HERO
MAKE INNOVATION

A450 – A460
Automatic Colorant Dispenser
USER MANUAL

Congratulations on your acquisition of a HERO Automatic Colorant Dispenser!

The HERO Archimede (A200/A210/A250/A260) and Eureka (A450/A460/A461) lines of automatic colorant dispensers represent the result of intensive research in the field of high-tech fluid-dispensing equipment. Top quality materials and modern designing tools such as the use of CAD three-dimensional parametrical systems, together with the attention given to ergonomics, guarantee an easy to use and long lasting dispenser.

HERO's innovative technology is also expressed by its POS dispensing software, TintWise®. This state-of-the-art Windows based software has been designed to meet the needs of most operators, combining ease of use and simplicity with extraordinary accuracy and functionality.

TintWise®, together with an integrated electronic formula book (EFB) and database will allow you to operate your HERO automatic dispenser as a stand-alone unit. It will also interface with most third-party color matching systems and spectrophotometers, allowing for a seamless transfer of EFB and custom formulas to the dispenser.

This Operator's Manual explains the various features of your HERO automatic colorant dispenser that will allow you to use it for its ultimate purpose: to dispense colorant formulas accurately and repeatedly throughout many years of efficient and reliable operations.

Please read this manual carefully and completely. Contact HERO's 24/7 Help Desk with any questions: 800-494-4376

This manual should be kept in a safe place

Declaration of Compliance with UL, CSA and CE Regulations

HERO Products Group
720 Eaton Way
Delta, BC V3M 6J9
Canada

Declares that:

The Automatic Dispenser model: **EUREKA A450 – A460**
Serial number:_____

Is in compliance with:

CAN/CSA-C22.2 No. 61010.1-04
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use, Part 1: General Requirements

Is in compliance with:

UL Std. No. 61010-1 (2nd Edition)
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use, Part 1: General Requirements

Is in compliance with the EC Machinery Directives:

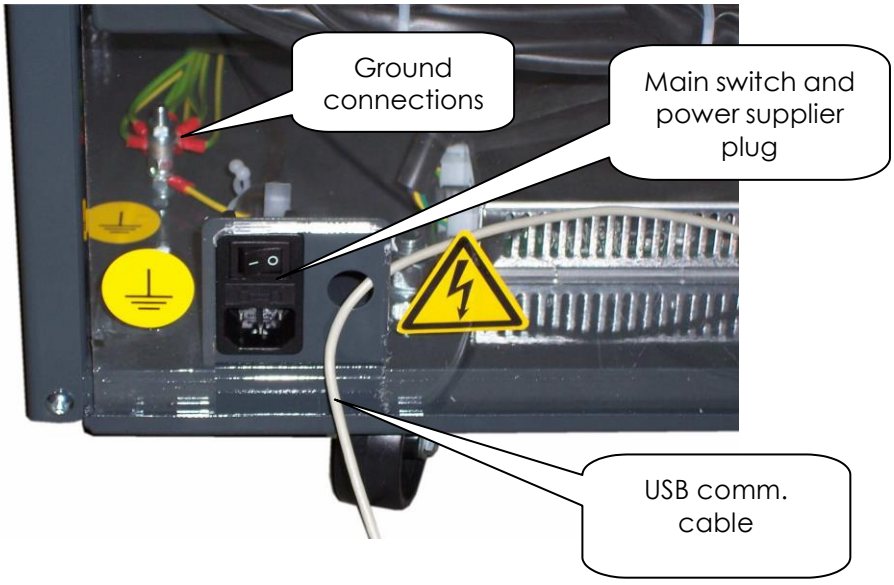
Machinery Directive 2006/42/CEE
Low tension 2006/95/CEE
Electromagnetic Compatibility 2004/108/CEE

Is in compliance with the standardized European Regulations:

EN 292-1, EN 292-2, EN 418 & EN 1050
EN 60204-1
EN 61000-6-2, EN 61000-6-3, EN 61000-3-2 & EN 61000-3-3

EUREKA Automatic Dispenser Key


PC sliding shelf
Identification Label with model and serial numbers
Cartridge Pumps
Electronic Board (PCB)


Ground connections
Main switch and power supplier plug
USB comm. cable

GENERAL INFORMATION

This manual contains information to help an operator to begin using the HERO Eureka A450/A460 automatic colorant dispenser and insure ease of use and proper maintenance.

Please read this manual carefully and completely before using or servicing your HERO automatic colorant dispenser.

The Eureka is a simultaneous colorant dispenser that uses progressive cavity volumetric pumps. **Do NOT operate the dispenser or energize any of the pumps without having colorant in if their respective canisters. Should this occur, the pumps will be irreparably damaged.**

Your HERO automatic colorant dispenser is intended for indoor use only. Do NOT operate in an outdoors environment.

For proper operation of your HERO automatic colorant dispenser, the following parameters must be met:

· Room temperature: **60° F - 105° F** (**15°C - 40°C)**
· Relative humidity: **30% - 90%**

As with any other electronic device, the Eureka must be connected to a dedicated electrical outlet and circuit with the proper grounding system. The AC supply voltage fluctuations may not exceed 10% of the nominal supply voltage.

The specifications for the LED/Laser used in this equipment are as follows:

650 nm, max.1 mW optical power, Class 2 laser (IEC 60825-1), FDA accession number 07R0483-000

Please read the equipment specifications sheet found elsewhere in this manual.

The equipment warranty will be null and void should any of the above mentioned criteria not be followed.

Please contact HERO's 24/7 Help Desk with any questions or if you require any technical assistance:

1-800-494-4376
customercare@hero.ca

This manual should be kept in a safe place

WARRANTY

Parts Warranty º - ☐ ***year(s)*** ***Labor Warranty [1] -*** ☐ ***year(s)***

HERO warrants its equipment to be free of material and workmanship defects to the original user, for the period indicated above. This warranty entitles the equipment owner to on-site parts repair or replacement at no charge under the conditions outlined in this document. Cleaning and general maintenance are the responsibility of the owner/operator and are *not* covered by the warranty. This includes the replacement of certain parts due to normal wear as determined by HERO.

The warranty is applicable to the original owner and/or location only and is non-transferable without prior written approval from HERO.

The warranty period begins when the equipment is shipped from HERO's manufacturing facilities. HERO may, at its own discretion, start the warranty period at a later date due to shipping, installation or other delays.

The warranty does ***not*** cover damage and repairs due to improper use or non-completion of recommended daily maintenance procedures, unauthorized service and/or modifications, AC power problems, or other manufacturers' interfaced equipment. Damage and subsequent repairs due to fire and other man-made calamities or any acts of God such as, but not limited to, floods and lightning, are also ***not*** covered. All work completed by HERO due to damage ***not*** covered by the equipment warranty will be billed at HERO's standard service rates.

I.C.T.C.'s/HERO's liability is limited to the repair or replacement of parts found to be defective and does not include other damages or expenses of any kind incurred in connection with the purchase and operation of the dispenser.

All warranty work requests or claims must be directed to HERO Customer Service at any of the following:

720 Eaton Way, Delta, B.C. V3M 6J9, Canada
P.O. Box 75, Custer, WA 98240-0075, U.S.A.
Tel: 604-522-6543
Fax: 604-522-8735
Customercare@hero.ca
Help Desk: 800-494-4376, Option 1

º Parts warranty include shipping via a carrier and service type compatible with the nature of the equipment failure and as determined by an authorized HERO Customer Service Representative. When expedited delivery is not warranted, the customer may request and pay for the difference between such service and HERO's standard shipping method.

[1] The labor warranty on units covers on-site and travel labor to and from the customer's location. **An authorized HERO Customer Service Representative must approve all warranty repairs before any work is performed**

SAFETY INSTRUCTIONS

Please read the following instructions carefully and completely before installing or operating your HERO Automatic Colorant Dispenser

I.C.T.C. Holdings Corp/HERO Products Group declines any responsibility should the following instructions not be followed:

This equipment is designed to be operated indoors only. Do **NOT** operate outdoors or in any environment that does not meet the requirements and specifications outlined in this manual.

Do **NOT** turn on or operate a damaged machine (for example, if the machine is damaged during shipping). If in doubt, first contact HERO's Customer Support Team.

All local, State and Federal safety regulations must be complied with in the installation and operation of this equipment.

The dispenser and PC must be connected to a dedicated electrical outlet and circuit with the proper grounding system meeting all the power requirements as specified on the identification plate.

The owner/operator must maintain the dispenser in good working condition and replace any broken components in a timely manner.

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All repairs other than customer maintenance responsibilities must be carried out by or under the guidance of a qualified technician.

A standard (non-solvent) dispenser is designed and built solely for the purpose of dispensing water/glycol based colorants. Do **NOT** use with any solvent based colorants or any other unauthorized products.

All conditions, instructions and specifications outlined in this manual must be followed in good faith and any questions or issues must be brought to the attention of a HERO authorized representative in a timely manner.

DISPENSER POSITIONING AND INSTALLATION

Unpacking the dispenser

Remove all shrink wrap from around the container and pallet.
Remove the fastening straps placed around the outside of the box(es).
If a PC is included, removed its boxes from atop the dispenser and place them in a safe area.
Remove the box around the dispenser by lifting it straight up.
Carefully maneuver the dispenser backwards with two people behind and one person in front of it, then slowly put the dispenser down on its rear wheels.
Without altering the position of each person, tilt the machine backwards until the pallet is free and easily removed.
Once the pallet has been removed carefully place the machine down on its wheels.

Instructions for correct positioning

Adhere to the following guidelines when positioning the dispenser:

Place the dispenser on a steady, horizontal (level) surface.
The area must be well ventilated. To prevent colorants from drying, make sure the dispenser is not exposed to the sun or near heating vents or any other source of heat.
The ambient temperature should be kept as constant as possible, around 18℃ (always between 15÷40℃) in order to avoid variations in the specific weight and viscosity of the colorants.

Machine positioning

The Eureka dispenser is fitted out with wheels and levelling feet. When the machine rests on its wheels and is positioned on a hard and levelled floor it can be easily moved by pushing it by hand.
Place the dispenser where it is intended to be put to use, then lower the feet and verify that the dispenser is in a steady, well levelled position.

Computer and monitor assembly

The EUREKA dispenser is provided with a shelf in the upper part of the machine at an ergonomic height of approximately 110 centimetres. The shelf can be used to position the PC , the LCD monitor and the keyboard.

After having positioned the PC, it must be connected to the electronic board that controls the dispenser. A USB cable can be found and pulled from inside the rear left corner of the dispenser for this purpose.

Pull the USB cable out carefully. If you encounter resistance call HERO's Help Desk. Connect it to one of the USB ports on the PC

Installing the dispenser

HERO automatic colorant dispensers should be installed by trained and authorized technicians. In addition, a proper installation requires the use of a precision balance capable of measuring weights between 0.01 and 250 grams.

In the event that a dispenser needs to be installed by someone other than a trained technician, please follow the instructions in Addendum A accompanying this manual and contact HERO's Help Desk with any questions.

The following instructions should be completed in preparing a HERO automatic colorant dispenser for installation:

Connect the AC power cords of the dispenser and the PC to a dedicated AC power outlet.

Add 1 or 2 quarts of colorant to each canister without exceeding the maximum canister capacity.

Colorant should be shook according to its manufacturer's recommendations but care must be taken to not operate the dispenser with aerated colorant.
If the colorant needs to be shook mechanically in a shaker or mixer for more than 1 minute, shake it 24 hours before it needs to be put in the dispenser.
Do NOT scrape solidified colorant residue from the bottom of the can into the dispenser. Mix it with more liquefied colorant in a clean container and stir it thoroughly until it is homogenized. If it is not aerated, it can then be used in an automatic colorant dispenser.
Move the PC shelf to one side and open the exposed canister cover.
Find the first canister you want to fill and remove its lid only. Do NOT remove any other canister lids.
Add colorant to the appropriate canister avoiding the central part of the mixing paddles as much as possible.
Replace the lid after colorant has been added to a canister and repeat the same process with all other colorants.

Insure that the dispenser is properly plugged into a dedicated AC circuit and turn on the power switch on the back of the dispenser where the AC power cord connects.

Check that the dispenser's emergency button is not activated. It should be pulled out.

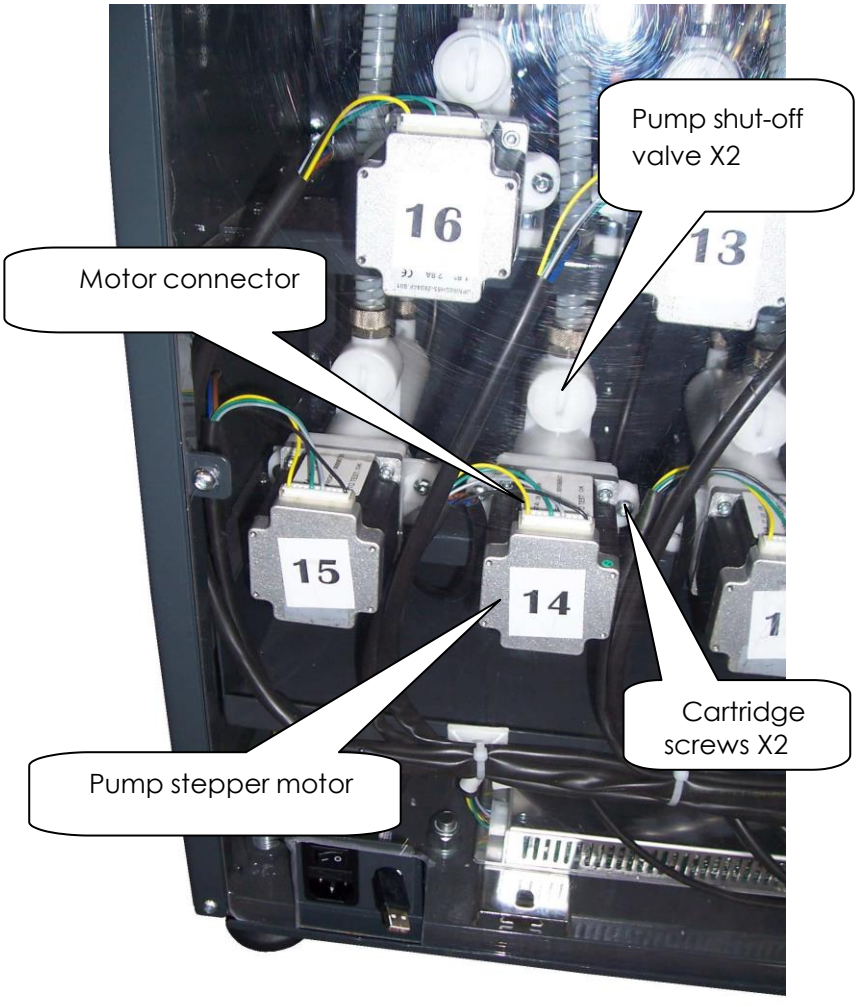
You should now hear the dispenser's agitation motors turn on and by removing one of the canisters' lids, you should see its agitation paddles turning. Call HERO's Help Desk if the agitation motors do not turn on after powering up the dispenser. The motors should run for approximately 3 minutes after power is turned on.

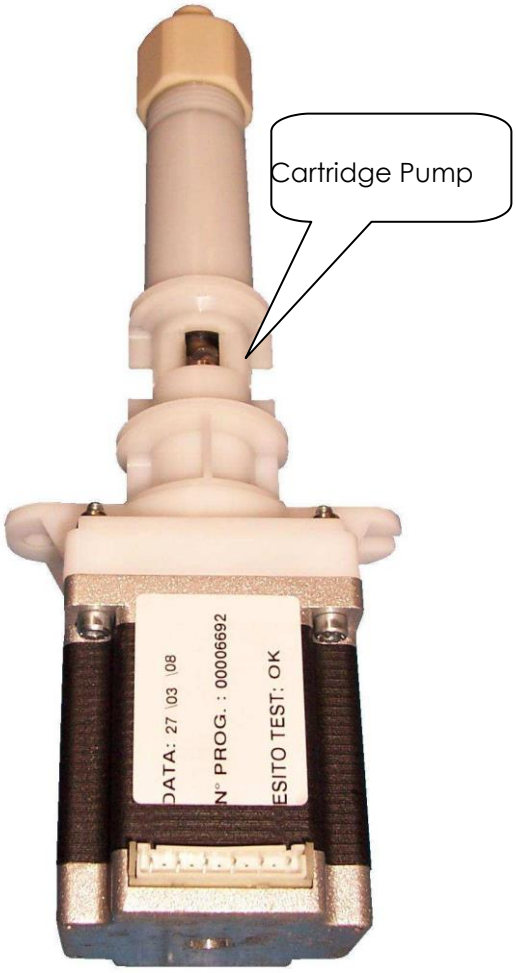
Follow the instructions in Addendum A to complete the installation of your HERO automatic colorant dispenser.

CARTRIDGE PUMP REPLACEMENT

When a cartridge pump needs to be replaced complete the following steps:

Disconnect the dispenser from its AC power source.
Remove the lower rear panel on the back of the dispenser.
Remove the wiring connector to the pump's motor on the pump you want to change.
Use a large flat-tip screwdriver to close the shut-off valve above the pump cartridge.
Some units will have two shut-off valves per colorant. The second shut-off valve is located in line with the tubing from the bottom of the colorant canister to the pump housing. This will be a ball type shut-off valve that can be turned off by hand.
Remove the 2 screws that secure the pump cartridge to the pump housing. **Do NOT lose these screws.**
(Although you have closed the shut-off valves, it is a good idea to have some towels or rags ready as you pull the cartridge from its housing). Pull out the pump cartridge from its housing. You may have to wiggle the cartridge to free it and insure that the dispenser does not roll towards you as you pull on the cartridge.
Insert a new cartridge pump ensuring that the 2 large "O" rings on either side of the pump opening and the small "O" ring on the tip of the pump are securely in place.
Secure the new pump cartridge to its housing by replacing the two screws removed earlier.
Reconnect the wiring connector to the pump's stepper motor ensuring that it is all the way down with no exposed pins on either side.





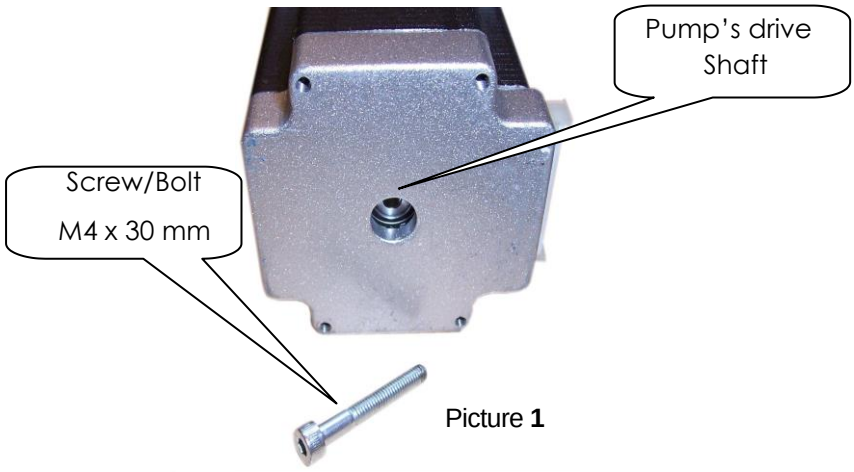
CARTRIDGE PUMP REPLACEMENT (Cont.)

Clean all colorant residue from the area around the pump. Make sure there is no colorant on the wiring connector.
Restore power to the dispenser and test the new pump cartridge by dispensing some colorant. Dispense enough colorant to ensure that all the air is removed from the line. This equates to approximately 10 oz of product. Check for leaks and if all is well, replace the rear panel on the dispenser. Ensure that the power cord and USB cable are not damaged or loose.

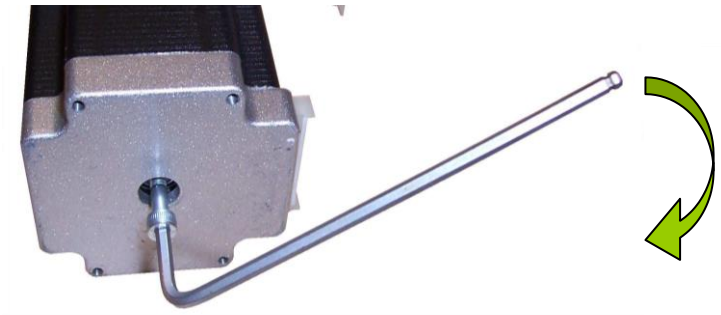
UNSTICKING A STALLED/JAMMED PUMP

When a pump stalls or jams creating a loud noise and normally not dispensing colorant, complete the following steps to attempt to free the pump and return to normal operations:

Disconnect the dispenser from its AC power source
Remove the lower rear panel on the back of the dispenser.
Locate the proper pump cartridge and using the 4 mm key provided with the dispenser, turn the bolt in the center bottom (facing you) of the stepper motor clockwise. If there is only a hole and no bolt, thread an M4 (4 mm) X 30 mm screw or bolt into the hole (pump's drive shaft-Picture **1**) and continue turning it until you feel the pumps's rotor start to move. Continue to turn past that point for at least 5 complete revolutions (Picture **2**).
Test the pump by dispensing several ounces. Repeat the above process if necessary.
Replace the rear panel on the dispenser. Ensure that the power cord and USB cable are not damaged or loose.
Reconnect the dispenser to its AC power source.



Picture **1**



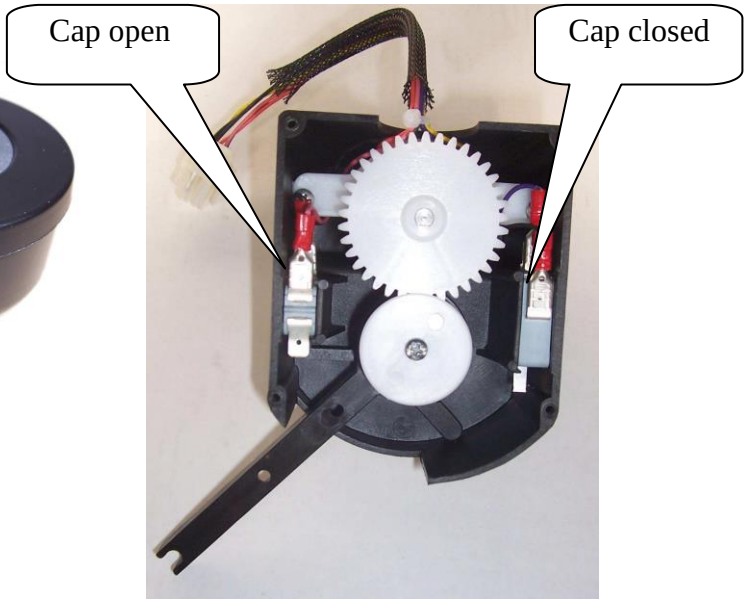
Picture **2**

AUTOMATIC NOZZLE CAP

The Eureka dispenser is equipped with an automatic nozzle cap that is essential in preventing the nozzle tips from drying or dripping. The cap opens and closes automatically before and after each dispense. The cup containing the sponge is removed easily, so that it and the sponge can be cleaned daily.
Inside the cap case there are two micro-switches that control the two positions of the automatic cap, opened and closed.
The automatic nozzle cap has been designed to be removed or installed easily and quickly. In order to service or replace it, disconnect the power connector and pull the complete cap assembly towards the front of the dispenser without letting go of the assembly. As the position clips release, the cap assembly will fall downward.

To install a new or repaired nozzle cap assembly, align the three position clips with the three slots on the dispenser's chassis and push the assembly up and then back until the clips lock into place. Plug the power connector to the corresponding wiring harness and test the nozzle cap for proper operation.

It is very important to keep the sponge clean and wet to maintain the nozzle tips in good working order. HERO recommends that the sponge and cup be removed and rinsed each morning, leaving the sponge wet with some water in the cup.



TELESCOPIC SHELF ACTUATOR

The Eureka automatic dispenser is equipped with a telescopic actuator that raises and lowers the can shelf. This device allows for the tinting of various size cans along with the use of the quart/pint locator included with the dispenser as well as the optional pull-out shelf that can be used with sample (half-pint) cans.

The shelf actuator can be activated using two of the three buttons atop the dispenser. The green START button on the left side must be pressed while pressing the UP or DOWN button on the right side.

To remove or replace the shelf actuator assembly, please proceed as follows:

Disconnect the dispenser from its AC power source.
Remove the can shelf by removing the four screws that secure the plate under the shelf (Picture **E**).
Remove the four screws that attach the telescopic column to the base plate of the machine (Picture **D**). The dispenser will need to be raised or tilted backwards to reach these screws.
Open the two front doors (or remove the three plastic horizontal panels) on the lower section of the dispenser. Take care not to damage the wiring and other electronics inside this area.
Remove the screws securing the mid-level support bracket around the telescopic actuator and remove the two halves of the bracket (Picture **F**).
Unplug the electrical connection to the actuator motor inside the telescopic column and extract the column (pull it up, tilt it to the right and extract it from the left side carefully).

Picture **A**

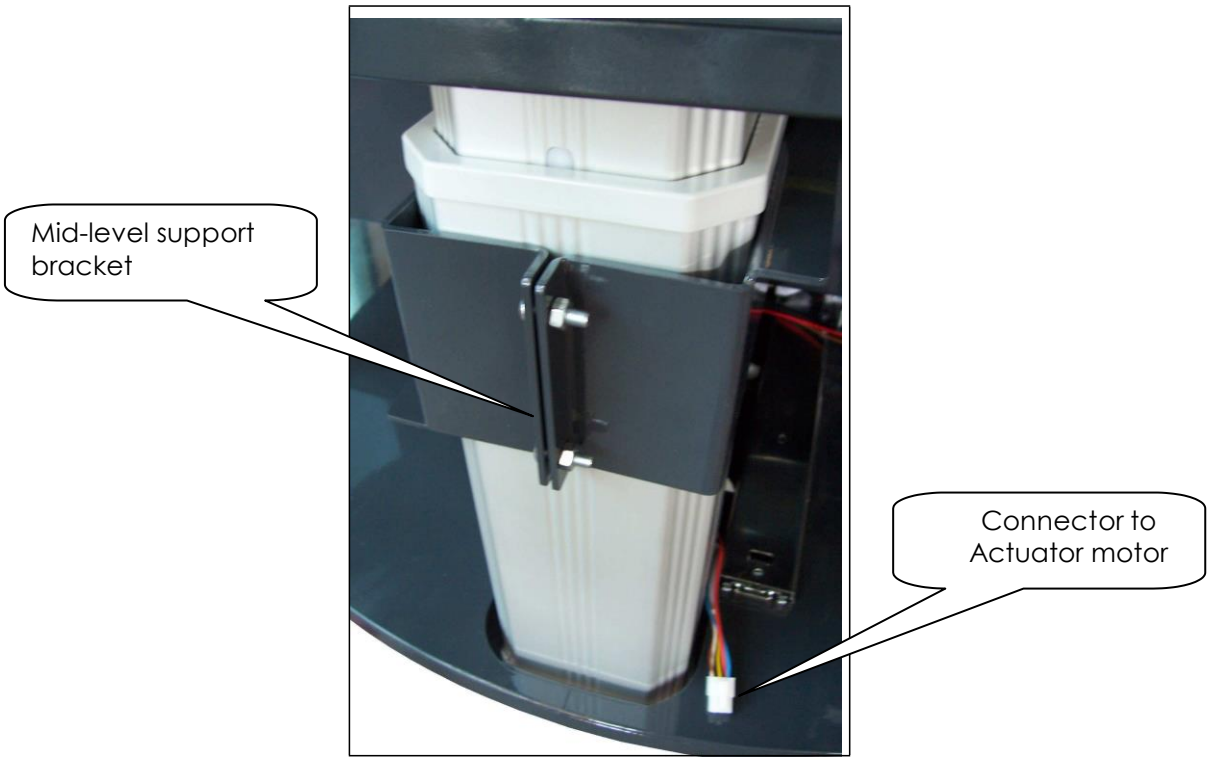
Picture **B**

Picture **C**

Place the new telescopic column in the dispenser as shown in pictures **A, B and C**.
Secure the new telescopic column with the four screws previously removed (Picture **D**). The dispenser will need to be raised or tilted backwards to reach these screws.
Attach the can shelf to the top of the telescopic column with the four screws previously removed (Picture **E**).
Reassemble the mid-level support bracket that surrounds the telescopic actuator with the screws previously removed (Picture **F**).
Plug in the power connector to the actuator motor (Picture **F**).
Close the front doors of the machine or replace the plastic horizontal panels.
Reconnect the dispenser to its AC power source.

Picture **D**

Picture **E**



Picture **F**

SIMULTANEOUS ELECTRONIC BOARD (PCB)

The simultaneous colorant dispenser allows up to four colorants to be dispensed simultaneously. The electronic board (PCB) is secured in the dispenser in such a way as to simplify its removal and replacement.

To remove and replace the PCB, please proceed as follows and refer to the pictures on the next page:

Disconnect the dispenser from its AC power source.

Remove the lower rear panel on the back of the dispenser.

Carefully pull out the sliding tray holding the PCB and power supplies.

Check that all cables connected to the PCB are properly labeled or otherwise identified.

Carefully pull out all of the connectors from both sides of the PCB.

Remove the screws that secure the board onto the sliding tray and lift the PCB from the tray.

Place the new PCB onto the sliding tray and secure it with the screws previously removed

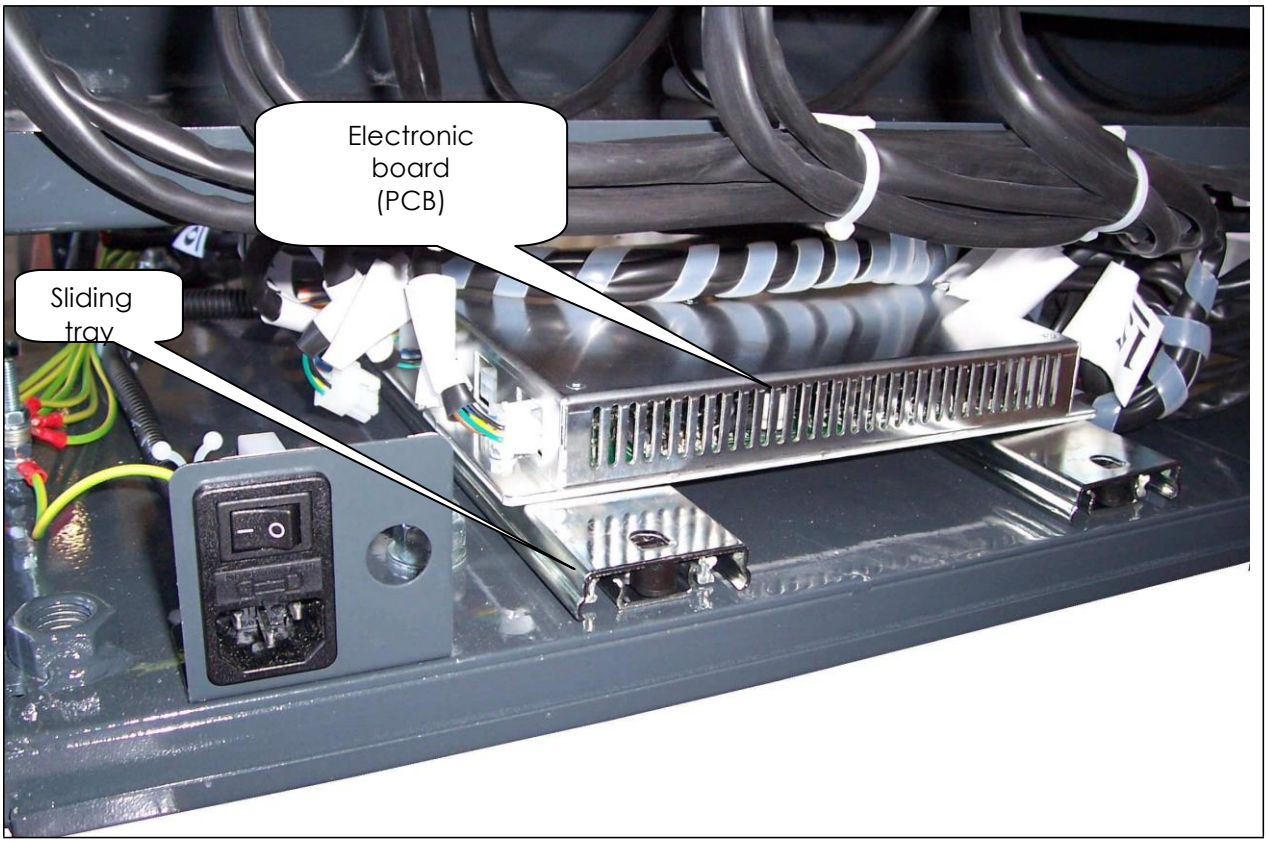
Plug in all of the connectors ensuring that each numbered harness is connected to the corresponding numbered connector on the PCB.

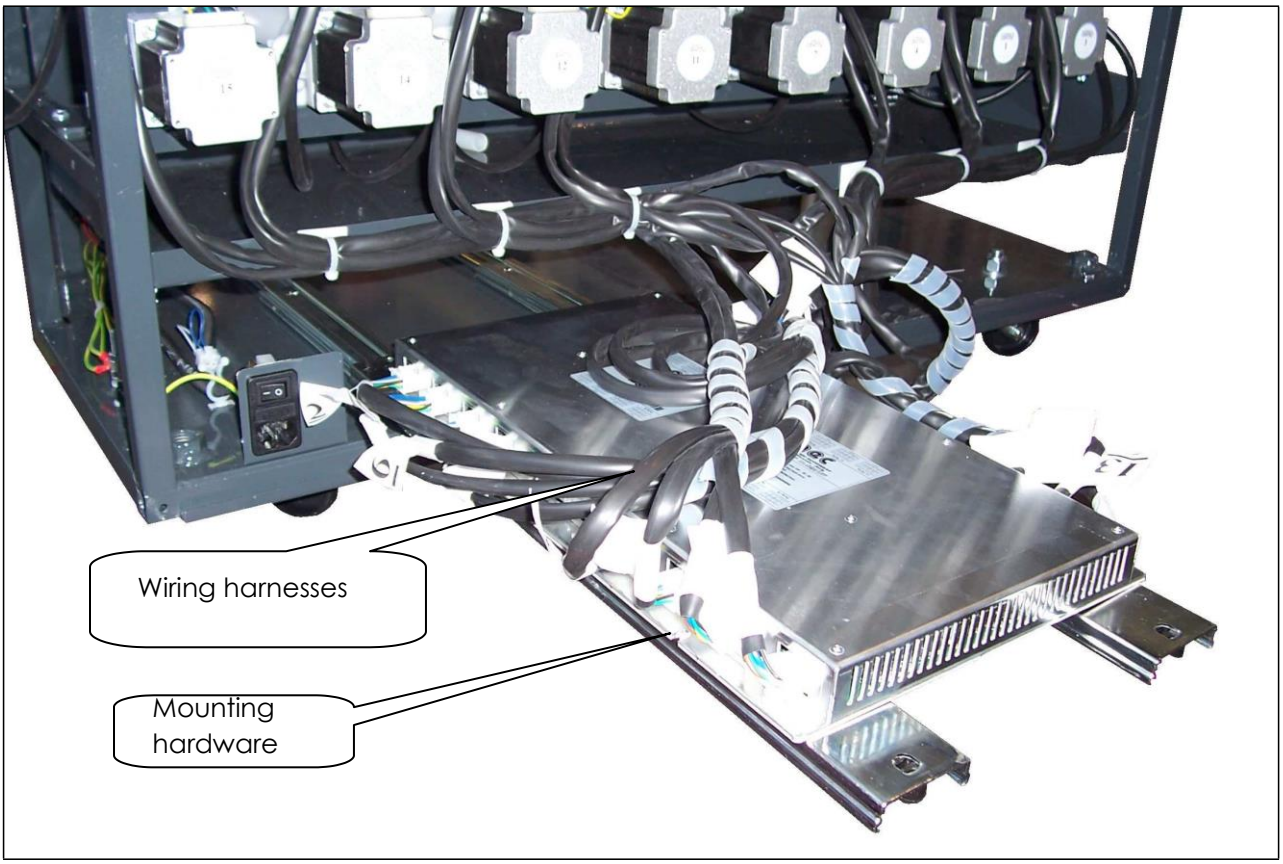
Plug in the power supply connectors and the USB cable in their respective locations.

Carefully push the sliding tray back into the dispenser.

Restore power to the dispenser and test the new PCB by dispensing some colorant.

If all is well, replace the rear panel on the dispenser. Ensure that the power cord and USB cable are not damaged or loose.


Electronic
board
(PCB)
Sliding
tray


Wiring harnesses
Mounting
hardware

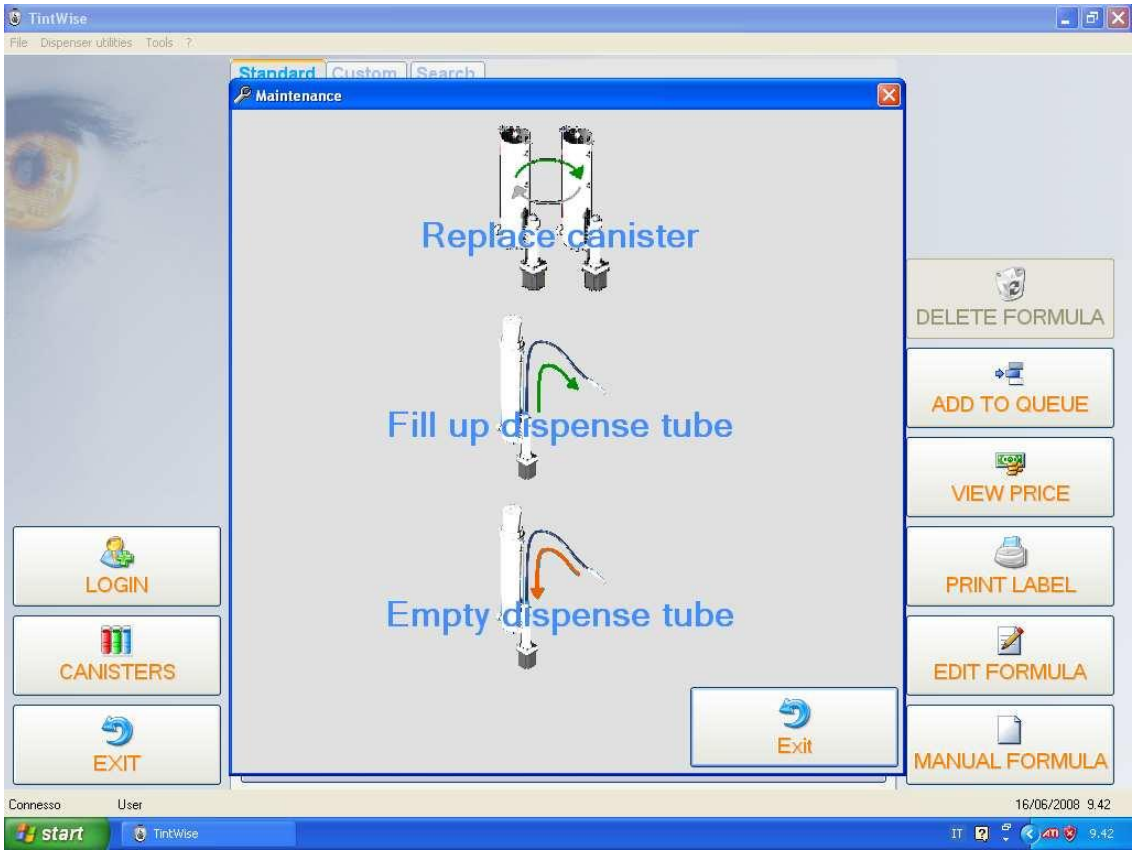
DISPENSE TUBE REPLACEMENT

Dispense tubes or hoses connect the output side of the pumps to the corresponding nozzles in the dispense head located in the upper front section of the dispenser.

To replace a dispense tube, please proceed as follows:

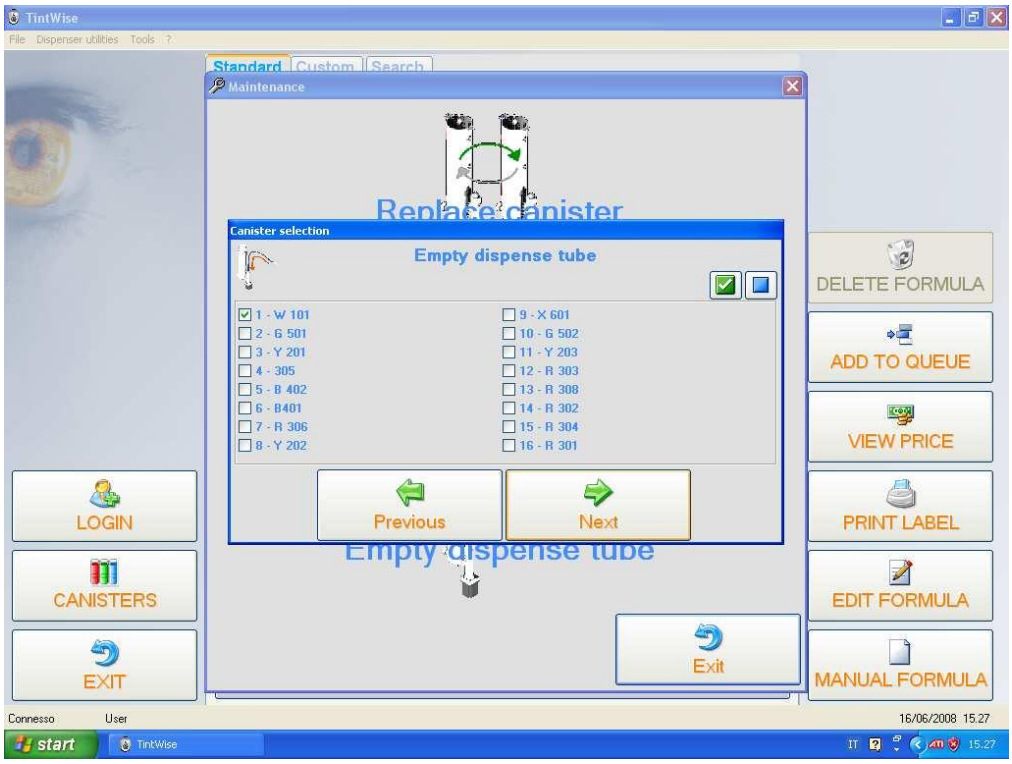
Access the “Empty dispense tube” feature in the TintWise® software by logging in as “Administrator” and selecting Dispenser utilities / Maintenance (Pictures **G** and **H**).

Picture **G**

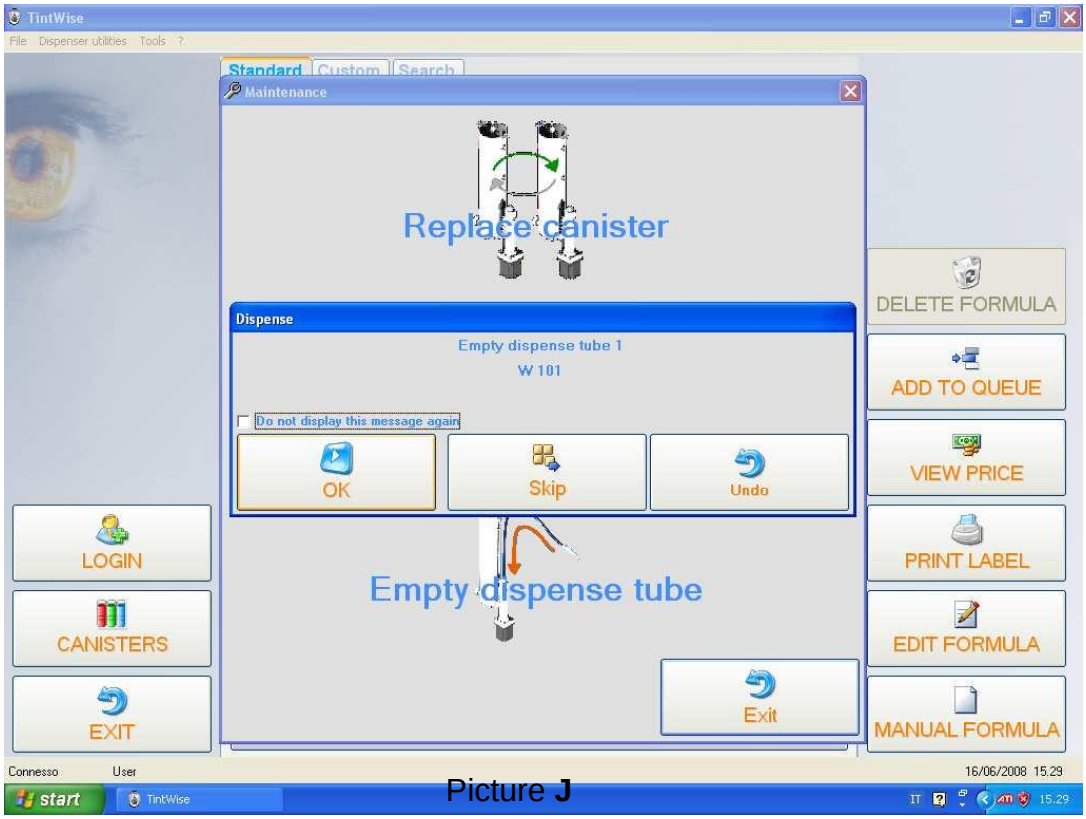


Picture

Select the circuit that has to be emptied and click on **Next.**
Click on the **OK** button in the dispense window (Pictures **I** and **J**).

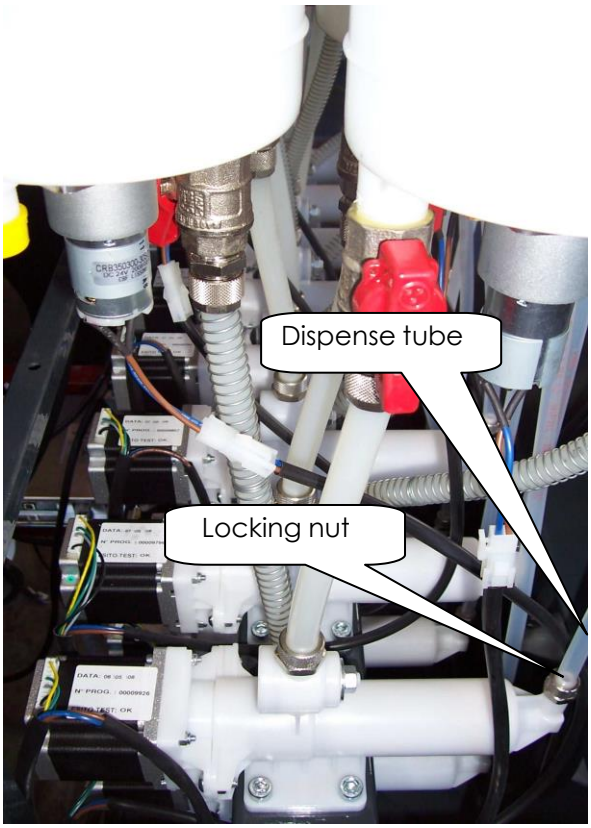


Picture **I**

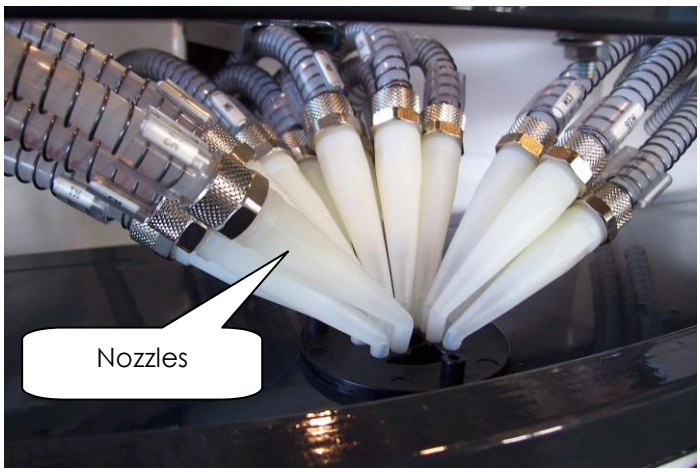


Picture **J**

After completing the “Empty dispense tube” procedure, disconnect the dispenser from its AC power source.
Remove the lower rear panel on the back of the dispenser.
Remove the plastic semi-circular cover with the HERO logo that covers the upper dispense nozzle area.
From behind the dispenser, remove the locking nut on the hose that connects to the pump housing (Picture **K**). Pull the hose away from the pump housing taking care to not drip colorant inside the machine or lose the locking nut.
At the dispense head, carefully identify and lift the correct nozzle from the dispense head and pull the hose assembly from the dispenser (Picture **L**). In some cases, tie wraps will need to be removed from around the hose to be removed.
If the new dispense hose does not include a nozzle, the original nozzle needs to be removed from the original hose (simply unscrew the nozzle from the hose) and attached to the new hose.
Insert the new hose and carefully connect it to the output side of the pump using the locking nut previously removed.
Insert the nozzle into its corresponding hole in the dispense head.
Restore power to the dispenser and access the “Fill up dispense tube” feature in the software using the same procedure as outlined above and shown in Pictures **G**, **H**, **I** and **J**.
Check both ends of the replaced hose for any leaks and if all is well, replace the front nozzle shield and rear panel.
Ensure that the power cord and USB cable are not damaged or loose.



Picture **K**



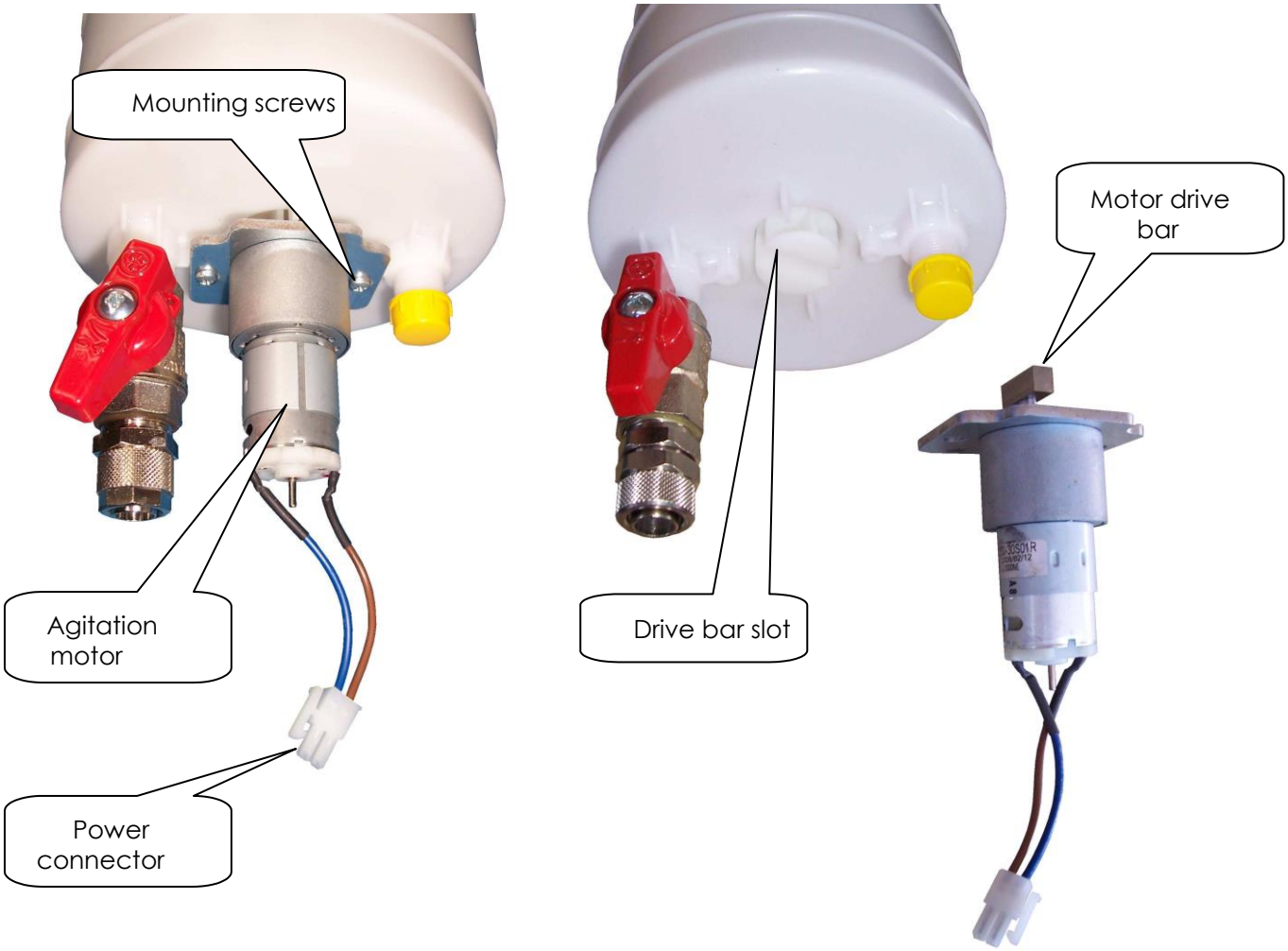
Picture **L**

AGITATION MOTOR REPLACEMENT

The agitation paddles inside the Eureka canisters are operated by a 24 VDC motor located on the bottom of each canister.

To remove and replace an agitation motor, please proceed as follows:

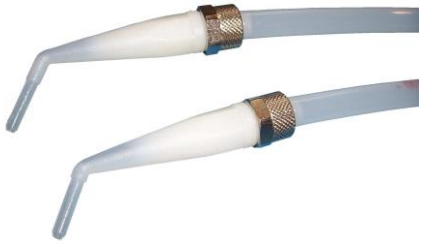
Disconnect the dispenser from its AC power source.
Remove the lower rear panel on the back of the dispenser.
Locate the appropriate canister and agitation motor and unplug the power connector on the wiring harness to the motor.
Remove the two screws holding the motor assembly to the canister and remove the motor.
Install the new motor ensuring that the drive bar on top of the motor fits correctly into the slot on the bottom of the canister.
Secure the new motor with the two screws previously removed.
Plug the motor's power connector into the wiring harness.
Restore power to the dispenser and test the new motor by initiating an agitation cycle.
If the new motor works properly, replace the dispenser's rear panel.
Ensure that the power cord and USB cable are not damaged or loose.



EQUIPMENT SPECIFICATIONS

Description:	EUREKA Automatic Colorant Dispenser		
Capacity:	Max 24 canisters, 5 liters and 3 liters		
Pumps:	Each circuit to be used with water or glycol based colorants uses a dedicated progressive cavity pump consisting of a hardened and chromed metal rotor with increased abrasion resistance and a stator made from Viton elastomer. The materials used for solvent based colorants are different.		
Pump speed:	Variable based on colorant and quantity to be dispensed. Maximum speeds per circuit are 0.3 liters/min (A-450) and 0.6 liters/min (A-460)		
Nozzle cleaning:	Software driven colorant pull-back system implemented at the end of each dispense, which draws colorant slightly into the nozzle and minimizes dripping and drying in conjunction with an automatic humidifying nozzle cap.		
Colorant agitation:	Individual 24 VDC agitation motors installed on the bottom of each canister and with programmable timing.		
Can sensor:	Optional reflective-photocell.		
Power supply:	Switching power supplies with input from 110 to 240 VAC, 50 Hz or 60 Hz frequency and output at 24 VDC and 67 VDC.		
		16 Canister	24 Canister
Dimensions:	Height	47” (119 cm)	47” (119 cm)
	Width	37” (94 cm)	55” (140 cm)
	Depth	26” (66 cm)	35” (90 cm)
	Weight	400 lbs. (181 Kg)	550 lbs. (250 Kg)
Shipping dimensions:	Height	62” (157 cm)	62” (157 cm)
	Width	40” (102 cm)	60” (152 cm)
	Depth	30” (76 cm)	40” (102 cm)
	Weight	500 lbs. (227 Kg)	650 lbs. (295 Kg)

RECOMMENDED SPARE PARTS

PART #	*DESCRIPTION*	*PICTURE*
A45500 A45525 A45502 A45532	Cartridge pump Standard flow High flow Solvent based Solvent based/High flow	
A20352 A10262	2.5 mm Nozzle Long elbow Short elbow	
A10305 A10205	Automatic nozzle cap Long arm Short arm	
A45560	24 VDC Agitation motor	

RECOMMENDED SPARE PARTS (Cont.)

PART #	*DESCRIPTION*	*PICTURE*
A45805	24 VDC Telescopic shelf actuator	
A10720	Electronic control board (PCB) Simultaneous	
A45772	24 VDC Switching power supply	
A10773	67 VDC Switching power supplier	

RECOMMENDED SPARE PARTS (Cont.)

PART #	*DESCRIPTION*	*PICTURE*
A45765	Power supply to PCB wiring harness	
A45740 A45741 A45742 A45743	Stepper motor and agitation motor to PCB wiring harness lengths L1, L2, L3, L4	

TROUBLESHOOTING CHART

Contact HERO's 24/7 Help Desk with any questions: 1-800-494-4376

PROBLEM	*CAUSE*	*SOLUTION*
Colorant leaking from the stepper motor connected to the cartridge pump	Damaged pump seals	Replace cartridge pump
Colorant dripping from the nozzle	Aerated colorant	Dispense colorant until you see a regular colorant flow without air
	Dirty nozzle	Clean nozzle tips and sponge
	Damaged nozzle tip	Replace nozzle
	Pull-back feature not set correctly	Reprogram pull-back parameters In software
While dispensing, the pump makes an irregular pitch noise, sounding louder than normal. Very little or no colorant dispenses when pump makes loud noise	Stuck or stalled pump	Colorant may be too thick. Move the pump rotor by hand by turning the bolt in the bottom center of the stepper motor. Turn it clockwise several times and try to run the pump again by dispensing 5 oz of product. Thin or replace the colorant if necessary
	The connecting cable between the PCB and the pump motor is not properly connected	Check that the connectors at both ends of the cable are inserted all the way
	Damaged connecting cable between the PCB and the pump motor	Replace the cable
	Stepper motor malfunction	Replace the pump cartridge
	PCB is not working correctly	Replace the PCB
PC no longer recognizes the dispenser and/or No communication message and/or All of the agitation motors do not work and/or The laser aiming device does not work and/or The automatic nozzle cap does not open and/or None of the pump motors run	No AC power to the dispenser	Check the dispenser's power source and switches, inc. emergency switch and AC fuse on the rear panel
	No output from one or the other power supplies	Unplug the dispenser and check that all wiring is firmly connected to all power supplies and the PCB. Power up the dispenser and carefully use a voltmeter to check the input and output of each power supply. Replace a power supply with input but no output
	PCB is not working correctly	Replace the PCB

TROUBLESHOOTING CHART (Cont.)

The pump motor runs normally, however, no colorant comes out of the nozzle	No colorant inside the canister	Add colorant to the canister and prime the line to remove any air
	The canister nozzle is obstructed	Clean or replace the nozzle
	Clogged line	Remove as much colorant as possible from the canister and add cool water. Try to pump water through the system or replace the dispense tube. Replace thick colorant as needed
	Damaged pump cartridge	Replace pump cartridge
Colors are difficult to reproduce, general mistints	Dirty dispense nozzles	Clean nozzles and sponge and complete 1 or more purge cycles
	One or more colorants not dispensing	Complete 1 purge cycle and identify the colorant(s) not dispensing. Follow instructions for specific problem
	Colorant in wrong canister	Identify canister and dispense out wrong colorant. Clean canister and circuit with water and introduce proper colorant
	Variations in colorant specifications such as viscosity and specific gravity	Contact colorant supplier and add colorant with correct specifications
	Improper calibration	Check calibration and adjust as necessary
One agitation motor not working	The motor's power cable is not well connected or is damaged	Check that the cable is well connected at both ends. Replace the cable if necessary
	Damaged agitation motor	Replace the agitation motor
	Damaged circuit on PCB	Replace the PCB
Can shelf does not move	The Start button or one of the Up and Down buttons not depressed	Ensure that both the Start button and either the UP or the Down button are pushed down at the same time
	The actuator cable or one of the button cables is not well connected	Check all cable connections and repair as necessary
	Damaged Start, UP or Down button	Replace the damaged button
	Damaged actuator motor	Replace the actuator motor assembly
The image on the monitor is not clear or is non-existent	The monitor is turned off	Turn on the monitor
	The monitor cables are loose or damaged	Check all cable connections to PC and monitor
	Brightness and/or contrast settings are incorrect	Adjust brightness and/or contrast settings
	Damaged Monitor	Replace the monitor

STANDARD PARAMETERS

The following charts show several parameters used in the dispenser's operation along with their respective default values.

PARAMETER	MEANING	DEFAULT VALUE
Mixing – Time ON Mixing – Time OFF	Agitation time ON Agitation time OFF	3 min – 0 sec 120 min – 0 sec
Pumps – acceleration	Pump motor acceleration speed	1000 When the value increases acceleration also increases
Pumps - deceleration	Pump motor deceleration speed	1500 When the value increases, deceleration also increases
Pumps – Boost time	Time during which the pump motor receives the maximum power	30 sec
Pumps – Start speed	Pump starting speed	15% (75 r.p.m.)

Canister Page

Dispensing speed	Pump dispensing speed expressed as a percentage of the maximum value	70% (300 r.p.m. – 0.3 l/min)
Purging - ml	Quantity dispensed during the purging cycle	1 ml/0.5 ml
Purging - Speed	Pump speed during the purging cycle	25% (125 r.p.m.)
Pull-back device - Steps	Number of pump motor steps during the phase in which the drop is "pulled up"	40 (0,1 r. – 0,07 cc)
Pull-back device – Waiting time	Waiting time, after each dispense, before the pull-back cycle is implemented	3 sec
Capacity	Canister capacity	3 – 5 liters
Warning level	Below this level you are warned to fill the canister (yellow)	0.4 litres
Alarm level	Below this level dispensing is no longer permitted (red)	0.2 litres
Steps alarm	Number of motor steps possible before proceeding with a precautionary substitution	1.013.854.085 steps (1.760,00 litres)
Purging alarm	Maximum time allowed without purging, between two dispense cycles of the same colorant	12 hours/24 hours

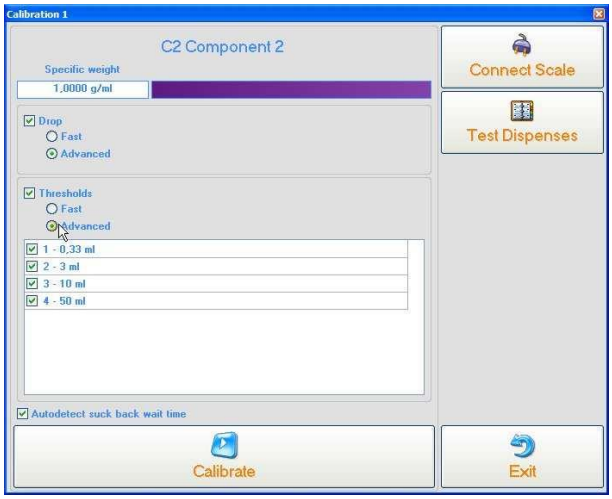
Calibration Page

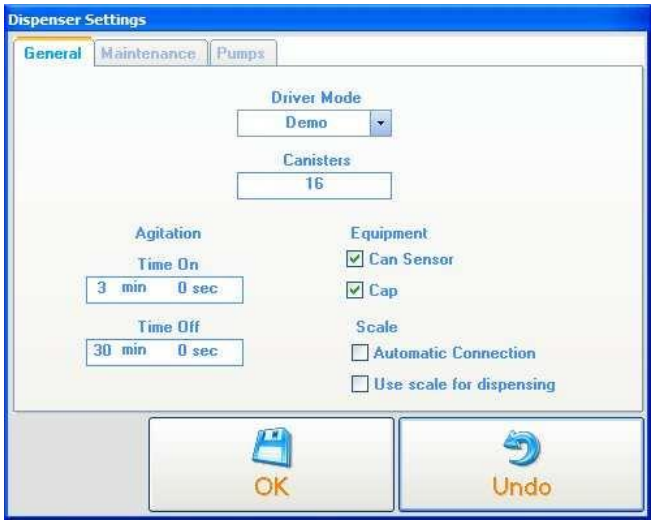
Drop Calibration	Quantity minimum calibrated	0.02 ml
Threshold Calibration	Machine Calibration	Variable

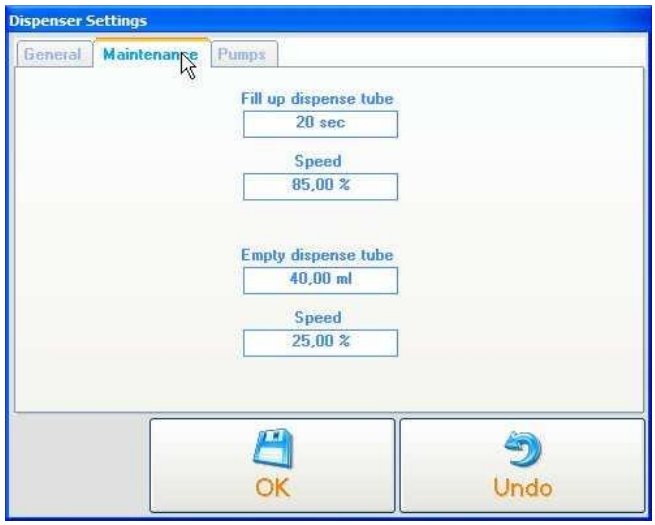
The theoretical value moved with one complete rotation of the pump is 0.6944 cc, measured with water at an approximate temperature of 25 ℃.

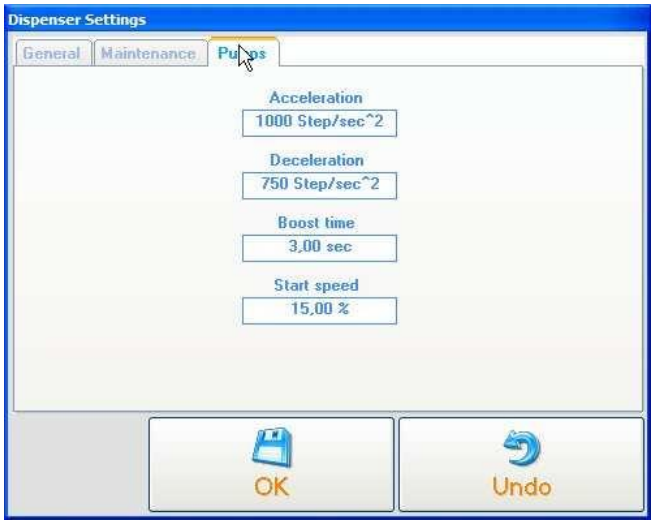
Dispensing 1 cc of product requires 576.05346 steps of a pump's stepper motor. This is the value programmed in the software as being the "standard" calibration value.

Parameter Images

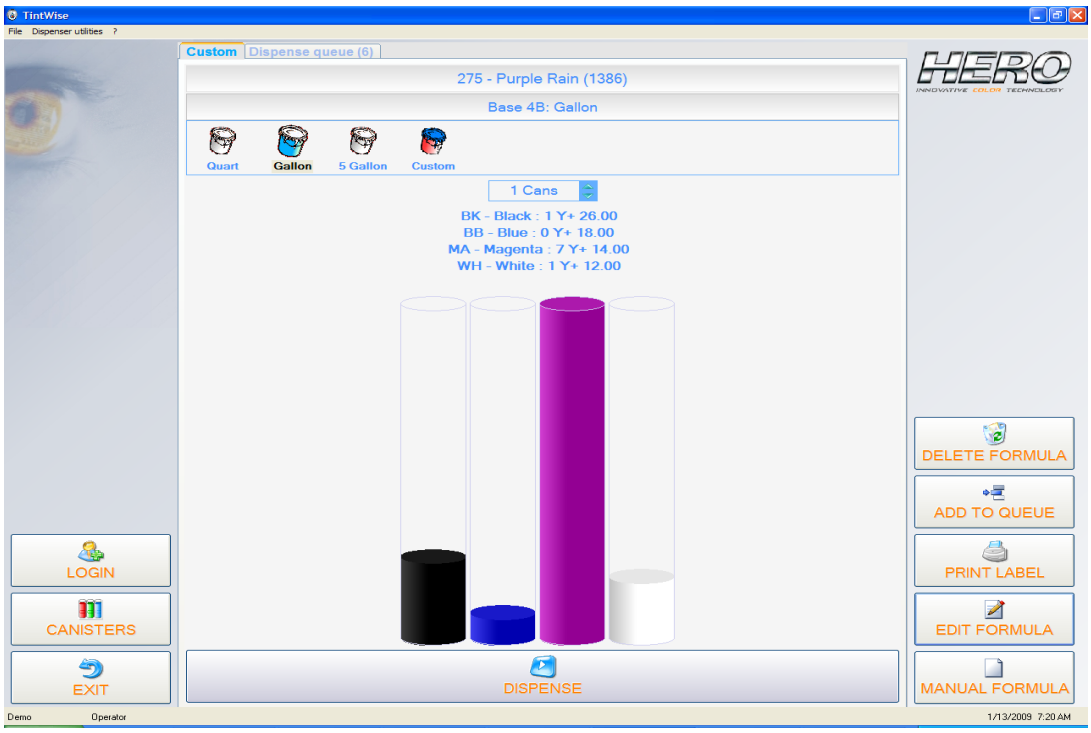








Main Dispense Screen



LOGIN - Allows login of different user levels. A password is required.

CANISTERS - Selecting this button will take you to the canister screen where you can purge, agitate, and change the canisters' levels.

EXIT - Exits TintWise® program.

DELETE FORMULA - This will allow you to delete a formula out of the queue (when the queue is enabled).

ADD TO QUEUE - Allows you to add the current formula being displayed to the queue (when the queue is enabled).

PRINT LABEL - Allows you to print a can label (when a printer is enabled in TintWise).

EDIT FORMULA - Allows you to edit the formula currently being displayed.

MANUAL FORMULA - Allows a manual or custom formula to be entered and dispensed.

How to Dispense

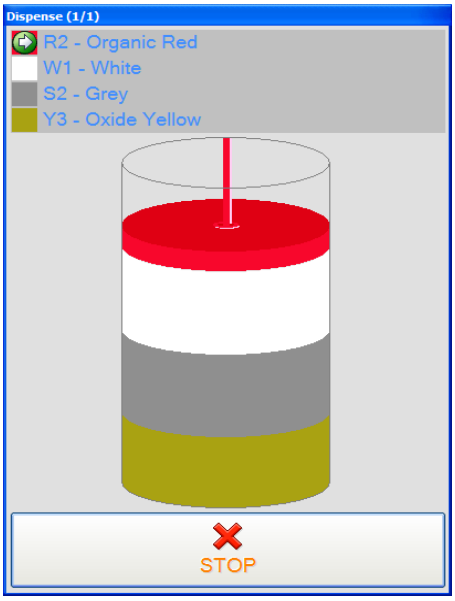
Select the appropriate collection, product and formula from the database within TintWise® or from your color matching system (Match-Rite, Datacolor, etc). When selecting from a color matching system the last step should be to click on the dispense or tint button in that system. This will send the information to TintWise®.

When a formula is selected from a database within TintWise® or is sent from a color matching system such as ColoRx, Paintmaker/Paint or ColorDesigner, the formula is displayed on the TintWise® Main Dispense Screen. It will show information such as formula name, base, can size selected and the amounts of each colorant to be dispensed **(Refer to picture on previous page).**

At this point, if the customer changes their mind as to what can size they want, it can easily be changed by **DOUBLE CLICKING** on the appropriate can size icon. For example, if they had originally asked for a Gallon but then decided they only needed a Quart, you would **DOUBLE CLICK** on the Quart can icon, at which point TintWise® will automatically reformulate the amount of colorant needed for a Quart.

You may also change the number of cans you will be tinting by pressing on the up or down arrows located above the formula description. Once the size and quantity of dispenses have been selected, press the DISPENSE button located at the bottom of the screen.

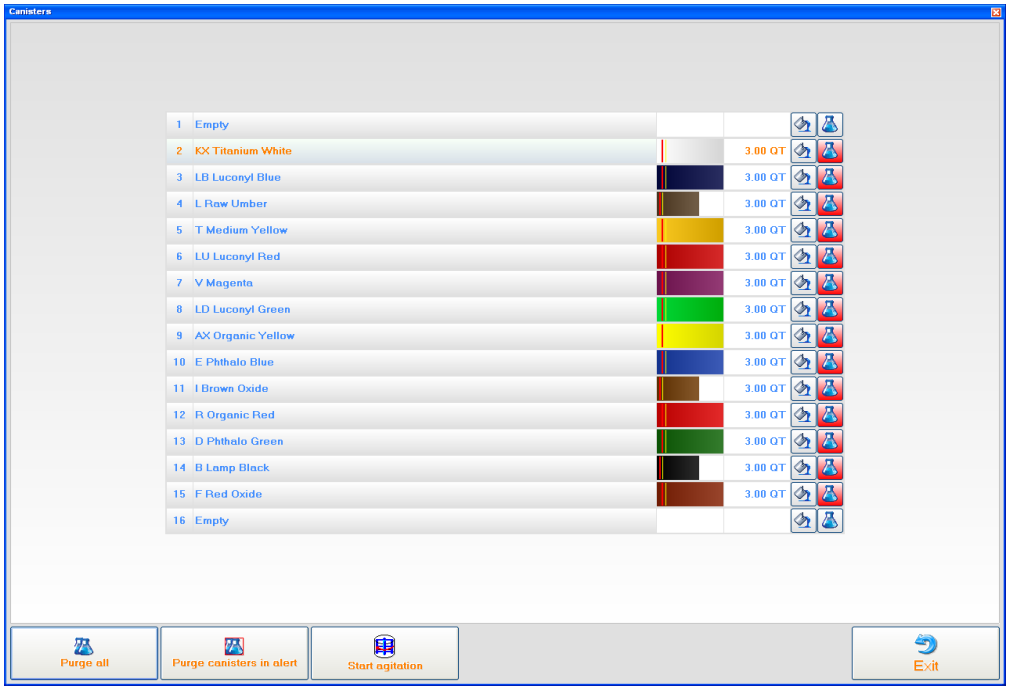
After selecting DISPENSE the above window will appear. This is a safety feature to insure there is a can under the nozzle and that the cap covering the nozzles has moved out of the way. If the correct can size is under the nozzles and the cap is out of the way then select OK to dispense.



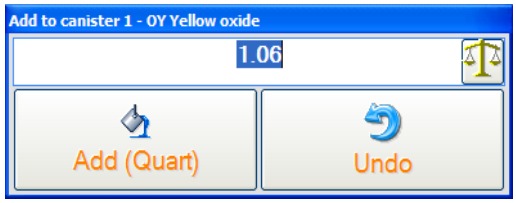
Once dispensing has started, a graphical representation of the tint being dispensed will appear on the screen as shown above. It will show what colorant is currently being dispensed and how much more is needed to complete the requested formula.

If at anytime you want to abort the dispensing process, click on the STOP button.

Canister Screen



 **Fill canister** – Opens the window pictured below allowing you to change the colorant level of an individual canister. Enter the appropriate amount and select Add.



The colorant levels can also be changed by clicking on the field showing the numerical quantity of colorant (to the left of the fill canister icon) on the canister screen, typing the appropriate amount and pressing enter. The colorant bar will change automatically.

 **Purge button** – Opens the window pictured below allowing you to purge an individual colorant. Select OK to purge.

 **Purge needed** – When you see the purge button with a red background, it means that colorant needs to be purged before a dispense will be allowed.

 **Canister requires filling** – When you see the fill button with a yellow background, it means the canister must be filled as soon as possible.

 **Canister requires immediate filling** – When you see the fill button with a red background, it means the canister must be filled before further dispensing is possible.

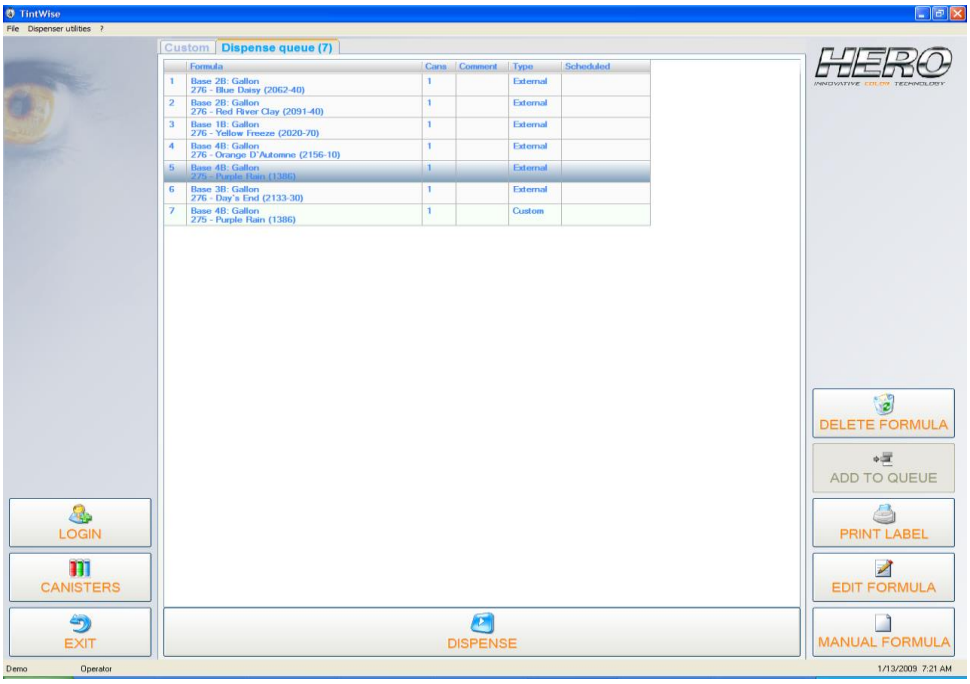
Purge all – Purges all colorants according to a preset program.

Purge canisters in alert – Purges the colorants with their respective purge buttons highlighted with a red background.

Start agitation – Starts a 3 minute agitation of the colorant in all of the canisters.

Exit – Exits the canisters screen and goes back to the main screen.

Dispense Queue Screen

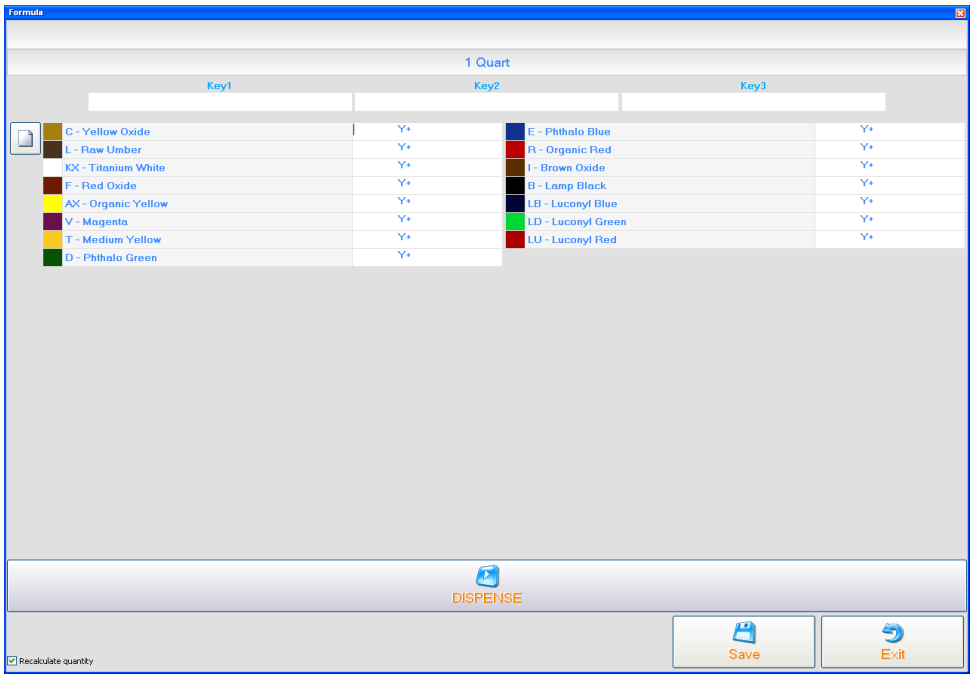


If the queue system is enabled you can access this screen by clicking on the dispense queue tab (next to the Custom and/or Standard tabs) from the Main Dispense Screen.

The queue screen will show all the formulas sent to TintWise® from your database software. At this point you can dispense the formula from the list by clicking on it and then selecting the dispense button. You can also double click on it and it will bring you back to the Main Dispense Screen, showing the formula ready to be dispensed.

Once the formula has been dispensed it will be removed automatically from the queue.

Manual Formula Screen



To start, select the appropriate paint collection, product and can size from the tabs at the top of the window, if TintWise® has and internal database. If the database resides only in your color matching computer, then only the can size should be selected.

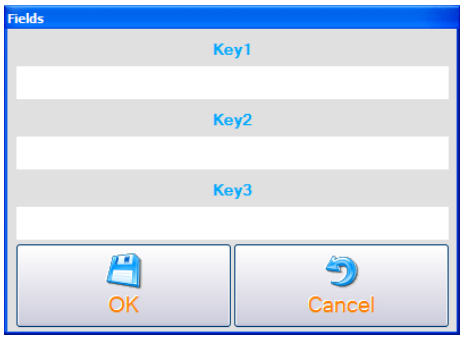
Enter the amount to be dispensed by clicking on the colorant square, name or on the space to the left of the Y (or X) of the colorant to be dispensed and typing the appropriate number of ounces. To enter the number of shots, click on the space to the right of the Y (ox X) of the colorant to be dispensed and type the appropriate number.

Example: 3 Y+ 22 represents 3 ounces plus 22 shots of that particular colorant.
Note: For ¼, ½ or ¾ shots type .25, .50, or .75 respectively.

Repeat the same process for all colorants in the formula.

To start with a clean page, click on the blank page icon  located next to the first colorant listed on the left side.

To save the formula, either before or after dispensing, click on Save at the bottom of the window. The following window will appear:



Three (3) fields are displayed as “Key1”, “Key2”, and “Key3”. These labels or titles can be changed as per a store’s needs (contact HERO customer service @ 800-494-4376 for further details).

These fields represent 3 different ways to save formulas using, for example, a customer’s name (Key1), formula name (Key2) and telephone number (Key3). Enter the appropriate customer information in one or all of the fields (only 1 field needs to have information entered into it in order to save the formula) and click OK. Click Exit to go back to the Main Dispense Screen.

To see or retrieve saved formulas, select the Custom tab from the top of the window. To dispense a formula double click on it to return it to the Main Dispense Screen.

Edit Formula Screen

This will allow you to edit whatever formula is displayed on the Main Dispense Screen. The EDIT FORMULA screen works the same way as the MANUAL FORMULA screen.

CUSTOMER MAINTENANCE PROCEDURES

DAILY:

- ✓ Keep all colorant canisters full but do NOT overflow. Maintain at least 1" of space between the colorant level and the canister brim.
- ✓ Using your dispenser's software program (TintWise®), enter the quantity of colorant added immediately after filing each canister. Do NOT wait until later.
- ✓ Clean up all spills immediately. Remove as much of the colorant as possible. Use soapy water if necessary. Do NOT use harsh chemicals or other abrasive materials.
- ✓ NEVER add any product other than the appropriate colorant to each canister. Call the HERO Help Desk if colorant or any other product is put into the wrong canister by mistake.
- ✓ Purge all colorants daily. Watch for any colorants that do not purge properly or dispense sideways. Contact the HERO Help Desk if standard cleaning procedures do not rectify the problem.
- ✓ Clean the dispense nozzle using a damp towel and/or a soft bristle toothbrush. Wipe the nozzle dry with a clean towel or rag. Do NOT insert foreign objects into the dispense nozzles unless otherwise instructed by authorized personnel.
- ✓ Clean the nozzle cap/humidifier sponge. Wash these parts with warm water or soapy water if necessary. Leave the nozzle sponge wet or moist.
- ✓ Ensure the can shelf or shelves work properly. Clean the can shelf or shelves with a moist towel or rag. Use soapy water if necessary to remove stains.
- ✓ Do NOT stack boxes or other inappropriate objects on top of the dispenser. This is your work area. Keep it clean and neat.

WEEKLY:

- ✓ Check all computer connections. Ensure that all cables are secure. Your dispenser and PC should be connected to a dedicated electrical outlet. Shakers, mixers and other devices should NOT be on the same circuit.
- ✓ Inspect the nozzle cap/humidifier sponge and replace as needed.
- ✓ Wipe down all of the dispenser exterior surfaces using a towel and warm soapy water. Wipe surfaces dry.
- ✓ Do NOT use liquids to clean the computer keyboard, printer or other PC components. Use only a compressed-gas duster. If necessary, the monitor screen may be cleaned with a slightly damp towel.

DAILY PROCEDURE FOR CLEANING AUTOMATIC CAPPER

From the main TintWise® dispense screen, navigate to the canisters screen by pressing the "Canisters" button on the left side.

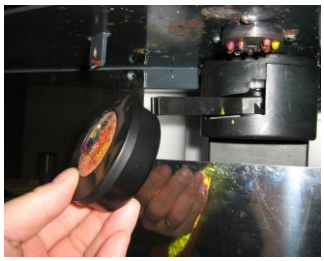
Making sure you have a purge container placed below the nozzles, select the "Purge all" button on the lower left corner to purge all the colorants.

CUSTOMER MAINTENANCE PROCEDURES (Cont.)

Before the colorants purge, a box will appear asking you to “Insert can remove cap”. At this point, remove the cup and sponge for cleaning. Do this before initiating the purge process.

To remove the cup, hold the front portion and pivot it downwards so that the sponge faces you. The cup will separate from the arm.

Pivot front of cup downwards



Cup will separate from arm

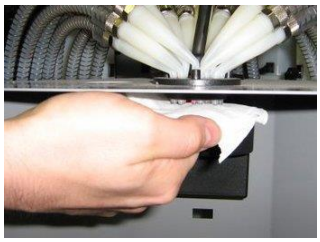
Once the cup and sponge have been removed, take them to a sink and wash them with warm water leaving the sponge damp. At this point you should also get a piece of paper toweling, fold it into a square and moisten it.

Cup and sponge

Washing the sponge

Moistened paper towel

Take the moistened paper towel and dab the nozzles with it and then push the cup and sponge assembly back onto the capper arm.



Dab the nozzles

Push cup back onto capper arm

Making sure the purge can is in place, select the “OK” button on the “Insert cap remove can” message. The dispenser will purge all colorants automatically. Once the purge process has been completed, select the “Exit” button on the canister selection screen and you’re ready to start your day.

CUSTOMER MAINTENANCE PROCEDURES (Cont.)

REMOVING COLORANT FROM A CANISTER AND CLEANING THE CANISTERS AND PUMPS IN ORDER TO INTRODUCE NEW COLORANT:

Please read all of the instructions below before starting the process.

1. Place the appropriate empty container on the dispenser's shelf and move the shelf to the highest position possible.
2. From TintWise®'s main screen, select Manual Formula
3. Selecting the correct colorant line, enter an amount to be dispensed. It is recommended that you dispense the colorant in 10 ounce increments until the canister is empty (enter the amount to the left of the Y).
4. Select Dispense from the Manual Formula screen and follow the screen prompts to complete the dispensing process.
5. Repeat steps 1 through 5 until the canister is empty. Note that once the bottom of the canister is exposed, the subsequent dispenses will tend to spray rather than dispense in a solid stream. It is suggested that the can shelf and panel behind the shelf be covered to protect them from the colorant spray.
6. Once the canister has been drained, clean the dispense nozzles with a wet towel or a soft bristle brush.
7. Clean the capper sponge and reinsert it the its cup leaving it as wet as possible
8. Remove the cap covering the top of the agitation paddle.
9. Using a pair of pliers, squeeze the top of the agitation shaft and pull the agitation paddles from the canister.
10. Wash the agitation paddle and cap thoroughly using warm water and a mild detergent if necessary.
11. Add approximately 2 quarts of warm water (do NOT use very hot water) to the canister and using your hand, a towel or a soft bristle brush, clean the inside walls of the canister.
12. Remove the water using steps 2 through 5 above.
13. Repeat steps 11 and 12 until the inside of the canister is as clean as possible.
14. Continue to add warm water to the canister and dispensing it until the water dispensing from the nozzle is as clear as possible.
15. In case the water continues contaminated, it may be necessary to replace the pump cartridge and the nozzle before introducing the correct colorant. Consult your user manual on how to replace these items.
16. Leave enough water at the bottom of the canister to just cover the output hole on the bottom of the canisters.
17. Replace the agitation paddles and caps to their appropriate canister
18. Repeat steps 6 and 7 above.
19. Once you are confident that the circuit is clean and that the proper colorant will not be contaminated by the erroneous colorant, add one or two quarts of the correct colorant to the canister.
20. In order to dispense any water left in the circuit and prime the tubing with the correct colorant, repeat steps 1 through 4 above until you are comfortable that the colorant is not contaminated with water and dispenses with no air. It should dispense in an uninterrupted solid stream.

Follow all local regulations in disposing of waste contaminated with colorant.
For any additional information, please contact HERO's 24/7 Help Desk at 800-494-4376.