



40006, 40007, 40008 and 40009
PRESSURE BLASTER
with Remote Control System

OPERATION GUIDE



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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 supplied-air 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.

Supplied-Air 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

NOTE: Refer to diagrams on pages 13 when assembling.

1. Check unit against the parts sheet to see that all parts are included.
2. When assembling wheels refer to inset #1 (p. 13). 40009 wheels are pre-assembled at factory.
3. Take plumbing assembly with bottom half of pipe union and mount to top half of pipe union assembled at base of tank.
4. Connect red by-pass hose to the 1/2" x 1/4" brass hose adaptor on top pipe assembly. Take the opposite end and connect to 1/2" x 1/4" hose adaptor on bottom pipe assembly.
5. Take the sandblast hose with 2 air lines and mount to 1/2" hose adaptor using clamp (40006 and 40007 models ONLY). Quick-disconnect couplings are used on models 40008 and 40009.
6. Locate air lines mounted to pressure hose. All tubing is color-coded red and black. Take red tubing and mount to color-coded port on media valve. Connect the black tubing to the 1/4" x 1/8" brass adaptor on the blue air filter at the bottom of the tank.
7. Take nozzles provided and assemble one on handle. (Check nozzle selection chart on pg. 4 when choosing nozzle.)
8. Re-check all pipe fittings and hose clamps to ensure they are tightened sufficiently. Air leaks will result in intermittent media flow.

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. Do not place fingers, any body parts or any components in the filler plug seal area when the blast machine is being pressurized. Failure to keep body parts from the filler plug area will result in serious injury.**
- 2. Do not exceed maximum working pressure of 110 PSI. Failure to keep maximum working pressure below 110 PSI can cause the blast machine to burst, causing death or serious injury.**
- 3. 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.**
- 4. 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.**
- 5. Use thick gloves with gauntlets to protect your hands.**
- 6. 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.**
- 7. Do not pull media tank around by the abrasive hose or let tank fall over as a 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.**

8. **Drain air out of tank through the inlet valve and disconnect power before maintenance cleaning of any kind. When removing nozzle, caution must be exercised as air pressure may still be in the hose if the nozzle is plugged.**
9. **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.**
10. **Do not use corrosive materials of any type in unit. Use only clean, dry media.**
11. **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.**
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.**
13. **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.**
14. **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.**
15. **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.**
16. **Do not overfill tank with media. Do not fill to within 6 inches from top of the tank.**

OPERATING INSTRUCTIONS

OPERATING TECHNIQUE:

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 pipe assembly.
3. Pull up on the closure valve while slowly opening the air inlet valve. After the air is up to 5 PSI on the pressure gauge, release the closure, and it will stay in place. Build the air supply up until it reaches your desired setting. The unit is now ready for blasting to begin. When finished filling, the air inlet is to be in the full open position.
4. Hold the hose firmly over or under the arm. Press activator lever down. To stop, release activator lever. The air/media valve will shut itself off under the tank.
5. For best results hold handle at 45 degrees to the work surface and 6" to 8" away from the item being blasted. Maintain continuous movement of the handle 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. See the "Abrasive and Pressure Guide" on page 5.

NOZZLE SELECTION:

1. Do not overtax your compressor by using too large a nozzle size. In addition, large nozzles will consume a greater amount of media within a given time period.
2. The nozzle I.D. will dictate the size compressor required. Refer to the selection chart below in deciding which nozzle size is appropriate to do your job on your compressor.
3. As the nozzle wears through use, the I.D. will increase, requiring a greater volume of air. Because of this, you may want to start with a smaller size nozzle.

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.

NOZZLE SELECTION CHART					
PART NO.	NOZZLE I.D.	CFM	PSI	BLASTING AREA SQ. FT./MIN.	ABRASIVE USAGE/HR.
40067	3/32"	7	80	1/2	100 lbs.
40068	1/8"	15	80	1 to 1-1/2	150 lbs.
40069	5/32"	25	80	2 to 2-1/2	200 lbs.
40070	3/16"	40	80	3 to 3-1/2	300 lbs.
40071	1/4"	80	80	4 to 4-1/2	500 lbs.
40072	5/16"	125	80	5 to 6	800 lbs.

NOTE: Blast area coverage per minute and abrasive consumption are 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.

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.

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 1/2" 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. Open the bleeder valve until water slowly flows out continuously.
4. 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.
5. 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.
7. Do not use sand.

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.

ABRASIVE AND PRESSURE GUIDE					
Material to Be Cleaned	Air Pressure	Abrasive		Grit Size	
Steel vats	100-125 psi	Black magnum	10898	30/50	20/40
Auto fenders	50-80 psi	Black magnum	10898	80/120	20/40
Brick and block	80-125 psi	Black magnum	10898	30/50	20/40
Steel cabinets	80-125 psi	Black magnum	10898	30/50	20/40
Truck bodies	100-125 psi	Black magnum	10898	30-50	20/40
Glass etching	50-70 psi	Glass beads	Silicon carbide	30/40	100
Wood	50-70 psi	Nut shells	Glass beads	14/30	30/40

See respiratory related WARNINGS at the beginning of the manual.

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/CAUSE

POSSIBLE SOLUTION

Surging of blast flow:

Air pressure too low
Too much media

Check pressure gauge on compressor
Adjust media valve 40198

Excessive media consumption:

Media valve open too far
Air pressure too low

Close slightly
Check pressure gauge on compressor

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 40198
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 (6" from top)
Dry media
Check system
Straighten hose
Clean or screen media

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.

MAINTENANCE

To ensure a long and efficient operational life of the Remote Control System, it is highly recommended that the following procedures be followed:

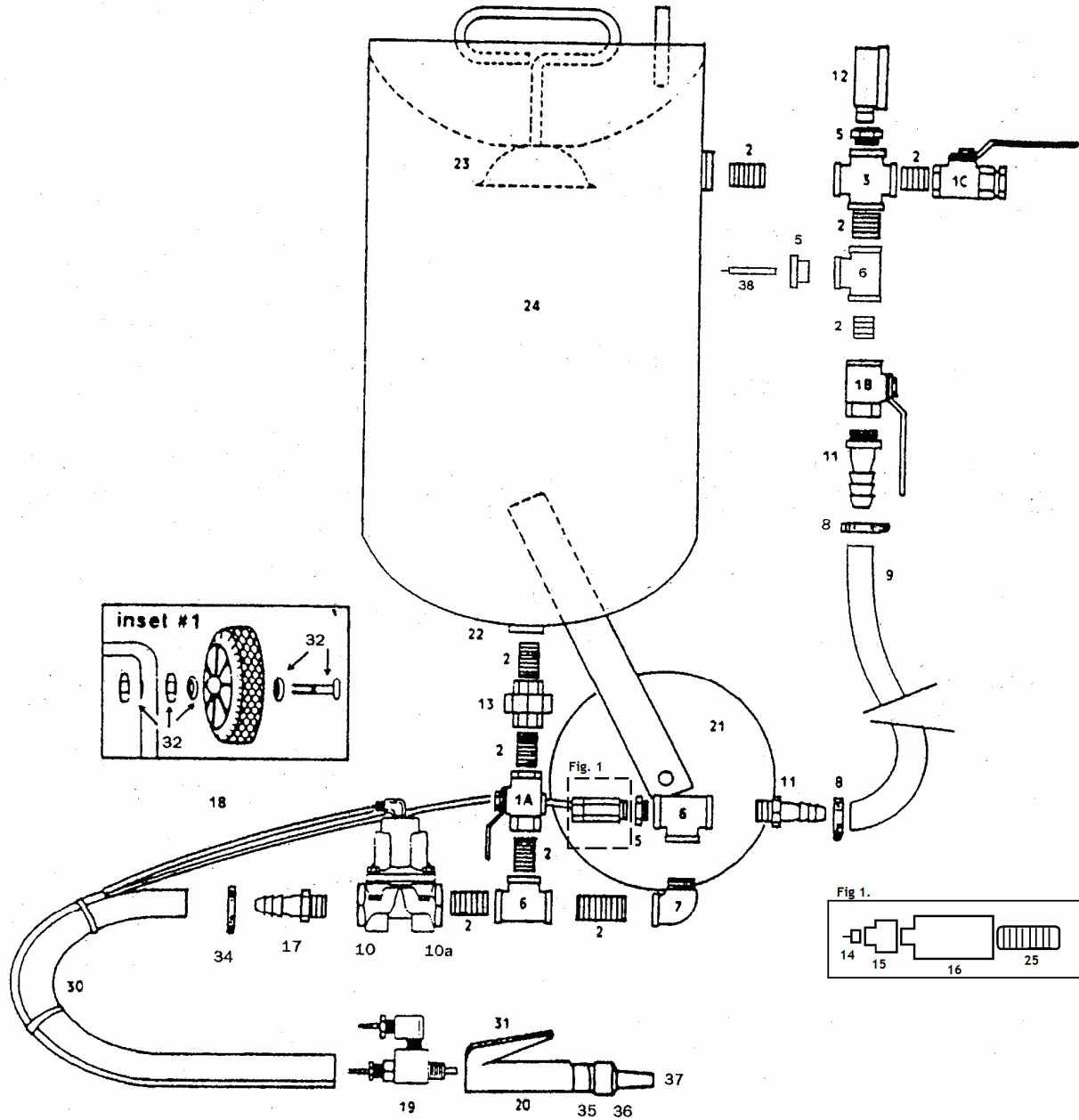
1. Periodically (after 5-6 months of moderate use or after 10-15 hours of heavy industrial use) replace all hose adaptors that are for abrasive flow use only (Order No. 40192).
2. Replace rubber sealing block on 40166 after 7-10 hours of use to maintain proper shut-off (Order No. 40164).
3. Check abrasive hose when it begins to soften or leaks media or air around the hose or handle area.
4. Replace the nozzle when it wears to the next larger size (at this time the Venturi effect of the nozzle is inefficient).
5. Check the urethane gasket in the pull-up closure when the air leaks excessively from the opening (make sure the gasket is free from media).

Note: Replace with genuine ALC parts – do not substitute.

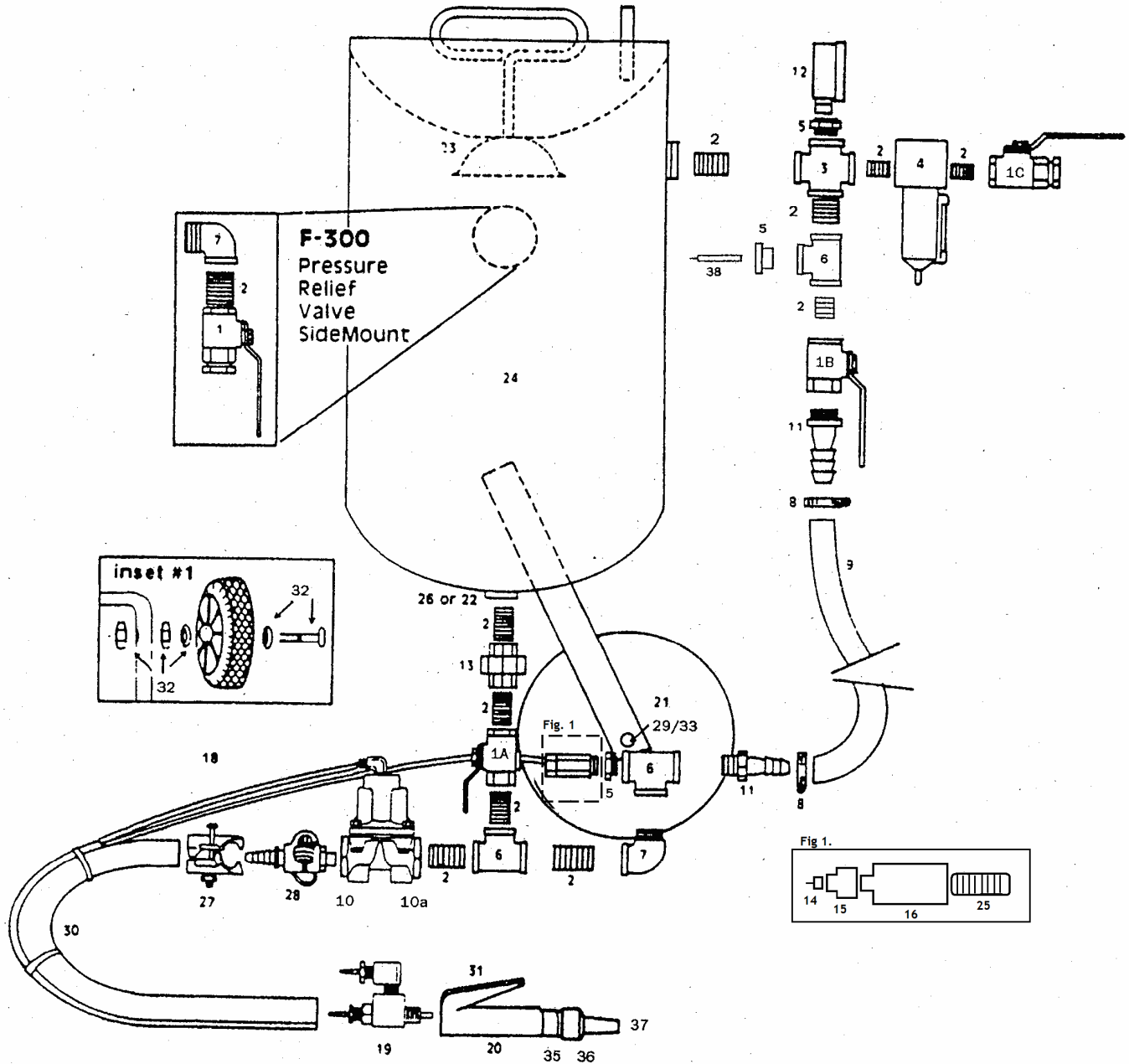
PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	40198	1/2" bronze ball valve	18	40189	Air lines – red or black
1A		Media valve	19	40190	Mini-matic control valve
1B		Choke valve	20	40191	Remote handle
1C	40199	1/2" ball valve (pressure relieving)	21	(40225:40006) (40226: 40007-40008) (40227:40009)	wheels
2	40213	1/2" x close nipple	22	40217	3/4" x 1/2" bushing
3	40221	1/2" cross	23	40228	Closure gasket
4	40207	1/2" moisture separator	24	40280, 40281, 40282, 40283 pressure tank only	
5	40219	1/2" x 1/4" steel bushing	25	4028600	¼ x Close Nipple
6	40230	1/2" tee	26	40231	1-1/2" x 1/2" bushing (40009)
7	40216	1/2" 90° elbow	27	40210	2-prong quick disconnect coupling
8	10935	1/2" hose clamp	28	40209	2-prong quick disconnect coupling
9	40123	1/2" red by-pass hose	29	10973	5/8" diameter axle (40009)
10	40188	Media valve	30	(40117:40006/40007) (40118:40008) (40120:40009)	1/2" abrasive hose
10A	40187	Replacement diaphragm for 40183	31	10167	Activator
11	40186	1/2" brass adaptor	32	40232	Axle Bolt Assy.(40006,07,08)
12	40224	0-200 PSI pressure gauge	33	10974	Palnuts for 10973 axle
13	40285	1/2" union	34	10905	Hose Clamp
14	10978	Brass Hose Barb	35	40196	Nozzle Washer
15	4018500	Brass Elbow Extender	36	40193	Nozzle Retainer nut
16	40183	1/4" blue air filter	37	Pg. 4	Nozzle – pick size/part #
17	40192	1/2" hose adaptor	38	40229	Pressure relief valve

MODELS 40006-40007 with Remote Control Systems Replacement Parts



MODELS 40008-40009 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.