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40011  
PRESSURE BLASTER  
with Remote Control System

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OPERATION GUIDE



**SPECIFICATIONS**

Air Pressure	80 – 125 PSI
Min. CFM	75 CFM
Max. Height	52"
Tank Dimensions	24" x 40"
Tank Capacity	600 lb.6 cu. ft.
Blast Hose	1" I.D. x 25'
Nozzle Size	1/4" Carbide
Shipping Weight	425 lbs



DIVISION OF S&H INDUSTRIES  
5200 Richmond Road • Cleveland, OH 44146  
Phone 216-831-0550 • Toll Free 800-253-9726 •  
Fax 216-831-9573  
[www.shindustries.com](http://www.shindustries.com)  
E-mail: [www.service@shindustries.com](mailto:www.service@shindustries.com)

**WARNING!**

Do not use an ALC Pressure Blaster until you have read this manual and you understand its contents and warnings. These warnings are included for the health and safety of the operator and those in the immediate vicinity. Keep this manual for future reference.

Dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals known to cause cancer, birth defects or other reproductive harm and respiratory illnesses. Some examples of the chemicals include:

- Lead from lead based paints
- Crystalline silica from bricks, cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Abrasive blasting produces harmful dust. Everyone in the blasting area must wear a properly fitted and properly maintained NIOSH approved air-supplied respirator.

**SILICOSIS AND OTHER DUST WARNINGS:**

Breathing dust from silica sand may cause silicosis, a fatal lung disease. Breathing dust during blasting operations may also cause asbestosis and/or other serious or fatal diseases. A NIOSH approved, well maintained air supplied abrasive blasting respirator must be used by anyone blasting, anyone handling or using media containing toxic substances or media with more than point one percent (.001) free crystalline silica and anyone in the area of the dust. Harmful dust can remain suspended in the air for long periods of time after blasting has ceased, causing serious injury or death.

Before removing respirator, use an air monitoring instrument to determine if atmosphere is safe to breathe. Contact local OSHA or NIOSH office to determine the proper respirator for your particular application.

Air supplied respirators do not remove or protect against carbon monoxide (CO) or any other toxic gas. Use a carbon monoxide removal device and monitoring device with the respirator to ensure grade D quality air. Follow all applicable OSHA standards and OSHA regulation 1910.134 (d).

## **ASSEMBLY INSTRUCTIONS**

1. Your 40011 Pressure Blaster is pre-assembled at the factory for your convenience.
2. Take the 1" x 25' long sandblast hose with quick-disconnect coupling and mount quick-disconnect plumbing underneath tank.
3. Take the two air lines (color-coded RED and BLACK) and attach RED line to BLUE diaphragm valve. Take BLACK air line and attach to fitting mounted on top plumbing assembly.
4. Take the 1" moisture separator and MOUNT to air inlet valve on side of tank.
5. Go back and **double-check ALL 4 steps**.
6. This unit is now completely assembled. Read operating instructions before using the unit.

### **WARNING!**

**Disconnecting hose while Unit is under pressure could cause serious injury or death. Use safety lock pins and safety cables in all coupling connections to help prevent hose couplings from accidental disconnection.**

**If twist-on type air hose couplings are used, they must be secured by safety lock pins or wires to prevent accidental disconnection while under pressure. Hose disconnection while under pressure could cause serious injury.**

## **PRESSURE BLASTER SAFETY PROCEDURES**

**CAUTION: READ THESE SAFETY PROCEDURES IN THEIR ENTIRETY – PARTS OF THE OPERATING INSTRUCTIONS ARE WITHIN THESE WARNINGS.**

These procedures are not intended to be exhaustive due to the many variables in the abrasive blasting field. Therefore, we **INSIST** that the hands, ears, mouth, nose and eyes be covered with appropriate safety protection at all times.

### **ADDITIONAL WARNINGS! CAUTION MUST BE EXERCISED BY USER AT ALL TIMES**

1. **Everyone in the blast area including the equipment operator should correctly use and maintain a NIOSH-approved air-supplied respirator, even after blasting has ceased.**

Harmful dust can remain suspended in the air for long periods of time after blasting has ceased causing injury or death.

2. **Before using the pressure blaster: Put on safety glasses, gloves, and NIOSH-approved respirator. Always wear these protective items when operating and while servicing your abrasive blaster. While a protective hood is provided to help protect you from flying particles as you use the machine, the hood does not provide protection from air borne particles. A well maintained air supplied blasting respirator must be used by anyone blasting.**
3. **Use thick gloves with gauntlets to protect your hands.**
4. **Use backboards to prevent overspray from hitting someone or something else because the dust will travel a long distance. Blast in a large open area to minimize abrasive accumulation in surrounding areas.**
5. **For safe operation, perform recommended preventive maintenance on blaster tank, remote unit and accessories. Replace all worn parts before they fail. Immediate replacement of worn components is required. Failure to replace worn components could result in exposing the operator or bystanders to high speed media and compressed air, causing serious injury.**
6. **Do not use corrosive materials of any type in unit. Use only clean, dry media.**
7. **Do not splice abrasive hose. The splice will wear out quickly and may violently spray media over the surrounding area. A worn blast hose could suddenly fail by bursting. Couplings and nozzle holders may not adequately grip worn hose, causing them to blow off under pressure. Compressed air and abrasive escaping from a burst hose, or disconnected coupling or nozzle holder, could cause severe injury.**
8. **Always place the machine so that the outlet is pointed away from any objects or persons. Stand clear of the path of exiting abrasive. It may come out at high velocity. Impact from exiting abrasive could cause severe injury.**
9. **Static electricity can be created by the use of this equipment. Do not use within fifty feet of any explosive, potentially explosive substances, or their vapors as an explosion can occur.**
10. **Do not use this equipment in any area that might be considered hazardous or where flammable gases or liquids are present. Failure to do so may cause an explosion resulting in serious injury.**
11. **Do not pull tank around by the abrasive hose or let tank fall over as fitting may break rendering the machine unsafe. Media and air under 110 PSI have a very high destructive force. Never leave a pressurized machine unattended. If an emergency occurs, such as a burst blast hose, shutdown the machine immediately.**

12. **Welding, Grinding or drilling on the blast machine could weaken the vessel. Compressed air pressure could cause a weakened blast machine to rupture, resulting in death or serious injury.**

### **OPERATING INTRUCTIONS**

1. Close all valves on Pipe System. Fill tank with abrasive and wipe all abrasive from the tank top and Closure Gasket.
2. Connect the air Supply to the Inlet Valve on the Top Side Pipe Assembly.
3. Since your air supply is properly connected, gradually start opening your Air Supply Valve. You have an automatic Closure System mounted on the inside of your Sandblast Tank to insure proper sealing. The Air Inlet Valve should be in the FULL open position.
4. Hold hose firmly over the shoulder or under the arm. Press Activator lever down to energize media valves and start blasting. To stop, Release Activator Lever, the air Media Valves mounted on side of tank and at base of the tank will shut off.
5. for BEST results hold handles at 45 degrees to the work surface and 8" to 10" away from the item being blasted. Maintain continuous movement of the handles to prevent the media from Cutting too deep into the surface.
6. In addition, you should adjust the operating pressure of your Air Supply to accommodate the surface and abrasive type.
7. The FP-614 bronze media valve at base of tank should only be partially opened. Never blast with this valve in the full open position. Open valve only enough to allow media to be barely visible at nozzle end.

### **WARNING!**

**All persons except for the equipment user must stay clear of the blast machine. The user may pressurize or depressurize the machine at any time. The noise generated by the sudden release of compressed air while the machine is pressurized or depressurized may startle bystanders, and may vent abrasive under pressure. Either condition could result in injury.**

<b>NOZZLE SELECTION CHART</b>				
<b><u>Size</u></b>	<b><u>Nozzle CFM</u></b>	<b><u>Carbide Nozzle#</u></b>	<b><u>Blast Area Feet per Minute</u></b>	<b><u>Media Use Pounds per Hour</u></b>
3/16"	40 CFM @ 80 psi	40324	3 – 3.5	400
1/4 "	80 CFM @ 80 psi	40325	4 – 4.5	500
5/16"	125 CFM @ 80 psi	40326	5 – 5.5	800
<p><b>NOTE:</b> Blast area coverage per minute and abrasive consumption is approximate guidelines. Abrasive material and surface blasted may alter coverage and consumption rates. Furthermore, for each 50 feet of blast hose, there will be a 5 PSI pressure drop.</p>				

**WARNING!**

The threads on the nozzle and nozzle holder must be inspected each time the nozzle is secured to the holder. Check the threads for wear, and make sure nozzle holder securely grips the nozzle. A loose-fitting nozzle may eject from the holder under pressure and could cause severe injury.

**WARNING!**

Disconnecting hose while unit is under pressure could cause serious injury or death. Use safety lock pins and safety cables in all coupling connections to help prevent hose couplings from accidental disconnection.

If twist-on type air hose couplings are used, they must be secured by safety lock pins or wires to prevent accidental disconnection while under pressure. Hose disconnection while under pressure could cause serious injury.

**AIR COMPRESSOR RECOMMENDATION:**

To permit efficient operation of your air compressor, follow these guidelines:

1. Use a smaller size nozzle to control the demand of air.
  2. Do not blast continuously. Stop blasting operation periodically to allow the compressor to cool. No compressor is designed to constantly run at full RPM. Use 70% of the rated output.
  3. Use a minimum 1- 1/2" air hose or metal piping from your air compressor to the blaster. If your compressor is creating an excessive amount of moisture, we recommend using a water trap or a moisture separator.
1. The air compressor should be drained at the bottom of the supply tank through a drain valve and should be blown down daily. It is not unusual to drain three or four gallons of water from the supply tank on a high humidity day. An additional supply tank will help.
  2. Keep dust and media created by blasting away from the air compressor unit. Observe maximum air pressure requirements for the blaster and either set your compressor to run within these limits or use a pressure regulator valve to reduce the air pressure to the appropriate range.

## ABRASIVE (MEDIA) USAGE:

1. If moisture is in the media it will eventually damage the blaster tank or plug the system. Keep the media and compressor air dry to avoid this problem.
2. If media is moist, screen it and dry it before using.
3. Do not leave media in the tank after blasting because it can absorb moisture and impair blasting performance.
4. Store media in a dry place; keep media off the ground or concrete floors. Put it on a wooden skid.
5. If the humidity is excessively high, it may not be advisable to blast at that time.
6. Consider using different grades or different types of media to prevent nozzle clogging due to high moisture content.

Material To Be Cleaned	Air Pressure	Abrasive		Grit Size	
Steel vats	100-125 psi	Coal Slag	Garnet	30/50	20/40
Auto fenders	50-80 psi	Coal Slag	Garnet	80/120	20/40
Brick and block	80-125 psi	Coal Slag	Garnet	30/50	20/40
Steel cabinets	80-125 psi	Coal Slag	Garnet	30/50	20/40
Truck bodies	100-125 psi	Coal Slag	Garnet	30/50	20/40
Glass etching	50-70 psi	Glass Beads	Aluminum Oxide	30/40	100
Wood	50-70 psi	Nut shells	Glass beads	14/30	30/40

### Coal Slag #40093

Coal Slag is used when paint and rust has to be removed from steel, such as car bodies, tanks or heavy machinery. Coal Slag is faster cutting, can be re-used, is moisture free, and will not pack or absorb moisture. (25 Lb. container)

**Steel Grit #40109**

Steel grit is extremely fast cutting on rusty metal and hard to remove paint. Steel Grit is popular because it leaves a very smooth finish. It is also comparable in price to most other specialty abrasives. Steel Grit is recommended in reclaim systems or cabinets. (25 Lb. container)

**Glass Bead #40105**

Glass Bead is used in creating a satin or matte finish. Glass Bead is recommended in reclaim systems or cabinets. (25 Lb. container)

**Aluminum Oxide #40098**

Aluminum Oxide is a high quality abrasive that is sharper than sand (not recommended) and cuts twice as fast as sand. It leaves a smooth textured finish with no pits or burrs. Aluminum Oxide is rougher than glass bead and can be used over and over again. It is one of the most economical abrasives you can use in any reclaim systems or cabinets. (4/25 Lb. container)

**Plastic Grit #40110**

Primarily used to strip aluminum and fiberglass. Great for stripping paint, light oxidation and surface rust. Recommended for use in blast cabinets because it creates very little dust. Works quickly, last a long time and increases visibility within the cabinet. (10 Lb. container)

**Walnut Shells #40112**

Walnut shells are recommended for use on "soft" surfaces such as aluminum, glass, wood, and other areas where no pitting is desired. Leaves a smooth, dull finish. (10 Lb. container)



## TROUBLESHOOTING TIPS

### PROBLEM

### POSSIBLE SOLUTION

#### Surging of blast flow:

Air pressure too low  
Too much media

See "Lack of Air Pressure"  
Adjust media valve 40314

#### Excessive media consumption:

Media valve open too far  
Air pressure too low

Close slightly  
Check pressure gauge

#### Clogging and plugging of blast flow:

Debris in media  
Media size too large  
Nozzle plugs  
Nozzle plugs  
Wet media

Purge and screen  
Use smaller grit size  
Use larger nozzle  
Adjust media valve 40314  
Dry media, drain water from air

#### Moisture in abrasive media:

Wet media  
Water in air  
Water in tank

Change or use dry media  
Drain water from air lines  
Empty, dry out and refill

#### Humid weather:

Moderate humidity  
Moderate humidity  
High humidity

Keep media as dry as possible  
Use drier or moisture separator  
Avoid that period of use if possible

#### Overtaxed compressor:

Compressor too small  
Nozzle size too large  
Too many leaks in plumbing  
Holes in abrasive hose  
Air filter on compressor plugged

Restrict time used  
Use smaller size  
Seal and tighten plumbing  
Replace hose  
Clean

#### Lack of air pressure:

Compressor too small  
Supply valves not on full position  
Nozzle size too large  
Leaks in plumbing  
Holes in abrasive hose  
Air filter on compressor plugged  
Urethane gasket worn or dirty

Use smaller nozzle  
Open valves  
Use smaller size  
Seal and tighten plumbing  
Replace hose  
Clean filter  
Clean or replace gasket

#### Lack of abrasive flow:

Blaster tank empty  
Moisture in media  
Not enough air pressure  
Abrasive hose kinked  
Debris in media

Fill tank  
Dry media  
Check system  
Straighten hose  
Clean or screen media

**Warning! Do not fill the pressure vessel to within six (6) inches of the top of the vessel. If a hose is accidentally disconnected during use media spray may occur.**

**WARNING!**

The threads on the nozzle and nozzle holder must be inspected each time the nozzle is secured to the holder. Check the threads for wear, and make sure nozzle holder securely grips the nozzle. The nozzle washer must also be inspected for wear. Worn nozzle washers cause thread erosion. A loose-fitting nozzle may eject from the holder under pressure and could cause severe injury.

**MAINTENANCE**

PARTS LIST			
ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	10920	1	Tank
2	40300	2	Wheels
3	40301	1	Axle
4	40302	2	Cotter pins
5	40303	2	1-1/2" x 1" bushing
6	40304	12	1" x close nipple
7	40305	2	Remote valve
8	40307	2	1" Street ell
9	70308	1	1" Y
10	40309	1	1-1/2" quick-disconnect coupling (tank end)
11	40310	1	1" x 15-1/4" pipe
12	40311	1	1" 90° elbow
13	40312	1	1" x 15-3/4" pipe
14	40313	2	1" union
15	40314	4	1" bronze valve
16	40315	1	1-1/4" cross
17	40316	1	1-1/4" x close nipple
18	40317	1	1-1/4" x 1/4" bushing
19	40224	1	Pressure gauge
20	40318	1	1" T
21	40319	1	1" x 1/4" bushing
22	40229	1	Pressure relief valve
23	40320	1	1" I.D. x 1-3/4" O.D. blast hose – 24 ft.
24	40321	1	Quick-disconnect coupling (hose end)
25	40322	1	Aluminum nozzle holder
26	40325	1	1/4" tungsten carbide nozzle
27	40327	1	Remote handle
28	40328	1	1" moisture separator
30	40329	3	1/4" hose barb
31	40330	2	1/4" T
32	40189	1	Air line (2-piece) 28'
34	40190	1	Mini-matic control valve
35	40331	2	1/4" Street ell
36	40286	1	1/4" x close nipple
37	40332	2	1-1/4" x 1" bushing

**WARNING!**

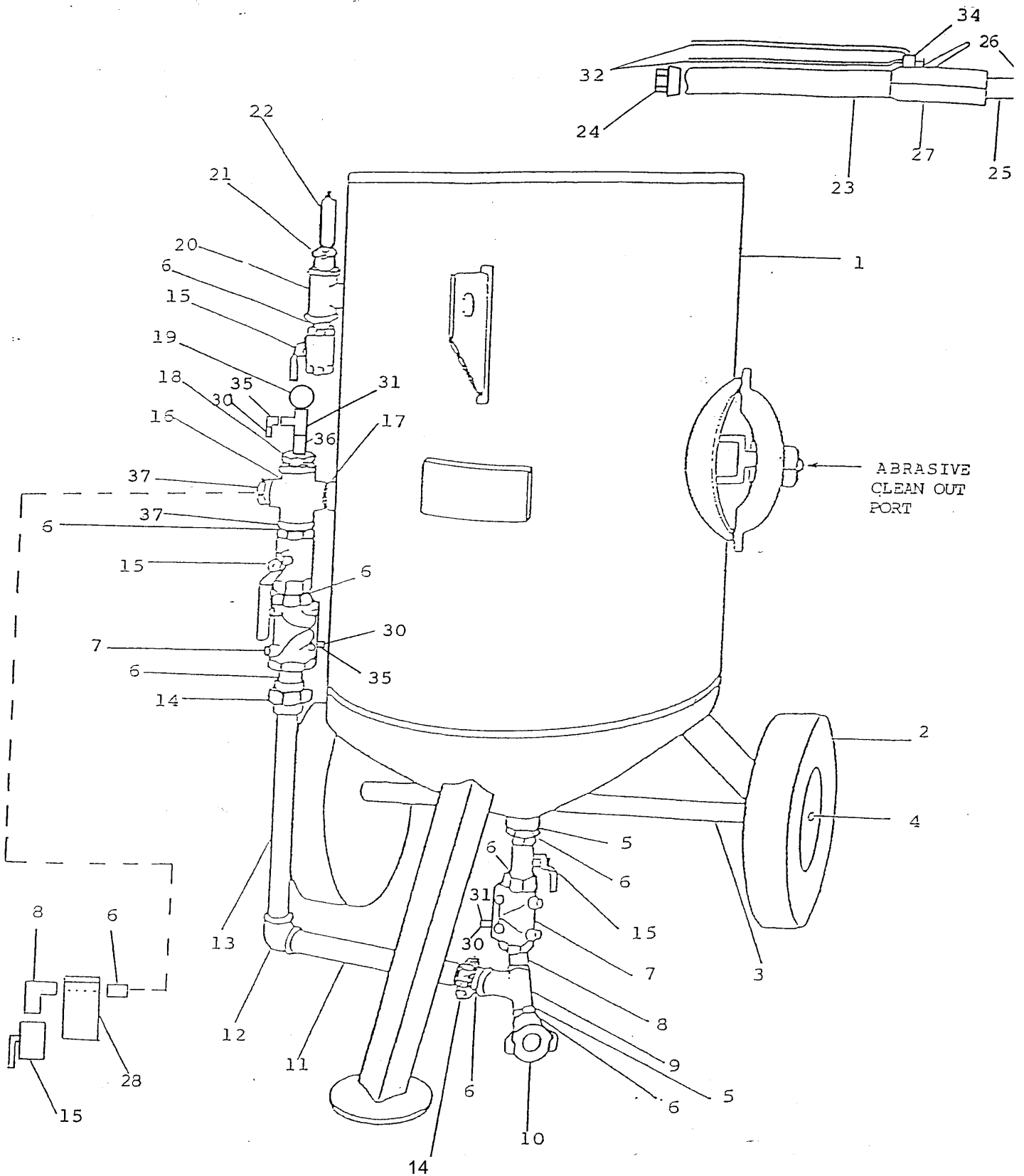
Failure to observe the following before performing any maintenance could cause serious injury or death from the sudden release of compressed air:

- Depressurize the blast machine.
- Disconnect power supply.
- Lockout and tagout the compressed air supply.
- Bleed the air supply line to the blast machine.

Immediate replacement of worn components is required. Failure to replace worn components could expose the operator or bystanders to high speed media and compressed air could cause death or serious injury.

Leaks around couplings and nozzle holders indicate worn or loose fitting parts. Nozzle holders and couplings that do not fit tightly on hose and nozzles that do not fit tightly in nozzle holders could disconnect while under pressure. Impact from nozzles, couplings, hoses, or abrasive, and parts disconnected while under pressure could cause severe injury.

## MODEL 40011 with Remote Control System – Replacement Parts



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### LIMITED WARRANTY

**S & H Industries Inc. warrants this product to be free from defects in materials or workmanship for two years after the date of original purchase.**

**If the product should become defective within that warranty period, we will repair or replace it (at our option) free of charge including return transportation to you provided you deliver it prepaid to S & H Industries Inc., 5200 Richmond Road, Bedford Hts., Ohio 44146.**

**This warranty does not include damage resulting from accident, abuse or misuse of the product. Nor does it apply to parts subject to abrasive wear, i.e., nozzles, air jets, seal blocks, valves, hose connections and hoses.**

**Implied warranties including those of merchantability and fitness for a particular purpose are excluded to the extent permitted by law, and any and all implied warranties are excluded. This is the exclusive remedy and liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law.**