

PAB50

Portable Abrasive Blaster INSTRUCTION MANUAL



READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRODUCT.

Every effort has been made to ensure the accuracy of this manual. These instructions are not meant to cover every possible condition and situation that may occur. We reserve the right to change this product at any time without prior notice.

**IF THERE IS ANY QUESTION ABOUT A CONDITION BEING SAFE OR UNSAFE,
DO NOT OPERATE THIS PRODUCT!**

DO NOT RETURN THIS PRODUCT TO THE RETAILER - CONTACT CUSTOMER SERVICE.

If you experience a problem, have questions or need parts for this product, visit our website at <http://www.buffalotools.com> or call Customer Service at 1-636-532-9888, Monday-Friday, 8 AM - 4 PM Central Time. A copy of the sales receipt is required.

FOR CONSUMER USE ONLY – NOT FOR PROFESSIONAL USE.

KEEP THIS MANUAL, SALES RECEIPT & APPLICABLE WARRANTY FOR FUTURE REFERENCE.

SPECIFICATIONS:

| | |
|--------------------------|--|
| Average Air Consumption: | 2 CFM@50 PSI |
| Operating Pressure: | 90 PSI |
| Max Pressure: | 125 PSI |
| Air Inlet: | 1/4 in. NPTM |
| Nozzle Size: | 3/16 in. |
| Abrasive Capacity: | 50 pounds |
| Kit Includes: | PE hopper, aluminum blast gun and 15 foot PVC hose |
| Applications: | Use with an air compressor to remove rust, paint, graffiti, corrosion and scale. |

IMPORTANT SAFETY PRECAUTIONS

WARNING! Read and understand all instructions before using this tool. The operator must follow basic precautions to reduce the risk of personal injury and/or damage to the equipment. Before allowing someone else to use this tool, make sure they are aware of all safety information.

WARNING! The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. Common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

WORK AREA

1. Operate in a safe work environment. Keep your work area clean and well lit.
 2. Do not use in the presence of flammable gases or liquids.
 3. Keep anyone not wearing the appropriate safety equipment away from the work area.
- NOTE:** Minimize distractions in the work environment. Distractions can cause you to lose control of the tool.
4. Store tools properly in a safe and dry location to prevent rust or damage.
 5. Always lock up tools and keep them out of the reach of children.

PERSONAL SAFETY

CAUTION! Wear protective equipment approved by the Canadian Standards Association (CSA) or American National Standards Institute (ANSI) when using the tool.

1. Dress properly; wear protective equipment. Use breathing, ear, eye, face, foot, hand and head protection. Always wear ANSI approved impact safety goggles, which must provide both frontal and side protection. Protect your hands with suitable gloves. Wear a full face shield if your work creates metal filings or wood chips. Protect your head from falling objects by wearing a hard hat. Wear an ANSI approved dust mask or respirator when working around metal, wood and chemical dusts and mists. Wear ANSI approved earplugs. Wear steel-toed boots.
2. Control the tool, personal movement and the work environment to avoid personal injury or damage to the tool. Stay alert, watch what you are doing and use your common sense.
 - a. Keep articles of clothing, jewelry, hair, etc., away from moving parts to avoid entanglement with a tool.
 - b. Do not operate when tired or under the influence of drugs, alcohol or medications.
 - c. Do not overreach when operating a tool. Proper footing and balance enables better control of a tool in unexpected situations.
 - d. Use clamps or other practical ways to support or secure the work piece to a stable platform. Holding the work piece by hand or against your body is not stable and may lead to loss of control and injury.

SPECIFIC SAFETY PRECAUTIONS

1. Wear washable or disposable protective abrasive-resistant clothing and safety gear as well as a dust mask that will filter out the fine dust particles created during the abrasive blasting process.
2. Conduct air monitoring to measure the level of exposure upon workers.
3. Do not exceed the maximum 125 PSI rating.
4. Use only abrasives specifically intended for blasting.
5. Do not attempt to move the unit when the hopper contains abrasive.

ABRASIVE BLASTING MEDIA PRECAUTIONS

The blasting process emits abrasive media under pressure that breaks apart upon impact. The resulting dust is a combination of the media and the material being removed by the abrasive. Both the media and the material being removed may have toxic components such as lead in paint.

1. Check the abrasive media's Material Safety Data Sheet (MSDS) for information on the health risks and preventative measure that can be taken to minimize those risks.
2. Determine the toxicity of the material being removed and take appropriate measures.
3. Work in a well-ventilated area whenever possible or use containment methods such as cabinets or blast-cleaning machines to control the hazards from exposure.
4. Wear NIOSH approved respirators that protect both the lower face and eyes during blasting operations whenever possible.

WARNING | Sand or silica particle dust can result in the lung disease known as silicosis, when inhaled over a short period or time. Silicosis causes shortness of breath, cough, fever and bluish skin (cyanosis). Seek immediate medical attention if these symptoms appear.

AIR TOOL PRECAUTIONS

1. Extended exposure to air tool noise may cause hearing loss. Ear protection gear can reduce or eliminate the noise level.
2. Inspect the tool's airline for cracks, fraying or other faults before each use. Discontinue use if the airline is damaged or hissing is heard from the airline or connectors, while operating the tool. Replace the defective component/airline.
3. Do not allow people, mobile equipment or vehicles to pass over the unprotected airline. Position the airline away from high traffic areas, in a reinforced conduit or place planks on both sides of the airline to create a protective trench.
4. Prevent damage to the airline by observing the following:
 - a. Never carry the tool by the airline.
 - b. Keep the airline behind the tool and out of the tool's work path.
 - c. Keep the airline away from heat, oil, sharp edges or moving parts.
 - d. Do not wrap the airline around the tool as sharp edges may pierce or crack the airline.Coil the airline when storing.
5. A damaged or disconnected airline under pressure may whip around and inflict personal injury or damage the work area. Secure the compressor's airline to a fixed or permanent structure with clamps or cable ties.
6. Install an in-line shutoff valve or regulator to allow immediate control over the air supply in an emergency, even if a hose is ruptured.

VIBRATION PRECAUTIONS

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders.

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused by or worsened from tool use. Pregnant women or people who have impaired blood circulation to the hands, past hand injuries, nervous system disorders, diabetes or Raynaud's Disease should not use this tool. If you feel any medical symptoms related to vibrations (such as tingling, numbness, and white or blue fingers), seek medical attention.
2. Do not smoke during use. Nicotine reduces the blood flow to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Do not use for extended periods. Take frequent breaks when using this tool.
5. Let the tool do the work. Grip the tool as lightly as possible (while still keeping safe control of it).
6. To reduce vibrations, maintain the tool as explained in this manual. If abnormal vibrations occur, stop using this tool immediately.

TOOL USE AND CARE

WARNING! Do not use the tool if the trigger or ON / OFF switch does not function properly. Any tool that cannot be controlled with the ON / OFF switch is dangerous and must be repaired.

1. Use the correct tool for the job.
 2. Do not modify this tool or use for a purpose for which it was not designed.
- Do Not:** a. Modify or alter the tool. b. Use the tool in a way for which it was not designed.
3. Be sure the trigger is in the neutral position when not in use and before connecting to air source.

ABRASIVE BLASTING MEDIA

There are a number of different abrasive media. Each type of abrasive has a different application and effect on the object being blasted.

NOTE: Read the abrasive blasting media precautions section before use and consult the Material Safety Data Sheet for each abrasive media product.

Material types:

1. Mineral: Sand or silica, garnet, magnesium sulphate.

NOTE: Sand should be avoided, as there are other abrasives that perform the same or better without the detrimental health effects.

2. Organic: Crushed nutshells.
3. Synthetic: Baking soda, grain starch.
4. Engineered: Aluminum oxide, glass beads.
5. Metal: Shot or grit made from steel, copper, aluminum or zinc.

Recommended Abrasive Blasting Media:

1. Aluminum Oxide
2. Glass Bead
3. Steel Shot
4. Copper Slag

Not Recommended Abrasive Blasting Media:

These blasting medias clog easier and require different nozzles and higher pressures.

1. Baking soda, grain starch
2. Crushed nutshells

NOTE: Store abrasive in a dry location. Wet abrasive will clog the tool.

UNPACKING

1. Carefully remove the tool from the package.
 - a. Retain packing material until you have carefully inspected and satisfactorily installed or operated the tool.
2. Make sure that all items in the parts list are included.
3. Inspect the parts carefully to make sure the product was not damaged while shipping.

PARTS IDENTIFICATION

| | |
|-----------|---|
| 1A | Hopper |
| 2 | Abrasive Supply Connection (Nozzle Housing) |
| 2A | Abrasive Supply Hose Connection |
| 3A | Lock Nut |
| 4A | Abrasive Supply Hose |
| 5A | Air Inlet |
| 6A | Discharge Gun |
| 7 | Trigger |



ASSEMBLY

Do not adjust or tamper with any control or component. Improper adjustment can result in tool failure or other serious hazards.

1. From the inside of the hopper (1A), insert the abrasive supply hose connection (2A) through the hole at the bottom of the hopper (1A).
2. From the outside of the hopper, thread the lock nut (3A) onto the bleeder valve.
3. Attach the abrasive supply hose (4A) to the abrasive supply hose connection (2A) by pushing one end of the abrasive supply hose (4A) onto the end of the bleeder valve (2A).
4. Attach the other end of the abrasive supply hose (4A) to the discharge gun (6A) by pushing the abrasive supply hose (4A) onto the nozzle housing (2) of the discharge gun (6A).
5. Attach the air inlet (5A) to the bottom of the discharge gun (6A) handle.

WARNING! Do not install a female quick coupler on the tool. Such a coupler contains an air valve that will allow the air tool to retain pressure and possibly operate accidentally after the air supply is disconnected.

6. Inspect all fittings to ensure that they are secure.

OPERATION

WARNING! Wear ANSI approved safety goggles, gloves and a NIOSH approved protective face mask, and hard hat when using the tool.

1. Set the compressor's regulator to 50 to 120 PSI. Do not set the compressor's outlet regulator over 120 PSI.

2. Connect the air supply to the air inlet (5A) of the discharge gun (6A).

CAUTION! If any leaks are detected, disconnect the air hose and make any repairs before use.

3. Fill the hopper (1A) with an appropriate abrasive for your project. Check to ensure that the abrasive is clean and dry. Use of a screen to filter the abrasive material into the hopper can assist to remove some abrasive that may have become dampened.

4. Place the material to be blasted in an area suitable for abrasive blasting work.

CAUTION! The blasting medium will accumulate and cover items near the blasting area, possibly damaging finishes or contaminating moving parts. Place the compressor in another room to prevent it from being damaged.

5. Holding the discharge gun (6A) so that it is pointing away from you, turn on the air compressor.

6. Firmly grasp the discharge gun (6A) and depress the trigger. This should begin the abrasive flow. If no flow is seen, you may need to clear the siphon funnel. Simply shake the bucket slightly to dislodge any blockage. If this does not work, try dislodging the media with a drill bit held in your hand. You need to discard any moist media.

7. Use even passes of the discharge gun (6A) to remove rust, paint, etc.

WARNING! Do not hold the discharge gun (6A) in one location to prevent peening, damage to the work piece.

NOTE: Use caution when blasting unfamiliar materials. Test the tool on a small area before proceeding. This will ensure that you will not damage or pit the work piece.

8. If the tool requires more force to accomplish the task, verify that the tool receives sufficient, unobstructed airflow (CFM) and increase the pressure (PSI) output of the regulator up to the maximum air pressure rating of the tool. If the tool still does not have sufficient force at the maximum pressure and airflow, then a larger tool may be required.

WARNING! Do not exceed the tool's maximum air pressure rating.

9. Release the trigger to halt the airflow. To prevent accidents, detach the air supply and safely discharge any residual air pressure in the airline after use. Clean the external surfaces of the tool with a clean, dry cloth.

CHANGING THE BLASTING MEDIA

It is not necessary to remove the blasting media from the hopper (1 A) after each use. However, clean out the hopper when a different type of blasting media is to be used.

MAINTENANCE

NOTE: Disconnect the air source and discharge any residual air pressure in the airline before performing any maintenance.

1. The nozzle will wear away over time, causing the internal diameter to widen and disperse the media over a larger area, reducing the tool's efficiency. The compressor will also need to work harder to maintain the pressure. Check ceramic nozzle at regular intervals and replace as needed.
2. Always check for cracks and leaks in the gun, hose, and plastic hopper bucket. These problems must be fixed immediately due to the dangers involved with air under pressure.
3. Check for damaged parts. Before using any tool, any part that appears to be damaged should be carefully checked to determine that it would operate properly and perform its intended functions. Check for alignment and binding of moving parts, for broken parts or mounting fixtures, or for any other condition that may affect proper operation.
4. Use only identical replacement parts or accessories intended for use with this tool when servicing. Replace damaged parts immediately.
5. Keep the tool clean. Wipe the tool with a clean cloth and periodically blow out all areas with compressed air. If compressed air is not available, use a brush to remove dust from areas. Do not use harsh chemicals or solvents to clean the tool. These chemicals could seriously damage the housing.

PLUGGED CONDITIONS

All blasting systems are prone to plugging or wear because of the abrasive material used. The blast nozzle may become plugged from moist media. Try dislodging the media with a drill bit held in your hand. You will need to discard the moist media.

WEAR CONDITIONS

This is usually noted when an excessive amount of dust appears while blasting. Dust will occur if:

1. The abrasive blasting media is worn out. If it has lost its granular or spherical appearance or has a lot of debris mixed in from the parts being blasted, replace the abrasive blasting media. This is usually noticed when the abrasive media that exits the nozzle resembles more of a cloud than a stream.
2. The gun parts may wear out. This is usually evident when the blast pattern is too wide and ineffective; simply replace the nozzle or orifice.

CLEANING THE HOPPER

1. Pour excess blasting media out of the hopper (1A) and into a container such as a five gallon bucket (sold separately).
2. Disconnect the abrasive supply hose (4A) from the abrasive supply hose connection (2A) and the discharge gun (6A).
3. To clear abrasive media from the hose, use your compressor to blow air through the abrasive supply hose (4A) into the container holding the excess blasting media.

CAUTION ! Wear protective clothing, a NIOSH approved lace mask and ANSI approved goggles when performing any maintenance to the tool.

4. When the hopper is clean, reassemble the abrasive supply hose and discharge gun and place the unit in a dry location out of the reach of children.

SEALS

Abrasive blasting is a damaging operation. In time, the internal parts of the discharge gun (6A) will become worn. When performance of the discharge gun decreases, take it to a qualified service technician for repair. There are no serviceable parts for this tool.

AIR SUPPLY MAINTENANCE

Every day, perform maintenance on the air. The moisture filter must be regularly drained. Performing routine maintenance on the air supply will allow the tool to operate more safely and will also reduce wear on the tool.

LUBRICATION

Do not use lubricants or air tool oil on the unit. The oil will contaminate the abrasive media, clogging the tool and reducing the effectiveness of the abrasive.

STORAGE

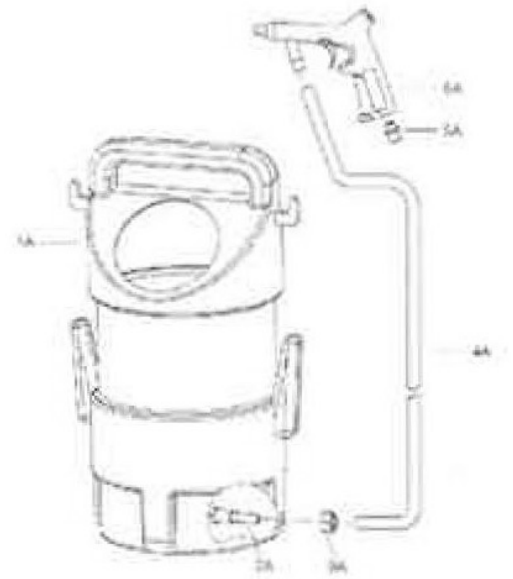
Prior to storage, with a soft brush remove any contamination buildup beneath the trigger (7) and the valve stem (14).

DISPOSING OF THE TOOL

1. If your tool has become damaged beyond repair, do not throw it out. Take it to the appropriate recycling facility.
2. Abrasive can be re-used until it eventually breaks down or becomes dusty. Dispose of waste abrasives in accordance with local authority regulations.

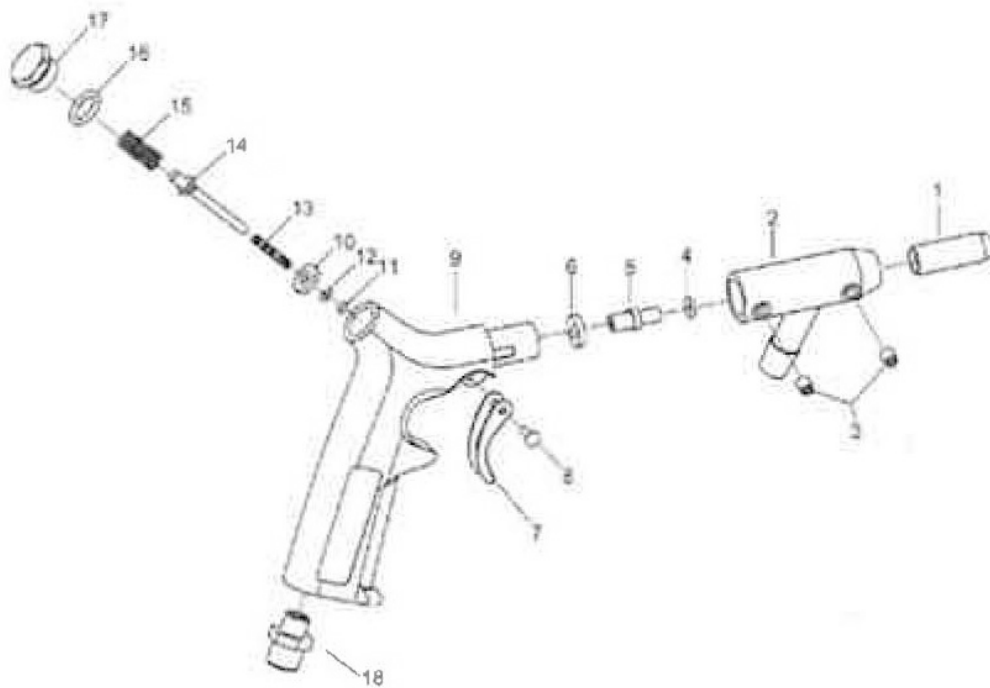
PARTS LIST/ PARTS DIAGRAM

| No. | Description | Qty. |
|-----|---------------------------------|------|
| 1A | Hopper | 1 |
| 2A | Abrasive Supply Hose Connection | 1 |
| 3A | Lock Nut | 1 |
| 4A | Abrasive Supply Hose | |
| 5A | Air Inlet | 1 |
| 6A | Discharge Gun | 1 |



DISCHARGE GUN

| No. | Description | Qty. | No. | Description | Qty. |
|-----|-------------------------|------|-----|-------------------|------|
| 1 | Ceramic Nozzle | 1 | 10 | Gasket | 1 |
| 2 | Nozzle Housing | 1 | 11 | O-Ring | 1 |
| 3 | Bleeder Valve M6 x 1.00 | 2 | 12 | Washer | 1 |
| 4 | O-Ring | 1 | 13 | Spring | 1 |
| 5 | Jet Nozzle | 1 | 14 | Valve Stem | 1 |
| 6 | Gasket | 1 | 15 | Spring | 1 |
| 7 | Trigger | 1 | 16 | O-Ring | 1 |
| 8 | Pin | 1 | 17 | Nut | 1 |
| 9 | Gun Body | 1 | 18 | Air Inlet Adapter | 1 |



TROUBLE SHOOTING

| Problem | Possible Cause(s) | Suggested Solution(s) |
|--|---|---|
| Decreased output. | 1. Not enough air pressure and / or air flow. | 1. Check for loose connections and make sure that the air supply is providing enough air flow (CFM) at the required pressure (PSI) to the tool's air inlet. DO NOT exceed the maximum air pressure of the tool. |
| | 2. Obstructed trigger. | 2. Clean around the trigger to ensure free movement. |
| | 3. Blocked air inlet screen (if equipped). | 3. Clean the air inlet screen of buildup. |
| | 4. Air leaking from the housing. | 4. Make sure that the housing components are properly assembled and tight. |
| | 5. Mechanism is contaminated. | 5. Clean and lubricate the mechanism. Install and in-line filter to the air source. |
| Housing heats up during use. | Worn parts. | Have a qualified technician inspect the internal mechanism and replace the parts as necessary. |
| Severe air leakage. (Slight air leakage is normal, especially on older tools.) | 1. Cross-threaded housing components. | 1. Check for incorrect alignment and uneven gaps. If cross-threaded, disassemble and replace the damaged parts before use. |
| | 2. Loose housing. | 2. Tight the housing assembly. If the housing cannot be tightened properly, the internal parts may be misaligned. |
| | 3. Damaged valve or housing. | 3. Replace damaged components. |
| | 4. Dirty, worn or damaged valve stem. | 4. Clean or replace the valve stem, O-ring, washer, and gasket. |