MANUAL NUMBER: M000

BLAST-IT-ALL®

DRY BLAST SYSTEMS SUCTION BLAST MACHINES

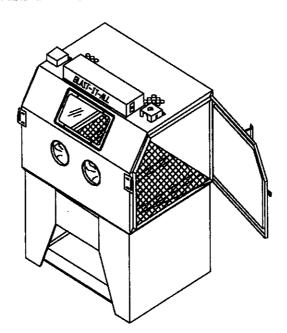
WARNING

DO NOT USE **SAND**. SAND WILL CAUSE SILICA DUST, WHICH IS THE CAUSE OF SILICOSIS DISEASE, A CONDITION OF MASSIVE FIBROSIS OF THE LUNGS. **THIS STATEMENT INDICATES POTENTIAL PERSONNEL HAZARD. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.**

WEBSITE FOR SILICOSIS:

http://www.osha-slc.gov/SLTC/silica advisor/mainpage.html

THIS MACHINE IS DESIGNED FOR THE USE OF GLASS BEADS OR ALUMINUM OXIDE.



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SECTION I

INTRODUCTION AND GENERAL INFORMATION

1-1 INTRODUCTION

1-2 PURPOSE AND SCOPE

This publication contains operation and maintenance instructions, with illustrated part breakdown, for the BLAST-IT-ALL Dry Blast Cabinet, manufactured by BLAST-IT-ALL, INC., Salisbury, NC.

1-3 GENERAL INFORMATION

1-4 DESCRIPTION

This machine is designed primarily for the cleaning and peening process with glass beads; however, it will also handle abrasive media when cutting action is required. The gun pressure and media is determined by the application. Additionally, the blast cleaning and peening machine has the following applications:

- A. Increase tensile strength and relieve stress by microscopic bombardment.
- B. Remove burrs following machining or grinding operation, subministure space age or large castings.
- C. Produces a metallurgically clean surface for plating, painting and other processes.
- D. Increase tool life by blending minute surface imperfections.
- E. Improve releasing characteristics of molds and dies which process glass, rubber and plastic parts.
- F. Enhance lubrication by imparting a microscopically controlled dimpled surface.
- G. Retain critical dimensions while producing above results.
- H. Reclaim and recondition parts by removing paint, rust, corrosion, etc. This process is also used on rubber, fiberglass and plastics.

The Blast Cleaning and Peening Machine is of the enclosed type. Parts for processing are loaded into the cabinet through doors on the right or left sides of the unit. operators hands are inserted into a pair of gloves, connected to the The gloves serve both to protect the operator, and to retain the media in the enclosure. Observation of the parts in process is through a glass window in the cabinet front. The unit also contains a sealed, two tube, fluorescent light which illuminates the work area when electrical power is on.

The media for abrasive blast cleaning or bead peening is propelled by externally supplied air pressure. The air pressure is routed through a moisture separator, pressure regulator, and control solenoid to the blast gun.

The Blast Cleaning and Peening Machine is equipped with a media reclaiming device. This device is a modified cyclone separator with a very delicate air balance. Media, dust, and debris being returned from the cabinet sump enters the air balance for separation. Reusable material drops thru the filter screen basket into the storage hopper for reuse. Air, dust, and debris are exhausted through the reclaiming device and into the dust bag to be discarded.

1-8 COMPRESSED AIR REQUIREMENTS Table # 1-1

Orifice	CFM Volume	PSIG
No. 4	21.0	80
No. 5	31.9	80
No. 6	47.0	80
No. 7	62.0	80
No. 8	85 7	80

SECTION II

INSTALLATION AND OPERATION

2-1 INSTALLATION

- A. Select a location providing suitable air and electrical service. Position machine from surrounding obstruction so as to permit efficient handling of the largest parts to be processed.
- B. Before connecting electrical power, ensure machine is properly grounded per local regulations.
- C. Connect electrical power to unit. (Check motor voltage)
- D. Connect air pressure, regulate to 80 PSI. (See Table 1-1)
- E. Connect dust bag to blower, using proper clamp.
- F. Select and obtain proper blasting media for intended use.
- G. Fill hopper with media.

2-2 ELECTRICAL REQUIREMENTS

- A. For machine equipped with a 1/2 H.P. or 1 H.P. blower motor, provide a 20 AMP, 115 volt, A.C. single phase, 60 cycle electric service.
- B. For machine equipped with a 2 H.P. 230 volt, A.C. single phase, 60 cycle blower motor, see wiring diagram.
- C. For safety, ground all machines as per local regulations.
- D. For 230/440 volt, 3 phase motors, before starting the blower, check the rotation of paddle located inside blower housing. To make the check, turn the electric switch on and off. This will cause the paddle wheel inside the housing to spin slowly, then by looking into the outlet of the blower, the rotation of the paddle can be easily observed. Rotation should be according to direction of arrow on the blower housing. See instruction sheet attached.

2-3 OPERATION

The machine requires electricity, air and blast media to operate. Dry BLAST-IT-ALL glass beads, media, etc. as purchased from your distributor or dealer have been treated to insure free-flow operation even under moderately high humidity conditions. This does not imply that water may be introduced onto the cabinet. Beads accidentally subjected to excessive moisture may be reused after thorough drying and breaking up the lumps.

A. Select the size bead best suited for your operation. Beads are dumped into the clean hopper of the reclaimer through the large pour—in door. The minimum amount of media to be placed in a hopper of the separator for satisfactory operation of the complete system should be as follows:

For a 400 CFM Separator - 10 lbs. media For a 700 CFM Separator - 20 lbs. media For a 900 CFM Separator - 40 lbs. media CAUTION

Do not operate reclaim unit with fill door open.

B. BE SURE ALL PREVIOUS MEDIA IS REMOVED.

To remove media or empty the reclaimer systems, secure a wrench and container, place container under metering valve, remove plug from valve and beads should flow into the container. If beads do not flow, this is an indication they have become caked. Open the fill door located on the side of the separator (reclaim), stir beads until they start to flow from the valve. Replace plug before operating.

SECTION II (cont.)

2-3 OPERATION (cont.)

- C. Adjust the air regulator to the desired operating pressure (turn knob of regulator clockwise to increase pressure). Observe the gauge and activate the gun; operating pressure will usually drop from closed line pressure.
- D. The toggle switch marked reclaimer turns the machine on and off. Some modified machines are equipped with individual gun switches. Other machines may have individual light switches.
- E. Insert hands into rubber gloves from the front of the cabinet.
- F. Hold gun in one hand and part to be processed with the other hand, then activate gun.

Note: Pressures of 80 PSIG or more normally require eigher a solid back rest for the part or the use of both hands, and mounting the gun stationary. Without this assist, especially on long peening operations, the operator will tire easily from fighting blast pressure.

- G. Blasting technique is similar to spray painting, that is, smooth continuous strokes are most effective. The distance from the part effects the size of the blast pattern. Normal usage places the gun approximately 3" from the surface of the material.
- H. Several media sizes and pressures may be required to process many varied types of materials. However, once the correct process is established, any person may be taught the application in a short time.

2-4 SHUT DOWN

For service economies, it may be desirous to shut down the unit after use.

- A. To turn the machine off, flip toggle switch; this will shut off all electrical services. Turn air off, press stop button on machines so equipped.
- B. Clean exhaust bag, see maintenance.
- C. The air filter is equipped with a manual drain and should be opened by screwing counter clockwise. Do not exceed half full. This is easily observed through the plastic bowl.

SECTION III

MAINTENANCE INSTRUCTIONS

3-1 GENERAL

This section contains instructions for maintenance of the BLAST-IT-ALL blast cleaning and peening machine.

3-2 PERIODIC MAINTENANCE.

To keep the BIA blast cleaning machine functioning properly, the following procedures should be performed at the recommended intervals:

A. After each use:

 Check air intake ducts for obstructions (ducts should

be open).

Empty filter bag. The exhaust 2. bag is one of the most important items in the correct and proper functioning of the machine. The exhaust bag must be kept clean at all times. How to keep the bag clean depends on the type of peening operations. When cleaning extremely dirty parts, it may be necessary to clean bag in less than one hour. Other types of operations may require bag cleaning only once a day. Clean the exhaust bag by opening the zipper located in bottom of the bag. Empty by-products, turn bag inside out and shake thoroughly. Periodic washing is suggested to reopen the porosity of the cloth. amount of washing depends on the type of operation.

B. Daily:

- Open separator door, take out screen basket, clean, and reinstall.
- Drain moisture separator.
- 3. Check gun parts for wear.
- C. As required:
 - 1. Wash filter bag.
 - 2. Replace worn gloves.
 - 3. Inspect and replace reclaimer and cabinet door gasket.
 - 4. Replace window.

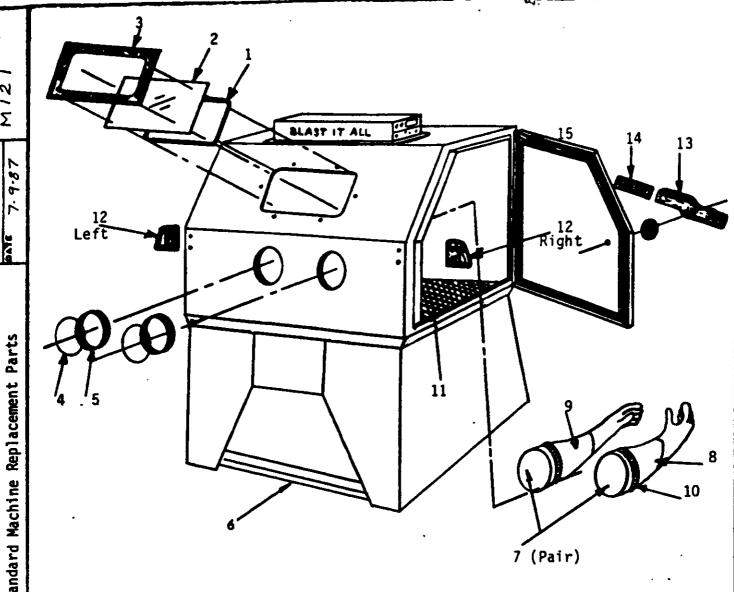
FAULT ISOLATION

TABLE IV-1

SYMPTOM	PROBABLE CAUSE	SOLUTION
Fogging Cabinet	 Reclaim not operating. Dirty dust bag. Fan rotation wrong. 	Activate reclaimer switch. Clean bag. (see 3-2-A) Check (see 2-2-D)
Abnormal Media Consumption	 Reclaimer fill door. A. Not in place. B. Gasket worn. Improper exhaust hook-up. 	Install fill door. Replace as required. If the bag is not used and reclaim is exhausted outside without damper, never connect to any other system such as in-plant exhaust, roof vanes, or any system that will reduce the exhaust pressure, as this can effect the operation of the reclaim system and cause good beads to be lost.
Reduction of Cleaning	 Low bead level. Reduced air pressure. Media hose clogged. Dirty exhaust bag. Wet media. Worn gun parts. 	Fill as required. Check air system set for blast at 80 psi. Inspect hose for worn places or soft spots. Clean bag. Purge system and refill. Inspect and replace or adjust as required.

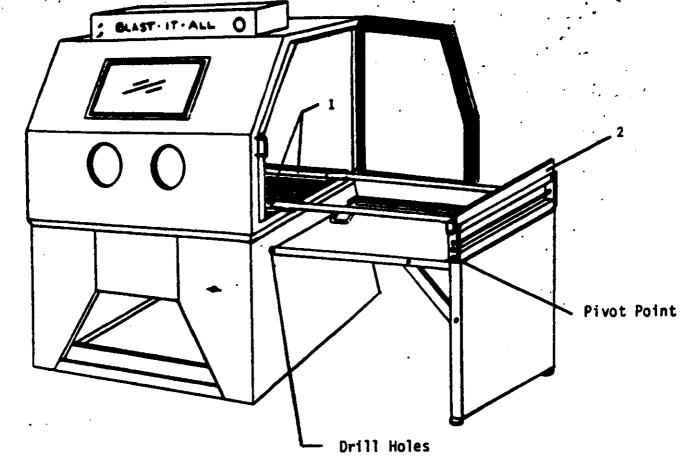
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Item	Part No.	Description
1	23-059	Window Seal
2	23-050	Window
3	23-053	Window Frame
4	22-102	Arm Hole Trim (Pair)
5	22-101	Arm Hole Gasket
6	15-729	Foot Treadle
7	22-070	Gloves (One Pair)
8	22-078	Glove (Right)
9	22-077	Glove (Left
10	21-038	Clamp ·
11		Grate (Specify Machine Model =)
12	15-730	Door Striker
13	15-719	Door Cam
14	15-720	Door Cam Rubber Grip
15	24-025	Door Gasket

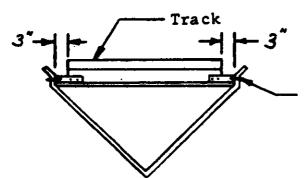
NOTE: When ordering, give Model #, Part #, and Description



Item	Machine	Model	Number			Description
No.	3636	4426				
l i	17-111	17-112				Inside Track
2	17-110	17-110	17-	-110	17-110	Outside Track

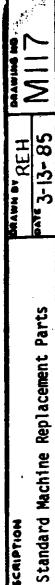
INSTALLATION INSTRUCTIONS

1. Locate and install the inside tracks, per figure below. Center to center distance is 18 1/2".



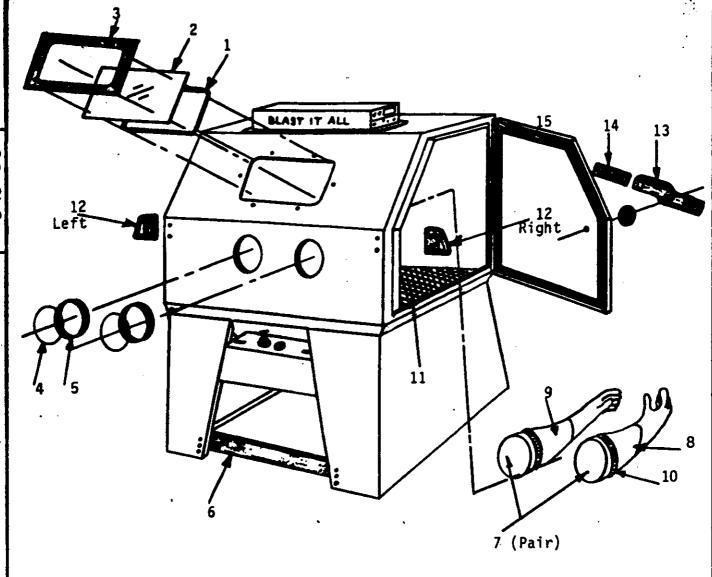
Drill 1/4" Ø holes and assembly with 1/4" bolts furnished.

- Locate and install outside table and track per drawing M11015.
 - A. Set table on either side of machine desired.
 - B. Drill two (2) 1/2" Ø holes in side of machine skirt to receive 1/2" Ø bolts furnished.
 - C. Flip track into machine.
 - D. Select (1) of (3) pivot holes in table assembly, that will allow the outside track to set level.
 - E. For minor height adjustments, use bolt levelers in bottom of table leg.
- 3. For turntable assembly see drawing M11016.



DESCRIPTION

BLAST-IT-ALL, inc.



Item	Part No.	Description
1	23-059	Window Seal
2	23-050	Window
3	23-053	Window Frame
4	22-102	Arm Hole Trim (Pair)
5	22-101	Arm Hole Gasket
6	15-729	Foot Treadle
7	22-070	Gloves (One Pair)
8	22-078	Glove (Right)
9	22-077	Glove (Left
10	21-038	Clamp
11		Grate (Specify Machine Model #)
12	15-730	Door Striker
13	15-719	Door Cam
14	15-720	Door Cam Rubber Grip
15	24-025	Door Gasket

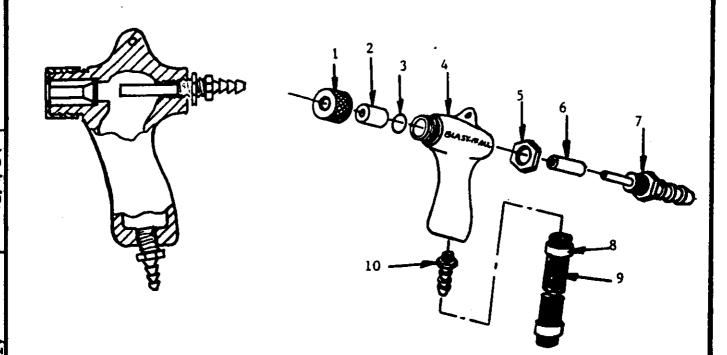
NOTE: When ordering, give Model #, Part #, and Description

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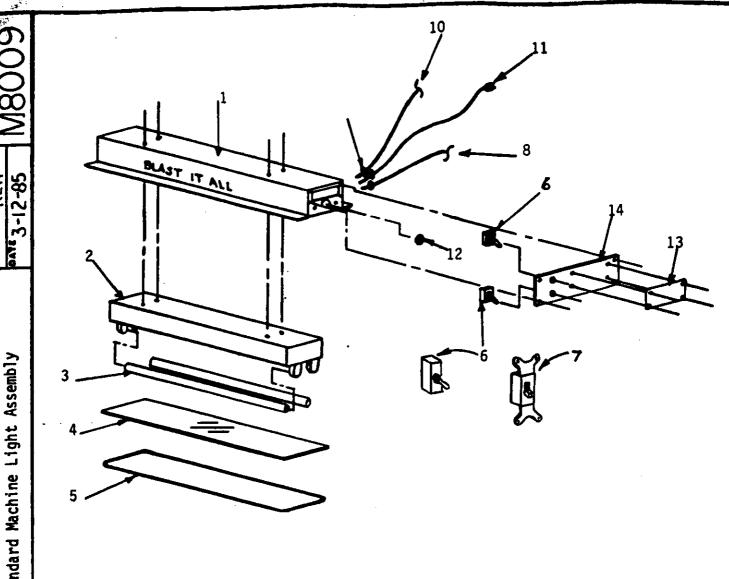
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DESCRIPTION



Item	# Part #	Description
1	20-054	Nozzie Nut
1	20-055	Nozzle Nut (Wide Spray)
2	20-074	Nozzle Ceramic, 1/4" I.D., Size 4
2	20-075	Nozzle Ceramic, 5/16" I.D., Size 5
2	20-076	Nozzle Ceramic, 3/8" I.D., Size 6
2	20-077	Nozzle Ceramic, 7/16" I.D., Size 7
2	20-078	Nozzle Ceramic, 1/2" I.D., Size 8
2	20-084	Nozzle Carbide, 1/4" I.D., Size 4
2	20-085	Nozzle Carbide, 5/16" I.D., Size 5
2	20-086	Nozzle Carbide, 3/8" I.D., Size 6
2	20-087	Nozzle Carbide, 7/16" I.D., Size 7
2	20-088	Nozzle Carbide, 1/2" I.D., Size 8
2	20-096	Nozzle Boron Carbide, 3/8" I.D., Size 6
2	20-099	Nozzle Boron Carbide (Wide Spray), 3/8" I.D., Size 6
3	20-053	"O" Ring - Nozzle Sealing
4	20-040	Gun - Body Only
5	20-052	Locknut Orifice
6	20-063	Rubber Cover
7	20-064	Orifice, Air 4/32" I.D., Size 4
7	20-065	Orifice, Air 5/32" I.D., Size 5
7	20-066	Orifice, Air 6/32" I.D., Size 6
7	20-067	Orifice, Air 7/32" I.D., Size 7
7	20-068	Orifice, Air 8/32" I.D., Size 8
8	21-031	Clamp
9	18-084	Hose, Media 1/2" I.D. (Specify Length)
10	14-304	Fitting - Hose to Gun
	20-041	Gun, Standard Complete with Ceramic Nozzle
	20-042	Gun, Standard Complete with Carbide Nozzle
	20-044	Gun, Standard Complete less Nozzle (Specify Orifice Size)

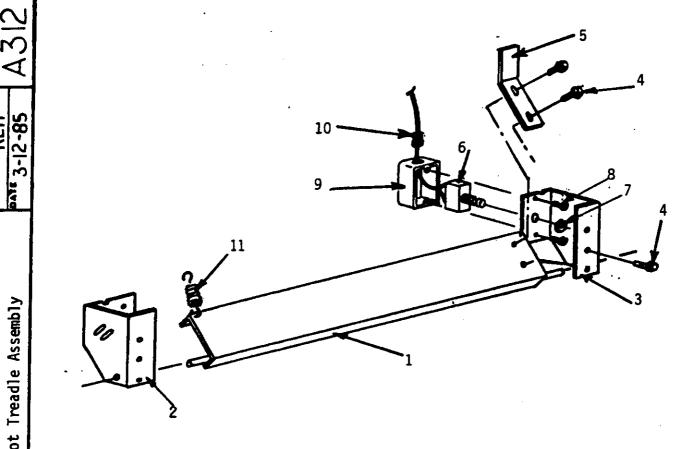
NOTE: When ordering a Gun Complete, indicate what size orifice is required.



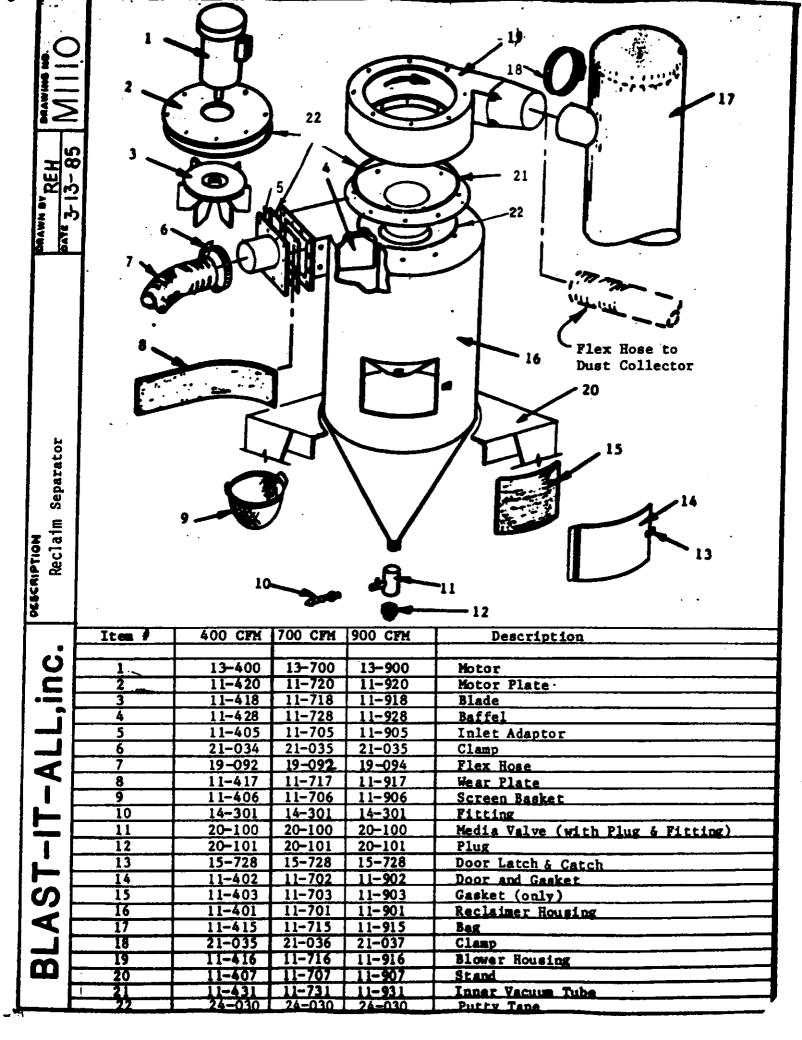
Item	Part No.	Description
1	13-648	Light Box
2	13-533	Fluorescent Fixture
3	13-534	24" Fluorescent Tube
4	23-058	Window
5	23-059	Window Seal
6	13-510	Switch (BEFORE 1986)
7	13-655	Switch (AFTER 1986)
8	13-555	S.J. Cord, 2 Wire (Specify Length)
9	13-605	Heyco Connector
10	13-552	S.J. Cord, 3 Wire (Specify Length)
11	13-550	Power Cord, 3 Wire, 6" Long
12	13-620	7/8" Knock Out Plug
13		Serial Number Plate
14	13-649	Switch Mounting Plate .
14	13-649-1	" " (AFTER 1986)

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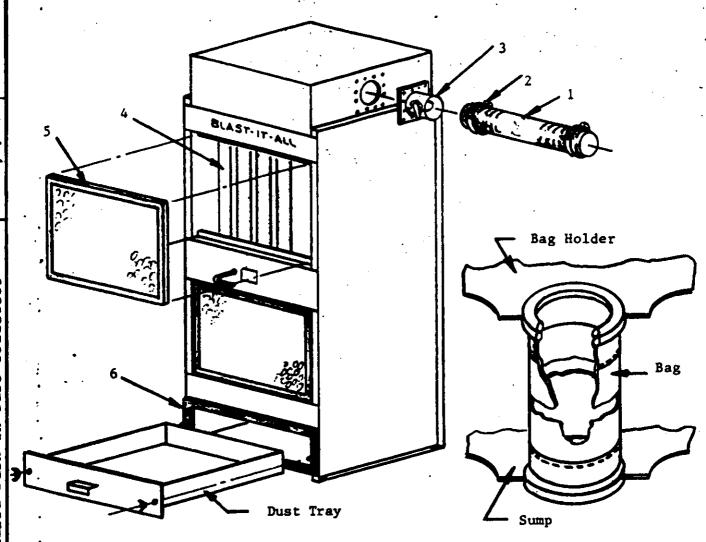
Standard Foot Treadle Assembly



I tem	Part No.	Description
1	A313(1)	Foot Treadle (Only)
2	A6277 (1)	Left Bracket
3	A6277 (2)	Right Bracket
4	30-111	1/4"-20 x 1/2" Self Tapper
5	A313(2)	Switch Bar
6	13-512	Switch
7		Nut (Furnished with switch)
8	30-617	#6-32 x 1/2" Sloted Head Screw
9	13-570	2 x 4 Handy Box
10	13-605	Haco Connector
11	15-721	Spring



PESCRIPTION



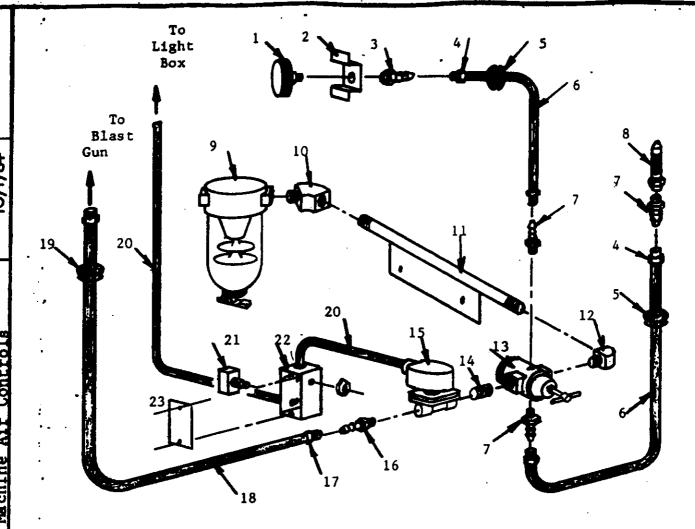
NOTE:

BLAST-IT-ALL's specially designed tubular dust bag is installed by pushing end of bag into hole far enough to allow springs to snap into place. The bags fit extremely tight to form a perfect filtering media to control dust leakage.

*CAUTION:

Do not use a sharp instrument to force snapsprings into hole. Install one bag at a time starting with the rear halves and working forward.

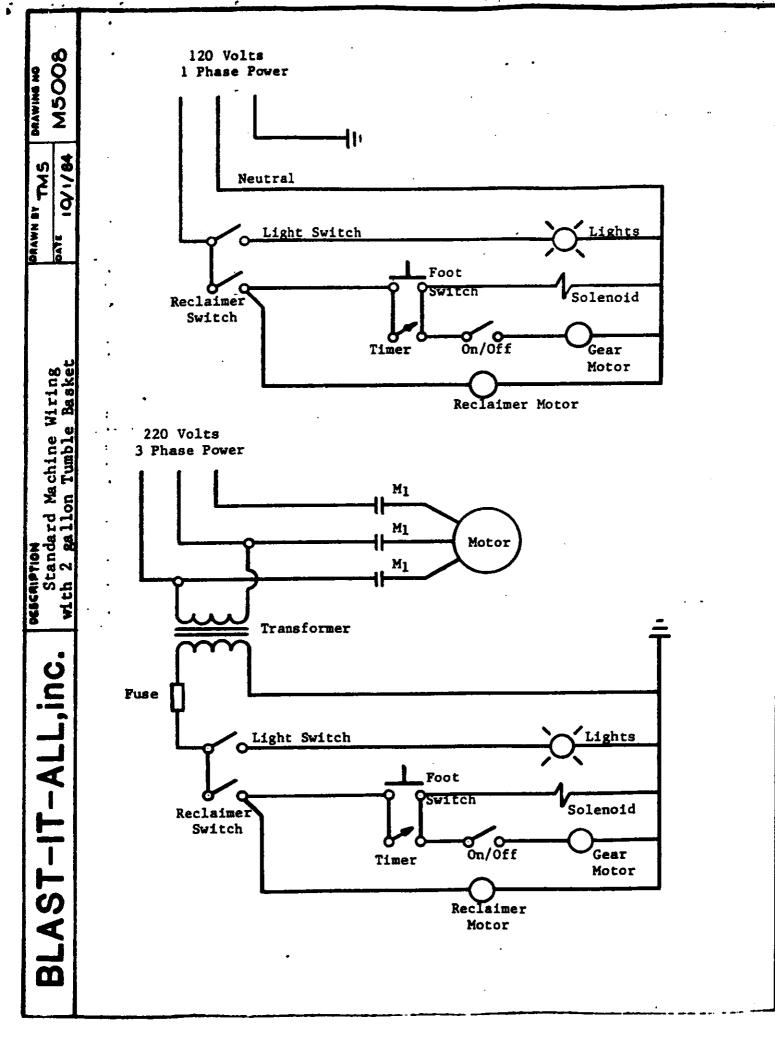
Item #	400 CFM	700 CFM	900 CFM	Description
1	19-094	19-096	19-097	Flex Hose
	21-035	21-036	21-037	Clamp
	19-303	19-300	19-302	Inlet Damper
		11-364 (30)	11-364 (42)	Bag
	19-301	19-301	19-301	Filter
	24-025	24-025	24-025	Gasket (Specify Length)

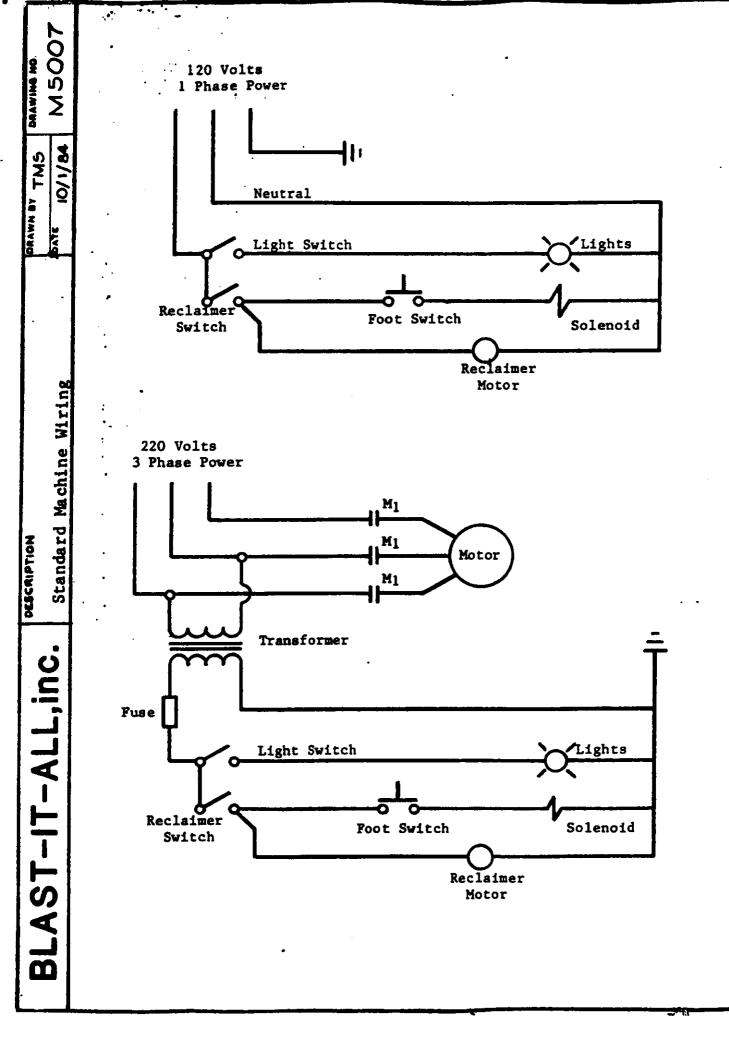


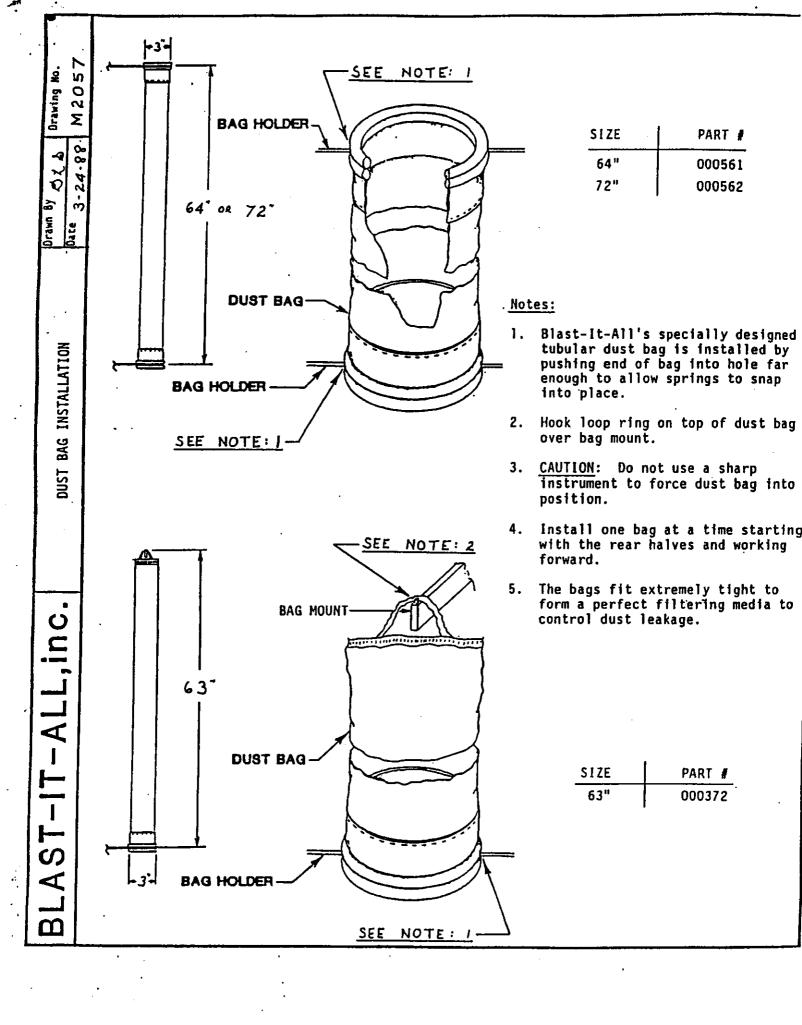
Item #	Part #	Description		
1	16-821	Air Gauge		
2	16-820	Air Gauge Mounting Bracket		
3	14-315	1/4" Hose x 1/4" FPT Fitting		
4	21-030	1/2" Clamp		
5	24-052	Rubber Grommet for 1/4" Hose		
6	18-074	1/4" Air Hose (Specify Length)		
7	14-313	1/4" Hose x 1/4" MPT Fitting		
8	16-822	Blow-Off Nozzle		
9	16-814	Air Filter		
10	14-333	3/8" x 45° Street E11		
11	16-835	Air Pipe (Specify Model #)		
12	14-331	3/8" x 90° Street Ell		
13	16-813	Air Regulator		
14	14-322	3/8" Close Nipple		
15	13-513	Solenoid		
16	14-304	1/2" Hose to 3/8" MPT Fitting		
17	21-031	1" Clamp		
18	18-076	1/2" Air Hose (Specify Length)		
19	24-050	Rubber Grommet for 1/2" Hose		
20	13-555	2 Wire, 14 Gauge S.J. Cord (Specify Length)		
21	13-570	2" x 4" Electric Junction Box		
22	13-512	Foot Control Switch		
23	13-571	2" x 4" Electric Junction Box Cover		

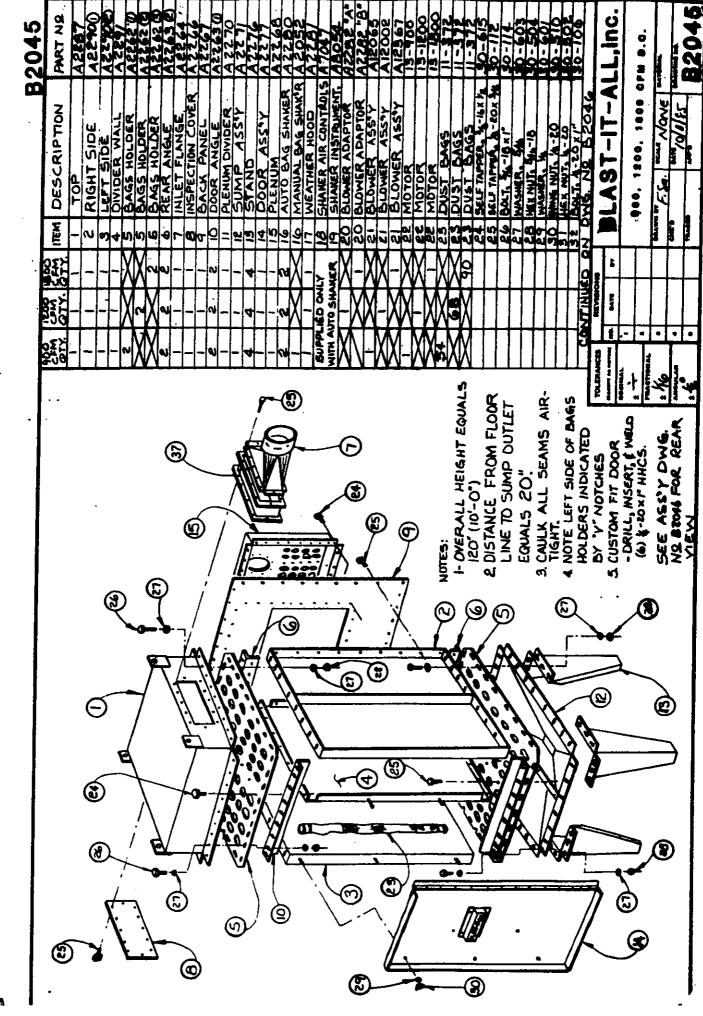
NOTE: When ordering, give Model #, Part #, & Description.

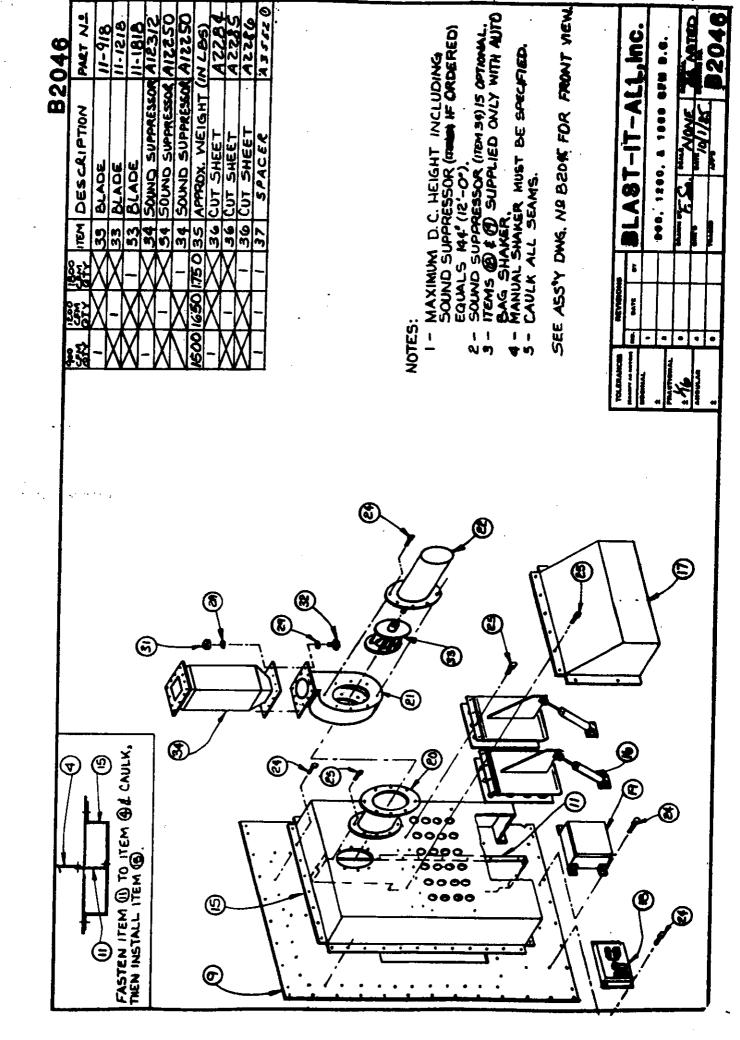
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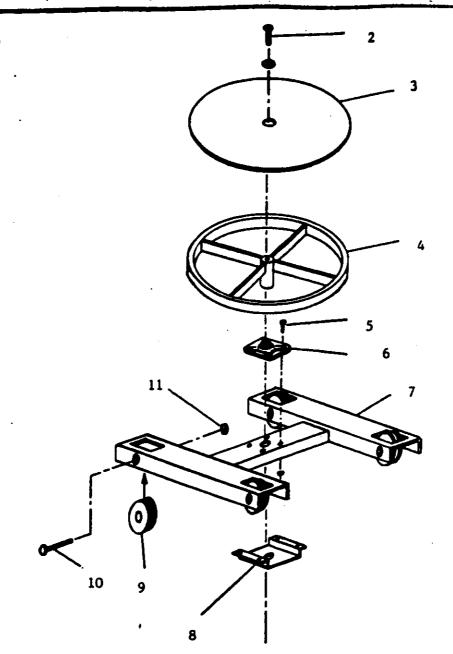












Item	20" dia.	24" dia.	30" dia.	Description
1	A-11026	A-11027	A-11028	Complete Assembly
2	30-114	30-114	30-114	5/16" x 1" Bolt & Washer
3	A11026-20	A11027-24	A11028-30	Turntable Top
4	A11026-20A	A11027-24A	A11028-30A	Turntable Base
5	30-123	30-123	30-123	3/8" x 1 1/2" Bolt & Nut
6	15-920	15-920	15-920	1" 4-Bolt Bearing
7	17-123	17-123	17-123	Cart
8	15-919	15-919	15-919	Bearing Support
9	15-913	15-913	15-913	3" Wheel
10	30-132	30-132	30-132	1/2" x 2 3/4" bolt
11	30-509	30-509	30-509	1/2" Lock.Nut

NOTE:

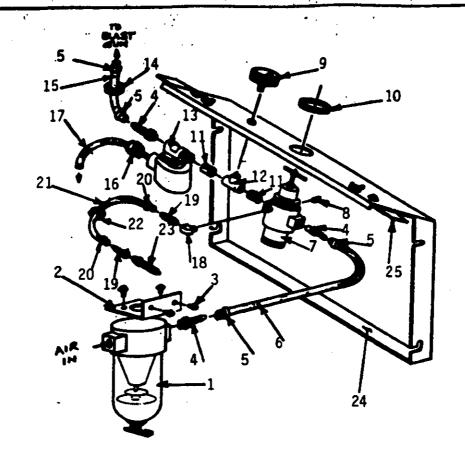
Set-in turntable assemblies do not include 9, 10, or 11.

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Standard Machine Air Controls

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BLAST-IT-ALL, inc.



- Thom	Davet No.	Dosoviation
Item	Part No.	Description 2/0% Adv. 55122
 	16-814	3/8" Air Filter
2	A-7081	Air Filter Bracket
3	30-111	1/4"-20 x 1/2" Self Tapper
4	14-304	1/2" To 3/8" Barb.
5	21-031	1/2" Hose Clamp
6	18-076	1/2" Hose
7	16-813	3/8" Regulator
8	14-399	1/4" Pipe Plug
9	16-821	Air Gage (1/4" Back Outlet)
10	16-922	Lock Ring
11	14-322	3/8" Close Nipple
12	14-445	3/8" x 1/4" Tee
13	13-513	3/8" Solenoid Air Valve
14	24-050	1/2" Hose Grommet
15	18-076	1/2" Hose
16	13-621	1/2" NPT Liquid Tight Connector
17	13-555	SJ Cord
18	14-327	1/4" Street Ell
19	14-315	1/4" To 1/4" Barb.
20	21-030	1/4" Hose Clamp
21	18-074	1/4" Hose
22	24-052	1/4" Hose Grommet
23	16-822	1/4" Blow-Off Nozzle
24	A-7080	Mounting Panel
25	A-7104	Mounting Panel Latch

