

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

21i

AVANTI™

AIRLESS PAINT, PRIMER & STAIN SPRAYER



**RETURNS NOT ACCEPTED
& WARRANTY VOID**

**if Sprayer is not properly cleaned
immediately after every use.**

**Clean Sprayer immediately after
use to prevent permanent damage.**

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

57042

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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⚠ WARNING

Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.






RETURNS NOT ACCEPTED & WARRANTY VOID
if Sprayer is not properly cleaned immediately after every use.

Clean Sprayer immediately to prevent permanent damage.

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WARNING SYMBOLS AND DEFINITIONS

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Addresses practices not related to personal injury.

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** – To reduce the risks of fire or explosion, electrical shock, and the injury to persons, read and understand all instructions included in this manual. Be familiar with the controls and the proper usage of the equipment.
2. **WARNING** – To reduce the risk of fire or explosion:
 - a. Do not spray flammable or combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
 - b. For units intended for use with only water-based or mineral spirit-type materials with a minimum flash point of 38°C (100°F) – Do not spray or clean with liquids having a flash point less than 38°C (100°F).
 - c. Paint or solvent flowing through the equipment is able to result in static electricity. Static electricity creates a risk of fire or explosion in the presence of paint or solvent fumes. All parts of the spray system, including the pump, hose assembly, spray gun, and objects in and around the spray area shall be properly grounded to protect against static discharge and sparks. Use only conductive or grounded high-pressure airless paint sprayer hoses specified by the manufacturer.
 - d. Verify that all containers and collection systems are grounded to prevent static discharge.
 - e. Connect to a grounded outlet and use grounded extension cords. Do not use a 3 to 2 adapter.
 - f. Do not use a paint or a solvent containing halogenated hydrocarbons. See operating instructions for examples of these types of materials.
 - g. Keep spray area well ventilated. Keep a good supply of fresh air moving through the area. Keep pump assembly in a well ventilated area. Do not spray pump assembly.
 - h. Do not smoke in the spray area.
 - i. Do not operate light switches, engines, or similar spark producing products in the spray area.
 - j. Keep area clean and free of paint or solvent containers, rags, and other flammable materials.

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- k. Know the contents of the paints and solvents being sprayed. Read all Material Safety Data Sheets (MSDS) and container labels provided with the paints and solvents. Follow the paint and solvent manufacturer's safety instructions.
 - l. Fire extinguisher equipment shall be present and working.
3. **WARNING – To reduce the risk of skin injection:**
- a. Do not aim the gun at, or spray any person or animal.
 - b. Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body.
 - c. Always use the nozzle tip guard. Do not spray without nozzle tip guard in place.
 - d. Only use a nozzle tip specified by the manufacturer.
 - e. Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the manufacturer's instructions for turning off the unit and relieving the pressure before removing the nozzle tip to clean.
 - f. Do not leave the unit energized or under pressure while unattended. When the unit is not in use, turn off the unit and relieve the pressure in accordance with the manufacturer's instructions.
 - g. High-pressure spray is able to inject toxins into the body and cause serious bodily injury. In the event that injection occurs, seek medical attention immediately.
- h. Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
 - i. This system is capable of producing 3000 psi. Only use replacement parts or accessories that are specified by the manufacturer and that are rated a minimum of 3000 psi.
 - j. Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly.
 - k. Verify that all connections are secure before operating the unit.
 - l. Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.
4. **WARNING – To reduce the risk of injury:**
- a. Always wear appropriate gloves, eye protection, and a respirator or mask when painting.
 - b. Do not operate or spray near children. Keep children away from equipment at all times.
 - c. Do not overreach or stand on an unstable support. Keep effective footing and balance at all times.
 - d. Stay alert and watch what you are doing.
 - e. Do not operate the unit when fatigued or under the influence of drugs or alcohol.
 - f. Do not kink or over-bend the hose.
 - g. Do not expose the hose to temperatures or to pressures in excess of those specified by the manufacturer.
 - h. Do not use the hose as a strength member to pull or lift the equipment.

Work Area

- 1. **Keep the work area clean and well lighted.**
Cluttered benches and dark areas increase the risks of electric shock, fire, and injury to persons.
- 2. **Operate only in a well-ventilated area.**
Paint thinners and solvents may be harmful if inhaled.
- 3. **Do not operate the sprayer in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.**
The sprayer is able to create sparks resulting in the ignition of the dust or fumes.
- 4. **Keep bystanders, children, and visitors away while operating the tool.** Distractions are able to result in the loss of control of the tool.

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Electrical Safety

1. **Sprayer plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded sprayers.** Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
3. **Do not expose sprayers to rain or wet conditions.** Water entering a sprayer will increase the risk of electric shock.
4. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the sprayer. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
5. **When operating a sprayer outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
6. **If operating a sprayer in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

Personal Safety

1. **Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating the tool increases the risk of injury to persons.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair increases the risk of injury to persons as a result of being caught in moving parts.
3. **Avoid unintentional starting. Be sure the trigger is off before connecting to the power supply.** Do not carry the sprayer with your finger on the trigger or connect the sprayer to the power supply with the trigger on.
4. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
5.  **Use safety equipment.** Wear protective paint spraying gloves and a NIOSH-approved respirator during use. Non-skid safety shoes and a hard hat must be used for the applicable conditions.
6.  **Always wear eye protection.** Wear ANSI-approved safety goggles.

Tool Use and Care

1. **Do not force the tool. Use the correct tool for the application.** The correct tool will do the job better and safer at the rate for which it was designed.
2. **Do not use the sprayer if the switch does not turn it on and off.** Any sprayer that cannot be controlled with the switch is dangerous and must be repaired.
3. **Disconnect the tool from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool unintentionally.
4. **Store the tool when it is idle out of reach of children and other untrained persons.** A tool is dangerous in the hands of untrained users.

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5. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. There is a risk of bursting if the tool is damaged.
6. **Use only accessories that are identified by the manufacturer for the specific tool model.** Use of an accessory not intended for use with the specific tool model, increases the risk of injury to persons.

Service

1. **Tool service must be performed only by qualified repair personnel.**
2. **When servicing a tool, use only identical replacement parts. Use only authorized parts.**
3. **Use only lubricants supplied with the tool or specified by the manufacturer.**

Specific Safety Instructions

1.  **INJECTION HAZARD!**
Although this paint gun is airless, it still puts out paint at a very high pressure. Through improper use, paint can be injected through a person's skin, leading to serious injury, possibly amputation. If paint is accidentally injected into someone's skin, contact a doctor immediately. Do not treat an injection injury as a simple cut. Injection can lead to amputation and requires immediate surgical treatment.
2. **Do not direct spray at people or animals. Do not place your hand in front of Spray Gun's nozzle or attempt to deflect paint spray with your hand during use.** Gloves and clothing don't offer adequate protection from toxic paints, sealers, or stains.
3. **Do not spray flammable materials in vicinity of open flame or near ignition sources.** Motors, electrical equipment, and controls can cause electrical arcs that will ignite a flammable gas or vapor. Do not store flammable liquids or gases in vicinity of this unit.
4. **Do not come into contact with a fluid stream created by a leak in the paint hose.**
5. **Do not leave Paint Sprayer pressurized while unattended.**
6. **Do not clean Spray Gun tip while it is still connected to paint hose.**
7. **Keep the trigger and the electrical cord plug clean and paint-free.**
8. **Do not run Paint Sprayer while empty.** Damage to the unit may occur.
9. **Do not use Paint Sprayer to spray asbestos, metallic paints, glazes, red lead, cement, ground chalk, abrasive grainy paints containing lime, or bleach.** These will damage the spray gun and void the warranty.
10. Read all of the information concerning coating products and cleaning solvents. Do NOT use bleach, low-flash naphthalene, acetone, alcohol or toluene when cleaning Paint Sprayer equipment.
11. **Do not use bleach or halogenated hydrocarbon solvents (DCM, 1,1,1-trichloroethane, methyl bromine, carbon tetrachloride, and ethyl iodide).** Long term exposure to many chlorinated hydrocarbons through inhalation can result in liver and kidney toxicity. Exposure of unprotected skin to the solvents used can cause defatting of the skin resulting in dermatitis. Methylene chloride and vinyl chloride have also been shown to be human carcinogens. Some of these solvents are flammable. Welding operations near the these materials can create phosgene, a highly toxic gas.
12. **Many spray guns contain aluminum, which reacts strongly to chlorinated solvents.** Contact the solvent or coating manufacturer as needed regarding potential chemical reactions.
13. Industrial applications must follow OSHA requirements.
14. Spraying hazardous materials may result in serious injury or death. Do not spray pesticide, acid, corrosive material, fertilizer, or toxic chemicals.

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SAFETY

15. Paints and solvents may be harmful or fatal if swallowed or inhaled. Avoid prolonged skin contact with solvents or paints as they will irritate skin. After any contact, immediately wash off exposed area with hot, soapy water.

16. Keep paint hose away from sharp objects. Bursting hoses may cause injury. Examine hoses regularly and replace if damaged.

17. When flushing Paint Sprayer system, use lowest possible pressure setting.

18. All hoses and spray gun accessories used with Paint Sprayer must be pressure rated at or above 3000 PSI.

19. The Paint Sprayer must be plugged into an outlet that is grounded in accordance with all local codes and ordinances.

20. Use caution while spraying on windy days.

21. Do not use Paint Sprayer without the Spray Gun's nozzle guard in place.

22. Paint Sprayer's housing may become hot during use. Do not touch housing until it has completely cooled.

23. Remove Spray Tip or turn to cleaning position **BEFORE** cleaning or flushing Paint Sprayer system.

24. Do not use pliers to tighten or loosen high pressure connections.

25.



Sparks from improper grounding can ignite fumes!

Follow all local regulations regarding the use of fluid supply containers and solvent pails used with flushing the Paint Sprayer. Use only conductive metal pails placed on a grounded (concrete) surface. Do not place pails on nonconductive surfaces (such as cardboard or paper). Ground all metal pails by clamping one end of a ground wire to the pail and the other end to a grounded structure (such as a nearby pipe). Maintain grounding, even when flushing or relieving pressure from Paint Sprayer into metal pail. The force of the spray can knock a metal pail over, so hold down the metal pail and keep the metal part of the spray gun set against the grounded metal pail when pressing the spray gun trigger.

26. Maintain labels and nameplates on the sprayer. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

27. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.



SAVE THESE INSTRUCTIONS.

SETUP

OPERATION

MAINTENANCE

Grounding

⚠ WARNING



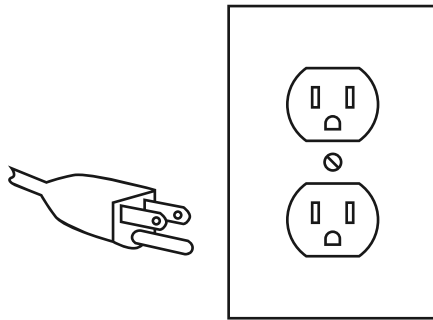
TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

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Grounded Tools: Tools with Three Prong Plugs



3-Prong Plug and Outlet

1. Sprayers marked with "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the sprayer should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See 3-Prong Plug and Outlet.)
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the sprayer. The green wire in the cord must be the only wire connected to the sprayer's grounding system and must never be attached to an electrically "live" terminal. (See 3-Prong Plug and Outlet.)
3. The sprayer must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. (See 3-Prong Plug and Outlet.)

Extension Cords

1. **Grounded** sprayers require a three wire extension cord. **Double Insulated** sprayers can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible sprayer damage. (See Table A.)
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See Table A.)
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. (See Table A.)
5. If you are using one extension cord for more than one sprayer, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
6. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.
7. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

RECOMMENDED MINIMUM WIRE GAUGE
FOR EXTENSION CORDS* (120/240 VOLT)

NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

TABLE A

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

SAFETY

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Symbology

Symbol	Property or Statement	Symbol	Property or Statement
V	Volts		WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved eye protection.
~	Alternating Current		WARNING marking concerning Risk of Respiratory Injury. Wear NIOSH-approved respirator.
A	Amperes		WARNING marking concerning Risk of Explosion.
PSI	Pounds per square inch of pressure		WARNING marking concerning Risk of Injection Injury. Do not direct spray at hands or body. Have injection injury treated immediately.
CFM	Cubic Feet per Minute flow		WARNING marking concerning Risk of Fire. Do not use solvents improperly.
SCFM	Cubic Feet per Minute flow at standard conditions		
NPT	National pipe thread, tapered		
NPS	National pipe thread, straight		

Specifications

Electrical Input	120VAC / 60Hz / 8A
Maximum Working Pressure	3000 PSI
Spray Hose Outlet	1/4"–NPS M
Sound Level	90dB @ 3'

TIP CHART					
Tip Size	Oil-Based		Water-Based		
	Stain	Primer & Enamel	Primer & Stain	Interior Paint	Exterior Paint
513	X	X	X	X	
515		X	X	X	X
517			X	X	X

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SAFETY



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OPERATION



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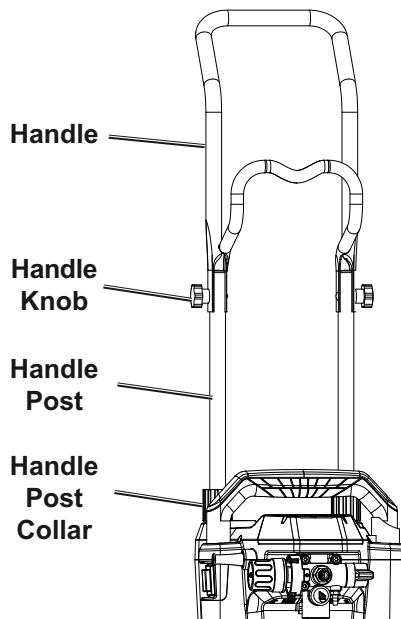
Clean Sprayer immediately to prevent permanent damage.

Assembly

1. Attach Handle

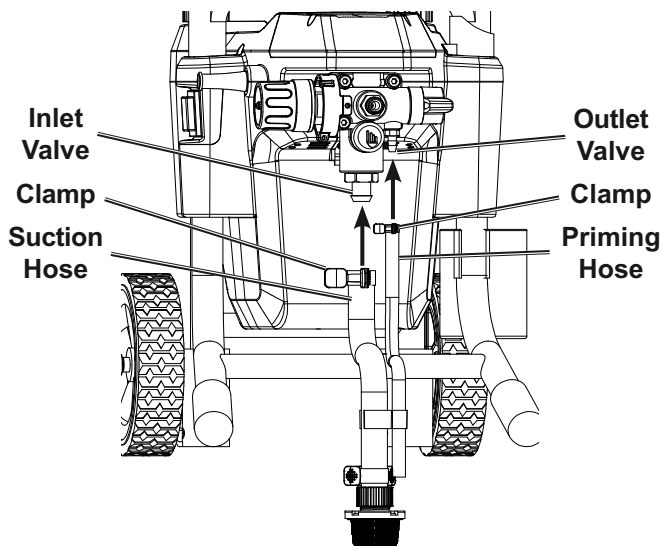
NOTE: Handle can be reversed so that Spray Gun/Hose Holder faces backward if desired.

- Insert Handle Posts into Handle Post Collars. Tighten Collars securely.
- Place Handle over Handle Posts.
- Insert Handle Knobs and tighten securely.



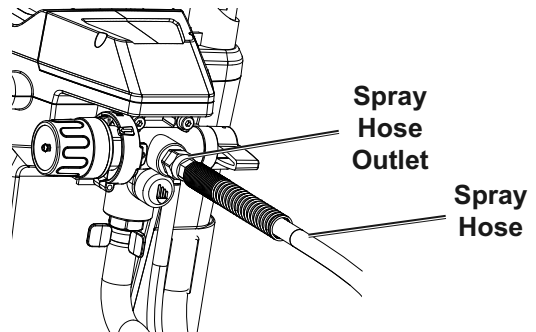
2. Attach Suction and Priming Hoses

- Remove cap covering Inlet Valve.
- Attach Suction Hose to Inlet Valve. Secure with Clamp.
- Attach Priming Hose to Outlet Valve. Secure with Clamp.



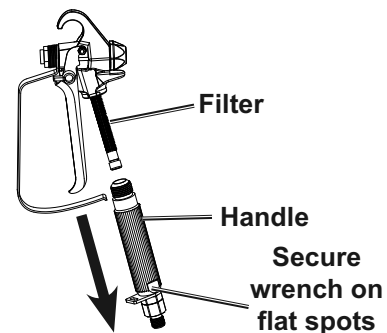
3. Attach Spray Hose

Attach Spray Hose to Spray Hose Outlet. Tighten securely with included wrench.



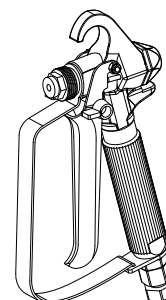
4. Install Filter in Spray Gun

- For water-based paints, use pre-installed 60 mesh coarse filter.
- For oil-based paints, remove coarse filter and install 100 mesh fine filter. Use proper Spray Tip according to **Tip Chart on page 8**.
 - Remove Handle from Spray Gun with included wrench.
 - Remove filter by turning it counterclockwise.
 - Replace filter and reassemble Spray Gun.



5. Attach Spray Gun

Attach Spray Gun to Spray Hose. Tighten securely with two included wrenches.



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Operating Instructions



Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.



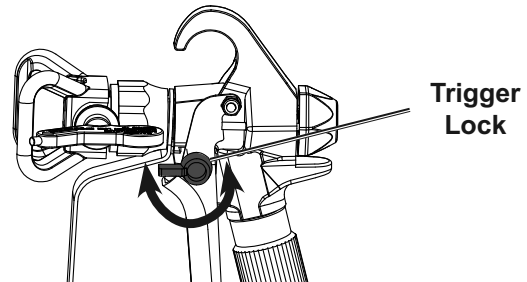
INJECTION HAZARD!

Although this paint gun is airless, it still puts out paint at a very high pressure. Through improper use, paint can be injected through a person's skin, leading to serious injury, possibly amputation. If paint is accidentally injected into someone's skin, contact a doctor immediately. Do not treat an injection injury as a simple cut. Injection can lead to amputation and requires immediate surgical treatment. Inspect tool before use, looking for damaged, loose, and missing parts. If any problems are found, do not use tool until repaired.

Lock/Unlock Trigger

WARNING! TO PREVENT SERIOUS INJURY: Risk of Injection - Set Trigger Lock when Spray Gun not in use.

1. Rotate Trigger Lock all the way back to lock Trigger.
2. Rotate Trigger Lock forward to unlock Trigger.

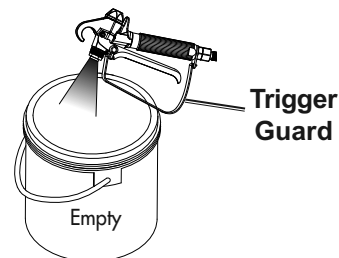


Depressurize Sprayer

WARNING! TO PREVENT SERIOUS INJURY: Risk of Injection - Unit maintains pressure after shut-down - Before servicing, cleaning, or removing any part, shut off power and relieve pressure.

Refer to this section when instructed to depressurize sprayer.

1. Turn Power Switch off.
2. Lock Trigger.
3. Turn Pressure Knob to lowest setting.
4. Reverse Spray Tip.
5. Rotate **PRIME/SPRAY** Valve to **SPRAY** position.
6. Unlock Trigger.
7. Point Spray Gun at interior side of empty grounded metal container. Hold Trigger Guard against container to ground Spray Gun.



8. Press Trigger until pressure is relieved, then release and lock Trigger.
9. Rotate Spray Tip to **SPRAY** position.
10. Rotate **PRIME/SPRAY** Valve to **PRIME** position when Sprayer not in use.

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⚠ WARNING

TO PREVENT SERIOUS INJURY:

Do not spray flammable or combustible liquids in a confined area. Spray area must be well ventilated. Do not smoke while spraying or spray where sparks or flame is present. Keep pump assembly in a well ventilated area at least 20 feet (6.1 m) from the spray area. Do not spray the pump assembly.

Do not use bleach or halogenated hydrocarbon solvents (DCM, 1,1,1-trichloroethane, methyl bromine, carbon tetrachloride, and ethyl iodide). Long term exposure to many chlorinated hydrocarbons through inhalation can result in liver and kidney toxicity. Exposure of unprotected skin to the solvents used can cause defatting of the skin resulting in dermatitis. Methylene chloride and vinyl chloride have also been shown to be human carcinogens. Some of these solvents are flammable. Welding operations near these materials can create phosgene, a highly toxic gas.

Wear ANSI-approved safety goggles, NIOSH-approved respirator, and heavy-duty work gloves during use.

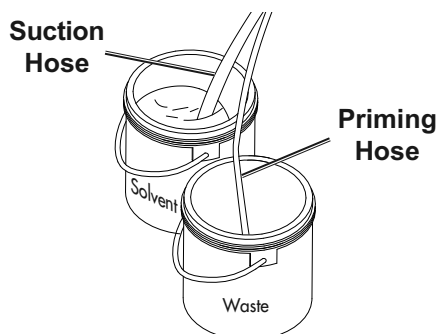
Priming

WARNING! TO PREVENT SERIOUS INJURY: Only water-based materials or materials with a minimum flash point of 38°C (100°F) should be used for spraying and cleaning. Only use water or mineral spirits for priming and cleaning. Only use water-based or oil-based paint for spraying.

Prime with Solvent

WARNING! To prevent high pressure solvent or paint splatter, remove Nozzle Guard and Spray Tip according to *Spray Tip and Nozzle Guard on page 20.*

- Depressurize Sprayer according to *Depressurize Sprayer on page 11.*
- Lock Trigger.
- Cover floor under Sprayer and containers with drop cloth.
- Designate two 1 gallon or larger containers, one for solvent and one for waste. If using mineral spirits, use metal containers.
- Separate Priming Hose from Suction Hose.
 - Place Suction Hose on bottom of solvent container.
 - Place Priming Hose on bottom of waste container.
- Fill solvent container with enough solvent to cover Suction Filter by 1".
 - Water for water-based paint.
 - Mineral spirits for oil-based paint.
- Prime Pump:**
 - Turn Pressure Knob to **PRIME/CLEAN** indicator.
 - Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - Press **PRIME** Button three times.
 - Plug Sprayer into 120VAC grounded GFCI outlet.
 - Turn Power Switch on. Pump will start. If pump does not start, turn Pressure Knob clockwise until it starts.
 - When solvent begins to flow out of Priming Hose, turn Power Switch off.
- Prime with paint according to *Prime with Paint on page 13.*

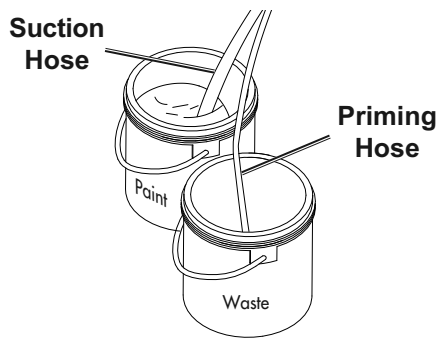


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Prime with Paint

1. Prime with solvent according to **Prime with Solvent on page 12.**
2. Lock Trigger.
3. **CAUTION!** To prevent high pressure solvent or paint splatter, remove **Nozzle Guard and Spray Tip** according to **Spray Tip and Nozzle Guard on page 20.**
4. Strain paint through paint strainer.
5. Remove Suction Hose from solvent container and place on bottom paint container.
6. Leave Priming Hose in waste container.



7. **Prime Pump:**
 - a. Turn Pressure Knob to **PRIME/CLEAN** indicator.
 - b. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - c. Turn Power Switch on. Pump will start. If pump does not start, turn Pressure Knob clockwise until it starts.
 - d. When solvent has been purged and paint begins to flow out of Priming Hose, rotate **PRIME/SPRAY** Valve to **SPRAY** position. Pump will cycle on then stop.
8. **Prime Spray Gun:**
 - a. Unlock Trigger.
 - b. Point Spray Gun at interior side of waste container.
 - c. Press Trigger.
 - d. When solvent has been purged and paint begins to flow, release and lock Trigger. Pump will cycle on then stop.
9. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
10. Remove Priming Hose from solvent container and place into paint container.



11. Spray paint according to **Spraying on page 15.**

NOTE: Dispose of solvent, paint and waste according to local hazardous waste standards.

SAFETY

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Clean Sprayer immediately to prevent permanent damage.

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Accessories and Replacement Parts

Accessories

Accessories are available at Harbor Freight stores and at <http://www.harborfreight.com>.

32 oz. Storage Fluid	Spray Gun
50' Spray Hose*	Nozzle Guard
513 Spray Tip	20" Tip Extension
515 Spray Tip	60 Mesh Coarse Spray Gun Filter
517 Spray Tip	100 Mesh Fine Spray Gun Filter
Quick Clean Faucet Adaptor	

Repair and Service Parts

Parts are available by calling 1-888-866-5797 or emailing productsupport@harborfreight.com.

25' Spray Hose*	Piston Seal Repair Kit
Suction Set	Inlet Valve Repair Kit
Prime/Spray Valve Repair Kit	
Outlet Valve Repair Kit	

***In the event that the supplied hose assembly is required to be replaced, replace only with Harbor Freight replacement hoses.**

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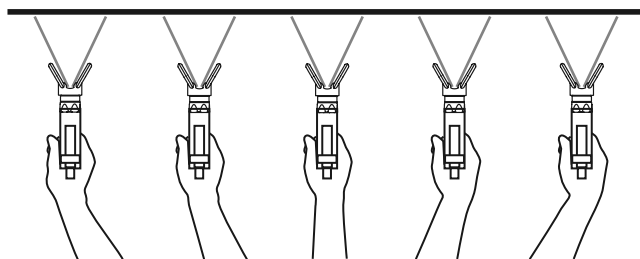
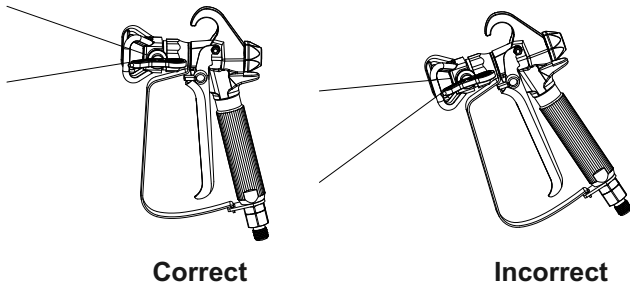
Clean Sprayer immediately to prevent permanent damage.

Spraying

WARNING! TO PREVENT SERIOUS INJURY: Only water-based materials or materials with a minimum flash point of 38°C (100°F) should be used for spraying and cleaning. Only use water or mineral spirits for priming and cleaning. Only use water-based or oil-based paint for spraying.

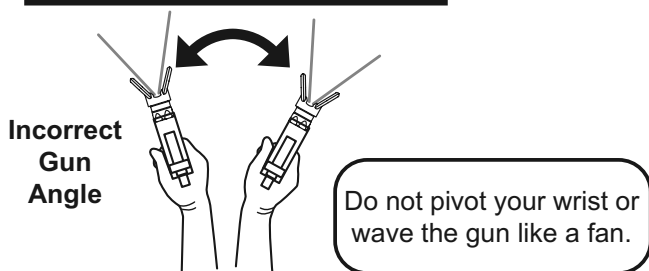
Proper Spraying Techniques

Keep the Spray Gun upright and at a right angle to the workpiece.



Correct Gun Angle

Move your arm, not just your wrist.
Point gun directly towards the surface and maintain an even, steady distance and speed.



To Avoid Paint Build Up

Apply two thin coats rather than one thick coat. Overlap 1/3 to 1/2 on second coat.

Start moving the Spray Gun before fully depressing Trigger.

Fully depress Trigger before contacting the workpiece.

When finished with the stroke, release the Trigger while still moving the Spray Gun and after passing the workpiece.

Before use, the Sprayer must be primed according to *Priming on page 12.*

Note: Remove or cover objects that you want to protect from overspray and paint mist.

1. Attach Nozzle Guard and Spray Tip according to *Spray Tip and Nozzle Guard on page 20.*
2. Rotate **PRIME/SPRAY** Valve to **SPRAY** position.
3. Turn Pressure Knob to **HIGH SPRAY** indicator.

Note: Practice painting techniques on a scrap workpiece.

4. Point Spray Gun 10" - 12" away from scrap workpiece.
5. Unlock and press Trigger fully, spraying, following "**Proper Spraying Techniques**" and "**To Avoid Paint Build Up**".
6. Adjust Pressure Knob as necessary to achieve desired consistency and reduce overspray.

Note: The motor has thermal overload protection. If unit overheats, allow approximately 45 minutes for unit to cool.

7. When finished spraying:
 - a. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - b. Turn Power Switch off.
 - c. Clean according to *User-Maintenance Instructions on page 16.*

Clearing Spray Tip Blockage

- a. Lock Trigger.
- b. Reverse Spray Tip.
- c. Unlock Trigger and Spray on scrap workpiece.
- d. Release and lock Trigger.

Note: If Spray Tip won't clear, replace according to *Spray Tip and Nozzle Guard on page 20.*

NOTE: *Dispose of solvent, paint and waste according to local hazardous waste standards.*

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User-Maintenance Instructions

After Every Use - Cleaning

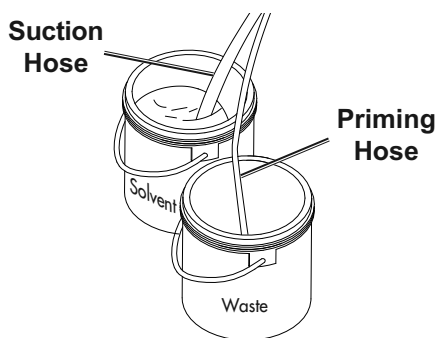
WARNING! TO PREVENT SERIOUS INJURY: Only water-based materials or materials with a minimum flash point of 38°C (100°F) should be used for spraying and cleaning. Only use water or mineral spirits for priming and cleaning. Only use water-based or oil-based paint for spraying.

To clean sprayer with garden hose (water-based materials only), go to page 18.

1. Turn Power Switch off.
2. Depressurize Sprayer according to **Depressurize Sprayer on page 11.**
3. Lock Trigger.
4. **CAUTION!** To prevent high pressure solvent or paint splatter, remove Nozzle Guard, Spray Tip, and Seal according to **Spray Tip and Nozzle Guard on page 20.**

CAUTION! TO PREVENT INJURY: TO PREVENT FIRE: When using mineral spirits, use metal containers only. **DO NOT** use plastic containers.

5. Designate two 1 gallon containers, one for solvent and one for waste.
6. Remove Suction and Priming Hoses from paint container and wipe off excess paint.
7. Place Suction Hose on bottom of solvent container.
8. Place Priming Hose on bottom of waste container.



9. Fill solvent container with enough solvent to cover filter by 4".
 - Water for water-based paint.
 - Mineral spirits for oil-based paint.
10. Place Nozzle Guard, Spray Tip and Seal in small container of:
 - Soap and water for water-based paint.
 - Mineral spirits for oil-based paint.

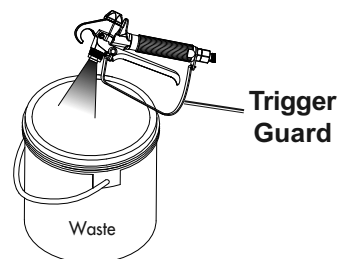
11. Clean Pump

- a. Turn Pressure Knob to **PRIME/CLEAN** indicator.
- b. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
- c. Plug Sprayer into 120VAC grounded GFCI outlet.
- d. Turn Power Switch on. Pump will start. If pump does not start, turn Pressure Knob clockwise until it starts.
- e. When paint has been purged and solvent begins to run clear, rotate **PRIME/SPRAY** Valve to **SPRAY** position. Pump will cycle on then stop.

12. Clean Hoses and Spray Gun

- a. Unlock Trigger.
- b. Point Spray gun into paint container, then press Trigger to pump excess paint back into paint container.
- c. Point Spray Gun at interior side of waste container.

Note: If using mineral spirits, hold Trigger Guard against edge of metal waste container to ground Spray Gun.



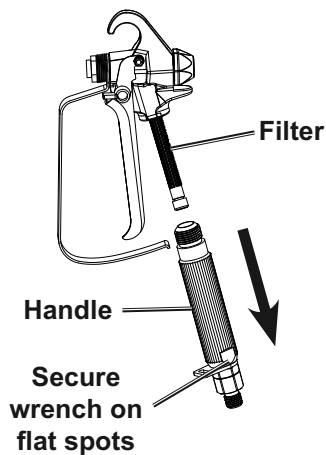
- d. Press Trigger until solvent runs clear, then release and lock Trigger.
13. If mineral spirits used, clean again with water.
 14. When finished:
 15. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - a. Turn Power Switch off.
 - b. Unplug Sprayer.
 - c. Remove Hoses from containers.
 - d. Let Hoses dry completely before storage.

RETURNS NOT ACCEPTED & WARRANTY VOID
if Sprayer is not properly cleaned immediately after every use.

Clean Sprayer immediately to prevent permanent damage.

16. **Clean Spray Gun Filter, Nozzle Guard and Spray Tip**

- Depressurize Sprayer according to ***Depressurize Sprayer on page 11.***
- Turn Power Switch off.
- Unplug Sprayer.
- Remove Spray Gun from Spray Hose.
- Remove Handle from Spray Gun with included wrench.



- Remove Filter by turning it counterclockwise.
- Place Filter in container of solvent with Nozzle Guard, Spray Tip and Seal.
- Using included brush, scrub accessories until clean.
- Let accessories dry completely.
- Reassemble Spray Gun and attach to Spray Hose.

17. Store Sprayer in a clean dry location out of reach of children.
If Sprayer will not be used for longer than 48 hours, store according to ***Long-Term Storage on page 19.***

NOTE: *Dispose of solvent, paint and waste according to local hazardous waste standards.*

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Cleaning with Garden Hose - Water-Based Materials ONLY

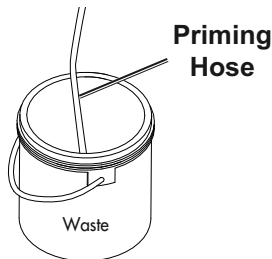
SAFETY

SETUP

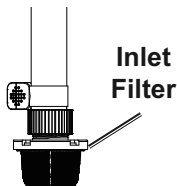
OPERATION

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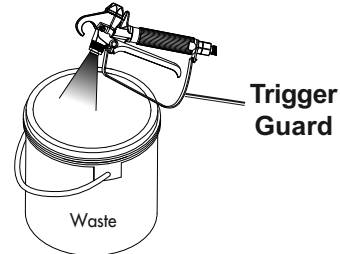
1. Turn Power Switch off.
2. Depressurize Sprayer according to ***Depressurize Sprayer on page 11.***
3. Lock Trigger.
4. **CAUTION!** To prevent high pressure water or paint splatter, remove Nozzle Guard, Spray Tip, and Seal according to ***Spray Tip and Nozzle Guard on page 20.***
5. Designate a 1 gallon container for waste.
6. Remove Suction and Priming Hoses from paint container and wipe off excess paint.
7. Place Priming Hose on bottom of waste container.



8. Remove Suction Hose's Inlet Filter.
9. Attach garden hose to Suction Hose.
10. Place Nozzle Guard, Spray Tip, Seal and Inlet Filter in small container of soap and water.
11. **Clean Pump**
 - a. Turn Pressure Knob to **PRIME/CLEAN** indicator.
 - b. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - c. Plug Sprayer into 120VAC grounded GFCI outlet.
 - d. Open garden hose's valve.
 - e. Turn Power Switch on. Pump will start. If pump does not start, turn Pressure Knob clockwise until it starts.



- c. Point Spray Gun at interior side of waste container.



- d. Press Trigger until water runs clear, then release and lock Trigger.
14. When finished:
 15. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 - a. Turn Power Switch off.
 - b. Unplug Sprayer.
 - c. Close garden hose's valve.
 - d. Depressurize Sprayer according to ***Depressurize Sprayer on page 11.***
 - e. Remove garden hose from Suction Hose.
 - f. Remove Priming Hose from waste container.
 - g. Let Hoses dry completely before storage.
 16. **Clean Spray Gun Filter, Nozzle Guard and Spray Tip**
 - a. Turn Power Switch off.
 - b. Unplug Sprayer.
 - c. Remove Spray Gun from Spray Hose.
 - d. Remove Handle from Spray Gun with included wrench.
 - e. Remove Filter by turning it counterclockwise.
 - f. Place Filter in container of soapy water with Nozzle Guard, Spray Tip and Seal.
 - g. Using included brush, scrub accessories until clean.
 - h. Let accessories dry completely.
 - i. Reassemble Spray Gun and attach to Spray Hose.
 17. Store Sprayer in a clean dry location out of reach of children.
If Sprayer will not be used for longer than 48 hours, store according to ***Long-Term Storage on page 19.***

NOTE: *Dispose of solvent, paint and waste according to local hazardous waste standards.*

RETURNS NOT ACCEPTED & WARRANTY VOID
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Clean Sprayer immediately to prevent permanent damage.

Long-Term Storage

1. Clean Sprayer according to ***User-Maintenance Instructions on page 16.***
 2. Depressurize Sprayer according to ***Depressurize Sprayer on page 11.***
 3. Designate storage area in a clean dry location out of reach of children.
 4. Remove Suction Hose from Sprayer.
 5. Attach Suction Hose, included with Storage Fluid, to Sprayer.
 6. Open Storage Fluid bottle, place Suction and Prime Hoses in bottle, then place bottle on ground.
 7. Rotate **PRIME/SPRAY** Valve to **PRIME** position.
 8. Plug Sprayer into 120VAC grounded GFCI outlet.
 9. Turn Power Switch on. Pump will start. If pump does not start, turn Pressure Knob clockwise until it starts.
 10. When Storage Fluid begins to flow out of Priming Hose, turn Power Switch off.
 11. Unplug Sprayer.
 12. Leave Hoses in Storage Fluid bottle.
- NOTE: After storage, dispose of storage fluid according to local hazardous waste standards.***

Maintenance and Lubrication



Procedures not specifically explained in this manual must be performed only by a qualified technician.

!WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Unplug the Sprayer from its electrical outlet before performing any inspection or maintenance procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipment.

If abnormal noise, vibration, or leaking air occurs, have the problem corrected before further use.

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for:
 - loose hardware,
 - misalignment or binding of moving parts,
 - damaged cord/electrical wiring,
 - damaged Nozzle Guard or Spray Tip,
 - damaged Spray Hose,
 - cracked or broken parts, and
 - any other condition that may affect its safe operation.
2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
3. Do not attempt to repair hose. Hose must be replaced if damaged.
4. Store in clean dry location out of reach of children.

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SAFETY

SETUP

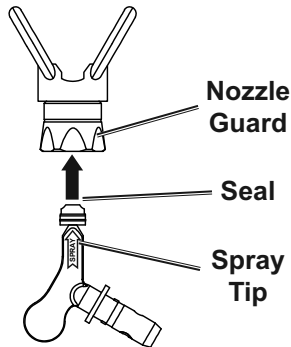
OPERATION

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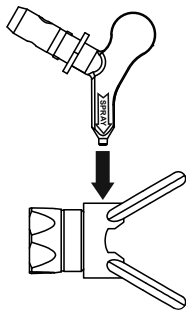
Spray Tip and Nozzle Guard

Attach

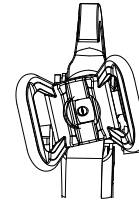
1. Seat Seal on end of Spray Tip, then insert Seal into back of Nozzle Guard.



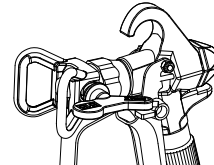
2. Insert Spray Tip, then rotate a full turn to align Seal.



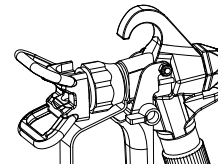
3. Remove Tip, then thread Nozzle Guard onto Spray Gun. Turn nut by hand until almost tight, then holding nut and Nozzle Guard together, tighten completely. Do not overtighten.



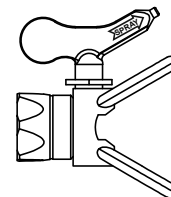
- Attach horizontally for horizontal spray pattern.



- Attach vertically for vertical spray pattern.

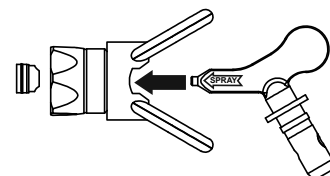


4. Install Tip into Nozzle Guard, then rotate until **SPRAY** end is facing forward.



Remove

1. **During operation:** Remove Spray Tip from Nozzle Guard, then remove Nozzle Guard from Spray Gun.
2. **During cleaning or changing tip size:** Remove Spray Tip from Nozzle Guard, then remove Nozzle Guard from Spray Gun. Insert Spray Tip into front of Nozzle Guard to remove Seal.



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Troubleshooting

Problem	Possible Causes	Likely Solutions
Pump will not prime.	Insufficient cleaning left input valve clogged.	Press the Prime Button underneath the pump to loosen the inlet check ball. If that fails: a. Remove Inlet Filter from Suction Hose. b. Attach garden hose to Suction Hose. c. Rotate PRIME/SPRAY Valve to PRIME position. d. Open garden hose's valve, wait until water flows into waste container. e. Close garden hose's valve, remove garden hose. f. Attach Inlet Filter. g. Proceed to Prime with Solvent on page 12 .
Decreased output.	Obstructed trigger.	Clean around trigger to ensure movement.
Inconsistent paint flow, blobs and splatters.	1. Clogged Spray Tip or damaged/clogged Filter. 2. Contaminated paint.	1. Clean, adjust or replace Spray Tip or Filter. 2. Remove paint and strain it.
Paint surface is bumpy or has orange peel texture.	1. Incorrect paint volume. 2. Paint gun too far from paint surface during spraying.	1. Adjust Pressure Knob. 2. Hold spray gun closer to surface during spraying.
Paint sags or runs.	1. Paint applied too thick. 2. Paint gun too close to work surface. 3. Uneven or hesitant motion of spray gun. 4. Excess overlapping of each spray stroke.	1. Apply thinner coats, allowing paint to get tacky between coats. 2. Move spray gun further back from paint surface when applying paint. 3. Keep spray gun moving during painting. Hesitations can cause sags or runs. 4. Overlap each stroke to keep the coverage even, but be aware that you are adding coat thickness by overlapping.
Blotchy surface (blushing) or uneven color.	1. Uneven paint application. 2. Work material absorbs paint unevenly.	1. Start each stroke off the work material and overlap each stroke consistently. 2. Use a conditioner or sealer coat before applying the finish coat.
Spots on surface with light center (fish eyes).	1. Improper primer or incompatible surface. 2. Surface contamination.	1. Check manufacturer's recommendations for primer or compatible surfaces. 2. Clean surface thoroughly before applying paint.
Spots on surface with dark center (contamination).	1. Dust or dirt on surface. 2. Insufficiently sanded. 3. Raised grain.	1. Clean surface with compressed air or tack cloth before painting. 2. Sand wood to a sufficiently fine grit before painting. 3. Wipe wood surface with thinner to raise grain, then sand with fine grit to knock off "hairs".

Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175449443 when ordering parts.

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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 MAKE ANY REPAIRS TO THE PRODUCT, OR 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 RISK 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.

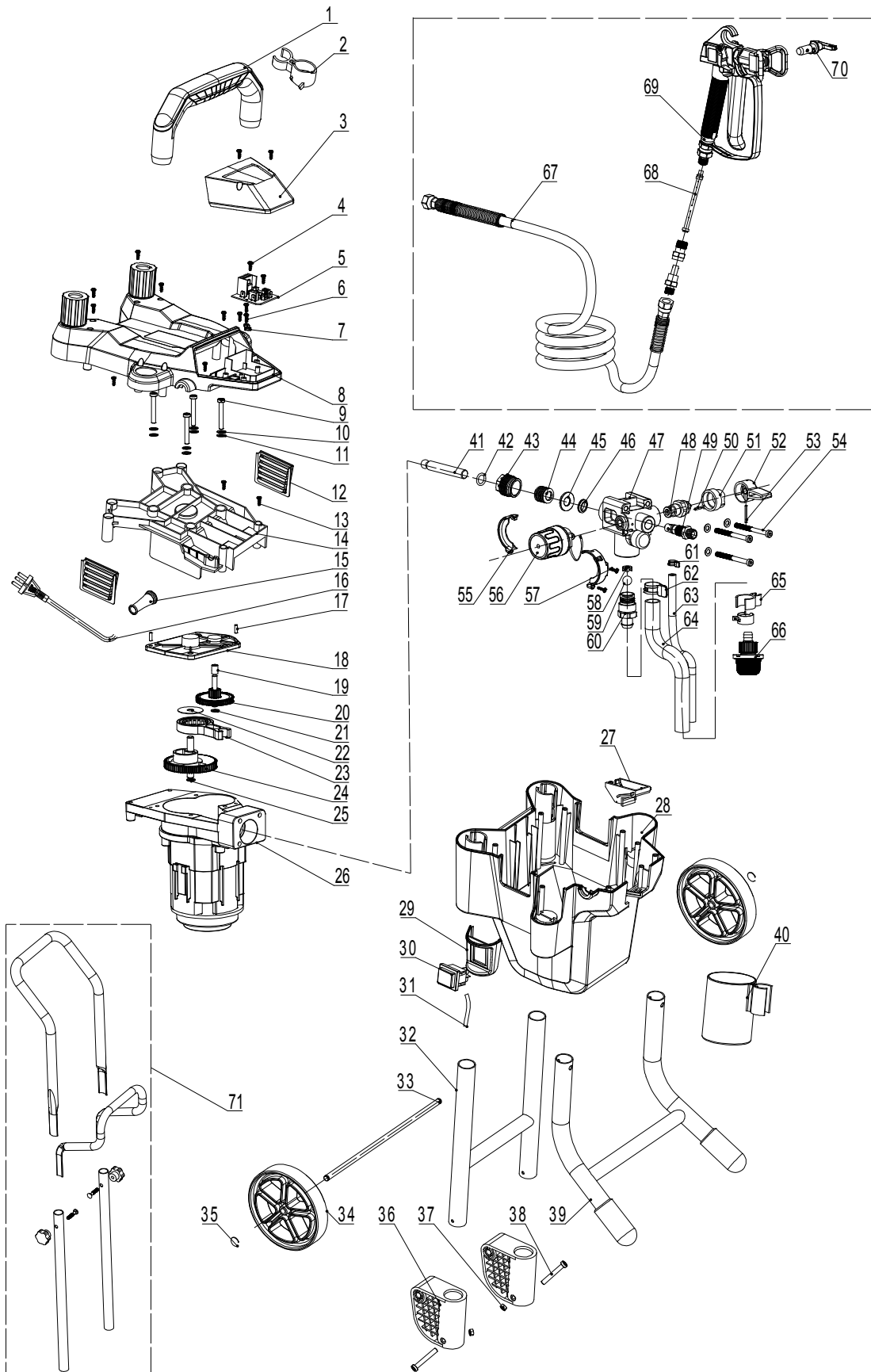
Parts List and Diagram

Parts List

Part	Description	Qty	Part	Description	Qty
1	Handle	1	37	Nut	2
2	Suction Hose Clip	1	38	Screw	2
3	PCBA Cover	1	39	Metal Support 2	1
4	Screw	2	40	Hose Storage	1
5	PCBA	4	41	Ball Head Plunger Rod	1
6	Screw	4	42	O-Ring	1
7	Cord Clamp	2	43	Plunger Rod	1
8	Top Housing	1	44	V Ring Unit	1
9	Screw	4	45	Plunger Positioning Pad	1
10	Flat Washer	7	46	Sealing Ring	1
11	Spring Washer	7	47	Pump	1
12	Vent	2	48	Priming Valve	1
13	Screw	23	49	Discharge Valve	1
14	Gearbox Housing	1	50	Pin	1
15	Power Cord Sleeve	1	51	Priming Switch Base	1
16	Power Cord	1	52	Prime/Spray Valve	1
17	Pin	2	53	Pin	1
18	Gearbox Cover	1	54	Screw	3
19	Bearing	1	55	Pressure Indicator	1
20	Dual-Gear Assembly	1	56	Pressure Knob	1
21	Washer	1	57	Screw	1
22	Crank Arm Ring	1	58	Valve	1
23	Crank Arm Unit	1	59	Tungsten Ball	1
24	Eccentric Gear Assembly	1	60	Inlet Valve	1
25	Washer	1	61	Priming Hose Clamp	1
26	Motor	1	62	Suction Hose Clamp	1
27	Drain Housing	1	63	Priming Hose	1
28	Bottom Housing	1	64	Suction Hose	1
29	Power Switch Cover	1	65	Hose Clip	1
30	Power Switch	1	66	Inlet Filter/Garden Hose Adapter	1
31	Wire	1	67	Spray Hose	1
32	Metal Support 1	1	68	Spray Gun Filter	2
33	Axle	1	69	Spray Gun	1
34	Tire	2	70	515 Spray Tip	1
35	C-Clip	2	71	Handle Assembly	1
36	Wheel Support	2			

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Clean Sprayer immediately to prevent permanent damage.

Assembly Diagram



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Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The logo for Avanti, featuring the word "AVANTI" in a bold, italicized, sans-serif font. A stylized, thick black arrow points from the left towards the letter "A". A small "TM" trademark symbol is located at the end of the word.

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