Marco®

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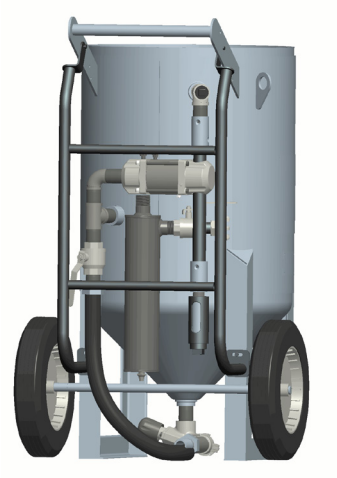
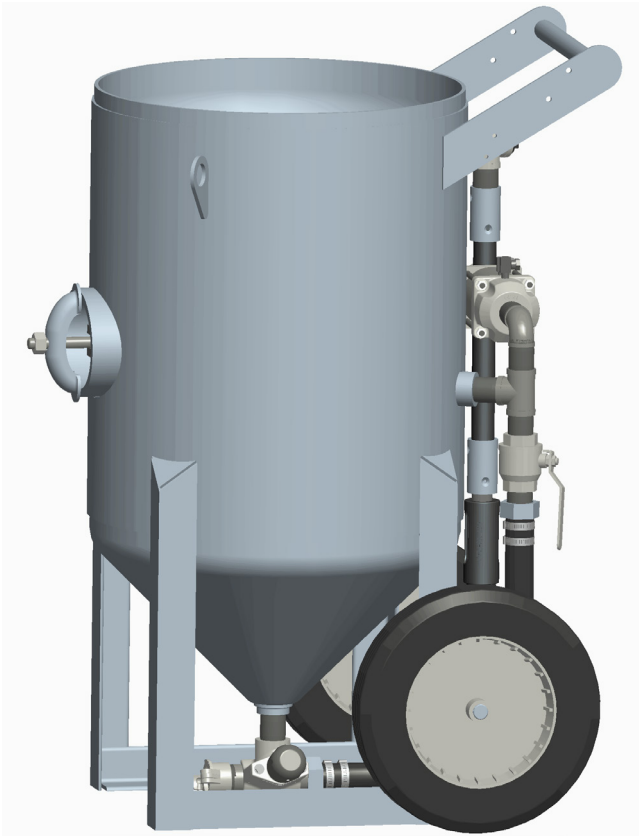
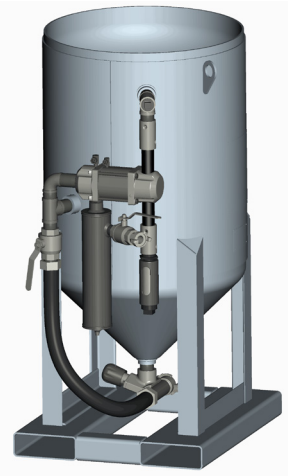
Operator's Manual
Part # 1090054
Revision: September 14, 2007

6.5 Cubic Foot S-Series Blast Machine

with Tandem Remote Control System







⚠ WARNING

Before using this equipment, read, understand and follow all instructions in the Operator's Manual. If the user or assistants cannot read or understand the warnings and instructions, the employer of the user and 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, contact your distributor or call (563) 324-2519 for replacements. Failure to comply with the above warning could result in death or serious injury.

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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.

⚠ 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.

⚠ 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.

NOTICE

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

⚠ WARNING

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

- Breathing dust containing silica could cause silicosis, a fatal lung disease. Breathing dust during blasting operations, post-blast cleaning operations, and/or servicing equipment within the 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 medias or surfaces being blasted can remain suspended in the air for long periods of time after blasting has ceased. A NIOSH-approved, well-maintained, respirator designed for the specific operation being performed must be used by anyone blasting, handling or using the media, 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.
- Blast operators must receive thorough training on the use of media resistant attire which includes: supplied-air respirator, blastsuit, 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.
- Always depressurize the entire blasting system, disconnect all electrical 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.
- 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 media and compressed air resulting in death or serious injury. (OSHA 29 CFR 1910.244(b))
- Point the blast nozzle only at the surface being blasted. Never point the blast nozzle or media stream at yourself or others others.
- Unless otherwise specified, maximum working pressure of blast machines and related components must not exceed 125 psi. Exceeding maximum working pressure of 125 psi could cause the blast machine and components to burst.
- Never weld, grind or drill on the blast machine (or any pressure vessel). Doing so will void ASME certification and manufacturer's warranty. Welding, grinding or drilling on the blast machine (or any pressure vessel) could weaken the vessel causing it to burst. (ASME Pressure Vessel Code, Section VII, 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.
- 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 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 media 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 media and compressed air.
- Never hang objects from the blast machine handle. Doing so may cause the blast machine to become unstable and tip over.

⚠ WARNING

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

- Never attempt to move a blast machine containing media. Never attempt to manually move blast machines greater than 6.5 cubic foot capacity. Always use at least two capable people to manually move a blast machine on flat, smooth surfaces. A mechanical lifting device must be used if a blast machine is moved in any other manner.
- 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 media and compressed air. Only Marco remote control switches should be used with Marco remote control systems.
- Always be certain to have secure footing when blasting. There is a recoil hazard when blasting starts that may cause user to fall and misdirect the media stream at operator or bystander.
- Never use a blast machine or attachments as a climbing device. The person could slip and fall. The blast machine could become unstable and tip over.
- The use of this product for any purpose other than originally intended or altered from its original design is prohibited.
- 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.

⚠ CAUTION

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

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

NOTICE

- Always use media that is dry and properly screened. This will reduce the potential for obstructions to enter the remote control system, metering valve and blast nozzle.
- Moisture build-up occurs when air is compressed. Any moisture within the blast system will cause medias to clump, clogging metering valves, hoses and nozzles. Install an appropriately sized moisture separator at the inlet of the blast machine. 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 media intrusion in the air supply hose, depressurize the Blast Machine before shutting off air supply from compressor.
- Inspect nozzle before placing in service. Damage to nozzle liner or jacket may occur during shipping. If you receive a damaged nozzle, contact your distributor immediately for replacement. Nozzles placed in to service may not be returned. Nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged blast nozzle.
- Blasting at optimal pressure for the media used is critical to productivity. Example: For a media with an optimal blasting pressure of 100 psi at the nozzle, one pound per square inch of pressure loss will reduce blast 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 media supplier for the requirements of your media.
- Replace Blast Nozzle if liner or jacket is cracked or damaged. Replace nozzle if original orifice size has worn 1/16" or more. Determine nozzle wear by inserting a drill bit 1/16" larger than original size of nozzle orifice. If drill bit passes through nozzle, replacement is needed.
- When it comes to media & air mixtures, more is not necessarily better. Optimum blasting efficiency takes place when a lean media & air mixture is used. To correctly set the metering valve, begin with the valve fully closed and slowly increase the amount of media entering the airstream. As you increase the media flow, watch for a "blue flame" (Figure 1) at the exit of the nozzle. Faster cutting, reduced media consumption and lower clean up costs, are benefits of the "blue flame".
- See Media Consumption Chart for consumption rates and required air flow (cubic feet per minute). The system must meet these minimum requirements to ensure proper function and performance.

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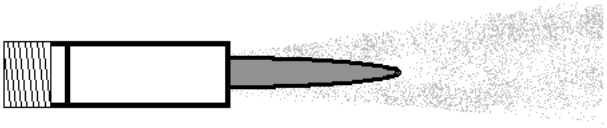


Figure 1

Media Consumption Chart*

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

*Media consumption is based on media with a bulk density of 100 lbs per Cu. Ft..

⚠ 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.

⚠ WARNING

Never weld, grind or drill on the blast machine (or any pressure vessel). Doing so will void ASME certification and manufacturer's warranty. Welding, grinding or drilling on the blast machine (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 VII, Division 1)

⚠ WARNING

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 media and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)

6.5 Cubic Foot S-Series Blast Machine

Description

Rugged, relentless and reliable is what you get with the Marco 6.5 Cubic Foot S-Series Blast Machine. Choose from three models: Portable Blast Machine, Portable Blast Machine with Loading Skid or Blast Machine with Fork Pockets. Each model comes standard with Lifting Lugs for ease of transporting with mechanical lifting devices. With a low loading height of only 47", the S-Series Blast Machine is easy to fill. The 90 degree Toriconical Bottom allows for smooth flow of media to the precision Bantam Metering Valve. All S-Series Blast Machines are rated at 150 psi working pressure for use with today's high output compressors, providing higher blasting pressure at the nozzle, increasing productivity. To provide a streamlined 31" width, pneumatic or electric remote controls are mounted on the back of the vessel, allowing the machine to easily fit through standard doorways. Marco 6.5 Cubic Foot S-Series Blast Machines can handle the roughest jobsites.

Features:

- Built in accordance with ASME Pressure Vessel Code
- 150 psi working pressure for increased productivity
- 90 degree Toriconical Bottom allows smooth flow of media
- Overall width of 31" fits through standard doorways
- 47" loading height for easy loading of bagged media
- Heavy-duty 16" Wheels and Lifting Lugs for ease of portability
- Powder coat finish to withstand harsh environments
- Optional Loading Skid available to protect the remote controls during transport
- Dimensions: Portable Model Overall Height: 51" Width: 31" Depth: 25" Weight: 390 lbs
  Fork Pocket Model Overall Height: 50" Width: 21" Depth: 29" Weight: 390 lbs

Operational Requirements

The following may cause safety hazards or reduced performance:

- Improper installation and/or maintenance of components
- Failure to place blast machine on a secure, flat surface
- Improper air supply pressure (minimum 50 psi, maximum 150 psi)
- Incorrect lifting/transporting of blast machine or incorrect or worn lifting devices

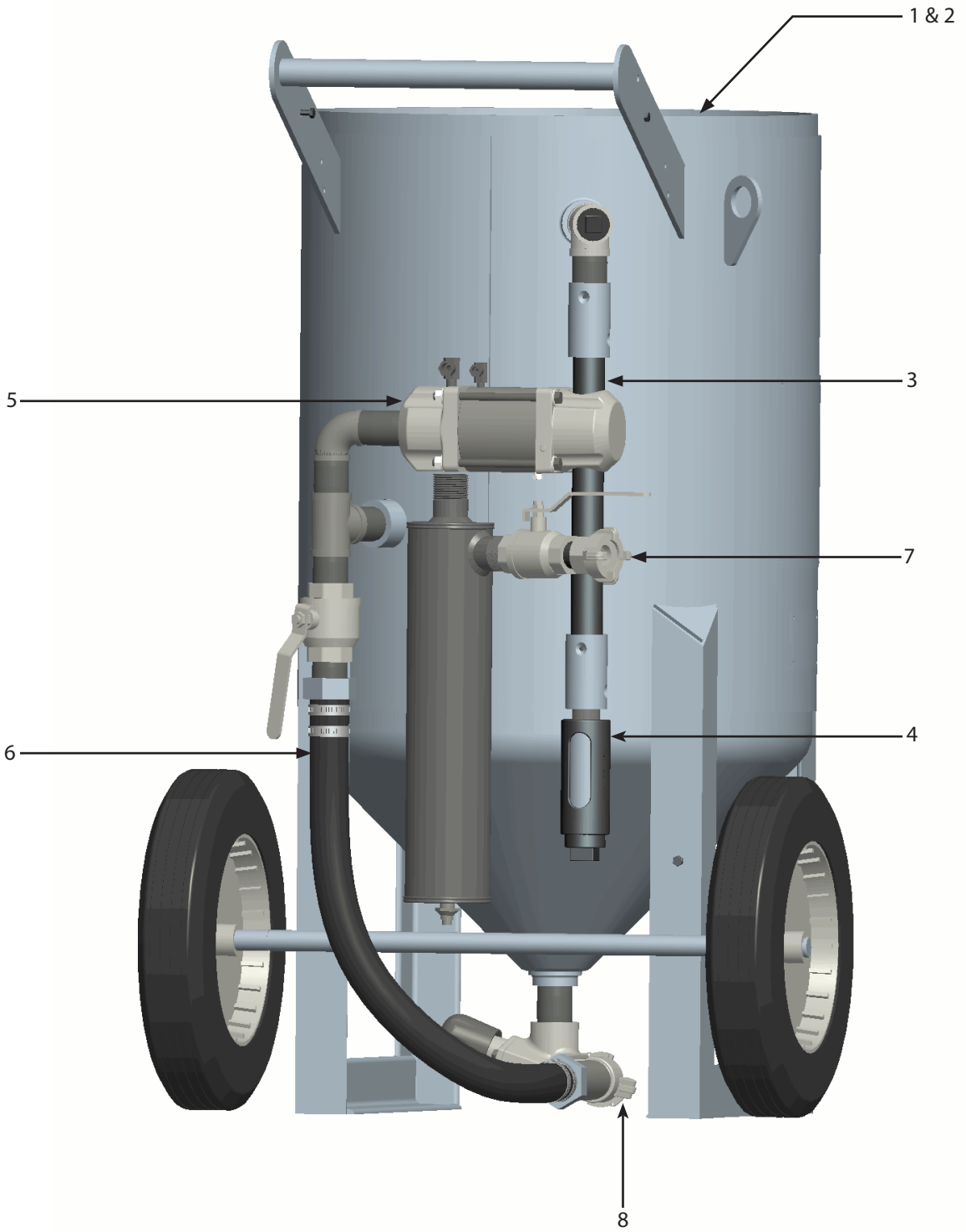
Operating Instructions (Figure 2)

Before using:

- Inspect Pop Up Valve Seat (1) and Pop Up Valve (2) for damage. Replace damaged components before use.
- Inspect Blowdown Hose Assembly (3) for damage. Replace damaged components before use.
- Inspect Muffler Assembly (4) per operator's manual.
- Inspect remote control system (5) components per operator's manual.
- Inspect Pusher Line (6) for damage. Replace damaged components before use.
- Inspect Blast Machine for damage. Do not use Blast Machine if damaged.
- Locate Blast Machine on an even, flat surface that can withstand the weight of a full blast machine. Be aware of possible erosion of surface and load shifting.
- Connect air supply hose from compressor to inlet (7) of the Blast Machine (optional moisture separator is shown). To provide best performance, an air supply hose with an inner diameter five to six times the size of blast nozzle orifice is recommended.
- Connect blast hose to coupling installed on Metering Valve (8).

6.5 Cubic Foot S-Series Blast Machine

Figure 2



⚠ WARNING

Crushing and pinching are normal functions of this component. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above caution may result in minor or moderate injury.

⚠ CAUTION

High decibel noise levels are generated during the blasting process which may cause loss of hearing. Ensure appropriate Personal Protective Equipment and hearing protection is in use. Failure to comply with the above caution may result in minor or moderate injury.

⚠ CAUTION

Release of high speed media and compressed air occurs during depressurization of the blast machine. Ensure appropriate Personal Protective Equipment is in use. Failure to comply with the above caution may result in minor or moderate injury.

⚠ WARNING

Always depressurize the entire blasting system, disconnect all electrical 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

To reduce media intrusion in the air supply hose, depressurize the Blast Machine before shutting off air supply from compressor.

6.5 Cubic Foot S-Series Blast Machine

Operating Instructions (Figure 3)

During use:

- Fill Blast Machine through hole (A) in top of Blast Machine. Do not overfill, the capacity of the blast machine is 6.5 cubic feet of media.
- To start/stop media blasting, follow instructions in the remote control system (1) operator's manual.
- Monitor remote control system components per operator's manual.

After use:

- Empty media from Blast Machine when blasting is concluded for the day.
- To remove media, place Metering Valve (2) in the FULL OPEN position. Place Choke Valve (3) in the OFF (shut) position. Remove Blast Nozzle from nozzle holder on blast hose. Ensure blast hose is placed in a container suitable for catching the media. Ensure Operator is prepared for strong recoil, the blast hose will provide strong recoil as the media exits the blast hose. Activate Remote Control System per Operator's Manual. When Blast machine is empty, only air will exit the blast hose. Deactivate the Remote Control System to depressurize the Blast Machine. Place Metering Valve (2) in the CLOSED position.
- Inspect Blast Machine components for damage. Replace damaged components before use.
- Cover Blast Machine when not in use to reduce debris and water intrusion.

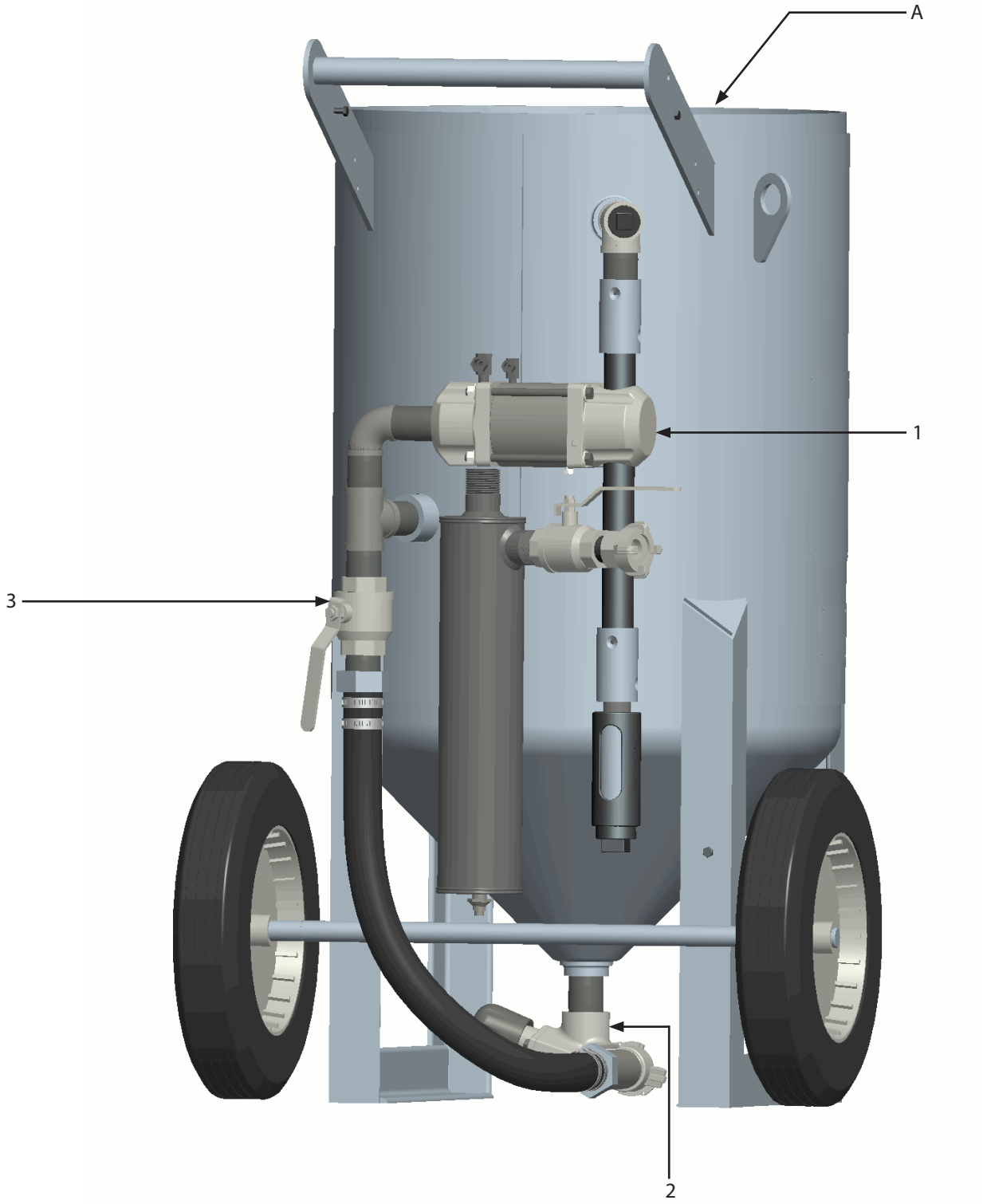
Troubleshooting

If the Blast Machine does not function properly, check the following:

SYMPTOM (Cause)	ACTION
Blast Machine will not pressurize (Damaged components, improper air supply, Remote Control System)	Refer to Remote Control System Operator's Manual. Insufficient air supply. Ensure minimum of 50 psi is supplied to Blast Machine and sufficient air volume to support blast nozzle. Ensure internal piping is aligned with Fill Hole. Ensure Pop Up Valve and Pop Up Valve Seat are seating without air leaks. Replace damaged components.
Blast Machine will not depressurize or depressurizes slowly (Damaged components)	Refer to Remote Control Operator's Manual. Refer to Muffler Operator's Manual.
No Air/Media or no media exits the blast nozzle (Blockages, Wet media, Metering Valve)	Depressurize Blast Machine. Inspect nozzle and blast hose for blockage. Remove blockage or remove components from use. Pressurize blast machine and open and close Choke Valve rapidly. If problem persists refer to Metering Valve Operator's Manual.
Intermittent media flow (Wet media, Metering Valve, Blast Nozzle)	Damp or wet media. Remove media from Blast Machine by cleaning out the vessel. Ensure dry media is used. Install a Moisture Separator at the inlet of the Blast Machine. Increase the inner diameter of Air Supply hose. Blast Nozzle is worn or too large for compressor size. Replace Blast Nozzle.

6.5 Cubic Foot S-Series Blast Machine

Figure 3



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⚠ WARNING

Never weld, grind or drill on the blast machine (or any pressure vessel). Doing so will void ASME certification and manufacturer's warranty. Welding, grinding or drilling on the blast machine (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 VII, Division 1)

NOTICE

Piping may loosen during transit. Ensure all internal and external piping is aligned and tightened before use. Ensure Pop-up Valve will seal properly with Pop-up Valve Seat at opening in top of Blast Machine.

6.5 Cubic Foot S-Series Blast Machine

Maintenance

Maintenance of the Blast Machine is limited to the daily cleaning and the immediate replacement of damaged or worn parts.

6.5 Cubic Foot S-Series Blast Machine

Disassembly:

Inspection Door Assembly: Fig. 4

1) Unthread Nut (1) from Bolt (3).
2) Remove Yoke (2) from Bolt (3).
3) With Bolt (3) captured in slot in Door (5), grasp Bolt (3) and push on Door (5) towards the interior of Blast Machine to free the Door (5) and Gasket (4).
4) Remove Door (5) from Blast Machine interior.

Pop-Up Valve: Fig. 5

1) Remove Inspection Door Assembly.
2) Unthread Vertical Pipe (3) from Pipe Elbow (4). Remove Vertical Pipe (3) and Pop-Up Valve (2) from the Blast Machine through Inspection Door opening.
3) Remove Pop-Up Valve (2) from pipe.

Pop-Up Valve Seat: Fig. 5

1) From inside Blast Machine and Pop-Up Valve (2) removed, pry Pop-Up Valve Seat (1) from recess in top of Blast Machine.

Assembly:

Pop-Up Valve Seat: Fig. 5

1) From inside Blast Machine and Pop-Up Valve (2) removed, insert new Pop-Up Valve Seat (1) (with curved side facing bottom of Blast Machine) in recess in top of Blast Machine. Ensure Pop-Up Valve Seat (1) is completely seated in recess.

Pop-Up Valve: Fig. 5

1) Inspect Horizontal Pipe (5) and Pipe Elbow (4) for damage. Replace if damaged.
2) Insert Pop-Up Valve (2) in non-threaded end of Vertical Pipe (3).
3) Place Pop-Up Valve and vertical Pipe in Blast Machine and thread in to Pipe Elbow (4).
4) Ensure Vertical Pipe (3) is perpendicular to Horizontal Pipe (5). Slide Pop-Up Valve (2) up and down to ensure freedom of movement and proper seating against Pop-Up Valve Seat (1).
5) Tighten Vertical Pipe (3).

Inspection Door Assembly: Fig. 4

1) Ensure Door (5) is free of debris. Place Gasket (4) on Door (5) and insert through opening in side of Blast Machine.
2) Place head of Bolt (3) in slot on Door (5). Grasp Bolt (3) and seat Door (5) and Gasket (4) on interior ring of opening. Ensure Gasket (4) creates positive seal.
3) Place Yoke (2) on Bolt (3) and tighten Nut (1). Ensure Yoke (2) is tight and an air-tight seal is produced.

6.5 Cubic Foot S-Series Blast Machine

Figure 4

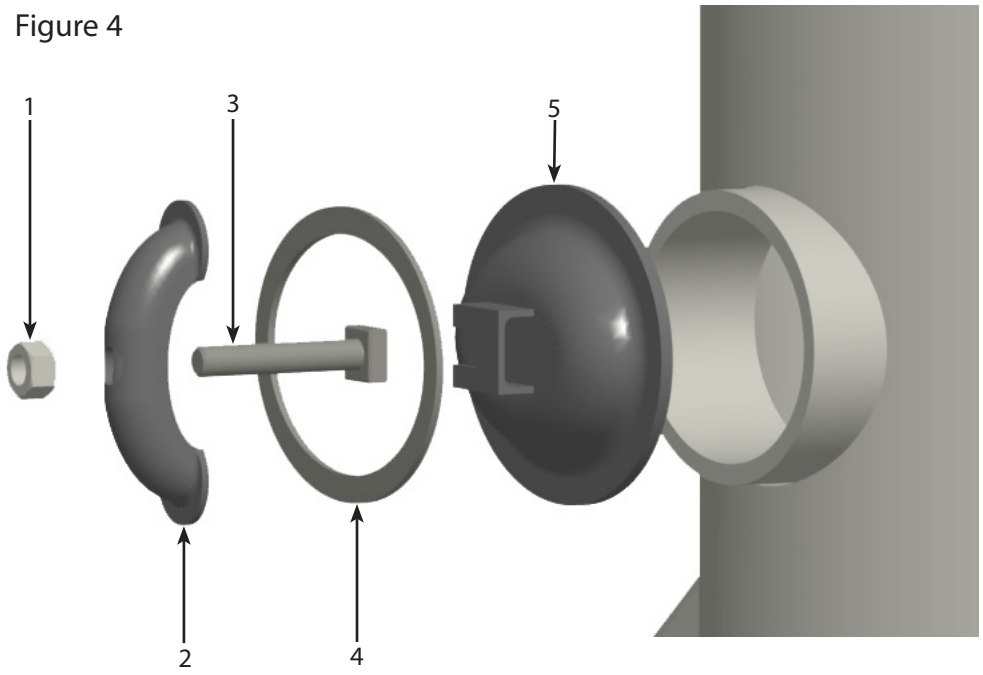
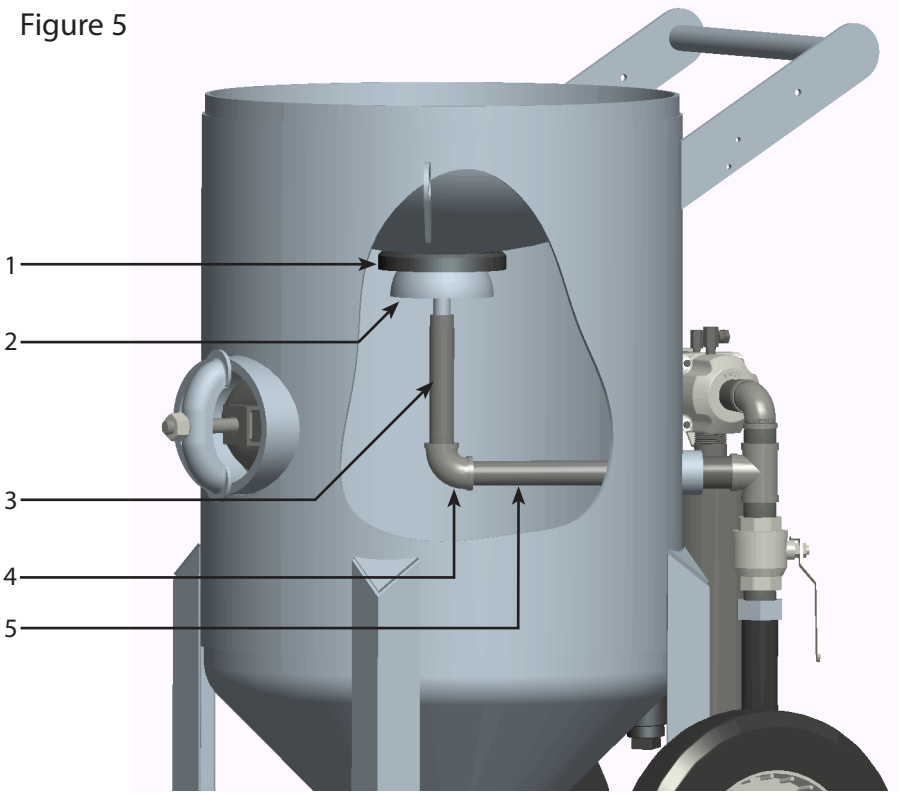


Figure 5



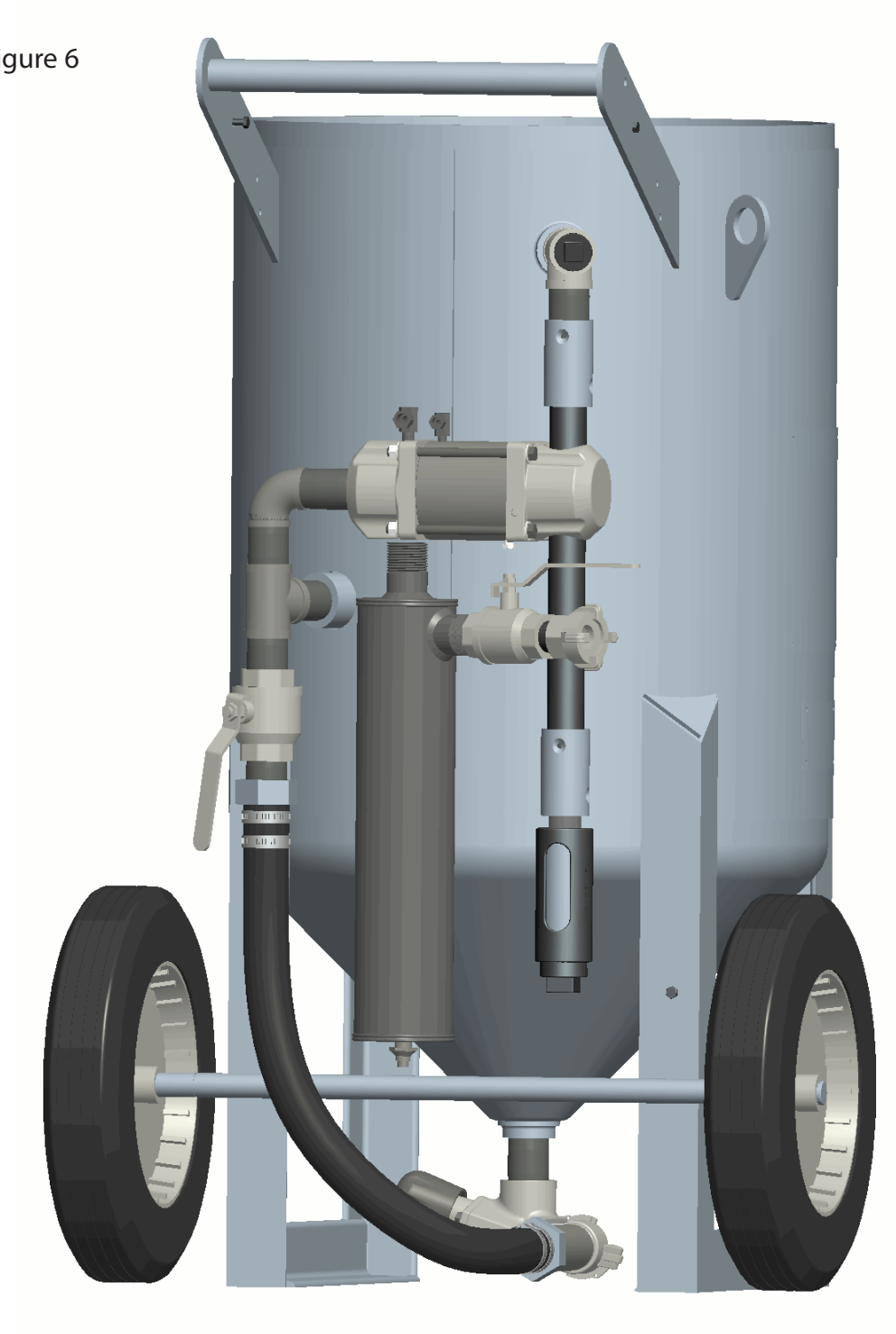
6.5 S-Series Blast Machine Configurations

Fig. 6

Part #	Description
1065001	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065002	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065003	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065004	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065005	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065006	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065007	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065008	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065009	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065001PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065002PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065003PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFIre 158 Control Hanlde, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065004PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065005PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065006PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065007PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065008PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065009PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator

6.5 Cubic Foot S-Series Blast Machine

Figure 6



*1065003PKA shown

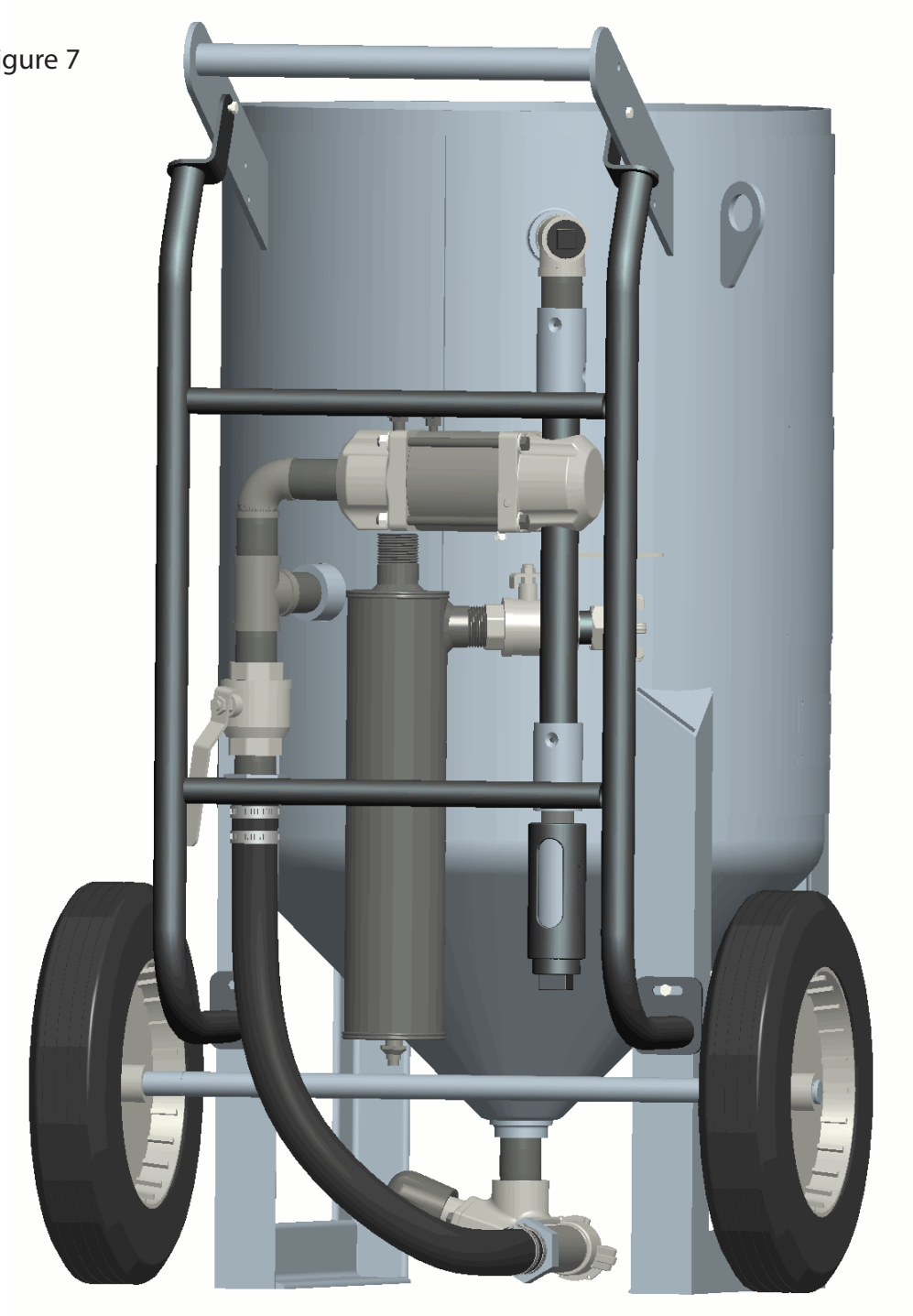
6.5 S-Series Blast Machine with Loading Skid

Fig. 7

Part #	Description
1065001LS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065002LS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065003LS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065004LS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065005LS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065006LS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065007LS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065008LS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065009LS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065001PKALS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065002PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065003PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFIre 158 Control Hanlde, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065004PKALS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065005PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065006PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065007PKALS	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065008PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065009PKALS	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator

6.5 S-Series Blast Machine with Loading Skid

Figure 7



*1065003PKALS shown

6.5 S-Series Blast Machine with Fork Pockets

Fig. 8

Part #	Description
1065010	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065011	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065012	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle and 55 feet of Pneumatic Control Line
1065013	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065014	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065015	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065016	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065017	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065018	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle and 50 feet of 16/2 SO Power Cord with Twist-lock Plugs
1065010PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065011PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 158 Control Handle, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065013PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFIre 158 Control Hanlde, 55 feet of Pneumatic Control Line and The Extractor Moisture Separator
1065014PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065015PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065016PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 12-volt DC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065017PKA	6.5 Cubic Foot Blast Machine w/ 1" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065018PKA	6.5 Cubic Foot Blast Machine w/ 1-1/4" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator
1065019PKA	6.5 Cubic Foot Blast Machine w/ 1-1/2" Bantam Metering Valve, Tandem Valve, KwikFire 190 120-volt AC Electric Control, KwikFire 156 Control Handle, 50 feet of 16/2 SO Power Cord with Twist-lock Plugs and The Extractor Moisture Separator

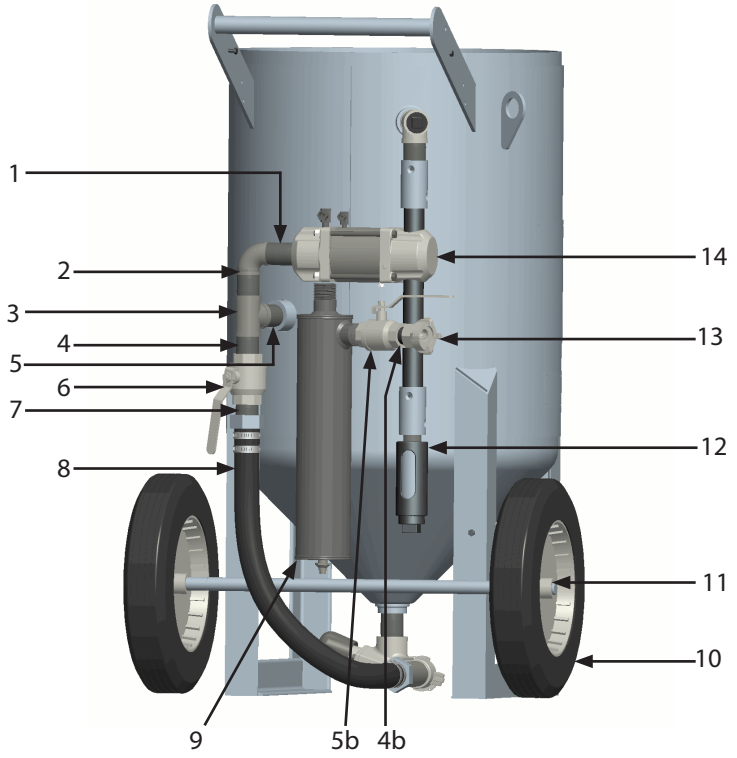
6.5 S-Series Blast Machine with Fork Pockets

Figure 8

*1065012PKA shown

6.5 S-Series Blast Machine Schematic

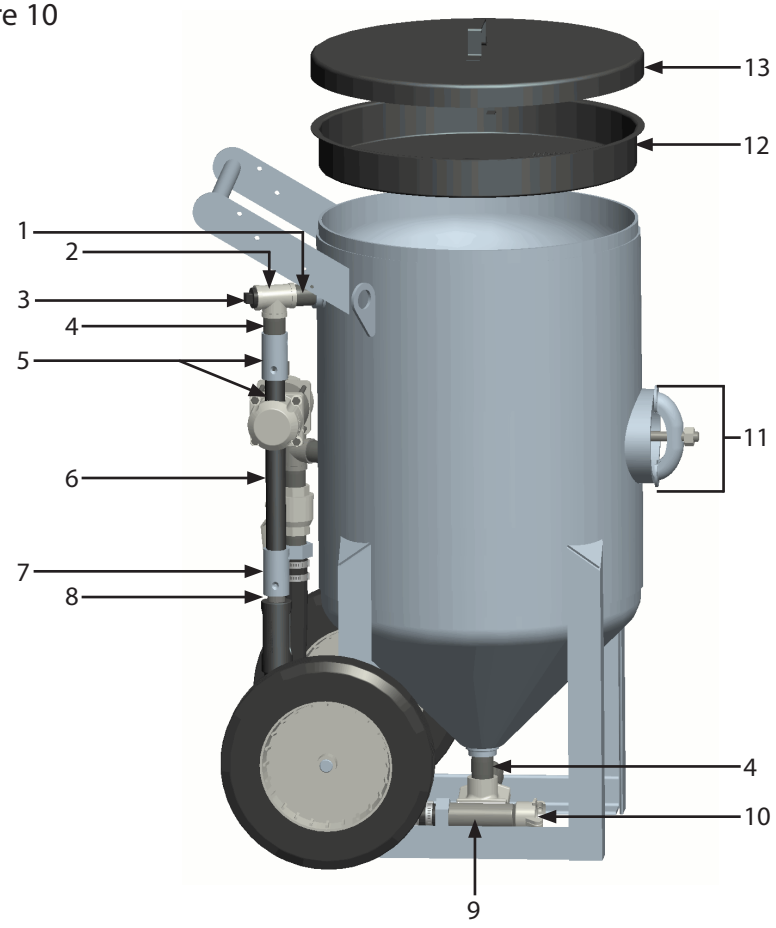
Figure 9



Item #	Part #	Description
Fig. 9		
1	1011216	1-1/4" x 3-1/2" NPT Pipe Nipple
2	1011802	1-1/4" NPT Street Elbow
3a	1011817	1-1/4" x 1-1/4" x 1" NPT Pipe Tee (for use with 1014100)
3b	1011803	1-1/4" x 1-1/4" x 1-1/4" NPT Pipe Tee (for use with 1014101)
3c	1011834	1-1/4" x 1-1/4" x 1-1/2" NPT Pipe Tee (for use with 1014102)
4a	1012151	1" NPT Close nipple (for use with 1014100)
4b	1011201	1-1/4" NPT Close Nipple (for use with 1014101)
4c	1014015	1-1/2" NPT Close Nipple (for use with 1014102)
5	1011204	1-1/4" x 3" NPT Pipe Nipple
6a	1011601	1" NPT Full Port Brass Ball Valve (for use with 1014100)
6b	1011602	1-1/4" NPT Full Port Brass Ball Valve (for use with 1014101)
6c	1011603	1-1/2" NPT Full Port Brass Ball Valve (for use with 1014102)
7a	1012151	1" NPT Close Nipple (for use with 1014100)
7b	1011201	1-1/4" NPT CLose Nipple (for use with 1014101)
7c	1014015	1-1/2" NPT Close Nipple (for use with 1014102)
8a	1006310	1" i.d. Pusher Line Service Kit (for use with 1014100) See Fig. 13
8b	1006311	1-1/4" i.d. Pusher Line Service Kit (for use on 1014101) See Fig. 13
8c	1006312	1-1/2" i.d. Pusher Line Service Kit (for use on 1014102) See Fig. 13
9	1011750	The Extractor Moisture Separator - (includes items 12) (optional)
10	1006064	16" Wheel (2 required for portable models)
11	1006205	Wheel Clip for 16" Wheels (2 required for portable models)
12	1011100	Blast Machine Muffler Assembly (includes 1" NPT Close Nipple)
13	10ME3	1-1/4" NPT (M) Air Hose Fitting (optional)
14	1012300	Tandem Valve - Complete

6.5 S-Series Blast Machine Schematic

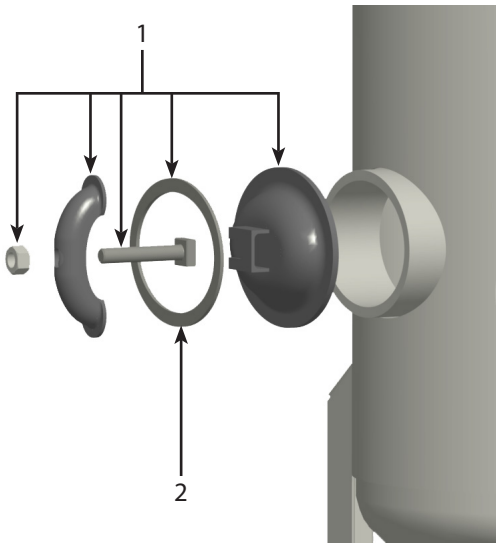
Figure 10



Item # Fig. 10	Part #	Description
1	1011204	1-1/4" x 3" NPT Pipe Nipple
2	1011803	1-1/4" NPT Pipe Tee
3	1011902	1-1/4" NPT Square Head Pipe Plug
4	1011201	1-1/4" NPT Close Nipple
5	1012350	Blowdown Hose Assembly (includes 3 feet of item (6) and (1) of item 7)
6	10BH0342BR	3/4" i.d. x 1-1/2" o.d. Blast Hose - 3 feet required (for use with 1012350)
7	10NHA1	Aluminum Nozzle Holder for 3/4" i.d. Blast Hose
8	1012157	1-1/4" (M) x 1" (F) NPT Pipe Bushing
9a	1014100	1" Bantam Metering Valve
9b	1014101	1-1/4" Bantam Metering Valve
9c	1014102	1-1/2" Bantam Metering Valve
10	10SB2	1-1/2" NPT Brass Tank Coupling
11	1006200	6" x 8" Inspection Door Assembly
12	1006102	24" Screen for 6.0 and 6.5 Cubic Foot Blast Machines (optional)
13	1006101	24" Cover for 6.0 and 6.5 Cubic Foot Blast Machines (optional)
–	1090054	6.5 Cubic Foot S-Series Blast Machine Operator's Manual

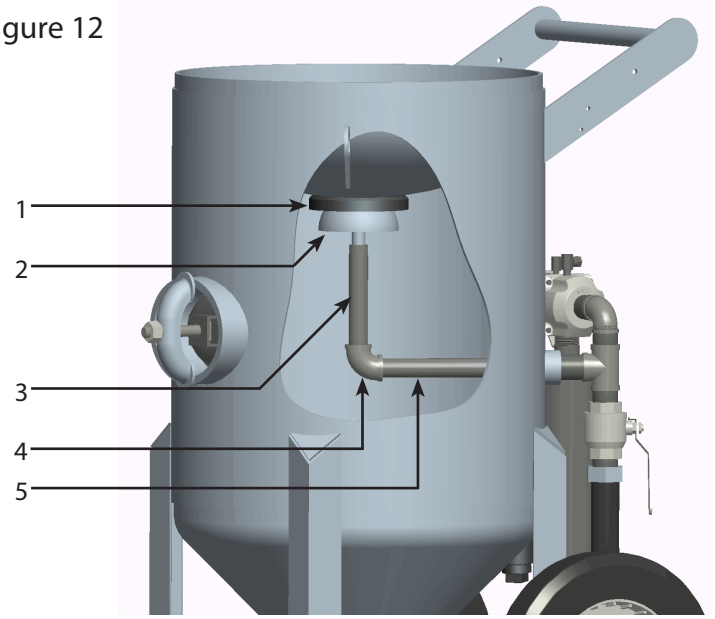
6.5 S-Series Blast Machine Schematic

Figure 11



Item #	Part #	Description
Fig. 11		
1	1006200	6" x 8" Inspection Door Assembly (Includes: Door, Bolt, Gasket, Yoke and Nut)
2	1006201	6" x 8" Inspection Door Gasket

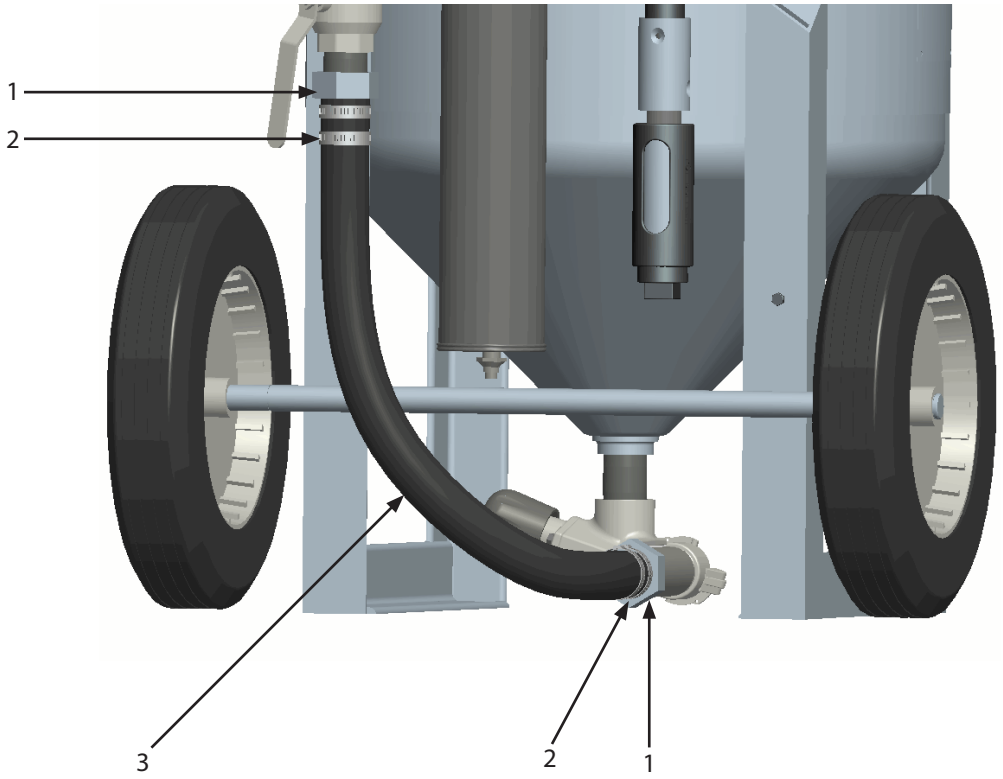
Figure 12



Item #	Part #	Description
Fig. 12		
1	1006040	Pop Up Valve Seat for 3.5 & 6.5 Cubic Foot S-Series Blast Machines
2	1006030	Pop Up Valve for 3.5 & 6.5 Cubic Foot S-Series Blast Machines
3	1011815	1" x 5" NPT Pipe Nipple
4	1006210	1-1/4" x 1" Reducing Pipe Elbow
5	1011200	1-1/4" x 10" NPT Pipe Nipple

6.5 S-Series Blast Machine Schematic

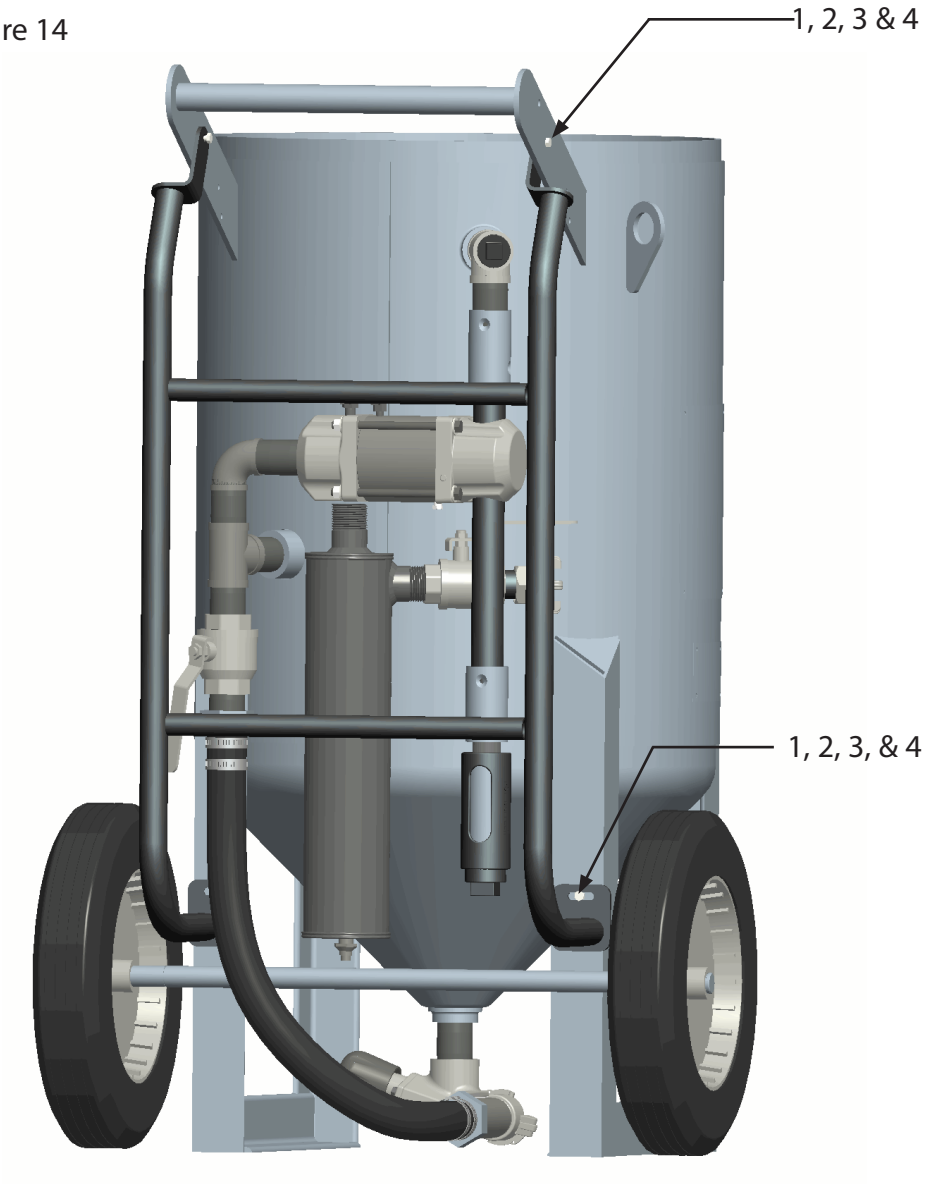
Figure 13



Item #	Part #	Description
Fig. 13		
–	1006310	1" i.d. Pusher Line Service Kit includes items: 1a) quantity of 2, 2) quantity of 4 and 3a) quantity of 3 feet
–	1006311	1-1/4" i.d. Pusher Line Service Kit includes items: 1b) quantity of 2, 2) quantity of 4 and 3b) quantity of 3 feet
–	1006312	1-1/2" i.d. Pusher Line Service Kit includes items: 1c) quantity of 2, 2) quantity of 4 and 3c) quantity of 3 feet
1a	10SFE2	Swivel Air Hose End - 1" NPT (for use with 1006310) 2 required
1b	10SFE3	Swivel Air Hose End - 1-1/4" NPT (for use with 1006311) 2 required
1c	10SFE4	Swivel Air Hose End - 1-1/2" NPT (for use with 1006312) 2 required
2	1015503	Screw Type Hose Clamp (4 required)
3a	10AH100B	Air Hose - 1" i.d. (sold per foot)
3b	10AH114B	Air Hose - 1-1/4" i.d. (sold per foot)
3c	10AH112B	Air Hose - 1-1/2" i.d. (sold per foot)
–	10SFE2G	Gasket for 10SFE2 Swivel Air Hose End
–	10SFE3G	Gasket for 10SFE3 Swivel Air Hose End
–	10SFE4G	Gasket for 10SFE4 Swivel Air Hose End

Optional Loading Skid for 6.5 S-Series Blast Machine

Figure 14



Item #	Part #	Description
Fig. 14		
–	1065040	Loading Skid Assemblhy for 6.5 Cubic Foot S-Series Blast Machine (optional) items included: 1) quantity of 8, 2) quantity of 8, 3) quantity of 4 and 4) quantity of 4
1	10L805003	5/16" Flat Washer (8 required)
2	10L805014	5/16" Lock Washer (8 required)
3	1035046	5/16" - 18 Nut (4 required)
4	1035045	5/16" - 18 x 1" Grade 5 Bolt (4 required)

ADDITIONAL TECHNICAL DATA

The associations listed below offer information, materials and videos pertaining to media 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 43229
  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

WARRANTY

Seller warrants to the original purchaser that the Product covered by this 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 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 by persons other than Seller or Seller's authorized representatives, or to maintenance parts.

DISCLAIMER OF WARRANTY

The foregoing Warranty is exclusive and is in lieu of all other warranties of quality, whether oral or written and whether express or implied. All warranties of merchantability or fitness for a particular purpose are hereby excluded and are inapplicable to the Product. Seller makes no warranties or representations concerning respirators, or equipment made by other manufacturers.

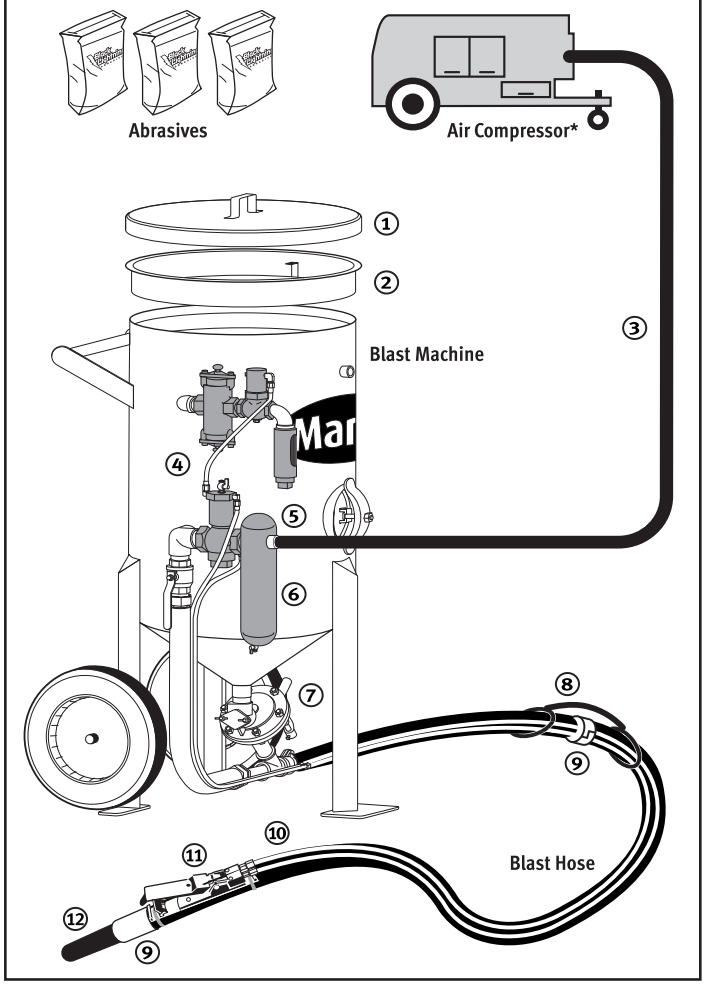
EXCLUSIVE REMEDIES FOR WARRANTY CLAIMS

THE SOLE AND EXCLUSIVE REMEDIES OF PURCHASER FOR UNDER THE FOREGOING WARRANTY COVERING THIS PRODUCT SHALL BE REPAIR OR REPLACEMENT, FREE OF CHARGE, F.O.B. POINT OF MANUFACTURE, OF ANY DEFECTIVE PART OR PARTS OF THE PRODUCT THAT WERE MANUFACTURED BY SELLER, AND WHICH ARE RETURNED TO SELLER AT SELLER'S PRINCIPAL PLACE OF BUSINESS, POSTAGE PREPAID. THIS SOLE AND EXCLUSIVE REMEDY IS CONDITIONED UPON PURCHASER'S PROMPT WRITTEN NOTICE TO SELLER AT SELLER'S PLACE OF BUSINESS THAT A DEFECT HAS BEEN DISCOVERED, TOGETHER WITH A REASONABLY DETAILED DESCRIPTION OF THE DEFECT IN THE PRODUCT, WITHIN THIRTY (30) DAYS AFTER DISCOVERY OF THE DEFECT, OTHERWISE SUCH CLAIMS SHALL BE DEEMED WAIVED. NO ALLOWANCE WILL BE GRANTED FOR ANY REPAIRS OR ALTERATIONS MADE BY PURCHASER OR OTHERS WITHOUT SELLERS PRIOR WRITTEN CONSENT. IF SUCH NOTICE IS TIMELY GIVEN, SELLER WILL HAVE THE OPTION TO EITHER MODIFY THE PRODUCT OR COMPONENT PART THEREOF TO CORRECT THE DEFECT, REPLACE THE PRODUCT OR PART WITH COMPLYING PRODUCTS OR PARTS, OR REFUND THE AMOUNT PAID FOR THE DEFECTIVE PRODUCT, ANY ONE OF WHICH WILL CONSTITUTE THE SOLE LIABILITY OF SELLER AND FULL SETTLEMENT OF ALL CLAIMS. PURCHASER SHALL AFFORD SELLER PROMPT AND REASONABLE OPPORTUNITY TO INSPECT THE PRODUCT FOR WHICH CLAIM IS MADE. THE SOLE PURPOSE OF THE FOREGOING STIPULATED EXCLUSIVE REMEDY SHALL BE TO REPAIR OR REPLACE DEFECTIVE PRODUCTS OR COMPONENTS THEREOF, OR TO REFUND PURCHASER THE PURCHASE PRICE THEREOF. THIS STIPULATED EXCLUSIVE REMEDY SHALL NOT BE DEEMED TO HAVE FAILED OF ITS ESSENTIAL PURPOSE SO LONG AS SELLER IS WILLING AND ABLE TO REPAIR OR REPLACE THE DEFECTIVE PARTS OR REFUND THE PURCHASE PRICE IN ACCORDANCE WITH THE TERMS HEREOF.

LIMITATION OF REMEDIES

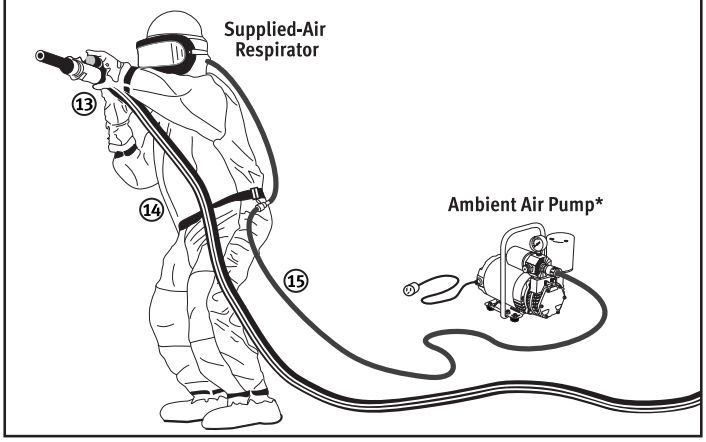
The foregoing stipulated exclusive remedies is in lieu of all other remedies for breach of contract, warranty and/or tort. Seller shall not be liable for the Purchaser's expenses for downtime or for making up downtime, damages for which the Purchaser may be liable to other persons and/or entities, damages to property, and injury to or death of any persons and/or any claims for incidental or consequential damages, including but not limited to loss of profits, regardless of whether Seller has been informed of the possibility of such damages. Seller neither assumes nor authorizes any person to assume for it any other liability in connection with the sale or use of any Products covered by the foregoing Warranty and Disclaimers, and there are no oral agreements relating to remedies which are collateral to or which affect this limitation.

Marco Blast Machine – Hose Configuration



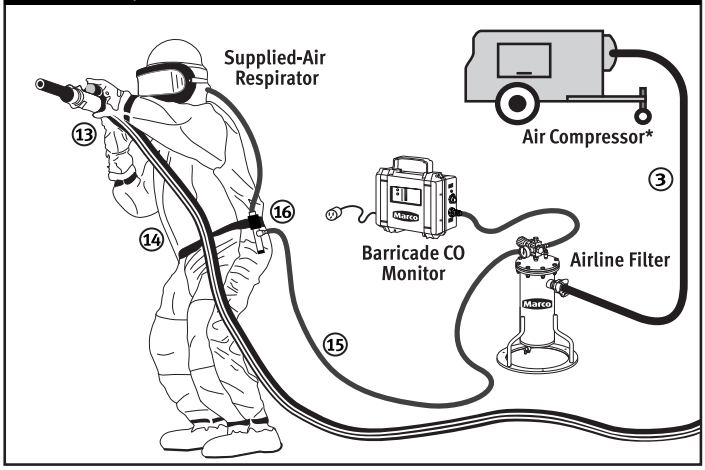
* Grade D quality air in an atmosphere free of contaminants

Ambient Air Pump Configuration



* Grade D quality air in an atmosphere free of contaminants

Air Compressor Breathing Air Configuration



* Grade D quality air in an atmosphere free of contaminants

DAILY PRE-OPERATION CHECKLIST

Additional Components

① blast machine lid
② blast machine screen
③ air hose
④ remote control system
⑤ air hose couplings & gaskets
⑥ moisture separator
⑦ metering valve
⑧ safety cable
⑨ blast hose couplings & gaskets
⑩ remote control line
⑪ remote control handle
⑫ blasting nozzle
⑬ blasting gloves
⑭ media resistant blastsuit
⑮ breathing line
⑯ climate control device

☐ MEDIAS:

- Review the Media MSDS (Material Safety Data Sheet) to ensure the material is free of toxic or harmful substances such as lead, silica, cyanide or arsenic. Use properly sized media to ensure required surface finish.

☐ BLAST MACHINE:

- Inspect the Blast Machine for internal and external wear, abrasions and leaks.
- Ground the Blast Machine to dissipate static electricity created by the Media moving through the Blast Hose.
- Install a Moisture Separator at the Inlet Port of the Blast Machine. Removing moisture from the Air Supply will allow Media to flow smoothly from the Blast Machine to the work surface.

☐ AIR SUPPLY: Blast Machine

- Use an Air Compressor that will provide sufficient CFM (Cubic Feet Per Minute) volume of air to the Blast Nozzle and all other pneumatic tools, with an additional 50% to allow for Nozzle wear.

☐ AIR SUPPLY: Respirator

- Inspect Respirator Assemblies for worn components and replace as needed.
- You MUST consult the Operator's Manual supplied with your Respirator for ALL applicable Warnings and Hazards.

☐ BLAST NOZZLES:

- Replace Blast Nozzles if liner or jacket is cracked, damaged or an orifice size 1/16" larger than the original size.
  – Determine Nozzle wear by inserting a drill bit 1/16" larger than original size of the Nozzle orifice. If the drill bit passes, replacement is needed.
- Blast Nozzles with ½" I.D. or 1" I.D. Entry require use of a Nozzle Washer. Wide Entry (1-1/4" I.D.) Blast nozzles do not require a Nozzle Washer. Inspect and replace damaged Nozzle Holder or Nozzle Washer before use.
- Long Venturi Nozzles are most effective when the distance from Nozzle to work surface is 24-36".

☐ AIR & BLAST HOSE:

- Inspect all Hoses for internal and external wear, abrasions and leaks.
- Lay out Air Hose and Blast Hose as straight as possible to remove restrictions which cause reduced performance and premature wear.
- Blast Hose I.D. should be 3-4 times the size of Nozzle orifice.
- Blast Hose and Air Hose Couplings are to mate securely using Gaskets to provide a positive seal without leaks. Inspect and replace any worn or damaged component before use.
- Install Safety Clips and Safety Cables at each connection.

☐ PROTECTIVE CLOTHING:

- Wear appropriate Protective Clothing and Equipment (supplied-air respirator, blastsuit, safety shoes, leather gloves, ear protection and eye protection) appropriate for the work environment.