

OPERATOR'S MANUAL

BLASTMASTER® ABRASIVE CUT-OFF SYSTEM



⚠ WARNING

Before using this equipment, read, understand and follow all instructions in the Operator's Manuals provided with this equipment. If the user and/or assistants cannot read or understand the warnings and instructions, the employer of the user and/or assistants must provide adequate and necessary training to ensure proper operation and compliance with all safety procedures pertaining to this equipment. If Operator's Manuals have been lost, please visit www.marco.us, or contact Marco at 563.324.2519 for replacements. Failure to comply with the above warning could result in death or serious injury.



Company Profile

Since 1944, Marco has developed a strong tradition of providing innovative and reliable products and services to the surface preparation and protective coatings industries. We are the world's premier provider of Abrasives, Blasting, Coating, Dust Collectors, Engineered Systems, Rental, Safety, Service, Repair, & Modernization, and Vacuums.

Through innovative designs and a total commitment to quality, Marco manufactures products that increase production rates, create a safer workplace, and reduce maintenance costs. Marco's industry experience, manufacturing capabilities, legendary customer service, product availability, logistics services, and technology leadership is your assurance that we deliver high quality products and services, providing the best value to you, our customer.

The Marco Difference

- **Industry Experience** – With Marco on your team, you have access to expertise which can only come from decades of industry leadership. We have organized our engineering department, production specialists, customer operations, and safety support into a “Center of Competence.” As a Marco customer, you have access to hundreds of years of cumulative experience related to your operations.
- **Manufacturing Excellence** – Marco is a U.S. based, ISO 9001:2008 certified manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Marco's engineers benchmark the industry to ensure that we design and manufacture superior products that set the “Gold Standard” for performance, safety, and quality.
- **Legendary Customer Service** – Marco's legendary customer service team is staffed by friendly, highly-trained individuals who are focused on providing the highest level of product support, order accuracy, and customer satisfaction.
- **Product Availability** – We stock over 10,000 SKU's and have more than 45 shipping locations to serve North American and International markets for all major brands of blasting and coating equipment. As the largest provider of surface preparation and protective coatings equipment in the world, our inventory levels and product availability are unmatched.
- **Logistics Services** – Marco's in-house logistics team is dedicated to moving your shipment anywhere in the world. We move more than 14,000 truckloads every year, allowing you to save on freight costs by leveraging our buying power. Lower your process costs with a single invoice, which includes product and freight.
- **Technology Leadership** – Our website provides: Operator's Manuals, Part Numbers and Schematics Guides, SDS information, and Features & Specifications Guides, providing access to information 24/7. Our Extranet application allows you to receive quotes and place orders online. Our Intranet maintains a complete record of your purchase history to assist with ongoing support of your existing equipment and future purchasing decisions.

Vision Statement

Marco is the world's premier provider of Abrasives, Blasting, Coating, Dust Collectors, Engineered Systems, Rental, Safety, Service, Repair, & Modernization, and Vacuums.

Mission Statement

Marco provides strong leadership and innovation to the surface preparation and protective coatings industries. We dedicate our efforts to the continuous improvement of our products, services, processes, people, and most importantly, the quality of our customer's experience.

Quality Statement

Marco is committed to providing superior quality in the design, manufacturing, distribution, rental, service, and repair of our products. Our ISO 9001:2008 certification extends throughout all operations in all locations. Continuous improvement of our processes and supply chain Integration comprise the core of our business strategy for delivering exceptional quality and value in all Marco products and services.

Management Philosophy

We are a company dedicated to the success of every customer and associate. We discuss, debate, challenge, measure, and test our ideas. We will be boundless and limitless in our passion to improve. Through sound leadership and dedicated associates, we will ensure a long term, profitable future for Marco, our associates, customers, and suppliers.

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DEFINITION OF TERMS

DANGER

This is an example of danger. This indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION

This is an example of a caution. This indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It can also be used to alert against unsafe practices.

WARNING

This is an example of a warning. This indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

This is an example of a notice. This indicates policy or practice directly related to safety of personnel or protection of property.

HAZARD IDENTIFICATIONS

WARNING

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- ▶ OSHA sets exposure limits to protect workers from exposure to respirable crystalline silica, 29 CFR 1910.1053. Airborne dust could increase the exposure levels beyond permissible limits. Breathing dust containing silica could cause silicosis, a fatal lung disease. Breathing dust during abrasive blasting operations, post-blast cleaning operations, and/or servicing equipment within the abrasive blasting area may expose an individual to conditions that could cause asbestosis, lead poisoning and/or other serious or fatal diseases. Harmful dust containing toxic material from abrasives or surfaces being abrasive blasted can remain suspended in the air for long periods of time after abrasive blasting has ceased. A NIOSH-approved, well-maintained, respirator designed for the specific operation being performed must be used by anyone abrasive blasting, handling or using the abrasive, and anyone in the area of the dust.
- ▶ Contact NIOSH and OSHA offices to determine the proper respirator for your specific application. The air supplied to the respirator must be at least Grade D quality as described in Compressed Gas Association Commodity Specification G-7.1 and as specified by OSHA Regulation 1910.134. Ensure air filter and respirator system hoses are not connected to non-air sources or in-plant lines that may contain nitrogen, oxygen, acetylene or other non-breathable gases. Before removing respirator, use an air monitoring instrument to determine if the atmosphere is safe to breathe.
- ▶ You must comply with all OSHA, local, City, State, Province, Country and jurisdiction regulations, ordinances and standards, related to your particular work area and environment. Keep unprotected individuals out of the work area.
- ▶ Abrasive blasting operators must receive thorough training on the use of abrasive resistant attire which includes: supplied-air respirator, abrasive blasting suit, safety shoes, gloves, ear protection and eye protection. Protect the operator and bystanders by complying with NIOSH and OSHA Safety Standards.
- ▶ Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions.
- ▶ OSHA requires abrasive blasting nozzles be equipped with an operating valve, which shall be designed to be held open only by continuous hand pressure and shall close immediately upon release of hand pressure (i.e., a “deadman” control). The valve shall not be modified in any manner that would allow it to remain open without the application of continuous hand pressure by the operator. Failure to comply with the above warning could result in release of high speed abrasive and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)
- ▶ Point the abrasive blasting nozzle only at the surface being abrasive blasted. Never point the abrasive blasting nozzle or abrasive stream at yourself or others.
- ▶ Unless otherwise specified, maximum working pressure of abrasive blasting pots and related components must not exceed 150 psi. Exceeding maximum working pressure of 150 psi could cause the abrasive blasting pot and components to burst. Failure to comply with the above warning could result in death or serious injury.
- ▶ Never weld, grind or drill on the abrasive blasting pot (or any pressure vessel). Doing so will void ASME certification and manufacturer’s warranty. Welding, grinding or drilling on the abrasive blasting pot (or any pressure vessel) could weaken the vessel causing it to burst. Failure to comply with the above warning could result in death or serious injury. (ASME Pressure Vessel Code, Section VIII, Division 1)
- ▶ This equipment is not intended for use in any area that might be considered a hazardous location, as described in the National Electric Code NFPA 70, Article 500. Use of this equipment in a hazardous location could cause an explosion or electrocution.
- ▶ Never attempt to move an abrasive blasting pot containing abrasive. Never attempt to manually move abrasive blasting pots greater than 6.5 cubic foot capacity. Always use at least two capable people to manually move an abrasive blasting pot on flat, smooth surfaces. A mechanical lifting device must be used if an abrasive blasting pot is moved in any other manner.

HAZARD IDENTIFICATIONS

WARNING

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- ▶ This product is not for use in wet environments. Always use a Ground Fault Interrupter Circuit (GFIC) for all electrical power source connections. Use of this product in wet environments could create a shock or electrocution hazard.
- ▶ Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed.
- ▶ Do not cut, obstruct, restrict or pinch pneumatic control lines. Doing so could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air.
- ▶ Use of Marco remote control switches with other manufacturer's remote control systems could cause unintended activation of remote control systems resulting in the release of high speed abrasive and compressed air. Only Marco remote control switches should be used with Marco remote control systems.
- ▶ Always be certain to have secure footing when abrasive blasting. There is a recoil hazard when abrasive blasting starts that may cause user to fall and misdirect the abrasive stream at operator or bystander.
- ▶ Never use an abrasive blasting pot or attachments as a climbing device. The person could slip and fall. The abrasive blasting pot could become unstable and tip over.
- ▶ For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator's manuals, information, training, instructions and warnings, for the proper and intended use of all equipment.
- ▶ Flammable fumes, such as solvent and paint fumes in the work area can present an ignition or explosion hazard if allowed to collect in adequate concentrations. To reduce conditions that could result in a fire or an explosion, provide adequate ventilation, eliminate all ignition or spark sources, keep the work area free of debris, store solvents and solvent contaminated rags in approved containers, follow proper grounding procedures, do not plug/unplug power cord or turn on/off power switches when flammable fumes are present, keep a working fire extinguisher or provide another fire suppression system in the work area. Cease all operations and correct condition if a spark or ignition source is identified during operation.
- ▶ Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.
- ▶ Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts.
- ▶ Surfaces of heated supply tanks, drums and/or lines as well as the adjoining plumbing may become hot during normal use. Do not touch these heated surfaces without proper protection. Deactivate and allow sufficient time for all surfaces to cool before attempting any maintenance.
- ▶ High-pressure fluid from gun, hose leaks, or ruptured components can pierce skin and can cause a serious injury that may result in amputation. Do not point gun or spray tip at anyone or at any part of the body. Keep clear of any leaks or ruptures. Depressurize the entire system before attempting cleaning, inspecting, or servicing equipment.
- ▶ Exposure to toxic fluids or fumes may occur during the normal operation of this system. Before attempting to fill, use, or service this system, read SDS's to know the specific hazards of the fluids you are using. Always use proper Personal Protective Equipment when attempting to fill, use, or service this system.
- ▶ The use of this product for any purpose other than originally intended or altered from its original design is prohibited.
- ▶ Never hang objects from the abrasive blasting pot handle. Doing so may cause the abrasive blasting pot to become unstable and tip over.

HAZARD IDENTIFICATIONS

CAUTION

Failure to comply with ANY CAUTION listed below may result in minor or moderate injury.

- ▶ Static electricity can be generated by abrasive moving through the abrasive blasting hose causing a shock hazard. Prior to use, ground the abrasive blasting pot and abrasive blasting nozzle to dissipate static electricity.
- ▶ High decibel noise levels are generated during the abrasive blasting process which may cause loss of hearing. Ensure appropriate Personal Protective Equipment and hearing protection is in use.

NOTICE

Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

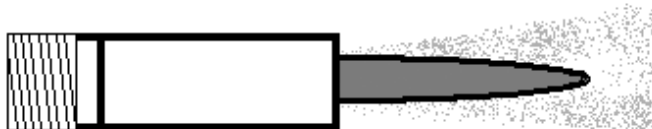
- ▶ See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- ▶ Always use abrasive that is dry and properly screened. This will reduce the potential for obstructions to enter the remote control system, abrasive metering valve and abrasive blasting nozzle.
- ▶ Moisture build-up occurs when air is compressed. Any moisture within the abrasive blasting system will cause abrasive to clump, clogging metering valves, hoses and nozzles. Install an appropriately sized moisture separator at the inlet of the abrasive blasting system. Leave the moisture separator petcock slightly open to allow for constant release of water. If insufficient volume of air exists and petcock is unable to be left open (at all times) petcock should be opened frequently to release water.
- ▶ To reduce abrasive intrusion in the air supply hose, depressurize the abrasive blasting pot before shutting off air supply from compressor.
- ▶ Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liner or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzles placed into service may not be returned. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.
- ▶ Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.
- ▶ Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16" or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16" larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.

AIR & ABRASIVE CONSUMPTION CHART

NOTICE

Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

- ▶ See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- ▶ When it comes to air & abrasive mixtures, more is not necessarily better. Optimum abrasive blasting efficiency takes place when a lean air & abrasive mixture is used. To correctly set the abrasive metering valve, begin with the valve fully closed and slowly increase the amount of abrasive entering the airstream. As you increase the abrasive flow, watch for a “blue flame” at the exit of the abrasive blasting nozzle. Faster cutting, reduced abrasive consumption and lower clean up costs, are benefits of the “blue flame”.
- ▶ Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.



“Blue Flame”

NOTICE

Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liner or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzles placed into service may not be returned. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.

Air & Abrasive Consumption Chart*

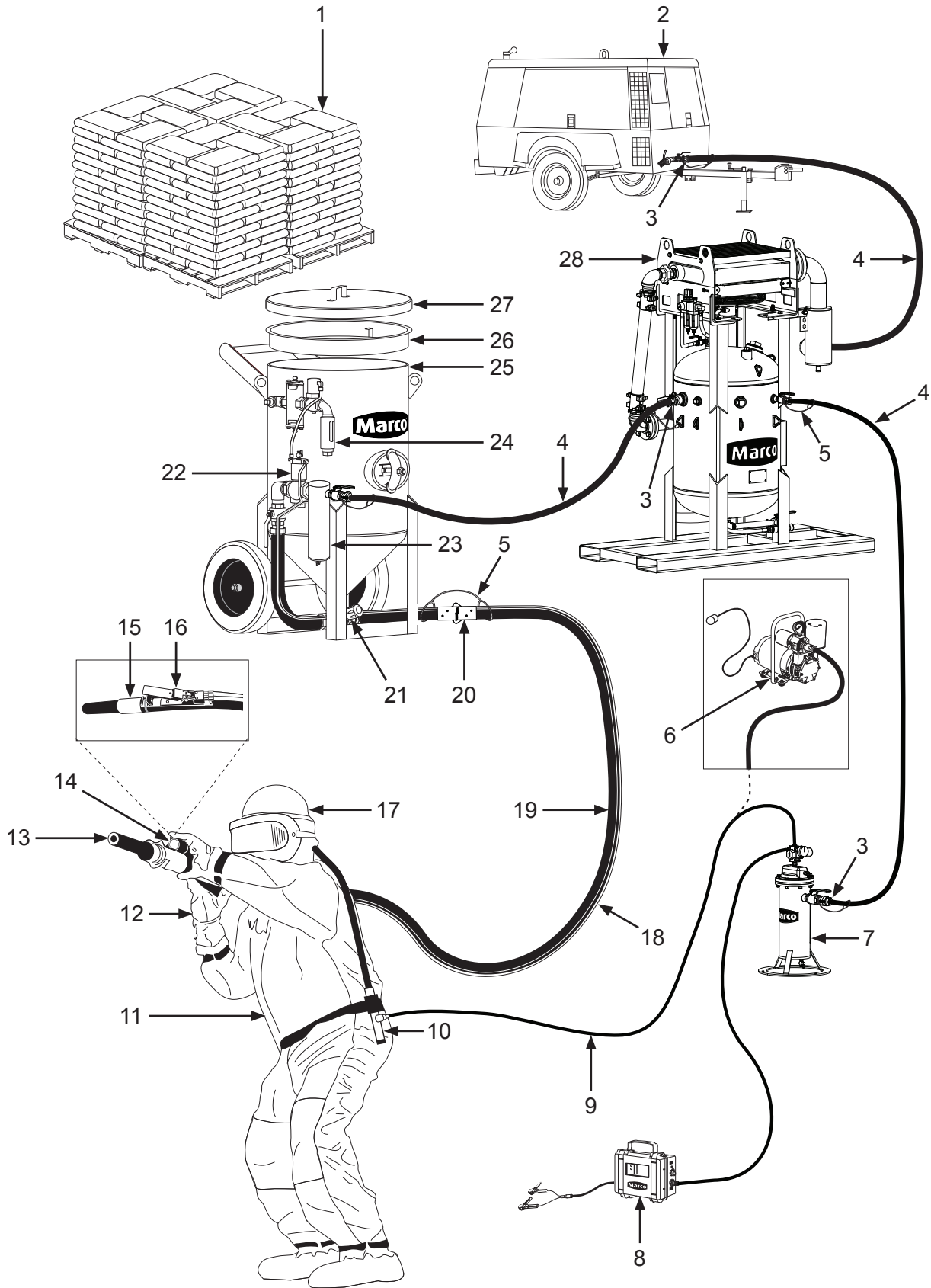
Nozzle Orifice	Pressure at the Nozzle (PSI)								Air (in cfm), Abrasive & Compressor Requirements
	50	60	70	80	90	100	125	140	
No. 2 (1/8")	11	13	15	17	18	20	25	28	Air (cfm)
	67	77	88	101	112	123	152	170	Abrasive (lbs/hr)
	2.5	3	3.5	4	4.5	5	5.5	6.2	Compressor Horsepower
No. 3 (3/16")	26	30	33	38	41	45	55	62	Air (cfm)
	150	171	196	216	238	264	319	357	Abrasive (lbs/hr)
	6	7	8	9	10	10	12	13	Compressor Horsepower
No. 4 (1/4")	47	54	61	68	74	81	98	110	Air (cfm)
	268	312	354	408	448	494	608	681	Abrasive (lbs/hr)
	11	12	14	16	17	18	22	25	Compressor Horsepower
No. 5 (5/16")	77	89	101	113	126	137	168	188	Air (cfm)
	468	534	604	672	740	812	982	1100	Abrasive (lbs/hr)
	18	20	23	26	28	31	37	41	Compressor Horsepower
No. 6 (3/8")	108	126	143	161	173	196	237	265	Air (cfm)
	668	764	864	960	1052	1152	1393	1560	Abrasive (lbs/hr)
	24	28	32	36	39	44	52	58	Compressor Horsepower
No. 7 (7/16")	147	170	194	217	240	254	314	352	Air (cfm)
	896	1032	1176	1312	1448	1584	1931	2163	Abrasive (lbs/hr)
	33	38	44	49	54	57	69	77	Compressor Horsepower
No. 8 (1/2")	195	224	252	280	309	338	409	458	Air (cfm)
	1160	1336	1512	1680	1856	2024	2459	2754	Abrasive (lbs/hr)
	44	50	56	63	69	75	90	101	Compressor Horsepower
No. 10 (5/8")	308	356	404	452	504	548	663	742	Air (cfm)
	1875	2140	2422	2690	2973	3250	3932	4405	Abrasive (lbs/hr)
	68.5	79.5	90	100.5	112	122	146	165	Compressor Horsepower
No. 12 (3/4")	432	504	572	644	692	784	948	1062	Air (cfm)
	2672	3056	3456	3840	4208	4608	5570	6238	Abrasive (lbs/hr)
	96	112	127	143	154	174.5	209	236	Compressor Horsepower

*Abrasive consumption is based on abrasive with a bulk density of 100 lbs per Cubic Foot

NOTICE

Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16" or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16" larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.

"THE BIG PICTURE"



DAILY PRE-OPERATION CHECKLIST

Daily Pre-operation Checklist

- 1. Abrasive
- 2. Air Compressor
- 3. Air Hose Couplings & Gaskets
- 4. Air Hose
- 5. Safety Cable
- 6. Ambient Air Pump*
- 7. Breathing Air Filter
- 8. CO Monitor
- 9. Breathing Line
- 10. Climate Control Device
- 11. Abrasive Blasting Suit
- 12. Gloves
- 13. Abrasive Blasting Nozzle
- 14. Lighting System*
- 15. Abrasive Blasting Nozzle Holder
- 16. Remote Control Switch
- 17. Supplied-Air Respirator
- 18. Control Line
- 19. Abrasive Blasting Hose
- 20. Abrasive Blasting Hose Couplings & Gaskets
- 21. Abrasive Metering Valve
- 22. Remote Control System
- 23. Moisture Separator
- 24. Abrasive Blasting Pot Exhaust Muffler
- 25. Abrasive Blasting Pot
- 26. Abrasive Blasting Pot Screen
- 27. Abrasive Blasting Pot Lid
- 28. Aftercooler*

* *Optional or alternative device. Ask your Marco Representative for more details.*

Abrasive – Select the correct Abrasive (1) for the application. Review the SDS (*Safety Data Sheet*) to ensure the correct PPE (*Personal Protective Equipment*) and Environmental Controls have been selected and are in place.

Air Compressor – Select an Air Compressor (2) of adequate size to support all equipment requirements. Refer to “Air & Abrasive Consumption Chart” for Abrasive Blasting Nozzle (13) air consumption requirements. Before connecting Air Hose (4), sample the air being produced by the air compressor (2) to ensure it is free of petroleum contaminants.

Air Hose, and Air Hose Couplings & Gaskets – Select Air Hoses (4) of sufficient size to support all subsequent volumetric requirements and with a sufficient PSI (*pound per square inch*) rating. Inspect all Air Hoses (4), and Air Hose Couplings & Gaskets (3) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Hose, Abrasive Blasting Hose Couplings & Gaskets, and Abrasive Blasting Nozzle Holder – Select an Abrasive Blasting Hose (19) that has an inner diameter 3 to 4 times larger than your Abrasive Blasting Nozzle (13). Inspect Abrasive Blasting Hose (19), Abrasive Blasting Hose Couplings & Gaskets (20), and Abrasive Blasting Nozzle Holder (15) for damage or wear. Repair or replace damaged or worn components.

Safety Cables – Install a Safety Cable (5) at each Abrasive Blasting Hose (19), and Air Hose (4) connection points.

Aftercooler and Moisture Separator – Ensure Aftercooler (28) is positioned on stable ground. Keep petcock drain of Moisture Separator (23) slightly open during use. Drain both devices after each use.

Supplied-Air Respirator, Breathing Line, Breathing Air Filter, Climate Control Device, CO Monitor, Ambient Air Pump – You MUST consult the Operator’s Manual supplied with your Respiratory Equipment (6, 7, 8, 9, 10, 17) for ALL applicable instructions and warnings. Inspect all Respiratory Equipment components for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Suit and Gloves – Select an abrasive-resistant Abrasive Blasting Suit (11) that is slightly oversized to allow ease of movement and allows air to flow around your body. Select abrasive-resistant Gloves (12) with a tight fit and a long cuff that overlaps the sleeve of the Abrasive Blasting Suit (11).

Abrasive Metering Valve and Abrasive Blasting Pot – Confirm Abrasive Blasting Pot (25) is positioned on stable ground. Inspect Abrasive Blasting Pot (25) and Abrasive Metering Valve (21) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Pot Screen and Abrasive Blasting Pot Lid – Always use an Abrasive Blasting Pot Screen (26) when filling Abrasive Blasting Pot (25) with Abrasive (1) to prevent debris from entering the Abrasive Blasting Pot (25). Remove Abrasive Blasting Pot Lid (27) before operating the Abrasive Blasting Pot (25). Install Abrasive Blasting Pot Lid (27) after use to protect the Abrasive Blasting Pot’s (25) interior.

Remote Control System, Remote Control Switch, Control Line, – Inspect Remote Control System (22) and Control Line (18) for damage or wear. Repair or replace damaged or worn components. Ensure Control Line (18) fittings connected to the Remote Control System (22) are tight and free of leaks. Ensure Remote Control Switch (16) is functioning properly. Consult Remote Control Switch Operator’s Manual for applicable instructions.

Abrasive Blasting Pot Exhaust Muffler – Inspect Abrasive Blasting Pot Exhaust Muffler (24) at start and end of daily use. Replace element of Abrasive Blasting Pot Exhaust Muffler (24) per Operator’s Manual instructions.

Lighting System – Ensure the Lighting System (14) is connected to a proper power supply before use.

OPERATING INSTRUCTIONS

WARNING

W-506
OSHA requires blast cleaning nozzles be equipped with an operating valve, which shall be designed to be held open only by continuous hand pressure and shall close immediately upon release of hand pressure (i.e., a “deadman” control). The valve shall not be modified in any manner that would allow it to remain open without the application of continuous hand pressure by the operator. Failure to comply with the above warning could result in release of high speed abrasive and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)

WARNING

W-522
Verify your remote control system is designed to function as normally-closed. Use of this assembly with a normally-open remote control system could cause unintended activation of the remote control system resulting in the release of high speed abrasive and compressed air. Failure to comply with the above warning could result in death or serious injury.

Description

The Blastmaster® Abrasive Cut-Off System allows the operator to remove dust and other contaminants from the just-blasted work surface using the blast hose. This is accomplished by operating the metering valve and air valve individually. When blasting, both an air valve and an air-actuated metering valve are activated to flow compressed air and abrasive into the blast hose and to the work surface. When the work surface has been blast-cleaned, dust can adhere to the work surface and require removal. This residual dust is commonly removed using compressed air and a separate air hose. The Blastmaster® Abrasive Cut-off System allows the operator to blow down the work surface using the blast hose. This eliminates wasted time to secure the blast hose and access the air hose. Available in pneumatic or electric configurations, the Blastmaster® Abrasive Cut-Off System can be adapted to many sizes of abrasive blasting pots. Typical applications include blast rooms, blast yards, bridges, offshore oil platforms, oil refineries, pipelines, shipyards, storage tanks, and water treatment plants.

Operational Requirements - Pneumatic

The following is required for proper installation of a Blastmaster® Abrasive Cut-Off System:

- An abrasive blasting pot with a normally-closed air-actuated abrasive metering valve.

The following may cause safety hazards or reduced performance:

- Improper installation and/or maintenance of components.
- Incorrect disassembly and/or incorrect reassembly.
- Improper air supply pressure (minimum 50 psi, 150 psi maximum).
- Use with normally-open remote control valves.
- Improper installation and routing of pneumatic control lines.
- Use of pneumatic control lines greater than 100 feet in length.

Operational Requirements - Electric

The following is required for proper installation of a Blastmaster® Abrasive Cut-Off System:

- An abrasive blasting pot with a normally-closed air-actuated abrasive metering valve.

The following may cause safety hazards or reduced performance:

- Improper installation and/or maintenance of components.
- Incorrect disassembly and/or incorrect reassembly.
- Improper air supply pressure (minimum 50 psi, 150 psi maximum).
- Use with normally-open remote control valves.
- Improper installation and routing of control lines.
- Incorrect power source - any power source greater than 12 volt.
- Use in wet or hazardous environments.

OPERATING INSTRUCTIONS

Blastmaster® Abrasive Cut-Off System

⚠ WARNING

W-568

Use of Marco remote control switches with other manufacturer's remote control systems could cause unintended activation of remote control systems resulting in the release of high speed abrasive and compressed air. Only Marco remote control switches should be used with Marco remote control systems. Failure to comply with the above warning could result in death or serious injury.

⚠ WARNING

W-511

For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator's manuals, information, training, instructions and warnings, for the proper and intended use of all equipment. Failure to comply with the above warning could result in death or serious injury.



Pneumatic Abrasive Cut-Off Switch Control System



12-Volt Electric Abrasive Cut-Off Switch Control System - 157E switch



12-Volt Electric Abrasive Cut-Off Switch Control System - 151E switch

OPERATING INSTRUCTIONS

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

Operating Instructions - Pneumatic

Before using:

- Ensure Blast Pot is fully depressurized and is locked-out.
- Inspect all pneumatic control lines ensuring they are free of obstructions or damage. Replace or repair control lines if necessary before use.
- Inspect all components of Abrasive Cut-Off Switch Control System and Blastmaster® 150P Remote Control Switch (1) for damage, air leaks and free motion. Replace or repair any damaged components before use.
- Place the Abrasive Control Switch (2) in the “ON” position (forward).
- Inspect components of air-actuated Metering Valve (4) and Gatekeeper Air Valve (5) for damage and air leaks. Replace or repair any damaged components before use.
- Attach Pneumatic Twinline (3) and Abrasive Control Line (6) to Pneumatic Control Valves.
- Connect Blast Pot to Air Compressor.

During use:

- Remove lock-out and follow the instructions in the device’s Operator’s Manual to pressurize Blast Pot.
- Follow the instructions in the Blast Pot’s Operator’s Manual to begin blasting.
- To shut-off the abrasive flow, move the Abrasive Control Switch (2) to the “OFF” position (back).

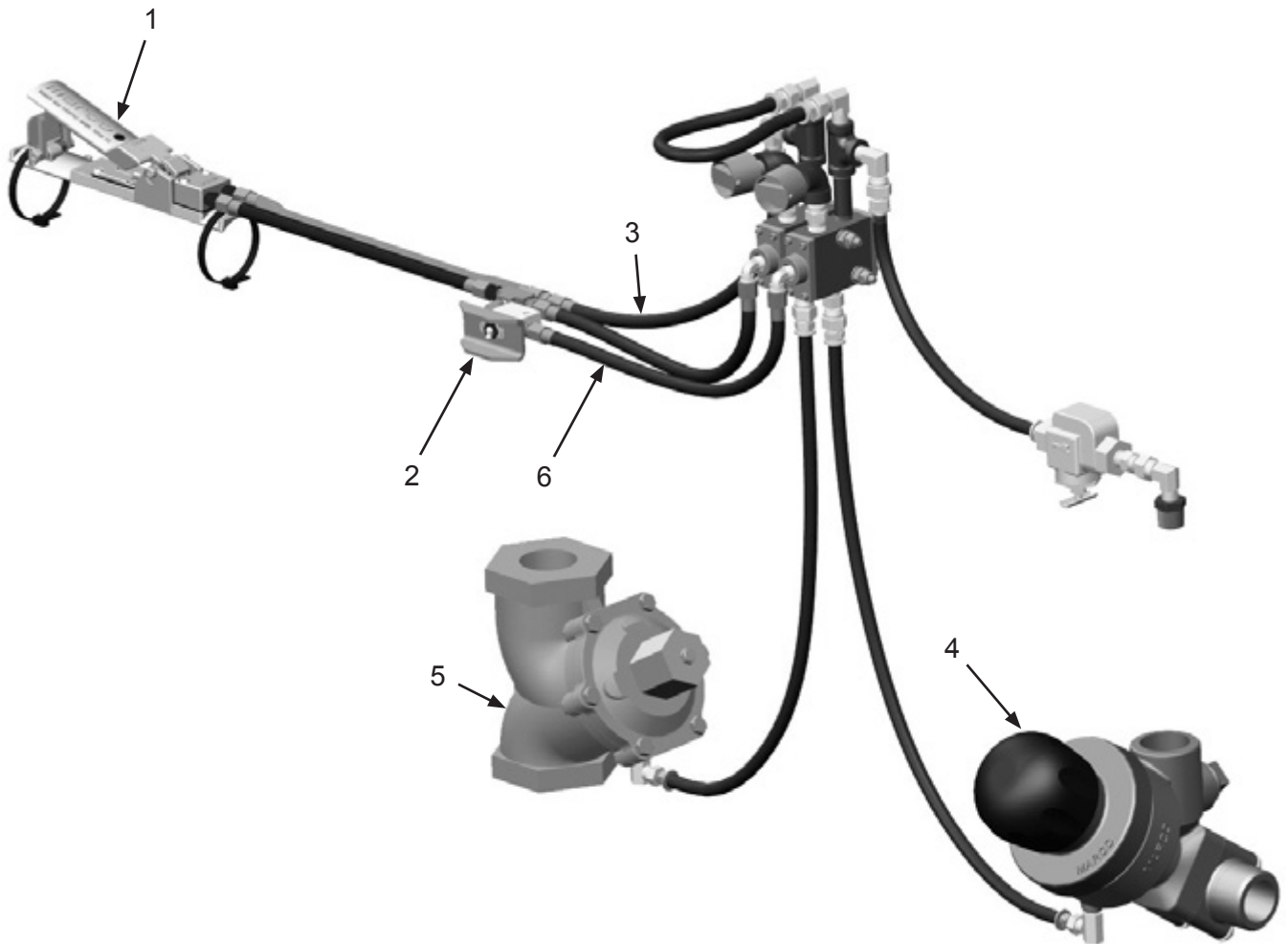
Note: Some abrasive will remain in the Blast Hose for a short period after the switch is moved. Please allow time for this abrasive to clear.

Note: To restore the abrasive flow, move the Abrasive Control Switch (2) to the “ON” position (forward).

After use:

- Refer to Blast Pot Operator’s Manual for shut down and storage instructions.

OPERATING INSTRUCTIONS



Blastmaster Maxum Abrasive Metering Valve Shown

OPERATING INSTRUCTIONS

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-519

This product is not for use in wet environments. Always use a Ground Fault Interrupter Circuit (GFIC) for all electrical power source connections. Use of this product in wet environments could create a shock or electrocution hazard. Failure to comply with the above warning could result in death or serious injury.

Operating Instructions - Electric - 157E Switch

Before using:

- Ensure Blast Pot is fully depressurized and locked-out.
- Inspect all pneumatic control lines ensuring they are free of obstructions or damage. Replace or repair control lines if necessary before use.
- Inspect all electrical control lines ensuring they are free of damage. Replace damaged control lines before use.
- Inspect Remote Control Switch (3) for damage and free motion. Replace or repair any damaged components before use.
- Inspect components of air-actuated Metering Valve (2) and Gatekeeper Air Valve (4) for damage and air leaks. Replace or repair any damaged components before use.
- Attach Remote Control Switch (3) to Electric Control Box (1)
- Connect Control Hub (1) to power supply.
- Connect Blast Pot to Air Compressor.

During use:

- Remove lock-out and follow the instructions in the device's Operator's Manual to energize Blast Pot.
- Activate remote control switch using thumb/finger by pushing up or down on the Toggle Boot (5).
- To cease abrasive blasting, release Toggle Boot (5). Ensure Toggle Boot returns to OFF (center) position.
- To shut-off the abrasive flow while air continues to flow, move Toggle Boot (5) up.

Note: Some abrasive will remain in the Blast Hose for a short period after the switch is moved. Please allow time for this abrasive to clear.

- To restore the abrasive flow, move Toggle Boot (5) down.

Note: There will be a slight delay after the switch is moved before the abrasive stream returns to full. Please allow time for abrasive flow to be restored.

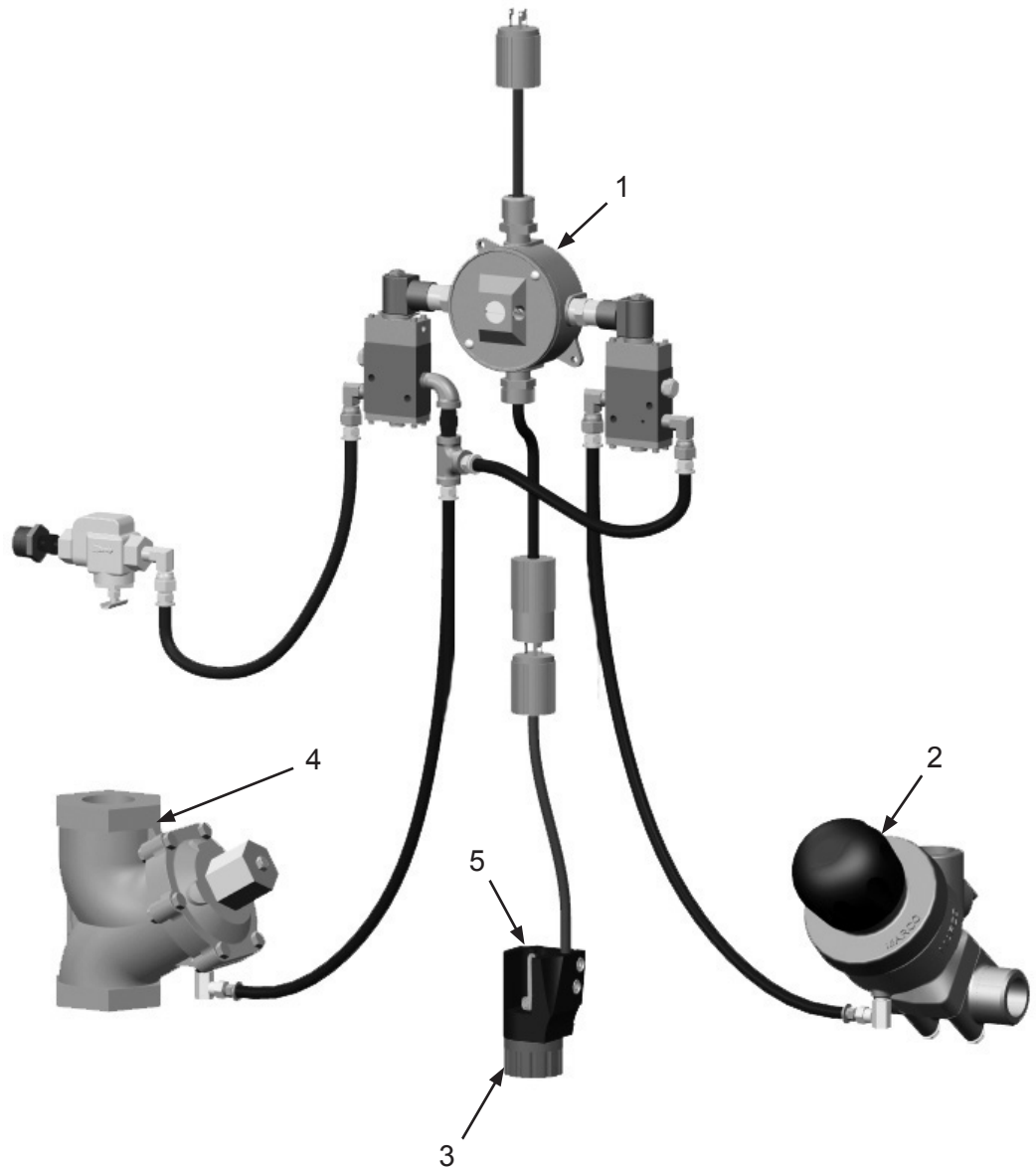
After use:

- Refer to Blast Pot Operator's Manual for shut down and storage instructions.

OPERATING INSTRUCTIONS

⚠ WARNING

This equipment is not intended for use in any area that might be considered a hazardous location, as described in the National Electric Code NFPA 70, Article 500. Use of this equipment in a hazardous location could cause an explosion or electrocution. Failure to comply with the above warning could result in death or serious injury.



157E Switch and Blastmaster Maxum Abrasive Metering Valve Shown

OPERATING INSTRUCTIONS

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-519

This product is not for use in wet environments. Always use a Ground Fault Interrupter Circuit (GFIC) for all electrical power source connections. Use of this product in wet environments could create a shock or electrocution hazard. Failure to comply with the above warning could result in death or serious injury.

Operating Instructions - Electric - 151E Switch

Before using:

- Ensure Blast Pot is fully depressurized and locked-out.
- Inspect all pneumatic control lines ensuring they are free of obstructions or damage. Replace or repair control lines if necessary before use.
- Inspect all electrical control lines ensuring they are free of damage. Replace damaged control lines before use.
- Inspect components of Abrasive Cut-Off Switch Control System and Remote Control Switch (4) for damage and free motion. Replace or repair any damaged components before use.
- Place the Abrasive Control Switch (3) in the “ON” position (forward).
- Inspect components of air-actuated Metering Valve (2) and Gatekeeper Air Valve (5) for damage and air leaks. Replace or repair any damaged components before use.
- Attach Abrasive Control Switch (3) to Electric Control Box (1)
- Attach Remote Control Switch (4) to Abrasive Control Switch (3).
- Connect Control Hub (1) to power supply.
- Connect Blast Pot to Air Compressor.

During use:

- Remove lock-out and follow the instructions in the device’s Operator’s Manual to energize Blast Pot.
- Follow the instructions in the Blast Pot’s Operator’s Manual to begin blasting.
- To shut-off the abrasive flow, move the Abrasive Control Switch (3) to the “OFF” position (back).

Note: Some abrasive will remain in the Blast Hose for a short period after the switch is moved. Please allow time for this abrasive to clear.

- To restore the abrasive flow, move the Abrasive Control Switch (3) to the “ON” position (forward).

Note: There will be a slight delay after the switch is moved before the abrasive stream returns to full. Please allow time for abrasive flow to be restored.

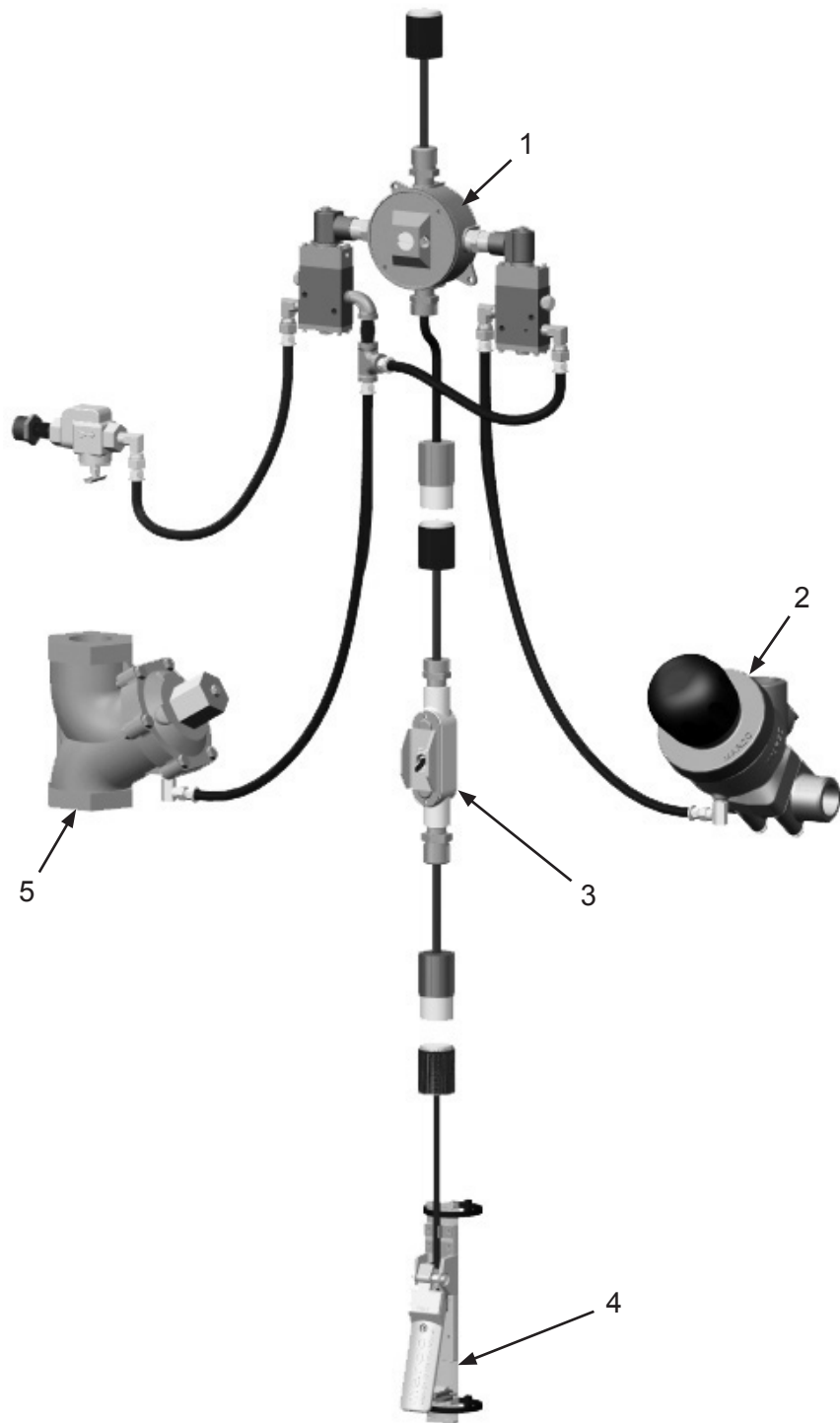
After use:

- Refer to Blast Pot Operator’s Manual for shut down and storage instructions.

OPERATING INSTRUCTIONS

⚠ WARNING

This equipment is not intended for use in any area that might be considered a hazardous location, as described in the National Electric Code NFPA 70, Article 500. Use of this equipment in a hazardous location could cause an explosion or electrocution. Failure to comply with the above warning could result in death or serious injury.



151E Switch and Blastmaster Maxum Abrasive Metering Valve Shown

INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot Manifold - Parts Plus Kit

WARNING

W-562
Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

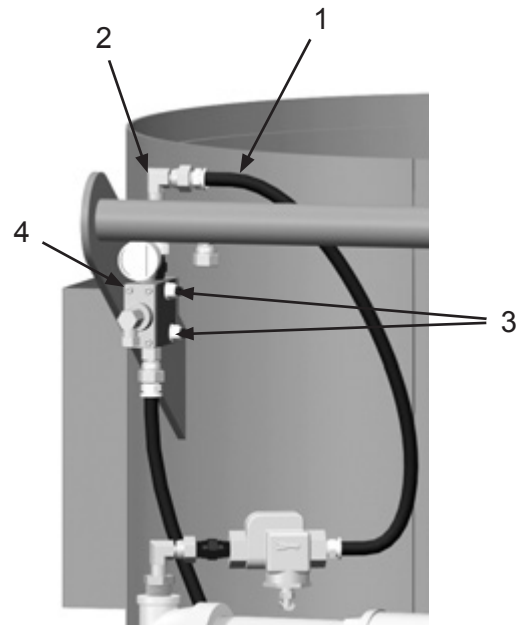
WARNING

W-505
Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

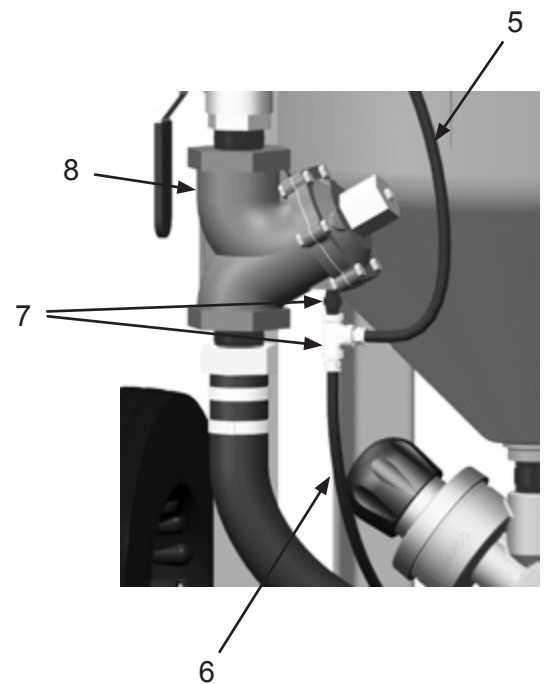
NOTICE

N-519
Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Disconnect Hose (1) from Fitting (2).
- 3) Remove two Bolts and Nuts (3) and Control Valve Assembly (4).



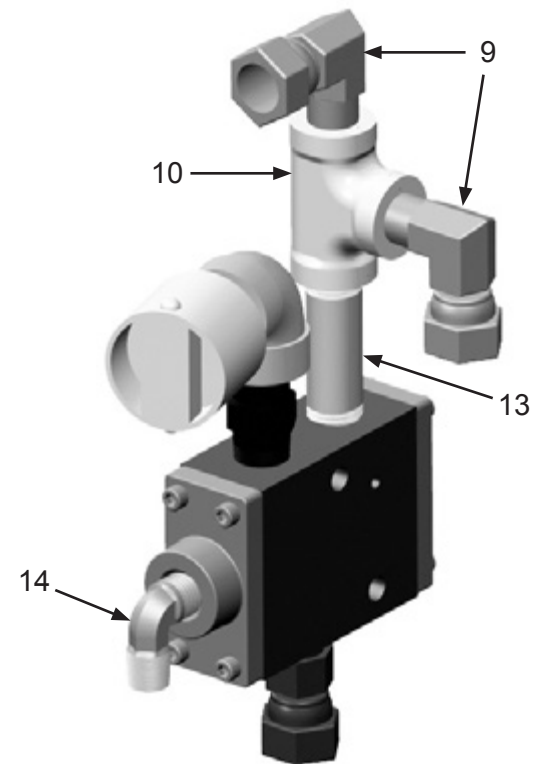
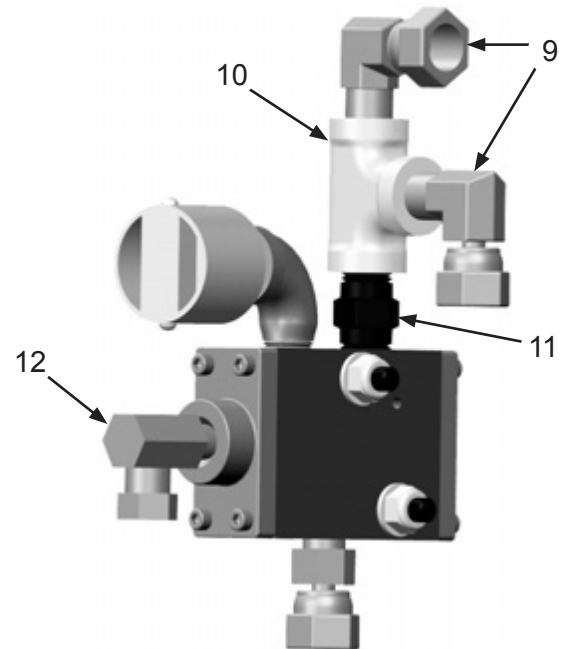
- 4) Remove Hoses (5,6).
- 5) Remove all Fittings (7) from Gatekeeper Air Valve (8).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot Manifold - Parts Plus Kit (Cont.)

- 6) Remove Fittings (9), Tee (10) and set aside for later use.
- 7) Remove Nipple (11), Fitting (12) and discard.
- 8) Install Pipe Nipple (13).
- 9) Install Fittings (9) and Tee (10) in positions shown.
- 10) Install Elbow (14).



WARNING

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

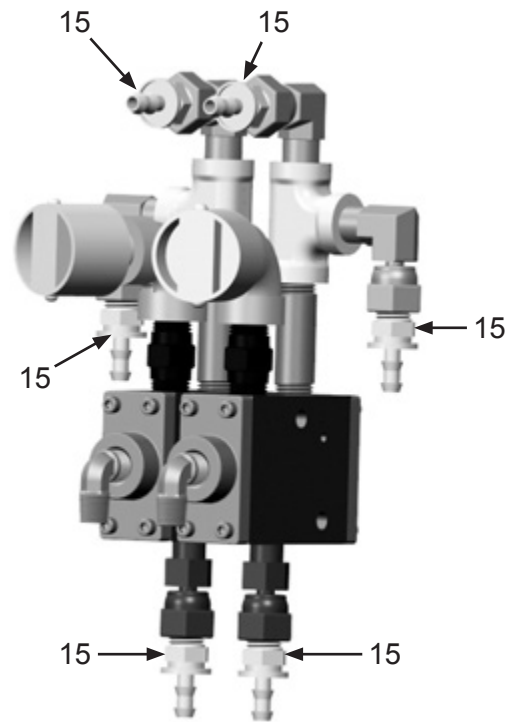
NOTICE

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot Manifold - Parts Plus Kit (Cont.)

11) Install Push On Hose Fittings (15).



WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

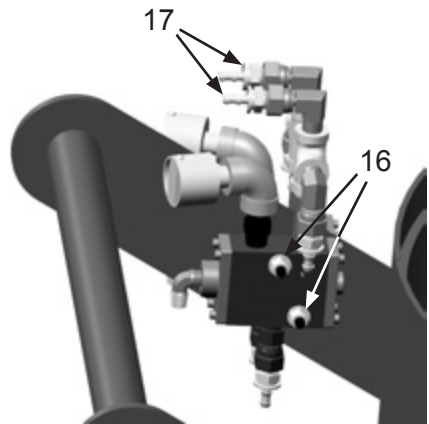
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NOTICE

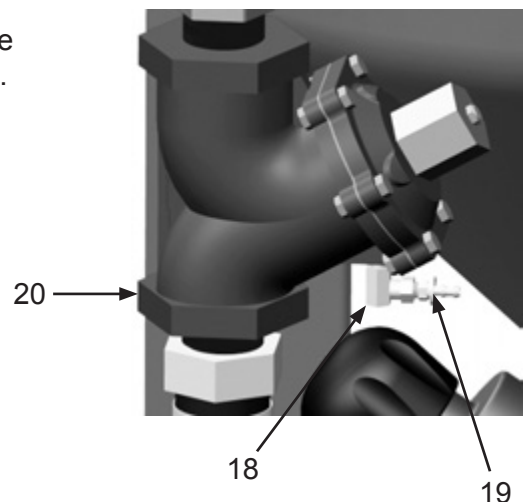
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 12) Utilizing existing holes in handle, install valves in the orientation shown using two Nuts and Bolts (16).
13) Install 8" air line between 90° Fittings (17).



- 14) Install 90° Fitting (18) and Push On Hose Fittings (19) onto Gatekeeper Valve (20).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

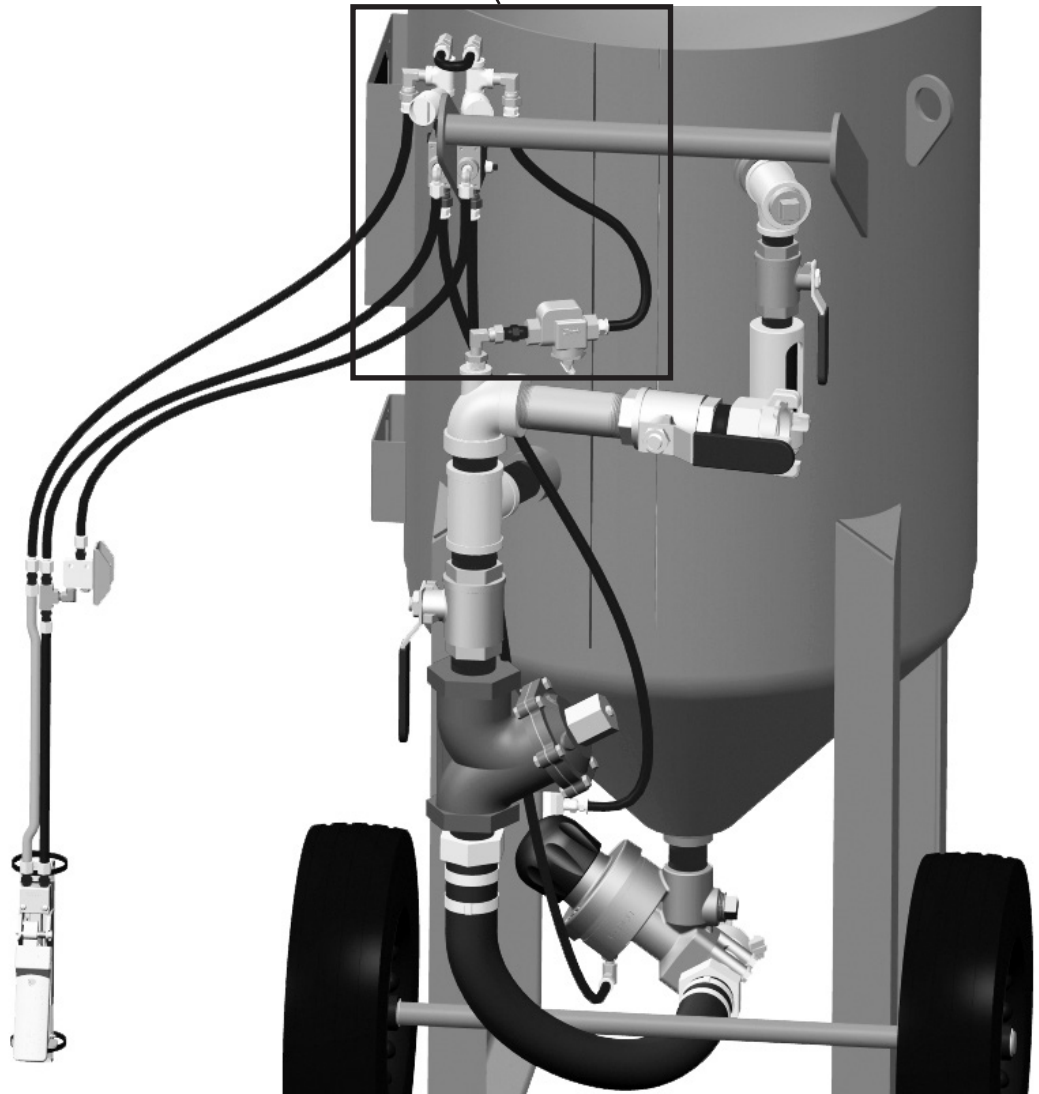
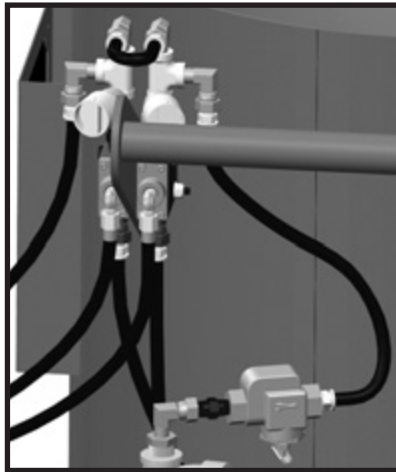
Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

15) Connect all hoses as shown.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Small Pot Manifold - Parts Plus Kit

WARNING

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

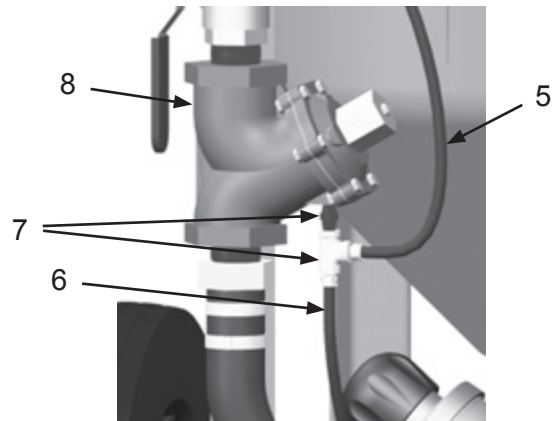
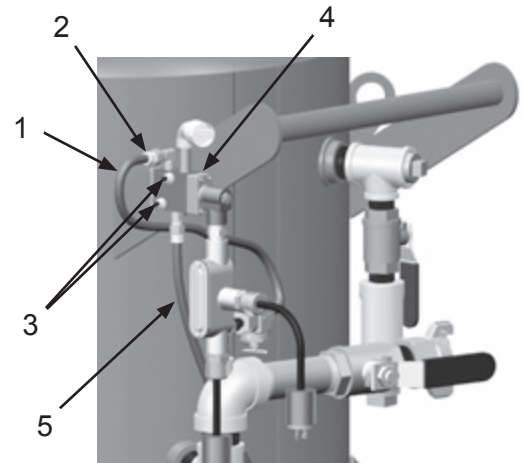
WARNING

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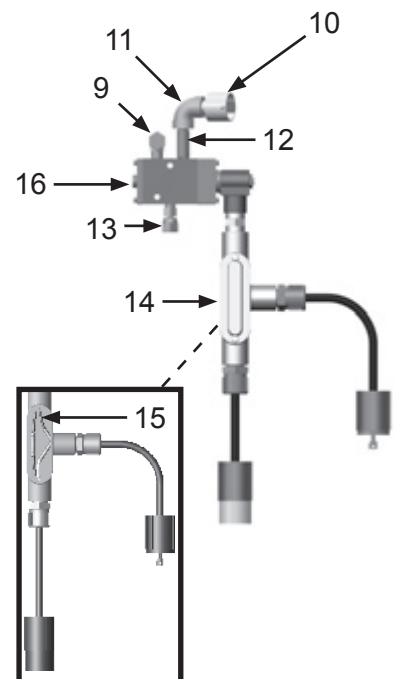
NOTICE

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Disconnect Hose (1) from Fitting (2).
- 3) Remove Hoses (5,6).
- 4) Remove all Fittings (7) from Gatekeeper Valve (8).
- 5) Remove two Bolts and Nuts (3) and Control Valve Assembly (4).



- 6) Remove Fittings (9,13); Muffler (10); Elbow (11) and Pipe Nipple (12) from Control Valve (16).
- 7) Remove cover from Conduit Assembly (14). Cut wires (15) and remove Conduit Assembly. Set Control Valve aside for later use.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Small Pot Manifold - Parts Plus Kit (Cont.)

WARNING

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

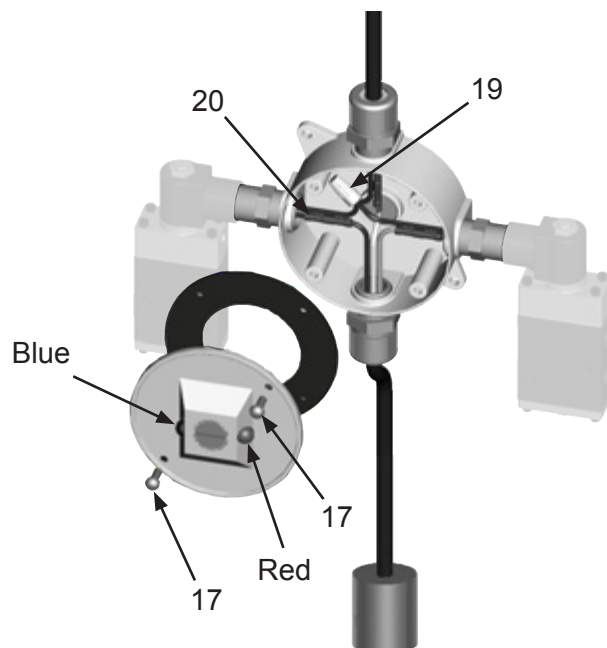
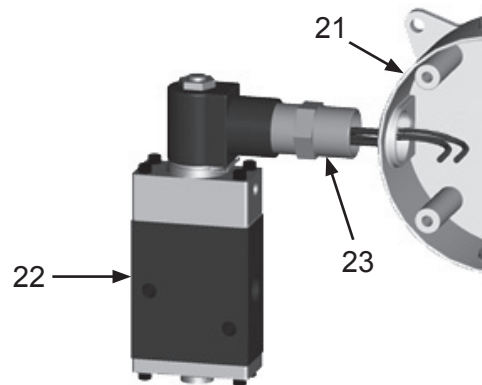
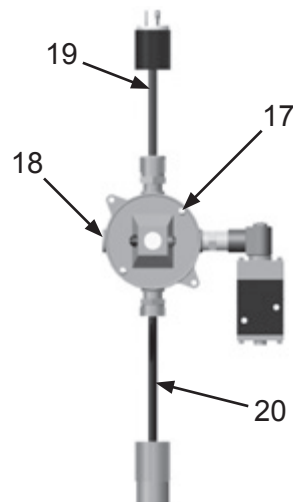
WARNING

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

NOTICE

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 8) Remove two screws (17) and separate Cover (18) from Base (21).
- 9) Retrieve Control Valve (22) removed in step (7).
- 10) Add Teflon tape to threads of Hex Nipple (23).
- 11) Connect Control Valve (22) to Base (21) with Nipple (23).
- 12) Connect one black wire from solenoid to Yellow Wire Nut (19).
- 13) Connect second black wire from Control Valve (22) to Butt Splice Terminal (20).
- 14) Secure Cover (18) to Base (21) using two screws (17) as shown below.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Small Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

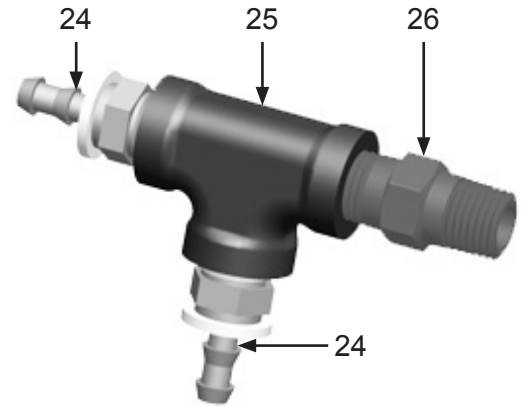
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NOTICE

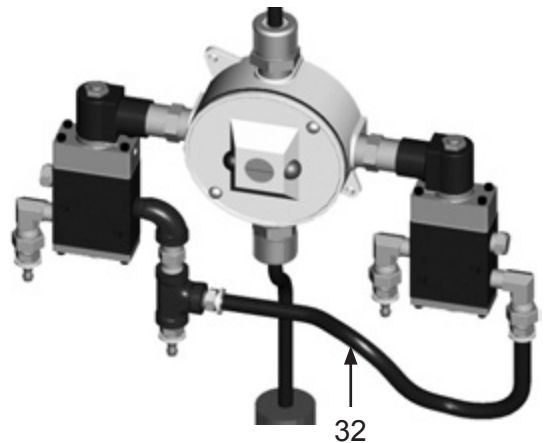
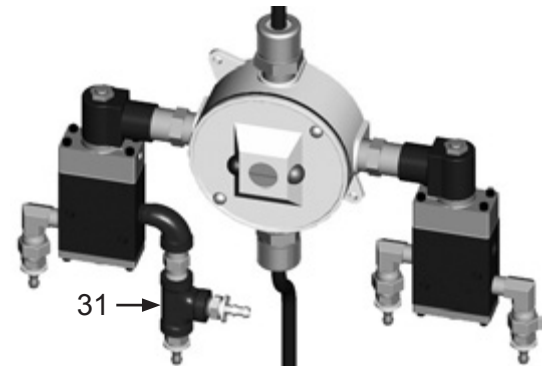
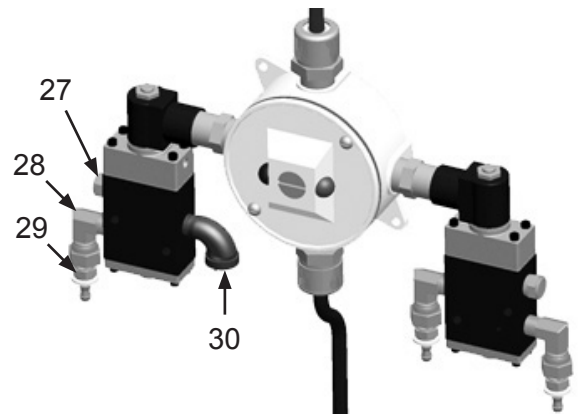
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 15) Using Teflon tape on all threaded joints, assemble Hose Fittings (24), Tee (25) and Nipple (26).



- 16) Using Teflon tape on all threaded joints, assemble Breather Vent (27), Elbow (28), Hose Fitting (29) and Elbow (30).
- 17) Assemble Pipe String (31) and Air Hose (32).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Small Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

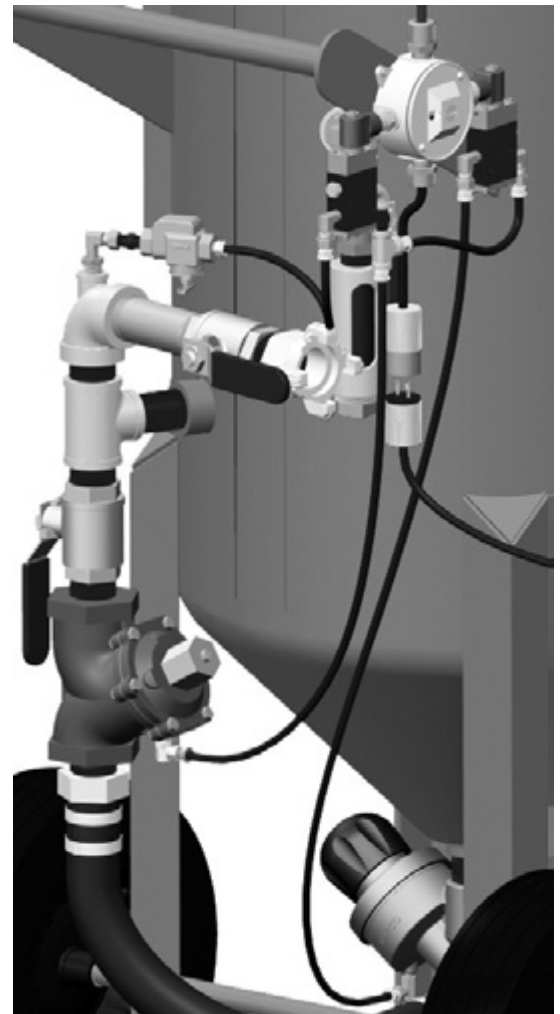
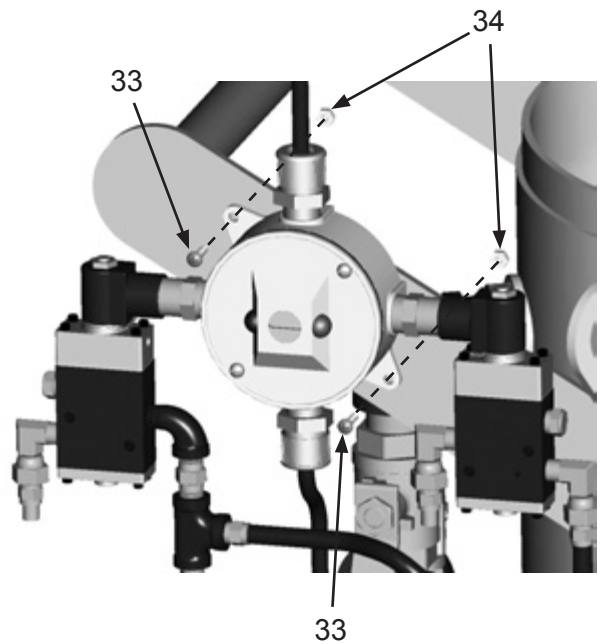
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NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 18) Mark two mounting hole locations on handle strut using ACS assembly as shown.
- 19) Pilot drill holes using 1/4" bit. Finish drill at 5/16".
- 20) Install ACS control box assembly to bracket with two Bolts (33) and Nuts (34).
- 21) Connect remaining hoses as shown.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Bulk Pot Manifold - Parts Plus Kit

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

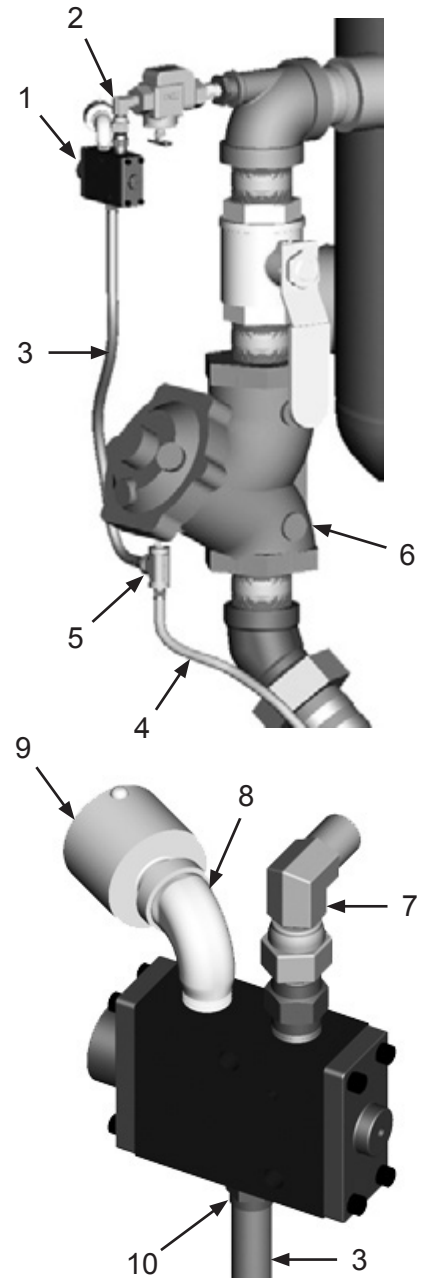
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NOTICE

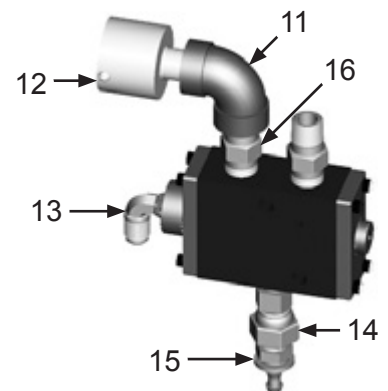
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Remove Control Valve assembly (1) with 90° fitting (2) (Leaving Watts Strainer on pot) and set aside for later use.
- 3) Remove Hoses (3,4).
- 4) Remove all Fittings (5) from Gatekeeper Valve (6).
- 5) Remove 90° fitting (7), Elbow (8), Muffler (9) and Hose Fitting (10).



- 6) Install Nipple (16), Elbow (11), Muffler (12), 90° fitting (13), Straight Fitting (14) and Hose Fitting (15).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562
Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

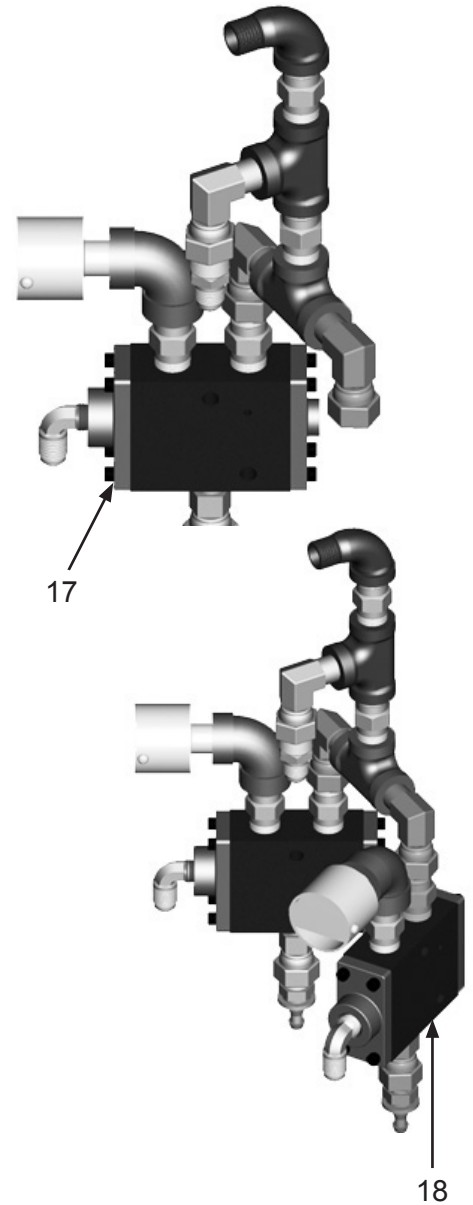
WARNING

W-505
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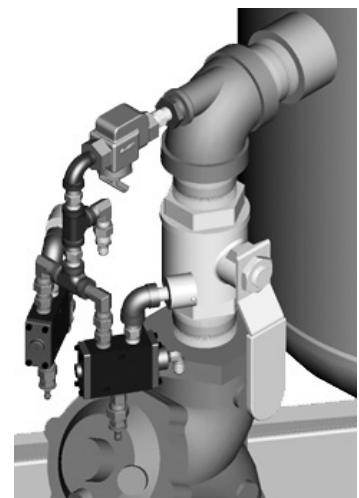
NOTICE

N-519
Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 7) Get ACS pipe string (17) from kit and install completed valve Assembly (18) as shown.



- 8) Install ACS pipe string assembly as shown.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Pneumatic - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

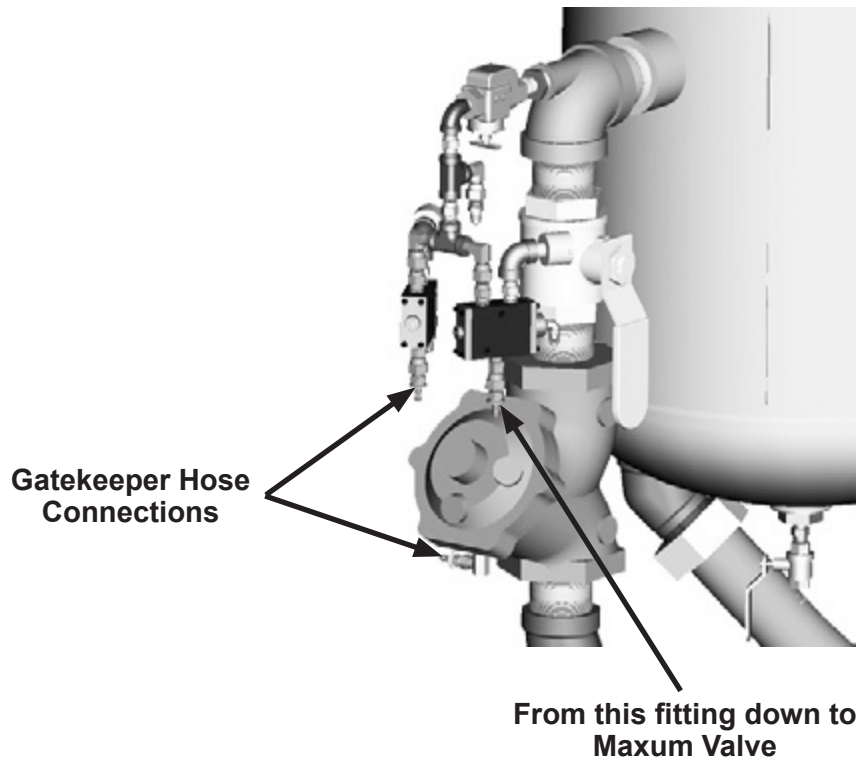
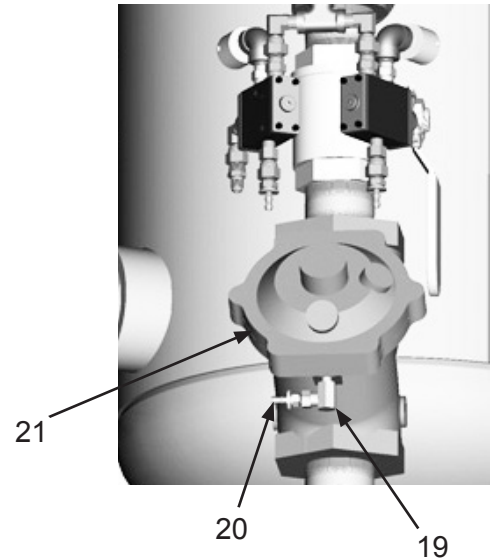
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NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 9) Install 90° Swivel Fitting (19) and Hose Fitting (20) onto Gatekeeper Valve (21).
- 10) Connect hoses as marked below.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Bulk Pot Manifold - Parts Plus Kit

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

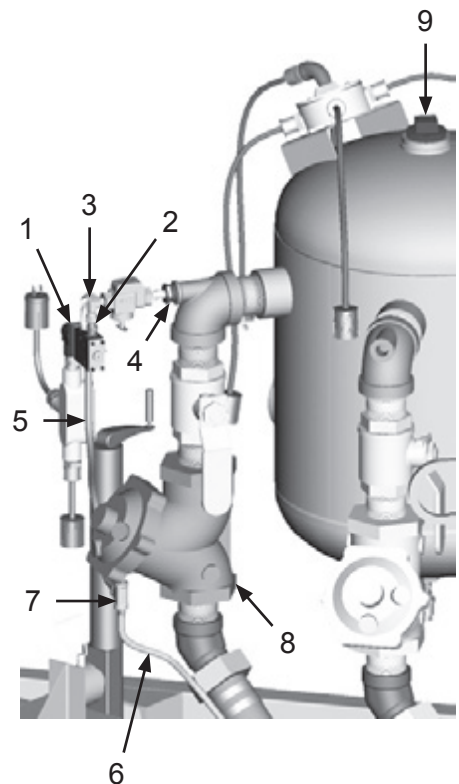
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NOTICE

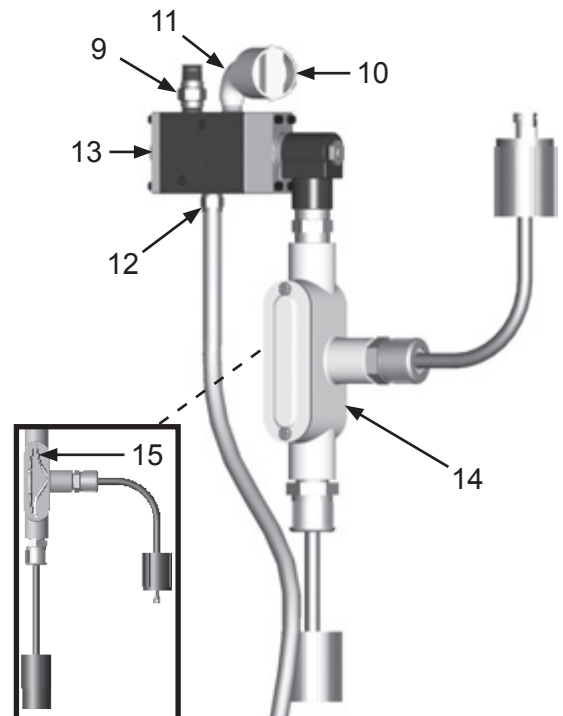
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Remove pipe plug (9).
- 3) Remove Control Valve assembly (1) with Hex Nipple (2) (Leaving 90° fitting (3) through Bushing (4) on pot) and set aside for later use.
- 4) Remove Hoses (5,6).
- 5) Remove all Fittings (7) from Gatekeeper Valve (8).



- 6) Remove Hex Nipple (9); Muffler (10); Elbow (11) and Hose Fitting (12) from Control Valve (13).
- 7) Remove cover from Conduit Assembly (14). Cut wires (15) and remove Conduit Assembly. Set Control Valve aside for later use.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

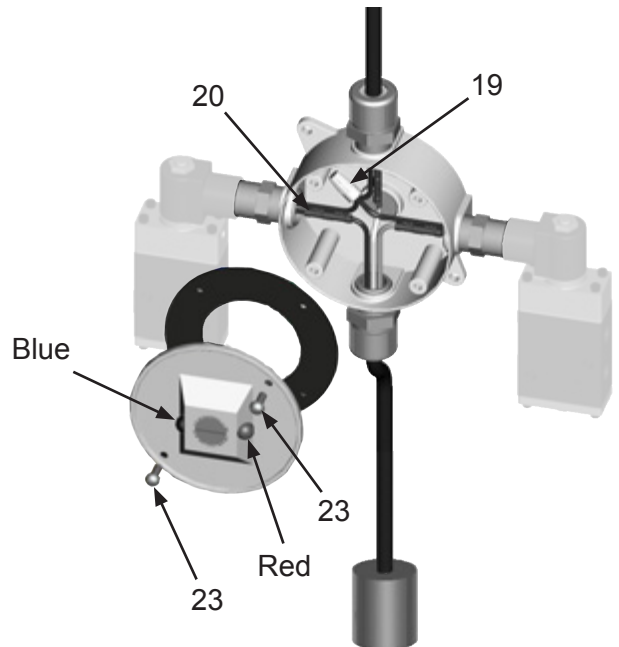
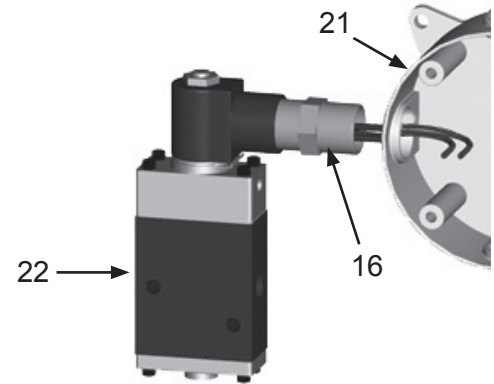
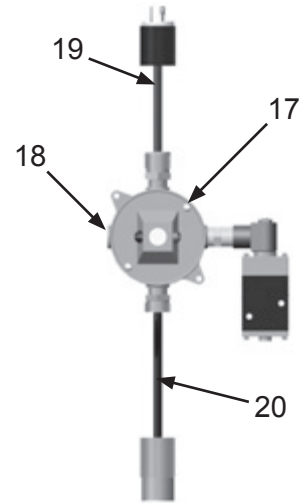
Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 8) Remove two screws (17) and separate Cover (18) from Base (21).
- 9) Retrieve Control Valve (22) removed in step (7).
- 10) Add Teflon tape to threads of Hex Nipple (16).
- 11) Connect Control Valve (22) to Base (21) with Nipple (16).
- 12) Connect one black wire from solenoid to Yellow Wire Nut (19).
- 13) Connect second black wire from Control Valve (22) to Butt Splice Terminal (20).
- 14) Secure Cover (18) to Base (21) using two screws (23) as shown below.



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

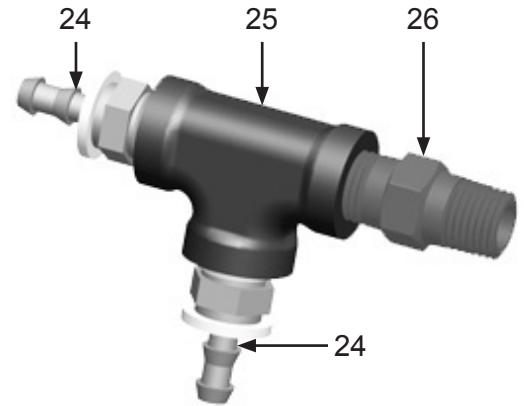
WARNING

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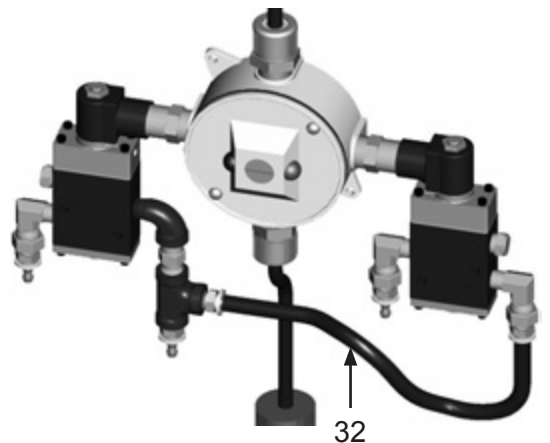
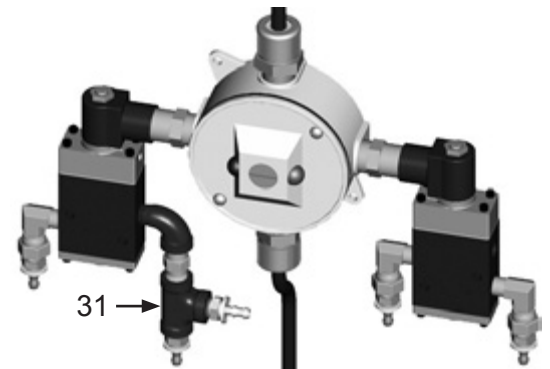
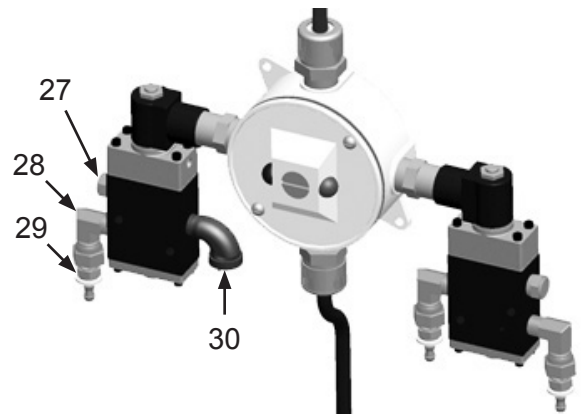
NOTICE

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 15) Using Teflon tape on all threaded joints, assemble Hose Fittings (24), Tee (25) and Nipple (26).



- 16) Using Teflon tape on all threaded joints, assemble Breather Vent (27), Elbow (28), Hose Fitting (29) and Elbow (30).
17) Assemble Pipe String (31) and Air Hose (32).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

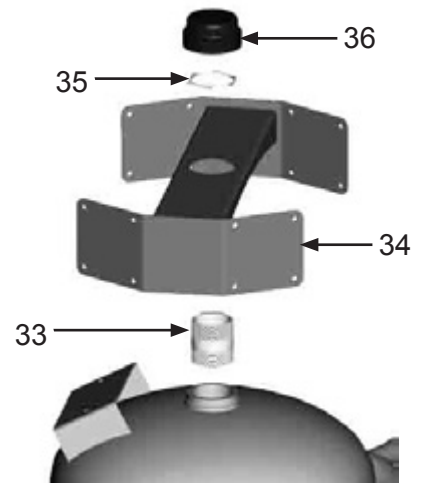
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NOTICE

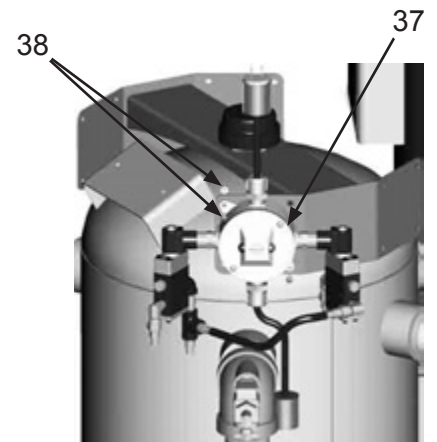
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

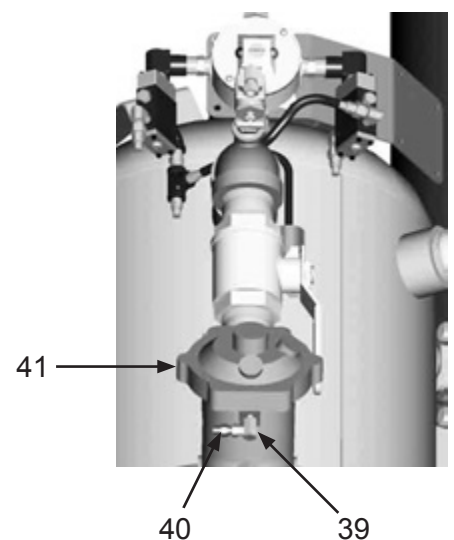
- 18) Install Nipple (33), Bracket (34), Lock Nut (35) and Pipe Cap (36) as shown.



- 19) Install Control Box Assembly (37) to bracket using hardware (38).



- 20) Install 90° Swivel Fitting (39) and Hose Fitting (40) onto Gatekeeper Air Valve (41).



INSTALLATION

Install Blastmaster® Abrasive Cut-Off System - Electric - Bulk Pot Manifold - Parts Plus Kit (Cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

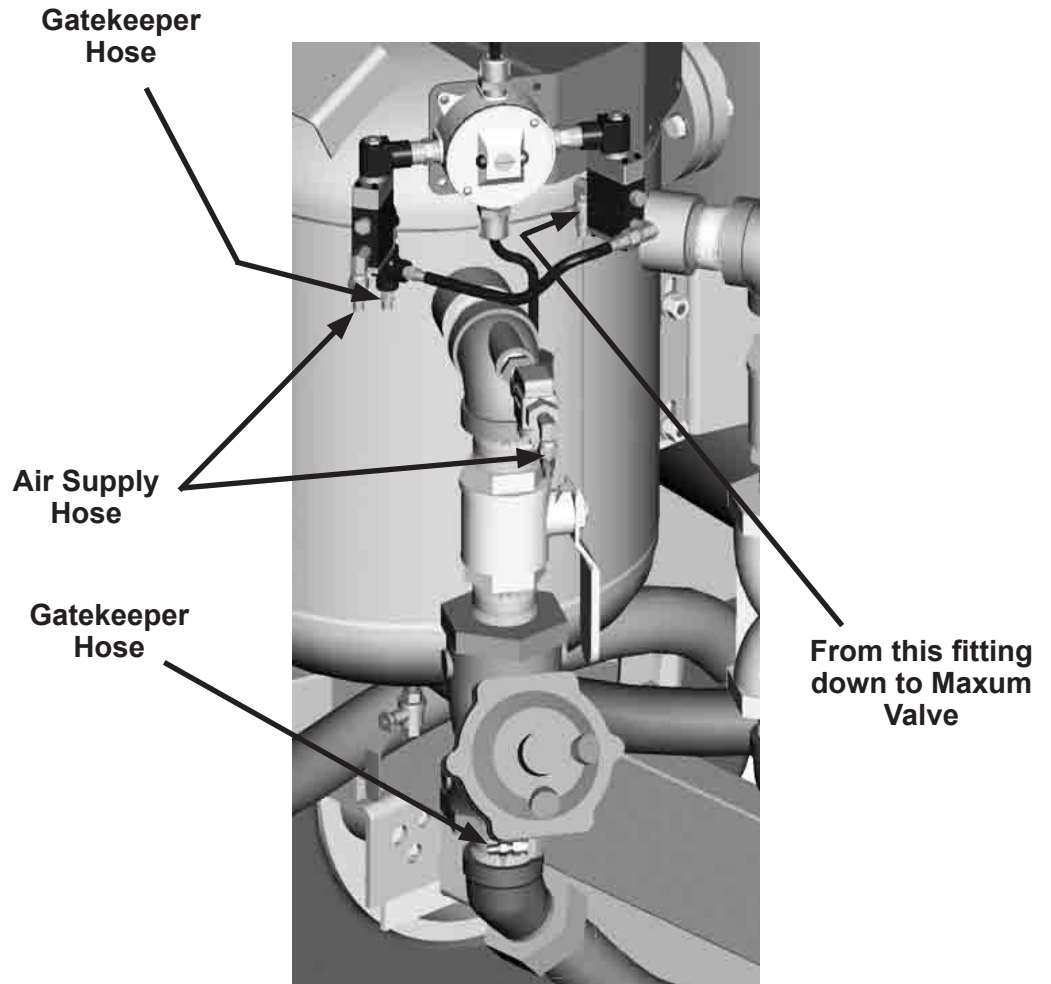
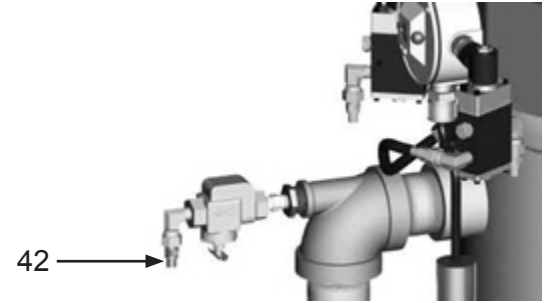
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NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 21) Install push-on hose fitting (42).
- 22) Install push-on hoses as shown.



MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot

Maintenance of the Blastmaster® Abrasive Cut-Off System is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

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NOTICE

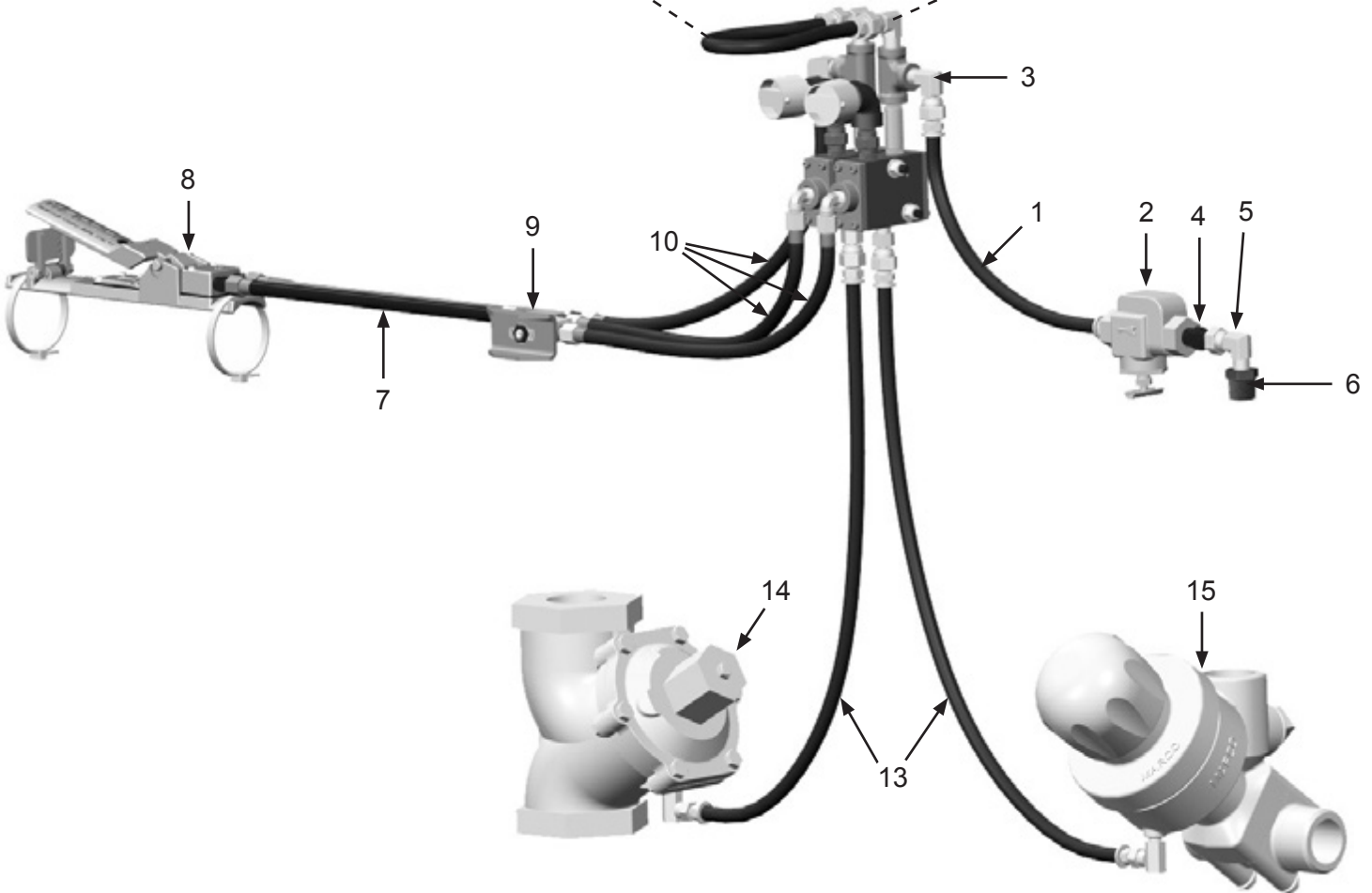
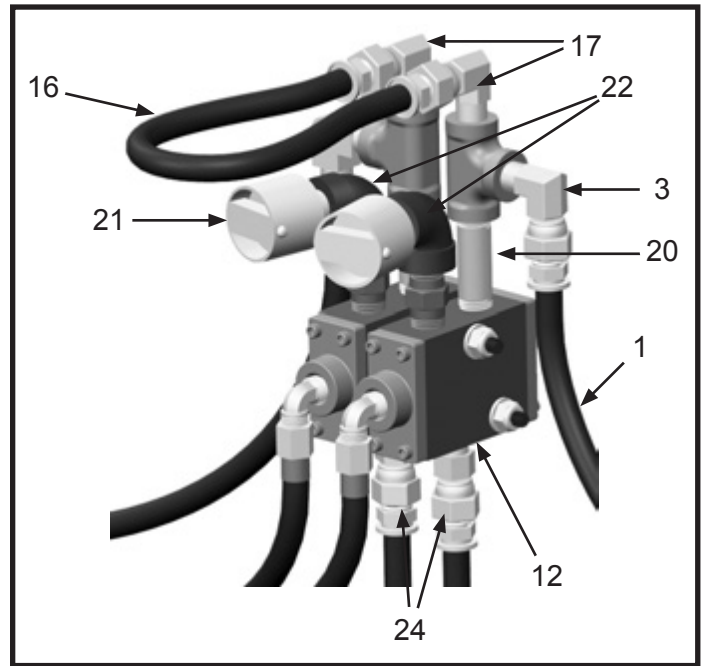
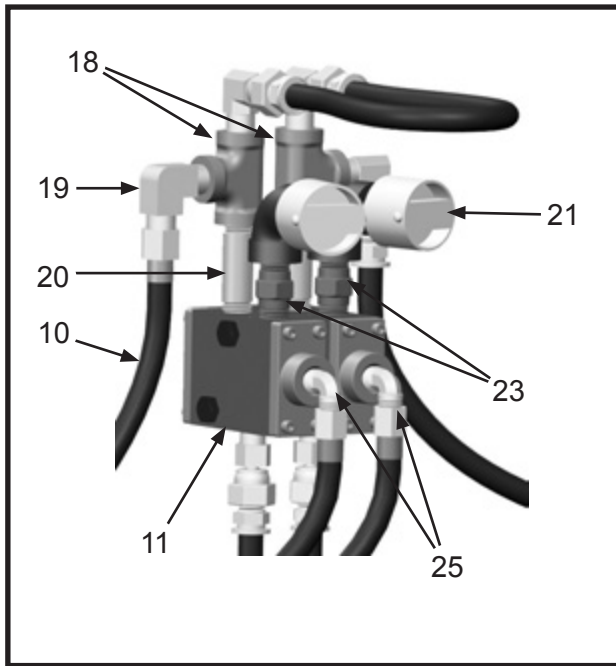
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Disconnect Air Line (1) from Watts Stainer (2) and Swivel Fitting (3).
- 3) Remove Watts Stainer (2), Nipple (4), Elbow (5) and Bushing (6).
- 4) Disconnect Twinline (7) from Blastmaster® 150P Remote Control Switch (8) and from Abrasive Control Switch (9).
- 5) Disconnect Air Lines (10) from 90° Elbows (25), Swivel Fitting (19) and Abrasive Control Switch (9).
- 6) Disconnect Air Lines (13) from Straight Swivel Fittings (24), GateKeeper Air Valve (14) and air-actuated Metering Valve (15).
- 7) Disconnect Air Line (16) and remove Swivel Fittings (17).
- 8) Remove Swivel Fittings (3,19), Pipe Tees (18) and Pipe Nipples (20).
- 9) Remove Dust Eliminators (21), 90° Elbows (22) and Hex Nipples (23.)
- 10) Remove Straight Swivel Fittings (24), and 90° Elbows (25).
- 11) Remove and separate Pneumatic Control Valves (11,12).
- 12) Install parts in reverse order.

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Pneumatic - Small Pot (cont.)



Blastmaster Maxum Abrasive Metering Valve Shown

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Pneumatic - Bulk Pot

Maintenance of the Blastmaster® Abrasive Cut-Off System is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

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NOTICE

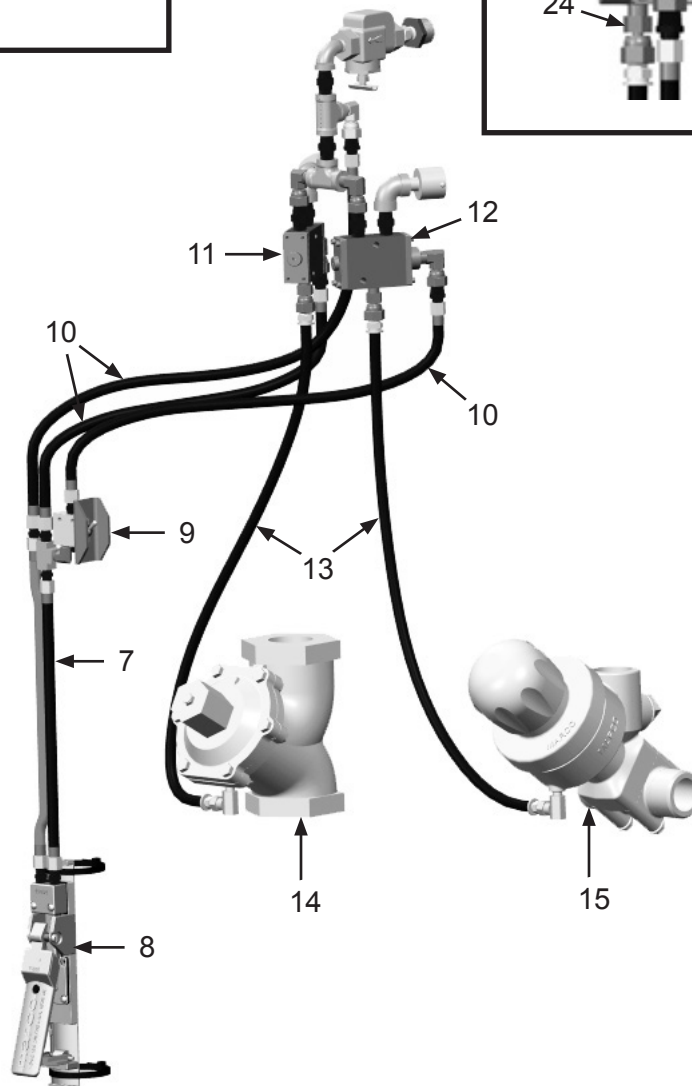
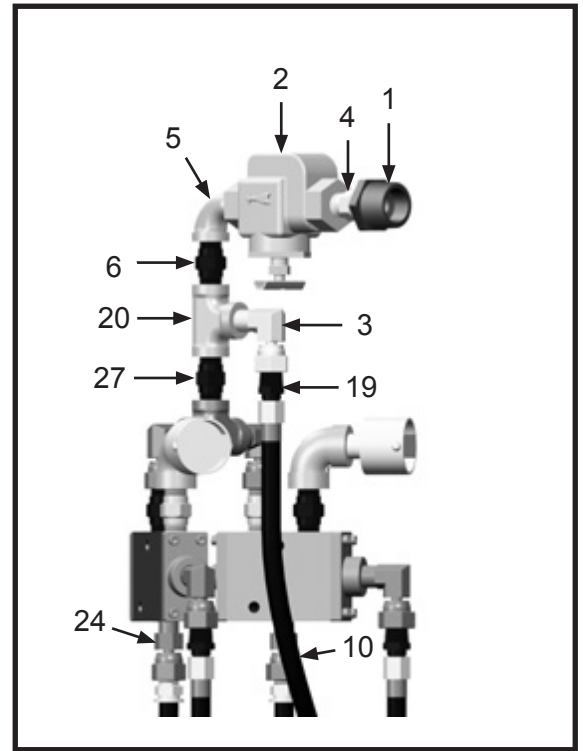
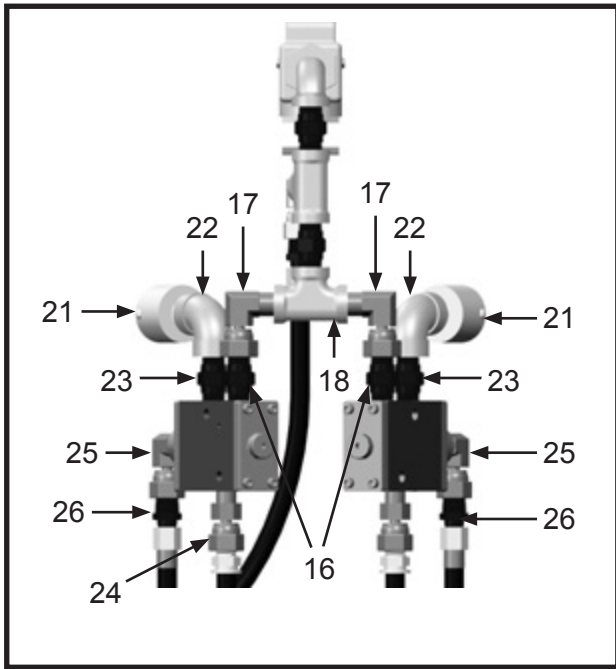
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Disconnect Tinline (7) from Blastmaster® 150P Remote Control Switch (8) and from Abrasive Control Switch (9).
- 3) Disconnect Air Lines (10) from Swivel Fittings (3,25) and Abrasive Control Switch (9).
- 4) Disconnect Air Lines (13) from Straight Swivel Fittings (24), GateKeeper Air Valve (14) and air-actuated Metering Valve (15).
- 5) Remove Straight Swivel Fittings (24), Nipples (26) and Swivel Fittings (25).
- 6) Remove Dust Eliminators (21), 90° Elbows (22) and Hex Nipples (23.)
- 7) Remove Nipples (16,19,27), Swivel Fittings (3,17), and Pipe Tees (18,20).
- 8) Remove Watts Stainer (2), Nipples (4,6), Elbow (5) and Bushing (1).
- 9) Remove Pneumatic Control Valves (11,12).
- 10) Install parts in reverse order.

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Pneumatic - Bulk Pot (cont.)



Blastmaster Maxum Abrasive Metering Valve Shown

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Electric - 157E Switch

Maintenance of the Blastmaster® Abrasive Cut-Off System is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

- 1) Depressurize entire system.
- 2) Unplug 157E Remote Control Switch (10).
- 3) Disconnect Air Supply Line (3) from Swivel Fittings (2,19).
- 4) Remove Watts Stainer (4), Nipple (18), Swivel Fitting (19) and Bushing (17).
- 5) Disconnect Control Line (8) from GateKeeper Air Valve (7) and Pipe Tee (6).
- 6) Disconnect Control Line (11) from air-actuated Metering Valve (12) and Swivel Fitting (15).
- 7) Disconnect Air Line (13) from Swivel Fitting (14) and Pipe Tee (6).
- 8) Remove Pipe Tee (6), Hex Nipple (9) and Street Elbow (5).
- 9) Remove Swivel Fittings (2,14,15).
- 10) Remove Control Valves (1) from Control Box (16).
- 11) Install parts in reverse order.

WARNING

W-505

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

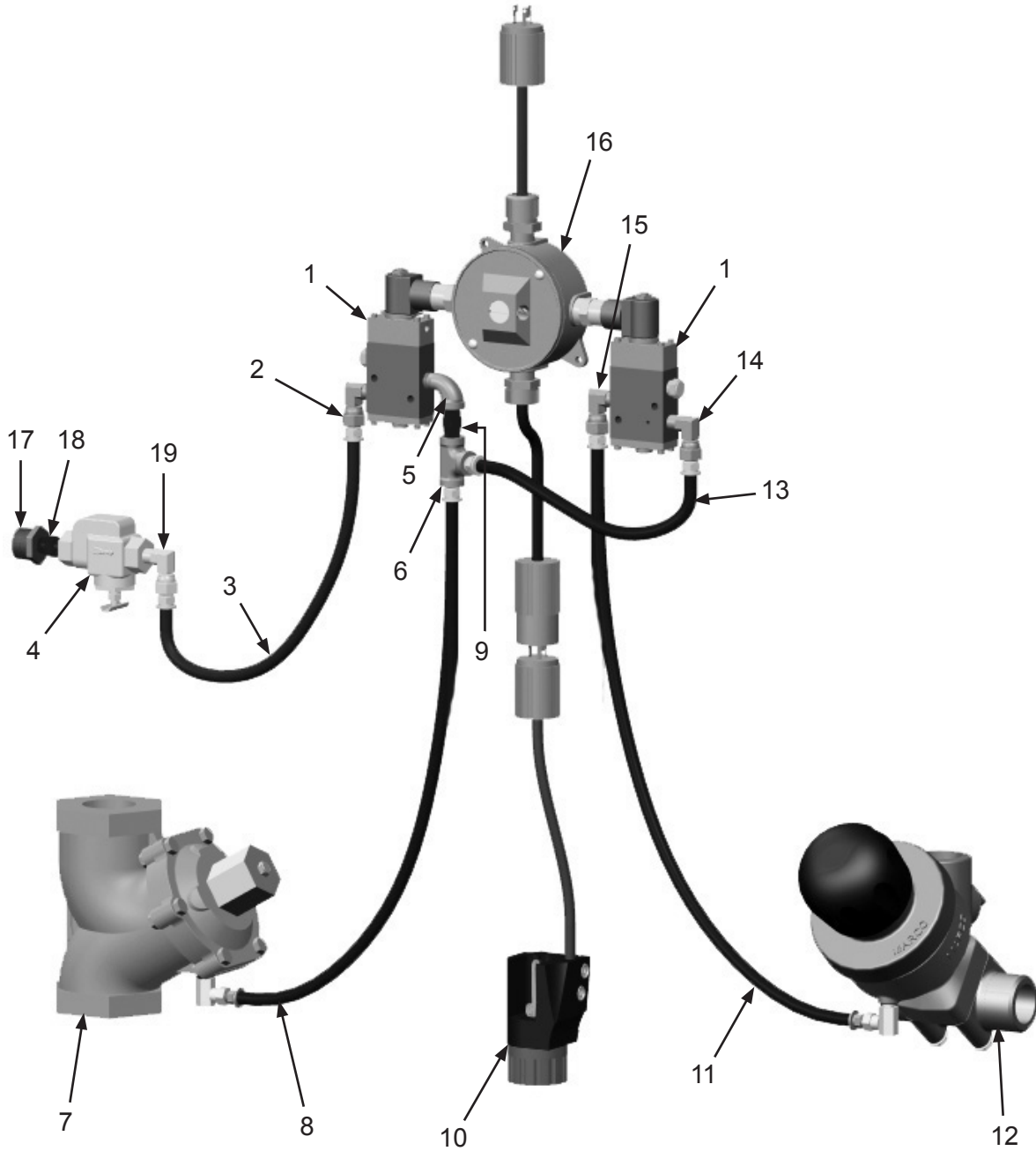
NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Electric - 157E Switch (Cont.)



MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Electric - 151E Switch

Maintenance of the Blastmaster® Abrasive Cut-Off System is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-505

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NOTICE

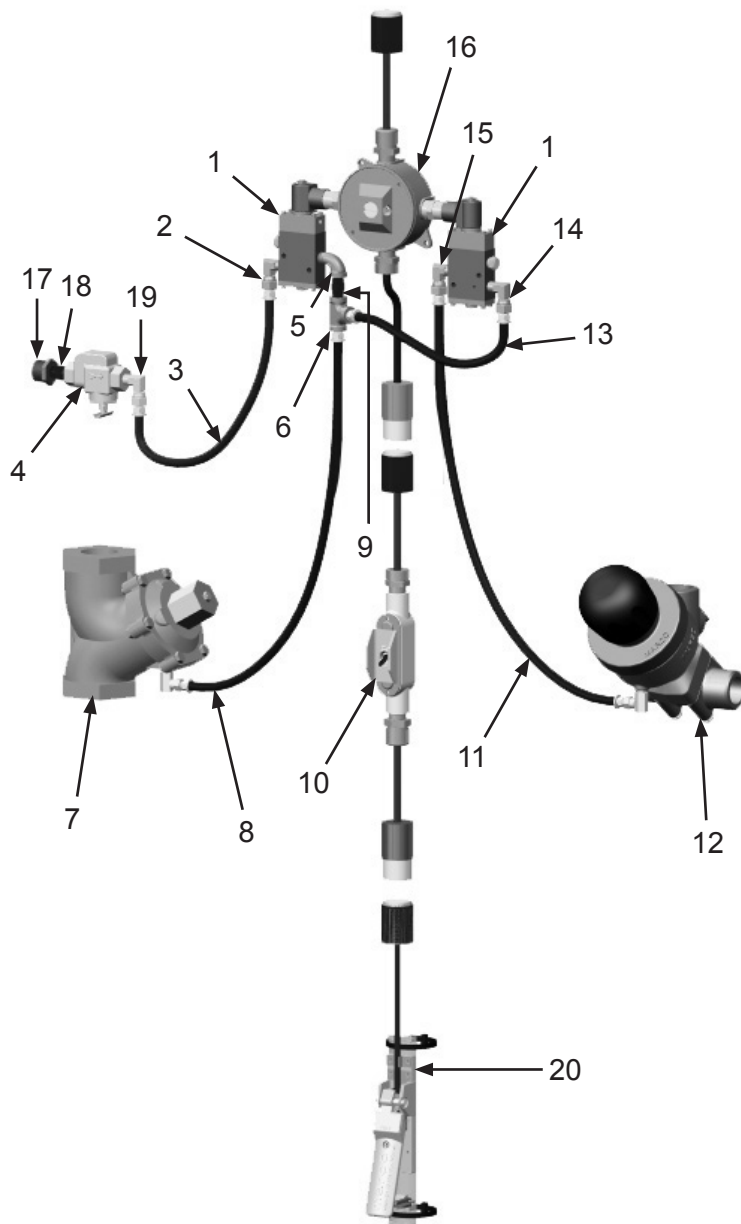
N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

- 1) Depressurize entire system.
- 2) Unplug 151E Remote Control Switch (20).
- 3) Unplug Abrasive Control Switch (10).
- 4) Disconnect Air Supply Line (3) from Swivel Fittings (2,19).
- 5) Remove Watts Stainer (4), Nipple (18), Swivel Fitting (19) and Bushing (17).
- 6) Disconnect Control Line (8) from GateKeeper Air Valve (7) and Pipe Tee (6).
- 7) Disconnect Control Line (11) from air-actuated Metering Valve (12) and Swivel Fitting (15).
- 8) Disconnect Air Line (13) from Swivel Fitting (14) and Pipe Tee (6).
- 9) Remove Pipe Tee (6), Hex Nipple (9) and Street Elbow (5).
- 10) Remove Swivel Fittings (2,14,15).
- 11) Remove Control Valves (1) from Control Box (16).
- 12) Install parts in reverse order.

MAINTENANCE

Disassemble and Assemble Blastmaster® Abrasive Cut-Off System - Electric - 151E Switch (Cont.)



MAINTENANCE

Disassemble and Assemble Abrasive Control Switch - Pneumatic

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

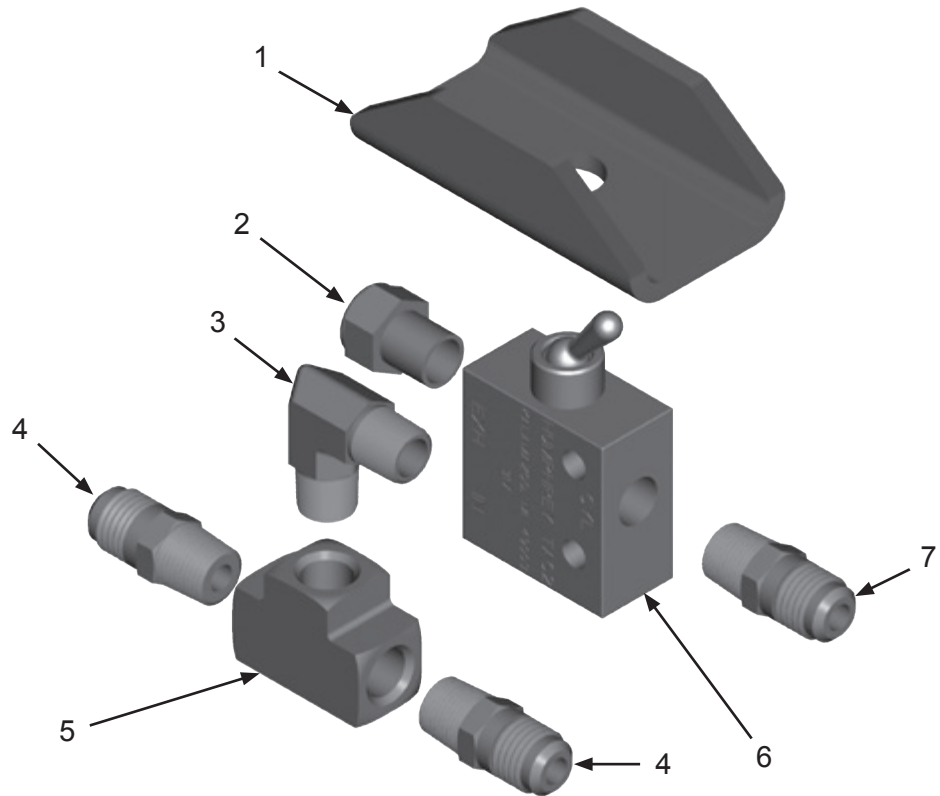
NOTICE

N-519

Apply pipe thread sealant to all pipe threads to ensure an airtight seal.

Maintenance of the Abrasive Control Switch is limited to the daily cleaning and the replacement of damaged or worn parts.

- 1) Remove Toggle Switch Guard (1) from Pneumatic Toggle Switch (6).
- 2) Remove Breather Vent (2) from Pneumatic Toggle Switch (6).
- 3) Remove Brass Fitting (7) from Pneumatic Toggle Switch (6).
- 4) Remove Brass Fittings (4) from Brass Tee (5).
- 5) Remove Brass Tee (5) from 90° Brass Elbow (3).
- 6) Remove 90° Brass Elbow (3) from Pneumatic Toggle Switch (6).
- 7) Install parts in reverse order.



MAINTENANCE

Disassemble and Assemble Pneumatic Control Valve

Maintenance of the Pneumatic Control Valve is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

W-562

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WARNING

W-505

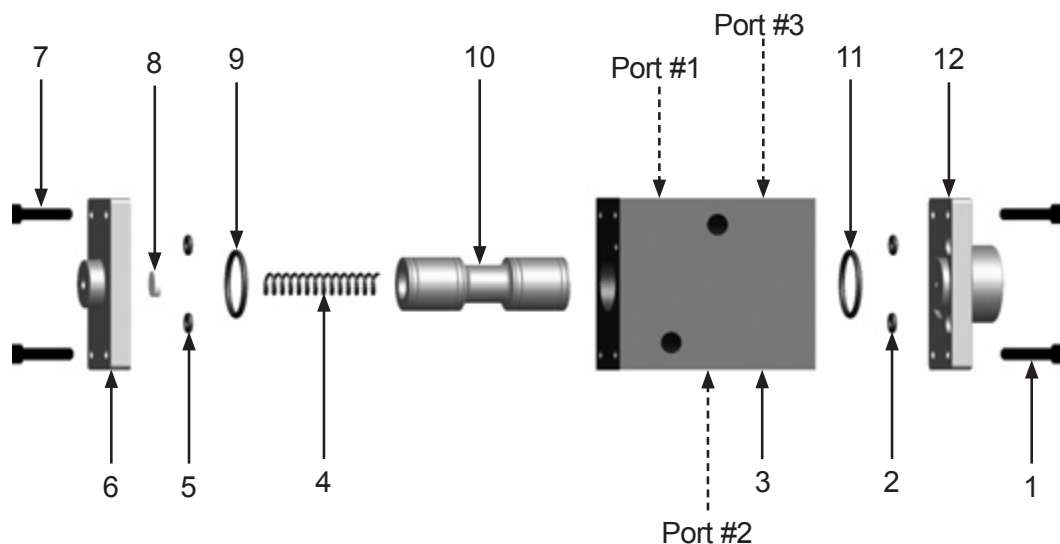
Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

Disassembly:

- 1) Remove four Screws (7) from End Cap (6). Remove Spring (4) from Valve Body (3).
- 2) Remove large O-ring (9) and two small O-rings (5) from End Cap (6).
- 3) Remove Felt (8) from End Cap (6).
- 4) Remove four Screws (1) from Air Pilot (12).
- 5) Remove large O-ring (11) and two small O-rings (2) from Air Pilot (12).
- 6) Ease Plunger (10) from Valve Body (3) by pushing Plunger (10) from Air Pilot (12) end.

Assembly:

- 1) Orient the Valve Body (3) so Port #1 and Port #3 are facing to the left. Insert Plunger (10) in Valve Body (3) from the left.
- 2) Place large O-ring (11) and two small O-rings (2) in Air Pilot (12).
- 3) Install four Screws (1) to secure Air Pilot (12) to Valve Body (3). Do not over-tighten.
- 4) Place two small O-rings (5) and large O-ring (9) in End Cap (6).
- 5) Insert Felt (3) in center recess of End Cap (6).
- 6) Insert Spring (4) in Valve Body (3). Place End Cap (6) on Spring (4) and compress spring until End Cap (6) meets Valve Body (3).
- 7) Install four Screws (7) in End Cap (6) and tighten. Do not over-tighten.



MAINTENANCE

Disassemble and Assemble Abrasive Control Switch Control Box

WARNING

W-562
Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

Disassembly:

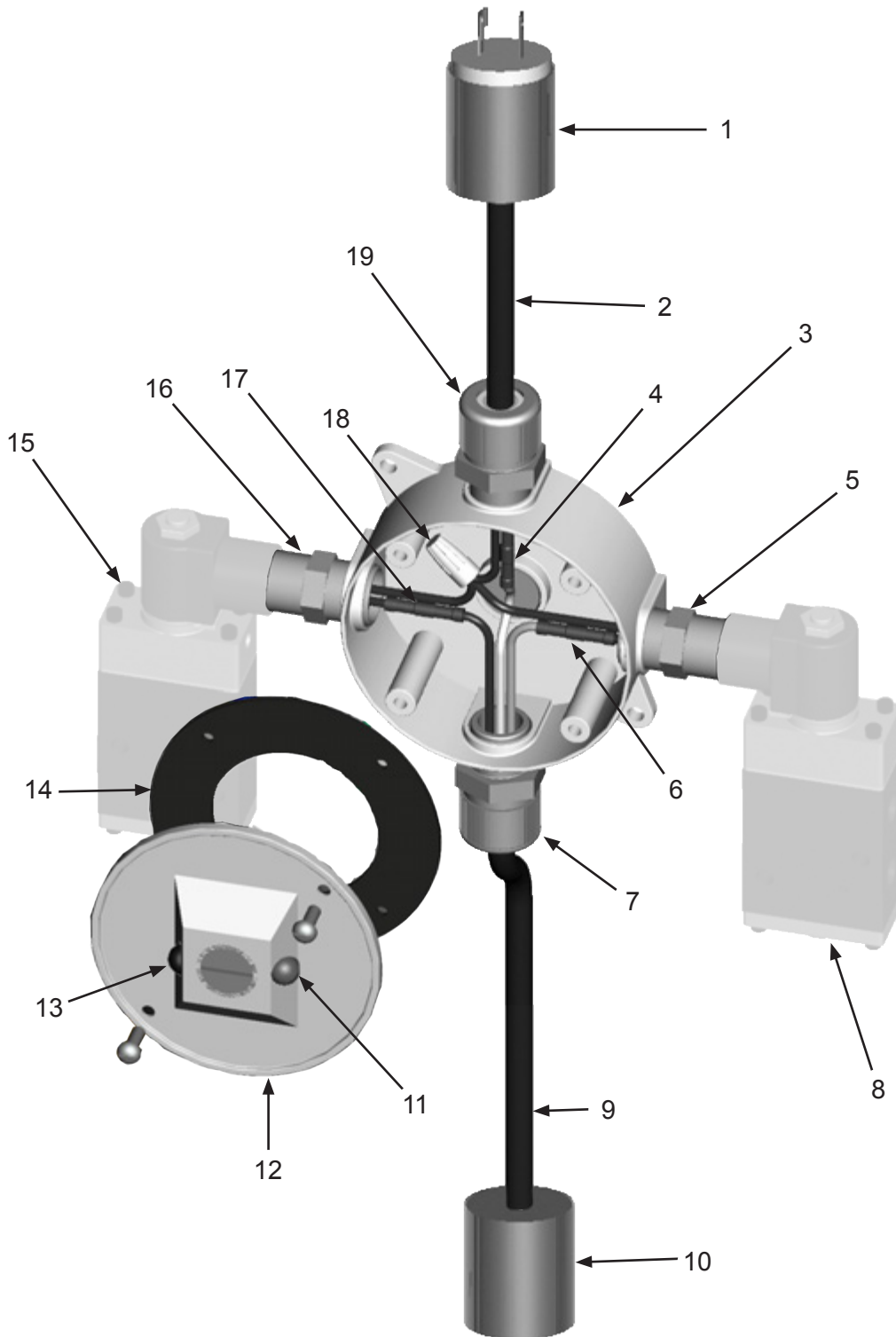
- 1) Disconnect Control Box power supply Twist-Lock Plug (1) and Abrasive Control Switch Twist-Lock Plug (10).
- 2) Remove Conduit Box Cover (12).
- 3) Cut leads from Red (11) and Blue (13) Indicator Lights.
- 4) Remove Red (11) and Blue (13) Indicator Lights from Conduit Box Cover (12)
- 5) Remove Conduit Box Cover Gasket (14).
- 6) Remove Wire Nut (18) and disconnect wires.
- 7) Cut remaining leads as close to Butt Connectors (4,6,17) as possible.
- 8) Loosen Cord Grips (7, 19) and remove Power Cords (2,9).
- 9) Remove Two Prong Male Plug (1) and Three Prong Female Plug (10) from Power Cords (2, 9).
- 10) Remove Electric Control Valves (8,15) from Hex Nipples (5,16).
- 11) Remove Hex Nipples (5,16) from Conduit Box (3).

Assembly:

- 1) Install Three Prong Female Plug (10) onto 16/3 Power Cord (9), assuring black lead is installed in gold toned connector, the white lead is installed in the silver toned connector, and the green lead is installed in the green connector.
- 2) Install Two Prong Male Plug (1) onto 16/2 Power Cord (2), assuring black lead is installed in gold toned connector and the white lead is installed in the silver toned connector.
- 3) Install 16/2 Cord Grip (19) into top of Conduit Box (3).
- 4) Install 16/3 Cord Grip (7) into bottom of Conduit Box (3).
- 5) Install Hex Nipples (5, 16) into Conduit Box (3).
- 6) Install Electric Control Valves (8, 15) onto Hex Nipples (5, 16).
- 7) Install 16/3 Power Cord (9) through bottom Cord Grip (7).
- 8) Install 16/2 Power Cord (2) through top Cord Grip (19).
- 9) Strip 1-1/2" of outer insulation from Power Cords (2, 9) inside the Conduit Box (3).
- 10) Strip 3/4" of insulation from all leads inside the Conduit Box (3).
- 11) Install Red (11) and Blue (13) Indicator Lights into Conduit Box Cover (12).
- 12) Install Conduit Box Cover Gasket (14) onto Conduit Box Cover (12).
- 13) Using a Butt Connector (4), connect white lead from 16/2 Power Cord (2) to white lead of 16/3 Power Cord (9).
- 14) Using Wire Nut (18), connect 16/2 Power Cord (2) black lead, one lead from each Red (11) and Blue (13) Indicator Lights, and one black lead from each Electric Control Valve (8, 15) together.
- 15) Using Butt Connector (17), connect second black lead from Air Control Solenoid (15) and second lead from Blue Indicator Light (13) to 16/3 Power Cord (9) black lead.
- 16) Using Butt Connector (6), connect second black lead from Abrasive Control Solenoid (8) and second lead from Red Indicator Light (11) to 16/3 Power Cord (9) green lead.
- 17) Install Conduit Box Cover (12) onto Conduit Box (3).

MAINTENANCE

Disassemble and Assemble Abrasive Control Switch Control Box (cont.)



MAINTENANCE

Disassemble and Assemble Abrasive Control Switch - Electric

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

Maintenance of the Abrasive Control Switch is limited to the daily cleaning and the imabrasivete replacement of damaged or worn parts.

Disassembly:

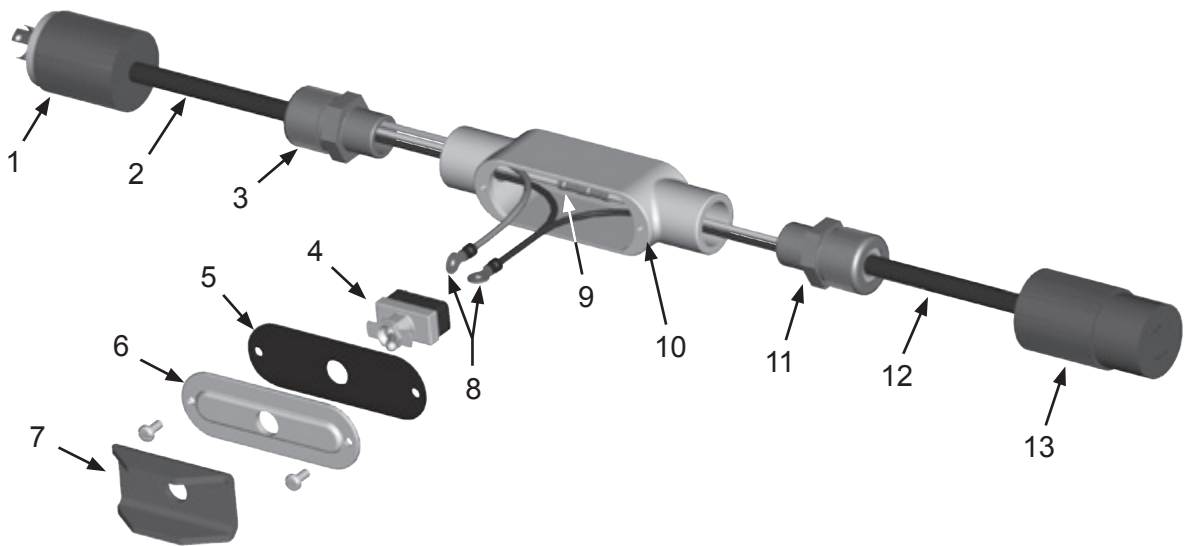
- 1) Remove Conduit Box Cover (6) from Conduit Box (10).
- 2) Disconnect Toggle Switch (4) from Ring Terminal Connectors (8).
- 3) Remove Switch Guard (7) and disconnect Toggle Switch (4) from Conduit Box Cover (6).
- 4) Remove Gasket (5).
- 5) If replacing power cord, remove Ring Terminal Connectors (8) and Butt Connector (9).
- 6) Release Power Cords (2,12) from Cord Grips (3,11) then remove Power Cords.
- 7) Remove Cord Grips (3, 11) from Conduit Box (10).
- 8) Remove Twist Lock Plugs (1, 13).

Assembly:

- 1) Install Twist Lock Plugs (1, 13), assuring black lead is attached to the gold-toned receiver, the white lead is attached to the silver-toned receiver, and the green lead is attached to the green receiver.
- 2) Install 16/3 Power Cord (2) into 16/3 Cord Grip (3), do not tighten.
- 3) Install 16/2 Power Cord (12) into 16/2 Cord Grip (11), do not tighten.
- 4) Install Cord Grips (3,11) into Conduit Box (10).
- 5) Splice white leads with Butt Connector (9).
- 6) Splice black leads with Ring Terminal Connector (8)
- 7) Install Ring Terminal Connector (8) on to green lead.
- 8) Tighten caps on Cord Grips (3, 1).
- 9) Install Toggle Switch (4) through Gasket (5), conduit Cover (6) and Toggle Switch Guard (7), making sure to orient the Toggle Switch (4) to the "ON" position is forward.
- 10) Attach black and green lead to Toggle Switch (4).
- 11) Install Conduit Box Cover (6) onto Conduit Box (10).

MAINTENANCE

Disassemble and Assemble Abrasive Control Switch - Electric (Cont.)



MAINTENANCE

Disassemble and Assemble Electric Control Valve

Maintenance of the Electric Control Valve is limited to the daily cleaning and the replacement of damaged or worn parts.

WARNING

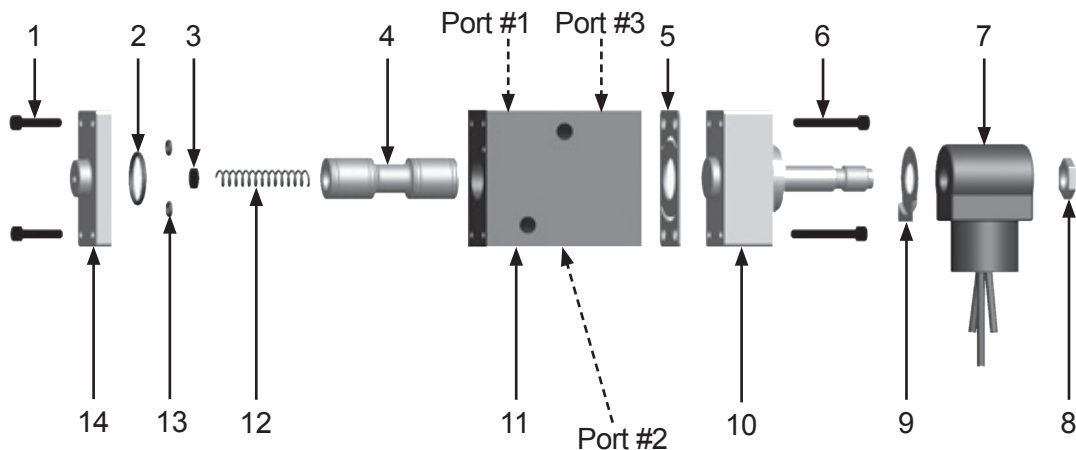
W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-520

The use of this product for any purpose other than originally intended or altered from its original design is prohibited. Failure to comply with the above warning could result in death or serious injury.



Disassemble:

- 1) Remove four Screws (1) from End Cap (14). Remove Spring (12) from Valve Body (11).
- 2) Remove large O-ring (2) and two small O-rings (13) from End Cap (14).
- 3) Remove Felt (3) from End Cap (14).
- 4) Remove Nut (8) Slide Coil and Coil Housing (7) from Pilot (10). Remove Coil Washer (9).
- 5) Remove four Screws (6) from Pilot (10). Remove Gasket (5).
- 6) Ease Plunger (4) from Valve Body (11) by pushing Plunger (12) from Pilot (10) end.

Assemble:

- 1) Orient the Valve Body (11) so Port #1 and Port #3 are facing away. Insert Plunger (4) in Valve Body (11) from the left.
- 2) Place Gasket (5) on Valve Body (11) on the right. Place Pilot (10) on Gasket (5).
- 3) Ensure port in side of Pilot (10) is on the same side as Port #2 of Valve Body (11).
- 4) Install four Screws (6) to secure Pilot (10) to Valve Body (11). Do not overtighten.
- 5) Place Coil Washer (9) over stem of Pilot (10). Slide Coil and Coil Housing (7) onto stem of Pilot (10). Install Nut (8) on stem of Pilot (10). Do not overtighten.
- 6) Place two small O-rings (13), large O-ring (2), and Felt (3) in End Cap (14).
- 7) Insert Spring (12) in Valve Body (11). Place End Cap (14) on Spring (12) and compress Spring (12) until End Cap (14) meets Valve Body (11).
- 8) Install four Screws (1) in End Cap (14). Do not overtighten.

TROUBLESHOOTING

Blastmaster® Abrasive Cut-Off System - Pneumatic

If the Blastmaster® Abrasive Cut-Off System does not function properly, check the following:

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-522

Verify your remote control system is designed to function as normally-closed. Use of this assembly with a normally-open remote control system could cause unintended activation of the remote control system resulting in the release of high speed abrasive and compressed air. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-509

Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed. Failure to comply with the above warning could result in death or serious injury.

SYMPTOM (Cause)

ACTION

No abrasive exits the blast nozzle

(Switch in "OFF" position, Damaged components, Abrasive Cut-Off System not properly installed, Blockage, Improper air supply, Remote Control System malfunctions)

Check position of Abrasive Cut-Off Switch.

Inspect all components Abrasive Cut-Off Switch. Replace any damaged components.

Refer to Assembly/Disassembly instructions.

Pressurize Blast Pot and open and close Choke Valve rapidly. If problem persists refer to Metering Valve Operator's Manual.

Refer to Remote Control System Operator's Manual.

Depressurize Blast Pot. Inspect nozzle and blast hose for blockage. Remove blockage or remove components from use.

Insufficient air supply. Ensure minimum of 50 psi is supplied to Remote Control System and sufficient air volume to support blast nozzle.

Refer to Remote Control System Operator's Manual.

Abrasive will not shut-off

(Damaged components, Abrasive Cut-Off System not properly installed, Improper air supply, Remote Control System malfunctions)

Inspect all components Abrasive Cut-Off System. Replace any damaged components.

Refer to Assembly/Disassembly instructions.

Insufficient air supply. Ensure minimum of 50 psi is supplied to Remote Control System and sufficient air volume to support blast nozzle.

Refer to Remote Control System Operator's Manual.

No air and/or abrasive exits the blast nozzle

(Debris or foreign object, damaged Toggle Boot or Toggle Switch.)

Inspect remote control switch. Repair or replace any damaged components.

TROUBLESHOOTING

Blastmaster® Abrasive Cut-Off System - Electric

If the Blastmaster® Abrasive Cut-Off System does not function properly, check the following:

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-522

Verify your remote control system is designed to function as normally-closed. Use of this assembly with a normally-open remote control system could cause unintended activation of the remote control system resulting in the release of high speed abrasive and compressed air. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-509

Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed. Failure to comply with the above warning could result in death or serious injury.

SYMPTOM (Cause)

No abrasive exits the blast nozzle

Switch in "OFF" position, Switch reversed, Damaged components, Abrasive Cut-Off System not properly installed, Blockage, Improper air or electric supply, Remote Control System malfunctions)

ACTION

Check position of Abrasive Cut-Off Switch

Confirm Switch is oriented correctly

Inspect all components Abrasive Cut-Off System. Replace any damaged components

Refer to Assembly/Disassembly instructions

Pressurize Blast Pot and open and close Choke Valve rapidly. If problem persists refer to Metering Valve Operator's Manual.

Refer to Remote Control System Operator's Manual.

Depressurize Blast Pot. Inspect nozzle and blast hose for blockage. Remove blockage or remove components from use.

Insufficient air supply. Ensure minimum of 50 psi is supplied to Remote Control System and sufficient air volume to support blast nozzle.

Confirm power supply is delivering 12-V DC

Refer to Remote Control System Operator's Manual.

Abrasive will not shut-off

(Damaged components, Switch reversed, Abrasive Cut-Off System not properly installed, Improper air supply, Remote Control System malfunctions)

Inspect all components of Abrasive Cut-Off System. Replace any damaged components

Confirm Switch is oriented correctly

Refer to Assembly/Disassembly instructions

Insufficient air supply. Ensure minimum of 50 psi is supplied to Remote Control System and sufficient air volume to support blast nozzle.

Refer to Remote Control System Operator's Manual.

TROUBLESHOOTING

Blastmaster® Abrasive Cut-Off System - Electric (cont.)

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-522

Verify your remote control system is designed to function as normally-closed. Use of this assembly with a normally-open remote control system could cause unintended activation of the remote control system resulting in the release of high speed abrasive and compressed air. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-509

Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed. Failure to comply with the above warning could result in death or serious injury.

SYMPTOM (Cause)

ACTION

No air and/or abrasive exits the blast nozzle

(Blockages, Metering Valve)

Refer to Remote Control System Operator's Manual.

Depressurize Blast Pot. Inspect nozzle and blast hose for blockage. Remove blockage or remove components from use.

Pressurize Blast Pot and open and close Choke Valve rapidly. If problem persists refer to Metering Valve Operator's Manual.

Intermittent abrasive flow

(Wet abrasive, Metering Valve, Blast Nozzle)

Damp or wet abrasive. Remove abrasive from Blast Pot by cleaning out the vessel. Ensure dry abrasive is used.

Install a Moisture Separator at the inlet of the Blast Pot. Increase the inner diameter of Air Supply hose.

Blast Nozzle is worn or too large for compressor size. Replace Blast Nozzle.

ADDITIONAL TECHNICAL DATA

The associations listed below offer information, materials and videos pertaining to abrasive blasting and safe operating practices.

- **American Society for Testing and Materials (ASTM)**
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Phone: (610) 832-9585
FAX: (610) 832-9555
www.astm.org
- **Occupational Safety & Health Administration (OSHA)**
United States
Department of Labor
200 Constitution Avenue
Washington, DC 20210

Phone: (800) 321-OSHA
(800) 321-6742
www.osha.gov
- **The National Board of Boiler & Pressure Vessel Inspectors**
1055 Crupper Avenue
Columbus, Ohio 4322

Phone: (614) 888-8320
FAX: (614) 888-0750
www.nationalboard.org
- **National Association of Corrosion Engineers (NACE)**
1440 South Creek Drive
Houston, TX 77084-4906

Phone: (281) 228-6200
FAX: (281) 228-6300
www.nace.org
- **The Society for Protective Coatings (SSPC)**
40-24th Street, 6th Floor
Pittsburgh, PA 15222-4656

Phone: (412) 281-2331
FAX: (412) 281-9992
www.sspc.org
- **American National Standards Institute (ANSI)**
1899 L Street, NW, 11th Floor
Washington, DC 20036

Phone: (202) 293-8020
FAX: (202) 293-9287
www.ansi.org

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Seller warrants to the original purchaser that the Product covered by this Limited Warranty will remain free from defects in workmanship or material under normal commercial use and service for a period of one year from the date of shipment to the original Purchaser. This Warranty shall not apply to defects arising, in whole or in part, from any accident, negligence, alteration, misuse or abuse of the Product, operation of the Product which is not in accordance with applicable instructions or manuals or under conditions more severe than, or otherwise exceeding, those set forth in the written specifications for the Product, nor shall this Warranty extend to repairs or alterations of the Product and/or any maintenance part by persons other than Seller or Seller's authorized representatives. This warranty does not apply to accessory items. Further, this Warranty does not apply to damage or wear to the surface finish or appearance of the Product or normal wear and tear to the Product. This Warranty is limited to a purchaser who purchases the Product either directly from the Seller or from one of Seller's "Authorized Distributors". An Authorized Distributor is a Seller approved distributor that purchases the Product directly from the Seller for the sole purpose of re-selling the Product at retail, without any use or modifications whatsoever, to an end-purchaser. This warranty is specifically non-assignable and non-transferable.

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ph: 563.324.2519
fax: 563.324.6258

REGIONAL BRANCH OFFICES

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- **Louisiana**
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