

AEROLYTE 3636A and 4050A

DRY STRIPPING CABINET



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

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

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

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

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

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

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

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

OWNER'S MANUAL

1.0 INTRODUCTION

1.1 Scope of Manual

1.1.1 These instructions cover set-up, operation, maintenance, troubleshooting, optional accessories, and replacement parts for Aerolyte 3636A and 4050A pressure dry stripping (non-aggressive media blasting) cabinets with all reclaimer, dry filter, and dust collector options. A supplemental manual is provided with the optional reverse-pulse dust collector.

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

1.2 Safety Alerts

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



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

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

CAUTION

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

CAUTION

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

WARNING

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

DANGER

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

1.3 General Description

1.3.1 Aerolyte dry stripping (non-aggressive media blasting) cabinets enclose the blasting environment to provide efficient blast cleaning while maintaining a clean surrounding work area. Production rates are influenced by size of nozzle, compressor output, working pressure, type and size of media, angle and distance of the nozzle from the stripping surface. Aerolyte dry stripping cabinets consist of four major components:

1. Cabinet Enclosure
2. Reclaimer
3. Media chamber
4. Dust Collector

See Figure 1 for arrangement of components with a dry filter. Figure 2 shows the arrangement with a reverse-pulse dust collector.

1.4 Theory of Operation

1.4.1 When the air supply is on, and the cabinet doors are closed, the system is ready for operation, by actuating the foot pedal. Fully depressing the foot pedal pressurizes the media chamber, and propels the media through the blast hose and out the nozzle. After striking the object being stripped, the media, along with fines, dust, and by-products generated by the process, fall through the mesh work table into the cabinet hopper. These particles are drawn into the reclaimer for separation. Dust and fines are first separated from the reusable media. Next, the media is screened of oversize particles, and held in the reclaimer hopper for reuse. Dust and fines are drawn through the reclaimer into the dry filter or dust collector, which traps the dust and discharges clean air. When the foot pedal is released, blasting stops as the media chamber depressurizes, allowing stored media to refill the machine.

1.5 Media Chamber and Remote Controls

1.5.1 The media chamber (which is a pressure vessel) is manufactured to American Society of Mechanical Engineers (ASME) standards, as described in Section VII, Div. 1, and carry a National Board certification. It is the owner's responsibility to maintain the integrity of the vessel as may be required by some states. This may include regular inspection and hydrostatic testing as described in National Board Inspection Code and Jurisdictional Regulations and /or Laws.

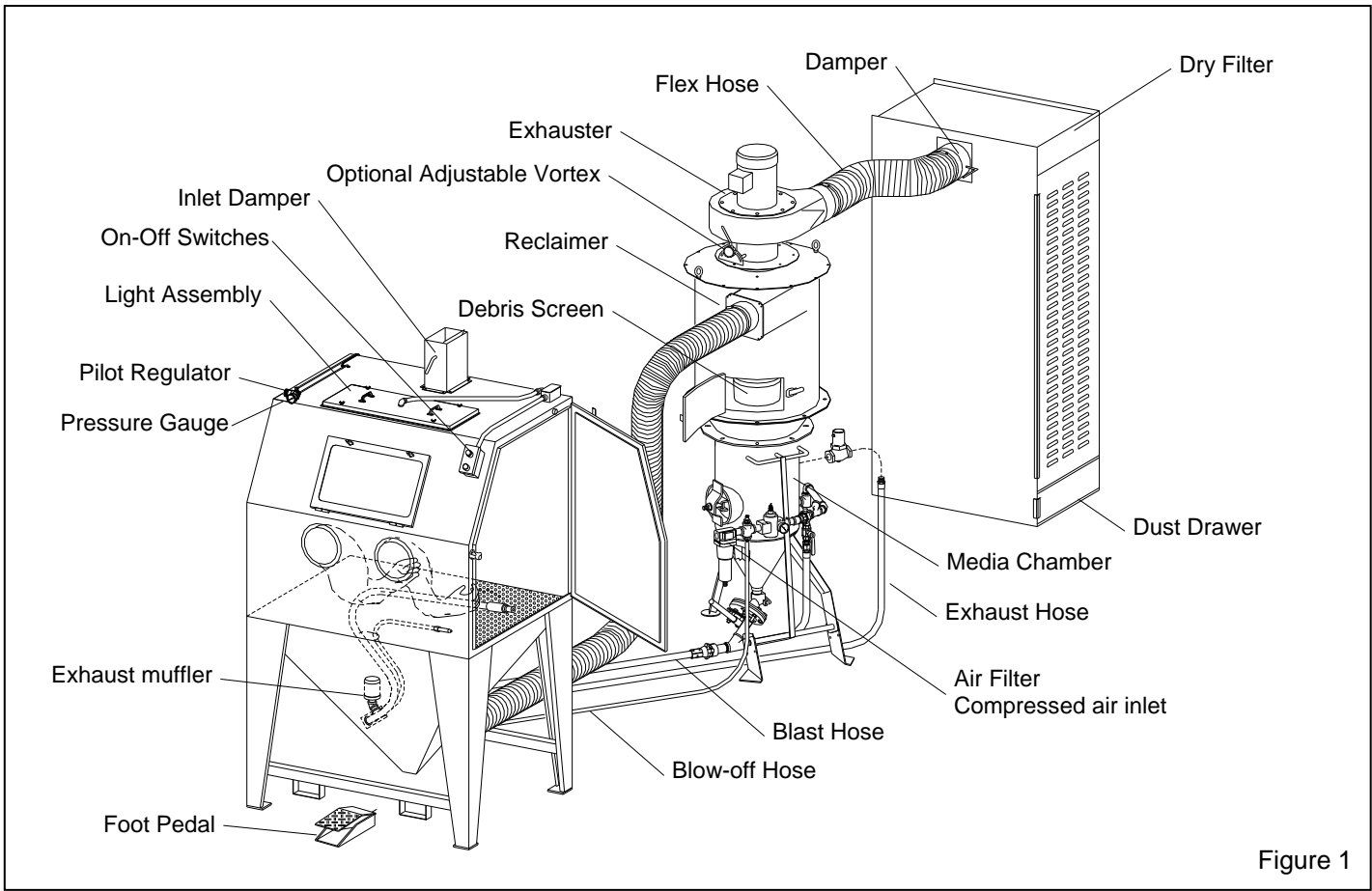


Figure 1

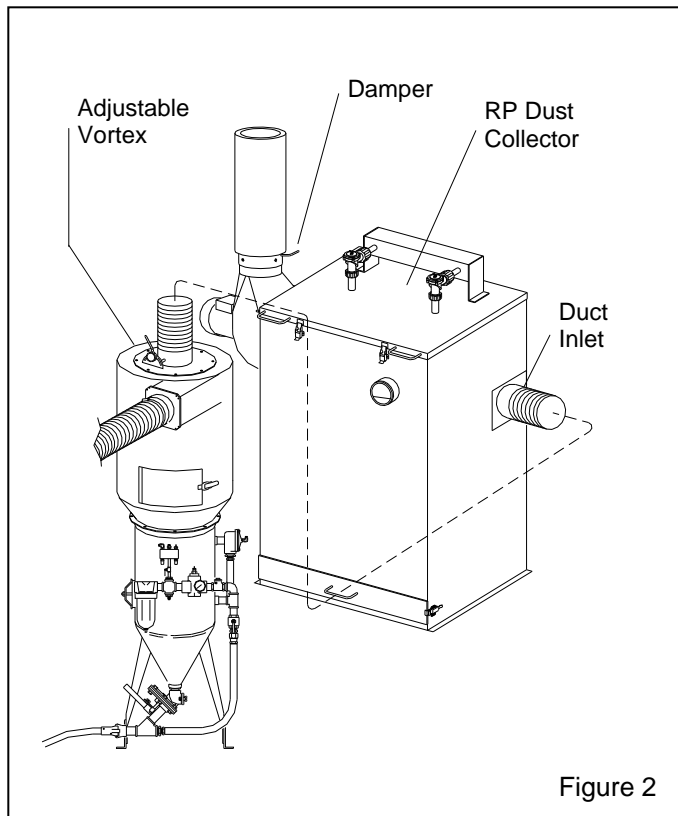


Figure 2

⚠ WARNING

Welding, grinding, or drilling on the media chamber could weaken the vessel. Compressed air pressure could cause a weakened vessel to rupture, resulting in death or serious injury. Welding, grinding, or drilling on the media chamber vessel, without a National Board "R" stamp voids the ASME and National Board certification.

1.5.2 All welding repairs done on 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 ASME and National Board certification of the vessel.

1.5.3 This vessel is rated for a maximum of 125 psi (pounds per square inch); do not exceed rated pressure.

⚠ WARNING

Excessive air pressure could cause the media chamber to rupture. To prevent serious injury or death, do not exceed the rated pressure of the media chamber vessel.

1.5.4 OSHA does not require pressure relief valves on media chambers when air compressors supplying air to the media chambers are built to ASME⁽¹⁾ specifications and comply with OSHA⁽²⁾ regulations. ASME Manual section VIII, Division 1, UG-125, paragraph A90 (g) states that pressure relief valves or protective devices "...need not be installed directly on a pressure vessel when the source of pressure is external to the vessel and is under such positive control that the pressure in the vessel cannot exceed the maximum allowable working pressure at the operating temperature...". OSHA regulation 1910.169 refers to the above ASME code when describing the necessity of pressure relief valves on compressed air equipment. **DO NOT** operate media chambers with air compressors that are not equipped with properly functioning pressure relief valves.

⁽¹⁾ American Society of Mechanical Engineers, Boiler and Pressure Vessel Code, 1989

⁽²⁾ Occupational Safety and Health Administration, 29 CFR 1910, Subpart M - Compressed Gas and Compressed Air Equipment.

1.5.5 The piping on the media chamber 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 non-aggressive media and delicate substrates.

1.5.6 When the air supply is on, and the cabinet doors are closed, the media chamber is ready for actuation by 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 media chamber, and dry stripping begins. When pressure on the foot pedal is released, the media chamber depressurizes, and dry stripping stops.

1.6 Dust Collector Options

⚠ WARNING

Prolonged exposure to any dust could result in serious lung disease and death. Short term ingestion of toxic materials, such as lead dust or dust from other heavy metals and corrosives, could cause serious respiratory injury or death. Identify all materials that are to be removed by blasting. Use reverse-pulse dust collectors with HEPA after-filters if lead coating or any other toxic materials are being removed by the blasting process. Do not use dust collectors with simple cloth filters for those applications.

1.6.1 Dry Filter: A push-through dry filter uses tubular filters which trap dust on their inner surfaces. A dry filter is efficient for moderate dust contamination. The filters

must be manually shaken every two hours and the dust drawer emptied regularly. This type of dust collection must never be used in applications which generate toxic dust.

1.6.2 Reverse Pulse Dust Collector: A pull-through reverse-pulse dust collector is the most efficient dust collector option. Cartridge filters are automatically cleaned by a periodic pulse of air. This type of dust collector used with the optional HEPA filter must be used in applications in which toxic dust is generated. See separate manual for operation of reverse-pulse dust collectors.

1.6.3 HEPA Filter: Optional HEPA after-filters provide additional filtration, and are available for use with reverse-pulse collector only. HEPA filters must be used when removing lead coatings or any other toxic materials.

1.7 Nozzle Options

1.7.1 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 chart 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 Orifice | AIR PRESSURE (psi) | | | | | |
|----------------|--------------------|--------|----|----|----|-----|
| | 20 | 25 | 30 | 35 | 40 | 45 |
| 1/4" | 25 | 2 9 | 32 | 36 | 40 | 43 |
| 5/16" | 41 | 4 7 | 53 | 59 | 65 | 71 |
| 3/8" | 57 | 6 6 | 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

1.8 Media

1.8.1 Aerolyte Dry Stripping Cabinets are designed to utilize plastic media specifically manufactured for dry stripping. The usable media size range depends on the nozzle size and reclaimer cleaning rate. Several factors

affecting the reclaimer cleaning rate include: reclaimer size, air pressure, media/air mixture, media breakdown, contamination of parts being cleaned, and humidity.

1.9 Compressed Air Requirements

1.9.1 The size of the compressor required to operate the cabinet depends on the size of the nozzle and stripping pressure. See the air consumption table in Figure 3. Unless specified otherwise, cabinets are supplied with a 5/16" orifice nozzle. NOTE: The table in Figure 3 shows air consumption of nozzles when new; it does not show the recommended compressor size. When the nozzles are worn, they will consume 70% to 80% more air. Consult with a compressor supplier for a suggested compressor size based on air consumption.

NOTE: A separate air line is required for the optional RP dust collector.

1.9.2 The air filter at the media chamber 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 clot and inhibits free flow through the metering valve. If moisture problems persist, an air dryer may be required.

1.10 Electrical Requirements

1.10.1 Electrical requirements depend on size of the motor. Standard cabinets are supplied as follows:

3636A Cabinet w/600 cfm reclaimer: 1 HP, 115/230V, 1-PH, 60 HZ (wired 115)

4050A Cabinet w/900 cfm reclaimer: 2 HP, 230/460V, 3-PH, 60 HZ (supplied with 230-volt heaters)

1.10.2 If voltage is 1-phase, a power cord is supplied. If voltage is 230/460, 3-phase, a magnetic starter is mounted in an electrical panel. Power from the user's disconnect has to be wired to it. Refer to Section 2.11.

2.0 INSTALLATION

2.1 General Installation Notes

2.1.1 See Figure 1 (and Figure 2 for optional reverse-pulse collector) for the general arrangement and Figure 4 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 media chamber directly behind the cabinet with the

blast hose connection toward the cabinet. The reclaimer may be rotated on the media chamber to enable hose connections with as few bends as possible. Determine the best location, and position all units before final assembly.

2.2 Assemble Media Chamber and Reclaimer

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

2.2.2 Place the optional storage segment on the media chamber. The access door should be on the bottom, and rotated to allow access. Bolt into place. Apply adhesive backed gasket to the top flange as described in Section 2.2.1.

2.2.3 Using a lift, raise the reclaimer over the media chamber 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 could occur if the reclaimer is released before it is secured to the media chamber.

2.3 Support the Media Chamber

2.3.1 Use ropes or other means to temporarily support the media chamber and reclaimer during final assembly.

2.4 Connect Conveying Hose

2.4.1 Connect flexible conveying hose between the cabinet hopper transition and reclaimer inlet adaptor. It is easier to slip the hose over the adaptor and create a tighter seal if the first two or three inches of wire is removed from the inside of the hose. Use care not to damage the hose. NOTE: The wire helps dissipate static electricity in the conveying hose, and also 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.

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 between the air filter and regulator. See the schematic in Figure 4.

2.6 Connect Blast Hose

⚠ WARNING

Hose disconnection while under pressure could cause serious injury or death. Use safety lock-pins and safety cables on all coupling connections to help prevent hose couplings from accidental disconnection while under pressure. Lock-pins and safety cables are listed under Optional Accessories in Section 9.1.

2.6.1 Connect the blast hose from the cabinet hopper to the coupling at the bottom of the media chamber. Be sure coupling gaskets are in place and couplings are secured with safety lock-pins.

2.7 Attach Air Exhaust Hose

2.7.1 Screw the male end of the exhaust hose into the 1" coupling in the cabinet hopper, turning the hose as required. Connect the female swivel end to the adaptor on the media chamber outlet valve.

2.8 Connect Urethane Control Tubing

2.8.1 Uncoil the 1/8" urethane control tubing. The end of each tubing is numbered 1, 2 or 3. Connect the tubing to the adaptor with the corresponding number on the

pressure regulator, piping, and 4-way air valve. Check the schematic in Figure 4 to confirm the connections.

2.9 Connect Compressed Air Supply Line(s)

2.9.1 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 media chamber. A smaller diameter hose may reduce stripping efficiency.

NOTE: A separate air line is required for the optional RP dust collector.

⚠ WARNING

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

2.10 Ground Cabinet

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

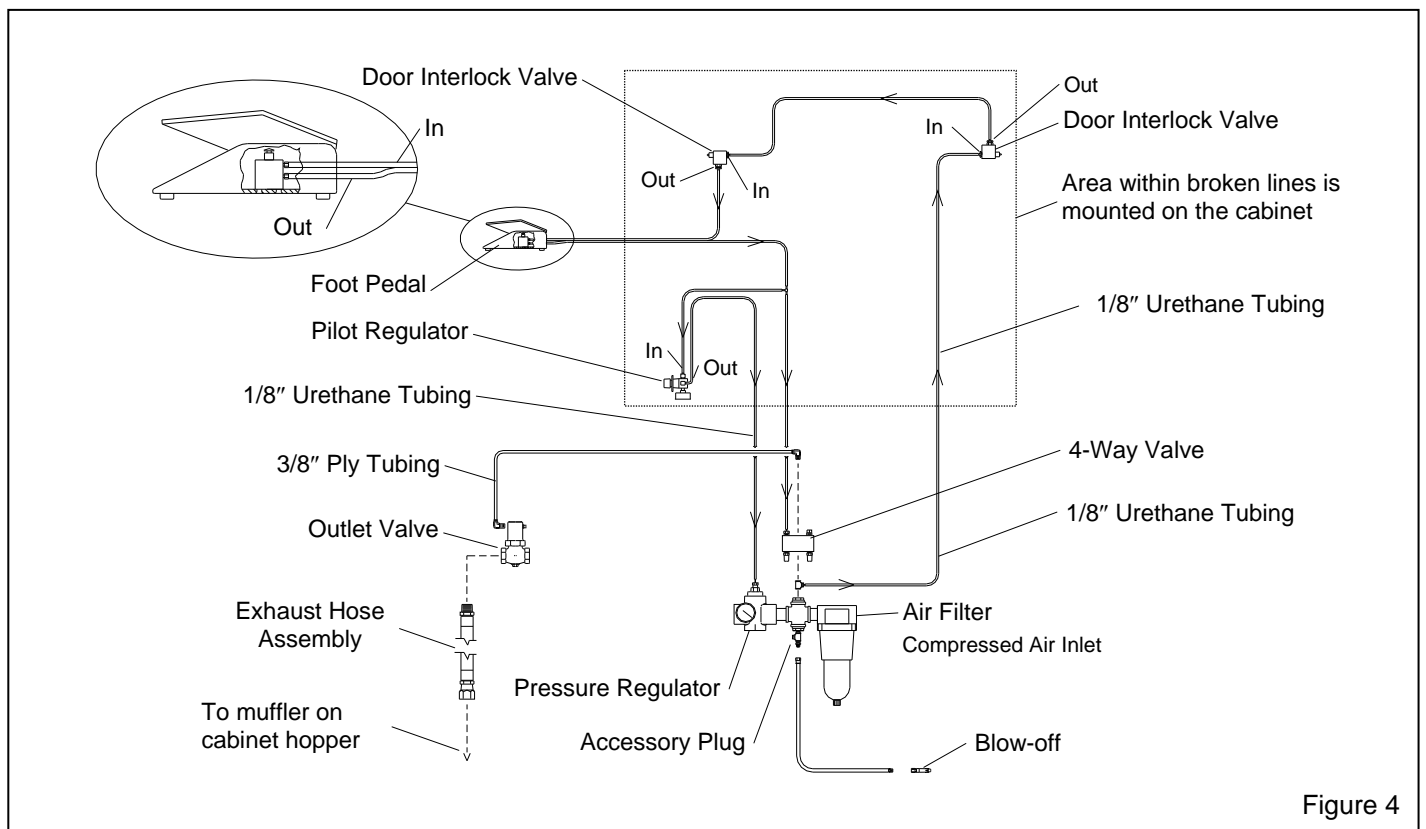


Figure 4

2.11 Connect Electrical Service

WARNING

Shorting electrical components could result in serious electrical shocks, or equipment damage. All electrical work must be performed by a qualified electrician, and comply with applicable codes.

NOTE: 115 volt 1-phase wiring schematics are packaged with this manual, 3-phase schematics are packed in the electrical panel. After wiring is completed, keep the schematic with the manual for future reference and for electrical replacement parts.

Conduit and wire are supplied from the cabinet panel for wiring reclaimer motors when used with dry filter collectors. Reverse-pulse collectors are usually too far from the cabinet to use flex conduit. Conduit and wiring for RP Collectors, and wiring from the user's disconnect to the cabinet panel must also be provided by the user.

2.11.1 115-volt single phase wiring. For 3-phase wiring, see Section 2.11.2.

2.11.1.1 600 cfm reclaimers do not require any wiring. 900 cfm reclaimers require connecting the flex conduit, and wiring the motor for low voltage, per instructions on the motor plate.

2.11.1.2 Incoming power is supplied by a U-Ground plug, and requires only plugging into a 115-volt outlet.

WARNING

Do not use electrical adaptors that eliminate the ground prong on 115 volt plugs. Doing so can cause electric shock and equipment damage.

2.11.1.3 Observe the subsequent warning, and check the motor rotation. To check rotation, jog the starter (momentarily turn switch on and off). This will cause the motor to rotate slowly. Look through the slots in the fan housing on top of the motor where rotation of the fan can easily be observed. Proper rotation is indicated by the arrow on the exhaustor housing. The fan should rotate toward the exhaustor outlet.

WARNING

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

2.11.2 Three Phase Wiring. For 1-phase wiring, see Section 2.11.1.

2.11.2.1 As much wiring as possible has been completed at the factory. The electrician only needs to provide service to the motor starter in the electrical mounted on the cabinet, and connect the conduit and wiring from the starter to the motor. Refer to the schematic packed in the panel. NOTE: The user must provide conduit and wiring from the starter to the motor for RP Collectors.

2.11.2.2 Whether voltage is 230 or 460 is determined at time of order, and heaters are provided accordingly. A wiring schematic for the cabinet and accessories is included in the panel.

WARNING

Lockout and tagout electrical power before continuing. Failure to do so could result in serious injury or death from electrical shock.

2.11.2.3 Connect flex conduit, and wire the motor per instruction on the motor plate.

2.11.2.4 Supply service from the user's disconnect to the electrical panel.

2.11.2.5 Connect 3-phase power to terminals 1, 2, and 3 on the motor starter as shown on the schematic.

2.11.2.6 Connect the ground wire to the grounding lug as shown in the schematic.

2.11.2.7 After the wiring is completed, observe the subsequent warning, and check the motor rotation. To check rotation, jog the starter (momentarily turn switch on and off). This will cause the motor to rotate slowly. Look through the slots in the fan housing on top of the motor where rotation of the fan can easily be observed. Proper rotation is indicated by the arrow on the exhaustor housing. The fan should rotate toward the exhaustor outlet.

WARNING

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

2.11.2.8 Check the amperage on initial start up. If the motor draws excessive amperage, gradually close the damper until the amperage is within the specifications shown on the motor plate. The damper is located on the

inlet of dry filters, and on the exhaust outlet of reverse-pulse collectors.

2.12 Dry Filter Dust Collector. See separate manual for Reverse-pulse Dust Collector.

2.12.1 Dry filters can be converted to left or right hand inlet. If it is convenient to have the inlet on the opposite side, switch the inlet adaptor for the blank cover.

2.12.2 Connect the flexible exhaust hose between the reclaimer outlet and dry filter inlet. It is easier to slip the hose over the adaptors, 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. Secure the hose with worm clamps. NOTE: The hose wire helps dissipate static electricity in the conveying hose, and also helps ground each segment. In order for the hose wire to dissipate static electricity, the wire must touch the metal of each segment.

2.13 Anchor Media chamber

2.13.1 When all the components are in their permanent position, remove the temporary supports, and bolt the media chamber to the floor. Anchor holes are located in the media chamber leg pads. Anchor through the holes to secure the machine to the floor.

2.14 Inlet Damper

2.14.1 Set the inlet damper to match the cabinet dimensions and reclaimer size. The decal on the damper shows the settings in degrees. The initial settings are as follows:

| | |
|--------------------|--------------------------------------|
| 3636A w/ 600 | align handle to 30 degrees |
| 3636A w/ 900 | align handle to 0 degree (full open) |
| 4050A w/ 600 | align handle to 30 degrees |
| 4050A w/ 900 | align handle to 0 degree (full open) |

See Section 5.6 for adjustment procedure.

2.14.2 Loosen the lock nuts and position the damper. When correctly positioned, tighten the lock nuts to maintain the setting.

2.15 Final Assembly

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

2.15.2 A package of 5 cover lenses is supplied with the cabinet. To install a cover lens, remove the adhesive backing and apply the lens to the clean, dry, inner surface of the view window per Section 6.2. When the cover lens becomes pitted or frosted, replace it.

3.0 FIELD INSTALLED ACCESSORIES

3.1 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 sound proofing 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

3.2.1 A constant static pressure balance is necessary for precise separation, as the reclaimer's efficiency is accomplished by a centrifugal balance of particle weight and size. The air balance and static pressure are set by adjusting the outlet damper. The manometer measures static pressure. Use the instruction sheet provided with the manometer, for installation and operation instructions. The optional manometer kit is listed in Section 9.1.

3.3 Turntable with Workcart and Track

3.3.1 The components of the turntable and track assembly are shown in Figure 5. The assembly consists of:

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

NOTE: The track may be placed on either side of the cabinet, allowing entry through either door. When

installing the inside track, place it so the stops are opposite the entry door.

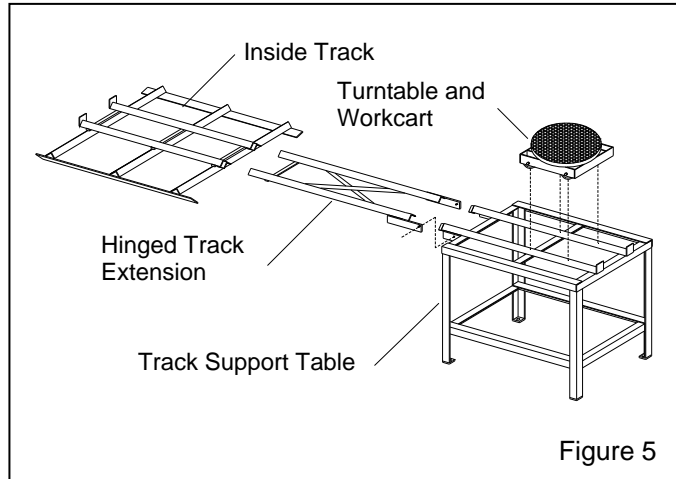


Figure 5

3.3.2 Place the inside track in the cabinet over the existing grate as shown in Figure 6.

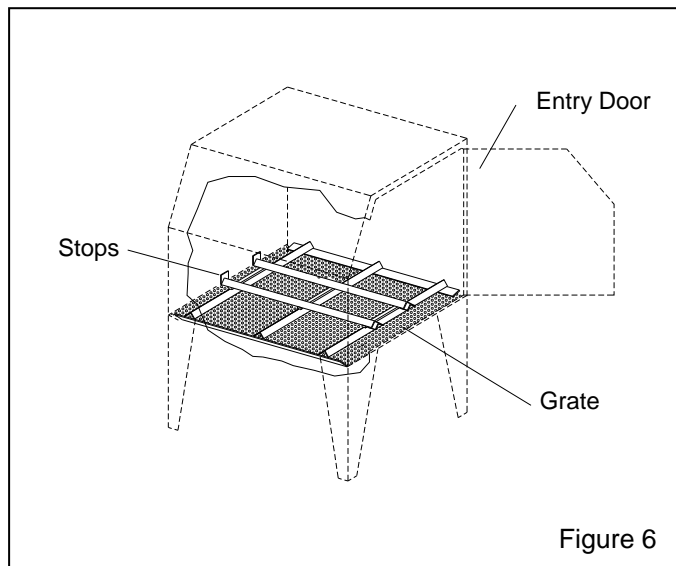


Figure 6

3.3.3 Position the track support table and extension as shown in Figure 7. 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.

3.3.4 Holes are provided on the track table leg pads, to permit anchoring when needed.

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

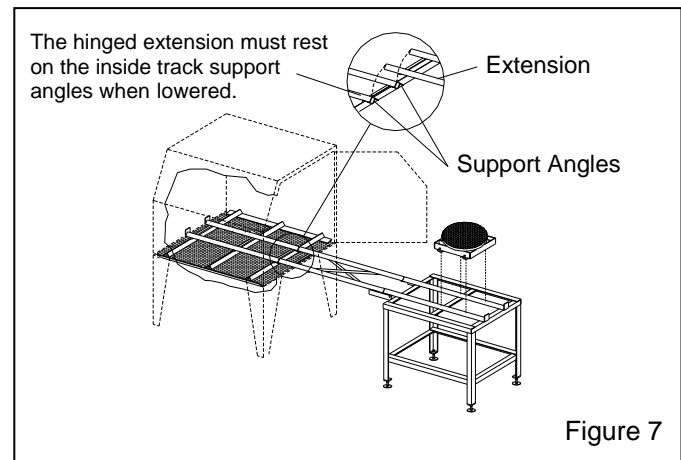


Figure 7

4.0 OPERATION

4.1 Media Loading and Unloading

4.1.1 Media Capacity: Media capacity depends on the reclaimer size. Media capacity of 600 cfm units is approximately 1.6 cu. ft. Full capacity will be below the opening of the pop-up valve. Capacity of 900 cfm units is approximately 2.0 cu. ft. Full capacity will be at the pop-up valve opening. Overfilling will result in media carryover to the dust collector and possible blockage in the conveying hose. The optional storage segment provides nearly 2 additional cubic feet of media storage, and raises the overall height by approximately 17 inches.

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 overfilling may occur.** Overfilling will result in media carryover to the dust collector and possible blockage in the conveying hose. Refill only after all media is recovered from the cabinet.

4.1.3 Media Unloading: To empty the cabinet and media chamber of media, allow all media to be recovered from the cabinet, and 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 handle, 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 media chamber head.

4.2 Loading and Unloading Parts

WARNING

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

4.2.1 Load and unload parts through either door.

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

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

4.2.4 Close door. Be certain door is sealed securely, or door interlock system will prevent the machine from working.

4.3 Dry Stripping (blasting) Operation

CAUTION

- **Always close cabinet, reclaimers and dust collector doors before blasting. Keep all doors closed during blasting.**
 - **Always wear blast gloves.**
 - **Avoid pointing the blast nozzle toward the view window.**
 - **Use the blow-off nozzle to blow media off parts before opening doors.**
 - **After blasting, keep doors closed and exhausters on until the cabinet is clear of all airborne dust.**
 - **Stop blasting immediately if dust leaks are detected.**
-

4.3.1 Slowly open the air valve on the air supply hose to the media chamber. Check for air leaks on the initial start up and periodically thereafter.

4.3.2 Turn on the lights and exhausters. The on/off switch performs both functions.

4.3.3 Load parts.

4.3.4 Close door. Be certain door is sealed securely, or door interlock system will prevent stripping.

4.3.5 Insert hands into rubber gloves.

4.3.6 Firmly grasp the nozzle and apply pressure to the foot pedal. Blasting will begin immediately.

NOTE: When blasting small parts, use a solid back rest for the part. Without this assist, especially with longer blasting operations, the operator will tire from resisting blast pressure. Whenever possible avoid holding small parts that will require blasting into the glove.

WARNING

Shut down the cabinet immediately if dust discharges from the collector. Check that filters are correctly seated and not worn or damaged. Prolonged breathing of any dust could 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 dust generated by blasting. Identify all material being removed by blasting, and obtain a material safety data sheet for the media.

4.3.7 Adjust the pilot pressure regulator located on the top, left side of the cabinet, to the required blasting pressure.

4.3.8 When blasting very small parts, place a screen over the grate to prevent parts from falling into the hopper. If an object should fall through the grate, stop blasting immediately and retrieve it.

4.4 Stop Blasting

4.4.1 To stop blasting, remove pressure on the foot pedal. The media chamber will depressurize each time the foot pedal is released.

4.4.2 The media chamber refills with media stored in the reclaimers each time the foot pedal is released. Refilling takes approximately 15 seconds.

4.4.3 Use the blow-off nozzle to blow media off cleaned parts. Allow the exhausters to clear the cabinet of airborne dust before opening the door.

4.4.4 Unload parts, shut off the air supply valve, and switch off the lights and exhausters.

4.5 Dry Stripping (blasting) Technique

4.5.1 Dry stripping 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.

5.0 ADJUSTMENTS

5.1 Blasting Pressure

CAUTION

The relief valve is set to vent at 65 psi. It serves as an audible signal that pressure is above normal pressure settings for non-aggressive media and delicate substrates.

5.1.1 The pilot pressure regulator, located on the top, left side of the cabinet, enables the user to adjust the blasting pressure to suit the application. The suitable pressure for most purposes is around 40-50 psi. Lower pressures may be required on delicate substrates, and will reduce media breakdown. Higher pressure may be required for difficult stripping jobs on durable substrates, but will increase media breakdown. In all cases, highest production can only be achieved when pressure is carefully monitored.

5.1.2 If the application requires blasting below 40 psi, first pressurize the media chamber 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 located on the top, left side of the cabinet.

5.1.4 To adjust, unlock the knob, and turn it clockwise to increase pressure or counter-clockwise to decrease pressure. Once operating pressure is set, lock the knob to maintain the setting

5.2 Media Metering

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.

5.2.1 Begin adjustments with the media valve closed (handle turned to either side of center). Increase media

flow by turning the handle toward center, no more than 1/8" at a time. Start blasting and allow time for the flow to stabilize before readjusting. The correct flow rate will depend on the type and size of media and the blasting pressure, and can best be determined by experience. As a general rule, use as little media as possible while maintaining production. The air/media mixture should be mainly air.

5.3 Static Pressure

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

5.3.2 Adjust static pressure by opening (handle horizontal) or closing (handle vertical) the damper. The damper is located on the dust collector inlet on dry filters, and on the outlet of reverse pulse collectors. If the damper is not opened 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 dust removal without media carryover.

5.3.3 A manometer is useful when adjusting or monitoring static pressure. Manometer kits are listed under Optional Accessories in Section 9.1. The static pressure starting point for plastic media and similar media should be 2-1/2" - 3".

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

5.4.1 The adjusting lever for the vortex cylinder is mounted on the spacer above the reclaimer body. Start with the lever in the vertical position. Before adjusting the vortex 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 as follows.

5.4.2 Dusty Media: If the reclaimer is not removing sufficient quantities of dust, raise the cylinder by moving the lever left toward "COARSE", in 1/4" increments at the indicator plate. Do not adjust again until the media has gone through several cycles, to be certain further adjustment is required.

5.4.3 Media Carryover: If too much 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 be carried over, and cause abnormally high static pressure.

5.5 Door Interlocks, Figure 8

⚠ WARNING

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

5.5.1 The door interlocks disable the blasting control circuit when the doors are 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 usually 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 adjusting bracket up or down, and the adjusting screw sideways, to center the adjusting 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.

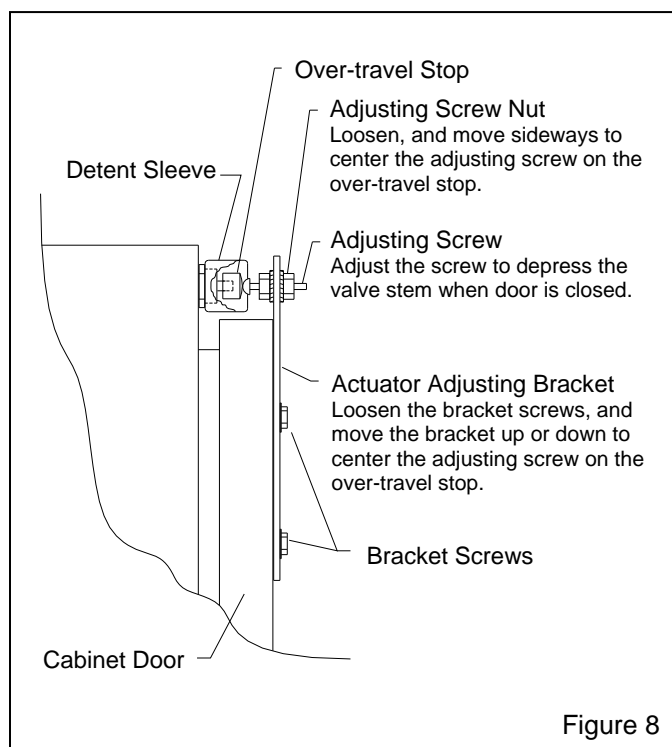


Figure 8

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

5.6 Inlet Damper

5.6.1 Once the inlet is initially set per Section 2.14, 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 as noted in Section 5.3, which is controlled by the outlet damper. Reclaimer pressure must be set before cabinet pressure.** In rare circumstances, cabinet pressure may need to be slightly higher or lower.

5.6.2 A manometer (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 inlet damper. Open the damper further to decrease static pressure or close it further to decrease pressure.

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

6.0 PREVENTIVE MAINTENANCE

⚠ WARNING

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

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

6.1 Dry Filter Dust Collector

6.1.1 The dry filter uses tubular filters which collect dust on their inner surfaces. A shaker arm accessible from the outside of the collector is used to shake the filters. Every two hours, turn off the exhauster and shake the filters vigorously.

CAUTION

Do not shake the filters when the exhauster is on. Doing so will accelerate wear on the filters around the shaker assembly, but not shake the dust loose.

6.1.2 Empty the dust collector drawer regularly. Begin by checking the drawer daily and adjust frequency based on usage and break down rate of media. Dump the contents into a suitable disposal container.

CAUTION

Do not open the dust drawer door while the exhauster is on. The drawer chamber is under positive pressure when the exhauster is on. Opening the dust door while the exhauster is operating or the paddle wheel rotating, will allow dust to escape.

NOTE: Dry stripping media is usually non-toxic, however, some materials removed by the process may be. Check with proper authorities for disposal restrictions.

6.2 View Window Cover Lens

6.2.1 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.

6.2.2 The best way to install a cover lens is to remove the window from the cabinet. If, for some reason, it is not helpful to remove the window, the lens may be applied with it in place.

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

6.3 Reclaimer Debris Screen

6.3.1 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 parts being blasted cause excessive debris. Do not operate the machine without the screen in place.

6.4 Air Filter

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

6.5 Blast Hose and Couplings

6.5.1 To avoid unscheduled down-time, inspect the blast hose for thin spots by pinching it every 6 to 12 inches. Check coupling gaskets and couplings for leaks and wear.

7.0 SERVICE MAINTENANCE

WARNING

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

7.1 Gloves

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

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

7.2 Nozzle

7.2.1 Replace the nozzle when its diameter has increased by 1/16", or sooner if pressure diminishes noticeably. Make sure the nozzle gasket is in place before screwing the nozzle into the nozzle holder.

7.3 View Window Replacement

⚠ WARNING

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

7.3.1 Remove the two window frame nuts located on the upper edge of the window frame, and swing the window frame open. **NOTE:** If the frame is to remain open, for cleaning or other reasons, remove it per Section 7.5.

7.3.2 Remove the old window.

7.3.3 Inspect the window frame gaskets, both on the window frame and on the cabinet. If either gasket is damaged, replace it per Section 7.4.

7.3.4 Install optional view window cover lens per Section 6.2.

7.3.5 Set the new window (cover lens down) squarely over the window opening, ensuring that all edges of the window are centered and overlapping the window gasket, and that the window is resting on the lower locators.

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

7.4 Window Gasket Replacement, Figure 9

7.4.1 Replace the window frame gasket and cabinet window opening gasket at the first sign of media leakage around the view window, or if gaskets appear damaged. Check the gaskets when changing the view window.

7.4.2 Remove the window and window frame per Section 7.5.

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

7.4.4 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 9. Peel additional backing as needed, and work the strip around the radius of each corner, pressing it tightly to bond. Trim the gasket to fit and compress the ends to seal.

7.4.5 Using 5/32" thick strip gasket, repeat the process on the window frame.

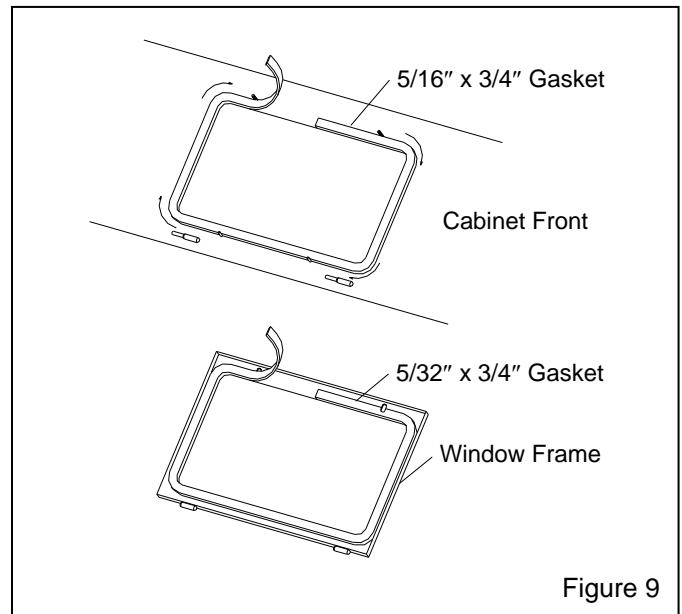


Figure 9

7.4.6 Trim around the window frame bolts slots, as needed.

7.5 Window Frame Removal, Figure 10

7.5.1 Remove the two window frame nuts located on the upper edge of the window frame, and swing the window frame open.

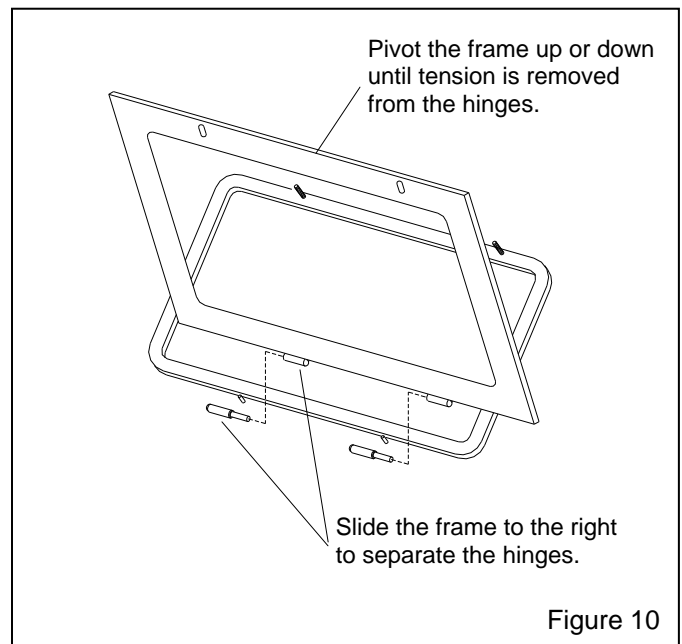


Figure 10

7.5.2 Remove the window to prevent breakage.

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

7.5.4 Slide the frame to the right, to remove. The hinges separate as shown in Figure 10.

7.5.5 Replace the frame in reverse order. Align the top bolt holes with the bolts; slide the frame as necessary.

7.5.6 Set the window squarely over the window opening, ensuring that all edges of the window are centered and overlapping the window gasket, and resting on the lower locators.

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

7.6 Light Assembly

CAUTION

Use an approved step ladder when servicing the light assembly. Do not climb on top of the cabinet. The cabinet top will not support the weight of a person.

7.6.1 Shut-off electrical power.

7.6.2 Gasket Replacement

7.6.2.1 Remove the four holding wing nuts, and use the handles to lift the fixture off the cabinet, as shown in Figure 11.

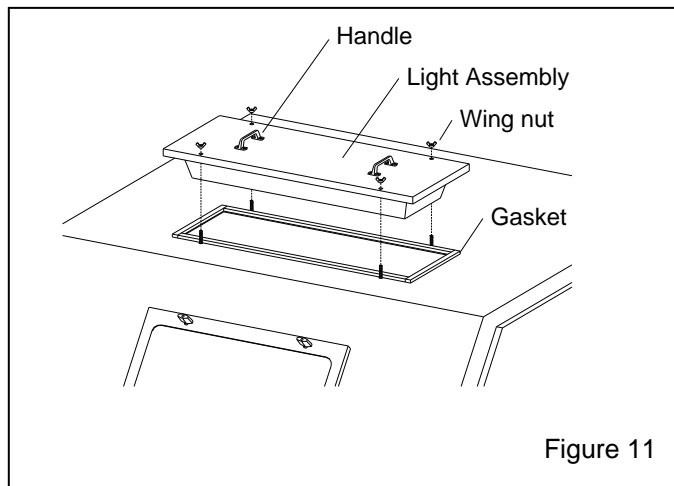


Figure 11

7.6.2.2 Remove all the old gasket material and clean the surfaces of the cabinet.

7.6.2.3 Lay a section of strip gasket next to 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 11. Press the gasket tightly to bond. Repeat the process for each side, compressing the ends to seal.

7.6.3 Lens and Tube Replacement

7.6.3.1 Remove the four holding wing nuts, and use the handles to lift the fixture off the cabinet.

7.6.3.2 Flip the assembly over to access the lens screws, ref. Figure 12.

7.6.3.3 Remove the four lens screws and remove the lens.

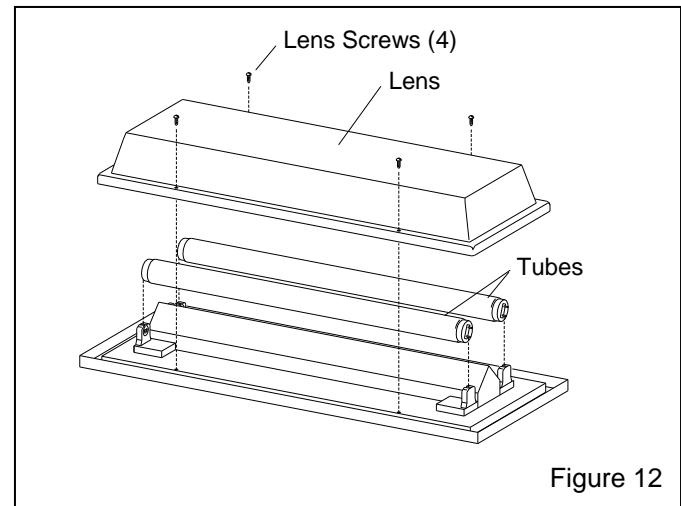


Figure 12

7.6.3.4 Replace the lens or tubes as required.

7.6.3.5 Inspect the gasket, and replace if worn or damaged.

7.6.3.6 Reassemble in reverse order.

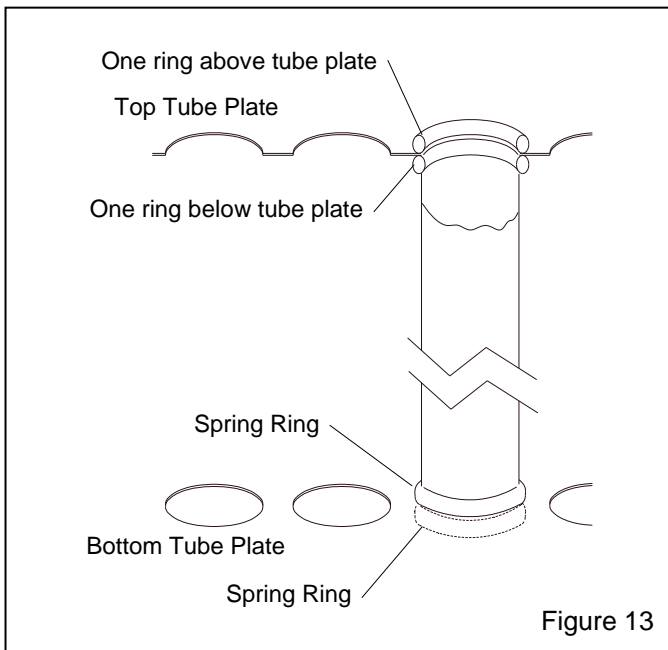
7.7 Dry Filter Tube Replacement, Figure 13

7.7.1 Replace damaged filters immediately. Remove the old filters by pulling the spring rings off the bottom and top tube plates. Working from the back to the front, install one filter at a time. To install new filters, form the end of the spring ringed tubular filter into a shallow "c" shape, push the filter far enough into the hole of the top plate to allow one spring ring to snap into place above the tube plate and the other to snap into place below it. See the illustration in Figure 13.

7.7.2 The tubular filter is held firmly by a spring ring above and below the perimeter of the holes in the top and bottom plate. The filters fit tight to prevent dust leakage. To ensure a tight seal, some force may be required by the installer. Check for proper seating at both ends, and remove any twist in the tube before proceeding to the next filter.

⚠ WARNING

- Do not bend spring ends tight enough to cause ends to kink.
- Do not use a sharp instrument to force spring rings into the opening. This could damage the filter and seriously impair the function of the dust collector.
- Install one filter at a time. Check the seating of the top and bottom spring rings, and that the tube is not twisted, before proceeding to the next.



7.8 Pop-up Valve Replacement

7.8.1 Empty the machine of media as described in Section 4.1.3.

7.8.2 Depressurize the media chamber, and lock out and tag out the compressed-air supply.

⚠ WARNING

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

- Depressurize the media chamber.
- Lock out and tag out the compressed air supply.
- Bleed the air supply line to the media chamber.

7.8.3 To gain access to the pop-up valve, remove the inspection door assembly.

7.8.4 Using a small pipe wrench, unscrew the pop-up valve guide (Figure 22 Item 12), by turning it counterclockwise. Remove the pop-up valve and guide from the machine. Place the new pop-up valve over the guide, and screw the valve guide (with the pop-up valve on it) back into position inside the machine. Tighten the guide as tight as possible without using a wrench.

7.8.5 Put a new gasket on the inspection door and bolt the door back onto the machine.

7.9 Pop-up Valve Seat Replacement

7.9.1 The easiest method to replace the rubber pop-up seat is through the reclaimers access door. If for some reason replacement can not be made through the reclaimers, observe the warning in Section 7.8, and empty the machine and bleed the air supply line. Remove the inspection door assembly and work through the opening.

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

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

7.10 Reclaimer Wear Plate Replacement

7.10.1 Remove the reclaimer inlet adaptor and old wear plate. The wear plate is held in place by screws attached from the outside of the reclaimer.

7.10.2 Angle the new wear plate into reclaimer inlet until it is in position with the straight end at the reclaimer inlet. Using a board or similar object as leverage, pry the wear plate against the inner wall of the reclaimer and install sheet metal screws to hold in place. Caulk any gaps or voids around the wear plate to prevent rapid wear in those areas.

7.11 RP Dust Collector

Optional reverse-pulse dust collectors are covered by a separate manual.

8.0 TROUBLESHOOTING

WARNING

To avoid serious injury, observe the following when troubleshooting.

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

8.1 Poor Visibility

8.1.1 Dirty tube filters or filter cartridge. Shake tube filters, and empty dust drawer regularly. Ref. RP Dust Collector Manual for pulse pressure and sequence.

8.1.2 Motor rotating backwards. The motor should rotate as indicated by the arrow on the housing. If it does not rotate in the proper direction, lockout and tagout power and switch the motor leads as shown on the motor plate. See Section 2.11.

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

8.1.4 Outlet damper closed too far restricting air movement in cabinet. Adjust per Section 5.3.

8.1.5 Inlet damper requires opening. Restrictions at the inlet damper reduces air movement in the cabinet. Open damper per Section 2.14 and 5.6.

8.1.6 Hole worn in flex hose between cabinet hopper and reclaimer inlet (if RP collector is used also check hose between the reclaimer outlet and dust collector inlet).

8.1.7 Reclaimer door open.

8.1.8 Obstruction in flex hose between the cabinet hopper and reclaimer inlet.

8.1.9 Paddle wheel worn. Check wheel for wear.

8.2 Abnormally High Media Consumption

8.2.1 Door on reclaimer open or improper fit or worn door gasket. Air entering the reclaimer at this point will

cause media to be carried into the dust collector. DO NOT operate unless all doors are closed.

8.2.2 Dust collector damper open too far. Adjusts static pressure per Section 5.3.

8.2.3 Media may be too fine or worn-out.

8.2.4 Using friable media that rapidly breaks down.

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

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

8.2.7 Adjustable vortex cylinder out of adjustment, See Section 5.4.

8.3 Reduction In Blast Cleaning Rate

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

8.3.2 Incorrect metering valve adjustment. Adjust per Section 5.2.

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

8.3.4 Blockage in nozzle. Blockage may occur as a result of a missing debris screen.

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

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 re-install 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 by blasting parts that are slightly oily, from moisture in the compressed air, or from absorption.

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 an air line permitting moisture to condense on the inside, and from high humidity. Drain filters and receiver tank regularly. If the problem persists, it may be necessary to change media more often, or install an aftercooler or air dryer.

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

8.5.5 A vibrator mounted either on the media chamber leg or on a bolt on the media metering valve may help prevent bridging of fine-mesh media

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

8.6.1 Depressurize the media chamber, and check the nozzle to see if it is plugged. See Section 8.4.

8.6.2 Check that the media chamber pressurizes when the foot pedal is pressed. If it does not, see Section 8.11.

8.6.3 Check that the media metering valve and the choke valve are open.

8.7 Media chamber Will Not Depressurize Or Depressurizes Too Slowly

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

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

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

8.7.4 Check 4-way air valve for jamming. See Section 8.11.10 and 8.11.11.

8.8 Heavy Media Flow

8.8.1 Make sure the choke valve is open.

8.8.2 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.

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

8.9.1 Heavy media flow. Adjust per Section 5.2

8.9.2 Empty, and depressurize the media chamber, and inspect the internal parts of the metering valve for wear.

8.10 Air Only (no media) Comes Out The Nozzle

8.10.1 Make sure the machine contains media.

8.10.2 Check that the media metering valve is not closed.

8.10.3 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, open the metering valve clean out cap and check for foreign objects.

8.11 Media chamber Will Not Pressurize

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

8.11.2 Check that pressure regulator is not turned down. Minimum pressure is 40 psi. See Section 5.1.

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

8.11.4 Inadequate air supply. Check table in Figure 3.

8.11.5 Inspect the outlet valve for wear.

8.11.6 Inspect pop-up valve and seat for wear and alignment.

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

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

8.11.9 Make sure the lines are not reversed on the foot pedal or pilot regulator. See schematic in Figure 4.

8.11.10 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.

8.11.11 Check the 4-way valve as follows: Depressurize the air supply line. Remove the tubing leading 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 probably faulty.

8.11.12 Inspect the check valve for broken flap.

8.12 Static Shocks

8.12.1 Cabinet and/or operator not grounded. Dry stripping blasting creates static electricity. The cabinet must be grounded to prevent static build-up. See Sections 2.10 and 2.12.2. 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.

8.12.2 Avoid holding parts off the grate. Static will build-up in the part if not dissipated through the metal cabinet.

8.13 Dust Leaking From Dust Collector

Refer to RP Dust Collector Manual for service of reverse-pulse dust collectors.

8.13.1 Check for damaged or loose filters.

8.13.2 Check for a faulty seal on the dust drawer.

8.13.3 Make sure upper and lower tube sheets are sealed on both sides, front, and rear.

9.0 ACCESSORIES AND REPLACEMENT PARTS

9.1 Optional Accessories

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.

Stationary turntable without bearing

| Description | Stock No. |
|-------------------------------|-----------|
| 20" dia. 25 lb capacity | 12412 |

**Stationary Turntable with Bearing, 500 lb. capacity
Figure 14**

| 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. | Lock-washer, 1/2" | 03516 |
| 6. | Nut, 1/2-NC hex | 03511 |

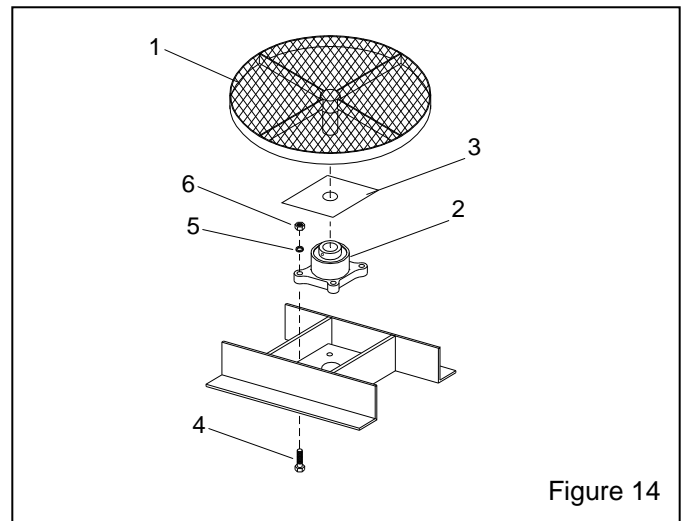


Figure 14

**Turntable with Workcart and Track, 500 lb. Capacity,
Figure 15**

| Item | Description | Stock No. |
|------|-------------------------------------------|-----------|
| (-) | 20" diameter turntable and track assembly | |
| | for 65 series | 13530 |
| | for 220 series | 12835 |
| (-) | 30" diameter turntable and track assembly | |
| | for 220 series | 24045 |
| (-) | Turntable and workcart replacement | |
| | 20" diameter | 24205 |
| | 30" diameter | 24086 |
| 1. | Turntable, replacement | |
| | 20" diameter | 18329 |
| | 30" diameter | 21390 |
| 2. | Bearing, 1-1/2" bore | 11517 |
| 3. | Protector, bearing | 13479 |
| 4. | Screw, 1/2-NC x 1-1/2" cap | 03454 |
| 5. | Lock-washer, 1/2" | 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.

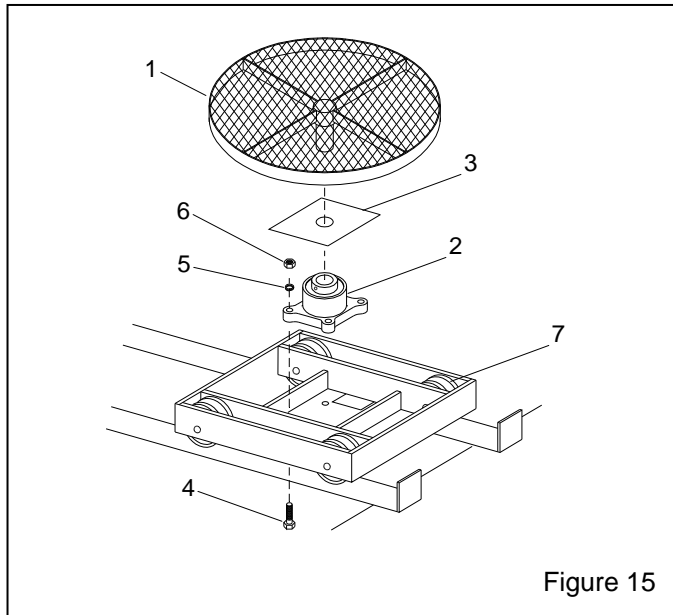


Figure 15

Description **Stock No.**

Storage segment, 16": Fits between the reclaimer and media chamber. Provides nearly 2 additional cubic feet of media storage 21128

Pass-thru door, with 15 inch square cut-out
 Right door
 for 3636A series 23610
 for 4050A220 series 23612
 Left door
 for 3636A series 23611
 for 4050A series 23613

Rubber curtains, white
 Curtain set
 for 3636A series 23541
 for 4050A series 23542

Rubber curtains, black
 curtain set
 for 3636A series 23531
 for 4050A series 23532

Back curtain
 for 3636A series 14243
 for 4050A series 14247

Front curtain
 for 3636A series 14242
 for 4050A series 14246

Door curtain, 2 required
 for 3636A series 14244
 for 4050A series 14245

Nozzles, silicon carbide lined, rubber jacketed short venturi, with contractor threads
 * TYP-4, 1/4" orifice x 3-3/4" 23502
 TYP-5, 5/16" orifice x 3-3/4" (standard) 23503
 * TYP-6, 3/8" orifice x 3-3/4" 23504

Lock pins (pkg of 25) for twist-on hose couplings . 11203
 Safety cable, blast hose 15012
 Manometer kit 12528
 Abrasive trap 02011

Abrasive Trap, Figure 16, Optional

| Item | Description | Stock No. |
|------|---------------------------------------|-----------|
| (-) | Abrasive trap, complete | 02011 |
| 1. | Screen | 02012 |
| 2. | O-Ring | 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 | 02434 |
| 9. | Decal | 02129 |
| (-) | Service kit (items 1, 2, 8 & 9) | 01925 |

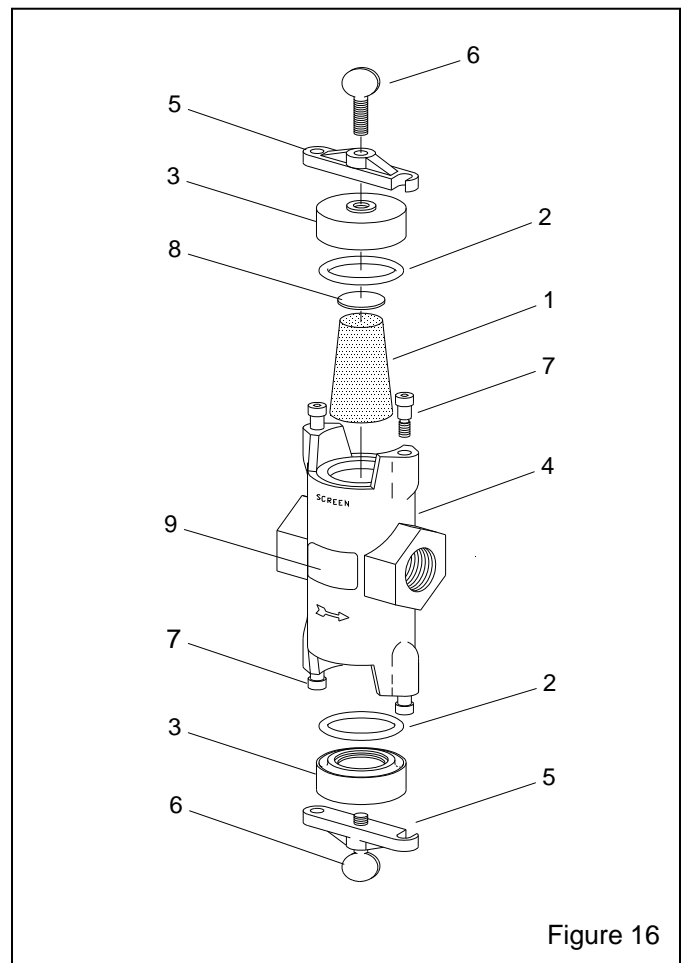


Figure 16

9.2 Cabinet Replacement Parts, Figure 17

| Item | Description | Stock No. |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1. | Gasket, door, adhesive backed, specify feet required 3636A, 11 ft. per door 00187 4050A, 13 ft. per door 00187 | |
| 2. | Light assembly w/ cover 23255 | |
| 3. | Window glass, 12.5" x 19.5" 12212 | |
| 4. | Gasket, 5/16" x 3/4", applied to cabinet per foot, 6 feet required 00189 | |
| 5. | Gasket, 5/32" x 3/4", applied to window frame per foot, 6 feet required 00192 | |
| 6. | Cover lens, pkg. of 5 06190 | |
| 7. | Door assembly, left for 3636A 20070 for 4050A 20074 | |
| 8. | Door assembly, right for 3636A 20071 for 4050A 20075 | |
| 9. | Grate for 3636A 11811 for 4050A 11810 | |
| 10. | Latch kit, door 20064 | |
| 11. | Glove set 11215 | |
| 12. | Glove, left hand only 12710 | |
| 13. | Glove, right hand only 12711 | |
| 14. | Clamp, glove 11576 | |
| 15. | Clamp, flex hose 5-1/2", for 3636A 11578 6-1/2", for 4050A 00750 | |
| 16. | Hose, flex, bulk, specify length required. 5" ID light lined for 3636A, 9 ft. required 12467 6" ID light lined for 4050A, 9 ft. required 12468 | |
| 17. | Grommet, blow-off hose 11798 | |
| 18. | Grommet, blast hose 11801 | |
| 19. | Adaptor pipe universal, flex hose 5" for 600 cfm 23296 6" for 900 cfm 23297 | |
| 20. | Gasket, flex hose adaptor pipe 5" for 600 cfm 23259 6" for 900 cfm 23291 | |
| 21. | Muffler, outlet 05068 | |
| 22. | Adaptor, 1" male NPT x 1" male flare 11720 | |
| 23. | Actuator, door interlock 19152 | |
| 24. | Over-travel stop, door interlock 20004 | |
| 25. | Detent sleeve, door interlock 15042 | |
| 26. | Air valve, 3 way door interlock 12202 | |
| 27. | Regulator, 1/8" NPT pilot 12715 | |
| 28. | Gauge, pressure 01908 | |
| 29. | Gasket, light assembly, applied to cabinet per foot, 7 ft. required 00187 | |
| 30. | Gasket, hopper plate adaptor 20247 | |
| 31. | Plate, hopper hose adaptor 21657 | |
| 32. | Switch, toggle (single phase only) 12127 | |
| 33. | Nut, plastic, window frame, 2 required 23035 | |
| 34. | Foot pedal assembly, less tubing 20483 | |

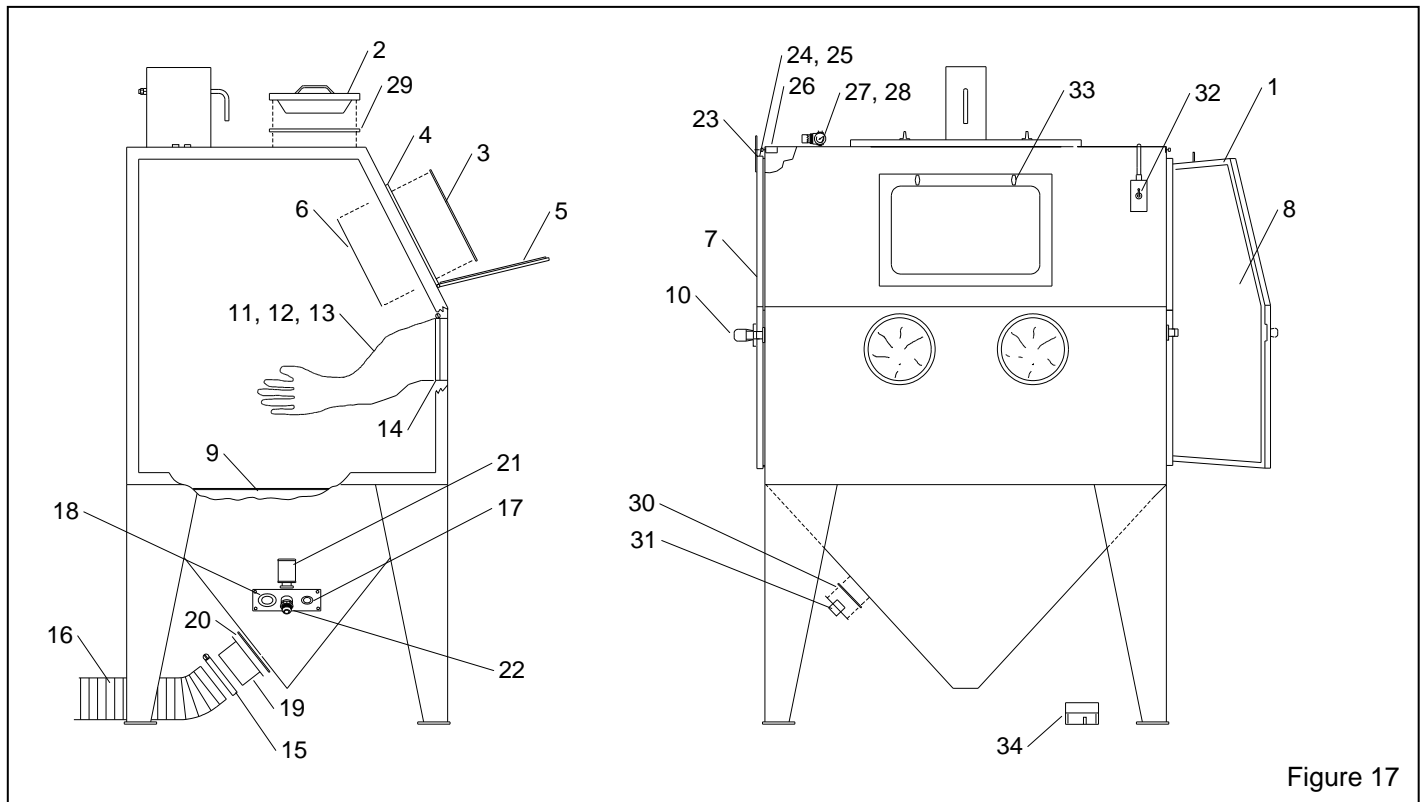


Figure 17

9.3 Light Assembly, Figure 18

| Item | Description | Stock No. |
|------|-------------------------------------------|-----------|
| (-) | Light assembly w/ cover | 23255 |
| 1. | Light fixture (assembly less cover) | 24740 |
| 2. | Reflector lens | 23253 |
| 3. | Tube, fluorescent, 20w | 24741 |

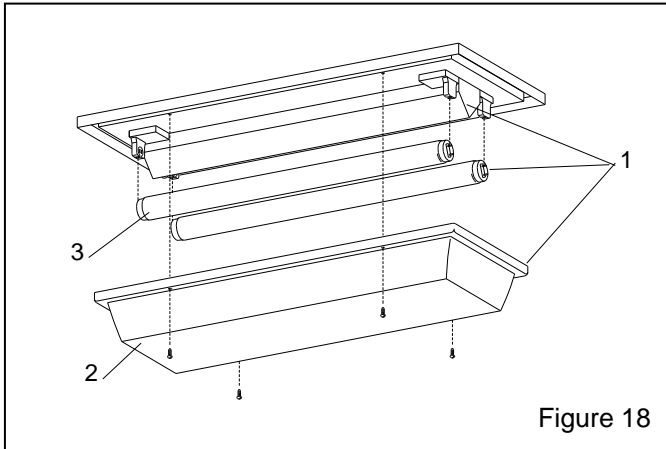


Figure 18

9.4 Foot Pedal Assembly, Figure 19

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

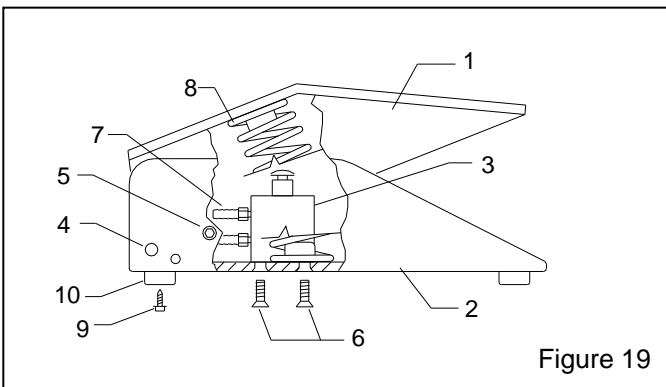


Figure 19

9.5 Exhaust Muffler, Figure 20

| Item | Description | Stock No. |
|------|--------------------------|-----------|
| (-) | Muffler, complete | 05068 |
| 1. | Screw, 8-32" x 4" | 05061 |
| 2. | Cap, coated | 05067 |
| 3. | Body, element | 05065 |
| 4. | Screen | 05060 |
| 5. | Guide w/ guide nut | 22344 |
| 6. | O-ring, 1-1/4" ID | 05069 |
| 7. | Seat | 05062 |
| 8. | Lock-nut, 8-32 ss | 05815 |

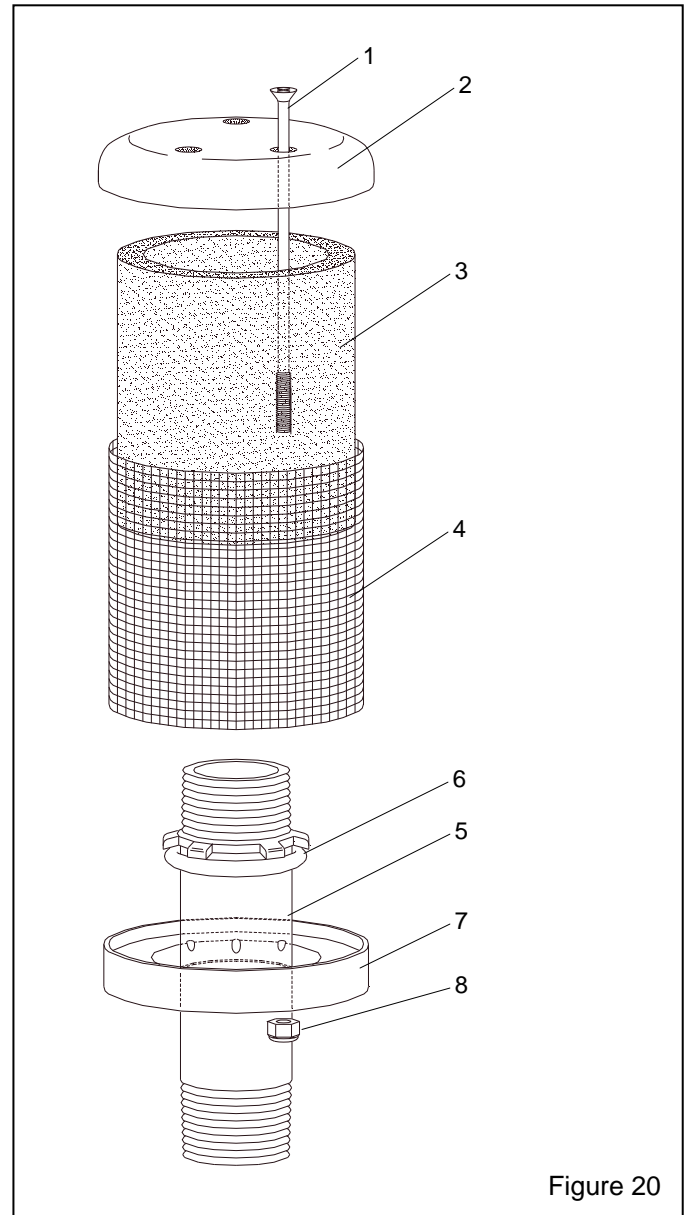


Figure 20

9.6 Plumbing Assembly, Figure 21

| Item | Description | Stock No. |
|------|-----------------------------------------------------|-----------|
| 1. | Valve, 3-way | 12202 |
| 2. | Adaptor, 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. | Filter, 1" manual drain | 22424 |
| 6. | Tubing, 3/8" OD poly, specify ft. required | 12478 |
| 7. | Tee, 1/8" tube barb | 11734 |
| 8. | Foot pedal assembly, less tubing | 20483 |
| 9. | Adaptor, 1/8" NPT elbow x 1/8" barb | 11733 |
| 10. | Valve, 4-way air | 12203 |

| | | |
|-----|---------------------------------------------|-------|
| 11. | Adaptor, elbow 1/4" male NPT x 3/8" tube | 11685 |
| 12. | Valve, 1" piston outlet | 01967 |
| 13. | Regulator, 1" pilot operated w/ gauge | 12052 |
| 14. | Tee, 1/4" brass | 02025 |
| 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" male NPT | 06369 |
| 21. | Blow-off nozzle | 13116 |
| 22. | Hose, 1/2" ID air, bulk, specify feet reqd. | 12472 |
| 23. | Regulator, 1/8" NPT pilot | 12715 |
| 24. | Gauge, pressure | 01908 |

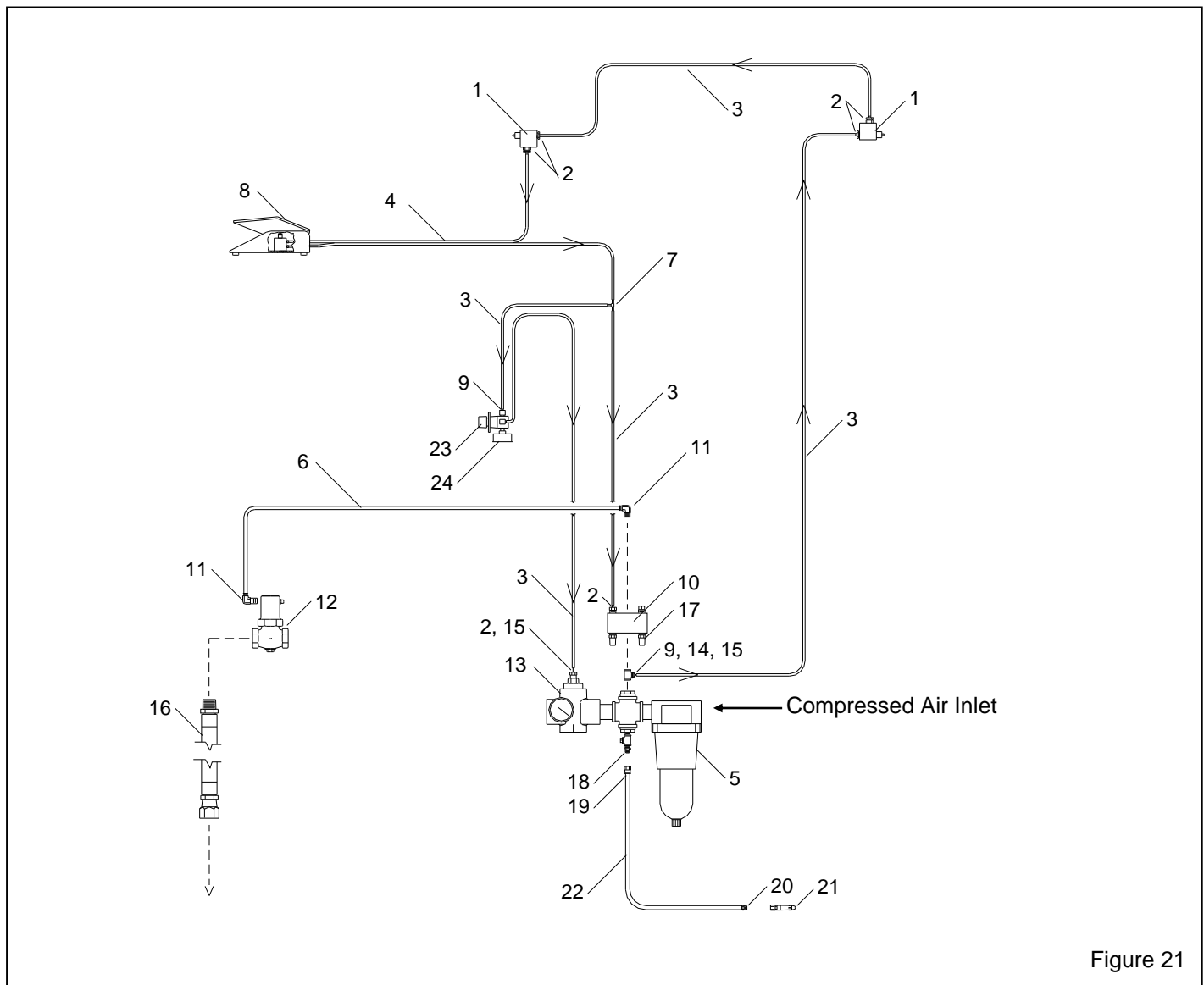


Figure 21

9.7 Media chamber, Figure 22

| Item | Description | Stock No. |
|------|-----------------------------------------------------------------------------------|-----------|
| (-) | Media chamber Assembly, 2 cu. ft. capacity (includes all items not marked with *) | 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. | Hose, cpld. 1"x 32" pusher line | 22864 |
| 6. | Adaptor, 1" male NPT x 1" male flare | 11720 |
| 7. | CF Coupling | 00551 |
| 8. | FSV Media metering valve | 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 1-1/4" x 6" toe | 01722 |
| 13. | Seat, pop-up valve | 02325 |

| | | |
|----------|-----------------------------------------|-------|
| 14. | Valve, 1" piston outlet | 01967 |
| 15. | Regulator, 1" pilot operated w/ gauge | 12052 |
| 16.* | Gauge, 1/4" cbm | 01908 |
| 17. | Filter, 1" manual drain | 22424 |
| 18. | Check valve, 1" swing | 12187 |
| 19. | Relief valve, 3/4" NPT, 65 psi | 10715 |
| 20.* | Gasket, for CF coupling, pack of 10 | 00850 |
| 21. | Valve, 4-way air | 12203 |
| 22. | Nozzle holder, 3/4" Supa hose | 11398 |
| 23. | Hose, 3/4" ID Supa-T, bulk, 16 ft. reqd | 23100 |
| 24. | Coupling, 3/4" Supa hose, CQPS-3/4 | 11395 |
| 25.* | Gasket, CQGP-1 coupling, pack of 10 | 08852 |
| 26. | Nozzle, silicon carbide | |
| * TYP-4, | 1/4" orifice x 3-3/4" | 23502 |
| TYP-5, | 5/16" orifice x 3-3/4" (standard) | 23503 |
| * TYP-6, | 3/8" orifice x 3-3/4" | 23504 |
| 27.* | Nozzle washer, NW-25, pack of 10 | 91024 |
| 28. | Hose assembly, 1" x 10' exhaust | 23915 |

* not included with media chamber assembly

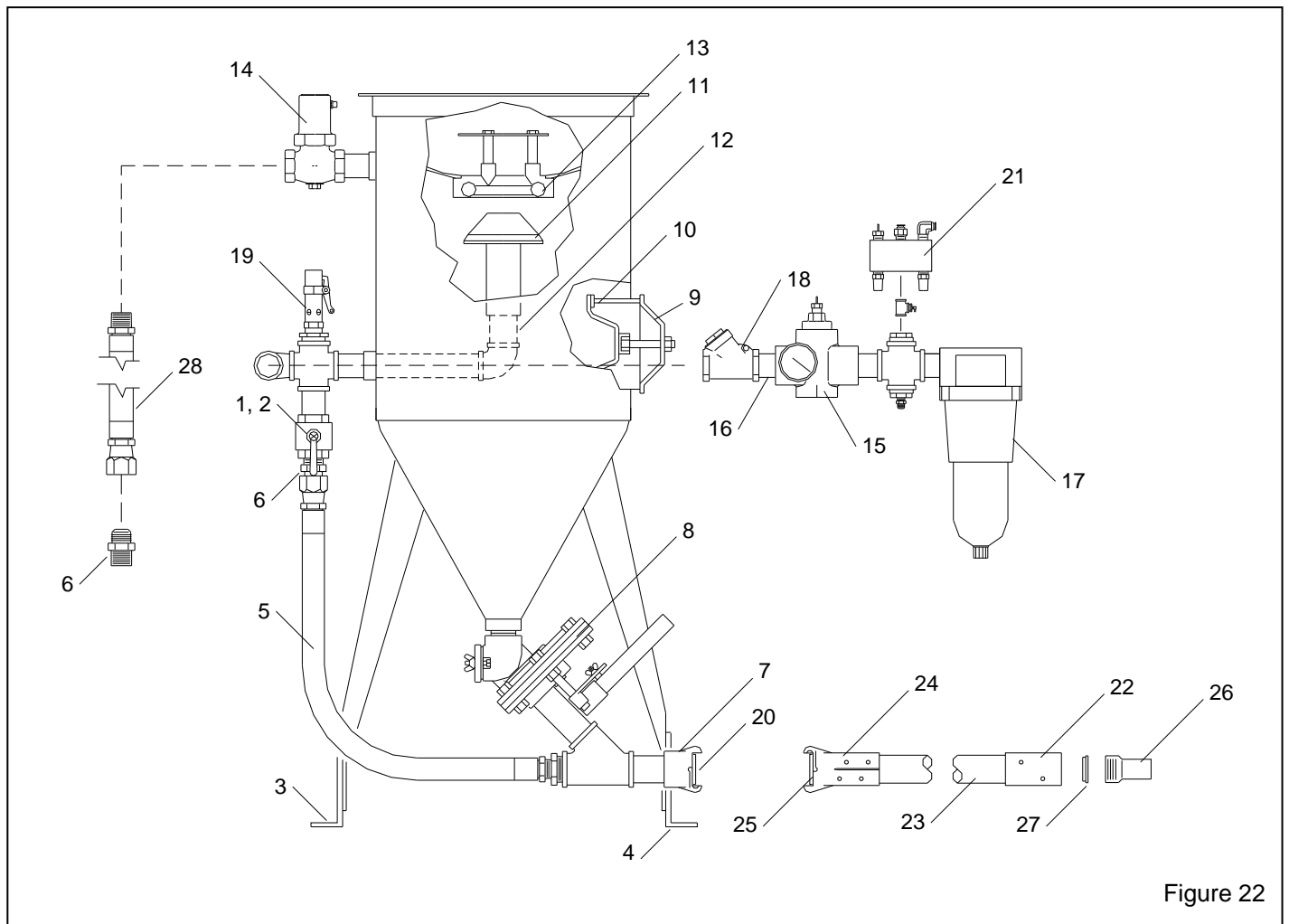


Figure 22

9.8 FSV Media Metering Valve, Figure 23

| Item | Description | Stock No |
|------|--------------------------------------------|----------|
| (-) | Media valve, complete | 02427 |
| 1. | Upper body | 02422 |
| 2. | Valve disc | 02423 |
| 3. | Gasket, rubber, 2 required | 02424 |
| 4. | Disc, stainless | 02425 |
| 5. | Lower body | 02426 |
| 6. | Metering handle, heavy duty | 20498 |
| 7. | Cap screw, 1/4" NC x 1" hex head | 03053 |
| 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. | Pin, hairpin cotter | 20245 |

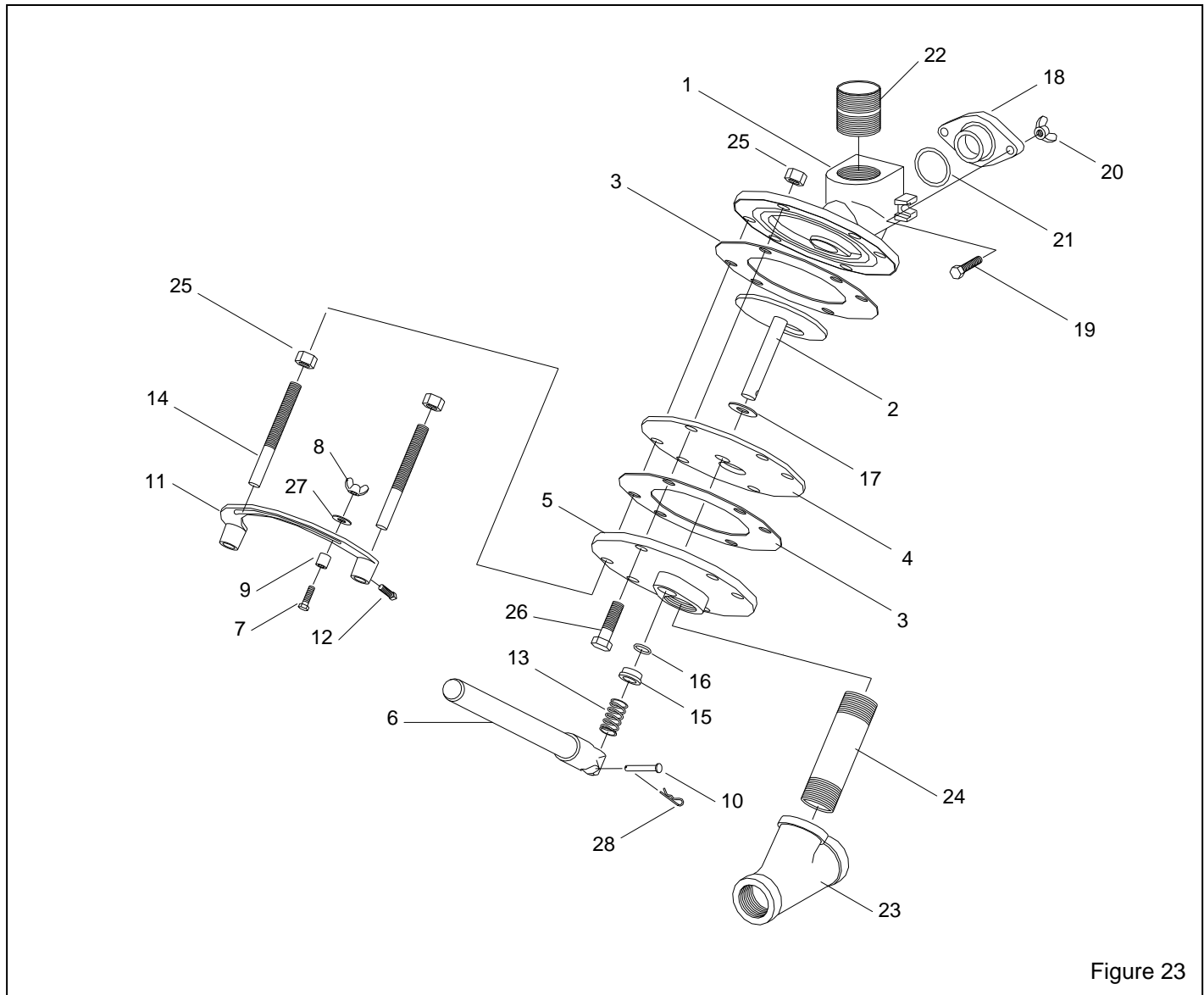
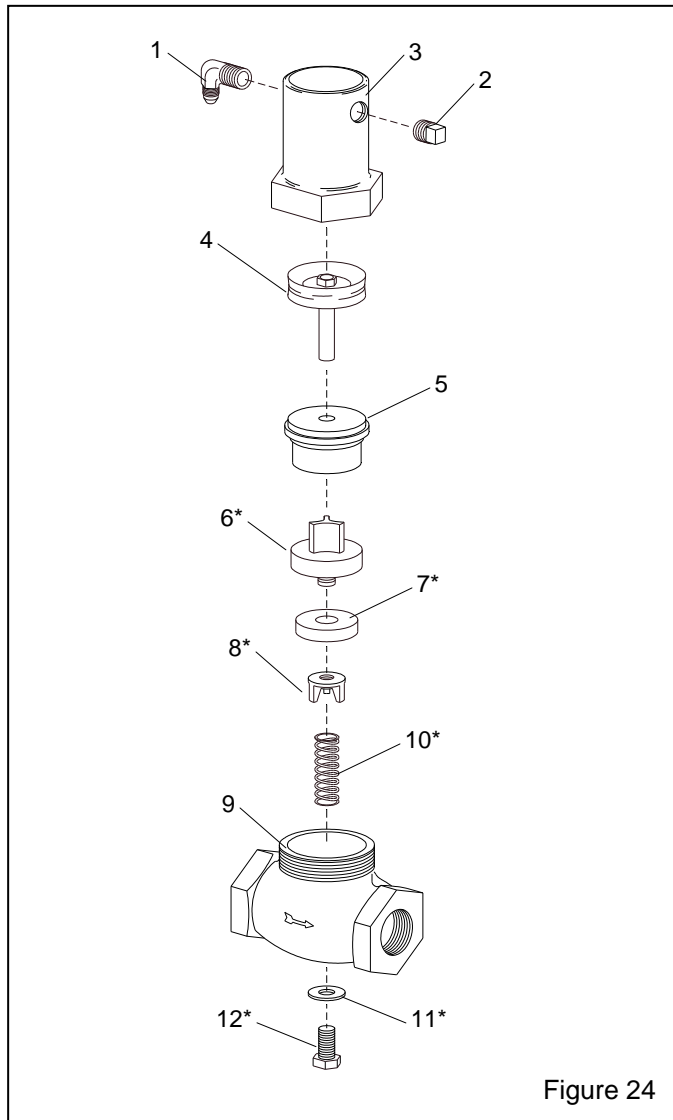


Figure 23

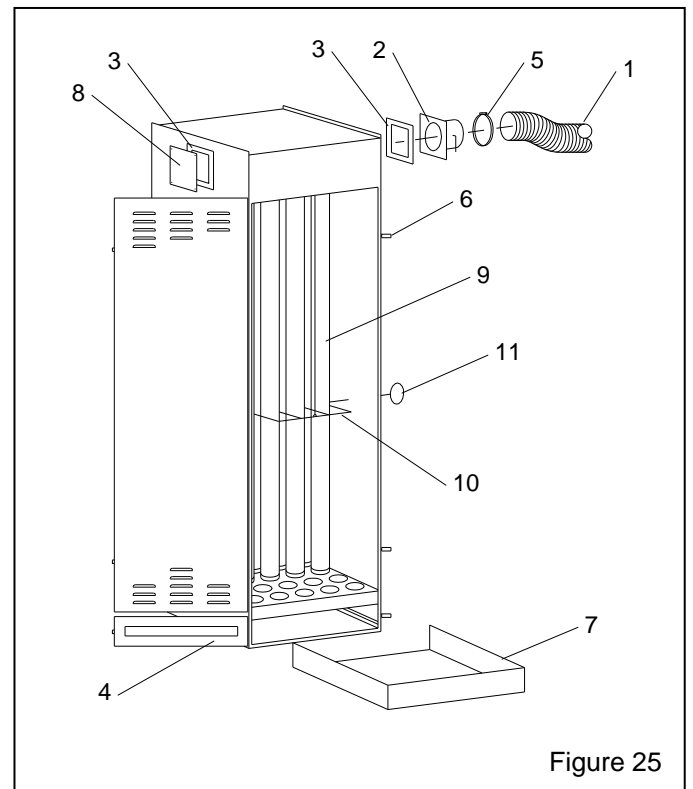
9.9 1" Piston Outlet Valve, Figure 24

| Item | Description | Stock No. |
|------|---------------------------------------------------------------------------------------|-----------|
| (-) | 1" Piston outlet valve, complete | 01967 |
| 1. | Adaptor, elbow 1/4" male NPT x 3/8" tube not included with replacement valve | 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 | 01979 |
| 12.* | Cap screw, 3/8-NC x 3/4" | 03251 |
| (-) | Service kit, includes items marked *, quantity is shown in () | 01928 |



9.10 Dry Filter Dust Collector, Figure 25

| Item | Description | Stock No. |
|------|-------------------------------------------------------------------------------|-----------|
| (-) | Dry filter, complete | |
| | 600 cfm | 12700 |
| | 900 cfm | 12701 |
| 1. | Hose, flex, bulk, specify ft. required, 5 ft. std. 6" ID for 600 cfm | 12452 |
| | 7" ID for 900 cfm | 12448 |
| 2. | Inlet adaptor w/ damper 6" for 600 cfm | 14272 |
| | 7" for 900 cfm | 14273 |
| 3. | Gasket, inlet adaptor 600 cfm | 11762 |
| | 900 cfm | 11763 |
| 4. | Gasket, dust drawer | 11771 |
| 5. | Clamp, hose | 11576 |
| 6. | Spring latch assembly | 12263 |
| 7. | Drawer, dust for 600 cfm | 14275 |
| | for 900 cfm | 14276 |
| 8. | Plate, inlet cover for 600 cfm | 14277 |
| | for 900 cfm | 14278 |
| 9. | Tubular filter, each | 11503 |
| | 600 cfm requires 25 | |
| | 900 cfm requires 40 | |
| 10. | Shaker, tube filter 600 cfm | 12414 |
| | 900 cfm | 12415 |
| 11. | Handle, shaker | 12899 |



**9.11 Reclaimer, for 16" Dia. Media chamber
Figure 26**

NOTE: Flex hose, clamp and lower adhesive backed gasket are not supplied with replacement reclaimers.

| Item | Description | Stock No. |
|------|------------------------------------------------------------------------------------------------------------------|-----------|
| (-) | Reclaimer assembly, with exhauster 600 cfm10782 900 cfm10491 | |
| (-) | Reclaimer assembly, pull-through type without exhauster 600 cfm22799 900 cfm22800 | |
| 1. | Motor, exhauster for 600 cfm reclaimer, 1 HP, 1-PH12314 for 900 cfm reclaimer, 2 HP, 3-PH12309 | |
| 2. | Plate, motor mount 600 cfm12004 900 cfm12005 | |
| 3. | Housing, 600 cfm exhauster12272 900 cfm exhauster12271 | |
| 4. | Gasket, 5/16" x 1" adhesive backed, (4 ft. required for each location)00187 | |
| 5. | Paddle wheel 600 cfm12334 900 cfm12335 | |

| | |
|-----|--------------------------------------------------------------------------------------------------------------------------------|
| 6. | Inlet pipe adaptor 600 cfm, 5"12361 900 cfm, 6"12363 |
| 7. | Gasket, inlet adaptor 600 cfm11779 900 cfm11759 |
| 8. | Wear plate 600 cfm13011 900 cfm14055 |
| 9. | Screen assembly, 4.5 mesh21275 |
| 10. | Gasket, door11745 |
| 11. | Spring latch assembly12263 |
| 12. | Gasket, 2" adhesive backed, specify ft. required13089 |
| 13. | Vortex cylinder assembly, adjustable, for exhauster mounted reclaimer, optional 600 cfm19062 900 cfm23047 |
| 14. | Vortex cylinder assembly, adjustable, standard with pull-through reclaimer 600 cfm19080 900 cfm23046 |
| 15. | Hose support inlet, optional for 900 cfm only 6", standard16887 |
| 16. | Hose, light lined flex, specify feet required 5" ID for 600 cfm12467 6" ID for 900 cfm12468 |
| 17. | Clamp, hose For 600 cfm, 5-1/2"11578 For 900 cfm, 6-1/2"00750 |

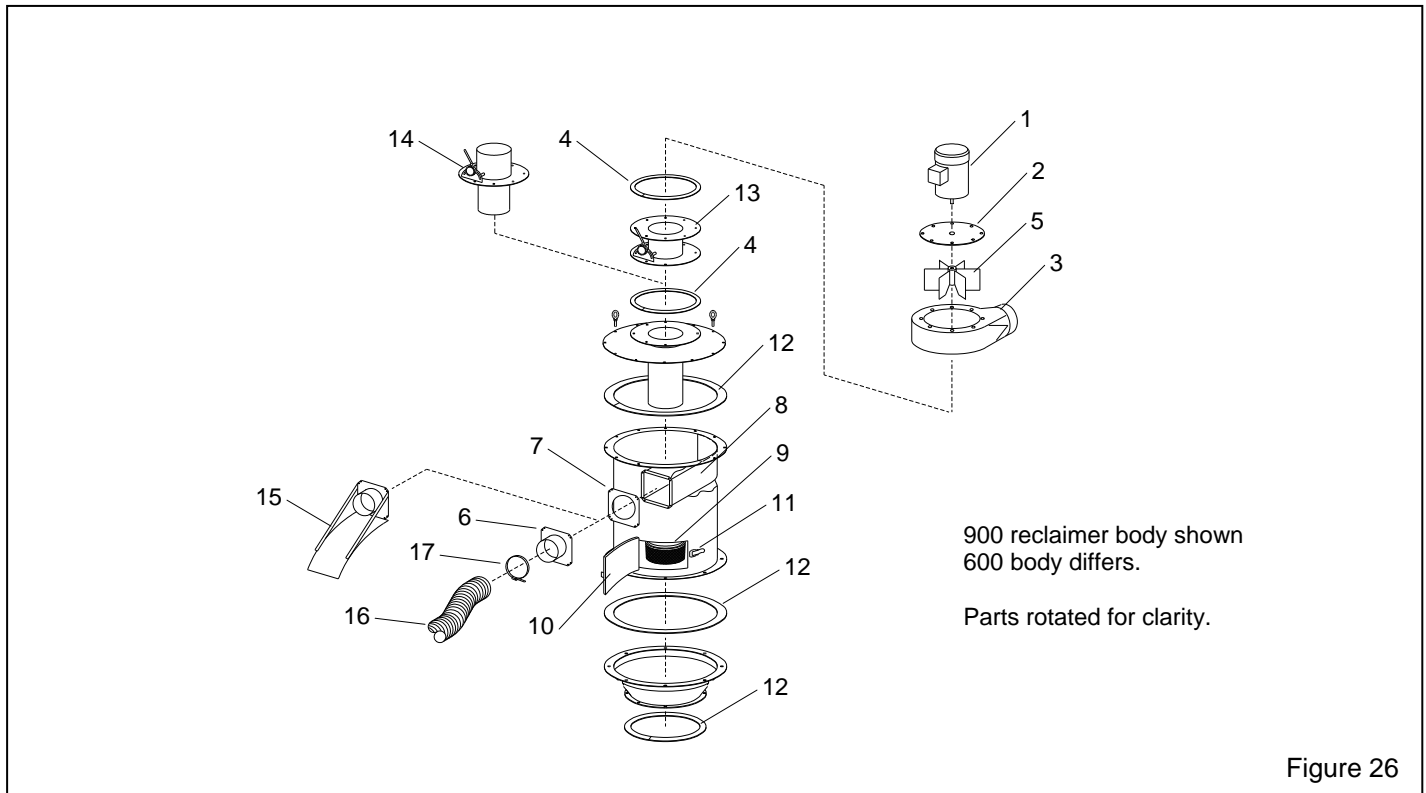


Figure 26