



Airless Paint Sprayer

Instruction Manual

19802



! WARNING

**READ AND UNDERSTAND THIS INSTRUCTION MANUAL
PRIOR TO USING THIS PRODUCT. FAILURE TO DO SO
MAY RESULT IN SERIOUS INJURY OR DEATH.**

Keep this instruction manual for future reference.

IMPORTANT SAFETY INSTRUCTIONS

This instruction manual is intended for your benefit. Please read and follow the safety, installation, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice.

The safety instructions provided in this manual are not intended to cover all possible conditions and practices that may occur when operating, maintaining and cleaning power equipment.

Always use common sense and pay particular attention to all the DANGER, WARNING, CAUTION and NOTICE statements in this manual.

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.
	

Maintain labels. These carry important information. If unreadable or missing, contact Star-Asia USA, LLC for free replacement labels.

The label on your tool may include the following symbols. The symbols and their definitions are as follows:

Symbol	Property or Statement	
	Safety Alert Symbol	
V	Volts	
A	Amperes	
Hz	Hertz	
W	Watts	
~	Alternating Current (AC)	
	Direct Current (DC)	
~	Alternating or Direct Current (AC/DC)	
⊕	Earthing Terminal	
⦿	Class I construction (grounded)	
⊞	Class II construction (double insulated)	
PSI	Pounds Per Square Inch	
MPa	Megapascals	
RPM	Revolutions Per Minute	
min	Minutes	
s	Seconds	

Symbol	Property or Statement	
∅	Diameter	
	Read and understand this instruction manual prior to using this product.	
	Wear ANSI approved safety glasses.	
	Wear an approved respirator.	
	Wear appropriate ear protection.	
	Risk of Electric Shock.	
	Risk of Fire.	
		Risk of Explosion.

Symbol	Property or Statement		
			Risk of Skin Injection.
		Risk of Toxic Fumes. Use only in well ventilated areas.	
	Pressurized Aluminum Parts Hazard.		

Symbol	Property or Statement
	Avoid ignition sources such as pilot lights, cigarettes, portable lamps, etc.
	Relieve System Pressure.
	Hot Surfaces/Burn Hazard.

UNPACKING & INSPECTION

When unpacking, please inspect the product carefully to ensure the product is intact and undamaged. If any parts are missing or broken, please call 1-800-386-0191 as soon as possible.



WARNING

Do not operate this power tool if damaged during shipment, handling or misuse. Do not operate the tool until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage.

- Items included:
- Spray Gun
 - Nozzle Tip Guard
 - High Pressure Hose
 - 517 Spray Tip Nozzle
 - Piston Pump
 - Funnel

GENERAL POWER TOOL SAFETY RULES



WARNING

READ ALL SAFETY WARNINGS AND ALL INSTRUCTIONS. Failure to follow the warnings and instructions may result in electric shock, fire, explosion, and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool.

WORK AREA SAFETY

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment.** Always wear eye protection with side shields. Protective equipment such as respirators, dust masks, non-skid safety shoes, hard hat, and hearing protection will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source, picking up or carrying the tool.** Carrying power tools with your finger on

- the switch or energizing power tools that have the switch on invites accidents.
- **Do not overreach.** Always keep proper footing and balance to enable better control of the power tool in unexpected situations.
- **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore safety principles.** A careless action can cause severe injury within a fraction of a second.
- **This product is not intended for use by persons (including children) whose physical, sensory, or mental capabilities are different or reduced, or lack experience or knowledge unless such persons receive supervision or training in the operation of the appliance by a person responsible for their safety.** Children should be supervised to ensure that they do not use the device as toys.

POWER TOOL USE AND CARE

- **CLEAN THE SPRAYER AFTER EACH USE.**

SERVICE

- **Do not force the power tool.** Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- **Check for damaged parts before each use.** Check to determine that guards operate properly and perform their intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center. Following this rule will reduce the risk of shock, fire, or serious injury.
- **Inspect power tool cord periodically and, if damaged, it must be replaced only by the manufacturer or by an authorized service center to avoid risk.** Following this rule will reduce the risk of electric shock or fire.
- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY WARNINGS



This sprayer is not intended for use with flammable or combustible materials used in industrial or fixed location applications such as factories or paint shops. Follow all applicable federal, state, or provincial regulations and comply to NFPA 33 and OSHA requirements if used in these applications.

FIRE SAFETY



To reduce the risk of fire or explosion:

- **Fumes from solvent and paint are flammable and may ignite or explode.** Use only in a well-ventilated area and allow fresh air to move through the work area. Keep the pump well-ventilated and do not spray the pump assembly.
- **Sprayer generates sparks.** When flammable liquid is used in or near the sprayer or for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors.
- **Do not spray flammable or combustible materials near an open flame or sources of ignition such as water heaters, cigarettes, motors, and electrical equipment with pilot lights.** Use only water-based or mineral spirit-type materials with a flash point greater than 70°F (21°C).
- **Paint or solvent flowing through the equipment can 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.
- **Prevent static discharge by ensuring that all containers and collection systems are properly grounded.**
- **Always use a grounded outlet and grounded extension cords.** Do not use a 3-to-2 plug adapter.
- **Do not use a paint or solvent containing halogenated hydrocarbons.** Know the contents of 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 solvents manufacturer's safety instructions.
- **Always keep a working fire extinguisher nearby.**
- **Do not smoke in the work area.**
- **Do not operate light switches, engines, or similar spark producing products in the spray area.**
- **Keep the work area clean and free of paint or solvent containers, rags, and other flammable materials.**

ELECTRICAL SAFETY

To reduce the risk of electric shock:

- **This product requires a properly grounded outlet to reduce the risk of electric shock.** Ensure the power outlet is properly grounded in accordance with all local codes and ordinances. The plug and outlet should look like those in Fig. A. Consult with a qualified electrician or service person if grounding instructions are not understood or if there is doubt as to whether the equipment is properly grounded.
- **Do not modify the power cord plug provided with the tool.** Never remove the grounding prong from the plug. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.
- **Do not use the tool if the power cord or plug is damaged.** If damaged, have it repaired by a service facility before use.
- **Outlet must match the plug.** Do not use any kind of adapter with an earthed (grounded) plug. Unmodified plugs and matching outlets will reduce the risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose this product to rain or wet conditions.** Water entering the product will increase the risk of electric shock.
- **If an extension cord is needed, use a 12 AWG (2.5mm²) minimum to supply the correct amount of current for the tool.** An undersized cord will result in voltage drop which will cause loss of power and overheating.
- **Use only a 3-wire extension cord with a grounding plug that has a properly grounded receptacle that will accept the plug on this tool.**
- **Follow local codes when choosing a solvent pail for flushing.** Use only conductive metal pails placed on a grounded surface such as concrete. Do not place the pail on a nonconductive surface such as paper or cardboard. Connect a ground wire between the pail and a ground such as a metal pipe. When flushing or relieving pressure hold a metal portion of the spray gun against the pail to ensure continuity to ground then spray.

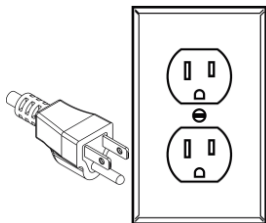


Fig. A

SKIN INJECTION SAFETY

**IN CASE OF ACCIDENTAL SKIN INJECTION
SEEK IMMEDIATE MEDICAL TREATMENT!**

High pressure spray or leaks can penetrate skin resulting in serious injury or death.

To reduce the risk of skin injection:

- **Verify all connections are tightened BEFORE turning on the unit.**
- **Do not aim the gun or spray at any person or animal.**
- **Keep hands and other body parts clear of spray tip and leaks.** Do not attempt to stop leaks with any part of the body.
- **Always use a nozzle tip guard.** Never spray without a nozzle tip guard installed.
- **Engage the trigger lock when not spraying.** Equipment maintains pressure after power is shut off.
- **Inspect the hoses and parts for any damage before each use.** Replace any damaged hose or parts only with original replacements.
- **Replacement components must have a pressure rating not less than the pump rating of 3000 PSI (205 bar).**



- **Always follow the Pressure Relief Procedure to turn off and relieve pressure.** Do not leave the unit energized or under pressure while unattended or not in use.
- **Use caution when cleaning and changing hoses, nozzle tips, tip guards, or when installing extensions.** Follow the Pressure Relief Procedure for turning off and relieving pressure before attempting to change.

HOT SURFACE SAFETY

Equipment surfaces and fluid that are pressurized can become hot during operation. Avoid burns by not touching hot fluid or equipment.

EQUIPMENT SAFETY

! WARNING



MISUSE OF THIS EQUIPMENT CAN CAUSE DEATH OR SERIOUS INJURY.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed. Always wear personal protective equipment including eye protection, face shield, ear protection and respirator or face mask. Always review the MSDS and know the specific hazards for the fluid you are using.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component.

- Use fluids and solvents that are compatible with equipment. Always read fluid and solvent manufacturer’s warnings. For complete information about your material, request MSDS from distributor or retailer.
- Pressurized equipment can start without warning. Before inspecting, moving, or servicing the equipment, follow the Pressure Relief Procedure in this manual and disconnect the power supply.

PRESSURIZED ALUMINUM SAFETY

! WARNING



Using fluids that are incompatible with aluminum in pressurized equipment can cause a serious chemical reaction and equipment rupture. Failure to follow this warning could result in death, serious injury, or property damage.

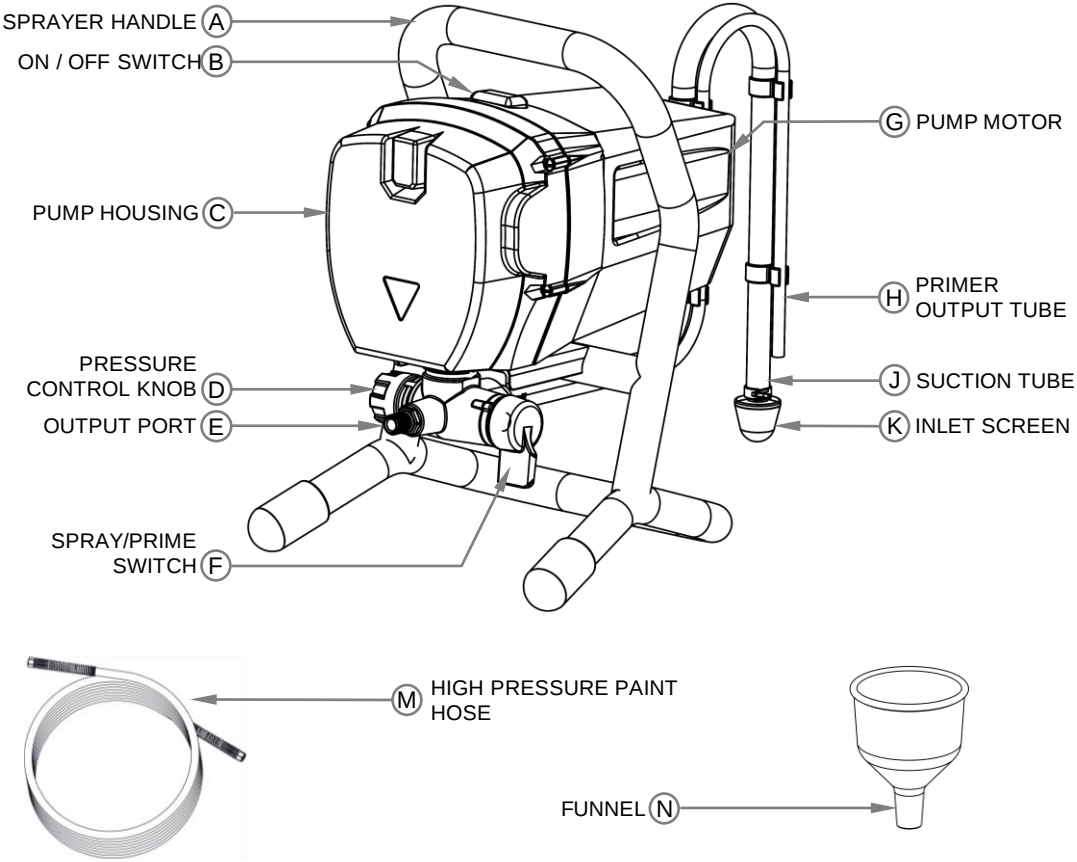
- Do not use 1,1, 1 – trichloroethane, methylene chloride, or other halogenated hydrocarbon solvents or fluids containing such solvents.
- Many other fluids can contain chemicals that may react with aluminum. Contact your material supplier for compatibility.

SPECIFICATIONS

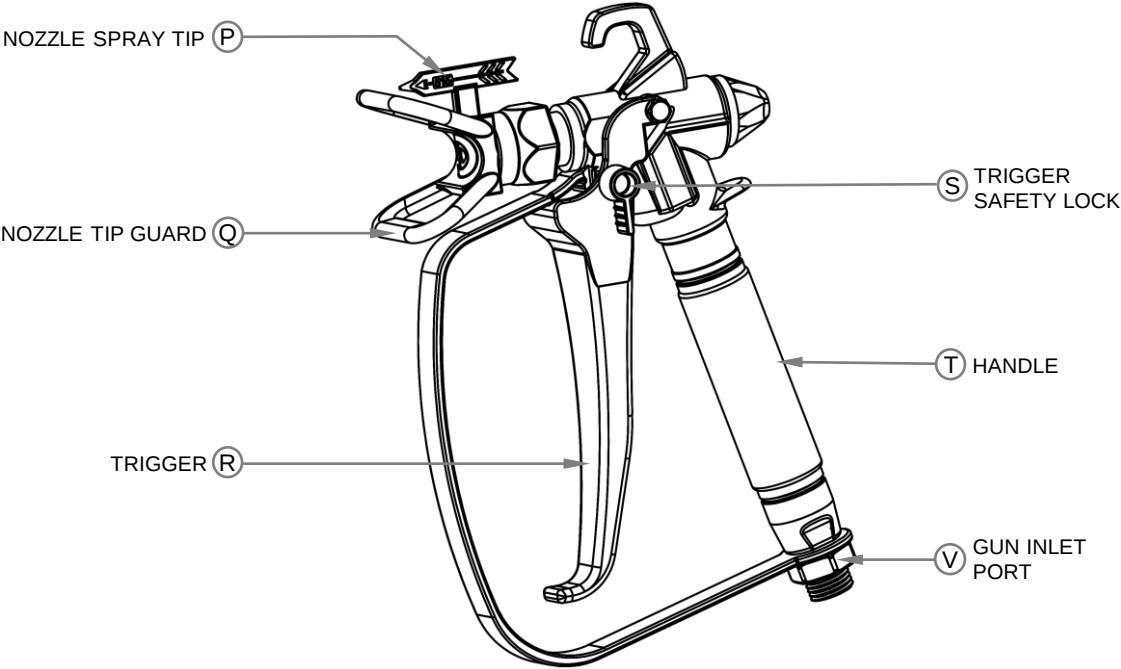
Rated Voltage:	120VAC ±10% ~ 60Hz ± 1 Hz
Rated Power:	750 W
Rated Current:	7 A
Maximum Working Pressure (MWP):	20.7 MPa / 3000 PSI
Hose Bursting Pressure:	83 MPa / 12,000 PSI
Sound Pressure Level:	89 db
Vibration Value:	0.715 m/s ²
Maximum Delivery:	1.1 lpm / 0.29 GPM
Work Environment Temperature:	5°C ~ 40°C / 40°F ~ 105°F
Work Environment Humidity:	30% ~ 95%
Standard Nozzle:	517
Transportation and Storage Temperature:	25°C ~ 55°C / 75°F ~ 130°F
Hose Length:	7.6 m / 25 ft
Paint Outlet Connector Size	1/4"-18 NPSM
Weight:	6.1 kg / 13.5 lbs

FEATURE IDENTIFICATION

SPRAYER



AIRLESS SPRAY GUN



OPERATION

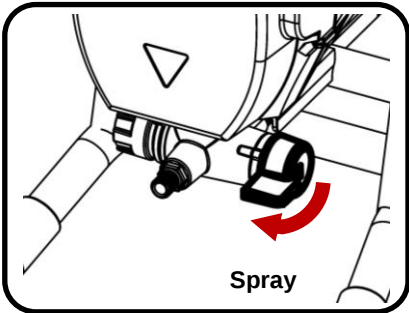
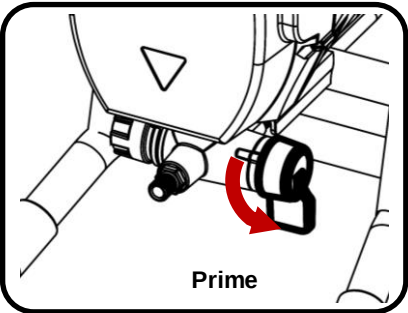
NOTICE

CLEAN AFTER USE TO PREVENT PERMANENT
DAMAGE TO THE SPRAYER.

RETURNS NOT ACCEPTED & WARRANTY VOID IF SPRAYER IS NOT
PROPERLY CLEANED IMMEDIATELY AFTER EVERY USE.

Prime/Spray Switch

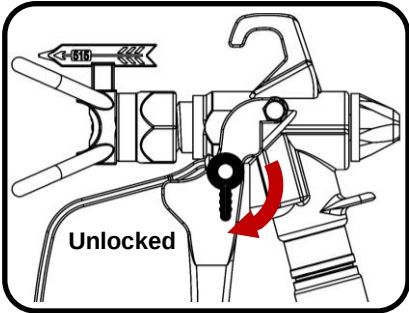
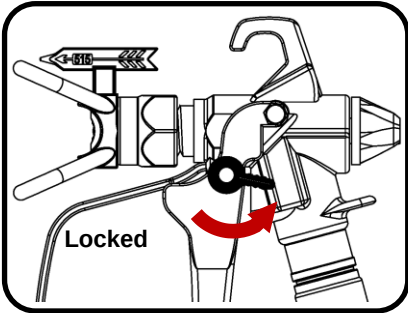
The Prime/Spray Switch (F) toggles the unit between the priming mode and the spraying mode.



Trigger Lock

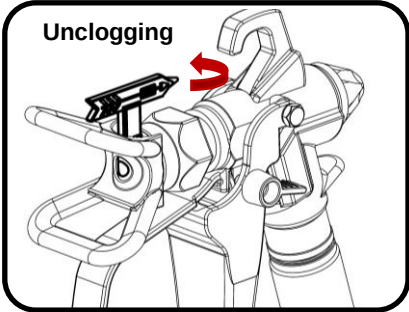
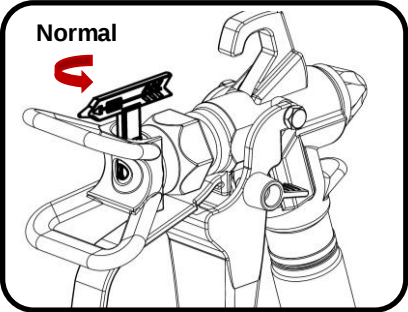
The Trigger Lock (S) prevents the trigger from being accidentally actuated such as when the gun is dropped.

**ALWAYS ENGAGE THE
TRIGGER LOCK WHEN THE
SPRAY GUN IS NOT IN USE.**



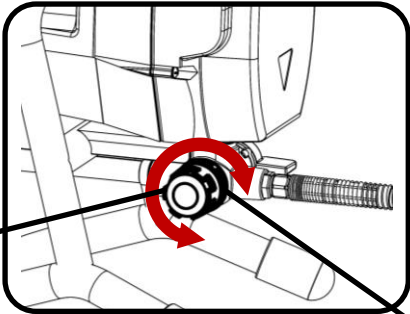
Nozzle Spray Tip

The Nozzle Spray Tip (P) is removable and reversible to make cleaning and unclogging easier. Normal operation is with the arrow pointed outwards and away from the gun. Unclogging the nozzle is done by turning the Nozzle Spray Tip so the arrow is pointing inwards towards the gun.



Pressure Control Knob

The Pressure Control Knob (D) adjusts the pressure of the paint output at the Output Port (E). Turning the knob fully to the right (clockwise) adjusts the paint output to the maximum pressure for high pressure spraying. Turning the knob fully to the left (counter-clockwise) will reduce the paint output to the minimum pressure. Align the Pressure Control Knob indicator to the desired function as shown on the label (shown below).



High Pressure Spray

Low Pressure Spray

Prime/Clean

Roller

PRESSURE RELIEF PROCEDURE

! WARNING

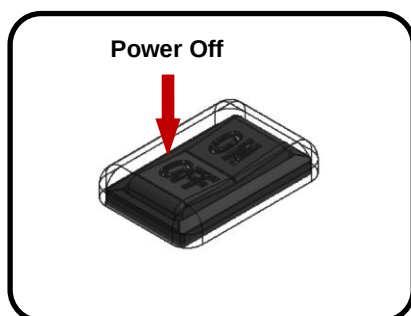


ALWAYS RELIEVE PRESSURE WHEN SPRAYING IS COMPLETED, AND PRIOR TO CLEANING, SERVICING, OR TRANSPORTING.

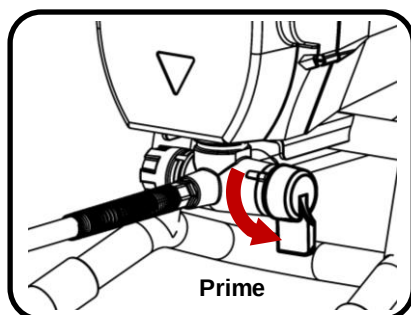


RISK OF SKIN INJECTION. DO NOT AIM THE GUN OR SPRAY AT ANY PERSON OR ANIMAL. DO NOT PLACE HAND IN FRONT OF SPRAY NOZZLE.

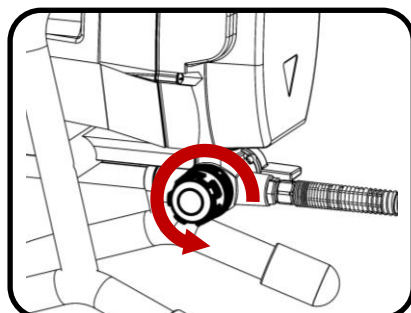
1. Place the ON/OFF Switch (B) into the OFF position and unplug the power cord.



2. Turn the Prime/Spray Switch to the PRIME position.

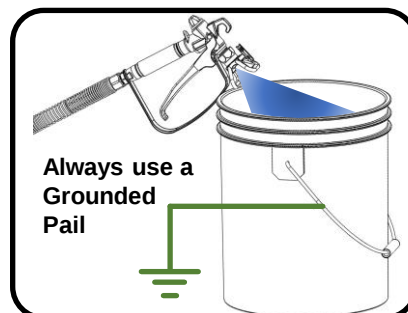


3. Adjust the Pressure Control Knob (D) to the lowest pressure setting (ROLL)

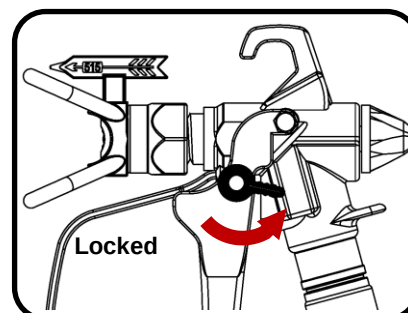


4. When using a waste or solvent pail, ensure the pail is metal and is properly grounded. Clamp one end of a ground wire to the pail the other end to a proper ground, such as a metal water pipe.

5. Point the spray gun into the grounded waste or solvent pail while holding any metal part of the spray gun firmly to the side of the pail to maintain ground continuity of the gun and pail, then operate the trigger several times until pressure within the hose has been relieved.



6. Engage the trigger lock after pressure has been relieved.

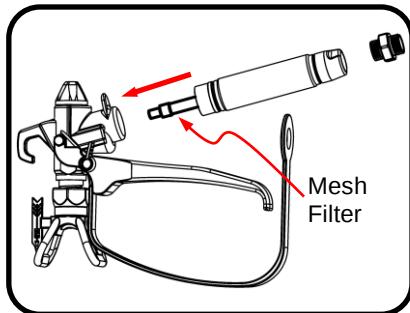


7. Leave the Prime/Spray switch in the Prime position until you are ready to spray again.
8. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved after following these steps, **CAREFULLY AND SLOWLY** loosen the tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely before attempting to clear the any obstruction.

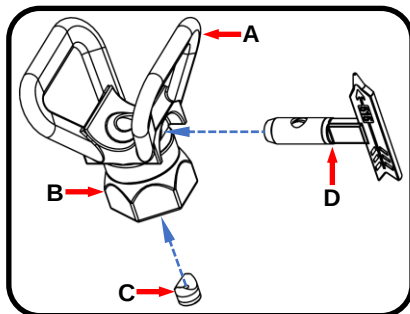
SETUP

Items in parenthesis () refer to the Feature Identification drawing in the previous section.

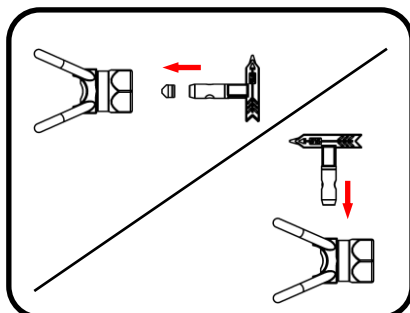
Note: The spray gun comes assembled from the factory. If the gun has been disassembled for cleaning, follow the steps below to reassemble.



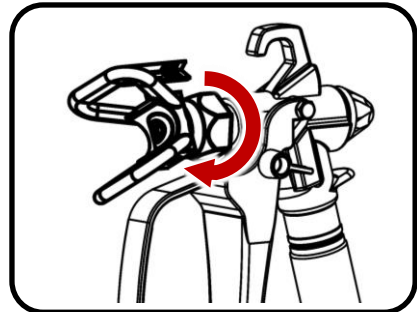
1. Insert the mesh filter into the Handle (T) and align the handle with the upper body of the spray gun.
2. While holding the upper body of the spray gun, tighten the Handle (T) using a wrench.
3. Place the handle guard over the hole on the bottom of the handle, then secure in place using the hose Inlet Port (V) adapter and two wrenches.



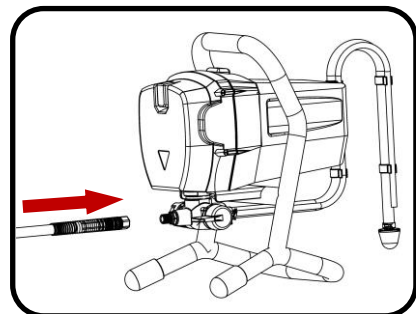
4. The Gun Tip and Guard consists of the following components:
 - A. Nozzle Tip Guard
 - B. Nozzle Tip Guard Retaining Nut
 - C. Metal Seat with Rubber Gasket
 - D. Nozzle Spray Tip
5. Use the Nozzle Spray Tip to install the Metal Seat with Rubber Gasket into the Nozzle Tip Guard.



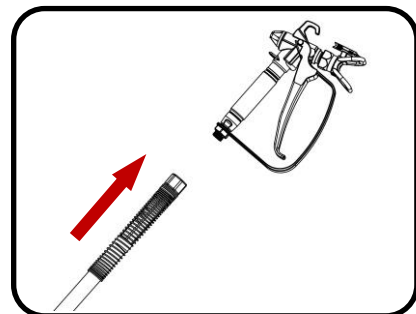
6. Install the Nozzle Spray Tip into the Nozzle Tip Guard.



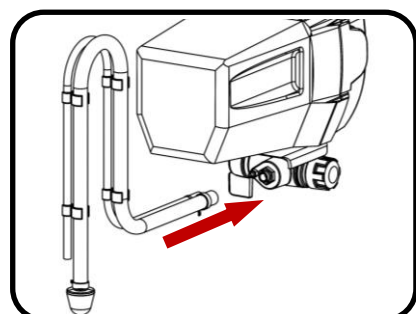
7. Thread the Nozzle Tip Guard Retaining Nut onto the front of the upper spray gun body and tighten with a wrench.
8. With the unit unplugged, uncoil and connect the High-Pressure Paint Hose (M) to the Output Port (E). Use a wrench to correctly tighten the fitting.



9. Connect the other end of the High-Pressure Paint Hose (M) to the Gun Inlet Port (V) on the spray gun Handle (T). Use a pair of wrenches to correctly tighten the fitting.

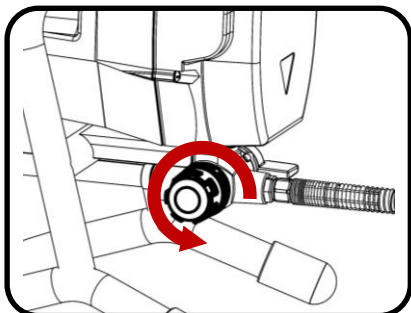


10. Connect the Suction Tube (J) and Primer Output Tube (H) to the back of the valve housing, then install the Inlet Screen (K). Secure in place using the supplied hose clamps.

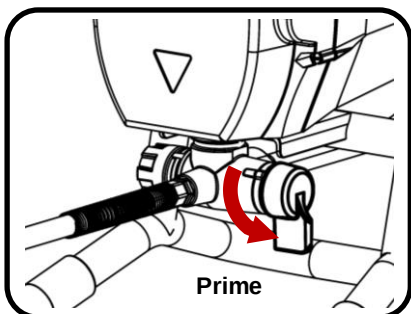


SETUP

11. Set the Pressure Control Knob (D) to the Prime/Clean position.



12. Place the Spray/Prime Switch (F) to the Prime Position.



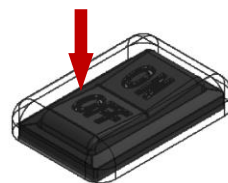
PRIME AND FLUSH

Before each use, the sprayer must be primed and flushed to remove the storage fluid out of the sprayer. Follow these guidelines when priming and flushing:

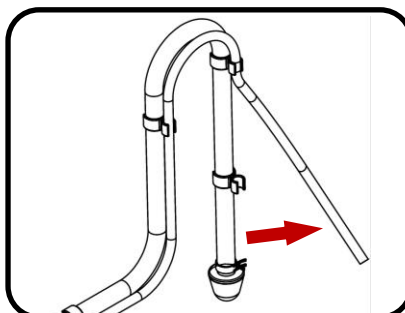
- Use water to thoroughly flush the system if you will be spraying water-based materials.
- Use a compatible oil-based flushing solvent or mineral spirits to thoroughly flush the system if you will be spraying oil-based materials.
- If changing from oil-based spraying to water-based spraying, flush the system thoroughly with water first. The water flowing out from the Primer Outlet Tube (H) should be clear and free from any solvent before you begin spraying the water-based material.
- If changing from water-based spraying to oil-based spraying, flush the system thoroughly with compatible oil-based flushing solvent or mineral oil first. The solvent flowing from the Primer Outlet Tube (H) should not contain any water.
- Always use a grounded metal waste or solvent pail. See Electrical Safety section.
- Always aim the gun at the inside wall of the waste or solvent pail to avoid fluid splashing back on your skin or into your eyes.

1. Turn the power ON / OFF Switch (B) to the OFF position and unplug the sprayer.

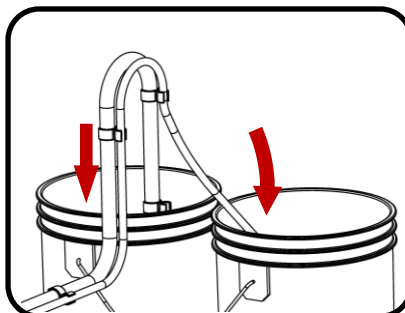
Power Off



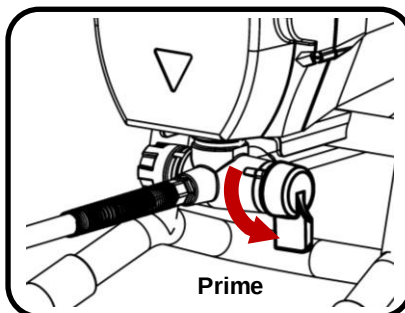
2. Separate the Primer Output Tube (H) from the Suction Tube (J).



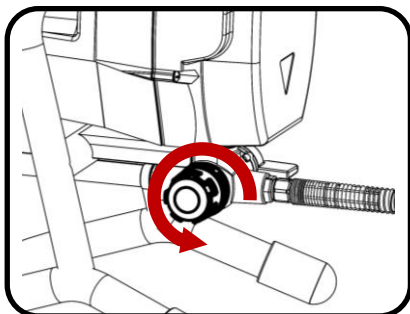
3. Place the Primer Output Tube (H) into a grounded waste / solvent pail and insert the Suction Tube (J) with Inlet Screen (K) into a pail that contains water or flushing solvent (determined by guideline discussed above).



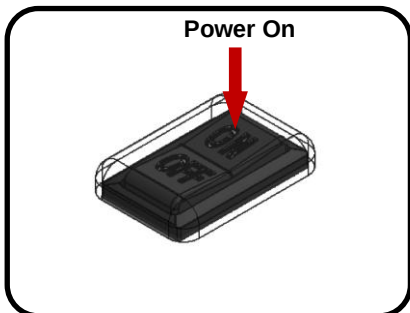
4. Check that the Spray/Prime Switch (F) is in the Prime Position.



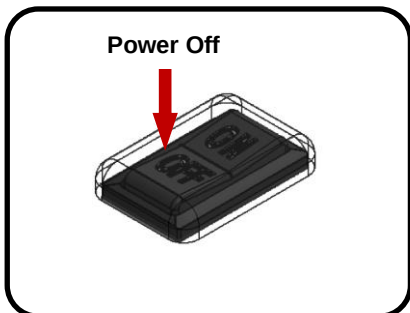
5. Set the Pressure Control Knob (D) to the Prime/Clean position.



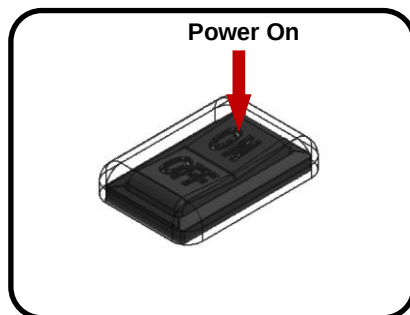
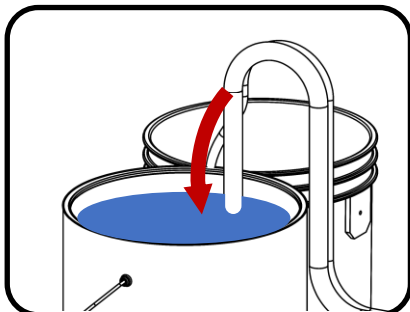
6. Plug the sprayer into a grounded outlet and turn the power ON / OFF Switch (B) to the ON position.



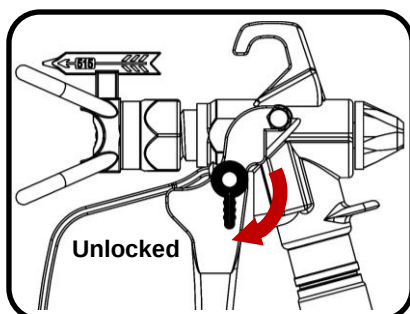
7. The sprayer will start pumping water or flushing solvent. Air and storage oil will be purged from the system. Allow the fluids to continue being discharged from the Primer Output Tube (H) and into the waste / solvent pail. 30 to 60 seconds, then turn the power ON / OFF Switch (B) to the OFF position.



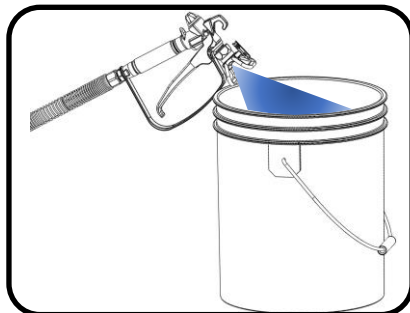
8. Remove the Suction Tube (J) and Inlet Screen (K) from the pail that contains water or flushing solvent (step 3) and insert into the container that holds the paint you will be using.



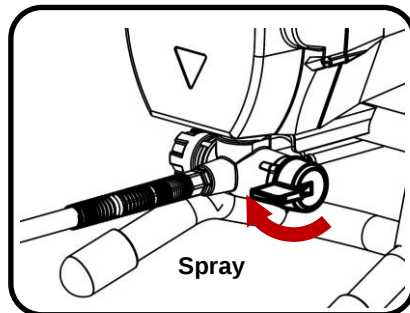
9. Turn the ON / OFF Power Switch (B) ON.
10. Paint will begin to be pumped through the Suction Tube (J) and will begin to be discharged through the Primer Output Tube (H) and into the waste / solvent pail.
11. Hold the spray gun pointing into and against the waste / solvent pail.
12. Unlock the trigger lock.



13. Pull and hold the trigger.

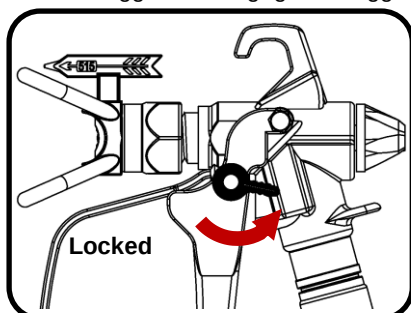


14. Turn the Spray / Prime Switch (F) to the Spray position.

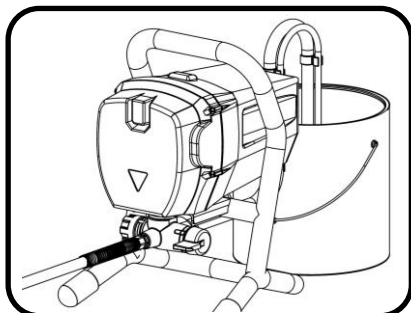


15. Continue to hold the trigger while pointing the gun into the waste / solvent pail until only paint is coming out of the gun.

16. Release the trigger and engage the trigger lock.



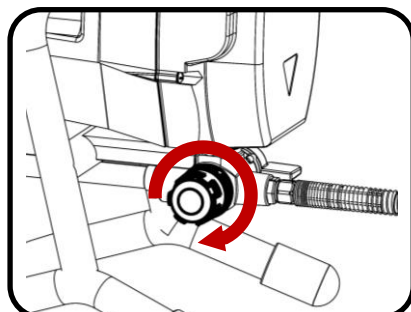
17. Move the Primer Output Tube (H) to the paint container and clip it to the Suction Tube (J).



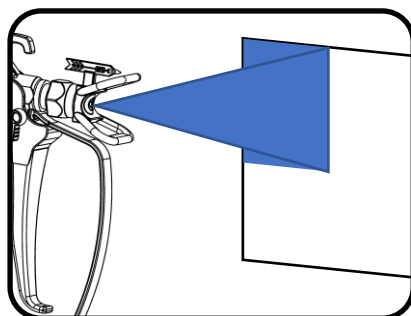
NOTICE: The motor will stop which indicates the pump and hose are primed with paint and under pressure. If the motor continues to run, the sprayer is not correctly primed. To re-prime, turn the Spray / Prime Switch (F) to the Prime position and repeat all the steps beginning at Step 9.

PAINTING

1. Set the Pressure Control Knob (D) to a medium – high pressure.

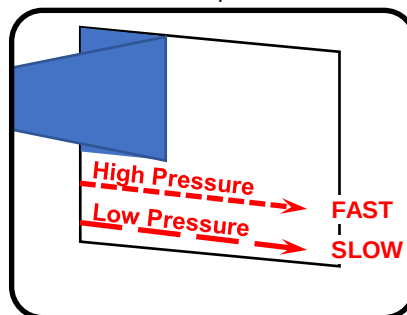


2. Test this pressure setting on a scrap piece of material.



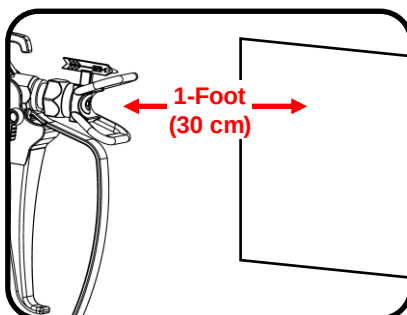
3. Adjust the Pressure Control Knob (D) until a smooth and even consistency is achieved.

4. On a scrap piece of scrap material, spray a test patch and assess the speed of the stroke required for the pressure setting. Lower pressure will require a slower speed, and higher pressure will require a faster stroke speed.

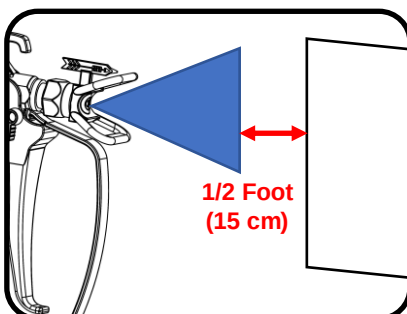


NOTE: The quality of the surface being painted will have a great affect on the spraying result. The surface being painted must be properly prepared before beginning to spray.

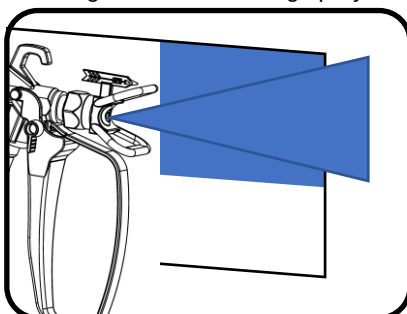
SPRAYING TECHNIQUE



1. Maintain about a 1-foot (30cm) distance away from the surface to be sprayed.

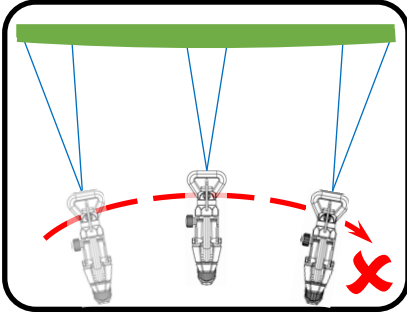
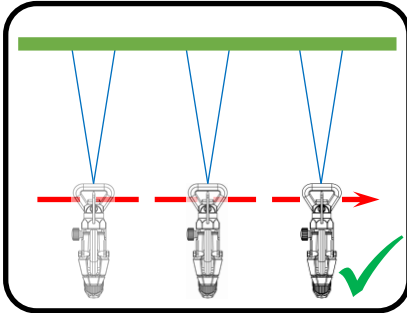


2. Start the movement of the stroke before squeezing the trigger and begin about 1/2 foot (15cm) away from the edge of the area being sprayed.

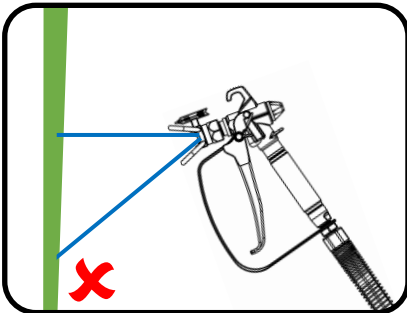
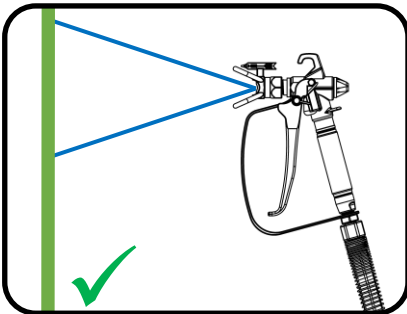


3. Release the trigger once past the opposite edge of the surface being sprayed.

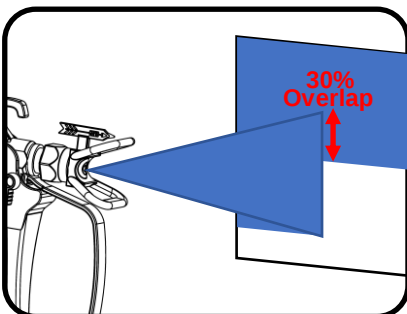
4. Move the gun with the entire arm without flexing your wrist to ensure an even spraying pattern.



5. Keep the spray gun at a right angle to the surface being painted.



6. Overlap each stroke by 30% to ensure even coverage.



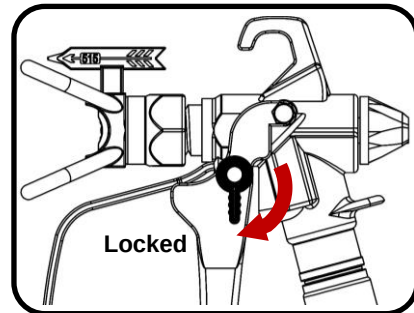
Other Helpful Hints:

- Spraying outdoors on a windy day may result in poor results. Wait until there is no wind and the weather is satisfactory.
- Apply one coat at a time and allow it to dry completely before adding another coat.
- Avoid stopping and starting which will result in a patchy finish. Start on one edge of a surface and finish just past the opposite edge. Avoid stopping in the middle of a surface which may result in an uneven finish.

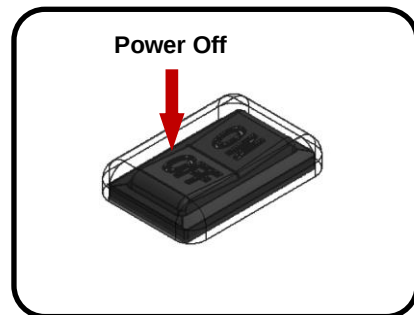
UNCLOGGING THE SPRAY TIP

The Nozzle Spray Tip (P) may occasionally become clogged with paint. Follow these instructions to clear a clogged Nozzle Spray Tip:

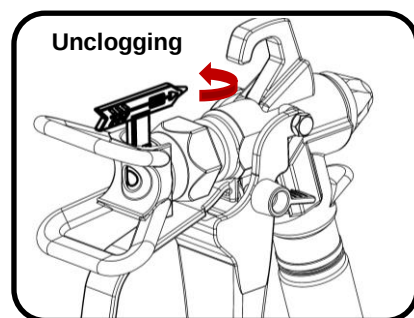
1. Release the trigger and engage the Trigger Lock (S).



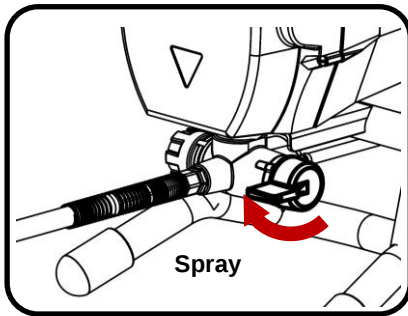
2. Place the ON/OFF Switch (B) into the OFF position and unplug the power cord.



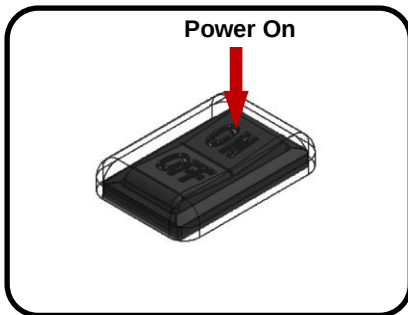
3. Rotate the Nozzle Spray Tip (P) so the arrow is pointing to the rear of the gun.



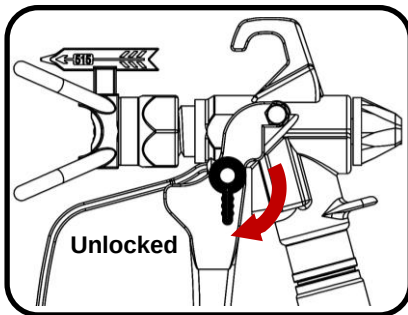
4. Turn the Spray / Prime Switch (F) to the Spray position.



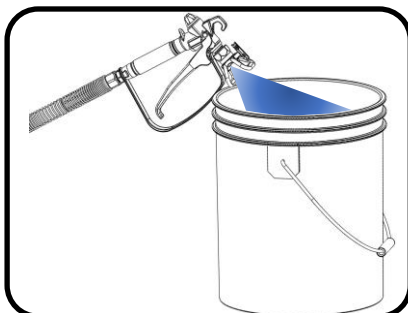
5. Place the power ON / OFF Switch (B) to the ON position.



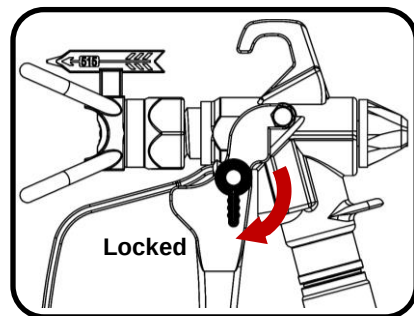
6. Disengage the Trigger Lock (S).



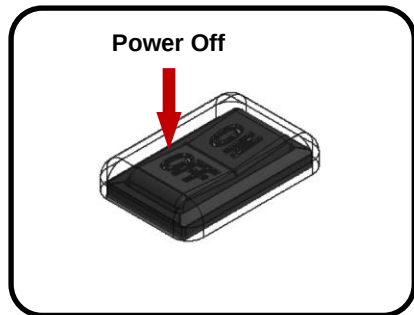
7. Point the spray gun into a grounded waste or solvent pail while holding any metal part of the spray gun firmly to the side of the pail to maintain ground continuity of the gun and pail, then operate the trigger several times to clear the clog.



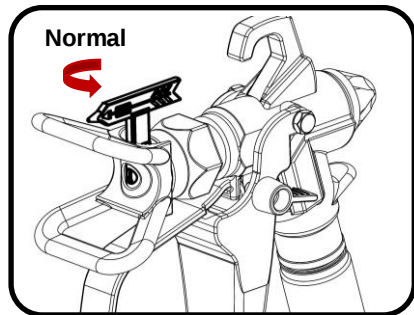
8. Release the trigger and engage the Trigger Lock (S).



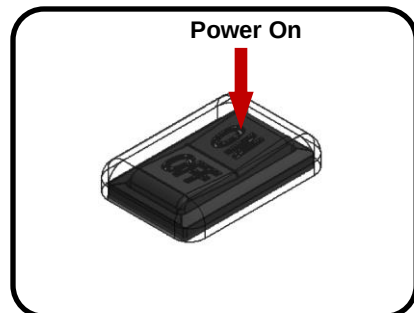
9. Place the ON/OFF Switch (B) into the OFF position and unplug the power cord.



10. Rotate the Nozzle Spray Tip (P) so the arrow is pointing to the front of the gun.



11. Place the power ON / OFF Switch (B) to the ON position.



CLEANING

NOTICE

CLEAN AFTER USE TO PREVENT PERMANENT DAMAGE TO THE SPRAYER.

RETURNS NOT ACCEPTED & WARRANTY VOID IF SPRAYER IS NOT PROPERLY CLEANED IMMEDIATELY AFTER EVERY USE.

USE THE CORRECT CLEANING FLUID

If the paint being used was water based (acrylic paint), use **ONLY WATER** when performing the cleaning procedure.

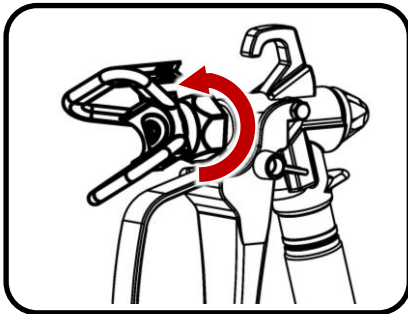
NOTE: USING SOLVENT BASED CLEANING FLUID ON WATER BASED PAINTS WILL RESULT IN A SUBSTANCE THAT WILL BE EXTREMELY DIFFICULT TO CLEAN.

If the paint or coating material being used was oil based (enamel paint, lacquer, etc.), refer to the coating material's label or MSDS to determine what solvent to use. These solvent-based cleaning fluids are safe to use in the airless sprayer:

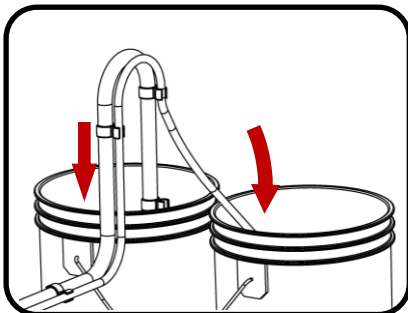
- Mineral Turpentine
- Paint Thinner

CLEANING THE SPRAYER

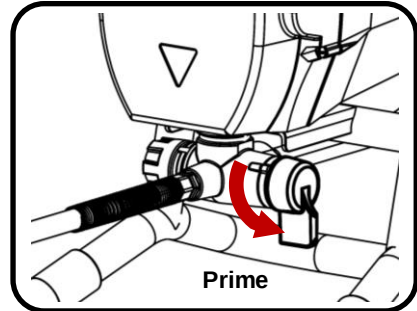
1. Start cleaning the sprayer **IMMEDIATELY** after use by following the **PRESSURE RELIEF PROCEDURE** on 9.
2. Use a wrench to remove the Nozzle Tip Guard (Q) and Nozzle Spray Tip (P) from the gun and place it into the cleaning fluid.



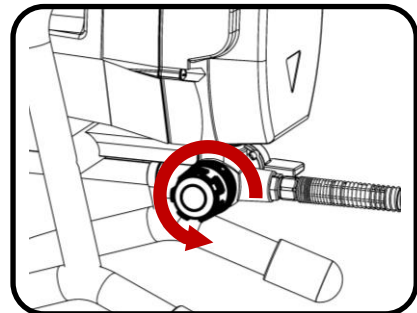
3. Separate the Primer Output Tube (H) from the Suction Tube (J). Place the Primer Output Tube (H) into a waste pail, and the Suction Tube with Inlet Screen (K) into a pail that contains water or flushing solvent (read section titled **USE THE CORRECT CLEANING FLUID** discussed above)



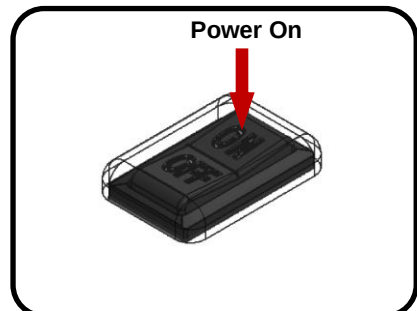
4. Check that the Spray/Prime Switch (F) is in the Prime Position.



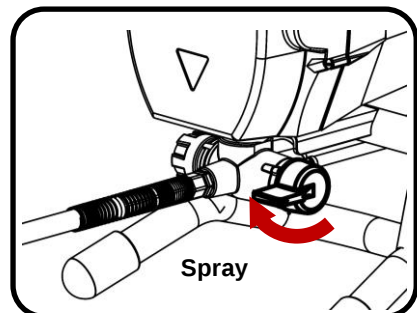
5. Set the Pressure Control Knob (D) to the Prime/Clean position.



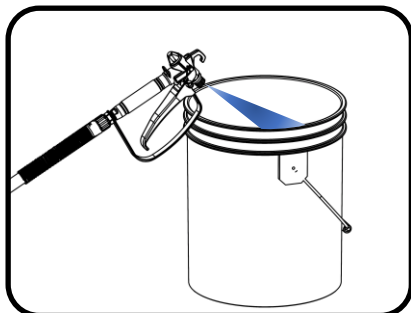
6. Place the power ON / OFF Switch (B) to the ON position.



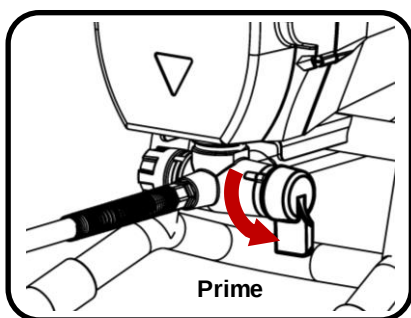
7. Once a steady stream of cleaning fluid is flowing from the Primer Output Tube (H), turn the Spray / Prime Switch (F) to the Spray position.



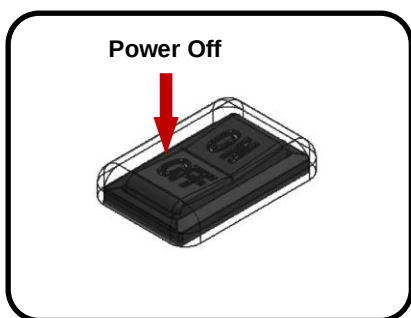
8. Point the spray gun into the waste pail while holding any metal part of the spray gun firmly to the side of the pail to maintain ground continuity of the gun and pail, then operate the trigger until the only fluid exiting the gun is cleaning fluid.



9. Change the Spray/Prime Switch (F) to the Prime Position, then repeat steps 7 and 8 until only cleaning fluid is exiting the sprayer.

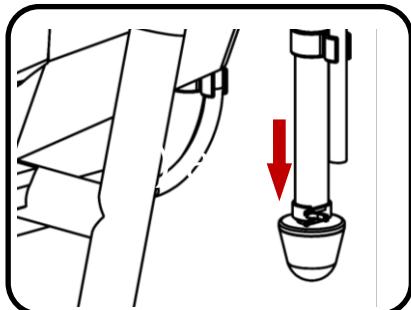


10. Place the ON/OFF Switch (B) into the OFF position and unplug the power cord.



CLEANING THE INLET HOSE

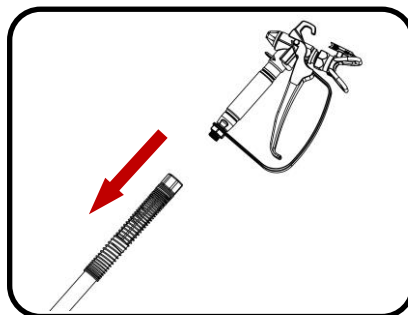
1. Remove the Inlet Screen (K) from the Suction Tube (J) by loosening the hose clamp and moving it away from the filter.
2. Pull the Inlet Screen (K) out and rinse using the appropriate cleaning fluid.



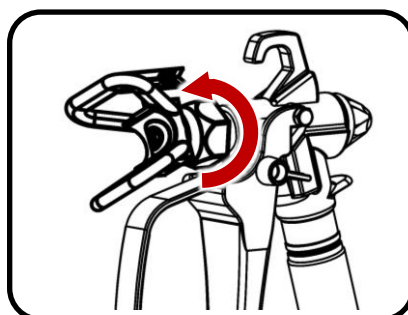
3. If the Inlet Screen (K) cannot be cleaned, replace with a new Inlet Screen.

CLEANING THE SPRAY GUN

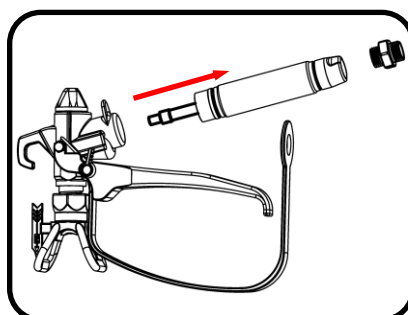
1. Follow the **PRESSURE RELIEF PROCEDURE** on 9.
2. Use a pair of wrenches and remove the High-Pressure Hose (M) from the Spray Gun.



3. Use a wrench to remove the Nozzle Tip Guard (Q) and Nozzle Spray Tip (P) from the gun and place it into the cleaning fluid.



4. Use a pair of wrenches and remove the Inlet Port (V) from the gun.
5. Move the handle guard out of the way and use a wrench to remove the Handle (T) from the upper body of the spray gun.

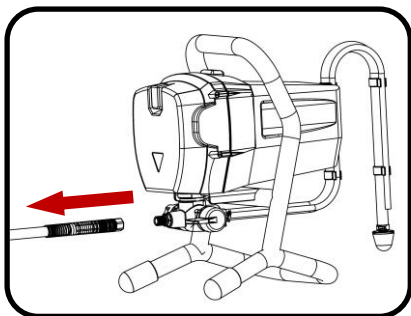


6. Remove the mesh filter from within the Handle (T) and place it into the cleaning fluid.
7. Use a soft brush to clean all components in the cleaning fluid.
8. Once cleaning is completed, reassemble the spray gun.

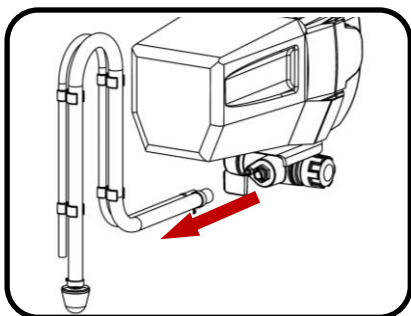
STORING THE SPRAYER

It is very important that the Sprayer is NOT stored with water or water-based materials inside the pump, hose, tubes, or spray gun. Water remaining within these items will cause corrosion and damage them. Follow these procedures to store the sprayer.

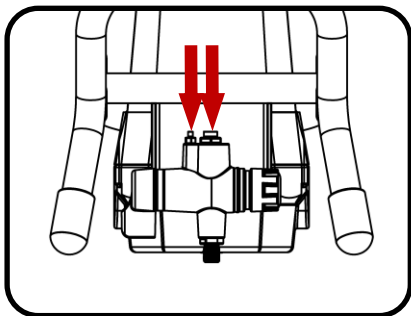
1. Before storing the sprayer follow the steps for cleaning the sprayer and spray gun.



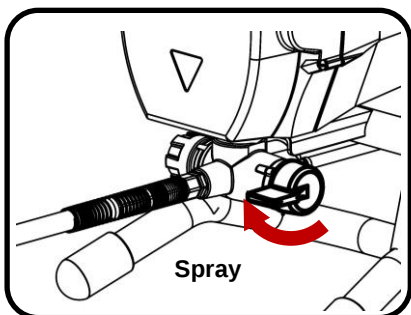
2. Remove the High-Pressure hose from the sprayer.



3. Remove the Primer Output Tube (H) and Suction Tube (J) with Inlet Screen (K) from the pump.

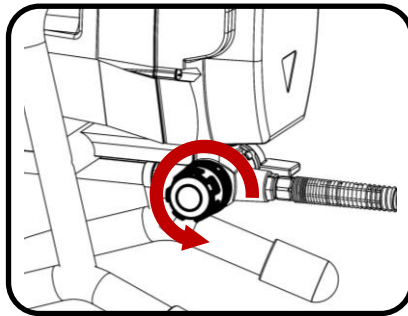


4. With the Sprayer turned over, add one ounce (30ml) of multi-purpose light machine oil such as sewing machine oil or ISO 22 oil to both the Suction Tube (J) and Primer Output Tube (H).

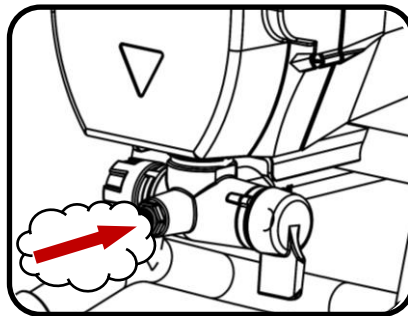


5. Set the Spray/Prime Switch (F) to the Spray Position.

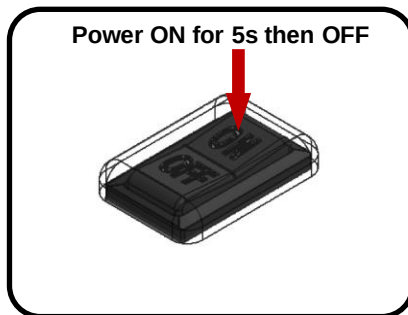
6. Set the Pressure Control Knob (D) to the Low Spray position.



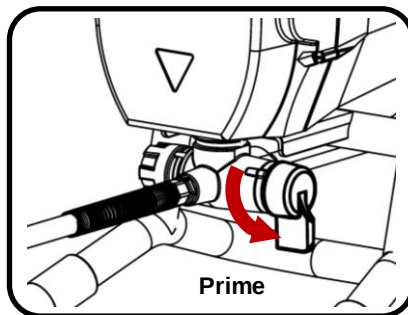
7. Use a rag to cover the Output Port (E).



8. Place the power ON / OFF Switch (B) to the ON position for FIVE SECONDS, then turn the power ON / OFF Switch (B) to the OFF position.



9. Set the Spray/Prime Switch (F) to the Prime Position to ensure the oil stays in the system while being stored.



10. Replace the Primer Output Tube (H) and Suction Tube (J) onto the pump.

11. Wipe the sprayer with a clean cloth and store out of reach of children.

MAINTENANCE & REPAIR

DAILY MAINTENANCE

Equipment life is directly related to the quality of maintenance. Follow these guidelines to ensure a long equipment life.

- Always follow the cleaning procedure immediately after use. Paint or water left in the equipment will cause blockages or corrosion which will make the unit stop working.
- Use the Pressure Relief Procedure when shutting down, adjusting, performing maintenance or repair.
- Ensure you or other operators have read and understand this manual prior to using the equipment.
- Coil the High-Pressure hose after cleaning to prevent damage.
- Periodically add multi-purpose light machine oil such as sewing machine oil or ISO 22 oil to the sprayer, as described in the section titled Storing the Sprayer, if being stored for a long period.

REPAIR

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- Keep all screws, nuts, washers, gaskets, and electrical fittings removed during repair. These parts are usually not provided with replacement kits.
- Review the section titled Troubleshooting to help identifying any issue.
- Do not operate the sprayer without the motor shroud in place. Replace if damaged. The motor shroud directs cooling air around the motor to prevent overheating and insulates the control board to prevent accidental shock.

 CAUTION

- Do not run the sprayer dry for more than 30 seconds. Doing so could damage the pump packing seals.
- Protect the internal drive parts of the sprayer from water. Openings in the cover allow for air cooling of both the mechanical parts and electronics. If water enters these openings, the sprayer may malfunction or be permanently damaged.
- Prevent corrosion or freezing of the pump to avoid damage. Fluids that freeze within the sprayer or High-Pressure hose will cause permanent damage. Always store the sprayer with a multi-purpose light machine oil such as sewing machine oil or ISO 22 oil added to the sprayer pump as described in the section titled Storing the Sprayer.

SPRAY TIP SELECTION

Spray tips are numbered so that:

- The first digit, when multiplied by two, gives the spray width in inches (with the spray tip 1-foot (30cm) away from the surface being sprayed).
- The last two digits specify the orifice size in thousands of an inch (Note: a larger orifice increases paint flow).
- The following are recommended spray tip orifice sizes for varying types of coating material:

Lacquer & Stain: 0.007” – 0.013” Enamel: 0.011” – 0.015” Acrylic: 0.015” – 0.021”

NOZZLE SPRAY TIP SELECTION CHART																
		Orifice Size (Inches)														
		0.007”	0.009”	0.011”	0.013”	0.015”	0.017”	0.019”	0.021”	0.023”	0.025”	0.027”	0.029”	0.031”	0.033”	0.035”
Spray Width (Inches)	2-4	107	109	111	113	115	117	119	121				129			
	4-6		209	211	213	215	217	219	221		225	227	229	231		235
	6-8	307	309	311	313	315	317	319	321	323	325	327	329	331	333	335
	8-10		409	411	413	415	417	419	421	423	425	427	429	431	433	435
	10-12		509	511	513	515	517	519	521	523	525	527	529	531	533	535
	12-14		609	611	613	615	617	619	621	623	625	627	629	631	633	635
	14-16			711	713	715	717	719	721	723	725	727	729	731	733	735
	16-18				813	815	817	819	821	823	825	827	829	831	833	835
	18-20									923		927		931	933	935

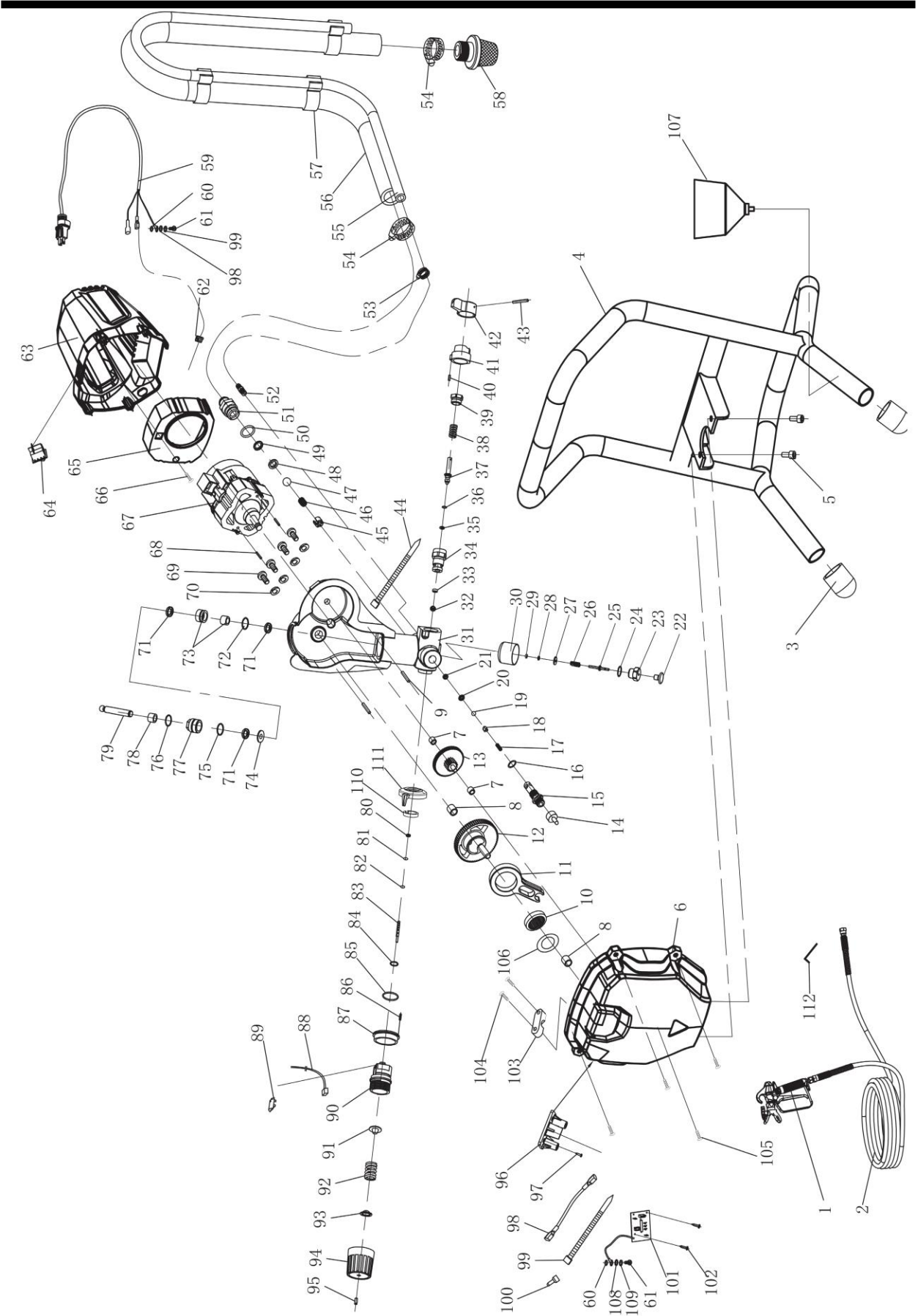
TROUBLESHOOTING

Problem	Cause	Solution
Power switch is on, and sprayer is plugged in, but motor does not run, and pump does not cycle.	Pressure Control Knob is set at zero pressure.	Turn Pressure Control Knob clockwise to increase pressure setting.
	Motor or control is damaged.	Have the sprayer serviced by a qualified repair person.
	Electric outlet is not providing power.	Try a different outlet or test the outlet with another appliance or circuit tester. Reset the circuit breaker or replace the fuse.
	Extension cord is damaged.	Replace the extension cord.
	Sprayer electric cord is damaged.	Unplug the sprayer cord and check for broken insulation or wires. Replace if damaged.
	Paint and/or water is frozen or has hardened in the pump.	Unplug the sprayer from the outlet. If frozen, do not try to start the sprayer until it is completely thawed or the motor, control board, and/or drivetrain will be permanently damaged. Ensure the power switch is OFF, place the sprayer in a warm area for several hours, then plug in the power cord and turn the sprayer ON. Slowly increase pressure setting to see if the motor will start. If paint has hardened in the sprayer, the pump packing seals, valves, drivetrain, and/or pressure switch will need to be replaced. Have the sprayer serviced by a qualified repair person.
Pump does not prime.	Spray/Prime Switch is in Spray position.	Turn Spray/Prime Switch to Prime position (pointing down)
	Inlet screen is clogged, or suction tube is not immersed.	Clean debris from inlet screen and make sure the suction tube is immersed in fluid.
	Pump was not primed with water or solvent based flushing fluid.	Remove suction tube from paint. Prime the pump with the correct flushing fluid.
	Inlet valve check ball is stuck.	Remove the suction tube and place a pencil into the inlet section to dislodge the ball, allowing the pump to prime properly.
	Inlet valve check ball or seat is dirty.	Remove inlet fitting. Clean or replace the ball and seat.
	Outlet check ball or seat is dirty.	Remove the outlet fitting. Clean or replace the ball and seat.
	Suction tube is leaking.	Tighten the suction tube connection. Inspect for cracks or vacuum leaks.
	Fluids are viscous or sticky.	Some fluids may prime faster if the Power Switch is momentarily turned off so the pump can slow and stop. Repeat several times if necessary.

Problem	Cause	Solution
Pump cycles but does not build up pressure.	Pump is not primed.	Prime the pump.
	Inlet screen is clogged	Clean the debris off the inlet screen and make sure the suction tube is immersed in fluid.
	Suction tube is not immersed in paint.	Make sure the suction tube is immersed in the paint.
	Suction tube is leaking.	Tighten the suction tube connection. Inspect the tube for cracks or vacuum leaks. If cracked or damaged, replace the suction tube.
	Spray/Prime Valve is worn or obstructed with debris.	Have the sprayer serviced by a qualified repair person.
	Inlet valve check ball is stuck.	Remove the suction tube and place a pencil into the inlet section to dislodge the ball, allowing the pump to prime properly.
	Inlet valve check ball or seat is dirty.	Remove inlet fitting. Clean or replace the ball and seat.
	Outlet check ball or seat is dirty.	Remove the outlet fitting. Clean or replace the ball and seat.
Pump cycles but paint only dribbles or spurts when the spray gun is triggered.	Pressure set too low.	Slowly turn the Pressure Control Knob clockwise to increase pressure setting.
	Nozzle Spray Tip is clogged.	Unclog the Nozzle Spray Tip.
	Spray gun filter is clogged.	Clean or replace the filter in the spray gun.
	Nozzle Spray Tip is too large or worn.	Replace the Nozzle Spray Tip.
Pressure is set at maximum but cannot achieve a good spray pattern.	Nozzle Spray Tip is in the Unclog position.	Relieve pressure and rotate the Nozzle Spray Tip so the arrow is pointing away from the handle.
	Nozzle Spray Tip is too large for the paint being sprayed.	Select a smaller Nozzle Spray Tip.
	Nozzle Spray Tip is worn.	Replace the Nozzle Spray Tip.
	Extension cord is too long or not heavy enough gauge.	Replace the extension cord with a 12 AWG cord.
	Spray gun fluid filter is clogged.	Clean or replace the spray gun fluid filter.
	Inlet screen is clogged.	Clean debris from inlet screen.
	Pump valves are worn, or debris is clogging the valves.	To check for worn pump valves: Prime the sprayer with paint. Trigger the gun momentarily. When the trigger is released, the pump should cycle momentarily and stop. If it continues to cycle, then the pump valve may be worn.
	Paint material is too thick.	Thin the paint material.
	High pressure hose is too long.	If another hose section has been added, remove the hose extension.

Problem	Cause	Solution
Spray gun stopped spraying.	Suction tube is leaking.	Tighten the suction tube connection. Inspect the tube for cracks or vacuum leaks.
	Nozzle Spray Tip is clogged.	Unclog the Nozzle Spray Tip.
Paint runs down the wall or sags.	Coat is going on too thick.	Move the gun faster. Choose a Nozzle Spray Tip with a smaller orifice. Choose a Nozzle Spray Tip with a wider fan. Ensure a sufficient distance (1-foot or 30cm) from the gun to the painted surface.
Coverage is too thin or sprayed paint is inadequate.	Coat is going on too thin.	Move the gun slower. Choose a Nozzle Spray Tip with a larger orifice. Choose a Nozzle Spray Tip with a narrower fan. Ensure a sufficient distance (1-foot or 30cm) from the gun to the painted surface.
Fan pattern varies dramatically while spraying. OR Sprayer does not turn on promptly when resuming spraying.	Pressure Control Knob is worn and causing excessive pressure variation.	Have the sprayer serviced by a qualified repair person.
Cannot trigger the spray gun.	Spray gun trigger lock is locked.	Rotate the trigger safety lever to the unlock position.
Paint is coming out of the pressure control knob.	Pressure Control Knob is worn.	Have the sprayer serviced by a qualified repair person.
Spray/Prime valve actuates automatically relieving pressure through the Output Prime Tube.	System is over-pressurized.	Have the sprayer serviced by a qualified repair person.
Paint leaks down the outside of the pump.	Pump packing seals have worn.	Replace pump packing seals.
Motor is hot and runs intermittently. Motor automatically shuts off due to excessive heat. Damage can occur if cause is not corrected.	Vent holes in motor enclosure are plugged or sprayer is covered.	Keep vent holes clear of obstructions and overspray, and keep the sprayer uncovered and open to air.
	Extension cord is too long or not heavy enough gauge.	Replace the extension cord with a 12 AWG cord.
	Unregulated electrical generator being used has excessive voltage.	Use an electrical generator with a proper voltage regulator. Sprayer requires a 120VAC, 60Hz, 1500-Watt generator.

PARTS DIAGRAM



PARTS LIST

No.	Description	No.	Description	No.	Description	No.	Description
1	Airless Spray Gun	34	Press. Relief Valve Seat	67	Motor Assembly	100	Locking Ring
2	High Pressure Hose	35	O-Ring, 5 x 1.8	68	Pin, 3 x 12	101	PCB Assembly
3	Foot Pads	36	Ring	69	Hex Bolt, M5 x 14	102	Self Tapping Screw
4	Base Frame	37	Press. Relief Valve Shaft	70	Spring Washer, M5	103	Baseline Plate
5	Hex Bolt, M6 x 25	38	Spring	71	Composite Retaining Ring	104	Bolt, M4 x 20
6	Pump Cover	39	Spring Seat	72	O-Ring, 22.5 x 1.8	105	Bolt, M4.8 x 16
7	Sm Brass Bushing	40	Pin, 3 x 8	73	Trap	106	Roller Brg. Cvr.
8	Lg Brass Bushing	41	Switch Seat	74	Flat Washer	107	Funnel
9	Pin, 5 x 12	42	Switch Knob	75	Seal Ring	108	Flat Washer, M4
10	Roller Bearing	43	Pin, 2.5 x 25	76	O-Ring, 26.5 x 1.8	109	Spring Washer, M4
11	Connecting Rod	44	Nylon Cable Tie	77	Plunger Seat	110	Press. Ctl. Gasket
12	Crank Gearwheel	45	Inlet Spring Holder	78	Guide Sheath	111	Press. Ctl. Indicator Ring
13	Cluster Gear	46	Inlet Spring	79	Piston		
14	Thread Protector	47	Steel Ball, 12.7	80	Lock Sleeve		
15	Discharge Valve Seat	48	Inlet Seal	81	Reinforced Seal		
16	O-ring, 10 x 8	49	Inlet Washer	82	White Seal		
17	Output spring	50	O-ring, 17 x 1.8	83	Switch Shaft		
18	Mandrel	51	Inlet Port	84	O-ring, 8.8 x 1.9		
19	Steel Ball, 6.4	52	Press. Relief Plug	85	O-ring, 27 x 2.4		
20	Seal Seat	53	Sm Hose Clamp	86	Bolt, M3 x 10		
21	Output Washer	54	Lg Hose Clamp	87	End Cap		
22	Pushbutton	55	Primer Output Tube	88	Microswitch Assy.		
23	Pushbutton Spring	56	Suction Tube	89	Microswitch Cover		
24	O-ring, 10 x 1.5	57	Hose Clip	90	Press. Ctl. Seat Insert		
25	Pushbutton Shaft	58	Inlet Screen Assy.	91	Deflation Cap		
26	Pushbutton Spring	59	Power Cord	92	Press. Ctl. Spring		
27	Brass Spacer	60	Locknut	93	Spring Seat		
28	Retaining Ring	61	Screw, M4 x 8	94	Press. Ctl. Knob		
29	O-ring 2.4 x 1.8	62	Cord Strain Relief	95	Press. Ctl. Screw		
30	Pushbutton Housing	63	Motor Housing	96	PCB Support Brkt.		
31	Pump Housing	64	Power Switch	97	Bolt, M4 x 10		
32	Plastic Washer	65	Fan Shroud	98	Wire Connector		
33	Plastic Washer	66	Bolt, 2 x 16	99	Nylon Cable Tie		

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90 DAY LIMITED WARRANTY

Star Asia-USA, LLC (hereinafter "seller") warrants to the original purchaser only, that this product will be free from defects in material or workmanship for a period of 90 days from date of purchase for home domestic use.

Warranty Performance

Warranty coverage is conditioned upon purchaser furnishing seller or its authorized service center with adequate written proof of the original purchase date. Products returned, freight prepaid and insured, to our factory or to an Authorized Service Center will be inspected and repaired or replaced, at seller's option, free of charge if found to be defective and subject to warranty. Defective parts not subject to normal wear and tear will be repaired or replaced, at our option during the above stated warranty periods. In any event, reimbursement is limited to the purchase price paid. Other than the postage and insurance requirement, no charge will be made for repairs or replacements covered by this warranty. Under no circumstances shall the manufacturer bear any responsibility for loss of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages. There are no warranties which extend beyond the description of the face hereof.

Exclusions

This warranty does not cover parts damaged due to normal wear, abnormal conditions, misapplication, misuse, abuse, accidents, operation at other than recommended pressures or temperatures, improper storage of freight damage. Parts damaged or worn by operation in dusty environments are not warranted. Failure to follow recommended operating and maintenance procedures also voids warranty. Additional items not covered under warranty: product failure caused by rain, excessive humidity, corrosive environments or other contaminants; cosmetic defects that do not interfere with product's functionality. This warranty shall not apply when: the product has been used for commercial or rental purposes; defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; this damage is due to abuse, improper maintenance, neglect or accident; or the damage is due to use of the product after partial failure or use with improper accessories. Warranty does not apply to accessory items. Seller will not be liable for: labor charges, loss or damage resulting from improper operation, maintenance or repairs made by persons other than a Star Asia-USA, LLC Authorized Service Center. The use of other than genuine Star Asia-USA, LLC repair parts will void warranty.

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