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Made for life. Built to work.

**EM360[™] Electrostatic Sprayer
User Manual**

052721

Thank you for choosing the EMist® EM360™ Electrostatic Sprayer.

We've created an easy-to-use system that combines advanced liquid application technologies with improved mobility. The result is superior application and enhanced disinfection, as well as a convenient convertible design for users.

We recommend you read through this entire instruction manual before beginning.

Included are assembly, operating, and safety instructions. Following these manufacturer guidelines will help the system perform at peak effectiveness, extend the life of the product, and ensure operator safety.

Questions?

Each component has been inspected prior to your purchase. However, in the event that there is a problem, please contact our customer support center at Emist.com.



Scan here to connect to additional resources for the EM360 Electrostatic Sprayer

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EM360™ Electrostatic Sprayer User Manual

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1. General Precautions & Safety Warnings

SAFETY NOTICES

This manual contains information that is important for you to know and understand before operating the EMist Electrostatic Sprayer. This information relates to protecting your safety and ensures product reliability and performance. **It is the owner's responsibility to ensure that all who operate this equipment read this manual.**

Warnings

Please read the manual carefully and pay special attention to the symbols and warning labels. Warning labels indicate a potentially hazardous situation which, if not avoided, could result in serious injury or death.

WARNINGS

PLASTIC PARTS CLEANING SOLVENT HAZARD

Many solvents can degrade plastic parts and cause them to fail, which can lead to serious injury or property damage. In order to help prevent against degradation:



- Use only water-based solvents to clean equipment or parts.

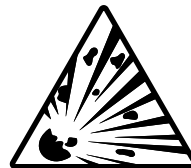
WARNINGS

- Read and fully understand the EMist Electrostatic Sprayer Operators Manual prior to using the electrostatic sprayer.
- EMist Electrostatic Sprayers should never be used in a hazardous environment.
- EMist Electrostatic Sprayers should never be used in an area containing volatile chemicals. Nor should it be used in any area containing volatile or explosive levels of gas, vapor or particulates.
- EMist Electrostatic Sprayers should never be used by untrained personnel.

WARNINGS

FIRE, EXPLOSION AND ELECTRIC SHOCK HAZARD

Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire, explosion and electric shock:



- Electrostatic equipment must be used only by trained, qualified personnel who understand the requirements of this manual.
- Stop operation immediately if static sparking occurs or you feel shock. Do not use equipment until you identify and correct the problem.
- Use and clean equipment only in well ventilated area.
- Never spray a flammable chemical (with a flashpoint less than 60°C).
- Do not turn lights on or off when flammable fumes are present.
- Keep spray area free of debris, including solvents, rags, gasoline or any flammable chemicals.
- Keep a working fire extinguisher in the work area.
- **CAUTION, TO AVOID ELECTRICAL SHOCK, DO NOT TOUCH OR INSERT ANYTHING IN THE NOZZLE OF THE SPRAYER**

WARNINGS

PRESSURIZED EQUIPMENT HAZARD

Liquid from equipment that leaks or ruptures from a component can splash in the eyes or on skin, causing serious injury. In order help prevent a leak or rupture:



- Check equipment daily. Replace worn or damaged parts immediately.

1. General Precautions & Safety Warnings

WARNINGS

PERSONAL PROTECTIVE EQUIPMENT



- Follow the chemical manufacturer's recommended directions of use found on the product label including but not limited to wearing appropriate protective equipment to help prevent serious injury.

WARNINGS

CHEMICAL USE HAZARD

Each chemical, such as a disinfectant, has a unique set of hazards and needs to be handled properly to ensure worker safety.

- Be aware of first aid procedures related to the product in use.
- It is a violation of Federal law to use a chemical in a manner inconsistent with its label.
- For use with water-soluble, non-flammable, non-combustible and non-volatile liquids only. Never spray a flammable chemical (flash point less than 60°C) .
- Ensure the area being sprayed has proper ventilation.
- Store all chemicals in original containers in a cool, dry place, away from heat and open flames.
- Do not reuse or refill a chemical container.
- Always follow the chemical manufacturer's direction of use.

WARNINGS

EQUIPMENT MISUSE HAZARD

Misuse can cause serious injury or death.



- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Use only water soluble fluids that are compatible with equipment wetted parts.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine replacement parts from trusted EMist partners only.
- Do not alter or modify equipment. Alterations or modifications void your EMist warranty, and create safety hazards.

WARNINGS



SAFETY WARNING!

DO NOT USE THE ELECTROSTATIC APPLICATION SYSTEM IF YOU HAVE A PACEMAKER OR AN IMPLANTABLE CARDIOVERTER DEFIBRILLATOR (ICD).

WARNINGS



STATE OF CALIFORNIA PROPOSITION 65 WARNING

- This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

2. Initial Inspection & Set Up - Inventory

EMist Electrostatic Sprayer Components



Power Pack with Applicator

Power pack with applicator may be used with either the backpack harness or pull cart configuration.

Battery Charger

The battery charger kit comes with AC adapter, smart battery charger, connector cable, and provides approximately 45 minutes recharge time.



Harness

This commercial harness for the backpack configuration is designed for comfort and safety. It is adjustable to the user from small to large frame individuals.



Pull Cart

This commercial pull cart for the pull cart configuration is designed for ease of use and safety. It provides an applicator holster for ease of storage.



Tank

Interchangeable one-gallon liquid tank includes strain filter and cap. It is inserted with a light downward pressure then rotated ¼ turn to lock in place.

Applicator

The applicator is connected to the application power pack housing by an electro-fluid cable. This hand-held device is trigger activated for the charging and applying of your liquids.



Battery

The rechargeable battery will stop working once it reaches 25% capacity (or one indicator bar). The system can accommodate two batteries, but only requires one to operate.



Grounding Strap

The grounding strap snaps to the bottom of the application power pack and is an extra layer of safety in the event static charge accumulates with extended use of the system. A simple loop slips over the toe of the shoe and heel.

* The grounding strap must be worn by the user when using the backpack harness or the system will shut down and not operate correctly.



Inspection

After unpacking, inspect components for any damage or missing hardware pieces, etc.

- Power Pack with Applicator
- One-gallon Liquid Tank
- Rechargeable Battery
- Grounding Strap
- Battery Charger
- Backpack Harness with Holster (Optional)
- Pull Cart (Optional)

2. Initial Inspection & Set Up - Before You Use

1. Install Battery (procedure same for both battery slots):

- a) Charge the battery first:
 1. Plug cord into AC adapter.
 2. Plug AC adapter cable into Smart Battery Charger.
 3. Plug AC adapter into 120v wall outlet.
 4. Install battery into smart charger.
 5. Reference power indicator (4 bars = full charge).
- b) With the application power pack battery slots facing you, remove battery covers by pinching the triangle.
- c) Install battery with tab facing left.
- d) Gently push battery to seat.
- e) Replace battery cover.
- f) Depress the power button to verify power on the power pack (LED will blink continuously).

2. Liquid Tank Removal:

- a) While gently depressing tank lid/handle, rotate counter-clockwise about 1/4 turn. Once disengaged, it will pop up slightly.
- b) Lift liquid tank out of power pack.

Note: Over time, the tank connector may need adjusting to align with placard.

3. Liquid Tank Insertion:

- a) For initial set up/test, fill the liquid tank 1/3 full with water.
- b) Gently place the liquid tank in the power pack.
- c) Slightly rotate clockwise about 1/4 turn while depressing tank until you feel resistance. Handle of tank should line up with placard on the power pack.

4. Pull Cart Installation (optional):

- a) Raise adjustable clamp, loosening the two knobs and positioning as desired then re-tightening the knobs.
- b) Put the clamp over the hand grip of the power pack keeping the electro-fluid cable out of the way. This secures the pack in place.
- c) Use the applicator holster when system is not in use.

5. Grounding Strap Installation:

- a) Identify the white or brown portion of the grounding strap ring and install placing the white or brown portion to the bottom of the ball of your shoe.
- b) Place the elastic strap around heel. This is adjustable if needed.
- c) Snap the button to the bottom of the power pack.

6. Power Pack Harness Strap Adjustments (optional):

- a) Put the harness on the power pack.
- b) Put the power pack on like you would a backpack and adjust the straps to fit comfortably.

7. Power Pack and Applicator Function Check:

- a) With grounding strap attached and the tank installed, push/flip the toggle power switch down to turn the machine on.
- b) The green LED on the applicator will light up green for power on.
- c) Once the applicator trigger switch is depressed, the fan will turn on first, followed by liquid spray.
- d) The yellow LED illuminating signifies that the high voltage power supply is charging the liquid droplets.
- e) Once the applicator is released, the liquid will stop, and the fan will turn off after slight hesitation to ensure the liquid is cleared from inside the applicator.
- f) To turn the system off push/flip toggle switch up to turn off the system.

3. Assembly & Operating Instructions

Assembly Instructions and Tips



Keep this tab to the right as you insert the battery into its compartment on the power pack.

1. Rechargeable Battery:

The system uses up to two lithium-ion batteries.

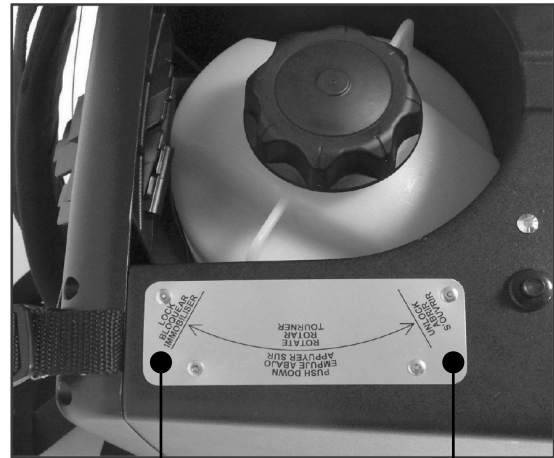
- The battery should be fully charged prior to the start of a project.
- Inspect the quick connectors for any debris or damage prior to inserting.
- The right tab side front end of the battery includes a power meter to show remaining charge (4 bars = full charge).
- Two bars or less during startup may limit time of use without charging.
- The connector side of the battery enters the power pack case with the connector slots down.
- Keep battery handle tab to the right as you insert.
- The battery easily seats in the power pack. Over applying pressure may make the battery difficult to remove without tearing tab or could damage the system or battery.
- Insert battery cover (plastic cover is attached by a lanyard).

2. Interchangeable One-gallon Liquid Tank:

- Remove the vented cap, leaving strain filter in place.
- Fill as needed and replace vented cap.
- Tank does not need to be removed to fill.
- Align the tank handle with manual identified on the power pack top label.

WARNING: THESE BATTERIES OR CHARGER WILL NOT INTERCHANGE WITH EMIST OLD STYLE BATTERY AND CHARGER. PLEASE DO NOT ATTEMPT THIS, DOING SO WILL DAMAGE YOUR SPRAYER AND VOID YOUR WARRANTY COVERAGE.

IMPORTANT: DO NOT DROP TANK INTO THE TANK WELL. CAREFULLY APPLY SLIGHT DOWNWARD PRESSURE ON THE TANK AND TURN INTO THE LOCKING POSITION.



Tank Locked
Handle Alignment

Tank Unlocked
Handle Alignment

- Utilize liquids for duration of project or until refill is required.
- You may exchange tanks with different liquids at any time.

IMPORTANT: CAREFULLY APPLY SLIGHT DOWNWARD PRESSURE ON THE TANK AND TURN TO UNLOCK BEFORE LIFTING TO REMOVE.

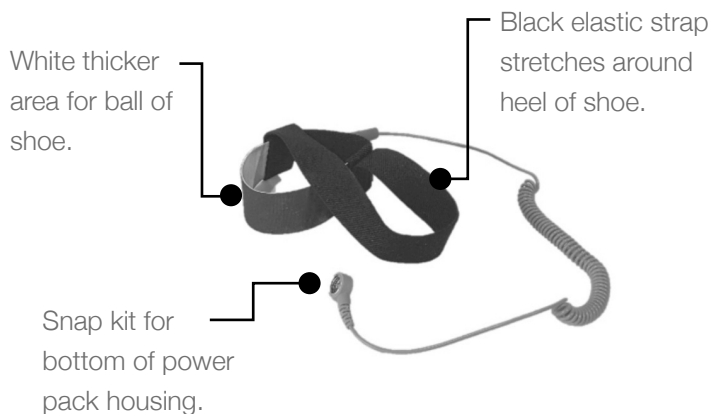
CAUTION: TURNING OR LIFTING A TANK FOR INSERTION OR REMOVAL WITHOUT APPLYING SLIGHT DOWNWARD PRESSURE PRIOR TO LOCKING OR REMOVAL CAN DAMAGE THE TANK OR THE SYSTEM.

3. Assembly & Operating Instructions

3. Grounding Strap:

This protection accessory is light weight and very flexible.

- Snap to the bottom of the power pack housing.
- Slide toe strap onto the toe of the shoe with the white or brown area touching the ball of your shoe.
- The black elastic strap area will stretch around the heel of your shoe. This strap is adjustable if needed.

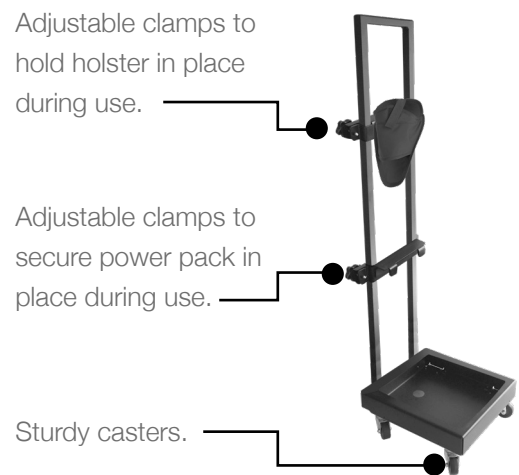


CAUTION: THE GROUNDING STRAP MUST BE WORN WHILE USING AS A BACKPACK BY USER. IF THE TOE STRAP IS NOT UTILIZED THE SYSTEM WILL SHUT DOWN AND NOT OPERATE CORRECTLY.

4. Pull Cart Configuration:

This optional feature is easy to use and mobile using ESD (Electrostatic Dissipative) wheels for grounding.

- The power pack fits into the lower portion of the cart between four metal sides to hold the pack in place during use.
- The cart has an adjustable clamp that is attached to the handle to secure the power pack in place during use.
- The handle also contains a holster for the applicator for the ease of storage.



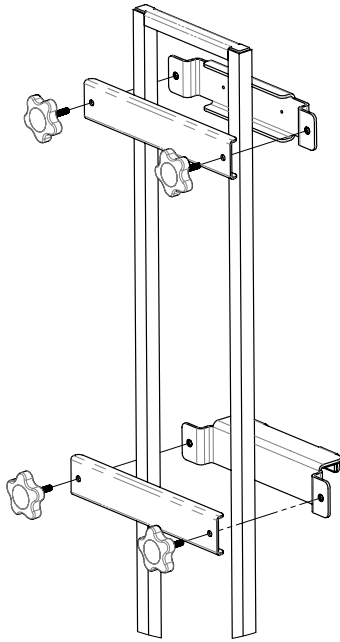
Tips

- While using as a backpack, the grounding strap must be worn by the user. If the grounding strap is not utilized the system can shut down and/or not operate correctly.
- Optimal distance from a target is 24" - 36".
- Applicator will shut off once power indicator on battery reaches 1 bar.
- Ensure applicator is secured while putting the backpack on/adjusting straps/taking backpack off to avoid damaging the applicator.
- While using the pull cart configuration, the ESD (Electrostatic Dissipative) grounding is completed by the snap button of the Power Pack touching the silver circle located on the base plate of the pull cart. If the power pack is not seated correctly in the pull cart, the system can shut down and/or not operate correctly.

3. Pull Cart Assembly

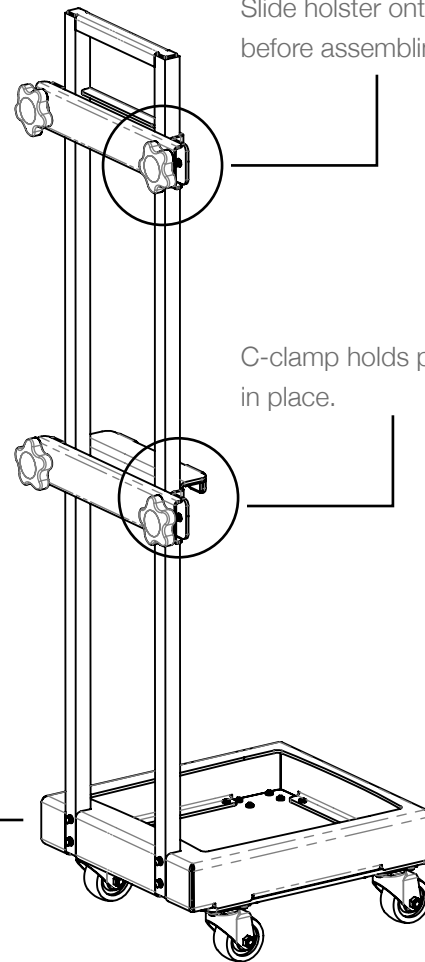
Handle Rails

Handle assembly positions can be adjusted by loosening the two knobs and positioning as desired and then re-tightening the knobs.



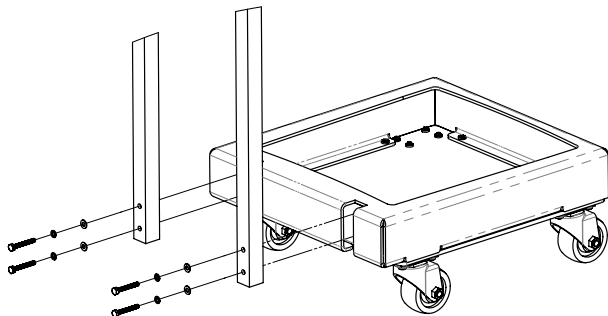
Slide holster onto flat clamp before assembling.

C-clamp holds power pack in place.



Cart Attachment

Assemble the handle to the cart base using the four hex bolts, lock washers and flat washers supplied with the unit.



4. Spray Application

A. Preparing the Spray Area:

1. Make sure food and drinks are removed or covered before application.
2. Spotless, clean interiors require no prep work prior to application.
3. Loose debris must be swept from floors and other surfaces prior to application.
4. Inspect the area for mechanical barriers such as: magazines on table tops, chairs touching each other, a table or a wall. The intended target surface area for application will need to be accessible.
5. Please cover and remove valuables. Electronics, furniture, paper or other common necessities do not need to be removed from the area.
6. Once the area has been cleaned, application can begin.
7. This system is NOT a mechanical cleaner.

B. Spray Application Process:

1. EMist recommends the use of disinfecting products on EPA's Disinfection List N that are approved for electrostatic application.
2. Begin at the farthest point from the doorway, work back toward the doorway so you can step out when application is complete.
3. Aim applicator 24"-36" feet (optimal distance) from the surface target area, begin with a smooth figure "S" movement aiming below, at, and above the surface target area while walking at an average pace (continuously moving).
4. Make sure you are working in a methodical "S" pattern and let your passes overlap when moving to the next surface target area.
5. Allow treated area to set for contact time as recommended by the chemical manufacturer's label before re-entry into the area.

TIP: IF THE APPLICATOR BECOMES WET OR BEGINS TO DRIP, YOU ARE MOVING TOO SLOW OVER THE SURFACE TARGET AREA AND NEED TO SPEED UP THE APPLICATION PROCESS. DO NOT OVER-SATURATE THE SURFACE. IF YOU SEE RUNS OR PUDDLES YOU ARE APPLYING TOO MUCH CHEMICAL. THE GOAL IS TO ACHIEVE EVEN COVERAGE OVER THE TARGET SURFACE AREA.

C. Fluid Management:

The system is designed for single or multiple application environments. Please use the multiple tank applications carefully by marking tanks with your chemical identifiers when necessary.

Application Tips:

1. While depressing the trigger button, move the applicator in an "S" pattern from bottom to the top of the surface target area in a continuous motion.
2. Stay in motion, electrostatically charged droplets will accumulate in higher levels at the tip of the applicator if you move too slowly while the device is in use.
3. Do not over apply.
4. In between chemical changes, press the trigger while pointing to the floor or other safe target area for 1-2 minutes to clear the remaining chemical in the system.

D. Battery Management:

The system's battery use is controlled to draw down the battery to 25% (or one indicator bar) of available cell power and to then shut off. This will eliminate the possibility of unwanted battery damage and extend the life of the battery.

Tips:

1. Fully charge each battery before use.
2. Keep batteries, chargers and connectors clean and dry at all times.
3. Insert with battery tab to the right, no matter what battery port it is in.
4. Do not expose batteries or chargers to liquid.

5. Maintenance & Cleaning

Flushing the Electrostatic Sprayer

TIP: IT IS IMPORTANT TO FLUSH THE APPLICATION SYSTEM EVERY 24 HOURS WITH CLEAN WATER. DO NOT STORE CHEMICALS IN THE RESERVOIR WHILE THE SYSTEM IS NOT IN USE FOR GREATER THAN A 24 HOUR PERIOD.

The system is designed to minimize maintenance and cleaning.

Tips:

- Clear the system at least once a day by spraying clean water through the system for 1-2 minutes.
- Some chemicals are harsher or more volatile than others. Because corrosion caused by chemicals is not covered under Manufacturer's limited warranty, it is imperative that you properly flush the system as directed herein, Note that the use of some chemicals may require more frequent flushing of the system based on the chemicals corrosive nature. Signs of failing to properly flush the system included clogged nozzle, hardened or calcified hoses or lines, deterioration of the plastics such as the manifold, and/or clogged filters.
- Keep batteries charged.
- Inspect cable for cuts, tears or damage.
- After flushing the system, inspection for any debris or damage.

Changing Chemicals:

TIP: IT'S IMPORTANT TO FLUSH THE SYSTEM IN BETWEEN USE OR WHEN SWITCHING CHEMISTRY TO PREVENT RESIDUAL BUILD UP AND TO AVOID MIXING CHEMICALS.

- To flush the system, empty the liquid tank and fill with at least 1 inch (2.5cm) of clean water.
- Spray for at least 1-2 minutes to flush the previous fluid from the system.

CAUTION: TO PREVENT CROSS CONTAMINATION OF CHEMICALS, YOU MUST PERFORM A FLUSH ANY TIME YOU CHANGE THE TYPE OF CHEMICALS BEING USED.

Battery Removal

- Make sure the system is powered off.
- Remove both battery covers by squeezing the triangular pop-out portion of the covers and pulling outwards.
- When covers are off, a pull-tab will be visible to assist in removal of the batteries.
- Place batteries into charger to fully charge for next usage. Each battery takes approximately 45 minutes to fully charge.

CAUTION: DO NOT STORE THE SYSTEM IN AN AREA THAT MAY FREEZE (TO AVOID DAMAGE FROM LIQUID REMAINING IN THE SYSTEM AND LINES). THIS WILL VOID THE WARRANTY.

Storage

- Empty fluid or run until empty.
- Insert at least 1 inch (2.5cm) of clean water in the liquid tank.
- Run the electrostatic sprayer for at least 1-2 minutes to flush active chemicals from the system.
- Remove batteries and re-charge by placing on the charger.
- Wipe down exterior with water or alcohol to remove dirt and soil.
- Use the power indicator on the end of the battery to determine the battery's state of charge (4 bars = full charge).
- Insert battery covers back into battery compartment slots to prevent foreign particles and moisture from damaging battery contact connectors.
- Coil the quick connect electro-fluid cable up neatly and securely.

6. Troubleshooting, Support & Repair

The EM360™ is designed and manufactured to function without defects. The system will operate normally with properly maintained batteries and without abuse to the connector or other system parts.

Indications & Remedies

PLEASE SEE BELOW FOR EASY INSTRUCTIONS FOR ADDRESSING ISSUES THAT MAY ARISE WHILE USING THE EM360™

Issue	Reason	Troubleshooting
No power to the system (battery)	Battery not installed correctly	Verify battery connector issue by using the opposing battery slot with a charged battery
	Battery not charged	Fully charge the battery (4 bars =full)
	Battery does not slide easily into the slot (do not try and slam the battery to seat)	Battery is mechanically obstructed.
	Battery connector not working	Verify battery connector issue by using the opposing battery slot with a charged battery
System operates, but led(s) not illuminating	Green led not illuminating	Contact Customer Care
	Yellow led not illuminating	
No mist/inadequate mist	Tank is empty	Fill tank with appropriate liquid
	Tank not seated correctly	Verify the tank is locked into place as instructed
	Battery life	Fully charge the battery (4 bars =full)
	Improper grounding	Make sure the grounding strap is connected to unit and opposite side is placed over your shoe
	Nozzle clogged	Check for signs of corrosion on the spray tip
	Pump not engaged	Verify all the above troubleshooting steps for results

Support or Repair

If your system fails to function, excluding obvious user damage, please contact EMist or your authorized EMist distributor.

If an issue occurs that is not addressed in the troubleshooting methods, please contact a technical support representative at: 888.534.7001 or visit Emist.com.

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