

PRESSURIZED ABRASIVE BLASTER

(Model 95014)

ASSEMBLY AND OPERATING INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011 Visit our Web site at: http://www.harborfreight.com

> TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND ALL WARNINGS AND INSTRUCTIONS BEFORE USE.

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For technical questions, please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Media Tank Capacity	110 Pounds or 20 Gallons
Working PSI	60 to 125 PSI
Air Consumption	6 CFM @ 60 PSI / 25 CFM @ 125 PSI (with 3/8" Hose)
Air Inlet Size	1/4"-18 NPT
Water Trap Type	Push Button to Drain
Hose Dimensions	1/2" I.D. x 1" O.D. x 8'-6" Long
Pressure Gauge Indicator	0 <-> 150 PSI (White Face / Red Numbers)
Recommended Media Type	Glass Bead / Silicon Carbide
	Alumina / Walnut Shell / Brass Bead
Accessories	Safety Hood / Blast Gun / Funnel
	Ceramic Nozzles (2.0mm, 2.5mm, 3mm)
Overall Dimensions	35-1/2" High x 15" Diameter
Unit Weight	60 Pounds

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

UNPACKING

When unpacking, check to make sure that all the parts and accessories **listed on pages 15** and **16** are included, and the product is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SAFETY WARNINGS AND PRECAUTIONS

- Do not operate the Pressurized Abrasive Blaster if the Air Supply Valve (18) does not turn the tool on or off. Any tool that cannot be controlled with its Air Supply Valve is dangerous and must be replaced.
- 2. **Keep work area clean.** Cluttered areas invite accidents.



WARNING! Do not operate pneumatic equipment in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Pneumatic equipment can create sparks which may ignite flammables.

- 4. **WARNING!** Always wear ANSI approved safety impact eye glasses under a full face shield, a respirator, and heavy duty work gloves when operating the Pressurized Abrasive Blaster. Also, wear heavy duty work boots, long trousers, and long sleeve shirt.
- 5. **Stay within air pressure capacity (60 to 125 PSI).** Never operate the Pressurized Abrasive Blaster above **125 PSI**.
- 6. **Keep children away.** Children must never be allowed in the work area. Do not let them handle equipment, tools, extension cords, or air hoses.
- 7. **Store idle equipment.** When not in use, the Pressurized Abrasive Blaster must be stored in a dry location to inhibit rust. Always lock up the machine and keep out of reach of children.
- 8. **Use the right tool for the job.** Do not attempt to force small equipent or attachments to do the work of a larger industrial equipment and attachments. There are certain applications for which this product was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this product, and do not use this product for a purpose for which it was not intended.
- 9. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
- 10. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running tools or air hoses.
- 11. **Disconnect air hose and release any built-up air pressure.** Never service the Pressurized Abrasive Blaster or disassemble with the air hose attached. Always release any built-up air even after disconnecting hose. Disconnect the Pressurized Abrasive Blaster when not in use.
- 12. **Remove adjusting wrenches.** Check that adjusting wrenches are removed from the tool and work surface before attaching to an air source.
- 13. **Stay alert.** Watch what you are doing. Use common sense. Do not operate any tool or equipment when you are tired.
- 14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts, any broken parts, and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician.

- 15. **Replacement parts and accessories.** This product is to be repaired and serviced only by a qualified technician. When this product is serviced, only identical replacement parts should be used. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
- 16. **Do not operate this product if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
- 17. **Maintenance.** The maintenance outlined in the "Maintenance" section should be performed regularly. For your safety, this product should be serviced or repaired regularly only by a qualified technician.
- 18. **Compressed air only.** Use clean, dry, regulated, compressed air at **65 to 125 PSI**. Never use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for this product.
- 19. **Transport the Pressurized Abrasive Blaster safely.** Always disconnect air supply when moving the tool. Pull the tool by the handle to avoid tipping.
- 20. Avoid working alone. If an accident happens, an assistant can bring help.
- 21. **Maintain labels and nameplates on the Pressurized Abrasive Blaster.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 22. Maintain a firm grip on the Blast Gun when in use.
- 23. **Never point the Blast Gun toward yourself, other people, or animals.** Keep all people and animals safely away from the work area.
- 24. **Maintain a safe distance away from the object being sandblasted.** Whenever possible, sandblast the object at a 45 degree angle to minimize the possibility of grit, dirt, and debris ricocheting directly backward toward your face and body.
- 25. Industrial applications must follow OSHA requirements.
- 26. Whenever possible, perform a sandblasting test on a small area of the object to be sandblasted. If necessary, adjust the distance to the object and/or change the Nozzle of the Blast Gun for more effective results.
- 27. Make sure to read and understand all safety warnings and precautions as

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outlined in the manufacturer's manual for the object you intend to sandblast.

- 28. **Avoid unintentional starting.** Make sure the Control Lever (42C) on the Blast Gun is in its "**OFF**" or "**CLOSED**" position when the tool is not being used.
- 29. **WARNING!** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known (to the State of California) to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

* Lead from lead-based paints,

- * Crystalline silica from bricks, cement, and other masonry products,
- * Arsenic and chromium from chemically treated lumber.

(California Health & Safety Code 25249.5, et seq.)

30. MARNING! Abrasive blasting with media containing crystalline silica can cause serious or fatal respiratory disease. Exposure to crystalline silica may cause silicosis (a serious lung disease), cancer, and death. Exposure to aluminum oxide (a dust generated from material removing processes) can result in eye, skin, and breathing irritation. Always use an ANSI approved respirator, safety impact eye glasses, and a full face shield. Avoid skin exposure. Proper ventilation in the work area is required. Read and understand the ten recommended measures below to reduce crystalline silica exposure in the workplace and prevent silicosis and silicosis related injuries and deaths.

The following <u>ten</u> measures are recommended to reduce crystalline silica exposures in the workplace and prevent silicosis and silicosis related injuries and deaths:

- 1. Prohibit silica sand (or other substances containing more than 1% crystalline silica) as an abrasive blasting material and substitute less hazardous materials.
- 2. Conduct air monitoring to measure worker exposures.
- **3.** Use containment methods such as blast-cleaning machines and cabinets to control the hazard and protect adjacent workers from exposure.
- 4. Practice good personal hygiene to avoid unecessary exposure to silica dust.
- 5. Wear washable or disposable protective clothes at the worksite. Shower, and change into clean clothes before leaving the worksite to prevent contamination of cars, homes, and other work areas.

- **6.** Use respiratory protection when source controls cannot keep silica exposures below the recommended levels.
- **7.** Provide periodic medical examinations for all workers who may be exposed to crystalline silica.
- **8.** Post signs to warn workers about the hazard and to inform them about re quired protective equipment.
- **9.** Provide workers with training that includes information about health effects, work practices, and protective equipment for crystalline silica.
- **10.** Report all cases of silicosis to State health departments and to OSHA or the Mine Safety and Health Administration (MSHA).
- 31. **WARNING!** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). *(California Health & Safety code 25249.5, et seq.)*
- 32. **WARNING!** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

ASSEMBLY INSTRUCTIONS

To Attach The Handle Bars:

- 1. To attach the two Handle Bars (6) to the Tank (1), lay the Tank on a flat, level surface with its Handle Bar mounting brackets facing up. **(See Figure B.)**
- The Handle Bars (6) are labeled "Left" and "Right". Align the holes in the left Handle Bar with the Handle Bar mounting brackets on the left side of the Tank (1). (See Figure B.)
- 3. Place a Washer (50) onto each of the four Handle Bar mounting Screws (8). Insert a Screw through each of the holes in the Handle Bar and Handle Bar mounting brackets. Then, screw a Hex Nut (9) onto each of the Screws and firmly tighten. **(See Figure B.)**
- 4. Repeat Steps #2 and #3 for the right Handle Bar (6) to the Tank (1). **(See Figure B.)**



To Attach The Wheels And Front Foot:

- 1. Locate the two Wheels (2), three Cotter Pins (3), Wheel Axle (5), four Wheel Washers (51), and Front Foot (4).
- 2. Slide the Wheel Axle (5) through the axle holes located at the bottom of the two Handle Bars (6). **(See Figure B.)**

- 3. Slide a Wheel Washer (51) onto each end of the Wheel Axle (5). **(See Figure B.)**
- 4. Place a Wheel (2) onto each end of the Wheel Axle (5). Then, slide a Wheel Washer (51) onto each end of the Wheel Axle. **(See Figure B.)**
- Insert a Cotter Pin (3) through the holes in each end of the Wheel Axle (5). Then, bend the Cotter Pins to secure the Wheels (2) to the Wheel Axle. (See Figure B.)
- 6. Roll the Pressurized Abrasive Blaster over so that the Handle Bars (6) are facing down.
- 7. Align the holes of the Front Foot (4) with the holes in the foot mount on the front side of the Tank (1). **(See Figure B.)**
- 8. Insert a Cotter Pin (3) through the holes and bend it to secure the Front Foot (4) in place. **(See Figure B.)**

To Attach The Abrasive Hose And Blast Gun:

- 1. **IMPORTANT:** Make sure to use pipe thread sealer tape (not included) on all threaded joints and ensure all joints are securely tightened.
- 2. Locate the Abrasive Hose (24), Blast Gun, and two Hose Clamps (23).
- 3. Slide one Hose Clamp (23) onto each end of the Abrasive Hose (24). Do not tighten yet. **(See Figure C.)**
- 4. Slide one end of the Abrasive Hose (24) onto the Hose Adapter (49C) of the



Blast Gun. Then, firmly tighten the Hose Clamp (23). (See Figure C.)

5. Slide the other end of the Abrasive Hose (24) onto the Abrasive Outlet Manifold (22). Then firmly tighten the Hose Clamp (23). **(See Figure C.)**

OPERATING INSTRUCTIONS

Abrasive Selection:

- 1. The type of *media* chosen will greatly influence the amount of time needed to clean a particular surface area.
- 2. Sandblasting media include silicon carbide, glass bead, walnut shell, brass bead, and alumina.
- 3. If you decide to reuse media, remember, it does wear out. The sharp edges become rounder and are less effective. At that point you should replace the tank of media you are using.

To Load Media Into The Tank:

- 1. **WARNING!** Never service the Pressurized Abrasive Blaster or disassemble with the air hose attached. Always release any built-up air even after disconnecting the hose.
- 2. **WARNING!** Always wear ANSI approved safety impact eye glasses under a full face shield, a respirator, and heavy duty work gloves when operating the Pressurized Abrasive Blaster. Also, wear heavy duty work boots, long trousers, and long sleeve shirt.
- 3. Make sure the media used is dry to avoid clogging the Abrasive Control Valve (18B), Abrasive Outlet Manifold (22), or Abrasive Hose (24).
- 4. Turn the Air Supply Valve (18) to the "**OFF**" position. **(See Figure D, next page.)**
- 5. Check the Pressure Gauge (15) to make sure it reads "**0**" pressure. **(See Figure D.)**
- 6. Unscrew and remove the Tank Filler Cap (12). Insert the accessory Funnel (29) into the Tank (1) opening. Then pour the media into the Tank, making sure to pour enough into the Tank to do the job at hand. Then, replace the Tank Filler Cap. **NOTE:** If this is a large job, fill the Tank only 3/4 full and reload as needed to finish the job. (See Figure D.)

7. **IMPORTANT TIP:** If the humidity is 90 to 100%, the Water Trap (17) will not be able to trap all of the moisture in a 3/4 full Tank (1). It is recommended to reduce the amount of media, load more frequently, and empty the Water Trap more often. This will reduce the possibility of clogging the bottom of the Tank or the line. **(See Figure D.)**



 Depending on the size (diameter) of the media, install the proper size Ceramic Nozzle (37C) onto the Blast Gun. To do so, unscrew and remove the Nozzle Cap Nut (39C). Position the Nozzle Gasket (36C) against the Adapter (35C).
 Position the proper Ceramic Nozzle (2.0mm, 2.5mm, or 3.0mm) against the Nozzle Gasket. Then screw the Nozzle Cap Nut back onto the Adapter to secure the Nozzle Gasket and Ceramic Nozzle in place. (See Figure E.)



OPERATING INSTRUCTIONS

- 1. If possible, place the workpiece inside a sandblast cabinet. Otherwise, isolate the workpiece to make sure no damage can occur to nearby walls, tools, personal property, etc.
- 2. Turn the Air Supply Valve (18), Throttling Valve (18A), and Abrasive Control Valve (18B) to the "**OFF**" position. **(See Figure F.)**



- 3. Connect the air compressor's hose to the Inlet Connector (19). Then turn on the air compressor, and set its regulator between **65 to 125 PSI**. <u>Do not exceed</u> <u>125 PSI</u>. (See Figure F.)
- 4. Turn the Air Supply Valve (18) and Throttling Valve (18A) to the "**ON**" position. At this point, the Tank (1) will begin to pressurize. **(See Figure F.)**
- 5. Check for leaks at the Tank Filler Cap (12) and along all hoses and fittings as the system pressurizes. If leaks are observed, shut off the air compressor. Use the Safety Valve (10) to release any remaining air pressure within the Tank (1). Turn the Air Supply Valve (18) and Throttling Valve (18A) to the "OFF" position. Repair the leaks. Then, turn on the air compressor and resume pressurizing the Tank. (See Figure F.)
- 6. Grip the Blast Gun firmly with both hands.
- 7. Open the Abrasive Control Valve (18B). (See Figure F.)

- 8. Point the Blast Gun at the workpiece so that the media will strike the surface of the workpiece at about a 45 degree angle.
- Squeeze the Control Lever (42C) of the Blast Gun to release the media.
 NOTE: The flow rate of the media may be irregular when the Blast Gun is first started. Provided the media is dry, the flow rate will become normal in approximately one minute. (See Figure E.)
- 10. Adjust the Abrasive Control Valve (18B) to increase or decrease the media flow rate. (See Figure F.)
- 11. Adjust the Throttling Valve (18A) to regulate the total air flow and pressure at the Blast Gun. **(See Figure F.)**
- 12. Move the Blast Gun in a circular or right to left motion until you have achieved the desired appearance (finish) on the workpiece.
- 13. Periodically, check the Water Trap (17) for excessive water build-up. If necessary, hold a container beneath the Water Trap and press the button located at the bottom of the Water Trap to drain the water. **(See Figure D.)**
- 14. When the sandblasting job is completed, release pressure on the Control Lever (42C) of the Blast Gun. Turn off the air compressor. Turn the Air Supply Valve (18), Throttling Valve (18A), and Abrasive Control Valve (18B) to the "**OFF**" position. **(See Figure F.)**
- Use the Safety Valve (10) to release any remaining air pressure in the Tank (1).
 <u>Check to make sure the Pressure Gauge reads "0" PSI.</u>
 (See Figures D and F.)
- 16. Squeeze the Control Lever (42C) of the Blast Gun to release any remaining air pressure and media. (See Figure E.)
- 17. Disconnect the compressor air hose from the Inlet Connector (19). **(See Figure F.)**
- 18. If necessary, empty the Tank (1) of any remaining media. Then, store the Pressurized Abrasive Blaster in a clean, dry, safe location out of reach of children and other unauthorized people.

INSPECTION, MAINTENANCE, AND CLEANING

- 1. **WARNING!** Prior to performing any inspection, maintenance, or cleaning of the Pressurized Abrasive Blaster, turn off the air compressor. Turn the Air
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Supply Valve (18), Throttling Valve (18A), and Abrasive Control Valve (18B) to the "**OFF**" position. Use the Safety Valve (10) to release any remaining air pressure in the Tank (1). <u>Check to make sure the Pressure Gauge reads "0"</u> <u>PSI.</u> Then, disconnect the compressor hose from the Inlet Connector (19) of the unit.

- Before each use: Inspect the general condition of the Pressurized Abrasive Blaster and its accessories. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged air hoses, and any other condition that may affect safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. Do not use damaged equipment.
- 3. **Before, during, and after use:** Periodically, check the Water Trap (17) for excessive water build-up. If necessary, hold a container beneath the Water Trap and press the button located at the bottom of the Water Trap to drain the water.
- 4. **To clean the exterior of the Pressurized Abrasive Blaster,** wipe with a clean, damp cloth using a mild detergent or mild solvent. Do not immerse the tool in liquids.
- 5. **When storing,** always store the Pressurized Abrasive Blaster in a clean, dry, safe location out of reach of children and other unauthorized people.
- 6. **CAUTION!** All maintenance, service, and repairs not mentioned in this manual must only be performed by a qualified service technician.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/ OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISKS AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

TROUBLESHOOTING

Problem	Possible Solution					
Blast flow surges.	1. Air pressure too low. Increase air pressure.					
	2. Too much media. Adjust Abrasive Control Valve.					
Excessive media consumption.	1. Abrasive Control Valve open too far. Close slightly.					
	2. Air pressure too low. Increase air pressure.					
Clogging and plugging of blast flow.	1. Excessive debris in media. Purge and filter media.					
	2. Media size too large. Use smaller grit size.					
	3. Nozzle plugging. Use larger Nozzle.					
	4. Nozzle plugging. Adjust Abrasive Control Valve.					
	5. Wet media. Dry media. Drain water from Water Trap.					
Moisture in abrasive media.	1. Wet media. Change or use dry media.					
	2. Excessive humidity in air. Drain water from Water Trap.					
	3. Water in Tank. Empty Tank, and refill.					
Humid weather.	1. Moderate humidity: Keep media as dry as possible.					
	2. Moderate humidity: Use dryer or moisture separator.					
	3. High humidity: Avoid that period of use if possible.					
Overtaxed compressor.	 Compressor too small. Use larger compressor or restrict time used. 					
	2. Nozzle size too large. Use smaller Nozzle.					
	3. Too many leaks in air compressor system. Seal and tighten all leaks.					
	4. Holes in Abrasive Hose. Replace Hose.					
	5. Air filter on compressor plugged. Clean Filter.					
Lack of abrasive flow.	1. Tank empty. Fill Tank.					
	2. Moisture in media. Dry media.					
	3. Not enough air pressure. Increase air pressure.					
	4. Abrasive Hose kinked. Straighten Hose.					
	5. Excessive debris in media. Clean or filter media.					

PARTS LIST & ASSEMBLY DIAGRAM - AIR BLASTER

Part #	Description	Qty.	Part #	Description	Qty.
1	Tank	1	17	Water Trap	1
2	Wheel	2	18	Air Supply Valve (3/8")	1
3	Cotter Pin	3	18A	Throttling Valve (3/8")	1
4	Front Foot	1	18B	Abrasive Control Valve (3/8")	1
5	Wheel Axle	1	19	Inlet Connector	1
6	Handle Bar	2	20	Male Connector	1
7	Handle Grip	2	21	Air Hose	1
8	Pan Screw	4	22	Abrasive Outlet Manifold	1
9	Hex Nut	4	23	Hose Clamp	2
10	Safety Valve	1	24	Abrasive Hose	1
11	O-Ring	1	29	Funnel	1
12	Tank Filler Cap	1	30	Hood	1
13	Joint Pipe	1	30A	Hood Lens	1
14	Intake Manifold	1	50	Washer	4
15	Pressure Gauge	1	51	Wheel Washer	4
16	Male Connector (3/8")	5			



NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

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PARTS LIST & ASSEMBLY DIAGRAM - BLAST GUN

Part #	Description	Qty.	Part #	Description	Qty.
31C	Upper Body	1	41C	Screw (ST4.2 x 12)	2
32C	Lower Body	1	42C	Control Lever	1
33C	Metal Pipe	1	43C	Spring Pin	1
34C	Intake Connector	1	44C	Spring	1
35C	Adapter	1	45C	Rubber Pad	1
36C	Gasket	1	46C	Screw (M3 x 25)	1
37C	Ceramic Nozzle	4	47C	Hard Alloy Pad	1
38C	Rubber Adapter	4	48C	Nut (M3)	1
39C	Nozzle Cap Nut	1	49C	Hose Adapter	1
40C	Screw (ST4.2 x 16)	4			



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