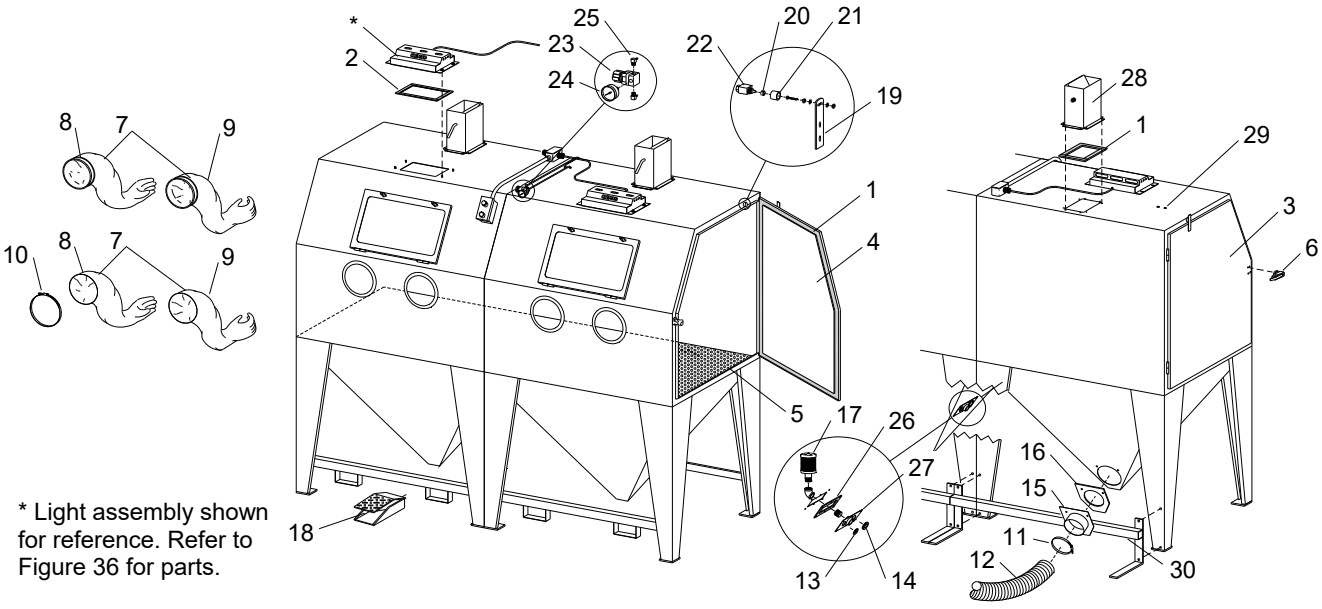


Figure 33

9.2 Cabinet Replacement Parts – Figure 34

Item	Description	Stock No.
1.	Gasket, 5/16" x 1" adhesive-backed, per foot, specify feet required	
	3672 door, 11 ft per door	00187
	40100 door, 13 ft per door	00187
	Air-inlet damper, 3 ft required	00187
2.	Gasket, 5/32" x 3/4", 3 ft required	00192
3.	Door assembly, left	
	for 3672	20070
	for 40100	20074
4.	Door assembly, right	
	for 3672	20071
	for 40100	20075
5.	Grate, 2 required	
	for 3672	11811
	for 40100	11810
6.	Latch kit, door	20064
7.	Glove set	
	Band-clamp attachment	11215
	Quick-change (clampless) attachment	28820
8.	Glove, left hand only	
	Band-clamp attachment	12710
	Quick-change (clampless) attachment	28638
9.	Glove, right hand only	
	Band-clamp attachment	12711
	Quick-change (clampless) attachment	28639
10.	Clamp, glove	11576
11.	Clamp, flex hose	
	5-1/2", for 3672	11578
	6-1/2", for 40100	00750
12.	Hose, light-lined flex, 5-ft required per side	
	4" ID for 900 cfm conventional use	12466
13.	Grommet, blow-off hose, 3/4" ID	11798
14.	Grommet, blast hose	00184
15.	Adaptor pipe universal, flex hose	
	4" for 900 cfm conventional use	23295
16.	Gasket, flex hose adaptor pipe	
	4" for 900 conventional use	23258
17.	Muffler, outlet	05068
18.	Foot-pedal assembly,	
	less tubing	20483
	with tubing, 14 feet	20195
19.	Bracket, door interlock actuator	19152
20.	Over-travel stop, door interlock	20004
21.	Detent sleeve, door interlock	15042
22.	Air valve, 3 way door interlock	12202
23.	Regulator, 1/8" NPT pilot pressure	12715
24.	Gauge, pressure, 1/8" cbm	01908
25.	Fitting, 1/8" NPT elbow x 1/8" barb	11733
26.	Gasket, hopper plate adaptor	20247
27.	Plate, hopper hose adaptor	21657
28.	Damper, air-inlet	23156
29.	Grommet, 1/4" ID	12762
30.	Brace, leg, 2 required	
	for 3672	24443
	for 40100	24445



* Light assembly shown for reference. Refer to Figure 36 for parts.

Figure 34

9.3 View-Window Assembly – Figure 35

Item	Description	Stock No.
1.	Window glass, 12.5" x 19.5" laminated	12212
2.	Gasket, 5/16" x 3/4", applied to cabinet per foot, 6-feet required	00189
3.	Gasket, 5/32" x 3/4", applied to window frame per foot, 6-feet required	00192
4.	Cover lens, pkg. of five	06190
5.	Nut, plastic, window frame, 2 required	23035
6.	Window frame, quick change	22826

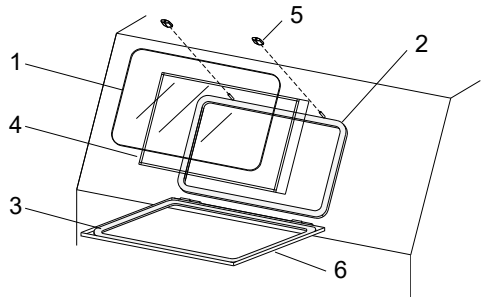


Figure 35

9.4 LED Light Assembly – Figure 36

Item	Description	Stock No.
1.	Cover, LED light mount	29712
2.	LED light module, 50w	29711
3.	Diffuser lens	29713
4.	Gasket, 5/32" x 3/4", 3 ft required	00192
5.	Strain relief connector	11631
6.	Nut, 1/2" conduit	12713
7.	Nut, 1/4-20 hex	03111
8.	Washer, 1/4 lock	03117
9	Washer, 1/4 flat	03116

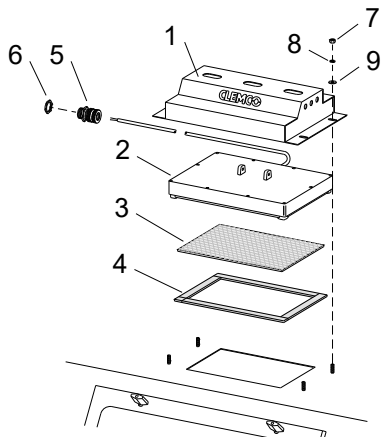


Figure 36

9.5 Foot-Pedal Assembly – Figure 37

Item	Description	Stock No.
(-)	Foot-pedal assembly, less tubing, item 10	20483
	with tubing, 14 feet Item 10	20195
1.	Foot pedal casting set, top and base	28379
2.	Valve, 10-32, 3 way n/c	20026
3.	Drive pin, grooved	20109
4.	Screw, sh 1/4 NF x 3/4"	03086
5.	Screw, 10-32 x 1/2" fh	19571
6.	Adaptor, 10-32 thread x 1/8 barb	11731
7.	Spring, 1-1/4" x 3-1/2"	20121
8.	Screw, 8-32 x 3/8″ thread cutting	11389
9.	Bumper, rubber (feet)	21522
10.	Tubing, 1/8" ID twin, specify ft required	19577
11.	Tie, nylon wire	12139

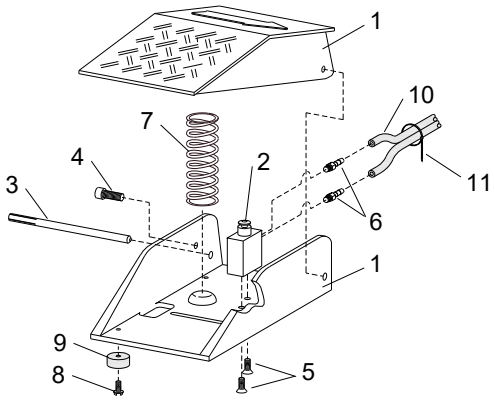


Figure 37

9.6 Plumbing and Air Schematic – Figure 38

Item	Description	Stock No.
1.	Valve, 3-way	12202
2.	Fitting, straight, 1/8" NPT x 1/8" barb	11732
3.	Tubing, 1/8" ID urethane, specify ft reqd.	12475
4.	Tubing, 1/8" ID twin urethane specify feet required	19577
5.	Fitting, elbow 1/4" M-NPT x 3/8" tube	11685
6.	Tubing, 3/8" OD poly, specify ft required	12478
7.	Tee, 1/8" tube barb	11734
8.	Plug, 1/4-NPT	01950
9.	Tee, 1/4" brass	02025
10.	Valve, 4-way air	12203
11.	Fitting, 1/8" NPT elbow x 1/8" barb	11733
12.	Valve, 1" piston outlet	01967
13.	Nipple, 1/4" Hex	02808
14.	Filter, 1" w/manual drain	22424
15.	Bushing 1/4" x 1/8" NPT	02010
16.	Hose assembly, 1" x 10' exhaust	23915
17.	Muffler, 1/4" bronze	03988
18.	Adaptor, 1/2" NPT x 1/2" male flare	11351
19.	Hose end, 1/2" barb x 1/2" female swivel	15002
20.	Hose end, 1/2" barb x 3/8" M-NPT	06369
21.	Blow-off nozzle	13116
22.	Hose, 1/2" ID air, bulk, specify ft reqd.	12472
23.	Regulator, 1/8" NPT pilot pressure	12715
24.	Gauge, pressure, 1/8" cbm	01908
25.	Foot-pedal assembly, less tubing	20483
	with tubing, 14 feet item 4	20195
26	Regulator, 1" pilot operated w/ gauge	12052
27.	Gauge, 1/4" cbm	11830
28.	Adaptor, 1" male NPT x 1" male flare	11720

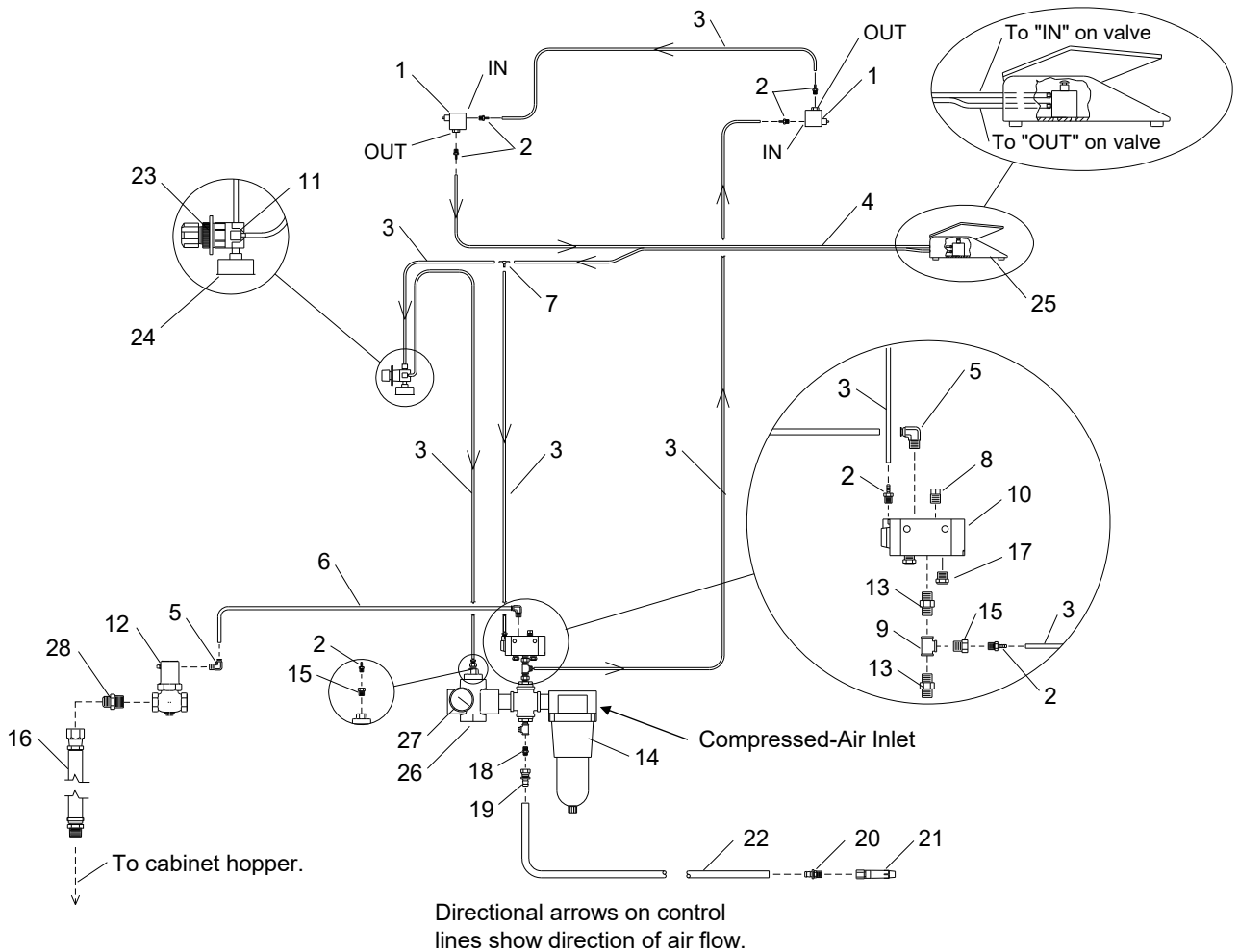
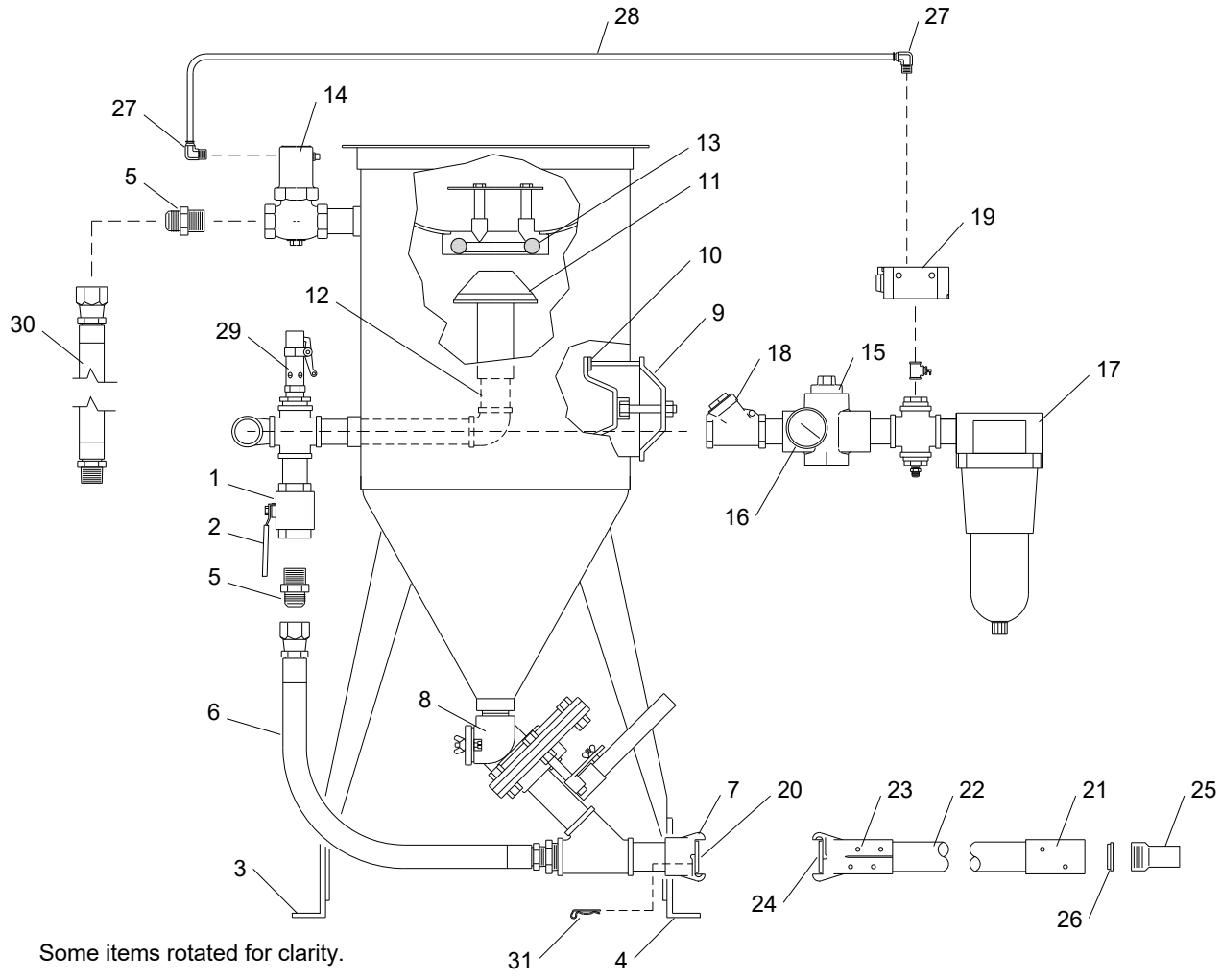


Figure 38

9.7 Blast Machine – Figure 39

Item	Description	Stock No.
(-)	Aerolyte blast machine assembly, 16" dia., 2 cuft capacity	20641
1.	Ball valve, 1" with handle (choke valve)	02396
2.	Handle, 1" ball valve	22531
3.	Leg pad, right for 1642	20735
4.	Leg pad, left for 1642	20736
5.	Adaptor, 1" male NPT x 1" male flare	11720
6.	Hose assembly, 1" x 32" pusher line	22864
7.	CF Coupling 1-1/4" NPT	00551
8.	Media metering valve, FSV, with wye	02427
9.	Inspection door assembly, 6" x 8"	02377
10.	Gasket, 6" x 8" inspection door	02369
11.	Pop-up valve with external sleeve	03699
12.	Guide, pop-up, 1-1/4" x 4" toe nipple	01751
13.	Seal, pop-up valve	02325
14.	Valve, 1" piston outlet	01967
15.	Regulator, 1" pilot operated w/ gauge	12052
16.	Gauge, 1/4" cbm	11830
17.	Filter, 1" w/manual drain	22424
18.	Check valve, 1" swing	12187
19.	Valve, 4-way air	12203
20.*	Gasket, CQG, pkg of 10	00850
21.	Nozzle holder, NHP-3/4 w/contractor thread	11398
22.	Hose, 3/4" ID Supa, bulk, 16 ft. req'd	23100
23.	Coupling, 3/4" Supa hose, CQPS-3/4	11395
24.*	Gasket, CQGP-1 coupling, pack of 10	08852
25.	Nozzle, tungsten carbide short venturi	
	*TYP-4, 1/4" orifice	23502
	TYP-5, 5/16" orifice (standard)	23503
	*TYP-6, 3/8" orifice	23504
26.*	Nozzle washer, NW-25, pack of 10	91024
27.	Fitting, elbow 1/4" M-NPT x 3/8" tube	11685
28.	Tubing, 3/8" OD poly, per ft, 3 ft req'd	12478
29.	Relief valve, 3/4″ NPT, 65 psi	10715
30.	Hose assembly, 1" x 10' exhaust	23915
31.*	Lock pin, coupling (package of 25)	11203

* Not included with blast machine assembly



Some items rotated for clarity.

Figure 39

9.8 FSV Media Metering Valve – Figure 40

Item	Description	Stock No.
(-)	FSV Metering valve with wye	02427
1.	Upper body	02422
2.	Valve disc w/ stem	02423
3.	Gasket, rubber, 2 required	02424
4.	Disc-stainless	02425
5.	Lower body	02426
6.	Metering handle	20498
7.	Cap screw, 1/4-NC x 1-1/4" hex head	03054
8.	Wing nut, 1/4-NC	03113
9.	Handle bolt spacer	02431
10.	Valve handle pin	20246
11.	Gauge unit	02433
12.	Set screw, 1/4-NC x 1/2" square head	03080
13.	Spring, compression	01982
14.	Stud	02436
15.	Packing gland	02437
16.	O-ring, 7/8″ OD	21165
17.	Gasket, shaft	02439
18.	Inspection plate	02440
19.	Cap screw 5/16-NC x 1" hex head	03152
20.	Wing nut, 5/16-NC	03213
21.	O-ring, 1-3/4" OD	01990
22.	Nipple, heavy wall 1-1/2" x close	01791
23.	Wye, standard 1-1/4"	01818
24.	Nipple, 1-1/4" x 5"	01721
25.	Nut, 1/2-NC hex	03511
26.	Cap screw, 1/2-NC x 1-3/4" hex head	03455
27.	Washer, 1/4" flat	03116
28.	Hitch pin	20245

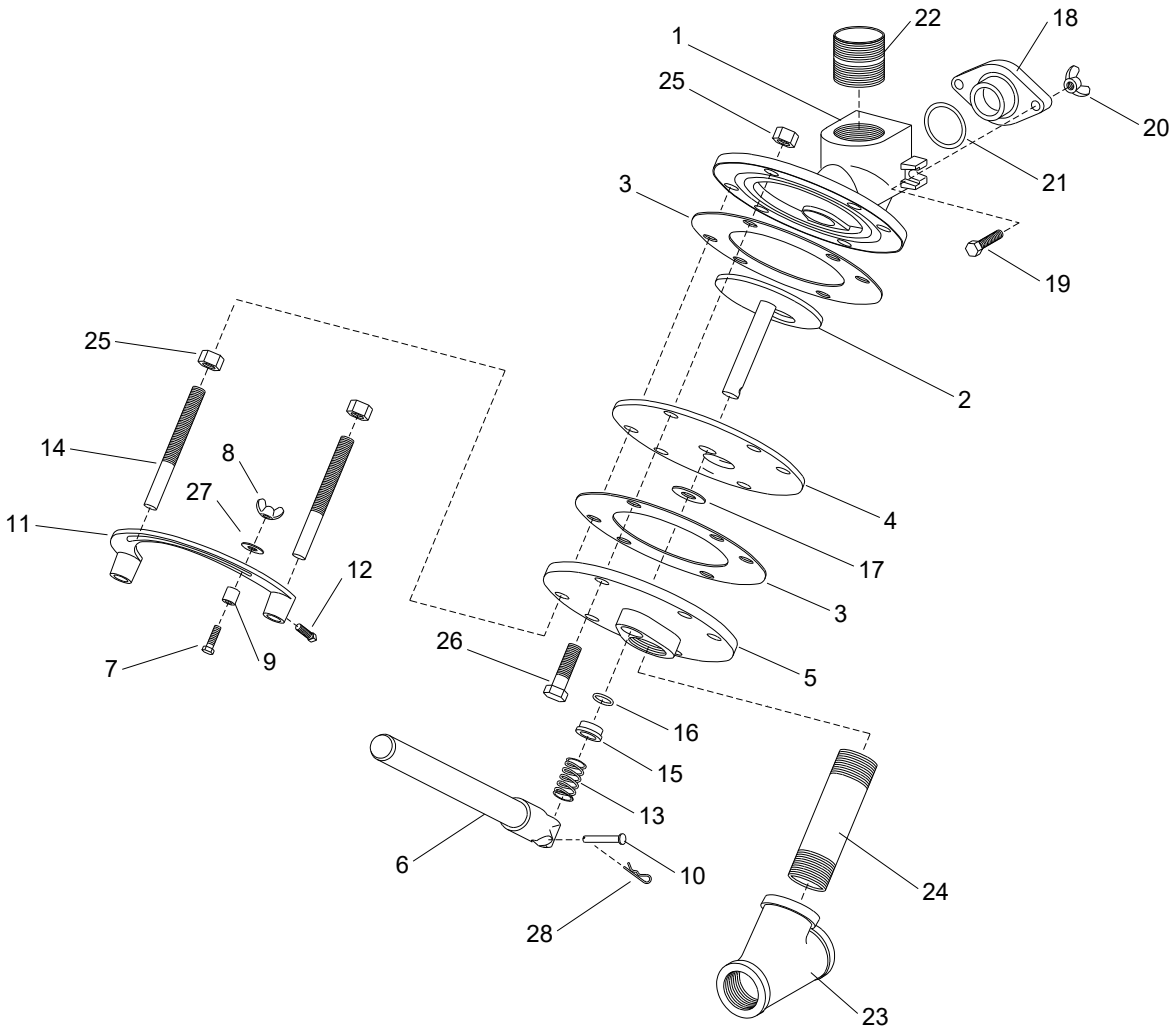
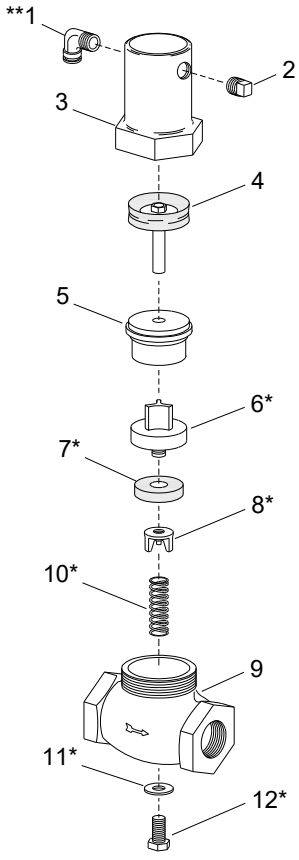


Figure 40

9.9 1" Piston Outlet Valve – Figure 41

Item	Description	Stock No.
(-)	1" Piston outlet valve, less item 1	01967
**1.	Fitting, elbow 1/4" M-NPT x 3/8" tube	11685
2.	Plug, 1/4" NPT	01950
3.	Bonnet	01970
4.	Piston and rod assembly	01976
5.	Plug and spindle guide	01971
6.*	Valve plug, (1)	01972
7.*	Washer, valve plug, (2)	01969
8.*	Retainer, valve-plug washer, (1)	01986
9.	Valve body	01968
10.*	Spring, 7/16" x 1-5/8" long (1)	01974
11.*	Nylon washer (1)	01979
12.*	Cap screw, 3/8-NC x 3/4" (1)	03251
(-)	Service kit, includes items marked * quantities are shown in ( )	01928



** 11685 – elbow is not included with replacement valve. If needed order separately.

Figure 41

9.10 Flex Hose and Wye Adaptor, Figure 42

All hose is sold per foot, specify feet required.

Some trimming may be necessary.

Item	Description	Stock No.
1.	Hose, light-lined flex, 5-ft required per side	
	4" ID for 900 cfm conventional use	12466
2.	Hose, light-lined flex, 9-ft required	
	6" ID for 900 cfm conventional use	12468
3.	Hose, unlined flex, specify feet required	
	7" ID for 900 cfm	12448
4.	Clamp, hose	
	for 4" hose	11577
	for 5" hose	11578
	for 6" hose	00750
	for 7" hose	11576
5.	Wye pipe adaptor, 4" x 4" x 6"	
	900 cfm conventional	12379

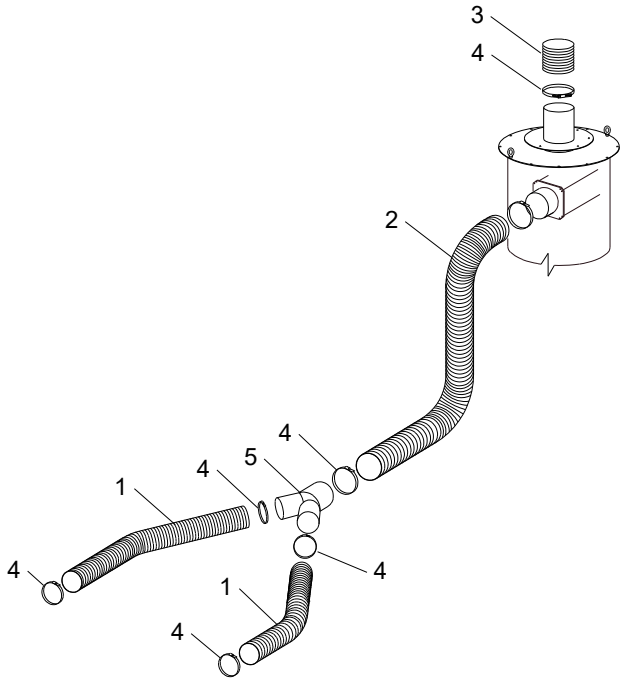
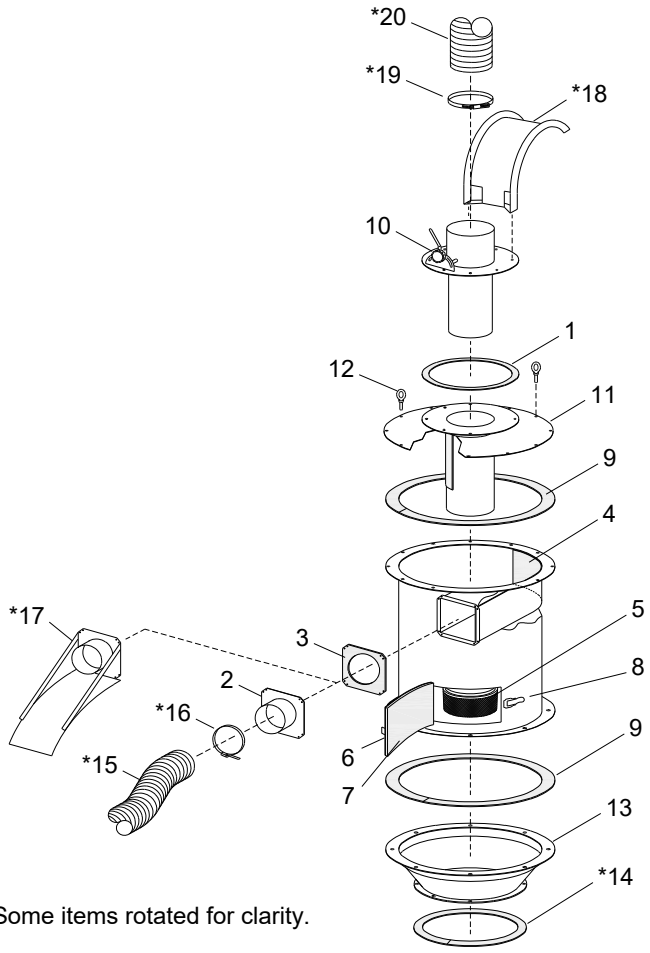


Figure 42

9.11 900 CFM Reclaimer, for 16″ Diameter Blast Machine – Figure 43

Item	Description	Stock No.
(-)	Aerolyte 900 cfm reclaimer w/vortex	22800
1.	Gasket, 5/16" x 1" adhesive-backed, 5 feet required	00187
2.	Inlet pipe adaptor, 6"	12363
3.	Gasket, inlet pipe adaptor, 6"	11759
4.	Wear plate, rubber-lined w/mntg screws 900 cfm with bolt-on top	25071
5.	Screen assembly, 4.5-mesh without magnets	21275
	with magnets	23146
6.	Door assembly, w/gasket and latch	14271
7.	Gasket, door	11745
8.	Latch assembly, door	12263
9.	Gasket, 2" adhesive-backed, per foot, 7 ft required at each location	13089
10.	Vortex cylinder assembly, adjustable, 900 cfm pull-thru	23046
11.	Top assembly, 900 cfm	23040
12.	Eyebolt 3/8-NC	00430
13.	Adaptor, 16″ dia. blast machine, used on 900 cfm only	23043
14.*	Gasket, 2" adhesive-backed, per foot, 6 ft required at this location	13089
15.*	Hose, 6" ID light-lined flex, per foot specify length required	12468
16.*	Clamp, hose, 6-1/2" for 6" hose	00750
17.*	Hose support, 6" inlet – option	16887
18.*	Hose support, 7" outlet – option	20619
19.*	Clamp, 8" for 7" hose	11576
20.*	Hose, 7" ID unlined flex, specify length	12448

900 CFM MODULAR RECLAIMER



*Items with an asterisk (*) are not include with replacement reclaimers. If those items are needed they must be ordered separately.

Some items rotated for clarity.

Figure 43