
DOWNSTREAM
POWERSTREAM
UPSTREAM
OWNER'S
MANUAL
Disruptor
Manufacturing
It's good to be Disruptive
CE

TABLE OF CONTENTS

Where Can I Find Help?

This owner's manual is your first source for support and direction on your new POWERSTREAM exterior cleaning system. In this owner's manual, you will find step by step directions for basic operations. Other sources for finding and getting support are:

1. The Distributor where you bought your system.

There are many issues you might run into when using the equipment that are an easy fix with a quick phone call with your distributor. Please try calling them first, after you have read through the owner's manual, as they will be able to help with most questions.

2. Call Disruptor Manufacturing Technical Support at 407.900.2868 and select the extension for Technical Support when prompted, after reviewing the manual and checking for solutions in the troubleshooting section.

Powering Your System

Proper Battery Choice (if you are running a 12 volt system)

The POWERSTREAM recommended battery choice is: Group 24 Deep Cycle Marine Batteries.

Only deep cycle batteries can be used. Do not use marine/start or starting batteries. Marine deep cycle batteries can be found at any RV or Boat supply or even discount stores like Walmart or Sam's Club, etc.

The general rule of thumb is 1 battery = 2 hours of "Spray time" (when the pump is running). We usually install 4 batteries with a battery charging system (AC & DC) which lasts all day.

Battery Mounting Options

Make sure to mount batteries in either a DM battery tray, which can hold up to five batteries, or within a standard poly battery box. Batteries should be secured.

Charging and Care of Your Batteries

Deep cycle batteries require daily charging. Make sure to visit your battery manufacturer's website for care and maintenance guidelines. Poorly charged batteries will diminish the performance of your system.

BATTERY VOLTAGE STATE OF CHARGE TABLE		
State of Charge	Sealed of Flooded Lead Acid battery voltage	AGM battery voltage
100%	12.70+	12.80+
75%	12.40	12.60
50%	12.20	12.30
25%	12.00	12.00

WARNING: STATIC VOLTAGE (WHEN THE PUMP POWER IS OFF) SHOULD BE NO LOWER THAN 11.5 TO OPERATE EFFECTIVELY.

General System Operation & Processes

Filling 50- or 100-Gallon Bleach Storage Tank

1. You can fill the tank directly with bleach from the black screw top lid located on the back of the unit.

2. Fill the tank leaving a little space at the top. **Do not overfill. These tanks are 52-gallon, and 104-gallon tanks respectively.**

End of Job Procedure

Note: To flush chemicals out of your system between jobs, simply turn off all soaps and bleach. Spray until only water comes out of the wand.

WARNING: DO NOT TRAVEL WITH PRESSURE ON YOUR SYSTEM. Turn the power switch to the "OFF" position with the application wand open to release the most pressure in the system. Once the pressure is about 10 PSI, close the wand.

End of Day Procedure

We require rinsing out and neutralizing your system at the end of each workday. Bleach is corrosive and can cause damage if not properly neutralized. **The end of day procedure must be followed daily to maintain your warranty on your Disruptor Manufacturing™ Equipment.** Following this procedure also flushes the inside of your pump which extends pump life.

To limit the waste of chemicals, start this process when you are approaching your final 500 square feet of cleaning at the job. This is because there are still 300 feet of chemical solution in the hose that will need to be used before you run a neutralizer like SoftWash Systems™ Final Wash™ through the system.

1. Turn all metering valves on the control panel to the off position ("0").

2. Set the valve with your neutralizing chemical to "2". This starts the neutralizing process inside the pump and hose.

3. Once the Final Wash™ in the line has switched to neutralizer, turn the valve to "0".

4. Use the Final Wash™ coming out of the application hose to wash the equipment and exterior of your truck.

5. Once there is no longer Final Wash™ coming out the end of the application hose, rinse off your equipment and truck with the clean water coming out of the same hose. This procedure also flushes the pump of residual Final Wash™.

6. Turn the power switch to the "OFF" position with the application wand open to release the most pressure in the system. Once the pressure is about 10 PSI, close the wand.

7. While rolling up the hose, run the hose through a damp rag. To protect the hoses, saturate the rag with Armor All or a similar product to clean at least once a week.

IMPORTANT: Pumps that fail due to abuse or poor maintenance and have not been daily rinsed with clean water and Final Wash will not be eligible for warranty privileges.

Troubleshooting Options

System Pump Won't Prime

Check to ensure that all tanks are filled.

System Pump Won't Prime - Check for Kinked Hose in System

One possible issue for a pump not priming can be a kink in a suction hose. We use a suction specific ribbed hose on our systems to keep this from happening. (This only applies to the ¾" ribbed suction hose; ribbed suction hoses are not available in ½" and 3⁄8"). Our suction hoses will not collapse under suction. However, it is prudent to look for kinks or any other kind of obstructions on the suction side of your system when having pump-priming problems. Suction regions of the system will have a ribbed suction hose on them and are identified. Please visually inspect all of your hoses to make sure you don't have an obstruction or a kink in the hose on any of your suction lines.

System Pump Won't Prime - Check for Suction Air Leak in Plumbing

Often a pump-priming issue can be from air getting into the system through a loose or broken fitting. We take extra time to make sure every thread is sealed, every clamp is seated correctly, and every fitting is in good working condition before water testing every system that comes out of our factory. It is important to note that our factory however is in sunny, mild Florida and as these systems are shipped all over the world, they encounter varying temperatures as well as shipping mishaps. Inspect your system for possible air leaks by visually inspecting every hose connection for visible bubbles in the lines. We use all clear hoses specifically to make troubleshooting these issues easy. Once you find bubbles in your line, backtrack upstream the bubbles until you find a section of line where the bubbles don't exist. Then move back up the line downstream to the fitting closest to where there is evidence of bubbles in your system. There you will find one of these below conditions to correct and solve the air intake problem.

1. Hose clamp needs to be tightened.

2. Barb fitting needs a new thread seal or may need to be tightened.

3. Cracked fitting needs replaced.

4. Cracked check valve.

5. Cracked tank flange also referred to as bulkhead fitting.

System Pump Won't Prime - Air Escaping Through Spray Wand & Low Pressure

Also related to the condition outlined above, evidence of an air leak in your system can be sputtering of air through your spray wand long after the initial priming of your system between tank refills. In other words, unexplained air keeps coming through your spray wand not

related to the initial system set up at the beginning of the day. Leaks of any kind in your system will result in air being introduced into your system (suction side of the system) or a dripping or streaming of chemicals from a fitting or pinhole in a hose (pressure side of the system).

Not Drawing Soap Properly

1. Make sure there is sufficient soap in the saddle tanks.

2. Check for an air leak in 3⁄8" hose at any of the barb fittings on the suction side of the pump. Check for loose hose clamps.

3. A metering valve body collar may need to be tightened. Call for technical assistance. Overtightening can cause damage.

4. Check to ensure that the ½" check valve isn't cracked. Replace as necessary.

5. The draw tube in the Saddle Tank may need to be re-glued to be airtight. We recommend using 3M 5200 Adhesive.

6. Restrictor valve in the water buffer tank may be open.

Loss of Pressure at Spray Tip

1. Clogged tip: Remove spray tip and check for debris.

2. Kink in Hose: Kink in ½" spray hose not visible from the hose being wound up on the reel. Unroll the hose completely to inspect.

3. Corrosion: Stainless steel hose reel riser tube is corroded and swollen almost shut or rust from within this tube clogging the ½" brass barb at end of ½" hose at the reel. Replace ½" hose barb at the manifold. Check for debris and remove it if present. This is prevalent in systems older than one year.

4. Debris has been pulled into the pump head keeping it from sealing/ seating so that pump struggles to maintain pressure.

5. Low voltage: Recharge batteries or replace them as necessary.

6. The pump has aged: Pump head needs a rebuild kit or pump completely replaced.

Loss of Power to System

1. Pressure switch contacts are burnt and need to be replaced. Call for technical assistance.

2. Corrosion is present at terminals. Check terminals at batteries, breaker, switch, and terminal block. If corrosion is present, clean or replace.

3. Loose connections: Tighten or replace as needed.

4. Low voltage: Proper voltage feed is very important. Low voltage will cause various power issues as well as premature failure of your system pump and pressure switch. The low battery voltage will also cause the pump to overheat. Charge or replace batteries as needed.

5. Resettable breaker tripped on the system firewall.

6. Pressure switch on pump triggered: Open your spray wand to make sure your system is not under pressure.

Note: *Make certain that your pressure gauge is functioning properly. When all pressure has been relieved from the system, the gauge should read zero ("0").*

System Pump is Struggling to Make Pressure

If your pump is struggling and there are no visible leaks, kinks, or fouls, your battery charge may have dropped below minimum

voltage for the pump to work effectively. Compare the reading of the voltmeter on the control panel to the chart below. Charge or replace batteries as necessary.

BATTERY VOLTAGE STATE OF CHARGE TABLE		
State of Charge	Sealed of Flooded Lead Acid battery voltage	AGM battery voltage
100%	12.70+	12.80+
75%	12.40	12.60
50%	12.20	12.30
25%	12.00	12.00

WARNING: STATIC VOLTAGE (WHEN THE PUMP POWER IS OFF) SHOULD BE NO LOWER THAN 11.5 TO OPERATE EFFECTIVELY.

System Pump is Cycling On and Off Too Frequently

1. The pressure switch is set incorrectly. Adjust pressure switch using a 1⁄16" Allen wrench (hex wrench). Turn set-screw clockwise to raise the shut-off pressure. The set-screw is located on the edge of the blackfin on the tip of the pump.

Note: *Adjusting the pressure switch only changes the shut-off pressure, not the spraying pressure.*

2. Restricted flow either at the tip of wand or hose reel swivel or somewhere in between. Refer to section **"Loss of Pressure at Spray Tip"**.

3. Too small of a tip for the job. For example, if you are working above two stories you will likely need to use a #30 tip rather than a #20 tip to get the pressure to drop.

Maintenance

Refer to the chart below for information about how often to perform maintenance on each part of your system.

MAINTENANCE INTERVALS

Maintenance Tasks	DAILY	WEEKLY	MONTHLY	QUARTERLY	YEARLY	AS NEEDED
End-of-Day Procedure	X					
Wipe off hose when winding	X					
Rinse exterior of system	X					
Apply Armor All to hose		X				
Check for loose hose clamps		X				
Test circuit breaker		X				
Charge battery with AC charger	X					
Wipe down system's aluminum with Pledge		X				
Check electrical connections			X			
Lubricate fasteners			X			
Reverse-pressure test			X			
Check/fill battery water level			X			
Check for loose fasteners			X			
Vacuum tanks			X			
Rotate Hose on Reel					X	
Replace valves						X

Helpful Tip: Set calendar reminders to do these items.

Tanks & Hoses

1. Coat the tanks from time-to-time with a plastics care product like Armor All, Tire Foam, or a like product. Allow soaking overnight and then wipe away excess in the morning. You can also use these types of dressing sprays on your hoses throughout the system as well.

2. Vacuum out residual trash from inside the tanks every month. Then rinse the tanks out with clean, clear water.

3. Remove and rinse the in-tank sediment filter monthly when you vacuum out the tanks.

4. Look for corrosion on any of the stainless steel hardware on tank lids, hose clamps, and tank straps and replace if anything looks worn.

Stainless Steel Hardware, Brass Connections & Aluminum

1. Look for corrosion on any of the stainless steel hardware on tank lids, hose clamps, and tank straps, and replace if anything looks worn.

2. Apply WD-40 to these hardware items regularly.

Winterizing the System

BEFORE YOU BEGIN: Remove all pure water [Phantom Window Works] cartridges (unscrew caps and remove filters) VERY important to do this BEFORE starting to run antifreeze through your system. Place filters inside or somewhere warm. Replace caps on filter housings after completion.

Please note each system is configured differently and instructions may differ slightly from system to system.

1. Completely remove all the TONER 12™ (bleach) solution from your system and rinse the entire system out with water.

2. In the TONER 12™ (bleach) and water buffer tanks, place 5 gallons in each tank (10) gallons of RV-20 antifreeze (the hose reel and hose will hold up to 5 gallons, so you will need 5 gallons in each tank).

3. Run the antifreeze through the system pushing all the water out of the valves, pumps, and hoses.

4. Open spray wand.

5. Set TONER 12™ (bleach) TANK valve to “0”

6. Place your wand in the tank after all the clear water has been pushed from the hose reel and recirculate the antifreeze through the reel.

7. Make sure your entire system has the colored antifreeze in every line that is visible.

AFTER YOU’RE FINISHED: Remove 12 Volt pump from Blend Cabinet – Put inside or somewhere warm. There is no reason to risk this pump when it is so easily removed.

Recommended Parts to Keep on Hand

Because of the nature of the chemicals that we spray through these systems, some components will fail before others. Here is a list of these parts so you can plan for their life cycle and replacement in order of life longevity.

5.3 GPM System Pump (If utilized on system)

General Life Span 3-4 Months or 300 hours

It is a fact that few pumps will hold up to transferring TONER 12™ (bleach). In the price range, we as contractors can attest that there are none. Your TONER 12™ (bleach) pump will get you about 300 hours of spraying service before it will possibly need to be replaced. This is three BUSY months of soft washing. The average cleaning season is nine months. This means that you will need to replace your pump possibly three times a year. There have been many examples of those who take extraordinary care of their pumps, flushing them nightly with Final Wash neutralizing soap, lasting more than a full year. There are also just as many examples of contractors that kill their first pump in under a month. Generally, this is directly attributed to the end of day procedure as well as other general care items.

IMPORTANT: It is a general rule that if you are going through many pumps it is because you are shortcutting on the care needed to keep them in service.

Hose Reel Swivel Rebuild Kit

General Life Span – Around 6 Months

The O-Rings in the hose reel swivel will begin leaking at around 6 months. We have several different types of swivels in stock as well as a rebuild kit available for you at SoftWash Systems.

150 PSI Liquid Filled Pressure Gauge

General Life Span – Around 1 year

This part, though sealed and filled with protective oil, fails yearly. Care as discussed above helps this gauge last longer.

Banjo Plumbing Fittings

General Life Span – Around 1 year

These fittings can crack and might need replacing. It is also recommended to replace these parts seasonally.

WARRANTY

Other Manufactures Components

Some of the components of our equipment carry their own manufacturer's warranties which supersede Disruptor Manufacturing expressed warranties. A partial list of those components are, but not limited to:

- Hose Reels Pumps
- Valves
- Switches
- Hoses
- Pressure Washers
- Breakers

The owner of the Disruptor Manufacturing equipment will need to contact that manufacturer directly. For all other than the pumps, see "Pump Warranty Procedures" below. For help identifying the correct manufacturer, please call Disruptor Manufacturing Customer Service at 407-900-2868.

Pump Warranty Procedures

To send your pump in for warranty, please follow the below instructions:

1. Email **sales@disruptormanufacturing.com** a picture of your pump that clearly shows the Model # and Serial # on it.

2. Enclose within the email what the problem is with the pump. Disruptor Manufacturing will fill out an RMA request for you and return to the manufacturer.

Once the manufacturer opens the RMA for you, you will send the pumps back to the address provided to you on the official RMA. Disruptor Manufacturing will provide you with the paperwork as soon as we receive it ourselves. DO NOT send it back to Disruptor Manufacturing.

The pumps will be reviewed and either fixed, replaced, or credited back. Disruptor Manufacturing will let you know what the manufacturer has approved or denied the claim and will provide you with options based on the manufacturer's decision.

You will be responsible for the shipping of the pump both to the manufacturer and back to you if they approve the warranty claim on it.

Proper Care

Discussed in this Owner's Manual are procedures for caring for and cleaning your equipment daily. This equipment requires neutralization

daily to protect the inner workings of the system from the corrosive effects of bleach. It is recommended that your equipment be flushed internally daily and washed externally with a neutralizing product like SoftWash Systems Final Wash™ to keep your warranty in effect. If Disruptor Manufacturing finds that you are not performing the correct end of day procedure on your equipment we may deny your warranty claim.

LIFETIME LIMITED WARRANTY

Disruptor Manufacturing offers a Lifetime Limited Warranty to the original purchaser of any of our skid mounted/Disruptor Manufacturing branded equipment. As long as the original purchaser is the current owner of the skid mounted system, Disruptor Manufacturing will stand behind our Aluminum Structure (Skids, Tank Straps, Control Panels, Reel Stands, Brackets) and our poly holding tanks, manufactured by Disruptor Manufacturing for the lifetime of the equipment when installed into a truck or a van. Trailers are excluded from this warranty because of inadequate suspension systems.

Disruptor Manufacturing also provides to the original purchaser a one-year (12 months) full bumper-to-bumper guarantee on all components attached to our branded skids for workmanship defects, as part of the original build performed by Disruptor Manufacturing. Workmanship defects are defined as defects in the system that inhibit normal operating performance.

Items like hose reels (other than Stingray Hose Reels™), booster pumps, banjo fittings/valves and pressure washers are manufactured by third party companies and have their own factory warranty. These items are not covered by Disruptor Manufacturing's warranty. We strive to help you with factory warranties – however, only items manufactured by Disruptor Manufacturing should be returned to our location. All factory warranties will need to be sent to the proper address, with shipping at the customer's expense. Please see "Other Manufacturers Components" section of this owner's manual.

Wear items like chemical o-rings, seals, check valves, pumps, hoses, and pressure gauges are not covered by this warranty. The term wear is described as the wear that should be expected in the course of normal operating usage of spraying equipment. Additionally, equipment must be cared for in a manner consistent with the POWERSTREAM skid owner's manual and must not suffer from abuse or neglect as determined by Disruptor Manufacturing. System rust and/or corrosion are indications that your system has not been properly cared for (see page 21, Proper Care) and will result in your warranty claim being denied.

In the event of failure, Disruptor Manufacturing will repair the deficiency or replace at its option. Parts will be replaced at no cost to the original customer. Shipping and instal- lation will be at customers expense.

Disruptor Manufacturing
407.900.2868
sales@disruptormanufacturing.com
www.DisruptorManufacturing.com


POWERSTREAM
UPSTREAM
DOWNSTREAM
Disruptor™
Manufacturing
It's Good to be Disruptive!
407.900.2868
465 Specialty Point, Sanford, FL 32771 • www.DisruptorManufacturing.com