

Instruction Manual

Lawson Pre-Treat Zoom-AE

Electric DTG Industrial Spray Unit



LAWSON
SCREEN & DIGITAL PRODUCTS, INC.

5110 Penrose St. | St. Louis, MO 63115
314.382.9300 | www.GoLawson.com

Pre-Treat Zoom AE

Manufactured by: Lawson Screen & Digital Products, Inc.
5110 Penrose St., St. Louis, MO 63115

Service Telephone: 314-382-9300

Serial Number: _____

(Please fill-in for future reference) Refer to this serial number when speaking to the Service Department. It contains valuable information related to this piece of equipment.

Congratulations on your purchase of the Lawson Zoom AE.

To insure successful performance of your *Zoom AE*, please read this entire manual thoroughly. If you have any questions or do not understand certain content, please call for clarification and additional information.

Like ink jet printing, your *Zoom AE* will require some preventive maintenance and a complete understanding of its operations and control systems to provide optimum performance. This manual is offered to help you get the best possible performance and results from this equipment.

The *Lawson Zoom AE* has been designed to work in conjunction with your direct-to-garment printer. To achieve optimum printing results, the proper amount of pretreat solution needs to be deposited on your printing surface on a consistent basis. The amount of required solution depends on your printer, garment, artwork, and shop environment.

Important Notes:

Always disconnect the power cord when servicing the unit.

Do Not operate this machine without reading this entire instruction manual first! Do Not start adjusting the unit until its entire function and operation are fully understood. If you have any questions, please call prior to operating the unit.

It is important that the spray nozzles always be kept clean. If the pre-treat solution is allowed to dry in the nozzle, the nozzle will become clogged and damaged - nozzles and filters are not covered by the parts warranty.

Use Distilled Water after use to flush the nozzle and other important components.

Never use "tap water" because tap water contains a variety of minerals (that form deposits) that can be harmful to various spray components. These mineral deposits can damage the spray tip and valves.

This machine is designed for the industrial/commercial user – it is not designed for hobby, or retail/consumer usage.

This manual is meant to serve as a general instructional guide and reference manual for the Pre-Treat Zoom AE sprayer. Design details are subject to change without notice and the manufacturer assumes no obligation regarding changes to the unit, herein described.

If you have any questions about the *Pre-Treat Zoom AE*, please contact your authorized dealer or Lawson. We are always ready to help. Your comments and suggestions are always welcome.

Should you need additional support, we are available to assist via phone, website, or e-mail.

All the information contained herein is proprietary to Lawson's Pre-Treat Zoom AE system. This publication may not be reproduced, copied, or transmitted in any way without written permission from Lawson Screen Products, Inc., St. Louis Missouri. Copyright 2015

Basic Operating Instructions:

Getting Started

1. The Zoom AE will need 120 volts 5 amps to operate.
2. Two pre-treat solution/waste collecting buckets are provided and need to be installed at the rear of the unit to collect the overspray fluid.
3. Distilled water is the only water to be used to clean the fluid circuit and tip. Never use "tap water". Tap water contains a variety of minerals which form deposits that can be harmful to various spray components and especially the spray tip.
4. The Zoom AE has a place for two one-gallon containers. Some production people will use both container spaces for the same pre-treat solutions allowing over 250 shirts to be pre-treated before having to stop and refill the containers. Some will use the space to hold two different styles of pretreat. The most popular configuration is for a gallon of pre-treat and a gallon of distilled water to clean the system after use.
5. To prime the fluid pump, unless both gallons of pre-treat solutions are being used for a long production run at the same time, only turn one fluid mechanical valve on. **Note: If both valves are turned on and there is no solution in the second container, the pump will not prime.**
6. Set the speed of the spray head for your desired amount of grams on the substrate. To establish desirable results a gram scale and a container to weigh the garment will be needed. Figuring out how much fluid is on the garment is easy. Place the dry garment in the container, tare the scale (it will read zero), spray the garment, and then weigh the pre-treated garment. Now you know the amount of pre-treat solution that is on the garment.
7. To spray the garment, simply push the **START** button and the spray head will come forward, reverse directions, and spray the garment.
8. Clean the unit at the end of the day. **This is a critical task! Skipping this task will result in your nozzle/tip not working the next time.** If you spray the unit one time or a hundred times, the same cleaning procedure must take place. Remember, the pre-treat solution that coats the fabric will also coat your spray tip. And a tip with a dried film solution will clog. It is very important to read and follow the daily maintenance procedures. **Note: After the cleaning procedures have been achieved, remove the quick exchange cap and soak the tip in distilled water so as to prevent the tip from clogging due to any partials that could have been left in the tip by not cleaning the tip correctly.**

Understanding the Basics of Pre-Treat Spraying:

1. The Lawson Pre-Treat Zoom AE Unit is designed to spray a fabric with pre-treat solution prior to printing the fabric. The amount of pre-treat solution deposited onto the fabric (measured in grams) is determined by many factors. **It is important to understand the principles of spraying the fabric so that the process does not become frustrating when you are trying to maintain consistency of the deposited fluid.** The amount of pretreat fluid deposited on the fabric is controlled by: 1) the travel speed of the spray nozzle, 2) the design of the spray tip, and 3) the distance of the tip to the fabric.
2. Lawson can provide many different types of spray tips for a variety of special purposes. Generally speaking, the standard tip provided with your Lawson Zoom AE will be sufficient for the vast majority of applications. If you feel you can benefit from one of our specialty tips, give us a call and we can discuss your requirements.
3. The Zoom AE also has different size platens available. Although the standard 16" x 20" Adult Platen that came with your unit is the most popular, we also offer a child and youth platen. We can provide custom platens for specialty purposes.
4. The Zoom AE features the Lawson quick exchange tip/cap system. This is an exclusive Lawson feature pioneered for the pre-treat industry. It does not matter which way you install the tip into the holder because the holder will locate the tip in the correct spraying position. This feature also allows the operator, after cleaning the system, to soak the tip in water so as to prevent the tip from clogging due to any particles that could have been left in the tip by not cleaning it correctly.
5. Adjusting the **length of the spray** is accomplished by moving the spray limit switch bracket. The spray always starts after the nozzle/tip travels to the forward position and reverses the travel position. The front limit switch is where the spray starts and the rear limit switch stops the spray. **Note: Radical change of the spray speed can effect the start and stop position of the fluid.**
6. If there are excessive drips (3 or more) at the end of the spray cycle, most likely the tip is not clean. The dripping is a sign of debris in the tip trapping the free flow of the fluid.

Maintenance Procedures

It is critical that the unit is cleaned on a daily bases. Most pre-treat fluids in simple terms are glue in salt water. If the glue is not cleaned at the end of the production day, the unit will not perform correctly and will void the manufacturer's warranty.

1. It is critical that distilled water flushes the system to rid the pre-treat fluid from the fluid valve and the spray tip. Cycle the unit till the fluid lines are visually cleared of pre-treat. This might take 10-15 seconds. This step cannot be over-stated on how important it is to insure the successful consistent spraying. You can cycle the system as in spraying a garment or use the purge button with a container under the tip to contain the flushing fluid.
2. Remove the tip and soak it in distilled water at the end of production day. This procedure will help prevent the pre-treat from clogging the tip in case the tip was not cleaned properly.

3. The tip should be cleaned with a tooth brush to clean the outside and inside of the tip. This will help remove any lingering salt deposits that could form on the tip to prevent staining and tarnishing effects on the tip. To clear a blockage on the tip's opening, a toothpick, toothbrush, and compressed air pressure are the best ways to clear the blockage. **Note: Any hard item such as a needle will most likely score the metal opening and ruin the spray nozzle.**
4. It is recommended that Magic Clean Solution be flushed through the system weekly for a more thorough cleaning. This solvent-based product is especially needed to clean the fluid valve.
5. The inside surfaces must be cleaned after each use. Without cleaning, the pre-treat fluid will cause corrosion to the interior paint finish. Also, without cleaning on a regular basis, the interior of the unit will become so caked and sticky it is a monumental task to clean. If your clean garment drags on this compromised surface, undesired results might occur. To clean the unit, a sponge and warm soapy water is all that is needed. Be sure to clean all the surfaces and dry the unit. This procedure usually only takes 5 minutes.

Suggested Replacement Parts to Keep On-Hand

Spray Tips

The quantity of spray tips that you stock will depend on your frequency of use, whether you are using distilled water as recommended, and your level of maintenance. Having at least one spare tip is important, just like having a spare tire for your automobile. You never know when you might need one. **Part #945-502-0**

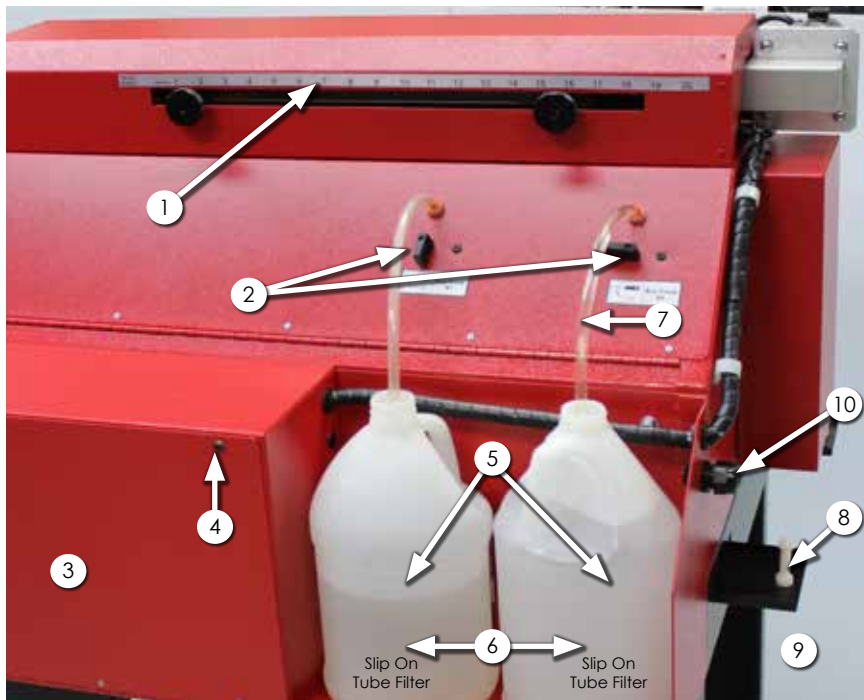
Slip-On Tube Filter

This is an inexpensive filter that removes debris and larger mass particulates from the pretreat solution, before it continues past the pressure canister. It is suggested that four (4) each of these be kept on-hand. **Part #945-507-8-EA**

Fluid Valve

Being prepared for production is always important. Having a spare fluid valve is simply good preparation. **Part #945-307-8**

RIGHT SIDE VIEW



	Description	Part #
1	Spray Tape Guide	945-120-6
2	Fluid Mechanical Valve	945-520-0
3	Electric Control Box	XXX
4	Control Box Screw	BS032406
5	Fluid Container	XXX
6	Slip On Tube Filter	945-507-8
7	AE Container Tube #19	945-514-0
8	Nylon Bolt	945-120-9
9	Gallon Bucket (not shown)	945-120-8
10	Power Cord (not shown)	945-300-1



#6 - Slip On Tube Filter

CONTROL BOX FACE



	Description	Part #
1	Power Toggle Switch	945-303-0
2	Prime Push Button	945-301-4
3	Option 2 Spray Switch	945-303-4
4	Start Button	945-301-8
5	Spray Speed Control	945-304-0
5-A	Speed Control Knob	945-304-5
6	Optional Digital Meter	945-860-0
7	Light	945-302-5

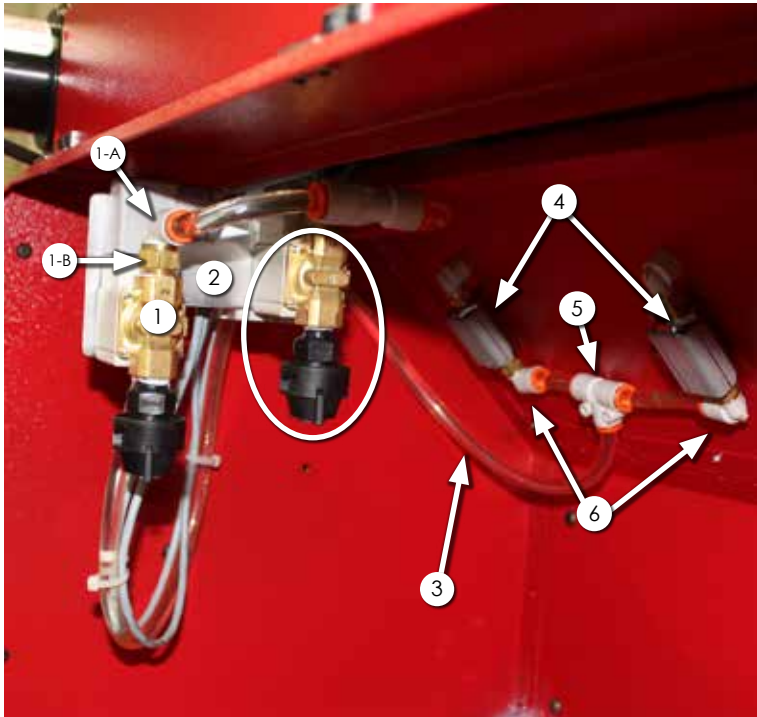
ELECTRIC CONTROL BOX



	Description	Part #
1	K1 Ice Cube Big Relay: Head moves forward	945-308-2
2	K2 Ice Cube Big Relay: Reverses, moves back	945-308-2
2-A	Big Relay Base	945-308-4
3	Small Ice Cube Relay: Head reverse	945-308-7
3-A	Small Relay Base	945-308-9
4	Glass 3amp Fuse: Motor	945-310-5

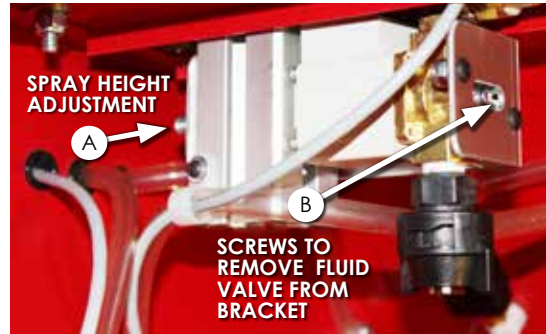
	Description	Part #
5	Ceramic Fuse	945-310-6
5-A	Fuse Base - Double	945-310-8
6	Head DC Speed Control	945-304-0
7	Transformer	945-309-6
8	Reverse Timer	945-309-2
9	Ground Lug	920-101-9
10	Power Terminals	923-808-8
11	Adjustment of Voltage	XXX

SPRAY HEAD #101

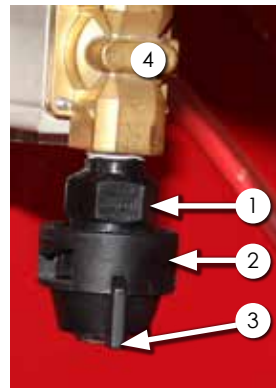


	Description	Part #
1	Optional Left Chest Spray Head	XXX
1-A	Air Fitting	945-511-2
1-B	Brass Fitting	945-932-4
2	Fluid Electric Spray Valve	945-307-8
3	Hose from Mechanical Valve to Pump	945-514-2
4	On/Off Mechanical Valve	945-520-0
5	Plastic T Fitting	945-932-8
6	Fitting	945-932-7

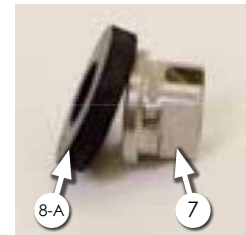
SPRAY HEAD MOUNTING BRACKET



SPRAY HEAD (enlarged photo)



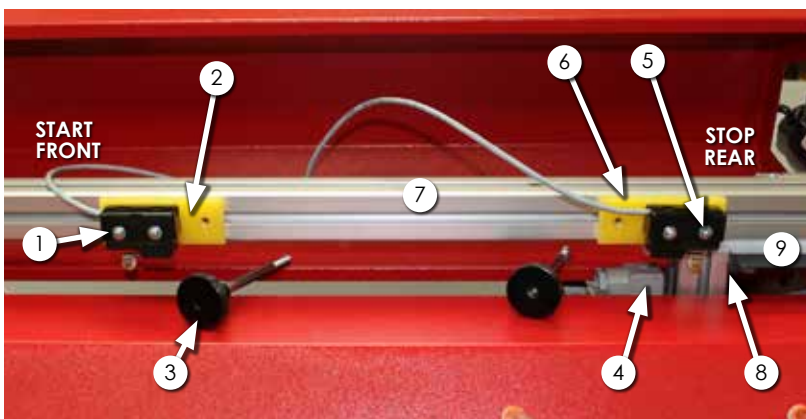
SPRAY TIP



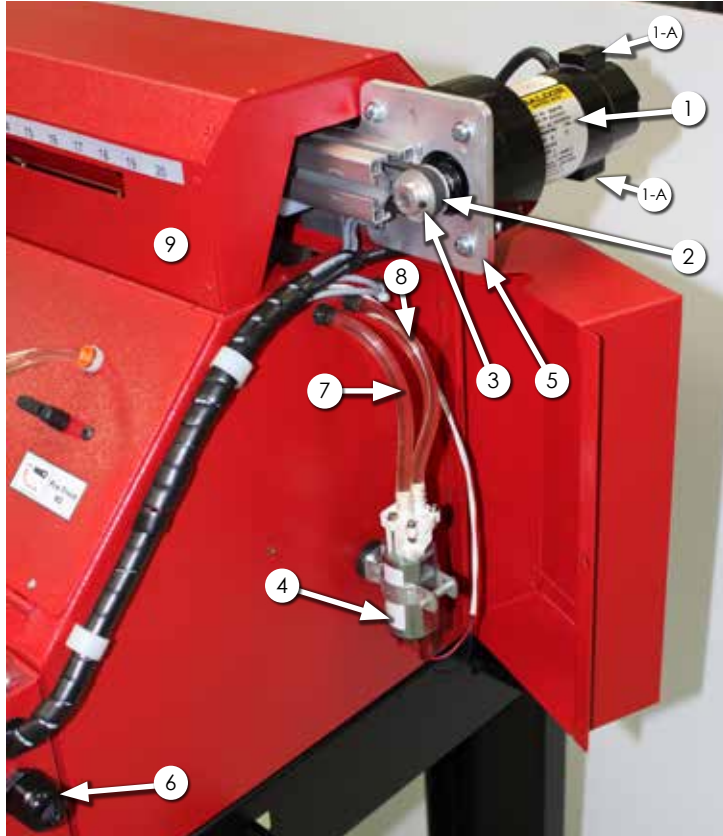
	Description	Part #
1	Quick Body	945-512-0
2	Quick Exchange Cap	945-512-3
3	Spray Tip: WENA*	945-502-0
4	Fluid Electric Valve	945-307-8

*Subject To Change

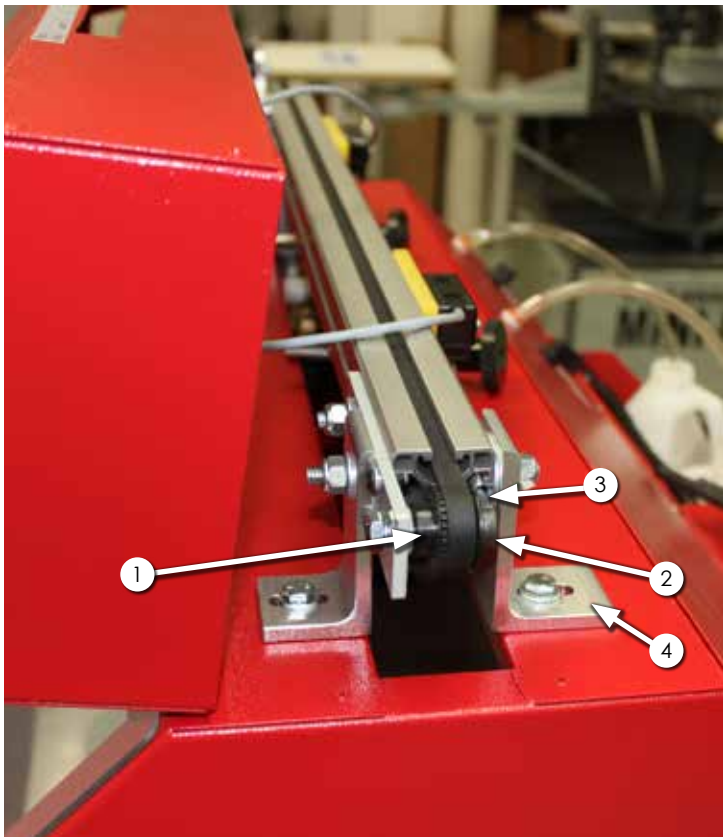
	Description	Part #
7	Spray Tip	XXX
8-A	Cap/Tip Gasket	945-540-1



	Description	Part #
1	Start Spray Limit Switch	945-306-7
2	Slider Micro Switch	945-755-3
3	Spray Range Knob	945-710-5
4	Fluid Electric Valve	945-307-8
5	Stop Spray Limit Switch	945-306-7
5-A	Switch Cover (not shown)	945-306-8
6	Slider Micro Switch	945-755-3
7	Head Rail	8C216001
8	Head Height Adjustment Bolt	XXX
9	Carriage Slider	945-755-6

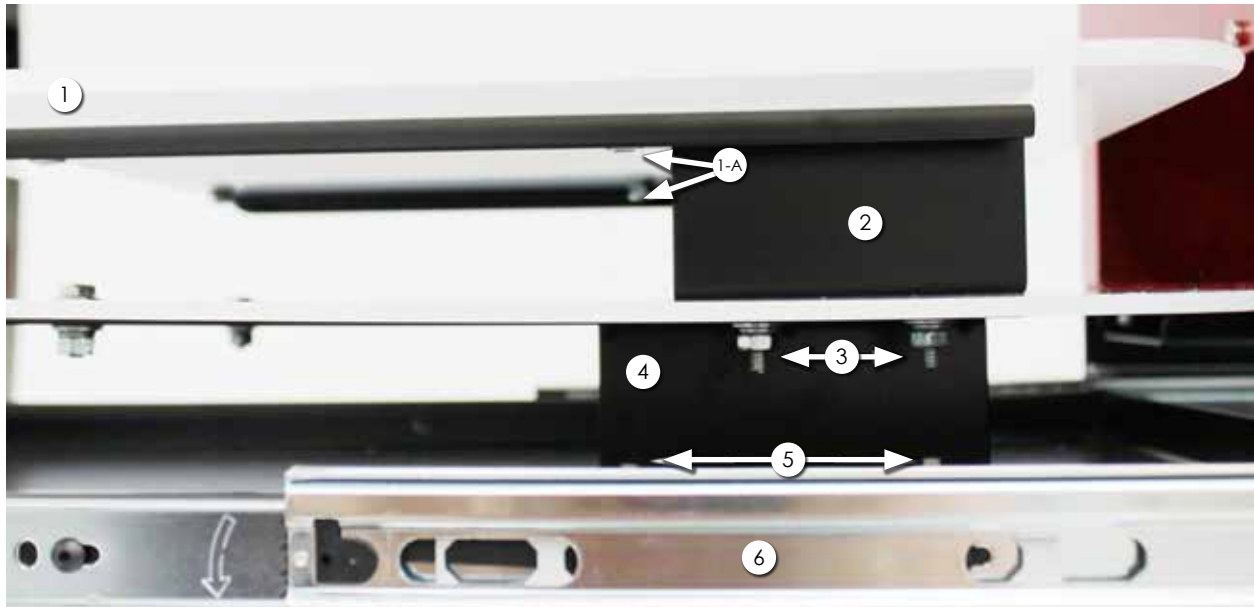


	Description	Part #
1	Head Motor	945-602-6
1-A	Motor Brushes	945-602-7
2	Drive Head Belt #65	945-602-8
3	Motor Pulley	945-601-5
4	Spray Pump	945-515-0
5	Motor Tension Bracket	945-601-8
6	Power Cord 120v	945-300-1
7	Pump Mech Valve Fluid Hose #26	
8	Pump Head Fluid Hose #37	945-514-4
9	Head Cover #20	86220004



	Description	Part #
1	Idler Pulley	945-601-0
2	Pulley Attachment Bolt	945-601-2
3	Idler Belt Pulley Bracket	945-601-1
4	Angle Support	8C216002
5	Lid Hinge (not shown)	HNG1616Z

PLATEN and DRAWER - ZOOM XL & AE



	Description	Part #
1	Standard Platen 16" w x 20" l	945-711-2
1-A	Platen Attachment Flat Screw	945-710-6
2	Top Platen Stand	945-712-4
3	Top Platen Stand Bolts	945-712-7

	Description	Part #
4	Bottom Platen Stand	945-712-5
5	Bottom Platen Stand Bolts	945-712-8
6	Drawer Slide #28	945-712-9B



This photo shows dried pretreat solution being peeled up from the inside of the spray chamber. It is important to clean your unit to protect your investment.



Leveling Leg Adjustment Bolts

Warranty/Service Information Highlights

Please thoroughly read the entire instruction manual prior to operating this piece of equipment. Please call if you have any questions regarding the operation and maintenance of your equipment. Lawson's Service Department is here to help!

Note: this "Warranty/Service Info. Highlights" is a supplement, and does not supersede Lawson's standard warranty policies, terms and conditions.

Service Hotline - 314-382-9300 (Mon. - Fri. 8:00 am - 5:00 pm - Central Standard Time)

After Hours/24 Hour Service Pager - 314-382-9865 and press option #6

1. Your Warranty is a Parts Warranty and excludes the Nozzles/Tips, and Filters. The warranty does not include installation, site training, maintenance, repairs or general labor. These services are available at an additional charge on an "as needed" basis.

2. Replacement parts may be sent prior to receiving the original parts back for evaluation. Payment via credit card for the part must be paid prior to shipment. If the part is a warranty item, credit will be issued to the credit card used within 5 days. Warranty parts must be received within 15 days of the replacement part being sent, returned f.o.b to Lawson, St. Louis, Mo.

3. Lawson will pay for standard, ground UPS on warranty parts shipped within the United States. We do not pay for Air Shipments! If air shipment is desired, these charges must be paid by your company. It is the customer's responsibility to return the part to Lawson.

Payment terms are Credit Card only: We accept Master Charge, Visa, Discover or American Express for payment.

4. Lawson's warranty is to the original owner for the specified period. It is based on a single eight (8) hour shift, five (5) days per/week operating schedule.