# **Operation Manual**

# Piston Pump Paint Sprayer





Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

# Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

# Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.





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#### Introduction

Thank you for purchasing this quality product. To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.

Keep these operation instructions safe.

#### Important information



Warning! To reduce the risk of injury, users must read the instruction manual.



Always wear ear protection!



Always wear protective goggles!



Always wear a breathing mask!



In accordance with essential applicable safety standards of European directives



Class II product

# Safety 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 proper usage of the equipment.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**DANGER: INJECTION INJURY** 



A high-pressure paint stream produced by this equipment can pierce the skin and underlying tissues, leading to serious injury and possible amputation. Injection can lead to amputation. See a physician immediately.

Attention! Do not treat an injection injury as a simple cut!

The maximum operating range of the gun is 206.8 bar (3,000 psi) fluid pressure.

## Prevention

- Never aim the gun at any part of the body.
- Never aim the gun at or spray on any person or animal.
- **Never** allow any part of the body to touch the fluid stream. Avoid that body parts touch a leak in the fluid hose.
- **Never** put your hand in front of the gun. Gloves will **not** provide protection against an injection injury.





- Always lock the gun trigger, shut the pump off, and release all pressure before servicing, cleaning the tip or guard, changing tip, or leaving it unattended. Pressure will <u>not</u> be released by turning off the motor. The PRIME/SPRAY knob needs to be turned to PRIME to relieve the pressure. Refer to the "Pressure relief" procedure described in the pump manual.
- Always keep the tip guard in place while spraying. The tip guard provides some protection but is mainly a warning device.
- Always remove the spray tip before flushing or cleaning the system.
- Paint hose can develop leaks from wear, kinking, and abuse. A leak can inject material into the skin. Inspect the hose **before each use.** Do **not** use hose to lift or pull equipment.
- Never use a spray gun without a working trigger lock and trigger guard in place.
- All accessories must be rated at or above **206,8 bar (3,000 psi).** This includes spray tips, guns, extensions, and hose.

#### Note to the doctor

Injection into the skin is a traumatic injury. It is important to treat the injury **as soon as possible. DO NOT** delay the treatment to research on toxicity. Toxicity is a concern with some coatings injected directly into the blood stream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.



#### **DANGER: HAZARDOUS VAPOURS**



Paints, solvents, insecticides, and other materials can be harmful if inhaled or in case they come in contact with the body. Vapours can cause severe nausea, fainting or poisoning.

#### Prevention

- Use a respirator or mask if vapours can be inhaled. Read all instructions supplied with the mask
- to be sure it will provide the necessary protection.
- · Wear protective eyewear.
- Wear protective clothing as required by coating manufacturer.



#### **DANGER: EXPLOSION OR FIRE**



Solvent and paint fumes can explode or ignite. This can result in severe injury or material damage.

#### Prevention

- Provide extensive exhaust and fresh air introduction to keep the air within the spray area free from accumulation of flammable vapours. Solvent and paint fumes can explode or ignite.
- Do not spray in closed spaces.
- Avoid all ignition sources such as static electric sparks, open flames, pilot lights, electrical appliances, and hot objects. Connecting or disconnecting power cords or operating light switches can produce sparks. Paint or solvent flowing through the equipment can form static electricity.
- Do not smoke in the spray area.
- A fire extinguisher must be present and in good working order.
- Place the paint pump at least 20 ft away from the spray object in a well-ventilated area (use a longer hose if necessary). Flammable vapours are often heavier than air. Therefore, the floor area must be extremely well ventilated.
- The equipment and objects in and around the spray area must be properly earthed to prevent static sparks.
- Keep the work area clean and free of paint or solvent containers, rags, and other flammable materials.
- Only use conductive or earthed high pressure fluid hoses. The gun must be earthed through hose connections.





- The power cord must be connected to an earthed circuit.
- Always flush unit into a separate metal container, at low pump pressure, with the spray tip removed. Hold the gun firmly against the side of container to earth the container and prevent static sparks from forming.
- Follow the material and solvent manufacturer's warnings and instructions. Know the contents of
  the sprayed paints and solvents being sprayed. Read all Material Safety Data Sheets (MSDS)
  and packaging labels provided with the paints and solvents. Follow the paint and solvent manufacturer's safety instructions.
- Take extreme care when using materials with a flash point below 21 °C (70 °F). The flash point is the temperature at which a liquid can produce enough vapours to ignite.
- Plastic can cause static sparks. Never use plastic to cover the spray area. Do not use plastic drop cloths when spraying flammable materials.
- Use the lowest pressure possible to clean the equipment.
- Do not spray onto pump assembly.



DANGER: EXPLOSION HAZARD DUE TO INCOMPATIBLE MATERIALS Will cause property damage or severe injury.



#### Prevention

- Do not use substances containing bleach or chlorine.
- Do not use halogenated hydrocarbon solvents such as bleach, fungicide, methylene chloride, and 1,1,1-trichloroethane. They are not compatible with aluminium.
- Contact your coating supplier about the compatibility of the substances used with aluminium.



**DANGER:** GENERAL SAFETY INSTRUCTIONS Can cause severe injury or property damage.

#### Prevention

- Read all instructions and safety precautions before operating the tool.
- Follow all appropriate local, national, and international codes governing ventilation, fire prevention, and operation.
- Use only manufacturer authorised parts. The user assumes all risks and liabilities when using
  parts that do not meet the minimum specifications and safety requirements of the spray pump
  manufacturer.
- Before each use, check all hoses for cuts, leaks, abrasion or bulging of the cover. Check for damage or movement of couplings. Replace the hose immediately if any of these conditions exist. Never repair a paint hose. Replace it with another earthed high-pressure hose.
- All hoses, fittings, and filter caps must be secured before operating the spray pump. Unsecured parts may eject at great force or leak a high-pressure fluid stream causing severe injury.
- All hoses, swivels, guns, and accessories must be pressure rated at or above 206.8 bar (3000 psi).
- Do not spray outdoors on windy days.
- Wear clothing to keep paint off skin and hair.
- Do not operate or spray near children. Always keep children away from the equipment.
- Do not overreach or stand on an unstable support. Always keep effective footing and balance.
- Stay alert and watch what you are doing.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.

# Important electrical information

**Notice!** This machine is provided with a non-resettable thermal overload.

- Always disconnect the motor from the power supply before working on the equipment.
- The cause of the overload should be corrected before restarting. Take unit to service centre.





#### Earthing instructions

This product must be earthed. In the event of an electrical short circuit, earthing reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having an earthing wire with an appropriate earthing plug. The plug must be plugged into an outlet that is properly installed and earthed in accordance with all local codes and ordinances.



DANGER: Improper installation of the earthing plug can result in a risk of electric shock.



If repair or replacement of the cord or plug is necessary, do not connect the green earthing wire to either flat blade terminal. The wire with insulation having a green outer surface with or without yellow stripes is the earthing wire and must be connected to the earthing pin.

Check with a qualified electrician or serviceman if the earthing instructions are not completely understood, or if you are in doubt whether the product is properly earthed. Do not modify the plug provided. If the plug does not fit the outlet, have the proper outlet installed by a qualified electrician.

This product is for use on a nominal 230 V circuit and has an earthing plug that looks like the plug illustrated below. Make sure that the product is connected to an outlet having the same configuration as the plug. **No adapter should be used with this product.** 

#### Components and description

#### Components

The shipping carton for your painting system contains the following:

- Suction tube and return tube
- Separating Oil
- · Spray gun with filter
- Spray tip assembly (see chart on next page)
- 1/4" diameter pressure hose
- Instruction manual

#### Controls and functions

ON/OFF switch

The ON/OFF switch turns the power to the sprayer on and off (O = OFF, I = ON).

Suction tube

Fluid is drawn through the suction tube into the pump.

Fluid section

A piston in the fluid section moves up and down to create the suction that draws fluid through the suction tube.

Spray gun

The spray gun controls the delivery of the fluid being pumped. The gun model you have depends on your sprayer model.

Spray hose

The spray hose connects the gun to the pump.

Return tube

Fluid is sent back out through the return tube to the original container when PRIME/SPRAY knob is in PRIME position.

PRIME/SPRAY knob

The PRIME/SPRAY knob directs fluid to the spray hose when set to SPRAY or the return tube when set to PRIME. The arrows on the PRIME/SPRAY knob shows the rotation directions for





PRIME and SPRAY. The PRIME/SPRAY knob is also used to relieve pressure built up in the spray hose (see "Pressure relief procedure").

Pressure control dial

The pressure control dial regulates the amount of force the pump uses to push the fluid.

Oiler

The oiler is designed to provide lubrication to the fluid section of the pump.

Pusher stem

The pusher stem is designed to keep the inlet valve open and from sticking due to dried materials.

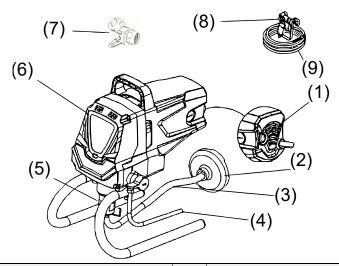
#### Technical specifications

Max. capacity (½min)	1,5	
Power source (W)	1010 (universal motor)	
Min. current requirements (A)	15 (with 230 V, 50 Hz)	
Safety features	Spray gun trigger lock and pressure diffuser; built-in tip safety guard; PRIME/SPRAY knob for safe pressure release.	
Capability	Sprays a variety of paints, oil base latex, primers, stains, preservatives, and other non-abrasive materials, including pesticides and liquid fertilisers.	

This pump should not be used with textured materials, block filler, or asphalt sealer.

This pump is available in this machine. All information given for the stand model applies to the cart models except where indicated.

**Important!** Some of the graphics in this manual may not exactly match your sprayer and spray gun. All information and instructions given in this manual applies to all models except where noted.



Nº	Name	Nº	Name
1	On/off switch	6	Motor, transmission components
2	Suction set filter	7	Spray tip
3	Suction tube	8	Spray gun
4	Return pipe	9	Spray hose
5	Return valve assembly		





#### **Assembly**



# Do not plug in the sprayer until the setup is complete!

Tools needed for assembly

- Two adjustable wrenches
- 3/16" Allen wrench
- Extension cord (refer to "Important electrical information")
- 1. Thread the high-pressure hose to the spray hose port. Tighten with an adjustable wrench.



2. Thread the other end of the hose to the spray gun. Hold the gun with one adjustable wrench, and tighten the hose nut with the other.

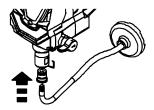
The spray tip SHOULD NOT be attached until after the sprayer and the spray hose have been purged and primed.



3. Thread the suction tube onto the inlet valve and tighten firmly by hand. Be sure that the threads are straight so that the fitting turns freely.



4. Press the return tube onto the return tube fitting. Squeeze clip over the return tube fitting to secure the return tube.



5. Verify that the seal is present inside the suction tube. Thread the inlet filter into the end of the suction tube.



# **Before commissioning**



This section contains instructions that will be repeated throughout this manual.

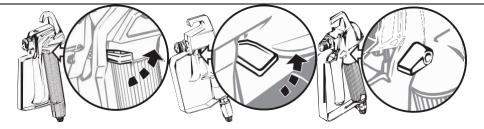
Locking the spray gun

Note! Always lock the trigger off when attaching the spray tip or when the spray gun is not in use.

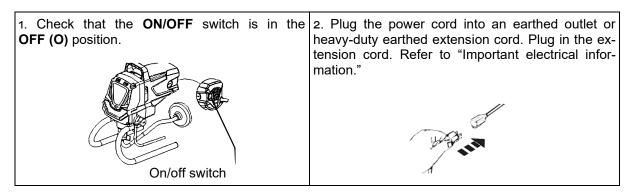
The gun is locked when the trigger lock is at a 90° angle (perpendicular to the trigger in either direction).







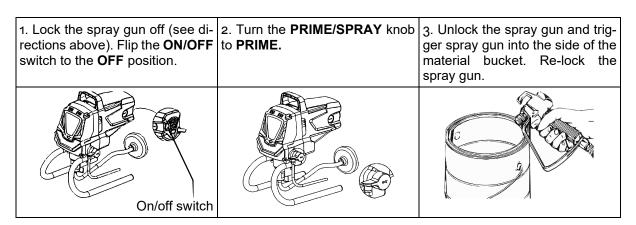
#### Plugging in the sprayer



#### Pressure relief procedure



Be sure to follow the "Pressure relief" procedure when shutting the unit off FOR ANY PURPOSE. This procedure is used to relieve pressure from the spray hose.



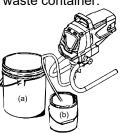
#### Purging and priming the sprayer

All new units are performance-tested at the factory and are shipped with test fluid in the fluid section to prevent corrosion during shipment and storage. If you have already used your pump, some water or solvent used in cleaning may remain in the fluid section. Whether your sprayer is new or you have already used it, this fluid must be purged and thoroughly cleaned out of the system prior to use. Follow the steps below:





derneath the suction tube (a). Secure the return sure. Turn the PRIME/SPRAY knob to PRIME. tube (b) into a waste container.

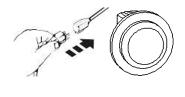


1. Place a full container of spraying material un- 2. Turn the pressure control dial to maximum pres-

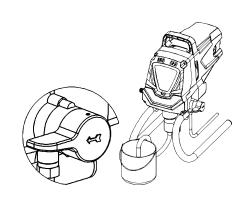


3. Plug in the sprayer and move the ON/OFF switch to the ON (I) position.

The unit will begin to draw material up the suction tube, into the pump, and out the return tube. Let the unit cycle long enough to remove test fluid from the pump, or until spray material is coming from the return tube.



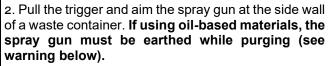
4. Switch the pump OFF (O). Remove the return tube from the waste container and place it in its operating position above the container of spraying material.



Purging and priming the spray hose

1. Unlock the spray gun and turn the PRIME/SPRAY knob to PRIME.

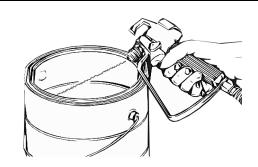
The spray tip SHOULD NOT be attached to your spray gun when purging your spray hose.



Keep hands clear from fluid stream. Ground the gun by holding it against the edge of a metal container while flushing. Failure to do so may lead to a static electric discharge which may cause a fire.

3. While pulling the trigger, switch the pump ON (I), AND turn the PRIME/SPRAY knob to SPRAY. Hold the trigger until all air, water, or solvent is purged from the spray hose and material is flowing freely.

If the PRIME/SPRAY knob is still on SPRAY, there will be high pressure in the hose and spray gun until the PRIME/SPRAY knob is turned to PRIME.

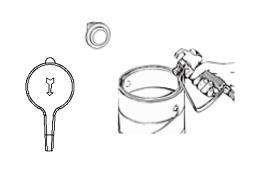




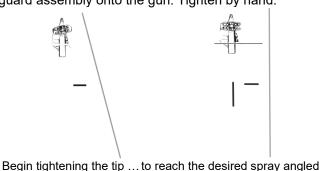


when tight.

4. Release trigger. Turn the **PRIME/SPRAY** knob to **PRIME.** Turn the pump **OFF (O).** Trigger the gun into the waste container to be sure that no pressure is left in the hose.



5. Lock the spray gun off. Make sure the saddle and black seal are in place inside the tip guard nut (refer to "Components and description"). Thread the spray tip guard assembly onto the gun. Tighten by hand.



Note! Be sure that the paint hose is free of kinks and clear of objects with sharp cutting edges.

at this angle

Practice spraying technique

1. Switch the pump **ON** (I). Turn the **PRIME/SPRAY** knob to **SPRAY**. Turn the pressure control dial to maximum pressure (+). The spray hose should stiffen as paint begins to flow through it.

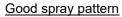






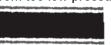
2. When the motor shuts off, unlock the spray gun and spray a test area to check the spray pattern.

The motor will cycle on and off automatically as it needs pressure. The pressure control dial can be adjusted up or down to achieve the desired spray pattern.



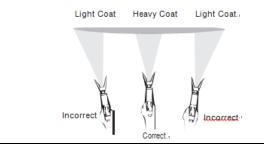


Bad spray pattern (tail forming from too low pressure, clogged tip)

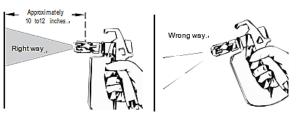


The key to a good result is an even coating over the entire surface. This is done by using even strokes. The tips below will help you to achieve a good result.

**Tip!** Keep the spray gun at right angles to the surface. This means moving your entire arm back and forth rather than just flexing your wrist.



**Tip!** Keep the spray gun perpendicular to the surface. Otherwise, one end of the pattern will be thicker than the other.



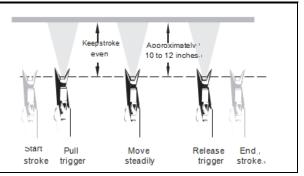




**Tip!** Trigger gun after starting the stroke. Release the trigger before ending the stroke. The spray gun should be moving when the trigger is pulled and released.

Overlap each stroke by about 30 %. This will ensure an even coating.

If you expect to be away from your sprayer for more than one hour, follow the Short-term storage instructions.



## Spraying troubleshooting - unclogging the spray tip

If the spray pattern becomes distorted or stops completely while the gun is triggered, follow these steps.



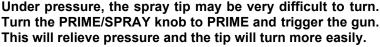
Do not attempt to unclog or clean the tip with your finger.

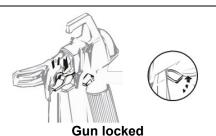
Note! Do not use a needle or other sharp pointed instrument to clean the tip. The hard tungsten carbide can chip.

tip arrow 180° so that the point of the arrow is toward the rear of the gun (CLEAN position).

Under pressure, the spray tip may be very difficult to turn.

1. Release the trigger and lock the gun off. Rotate the reversible





- 2. Turn the PRIME/SPRAY knob to SPRAY.
- 3. Unlock the gun and squeeze the trigger, pointing the gun at a scrap piece of wood or cardboard. This allows pressure in the spray hose to blow out the obstruction. When the nozzle is clean, material will come out in a straight, high-pressure stream.

If material still will not spray from the spray tip, follow the "Cleaning the spray gun filter instructions."



4. Release the trigger and lock the gun off. Reverse the tip so that the arrow points forward again (**SPRAY** position). Unlock the gun and resume spraying.



Gun unlocked





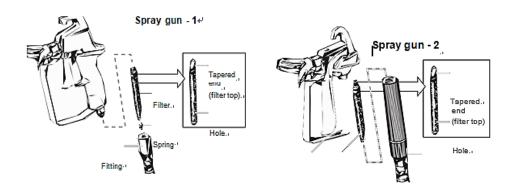
## Spraying troubleshooting - cleaning the spray gun filter

The filter must be cleaned **every time you use your sprayer.** When using thicker spray materials, the filter might need to be cleaned more often.

- 1. Perform the "Pressure relief" procedure.
- 2. a) Unscrew the fitting from the bottom of the spray gun using an adjustable wrench, making sure not to lose the spring.
  - b) Unclip the trigger guard from the filter housing by pulling outward from the filter housing. Unscrew the filter housing.
- 3. Remove the filter from the spray gun housing and clean with the appropriate cleaning solution (warm, soapy water for latex paints, mineral spirits for oil-based materials).
- 4. Inspect the filter for holes (see inset). Replace the filter in case you discover holes.

### Note! Never poke the filter with a sharp instrument.

- 5. Replace the cleaned filter, tapered end first, into the gun housing. The tapered end of the filter must be loaded properly into the gun. Improper assembly will result in a plugged tip or no flow from the gun.
- 6. Reassemble the spray gun.



# Spraying troubleshooting – cleaning the inlet filter

The filter at the bottom of the suction tube may also need cleaning. Check it every time you change spray containers.

Remove the filter by unscrewing it from the suction tube. Clean the filter with the appropriate cleaning solution (warm, soapy water for latex materials, mineral spirits for oil-based materials).



Thread the filter back into place.

If you are still experiencing problems after having completed all the steps in "Spraying trouble-shooting," refer to the section "Troubleshooting."

#### Important cleaning notes - read before clean-up

- When using latex materials, clean your sprayer and components with water. When using oilbased materials, use mineral spirits.
- **Do not use mineral spirits on latex materials,** or the mixture will turn into a jelly-like substance which is difficult to remove.
- No matter which cleaning solution you use, make sure to dispose it properly when finished cleaning your sprayer.





Thorough cleaning and lubrication of the sprayer is the most important step you can take to ensure proper operation after storage.



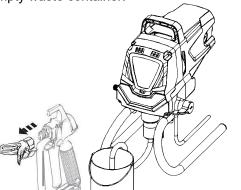
# Follow these steps whenever you are cleaning the tool with mineral spirits:

- Always flush spray gun at least one hose length away from spray pump.
- If collecting flushed solvents in one gallon metal container, place it into an empty five-gallon container, then flush.
- Area must be free from vapours.
- Do not use gasoline to clean your sprayer!

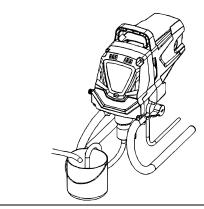
#### Clean-up for latex materials

Follow these steps if you used latex materials AND if you have a garden hose available. If you do not have a garden hose available, follow the "Clean-up for oil-based materials" instructions.

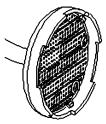
bly. Place the suction tube and return tube into an empty waste container.



1. Lock the gun and remove the spray tip assem- 2. Using a garden hose, rinse off the suction tube, return tube and inlet filter. Empty the waste container.



3. Remove the inlet filter from the suction tube and place into a waste container (do not discard).



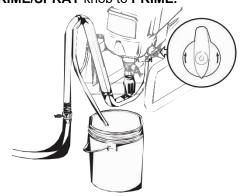
4. Verify that the seals are present inside the adapter and suction tube. Thread the pump cleaning adapter onto a garden hose. Connect hose and adapter to the fitting on the end of the suction tube.







5. Unclip the return tube from the suction tube and place it into the waste container. Turn the **PRIME/SPRAY** knob to **PRIME.** 

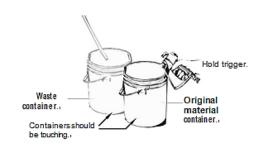


6. Turn water supply on. Turn the pump **ON** (I). Water will flow into the suction tube and out through the return tube. Let the pump run for a few minutes to allow the return tube to be completely flushed.

Leave pump running during steps 7 and 8.



7. Place the original material container next to the waste container. Aim the spray gun into the side of the original material container and hold the trigger.



8. While pulling the trigger, turn the **PRIME/SPRAY** knob to **SPRAY** to purge material from the hose back into the original container.



Keep holding trigger through next steps.

- g. When cleaning solution comes from the spray gun, keep holding the trigger and aim the spray gun into the side of the waste container.
- 10. Trigger the gun until the fluid coming out of the gun is clear. You may need to empty the waste container and continue flushing.
- 11. Turn the **PRIME/SPRAY** knob to **PRIME** and trigger gun once more to relieve pressure.



Spray material into original container

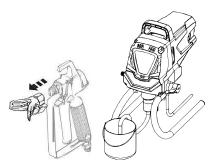
Move on to "Cleaning the spray gun components".





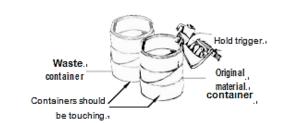
#### Clean-up for oil-based materials

1. Lock the gun and remove spray tip assembly. Submerge suction set into a bucket with appropriate cleaning solution.



Bucket with cleaning solution

2. Place a waste container next to the original material container. Aim the spray gun into the side of the **original material container** and hold the trigger.



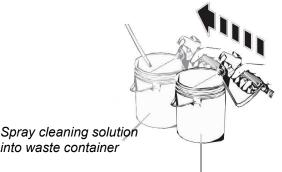
3. While pulling the gun trigger, turn the pump **ON (I),** and turn the **PRIME/SPRAY** knob to SPRAY to purge material from the hose back into the original container.

Keep holding trigger throughout the next steps.

- Hold trigger.
- Turn pump ON (I).
- Turn PRIME/SPRAY knob to SPRAY.



- 4. When cleaning solution comes from the spray gun, keep holding the trigger and aim the spray gun into the side of the waste container (earth gun with a metal container if flushing with flammable solvent).
- 5. Trigger the gun until the fluid coming out of the gun is clear. You may need to dispose and obtain new cleaning solution.
- 6. Turn the **PRIME/SPRAY** knob to **PRIME** and into waste container trigger gun once to relieve pressure.



Spray material into original container

Move on to "Cleaning the suction set."





# Clean-up - cleaning the suction set

1. Lock the gun and turn the pump OFF (O).





2. Remove the suction hose and the return tube and clean it using the appropriate cleaning solution. You should also wipe the threads of the inlet nut (a) and remove and clean the solution set inlet



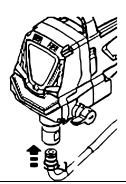


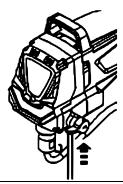
3. When the suction set is clean, thread the suction tube back into the inlet valve, and replace the return tube onto the return tube fitting. Replace clip.



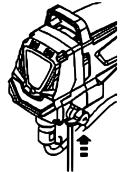
4. Submerge the suction set into a bucket of **NEW** cleaning solution.

(a)





5. Turn the PRIME/SPRAY knob to PRIME. Turn the pump ON (I), and trigger the gun once into a waste container to relieve pressure.



6. Let the pump circulate cleaning solution through the suction set for 2-3 min. Turn the pump OFF.





Note! In case you have used oil-based material, you must flush the pump again with water to prepare it for storage.

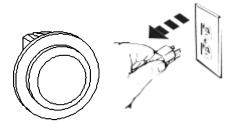
Move on to "Cleaning the spray gun components."



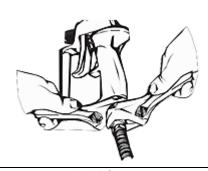


# Clean-up - cleaning the spray gun components

1. Make sure that the pump is switched **OFF (O)**. Make sure that the **PRIME/SPRAY** knob is turned to **PRIME**. Unplug the sprayer.



2. Remove spray gun from the paint hose using adjustable wrenches.

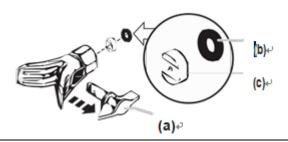


3. Remove filter from spray gun (refer to "Cleaning the spray gun filter").





4. Remove spray tip (a) from spray guard assembly. Clean spray tip with a soft-bristled brush and the appropriate cleaning solution. Be sure to remove and clean the washer (b) and saddle seat (c) located in the rear of the spray guard assembly.



5. Re-install gun filter tapered-end first. Reassemble spray gun.

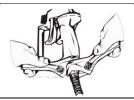




6. Install spray tip (a), saddle seat (c), and washer (b), and replace spray guard assembly.



7. Thread the spray gun back onto the paint hose. Tighten with a wrench.



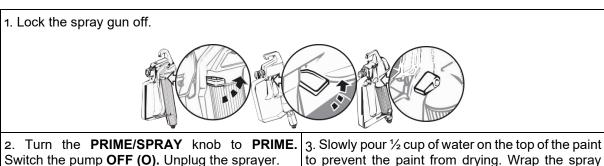




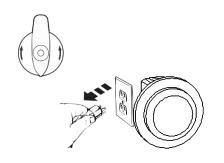
# Short-term storage (up to 16 hours)

Follow these steps when using latex materials only. If using oil-based materials, follow the "Clean-up" and "Long-term storage" steps.

#### Stopping work



Switch the pump **OFF** (O). Unplug the sprayer.



to prevent the paint from drying. Wrap the spray gun assembly in a damp cloth and place it in a plastic bag. Seal the bag shut. Place the sprayer in a safe place out of the sun for short-term storage.



#### Resuming work

1. Remove the gun from the plastic bag. Stir the 2. Turn the PRIME/SPRAY knob to PRIME. Plug water into the paint.



sprayer in. Turn the switch to ON (I).



3. Turn the PRIME/SPRAY knob to SPRAY. Test the sprayer on a practice piece and begin spraying.







# Long-term storage

Follow these instructions only after all clean-up steps have been performed.

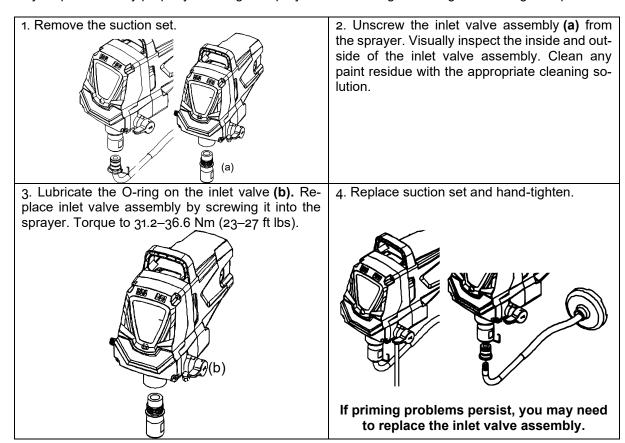
1. Fill a cup or other container with separating oil (approx. 2 ounces) supplied with the unit and submerge the inlet valve into the oil.	
	Separating oil
2. Place a rag over the spray hose port and turn the switch <b>ON (I)</b> . When the oil has been sucked from the cup, turn the pump <b>OFF (O)</b> .	
3. Wipe the entire unit, hose, and gun with a damp cloth to remove accumulated paint. Replace the high-pressure hose to the paint hose port.	





# Cleaning the inlet valve

Cleaning or servicing the inlet valve may be required if the unit has priming problems. Priming problems may be prevented by properly cleaning the sprayer and following the "Long-term storage" steps.



#### Fluid section

### Seal replacement instructions

- Always wear protective eye wear while servicing the pump.
- Be sure to follow the "pressure relief" procedure when shutting the unit down for any purpose, including servicing or adjusting.
- After performing the "pressure relief" procedure, be sure to unplug the unit before servicing or adjusting. Area must be free of solvents and paint fumes.

# Disassembling the fluid section

- 1. Remove the suction set.
- 2. Remove the front cover and the four screws that secure it using a T20 Torx head driver.
- 3. Remove the yoke screw and washer that secures the dowel pin. The dowel pin connects the yoke to the piston.
- 4. a) <u>For this machine,</u> rotate the pump shaft so that the piston is in the top dead centre position. This can be done by pushing on the piston near the yoke. This is required to disassemble all parts.
  - b) <u>For other models</u>, inspect the yoke assembly and piston. To remove all the necessary parts, the piston must not be in the bottom dead centre position. If the piston is at the bottom of the stroke, install the front cover and screws, turn the pump on briefly to index the piston, unplug the unit, and repeat step 2.
- 5. Unscrew and remove the inlet valve assembly.

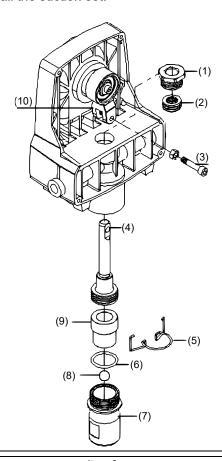




- 6. Remove the piston assembly by pushing down on the piston near the yoke.
- 7. Unscrew and remove the top nut using and adjustable wrench.
- 8. Remove the worn seals using a flat head screwdriver or punch. Remove the top seal from the top and the bottom seal from the bottom by pressing against the side of the seal and popping it out. Be sure not to scratch the housing where the seals are located.
- g. Clean the area where the new seals are to be installed.

#### Assembling the fluid section

- 1. Lubricate the new top seal with separating oil or light household oil and by hand place the seal (cup side of seal down) into the top port of the housing.
- 2. Place a small amount of anti-seize on the threads of the top nut. Place the top nut into the top of the housing and tighten with an adjustable wrench. This will drive the top seal into the correct position.
- 3. Turn the pump upside down. Lubricate the seal on the piston/seal assembly as you did with the top seal. Place the piston/seal assembly into the bottom of the housing. Insert the plastic insertion tool and thread into position to properly seat the piston/seal. Thread fully until tight. Remove the insertion tool.
- 4. Install the new O-ring on the inlet valve assembly, lubricate with separating oil, thread into the bottom (inlet) of the housing, and tighten with an adjustable wrench. This will drive the bottom seal into the correct position.
- 5. Align the piston with the yoke. Be careful not to damage the piston.
- 6. Apply any type of household grease to the piston and yoke area to prolong life. Apply to the holes in the yoke where the dowel is inserted.
- 7. Install the dowel pin to connect the yoke to the piston. The piston may have to be moved up or down to do this.
- 8. Install the yoke screw and washer to secure the dowel pin.
- 9. Turn pump right side up and apply a few drops of separating oil or light household oil between the top nut and piston. This will prolong the seal life.
- 10. Install front cover and four (4) screws.
- 11. Replace inlet valve. Install the suction set.







Nº	Name	Nº	Name
1	Top nut	6	O-ring
2	Top seal	7	Valve body
3	Yoke screw	8	Steel ball
	Piston/seal assembly		
4	Caution! DO NOT attempt to remove the seals from the piston.	9	Locating sleeve
5	Securing piece	10	Yoke

# Troubleshooting/maintenance

Problem	Possible cause	Solutions
	Sprayer not plugged in	Plug sprayer in.
	ON/OFF switch set to OFF	Turn <b>ON/OFF</b> switch to <b>ON</b> .
A) The sprayer does	Sprayer turned off while still under pressure	Turn pressure control knob to maximum pressure (+), or relieve pressure by turning PRIME/SPRAY valve to PRIME.
not start.	No voltage	Test power supply voltage.
	Extension cord damaged or with too low a capacity	Replace extension cord.
	Fuse blown in sprayer	Take sprayer to qualified workshop.
	Problem with the motor	Take sprayer to qualified workshop.
	Paint bucket empty or suction tube not totally immersed in paint.	Refill bucket or immerse suction tube in paint.
	Suction set clogged	Clean suction set.
	Suction tube loose at inlet valve	Clean tube connection and securely tighten it.
B) Sprayer starts but does not draw in paint when <b>PRIME/SPRAY</b> knob is set to <b>PRIME</b> .	Inlet valve stuck	Clean inlet valve. Inlet may be stuck from old paint. Depress pusher stem to release.
	Outlet valve stuck	Outlet may be stuck from old paint. Remove inlet valve. Insert pen or pencil in housing to release.
	Inlet valve worn or damaged	Replace inlet valve.*
	PRIME/SPRAY valve clogged	Take sprayer to qualified workshop.
	Spray tip worn	Replace spray tip with a new one.**
	Suction set screen clogged	Clean the suction set screen.
C) Sprayer draws up paint but pressure drops when gun is	Gun filter clogged	Clean or replace proper filter. Always keep extra filters on hand.
triggered.	Paint too heavy or coarse	Thin or strain paint.
	Inlet valve assembly damaged or worn	Replace inlet valve.*





	Suction tube loose	Tighten the suction tube.
D) PRIME/SPRAY valve is on SPRAY and there is flow through return tube.	PRIME/SPRAY valve dirty or worn	Take sprayer to qualified workshop.
E) Spray gun leaks.	Internal parts of the gun worn or dirty	Take sprayer to qualified workshop.
F) Tip guard assem-	Tip incorrectly assembled	Check tip assembly and assemble properly.
bly leaks.	Washer worn	Replace the washer.*
C) Sprov gun doog	Spray tip or gun filter clogged.	Clean spray tip or gun filter.
G) Spray gun does not spray.	Spray tip not fully on <b>SPRAY</b> position.	Turn tip to <b>SPRAY</b> position.
	Set pressure too low	Increase pressure.
	Gun or suction filter clogged	Clean filters.
U) Daint nattern is tail	Suction tube loose at inlet valve	Tighten suction tube fitting.
H) Paint pattern is tailing.	Tip worn	Replace spray tip.
	Paint too thick	Thin the paint.
	Pressure loss	Refer to causes and solutions for problem C.

<sup>\*</sup> Special repair kits with instructions are available for these procedures.

# Daily maintenance

The only daily maintenance necessary is thorough cleaning and lubricating after usage. Follow the cleaning and lubricating procedures in this manual.

# Extended maintenance

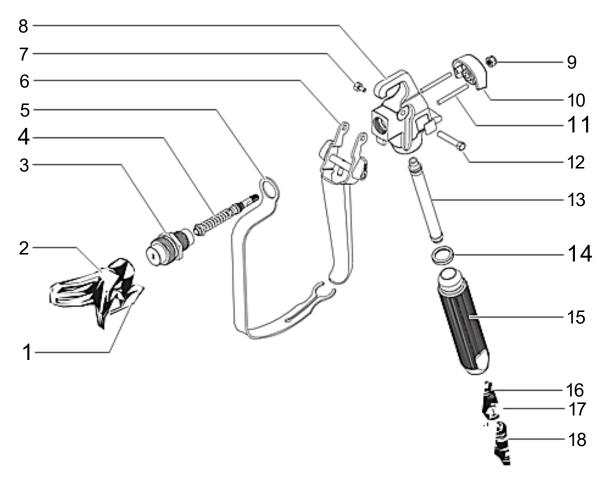
Some pump parts eventually wear out from use and must be replaced. The following list indicates the available repair kits for the parts replaced by each kit. However, pump performance is the only reliable indicator of when to replace wear parts. Refer to the "Troubleshooting" section for more information on when to use these kits.

<sup>\*\*</sup> Additional parts are available for this procedure.





# Exploded view and parts list



Nº	Name	Nº	Name
1	Spray tip 517	10	Retainer block
2	Guard assembly	11	Sliding pin
3	Diffuser, ¾"	12	Trigger screw (long)
4	Valve spring unit	13	Filter, white
5	Trigger guard	14	Washer
6	Trigger assembly	15	Handle
7	Trigger screw (short)	16	Spring
8	Gun housing	17	Sealing ring
9	Hex nut	18	Fitting





#### **Disposal regulations**

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with the domestic waste.

The company WilTec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).

The logo on the article or on its packaging points out that this article must not be treated as normal household waste but must be disposed to a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this article you protect the environment and the health of your fellow men. Environment and health are threatened by inappropriate disposal.



Material recycling helps reduce the consumption of raw materials.

Additional information on recycling this article can be provided by your local community, municipal waste disposal facilities, or the store where you purchased the article.

Address: WilTec Wildanger Technik GmbH Königsbenden 12 / 28 D-52249 Eschweiler

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