



Benjamin Moore®

THE RED BOOK

How to Produce
Accurate Color
Reference Guide

2024 V5 U.S.

Introducing the Red Book

Welcome to the Red Book: “How to Produce Accurate Color Reference Guide.” Following these guidelines will ensure that we provide our customers with the colors and quality they want. Using this guide will not only keep your equipment in good condition but also reduce the cost of mistints.

Contents

Colorant Dispenser General Maintenance Guidelines	3
Paint Department Daily Maintenance Checklist	4
Paint Department Weekly/Monthly Maintenance Checklist	5
Hero Daily Recommended Maintenance	6
Hero Dispenser Backup	7-8
Hero Extended Power Loss	9
Hero Preparing for a Natural Disaster	10
Fluid Management® Daily Recommended Maintenance	11
Corob® Daily Recommended Maintenance	12
Corob® Dispenser Backup (CorobTECH)	13-15
Corob® Dispenser Restore (CorobTECH)	16-18
Corob® Dispenser Backup (EVOservice)	19-20
Corob® Dispenser Restore (EVOservice)	21-22
Working with Half Pints	23-24
Half Pint Accessories for Corob™ Dispensers and Shakers	25
Half Pint Accessories for Fluid Management® Shakers	26
Half Pint Accessories for Radia® Shakers	27
Half Pint Accessories for Hero Mixers	28-30
X-Rite® MetaVue™ Recommended Maintenance	31
X-Rite® iVue Daily Recommended Maintenance, Tips, and Supplies	32-33
X-Rite® i1 Paint Daily Recommended Maintenance	34
BYK® Auto-Match® IV Recommended Monthly Maintenance	35
Datacolor® 45G Recommended Monthly Maintenance	36
Introduction to Color Matching	37
Evaluating Dispenser Accuracy	38
Gennex® Waterborne Color Technology	39
Customer Support	40

Colorant Dispenser General Maintenance Guidelines

Following these maintenance guidelines will keep your dispenser working to its full potential. Consult the owner's manual or additional pages in this guide for specific details.



Daily Maintenance

- Clean nozzles with appropriate tool.
- Open the nozzle cover, inspect, clean and moisten sponge.
- Empty and clean nozzle drip area.
- Purge colorant nozzles and visually inspect that colorant is dispensing properly.
- Refill humidification tank if applicable (use distilled water).
- Add colorant as needed per equipment manufacturer's or colorant manufacturer's instructions.
- Check and adjust colorant levels in software to match canister fill.
- Shake colorants for 5 minutes before adding to the dispenser.
Allow dispenser canisters to agitate after the addition of colorant.
- Clean outside surfaces with a mild cleaning solution or damp cloth.



Weekly Maintenance

- Visually inspect for obvious problems (e.g., mold, leaks, spills, drips).
- Check that all canister motors are agitating.
- Clean all spill trays.
- Dispense one ounce of any colorant that has not been used in a week.
Can be dumped back into canister.



Monthly Maintenance

- Check and adjust colorant levels in software to match canister fill.
- Replace sponge insert.
- Grease automatic shelf and automatic nozzle closer as recommended by the manufacturer.
- Check calibration as per manufacturer.

Paint Department Daily Maintenance Checklist

Standardized checklists serve as a quick reference to maintenance steps. You may print the samples below or create your own.

- Post sheets near the equipment or make available in a binder or on a clipboard.
- Train staff to initial the appropriate box when a task is completed.
- Collect and review with staff.

Spectrophotometer								
Task	Frequency	SUN. Completed by	MON. Completed by	TUE. Completed by	WED. Completed by	THU. Completed by	FRI. Completed by	SAT. Completed by
Spectrophotometer (CF57) cleaned and calibrated	Daily							
Spectrophotometer (MetaVue) calibrated	Daily							

Dispenser								
Task	Frequency	SUN. Completed by	MON. Completed by	TUE. Completed by	WED. Completed by	THU. Completed by	FRI. Completed by	SAT. Completed by
Visually check colorant levels	Daily a.m./p.m.							
Add colorant if needed (O1, etc.)	Daily a.m./p.m. or as required							
Update colorant levels in COLORx® software	Every time colorant is added							
Clean nozzle tips	Daily a.m.							
Clean sponge and add water	Daily a.m.							
Purge colorants	Daily a.m.							

Paint Department Weekly/Monthly Maintenance Checklist

Spectrophotometer								
Task	Frequency	Completed by	Completed by	Completed by	Completed by	Completed by	Completed by	Completed by
Spectrophotometer (iVue) cleaned and calibrated	Weekly							
Spectrophotometer (MetaVue) cleaned	Weekly							

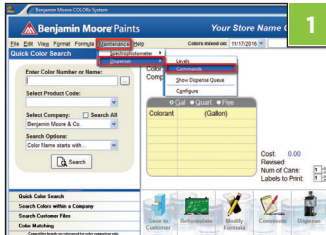
Dispenser								
Task	Frequency	Completed by	Completed by	Completed by	Completed by	Completed by	Completed by	Completed by
Clean spill trays around the canisters	Weekly							
Visually inspect unit for any obvious problems	Weekly							
Check all agitation motors are working	Weekly							
Dispense extra colorant of less frequently used colorants	Weekly							
Clean all surfaces with soap and water	Weekly							
Compare and update colorant levels in software with what is in canisters	Monthly							
Examine and replace sponge insert	Monthly							
Examine nozzle closer and maintain if needed via manufacturer's recommendation	Monthly							

Department manager: Collect and review each week.

Hero Daily Recommended Maintenance

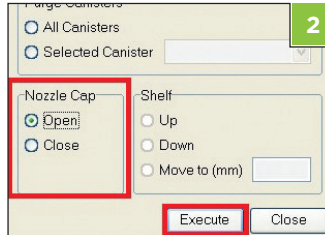


Daily Nozzle Cleaning Instructions:



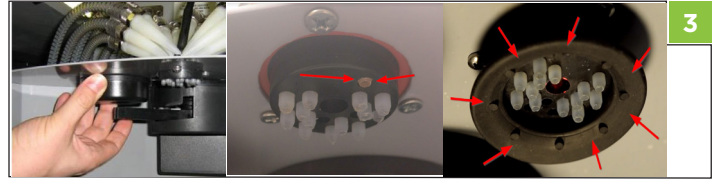
Open COLORx

- For automatic machines using COLORx:
- Select **Maintenance > Dispenser > Commands**
- If asked to purge, click **No**



Open Nozzle Closer

- Select **Open** nozzle cap
- Click **Execute**



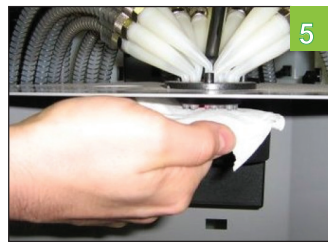
Remove Cup Holder from Nozzle Closer

- For automatic caps:
- With the cap in the open position, lift the cup up to release it.



Clean the Cup

- Wash cap in sink with warm water
- Clean sponge and replace inside cap



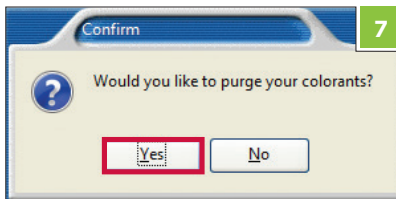
Clean Nozzle Tips

- Dab nozzle ends with moistened paper towel
- Remove any dried or dripping colorant
- **Do not push nozzles up**



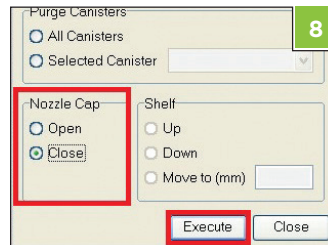
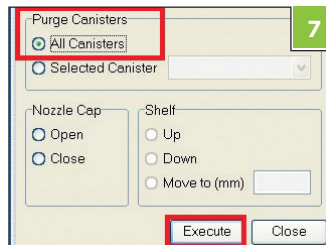
Replace Cap and Sponge Insert

- Moisten sponge with water
- Replace cup holder into closing bracket, making sure the cup, cup cap, and moisture ring are sealed



Purge Colorant

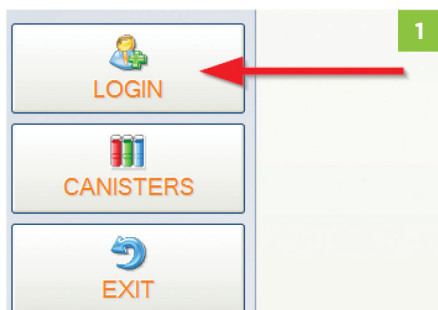
- Select **Maintenance > Dispenser > Commands**
- If asked to purge, click **Yes**
- Select **All Canisters**
- Click **Execute**



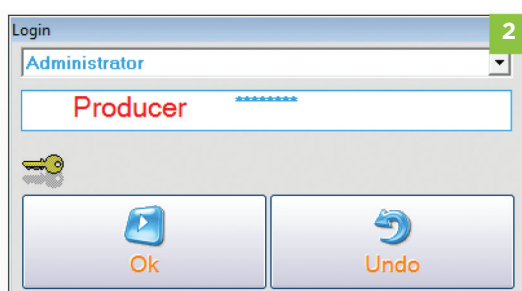
Close the Nozzle Cap

- Close nozzle cap until you hear a click
- Select **Close** nozzle cap
- Click **Execute**

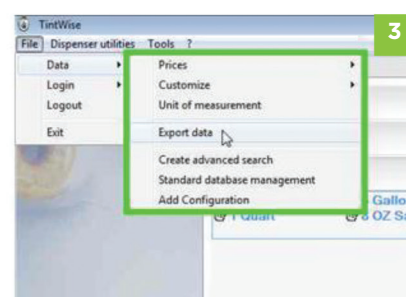
Hero Dispenser Backup



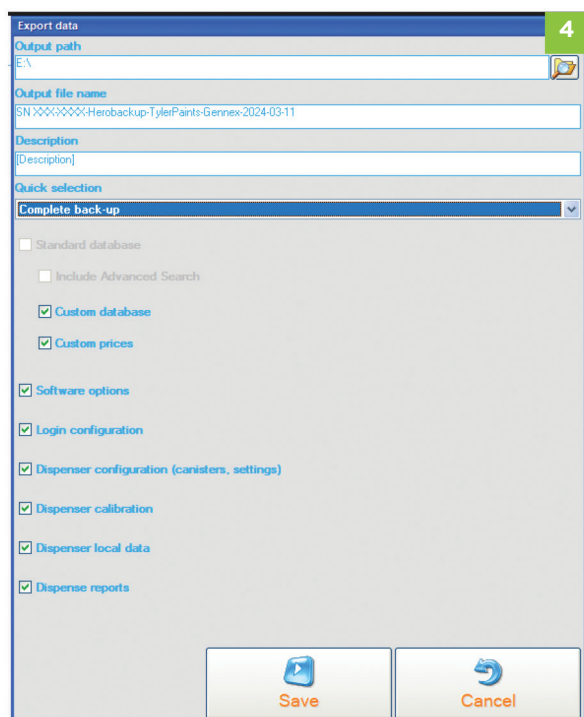
Log in to Tintwise as an admin by clicking on **Login** on the left-hand side of the main screen.



Choose **Administrator** from the dropdown menu and type in the password "Producer". Click **OK** and the login window should go away.



On the top left of the screen, click on **File**, then hover over **Data**. Now click on **Export Data** and a new window will open.



In the new window that opens, you must fill in some details.

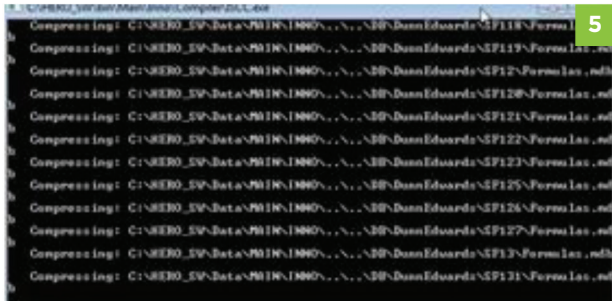
First you'll want to change the output path to an external flash drive, which is done by clicking on the magnifying glass and locating your drive (where the backup file will be stored).

You'll need to adjust the **Output file name** option. If it is already filled in, simply adjust the date and move on. A more real-life example of this format is as follows: **SN XXX-XXXXX - Customer Name - Colorant Line -YYYYMM-DD**

Leave the **Description** field as is.

From the **Quick Selection** drop down menu, choose **Complete back-up**; it will automatically select all possible options to be saved. Some options will remain unchecked. If you do not have the option for "Complete Backup," simply place a checkmark in all available boxes. Click **Save** on the bottom of the screen.

Hero Dispenser Backup



Expect to see a window similar to the one shown. Text will quickly scroll down the window while the backup archives the files. At the end of this process, a window should pop up that says "Successful." If you have any issues, please make sure there are no special characters in the file name as it is best to use only letters and spaces. If it still fails, please call HERO customer service for advice at 800-494-4376.

Exit all screens until you return to the TintWise software main screen.
Click on **Logout** and your backup is complete.

Remember to remove the flash drive and keep it in a safe place.

Hero Extended Power Loss



Extended Power Loss or Disconnect

NOTE: The dispenser should be without power for as little time as possible. However, before powering it back on for the first time, please make sure it is safe to do so, especially in the case of water damage.

This document explains what steps should be taken to ensure that the dispenser is ready for use after an extended power loss or disconnect.

The following tasks should be performed by a staff member who is familiar with the dispenser and terminology that is being used. If no such staff member is present and you would prefer assistance over the phone, please call 1-800-494-4376 or email customer@hero.ca.

After a Power Loss

Checklist

Please read this entire list before starting. If, at the end, you require assistance, please contact Hero.

1. Check that all colorants are healthy by looking for signs of separation, hardening, congealing, etc. Take note of any colorants that may be unhealthy. If any colorants look extremely unhealthy, exclude them from dispense tests. If they are very dry or hardened, call Hero before proceeding past this step as the agitation process could cause damage to some components.
2. Turn on dispenser and listen for agitation.

If agitation does not start, test the following:

- Check that the front-facing e-stop or toggle switch is turned on.
 - o E-stop: pulled out = on
 - o Toggle switch: "I" = on; "O" = off
 - o If it is on, turn off for 30 seconds, then back on again.
 - Does the main power outlet work with another device such as a fan or lamp?
 - Is the surge protector plugged in?
 - o Does the surge protector work with another device such as a fan or lamp?
 - o Does the surge protector need to be reset?
 - Make sure the dispenser's power cable is plugged firmly into the surge protector and the rear of the dispenser.
 - If there is a power switch on the rear power cable receptacle of the dispenser, make sure it's on. ("I" = on; "O" = off)
 - Is the fuse in the rear receptacle still good?
3. Check that all canisters are agitating. Take note of any that do not agitate.
 - After the agitation stops, check any unhealthy-looking colorants from step 1. If they still look unhealthy, repeat agitation once more.
 - Take note of any colorants that still look unhealthy.
 4. Clean nozzles and sponge: fill sponge cup with water.
 5. Purge each colorant one at a time, excluding any that look unhealthy from step 3. Take note of any that do not purge correctly.
 - Re-purge any colorants that failed the first purge. If they still do not purge correctly, try dispensing half an ounce from each failed colorant. Then purge again.
 - o If the pump makes no noise during purge or dispense, take note of that colorant and exclude it from the following tests:
 - If any continue to fail the purge, you may remove the nozzle and clean it under running water.
 - Test dispense another half ounce of each of the colorants whose nozzles required cleaning. Purge again.
 - Take note of any colorants that still do not purge.
 - If you had no failures during this process, then you can continue operation as normal. If any tests failed, please contact Hero for support. Call 1-800-494-4376, option 1, or email customer@hero.ca.

Hero Preparing for a Natural Disaster



Preparing for a Natural Disaster

The following are some basic steps to help prevent damage to your dispenser. As the Hero warranty does not cover “acts of nature,” it is of utmost importance that you prepare as soon as possible.

When the electrical grid fails and when it comes back on, power surges can occur that may harm electronic components.

Start by completing your daily maintenance procedure, ensuring that your sponge cup is completely full of water. Unplug any electronic devices that you do not wish to see damaged, such as the Hero Automatic Dispenser, computers, monitors, etc. You may also want to turn off relevant circuit breakers from the main breaker panel. Speak with your electrician for further details and recommendations.

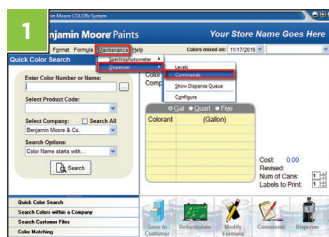
You may wish to move the dispenser to a safer location such as a raised floor, or, if possible, carefully raise the dispenser off the ground to decrease the chance of flooding damaging the dispenser. This is important as many of the dispenser’s primary components are on the bottom of the unit. As it is impossible to know how high the water level will be if a flood occurs, it is up to you to use your best judgment.

Cover the dispenser and computer with a tarp to prevent water damage from sprinklers should they come on. Be sure to fasten the tarp in place.

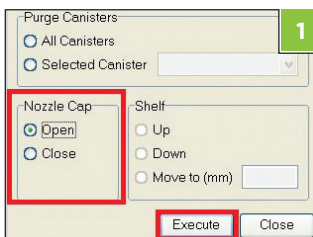
Fluid Management® Daily Recommended Maintenance



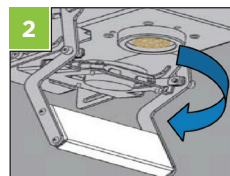
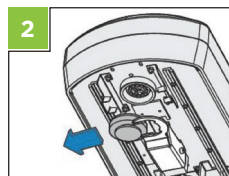
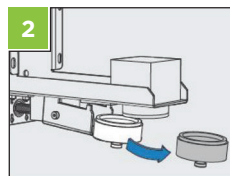
Daily Nozzle Cleaning Instructions:



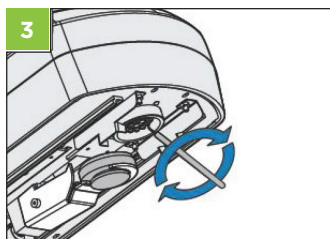
Open COLORx®
For automatic machines using COLORx:
• Select **Maintenance>Dispenser>Commands**
• If asked to purge, click **No**



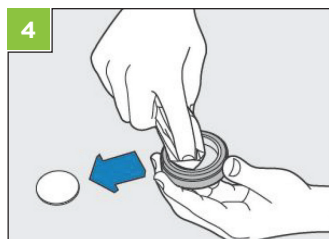
Open Nozzle Closer
• Select **Open** nozzle cap
• Click **Execute**



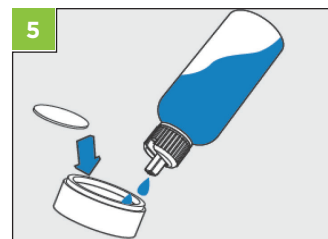
Remove Cup Holder from Nozzle Closer
For semi-automatic caps:
• Unscrew wing nut on bottom of cap
For automatic caps:
• Lift cap straight up, then over to the left
For manual AT1500:
• Remove container and release lever to open position



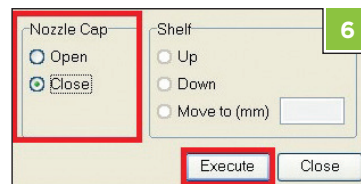
Clean Nozzle
• Clean each opening with included nozzle cleaning pick
• Use a circular motion to make sure opening is clear



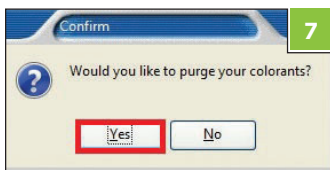
Clean Cup
• Remove sponge insert
• Clean inside of cup liner with water and paper towel



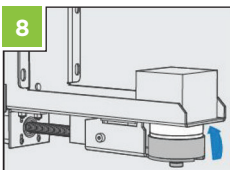
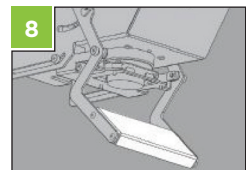
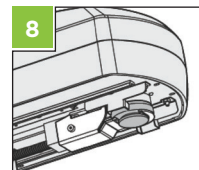
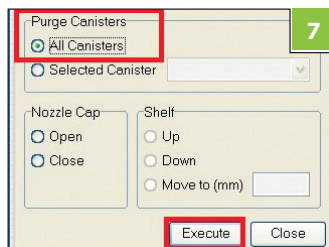
Replace Sponge
• Replace sponge insert
• Moisten sponge with water
• Replace cup holder to closer bracket



Close Nozzle Closer
For automatic machines:
• Select **Maintenance>Dispenser>Commands**
• Click **Close** nozzle cap
• Click **Execute**



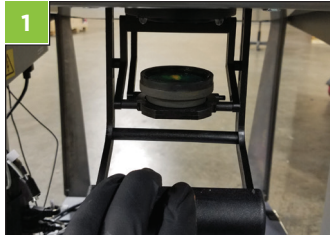
Purge Colorant
• Select **Maintenance>Dispenser>Commands**
• If asked to purge, click **Yes**
• Select **All Canisters**
• Click **Execute**



Close Nozzle Closer
For AT1500:
• Remove container and release lever to closed position



Daily Nozzle Cleaning Instructions:



Open Nozzle Closer D300 (manual only)

- Add purge container and push lever to open position



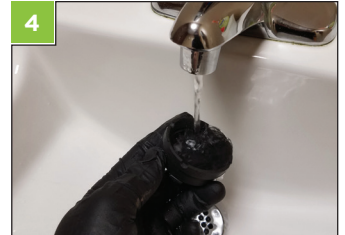
Remove Cup Holder from Nozzle Closer

- Grasp cup and twist 1/4 turn counterclockwise



Clean Nozzle

- Examine for dry colorant on tips
- Clean with a paper clip



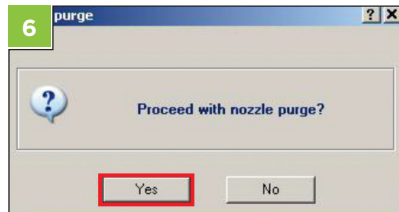
Clean Cup

- Remove insert and sponge from nozzle closer
- Clean the sponge
- Clean inside of cup liner with water and paper towel



Replace Sponge

- Replace sponge insert
- Moisten sponge with water
- Replace cup holder to closer bracket



Purge Colorants Through Corob Driver

- Open Corob® Driver
- Click **Yes** to proceed with dispenser initialization
- Place purge can under nozzle
- Click **Yes** to purge button
- Remove can after purging



Close Nozzle Closer (Corob)

- For D300:
 - Remove container and release lever to closed position



Verify Water Reservoir

- Check that water reservoir is filled between minimum and maximum settings
- Fill with distilled water if needed

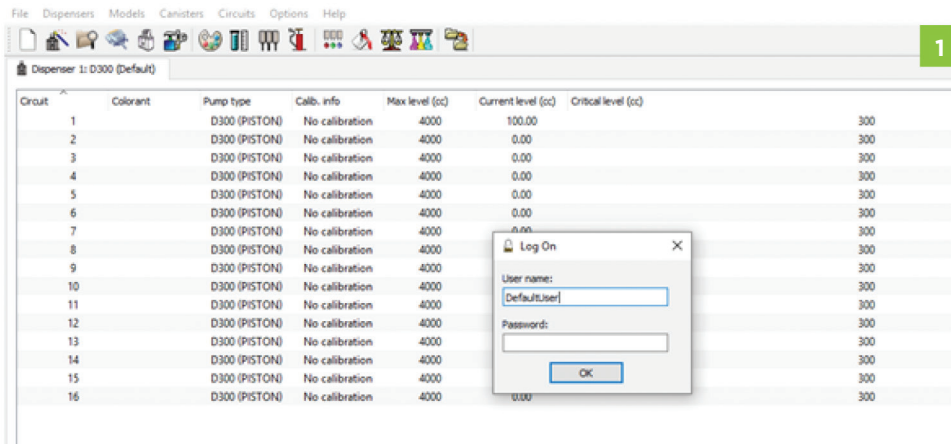
Corob® Dispenser Backup (CorobTECH)



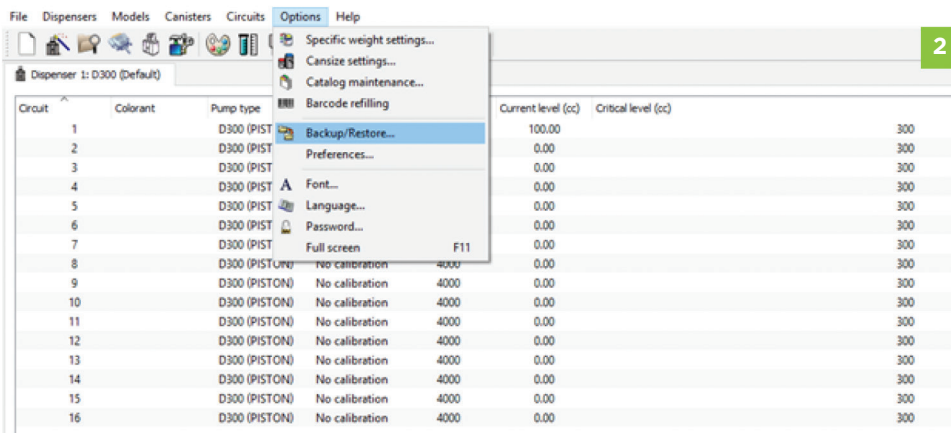
Performing the Corob restore using CorobTECH software

Open **CorobTECH**.

Enter "tech" for the CorobTECH password.



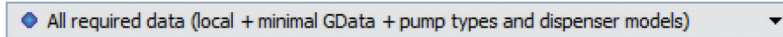
Under the **Options** menu, select **Backup/Restore**.



Corob® Dispenser Backup (CorobTECH)

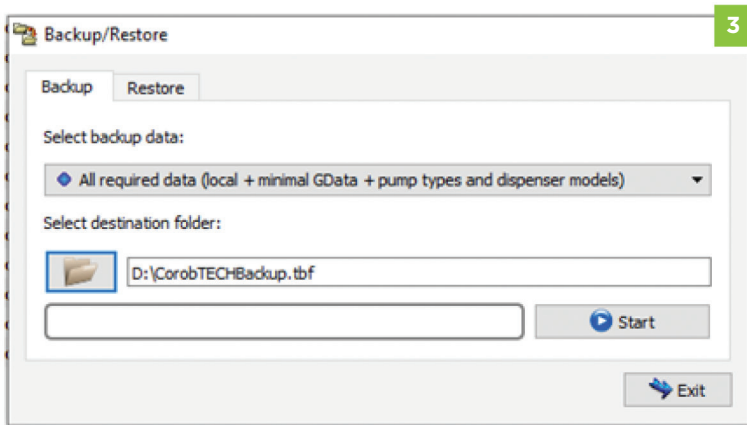


In the Backup/Restore window, choose the default option under Select Backup Data.

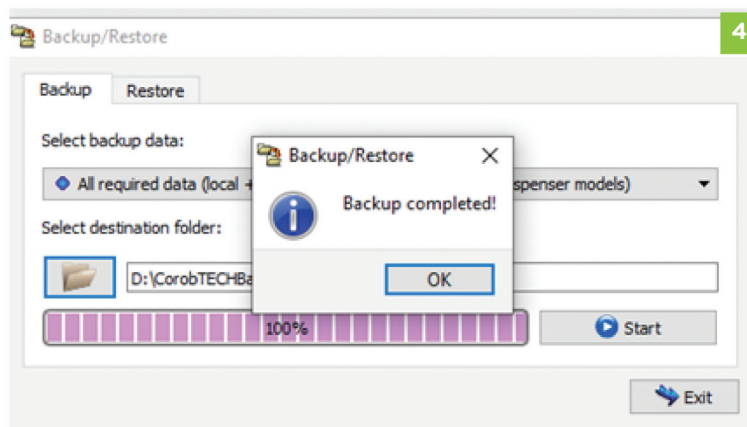


Then select your destination folder (in our example below, we are saving to a flash drive).

Choose **Start** to initiate the backup.

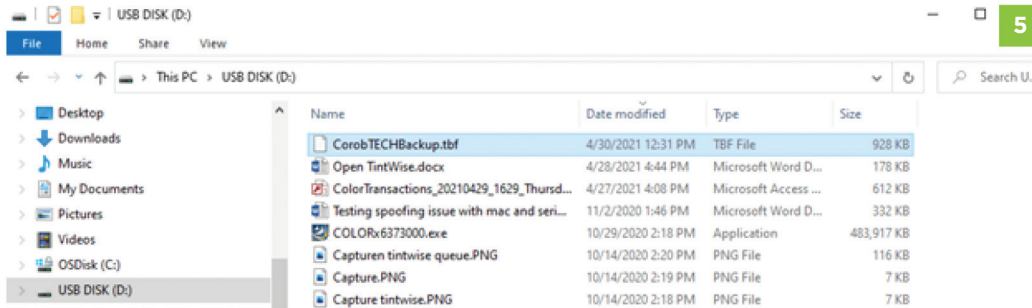


When the backup is finished, you will receive a "Backup completed!" message.





Check that you can see the resultant backup file.



Performing Backups for Your Important Corob Dispenser Files

(Alternate method of obtaining needed files.)

In the event that you are unable to create the backup from the CorobTECH software, you will be able to retain the necessary information for your dispenser machine by obtaining a copy of the local directory from your original C: drive.

You will need to have this directory available if you are to move your dispenser to a different PC or in the event of a PC failure.

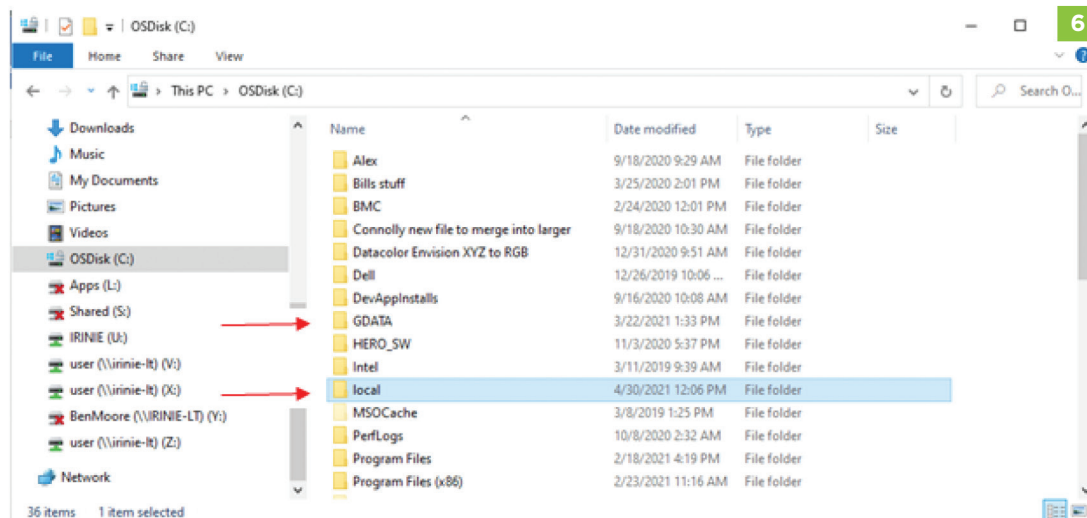
The information contained in the collection of files includes your calibration and level information for your Corob dispenser.

You will need to save two directories, **local** and **GDATA**, to protect your Corob dispenser data.

These directories are located at the root of your C: drive.

C:\local

C:\GDATA



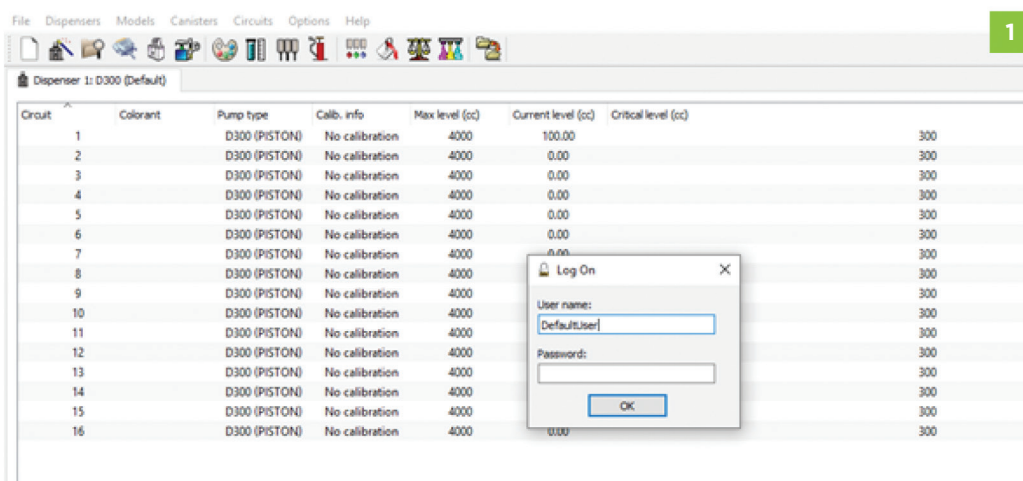
Corob® Dispenser Restore (CorobTECH)



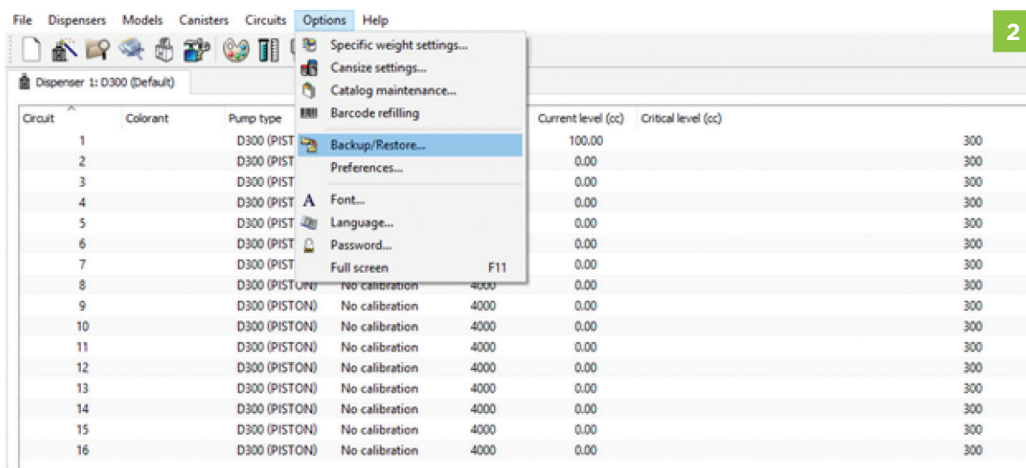
Performing the Corob Restore Using CorobTECH Software

Open **CorobTECH**.

Enter "tech" for the CorobTECH password.



Under the **Options** menu, select **Backup/Restore**.



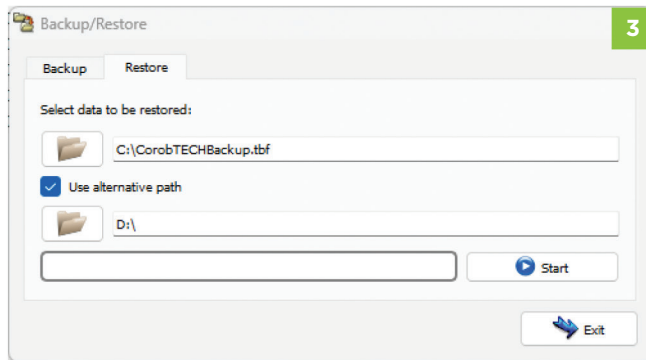
Corob® Dispenser Restore (CorobTECH)



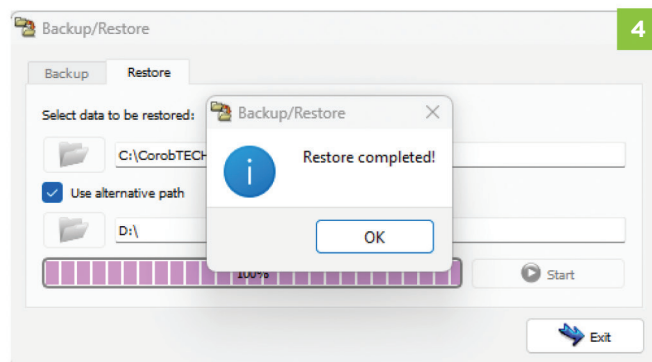
Select the **Restore** tab in the Backup/Restore window.

Then select the folder that contains the data to be restored. (In our example below, we are restoring from a flash drive.)

Choose **Start** to initiate the Restore.



When restoring is finished, you will receive a “Restore completed!” message.



Corob® Dispenser Restore (CorobTECH)



Performing Restores for Your Important Corob Dispenser Files

(Alternate method of obtaining needed files.)

If you were unable to create the backup from the CorobTECH software, and you saved a copy of the local and GDATA directories from your original C: drive to a flash drive, then these directories can be restored manually.

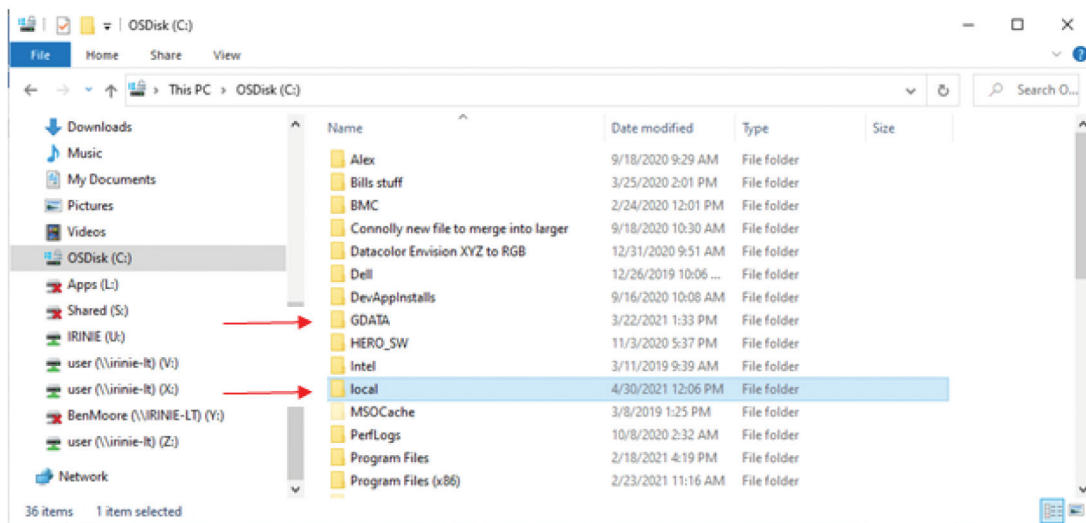
The information contained in the collection of files includes your calibration and level information for your Corob dispenser.

You will need the flash drive with the two saved directories: **local** and **GDATA**.

These directories can then be copied into the root of the C: drive of your computer.

C:\local

C:\GDATA

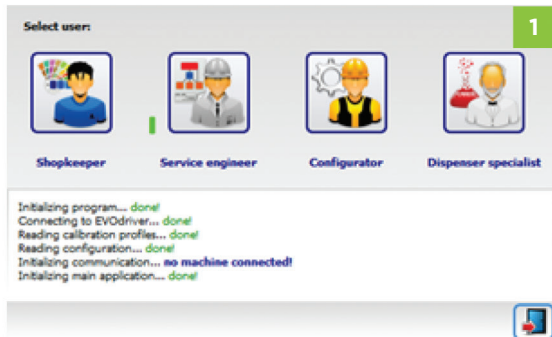


Corob® Dispenser Backup (EVOservice)

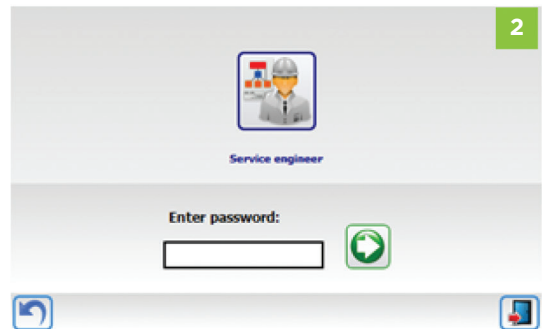


Open **EVOservice**.

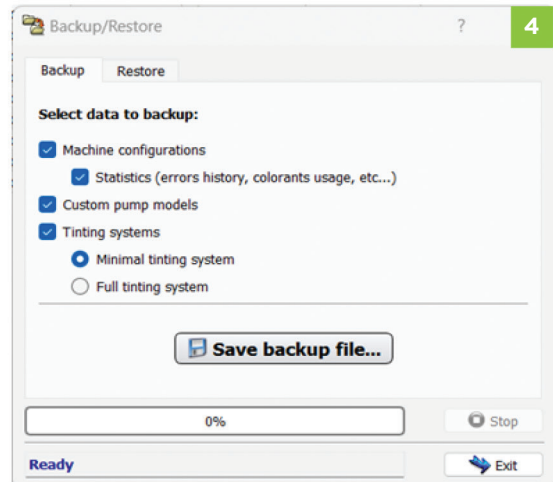
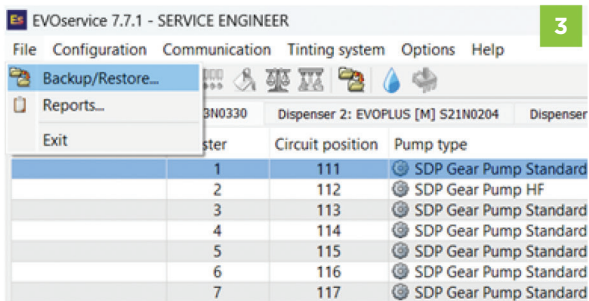
Log into EVOservice as the “Service Engineer.”



Enter “tech” as the EVOservice password.



Under the **File** menu, select **Backup/Restore**.

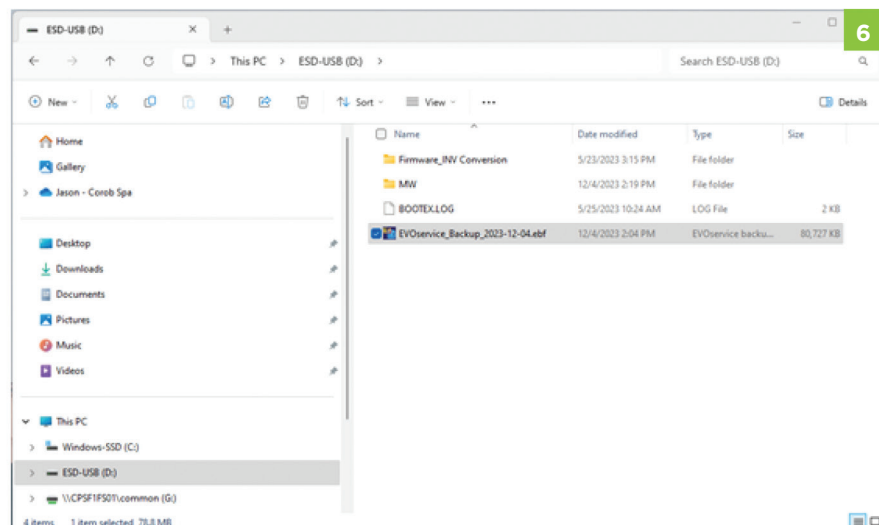
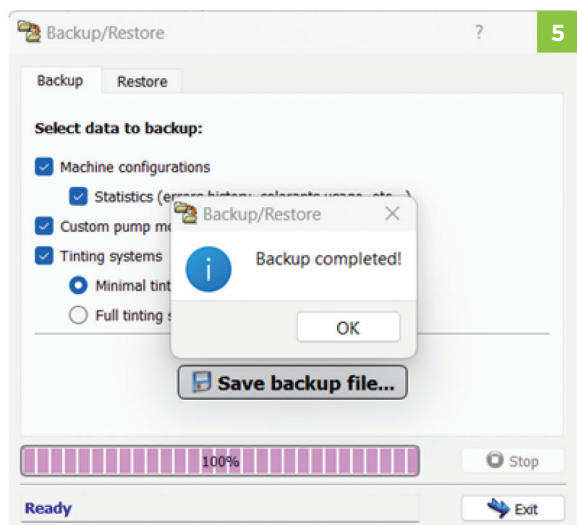


Corob® Dispenser Backup (EVOservice)



When the backup is finished, you will receive a "Backup completed!" message.

Check that you can see the resultant backup file in the location where it was saved.



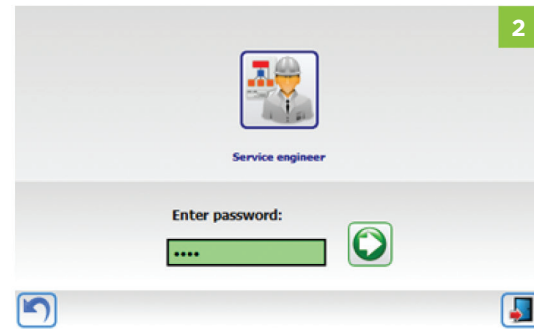
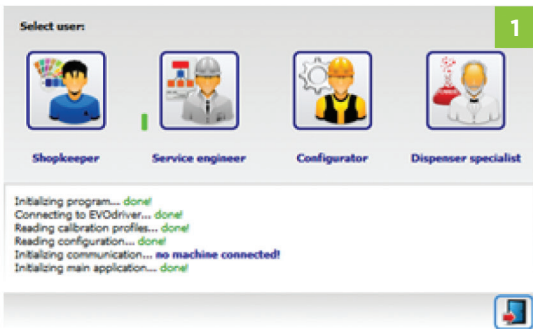
Corob® Dispenser Restore (EVOservice)



Open **EVOservice**.

Log into EVOService as the "Service Engineer."

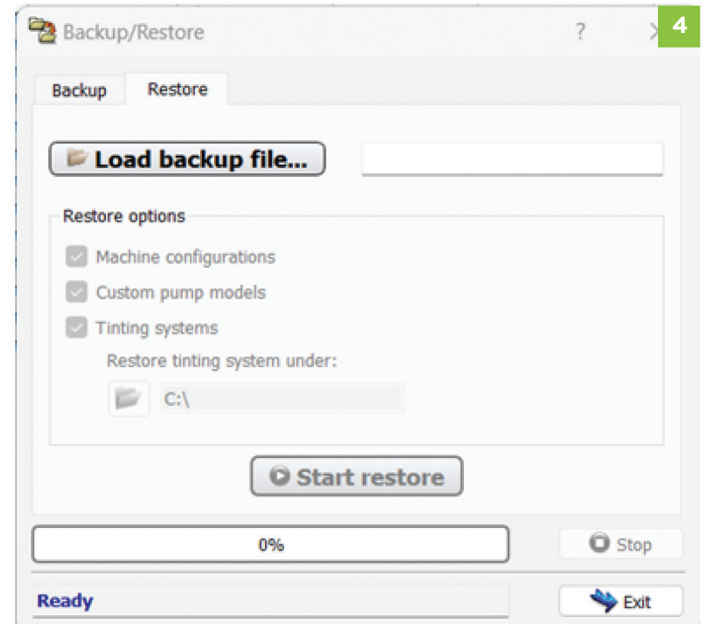
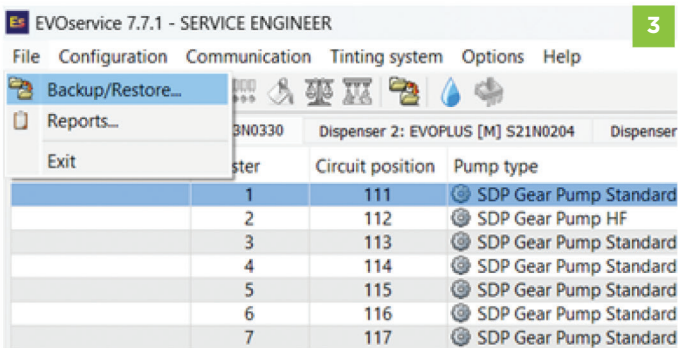
Enter "tech" as the EVOservice password.



Under the **File** menu, select **Backup/Restore**.

Click on the **Restore** tab.

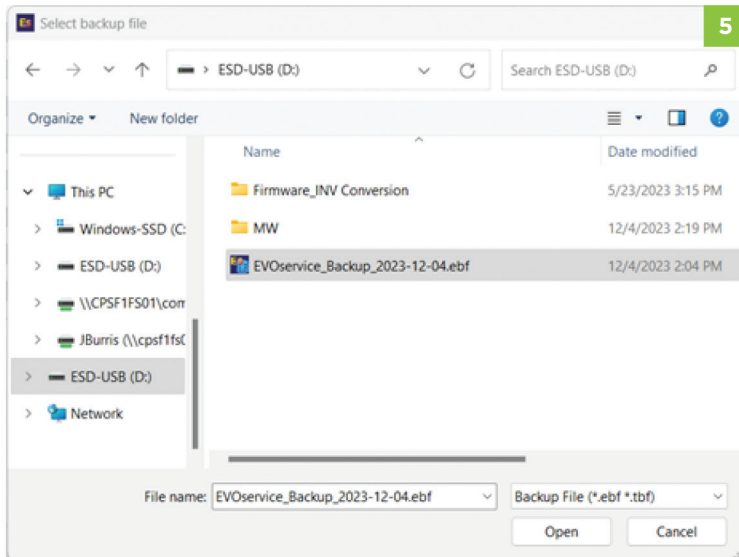
Then click the **Load backup file...** button.



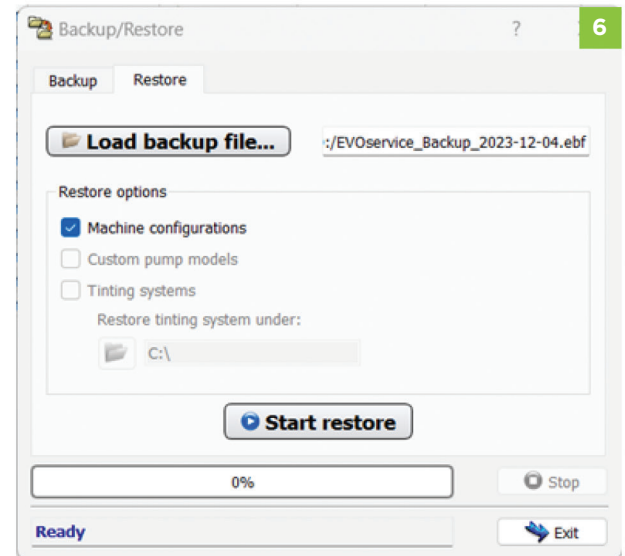
Corob® Dispenser Restore (EVOservice)



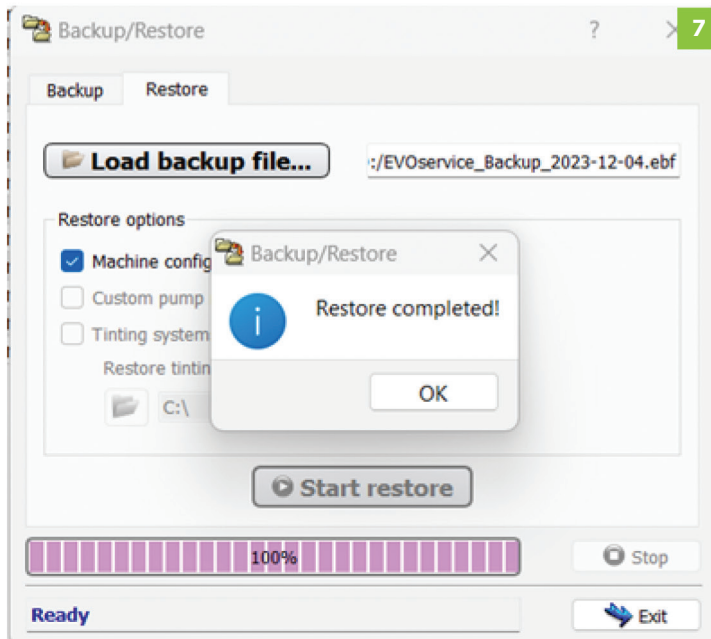
Select the location of the backup file, then click **Open**.



Click the **Start restore** button.



When restoring is finished, you will receive a "Restore completed!" message. Click the **OK** button, then exit out of the Backup/Restore window.



Working with Half Pints

Several accessories are available for shaking the half pint Color Samples, depending on the type of shaker you have in your store.

Recommended Minimum Shake Times

2 minutes: All platform shakers.

3-4 minutes: Shaker inserts.

Or follow the recommended shake times provided by the individual manufacturer.

Note: Platform shakers were shown to be more efficient at shaking half pints.

Vendor	Phone	Email	How to Order
Fluid Management Spare Parts Support	800-462-2466 (Ext 2)	FUSORDEREntry@IDEXCORP.com	Email completed order form to FUSORDEREntry@IDEXCORP.com
Radia	800-221-1083	Orders@RadiaProducts.com	Orders@RadiaProducts.com (When ordering from Radia, have your Benjamin Moore dealer number ready for additional discount)
Hero	800-494-4376	CustomerCare@hero.ca	Email completed order form to CustomerCare@hero.ca or call 800-494-4376
Corob	704-588-8408 (Ext 3)	Spareparts.NorthAmerica@Corob.com	Email completed order form to Spareparts.NorthAmerica@Corob.com or call 704-588-8408 (Ext 3)

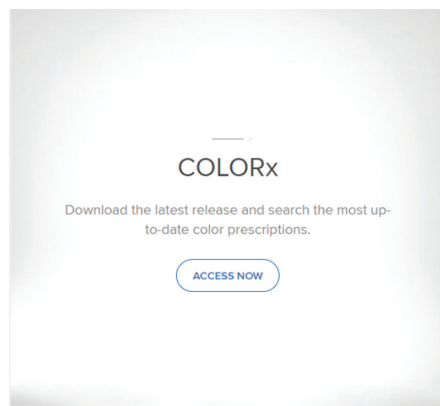
Please Note:

Order forms for dispenser stands and inserts for shakers can be found on our Retailer Gateway or you may order by contacting the vendor directly.

To access the order forms on the Benjamin Moore Retailer Gateway:

Sign on to the Benjamin Moore Retailer Gateway,

Scroll all the way down to COLORx® and click **Access Now**.



Working with Half Pints

Choose (1) **Ordering Tools**, then (2) **Approved Equipment**.

Find your shaker/dispenser form from the options below.

Choose **SAVE** to have the form saved to your Downloads directory.

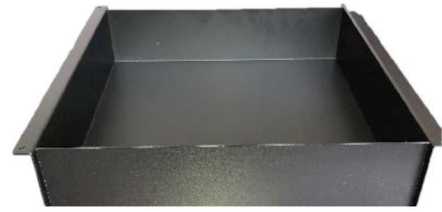
Use the proper corresponding form to order your equipment from the vendor.

The screenshot shows the Benjamin Moore website interface. On the left is a sidebar with a list of links: Product Resources, Product Documentation, COLORx, Ordering Tools (highlighted with a red box labeled '1'), Profit Margin Calculator, Financial Ratios, and Gross Margin Return on Investment. The main content area has a dark header with 'Welcome, JANE'. Below this, the 'ORDERING TOOLS' section is active, displaying a list of links: Standard Paint & Coatings Order Form, 2022 Applicator Program, and Approved Equipment (highlighted with a red box labeled '2'). Under 'Approved Equipment', there is a sub-header 'Order the approved electronic equipment you can use for reliably matching colors and mixing product.' followed by a grid of links for various equipment forms, including BYK, COROB, DATACOLOR G45, FM DISPENSERS, FM MIXERS/SHAKERS, FM HALF PINT, HERO DISPENSER, HERO MIXERS/SHAKERS, HERO HALF PINT, and RADIA MIXERS/SHAKERS, each with US and SPANISH versions.

Half Pint Accessories for Corob® Dispensers and Shakers

Half Pint Tray for EVOshake 500:

- Part number A5995S
- Guaranteed to fit the Corob EVOshake 500
- Fits up to 16 half pint sample paint cans
- Size: 13.5" x 12.25" x 3" (34.3 x 31.1 x 7.6 cm)



Quart/Pint/Half Pint Stand for Corob Dispensers:

- Part number 200153
- Fits all Corob dispensers
- Sized for quart, pint, and half pint containers



Quart/Pint/Half Pint Adapter for VORMix 1:

- Part Number 6783756
- Fits COROB VORMix 1 gallon vortex mixer
- Sized for Quart, Pint and Half Pint containers



Half Pint Accessories for Fluid Management® Shakers

1. 8 oz. Sample Tray for 5G Shaker

Part number 32044



2. Quart Adapter & Foam Sleeve

Adapter

Part number 25090



Foam Sleeve

Part number 39278



Half Pint Accessories for Radia® Shakers



Half Pint Foam Insert for Quart Adapters

- Fits 1 or 2 half pint sample paint cans
- Fits inside quart adapter

Part number 6786133 Half Pint Foam Sleeve



Half Pint Tray for 5995 Agitar™

- Fits 4 to 16 half pint sample paint cans
- Size 13.5" x 12.25" x 3"

Part number A5995S Half Pint Tray

Half Pint Accessories for Hero Mixers

Five-Gallon Multi-Mix Shaker S2700 Model



S2700



Riser

Each S2700 vibrational shaker model includes a riser (see picture above) that elevates smaller cans, including half pints, to allow for secure clamping with the top clamping plate. Shaking times for half pints is the same as for pint and quart containers.

One-Gallon Vortex Mixer



S2450

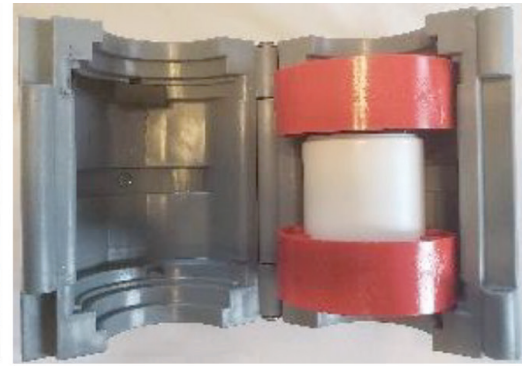
Half Pint Accessories for Hero Mixers



QUART



PINT



HALF PINT

Each 'S' Series one-gallon vortex mixer includes the adapter pictured above.

Contact the vendor for current pricing and additional information.

Hero Half Pint Sampler Resale Accessories

Quart/Pint/Half Pint Booster Seat (for A961 Dispenser)
Part Number AT60208 for Hero Model A961



Adapter Quart/Pint/Half Pint (for S2700 Shaker)
Part Number HL1101-1000



Half Pint Accessories for Hero Mixers

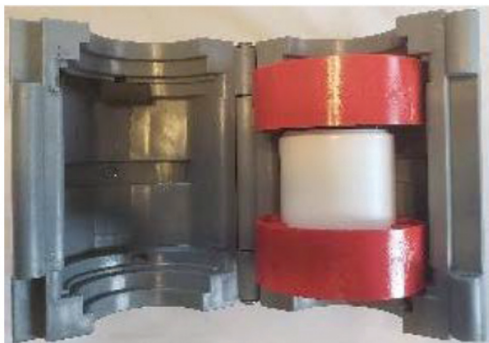
Red Adapter Kit for Pints and Half Pints (2 Pieces) for All 24XX Series
Part number HL350-A26



Adapter Assembly - Gray Standard Quart Adapter for All 24XX Series
Part number HL350-A11



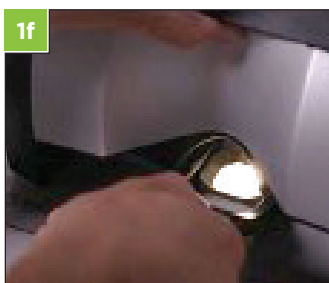
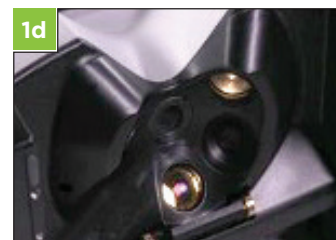
The above items are offered separately or as a set:
Gray Quart Adapter Kit and Red 2-Piece Pint and Half Pint Adapter Kit for All 24XX Series
Part number HL350-A27



X-Rite® MetaVue™ Recommended Maintenance



The MetaVue is a breakthrough non-contact imaging spectrophotometer introducing a new level of accuracy to a wider variety of customer samples.



1. Cleaning

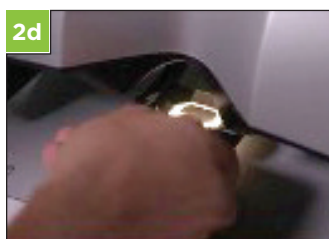
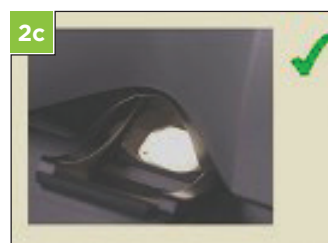
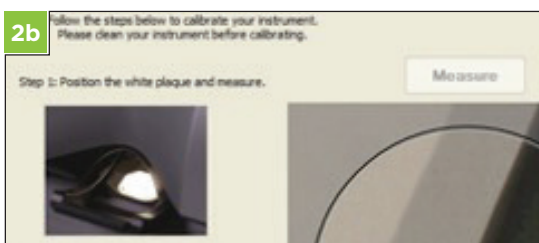
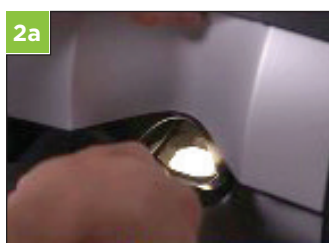
- To clean, place the MetaVue (1a) on its back so that the lenses are facing you (1b).
- Push the measurement slider into a completely retracted (1c) position so that the lenses are now exposed (1d) and can be cleaned with optic lens wipes.
- Clean all of the lenses (1e) and the calibration plaque (1f).

Use **only** optic lens wipes to clean your MetaVue. Do not use any all-purpose cleansers. Anytime you clean your device, you should calibrate it again before taking any measurement.

2. Calibrating

Calibration must be done once per day. The MetaVue displays a red light if the instrument needs to be calibrated.

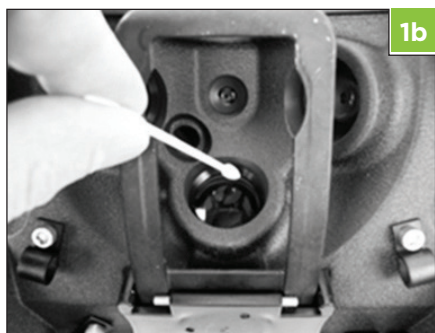
- To calibrate your device's white point, first locate the slider on the bottom of the device. Make sure the slider is locked in place by fully pulling it upward toward yourself (2a).
- The software will then prompt you to measure with a measurement button. If the measurement button is disabled, it means the white plaque is not positioned correctly (2b). A green checkmark will appear on the screen once your measurement is complete (2c).
- After calibrating the white plaque, you will be prompted to calibrate the targeting window. Locate the target window on the bottom of the device and slide it into the measurement position (2d).
- The software will then prompt you to measure with a white measurement button. A green checkmark will appear on the screen once this measurement is complete (2e).



X-Rite® iVue Daily Recommended Maintenance



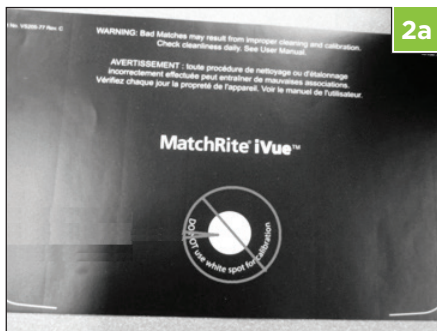
The iVue is a precision instrument that provides excellent color matching results when properly maintained.



1. Cleaning

The iVue's optics are protected by lenses. The lenses and calibration plaque must remain clean.

- Clean the four lenses (**1a & 1b**) and calibration plaque (**1c**) with supplied lens tissues and cotton swabs at least once per week.
- After cleaning, always calibrate the iVue.
- Use proper cleaning materials to ensure no residue is left on lenses or calibration plaque after cleaning. (See Ordering, page 33.)



2. Calibrating

Calibration must be done once per week but may be done more frequently.

Important: Do not calibrate to the white dot on black mat (**2a**) or to the white dot on 6 mm Small Sample Holder.

- Ensure iVue lenses and calibration plaque are clean before calibrating. (See Cleaning, above.)
- Slide calibration plaque forward (**2b**) on the rail beneath the targeting ring (**2c**) before calibrating.

X-Rite® Recommended Tips and Supplies

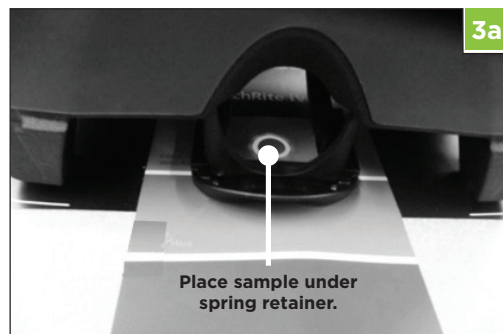
Large Sample Method



3a



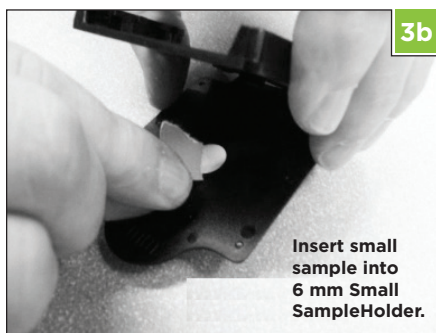
3a



3a

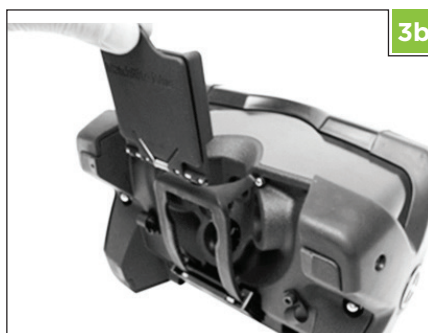
Place sample under spring retainer.

Small Sample Method



3b

Insert small sample into 6 mm Small SampleHolder.



3b



3b

3. Measuring

The iVue has two aperture sizes indicated by large and small green target rings. Color matching accuracy will be improved by keeping the samples flat. The Spring Retainer and 6 mm Small Sample Holder are designed to flatten card stock so there are no curves or bends on the sample to measure.

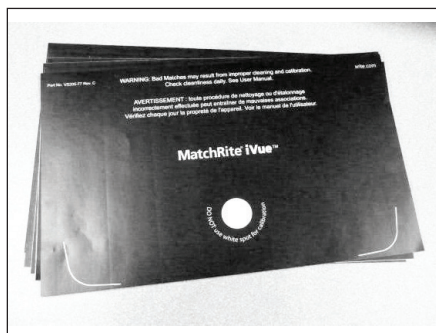
Large Samples

- When the solid color sample is more than 1/2 inch, use the Spring Retainer (3a). Slide the Spring Retainer onto the instrument rail and place the sample under the Spring Retainer. The large green target ring must be used when measuring a large sample.

Small Samples

- When the solid color sample is less than 1/2 inch, use the 6 mm Small Sample Holder (3b). Place sample in the holder and verify the sample fills the entire hole. Slide the 6 mm Small Sample Holder onto the instrument rail. The small green target ring must be used when measuring with this holder.

Black Mat 12-pack Part number VS205-77-Kit



Cleaning Kit Part number VS205-81-Kit



Maintenance Kit Part number VS205-85-Kit



4. Ordering

iVue Maintenance Kits

- Black Mat 12-Pack: part number VS205-77-Kit
 - Cleaning Kit: part number VS205-81-Kit
 - Maintenance Kit: part number VS205-85-Kit
- To order, call 800-572-4626.

X-Rite® i1 Paint Daily Recommended Maintenance



The i1 Paint is a precision instrument that facilitates a one-hand operation with a portable lightweight design. This instrument has no power supply and can read samples as small as 8 mm.



1. Cleaning

A clean white reference ceramic tile is essential for providing accuracy of your measurements **(1a)**. The protective cover should always be closed when the white reference ceramic tile is not in use **(1b)**. If necessary, you can clean the white reference ceramic tile with isopropyl alcohol and a soft clean cloth.

General Maintenance

Do not touch the diffuser disc of the ambient light limiting aperture **(1c)**. Do not store or operate the i1Paint device in dirty, greasy, or dusty environments. Do not use the i1 Paint in environments with temps higher than 35°C (95°F) or less than 10°C (50°F). The i1 Paint device is sensitive to mechanical shocks. To avoid damage during transport, the i1 Paint must always be shipped in its original packaging.



2. Calibrating

- In the center of the calibration plate is a slider to protect the white calibration tile. Open this protective slider until it clicks into place to access the white tile on this calibration plate **(2a)**. Place the i1 Paint measurement device on the calibration plate **(2b)**. The device must sit firmly on the calibration plate **(2c)**.
- Start the calibration mode in the software. Once the device is successfully calibrated, the status indicator light pulsates white. If the calibration fails, the status indicator light pulsates red and then returns to solid white.
- When the calibration is finished, you should close the protective slider for the white reference ceramic tile.

Note: If you own multiple devices, make sure the serial number on the front and back of the calibration plate matches the serial number of your i1 Paint device.

BYK® Auto-Match IV

Recommended Monthly Maintenance



The BYK Auto-Match® IV spectrophotometer can color match in all existing Benjamin Moore® products. Small and compact, standards are integrated into the sample clamp. This unit provides temperature-stable results without constant calibration. It comes with a 3-year guarantee on the instrument and a 10-year guarantee on the light source.



1. Keeping the BYK Auto-Match IV Clean

When not in use, keep the paddles in place in front of the measurement port. This protects the calibration standards as well as limits the amount of airborne particles entering the measurement port, which can affect accuracy.

During measurement, the gray tile closest to the measurement port may be used as a sample clamp. Do not use the other paddles in this way as it may lead to dirty standards and inaccurate calibration.

If the calibration tiles become dirty, they may be cleaned using isopropyl alcohol and a lint-free cloth. If the Auto-Match fails calibration or produces inaccurate results, try cleaning the standards and calibrating again.



2. Calibrating the Instrument

Calibration is performed using the paddles attached to the front of the instrument.

Pull back the sample holder and slide the two attached discs to the right. Gently return the plunger back into position and initiate the reading of the "black trap."

The picture above shows the black trap, which is found farthest from the measurement port.



3. White Calibration Tile in Place

Second: Pull back the sample holder once again and slide the middle disc back into position and then initiate the reading of the "white tile."

The white calibration standard is in the middle of the three paddles.

The third paddle, closest to the measurement port, is a gray tile and is there for protective purposes only. This tile is not utilized in the calibration process.

Preventive Maintenance or Repairs

For preventive maintenance or repairs, contact BYK-Gardner's service department at 800-343-7721 option 2.

Datacolor® 45G

Recommended Monthly Maintenance



The Datacolor® 45G is a 0/45 spectrophotometer that can color match in all existing Benjamin Moore® products. This instrument is also portable and can be used to perform remote measurements and then download them to COLORx.



1. Cleaning the Sphere

Do not allow anything to fall into the measuring port opening. When the instrument is not in use, store it in the case or facedown on a flat surface to avoid any dust buildup. Never allow liquids to enter the measuring port opening.

Never wipe the inside of the measuring port opening with anything. If there is a dust buildup, you could try to vacuum the dust out by holding a vacuum in front of the measuring port opening.

Never measure wet samples. If needed, you can promptly use a damp cloth to wipe down the outside of the unit if anything gets on it. If there is a dust buildup on the outside, you could wipe with a damp cloth as well.



2. Handling the Tiles

Make sure to keep your tiles in the case that comes with the instrument. Handle calibration tiles with extreme care. Do not drop them or scratch the glazed surface. Always grasp the tile using its edges.

3. Cleaning the Tiles

Wipe each tile clean with a soft, lint-free cloth before each use. In the event your tiles come into contact with inks, paints, or other coatings, you may use a soft cloth moistened with isopropyl alcohol to clean off the residue.



4. Cleaning the Black Trap

The black trap should be kept dust-free. To keep the black trap dust-free when it is placed on the countertop, keep the opened end facing down.

Dust accumulating in the black trap should be blown out with moisture-free compressed air.

5. Calibrating the Instrument

Once the unit is untethered, it needs to be calibrated. The calibration includes the utilization of the black trap, along with the white calibration and black gloss tiles.

Introduction to Color Matching

The following is for the person new to color matching.
Please use with guidance from an experienced color matcher.

Best Practices

1. Practice on mistints (with store permission).
2. Listen to and learn from the best color matcher(s) in your store.
3. Learn the various strengths of colorants.
4. Understand that there are no set quantities of “how much to add.”
5. Understand how complex colors are affected by their environment, substrate, and lighting.

Where to Start?

Begin with an existing Benjamin Moore color that is visually close to the color you are trying to match. Reduce the formula by at least 20% while also holding out the white and black.

Helpful Hints

- Always do your best to adjust the color using the original COLORx® formula.
- Avoid opposite colorants when adjusting a color.
- Have a color wheel on hand and know how to use it.
- Adding white does not lighten a color significantly (especially in light colors), and if you use too much in a dark color, it will make the color milky.
- Adding black will make a color muddy (toning) and muted.
- **REMEMBER** to use baby steps when adding colorant! If you put too much in, you generally cannot bring the color back.
- When doing a custom match, always brush out and dry a sample each time you add colorant (never try to match a wet sample to a dry sample).
- Always use the appropriate tinting base and do not overfill, as the can must have at least two ounces worth of air space to allow the colorant to disperse properly.
- Daylight is the best light for viewing color matches.



Evaluating Dispenser Accuracy

Fifty percent of all mistints are not caused by the color formula. This test will help you to determine if the mistint is related to your dispensing equipment, an employee error, or the color formula.

1. Verify you have the latest version of COLORx® on your dispenser computer. (To download, sign on to the Benjamin Moore Retailer Gateway, scroll down to COLORx and choose Access Now, then choose Download.)
2. Perform daily maintenance.
3. Follow the three-step process indicated below:
 - **Step 1:** Identify which colorant is causing the mistint.
 - **Step 2:** Use recommended base product.
 - **Step 3:** Use the following colors (*COLORx version 6.38.1000 or higher).

Step 1	Step 2	Step 3
Dispensing Issue	Use Product	Use Color*
Too little or too much B1	200	767
Too little or too much G1	200	767
Too little or too much M1	200	1347
Too little or too much O1	200	2014-40
Too little or too much R1	200	983
Too little or too much R2	200	1347
Too little or too much R3	200	2097-30, OC-16
Too little or too much S1	200	OC-16, 2097-30, 983
Too little or too much S2	200	767
Too little or too much W1	200	2097-30
Too little or too much Y1	W105 Qt. or N401 Qt.	2029-40
Too little or too much Y2	200	2014-40
Too little or too much Y3	200	OC-16, 983

4. Shake the can for 6 minutes.
5. Dry the color on a white unlined note card.
6. Retrieve selected color chip from chip rack (chips dated 5/2015 or newer).
7. Visually compare your color to the chip using natural light. If the colors do not match, your dispenser is overshooting or undershooting a certain colorant(s).
8. If the colors do not match, contact your dispenser company to have service performed.
9. If the colors match, it may be a color formula problem. Follow the Color Complaint Process; contact your Benjamin Moore representative for guidance.

Gennex® Waterborne Color Technology

Colorant Preparation for Canister

Optimizing colorant performance, in canister, is also essential to maximizing the performance of your Gennex® colorant system. Use the following steps to properly prepare the colorant before filling:



Shake Times

To ensure proper color development, paint shaking is an important process. Shake times, for example, are dependent not only on the colorant and base but also on the shaker itself. The following chart represents shake times for various vendors:

RADIA® (RED DEVIL®)			
Classic (Cradle Model)	1025 Red D (Vortex Model)	Speed Demon 1 (Gyro Model)	5025 Roller Load (Gyro Model)
5 minutes	4 minutes	6 minutes	6 minutes

HERO		
S2850M Fusion Manual Clamp 5 Gal.	S2450 1 Gal. Multi-Mix Countertop	S2700 5 Gal. Mega-Mix Platform
6 minutes	4 minutes	4 minutes

ULTRABLEND	
TruMix 1 (Gyro Model)	TruMix 1 by Hero (Gyro Model)
5 minutes	4 minutes

FLUID MANAGEMENT	
Harbil 5G (Platform case)	VR1 (Vortex Model)
4 minutes	4 minutes

These guidelines are based on extensive testing completed by Benjamin Moore, incorporating multiple equipment vendors using both interior and exterior products.

Customer Support

If you have a tinting-related issue that you cannot troubleshoot, contact customer support as follows.

Customer Support Contacts			
Issue	Model	Contact	Phone
Dispenser machine not operating properly	Fluid Management® (all)	Fluid Management	1-800-462-2466
	Corob (all)	Corob	1-800-728-8408 x52
	Hero (all)	Hero	1-800-494-4376
Spectrophotometer not operating properly	MatchRite CF57U MatchRite iVue MatchRite i1 Paint MetaVue Datacolor® 45G BYK Auto-Match IV	X-Rite	1-800-572-4626
		Benjamin Moore	1-800-809-9213
		Datacolor	1-800-982-6496
		BYK	1-800-343-7721
COLORx® software not operating properly		Benjamin Moore	1-800-809-9213
Benjamin Moore® color issues		Benjamin Moore	1-800-809-9213
Seiko Smart Label not printing correctly	Seiko Smart Label Printer 650	Seiko	1-800-757-1011
Dymo® label writer not printing correctly	Dymo 330, 400, 450	Benjamin Moore Color Technology	1-800-809-9213
Dymo label writer not printing correctly	Dymo 330, 400, 450	Dymo Sanford	1-877-724-8324

