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RM2



Obey local or municipal regulations for product recycling and disposal.

ABOUT THIS MANUAL

ITS PURPOSE

The purpose of this manual is to help you get the most value from your Binks IntelliFlow™ system. Follow the instructions to determine how to install, operate, maintain, service, and repair your equipment.

ITS CONTENTS

This manual is divided into Chapters, each of which is divided into consecutively numbered Sections.

Chapters will contain text, images, tables, or a combination of them.

Pages with images will have paragraphs and sentences with callout numbers that refer to their respective images, steps, and parts.

Procedures, once described in the text, are not normally repeated. When it is necessary to refer to another Chapter or Section, the reference will be given as Chapter and Section number. Cross references given without the use of the word “Chapter” apply to Sections or paragraphs in the current Chapter.

Chapter 02 Table of Contents.

Chapter 03 EU Declaration of Conformity: A mandatory document the manufacturer signs to declare the product complies with the EU requirements.

Chapter 04 Safety: Review safety, hazard, and warning rules.

Chapter 05 Operation: Covers basic operation, human-machine interface (HMI) screens, recipes, and startup and shutdown procedures.

Chapter 06 Remote Color Change Box: Find information about the optional remote color change box.

Chapter 07 Manual Change Summary: Shows the revisions and changes made to this manual.

Chapter 08 Warranty: Your equipment's warranty.

WHO SHOULD USE THIS GUIDE

This guide is intended for users with different levels of knowledge and experience with this system:

Installers: The person(s) who will locate and install this equipment.

Users: The person(s) who will learn how to operate this equipment.

Servicers: The person(s) who will service and maintain this equipment.

This guide assumes all persons who will install, use, operate, and service this equipment have some knowledge of the product and its operating system.

For information on the installation of this equipment, refer to RM2 Installation Manual 77-3153-1.

For information on the operation of this equipment, refer to RM2 Operation Manual 77-3153-2.

For information on the servicing and repair of this equipment, refer to RM2 Service Guide 77-3153-3.

For information on accessory kits and spare parts of this equipment, refer to RM2 Kit Instructions & Spare Parts Manual 77-3153-4.

MANUAL DISCLAIMER

All current and applicable certifications shown in this manual confirm Binks adherence to the strict standards met to obtain the required regulatory compliances.

This manual was prepared with the most accurate information current at the time of publishing. Binks does not accept responsibility for errors in, or omissions from, the information contained herein.

Please get in touch with your distributor or Binks Customer Service for additional service information and assistance.

RM2 RELATED MANUALS & PUBLICATIONS

Part Number	Description
77-3150	Coriolis Flow Meter Manual
77-3153-1	RM2 Installation Manual
77-3153-3	RM2 Service Guide
77-3153-4	RM2 Kit Instructions & Spare Parts Manual
77-3154	Standard Flow Meter Manual
77-3159	Screen Protector Kit Manual
77-3160	Gun Flush Box Kit Manual
77-3166	IntelliFlow Pulse Valve Manual
77-3167	IntelliFlow 300 & 600cc Dispense Pump Manual

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03 EU DECLARATION OF CONFORMITY

Product Description / Object of Declaration:	IntelliFlow RM2	
This Product is designed for use with:	Solvent & Waterbased Materials	
Suitable for use in hazardous area:		
Protection Level:	Not Applicable	
Notified body details and role:	TUV SUD America Inc, 141 14th St NW, New Brighton, MN 55112 USA. Cert Nos NC72170733.1 INTERTEK Testing Services NA, 545 E. Algonquin Rd, Arlington, IL 60005 USA. Cert Nos. 104972588MIN-003, 104972588MIN-002 US/9413/ITS-A1/M2.	
This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:	Low Voltage and EMC Assessment	
Representative authorised to compile the technical file	Binks US LLC. 3760 Victoria St N Shoreview, MN 55126. USA	
	President @. Binks France SAS 5 Place Pierre Semard, 94130 Nogent sur Marne , Paris, France	
EU Declaration of Conformity		CE
This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:		
Machinery Directive 2006/42/EC EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU RoHS Directive 2011/65/EU by complying with the following statutory documents and harmonised standards: EN 60204-1:2018 Safety of Machinery. Electrical equipment of machines BS EN 61000-3-2:2014 Electromagnetic compatibility (EMC) - Limits - Limits for harmonic current emissions BS EN 61000-3-3:2013 Electromagnetic compatibility (EMC) - Limits - Limitation for voltage changes, voltage fluctuations, and flicker in public low-voltage supply systems EN 61000-6-2:2005/AC:2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments EN 61000-6-4:2007/A1:2011 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments. UL 61010-1:2012 Ed.3+R:2019/CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1 Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements UL 61010-2-051:2019 Ed.4/CSA C22.2#61010-2-051:2019 Ed.4 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2- 051: Particular Requirements for Laboratory Equipment for Mixing and Stirring KS C 9610-6-2:2019 EMC Immunity Testing of Industrial Environments KS C 9610-6-4:2017 EMC Emission Testing of Industrial Environments EN 63000: 2018 Technical documentation for the assessment according to REACH IEC 61010-1:2010+AMD1:2016 Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements. IEC 61010-2-051:2018 Safety requirements for electrical equipment for measurement, control and laboratory use. Particular requirements for laboratory equipment for mixing and stirring FCC 47 CFR Part 15-Radio Frequency Devices, Subpart B – Unintentional Radiators ICES-001, Issue 5:2020 Class A Industrial, Scientific, and Medical (ISM) Equipment		
Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.		
Signed for and on behalf of Binks US LLC:	 F. A. Sutter 6-3-25	Executive President: Engineering and Operations, Shoreview, MN, 55126. USA
Document Part No. EN		

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04 SAFETY

04.1 SAFETY PRECAUTIONS

Before operating, maintaining, or servicing the RM2, fully read and understand all technical and safety literature. This manual contains information that is important for you to know and understand.

This information relates to USER SAFETY and the PREVENTION OF EQUIPMENT PROBLEMS.

To help you understand this information, we use recognizable ANSI Z535 and ISO warning boxes and symbols throughout this manual. Please obey these safety sections.

⚠ DANGER

DANGER!: Indicates a hazardous situation that, if not avoided, will result in death or severe injury.

⚠ WARNING

WARNING!: Indicates a hazardous situation that, if not avoided, could result in death or severe injury.

⚠ CAUTION

Caution!: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury, or equipment damage.

NOTICE

Notice: Indicates information considered important but not hazard related.

SAFETY

Safety: Indicates a type of safety instruction, or a separate panel on a safety placard, where specific safety-related instructions or procedures are described.

Careful study and continued use of this manual will provide a better understanding of the equipment functions and procedures.

This understanding will result in improved operation, efficiency, and longer, trouble-free service with faster and easier troubleshooting. If you need the necessary safety literature for your specific system, contact your local Binks representative or Binks directly.

NOTICE

This manual lists standard specifications and service procedures. Differences can occur between this literature and your equipment.

Differences in local or municipal codes, manufacturer or plant requirements, material delivery requirements, and more can make variations unpreventable. To find these differences, compare this manual to your system installation drawings and other applicable Binks equipment manuals.

⚠ WARNING

The user **MUST** read and be familiar with the Safety Section in this manual and the safety literature therein identified.

Only trained personnel can operate this equipment.

All personnel who operate, clean, or maintain this equipment **MUST** fully read and understand this manual! To operate and service the equipment, follow all **WARNINGS** and safety requirements.

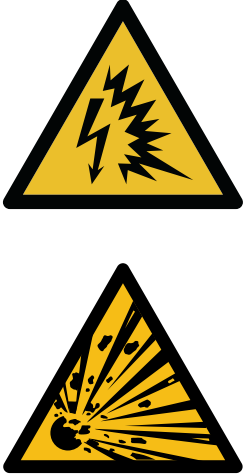
The user must be aware of and adhere to **ALL** local building and fire codes and ordinances, as well as NFPA 33 AND EN 16985 SAFETY STANDARDS, LATEST EDITION, or applicable country safety standards, before the installation, operation, or servicing of this equipment.

⚠ WARNING

The hazards shown on the pages that follow can occur during the normal use of this Binks equipment, but not all listed hazards will be applicable to your product model or equipment.

Repairs may only be performed by personnel authorized by Binks.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas  	Fire Hazards Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary	Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Keep spray areas clean to prevent the build-up of combustible residues. Do not smoke in the spray area. The high voltage supplied to the atomizer must be turned off before the equipment is cleaned, flushed or maintained. Spray booth ventilation must be kept at the rates as set by NFPA-33, OSHA, country, local, and municipal codes. If flammable or combustible solvents are used to clean the equipment, ventilate the area. Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of the output voltage is necessary. Do an equipment test only in areas free of combustible material. The test may necessitate the high voltage to be on, but only as instructed. Non-factory replacement parts or unauthorized equipment modifications can cause a fire or injury. The key switch bypass is used only during setup operation. Do no production work with disabled safety interlocks. Set up and operate the paint procedure and equipment under NFPA-33, NEC, OSHA, local, municipal, country, and European Health and Safety Norms.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Explosion Hazard Improper or unsatisfactory operation and maintenance procedures will cause a fire or explosion hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary.	Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of output voltage is necessary. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. If equipped, set the current overload sensitivity as described in the related section of the equipment manual. If incorrectly set, the current overload sensitivity for protection against accidental arcing is turned off and can cause a fire or explosion. Frequent power supply shutdown indicates a problem in the system, which requires correction. Always turn off the control panel power before the system is flushed, cleaned, or servicing the spray system equipment. Make sure no objects are within the spark-safe work distance before the high voltage is turned on. The control panel must interlock with the ventilation system and conveyor in accordance with NFPA-33, EN 50176. Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Do an equipment test only in areas free of combustible material.
General Use and Maintenance 	Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. Personnel must be correctly trained in the operation and maintenance of this equipment.	Train all personnel in accordance with the requirements of NFPA-33, EN 60079-0. Before equipment operation, personnel must read and understand these instructions and safety precautions. Obey appropriate local, municipal, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, EN Norms, and your insurance company requirements.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Area High Voltage Equipment    	Electrical Discharge This equipment contains a high-voltage device that can cause an electrostatic induction on ungrounded objects. This electrical charge is capable of igniting coating materials. Insufficient ground will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.	Operators in the spray area and the parts to be sprayed must be sufficiently grounded. All conductive objects inside the spray area must be grounded. Hold the parts that get sprayed on conveyors or hangers that are correctly grounded. The resistance between the parts and the earth-ground must not be more than 1 MΩ. Refer to: NFPA-33. Before the equipment is operated, ground all operators. They cannot wear rubber-soled insulated shoes. Wear ground straps on wrists or legs for sufficient ground contact. Operators must not wear or carry ungrounded metal objects. When used, operators must make complete contact with the applicator handle and electrostatic gun. Use conductive gloves or gloves with the palm section cut out. Operators must wear grounded footwear. NOTE: REFER TO NFPA-33 OR SPECIFIC COUNTRY SAFETY CODES FOR GUIDANCE TO CORRECTLY GROUND THE OPERATOR. Except for objects needed for the high-voltage process, all electrically conductive objects in the spray area are to be grounded. Supply a grounded conductive floor in the spray area. Always turn off the applicator voltage before the system is flushed, cleaned, or when servicing the spray system equipment. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. Do not install an applicator into a fluid system if the solvent supply is ungrounded. Do not touch an energized applicator electrode.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Toxic Fluid or Fumes Toxic fluids or fumes can cause severe injury or death if splashed in the eyes or on the skin, or if inhaled or swallowed.	Read the Safety Data Sheet (SDS) for instructions to know and understand how to handle the specific hazards of the fluids used, and the effects of long-term exposure. During the spray, clean, or servicing of equipment, or when in the work area, keep the work area fully ventilated. Always wear personal protective equipment (PPE) when in the work area or during equipment operation. Refer to the Personal Protective Equipment warnings in this manual. Store hazardous fluid in approved containers and refer to local, municipal, state, and national codes governing the disposal of hazardous fluids.
Spray Area and Equipment Use 	High-pressure fluid sprayed from the gun, hose fittings, or ruptured/damaged components can pierce the skin. While this injury can appear as cut skin, this is a severe injury that can result in the amputation of the affected area.	Do not point or operate the spray gun at the body part of a person. Do not put your hand or fingers over the gun fluid nozzle or fittings in the hose or proportioner. Do not try to stop or deflect leaks with your hand, glove, body, or shop rag. Do not “blowback” fluid, as the equipment is not an air spray system. Relieve pressure in the supply hoses, proportioner, and QuickHeat™ hose before the equipment is inspected, cleaned, or serviced. Use the lowest possible pressure to recirculate, purge, or troubleshoot the equipment. Examine the hoses, couplings, and fittings every day. Service or immediately replace parts that leak, are worn, or are damaged. Replace high-pressure hose sections. They cannot be recoupled or serviced.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Equipment and Fluids 	Skin and Clothing Burns Equipment surfaces and fluids can become very hot during operation.	Do not touch hot fluid or equipment during operation. Do not let clothing touch the equipment during operation or immediately after the equipment is stopped. Let the equipment fully cool before the examination or servicing of the component.
Pressurized Aluminum Parts    	The use of certain solvents and chemicals can cause equipment damage and severe personal injury.	Do not use 1,1,1-trichloroethane, methylene chloride or other halogenated hydrocarbon solvents or fluids that contain such solvents. These solvents can cause a severe chemical reaction and equipment rupture that results in equipment and property damage, serious bodily injury, or death.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Do Not Touch The effect of paint flow rates and formulations on the quality of atomization can cause the turbines to rotate at high speeds.	Do not use a rag or gloved hand against the bell edge to stop or slow down a bell during rotation. Do not try to clean the bell edge during rotation.

⚠ CAUTION

Only operate the equipment after you have read this section.

04.2 ADDITIONAL SAFETY INFORMATION

The RM2 has an emergency stop (E-Stop) pushbutton on the main operator panel. During an emergency, all operations for the IntelliFlow will halt when the E-Stop is engaged. The operator must disengage the E-Stop and reset the system to recover from this state.

Observe all local or municipal safety measures and wear approved protective equipment when servicing this equipment. Clean all spilled chemicals and materials and do all work in a clean and organized environment to prevent personal injury and equipment damage.

⚠ DANGER

To prevent injury or electrocution while the system is under power, do not contact, disconnect, or manipulate electrical connections or devices. The main disconnect on the right side of the controller can be locked out. Follow the proper Lockout–Tagout (LOTO) procedures for internal controller electrical work.

Only qualified electrical personnel can perform the work if diagnosis and troubleshooting are not possible during working conditions.

⚠ WARNING

To prevent possible chemical spillage when personnel are not on site, air and fluid supplies for the equipment must be disabled when the equipment idles for an extended period, such as an end-of-day shutdown.

NOTICE

During the initial commission of the equipment and at periodic times throughout equipment life, visually examine all fluid fittings for leaks.

Periodically, it is necessary to visually examine all pieces of this equipment for signs of noticeable degradation due to chemicals or other conditions in the equipment's environment.

SAFETY

Obey local or municipal regulations that require installed fire suppression for equipment operation.

If the operation of this equipment, sensors, switches, or other ancillary equipment occurs in the presence of flammable gases and vapors, connect this equipment through intrinsic-safe or Zener barriers. Classify them as a "simple apparatus" or approve them for use in these areas.

05 GETTING STARTED

05.1 HMI TOUCHSCREEN

The human machine interface (HMI) touchscreen (1) is used as an operator control panel for the machine.

The software-based touchscreen replaces manual controls with software parameters so that operators can easily adapt and adjust the functions.

The touchscreen buttons are graphical representations of the physical devices that control the machine's processes. They let operators adjust and interact with control processes without the use of external tools, including starting and stopping the machine and adjusting set points and output states (which valves are activated and fluid components).

The touchscreen runs on modern operating systems and can perform functions and control tasks across distributed and potentially complex processes from a centralized location.

Most of the IntelliFlow system operation information found in the manuals is available directly through the touchscreen.



05.2 EMERGENCY STOP (E-STOP) BUTTON

The IntelliFlow panel incorporates an emergency stop (E-Stop) button (2) on the front panel, along with an additional unused set of normally open and normally closed contacts, for customer use to interlock other system functions.

When the E-Stop button is pressed, all current machine operations immediately stop. Pressing the E-Stop button does not completely power off the machine but ceases

the current operation. All analog and control outputs to the fluid system are removed, and the fluid flow will immediately stop for all channels.

After correcting the issue that caused the work stoppage, reset the safety relay by pressing the reset button on the HMI. This resumes machine operation.

05.3 STATUS LIGHT

The status light (3) is on the top of the RM2 control enclosure. It will change color or flash depending on the machine's status. The table below shows the meaning of each color or flash.

RM2 STATUS LIGHTS	
Light	Function
Green	Machine is running. No trigger signal is present
Green - Flashing	Machine is running. Trigger signal is present
Red	Machine fault is present.
Yellow	Warning indication. Pot life is nearing expiration
White	Machine is idle. No system warnings or faults.

05.4 MAIN DISCONNECT SWITCH

The main disconnect switch (4) controls machine power. Turning the switch off disconnects the main control panel and power source. The switch energizes for operation and de-energizes for shut-down or during maintenance. The disconnect switch features a padlock loop for Lockout-Tagout (LOTO) procedures.

When operators initially power-on the IntelliFlow system, the system will automatically start the boot process. This can take up to one minute to complete. When the system is ready to operate, the stack light will turn white.

05.5 TOUCHSCREEN SPLASH SCREEN

The touchscreen splash screen is the first screen the system loads and appears every time the machine is powered on. It is only visible while the machine loads for operation.

Select **Main Menu** (1) to navigate to the main screen.

05.6 NAVIGATION

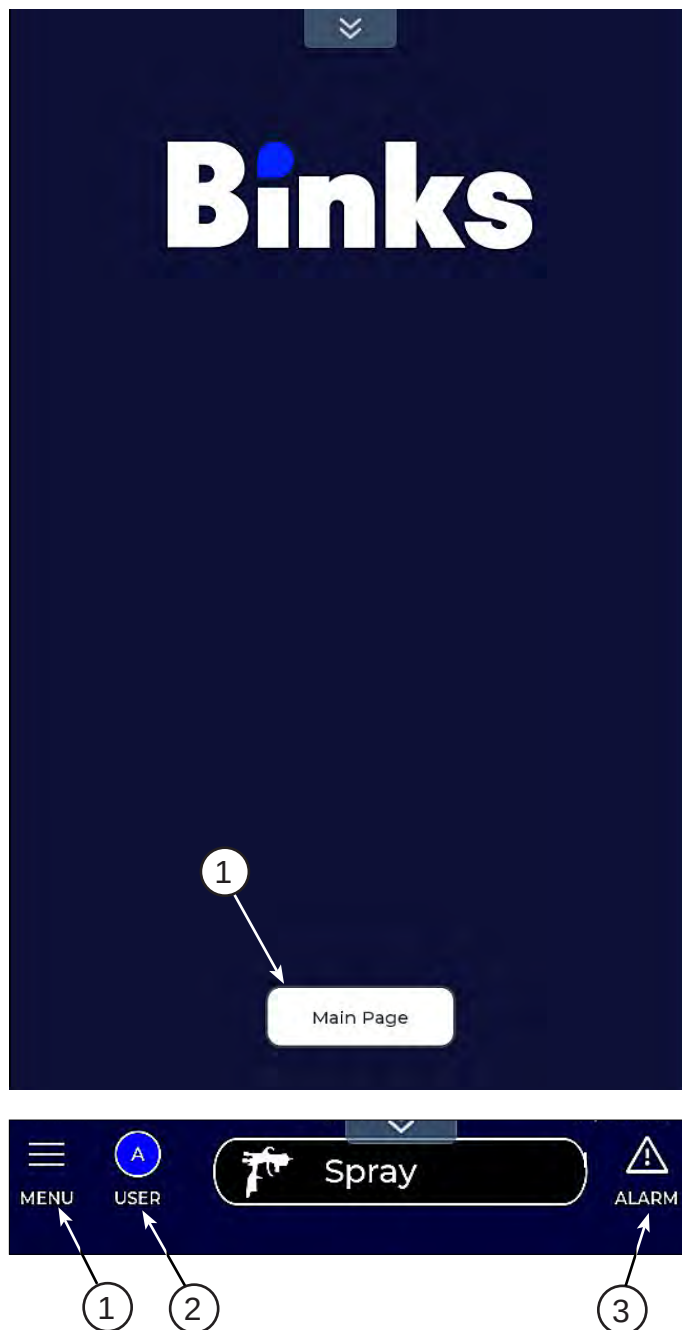
The main run screen is the primary screen for all machine operations. From this screen, the operator can start and stop operations, load materials, and flush the system.

The screen also allows access to all system settings and configurations. At the start of a job, the machine can be configured for the operator. Refer to 07. Setup in the RM2 Installation Manual (77-3153-1) for configuration options.

MENU (1) opens a drop-down menu that allows access to system functions unavailable in the main screen.

USER (2) opens a screen for the operator to log in and log out.

ALARM (3) opens the alarm status and history screen. When alarms are present, the alarm icon turns red. The number of active alarms is displayed in the upper left of the icon.



05.7 DROP-DOWN MENU

Use the drop-down and fly-out menus on the touchscreen to navigate to different functions, settings, and adjustments. Administrators can limit access to specific functions to designated users.

To access the main drop-down menu, select **MENU** (1) at the top of the touchscreen. The drop-down menu includes the following functions:

- **CLOSE** (2) closes the drop-down menu.
- **SPRAY** (3) opens the main spray screen.
- **COLOR** (4) opens the color change menu.
- **PRIME** (5) opens the paint priming menu.
- **ALARM** (6) opens the alarm status and history screen.
- **SETTINGS** (7) opens the password-protected settings screen.
- **RECIPE** (8) opens the recipe edit screen.
- **REPORTS** (9) opens the usage and job reports screen.
- **LANGUAGE** (10) opens the language menu. Use this menu to select the operator's language.

NOTICE

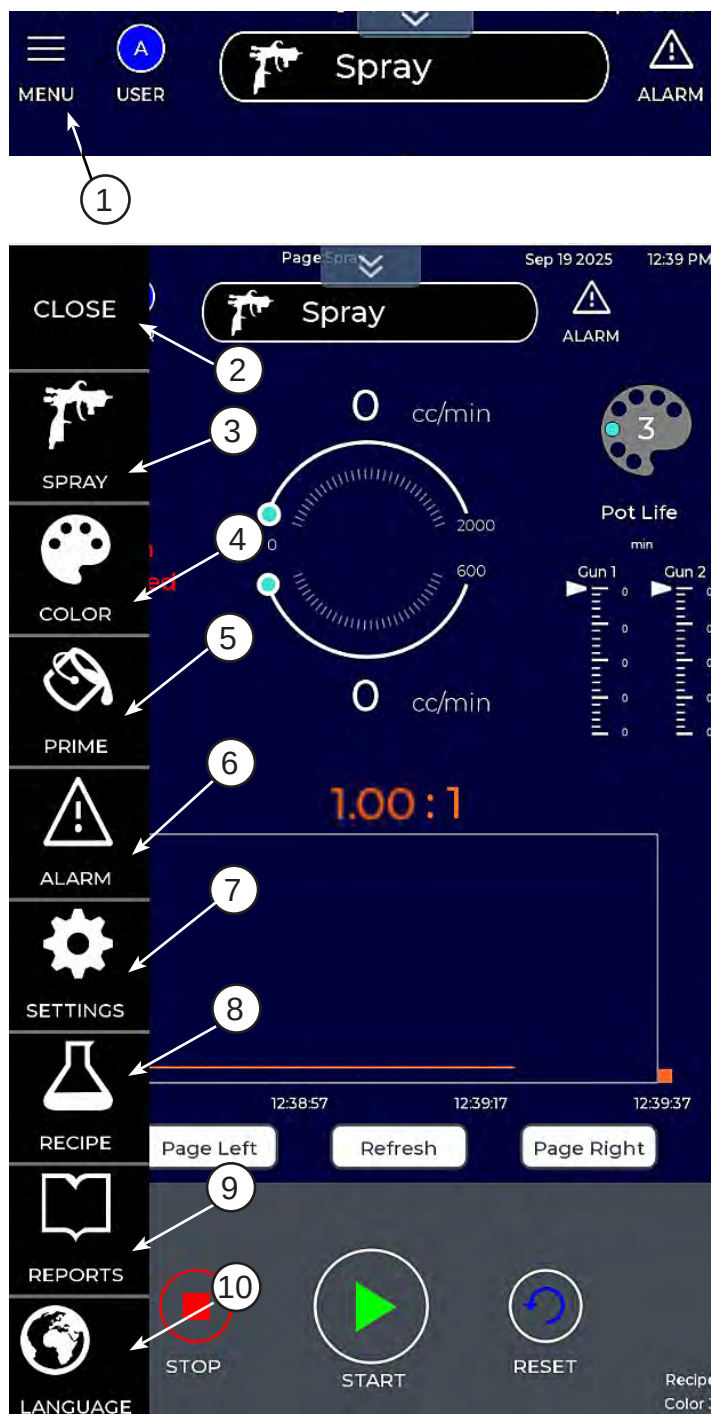
Regardless of the operator-selected language, not all objects can be translated during run time. Some of these include the user-defined fields and internal screens.

05.8 LANGUAGES

The touchscreen displays a defined number of available languages so users can operate the system in their native language.

To change the language from English:

1. Select **LANGUAGE** (10) from the drop-down menu.
2. A language selection menu (11) will open with representative language icons.
3. Press the desired language icon to change the language on the interface screens.

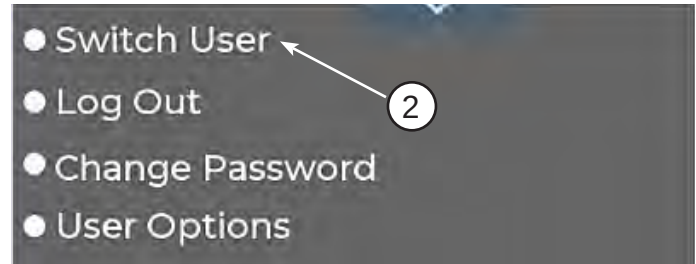
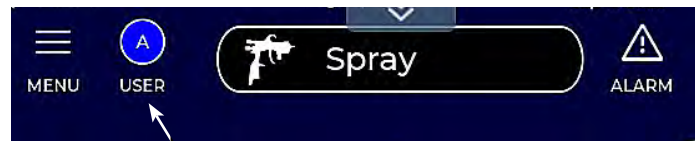


05.9 LOG IN

At boot, the system will be logged in as the guest user. Members of the "admin" group can access functions unavailable to the guest user and modify user access via the log in screen.

To log in:

1. Select **USER** (1) from the navigation bar.
2. Select **Switch User** (2) from the drop-down menu.
3. Enter the user information into the login input fields (3), including:
 - User name
 - Password
 - Show or hide the password
4. After filling the user input fields, press **Sign In** (4).



06 OPERATION

Ensure system configuration is complete before operating the RM2. Refer to 77-3153-1 RM2 Installation Manual for configuration instructions.

! WARNING

Read and understand all operating manuals for connected equipment. Failure to properly follow the operating instructions could result in severe injury.

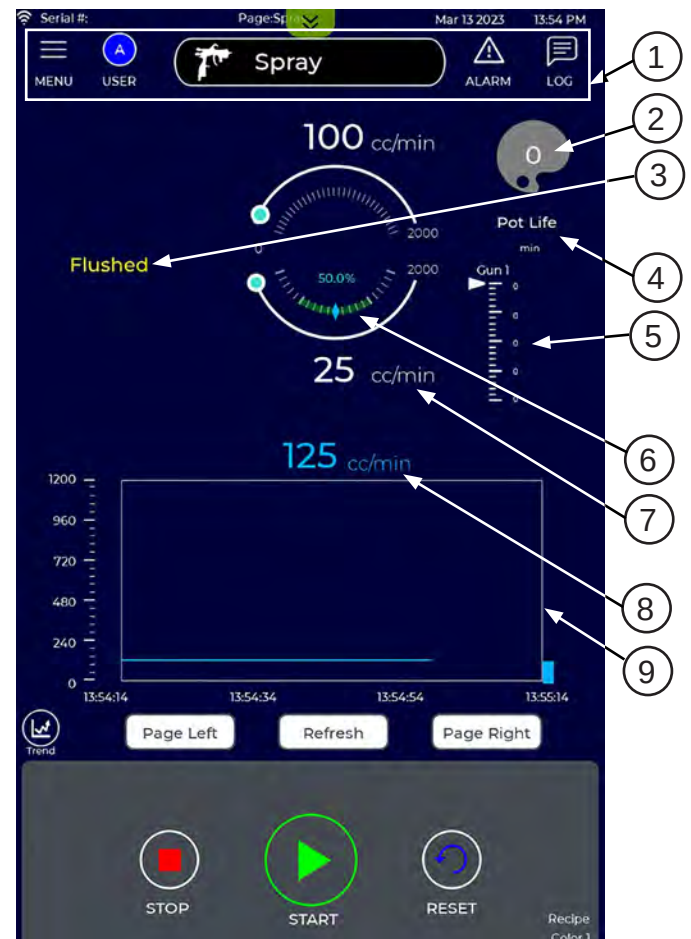
06.1 SPRAY SCREEN

The spray screen also functions as the home screen for the low-pressure (LP) and medium-pressure (MP) systems, where users monitor machine operation.

Users can view the spray screen through the material flow, pressure, and ratio configurations. For instructions on navigating between configurations, see 06.2 Modifying the Spray Screen Display.

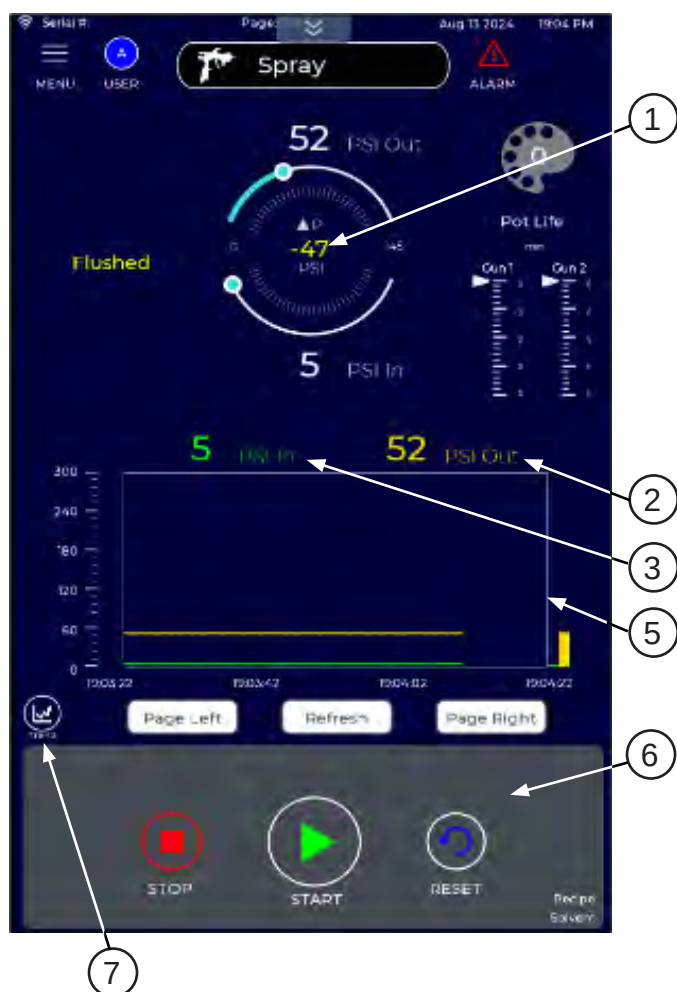
06.1.1 MATERIAL FLOW SPRAY SCREEN CONFIGURATION

1. Navigation bar: Navigate to different screens, switch users, view machine status, and view alarm status.
2. Currently loaded color: Displays the type of component "A" currently loaded into the machine. "0" means no material is loaded. Selecting the color icon takes you directly to the color change screen.
3. Multipurpose indicator: Displays the current status of the material. Possible states include **Flushed** and **Flush Required**. In normal operation, the indicator will be blank.
4. Pot life display: Displays the amount of time before mixed material expires. Users set the pot life in the recipe screen.
Selecting the pot life display button opens a pop-up showing a visualization of the remaining pot life for the material used in the gun.
5. Pot life indicator: The indicator arrow moves closer to zero as the set expiration time approaches. When two guns are enabled, indicators will appear for both guns.
6. Pulse flow range gauge (MP only): Displays the optimal range for component "B" flow from the pulse valve.
7. Flow rate visualization: Displays flow rate on a scale to give the user a sense of how fast or slow material is flowing.
8. Flow rate: Displays current material flow rate.
9. Trend graph: Displays changes in the material flow rate, amounts of pressure, or changes in the mixed material ratio over time, depending on user configuration.



06.1.2 PRESSURE SPRAY SCREEN CONFIGURATION

1. Pressure differential: Displays the current difference between outlet and inlet pressure.
2. Pressure out (LP only): Displays the pressure of material leaving the dispense pump.
3. Pressure in (LP only): Displays the pressure of material entering the dispense pump.
4. Percentage output (MP only, not displayed): Displays the percentage of the time the pulse valve is open during spraying. The percentage of open time is how the pulse valve regulates fluid flow.
5. Trend graph: Shows pressure ranges.
6. Run menu: Use this to run the machine in spray, color, or prime mode. To switch the mode, you must press **STOP** in the current mode.
7. Trend configuration: Select this button to change whether the spray screen displays information on material flow, ratio, or pressure.



06.1.3 RATIO SPRAY SCREEN CONFIGURATION

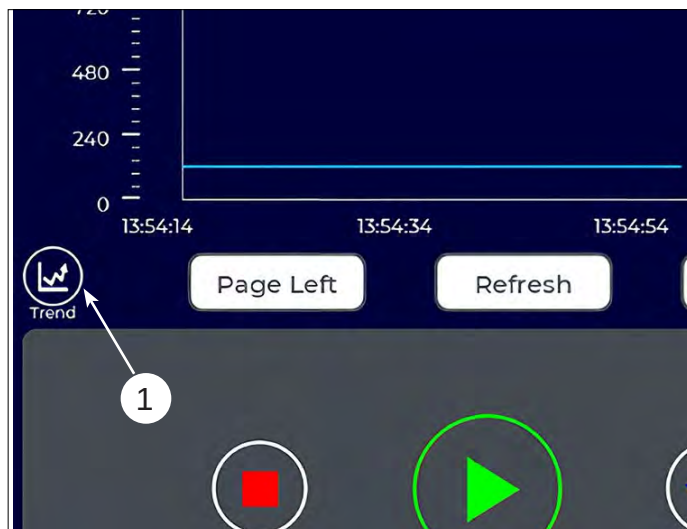
1. Material ratio: Displays current material ratio.
2. Trend graph: Shows mixed material ratio changes.



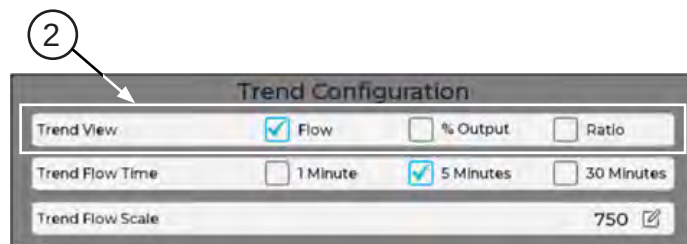
06.2 MODIFYING THE SPRAY SCREEN DISPLAY

The spray screen display depends on the selected configuration option. To change the display:

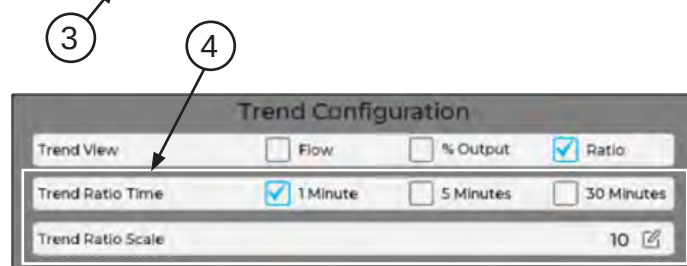
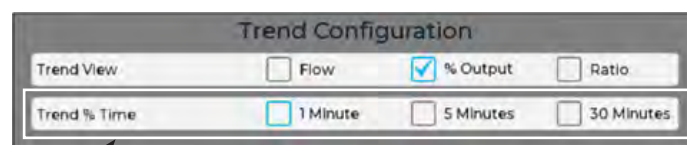
1. Select the trend configuration button (1) on the spray screen.



2. Under **Trend View**, choose between **Flow**, **% Output**, and **Ratio** (2).



3. The options displayed on the screen will change with each view (3,4).



06.3 COLOR CHANGE SCREEN

Use the color change screen to change colors and flush material from the system. The screen includes:

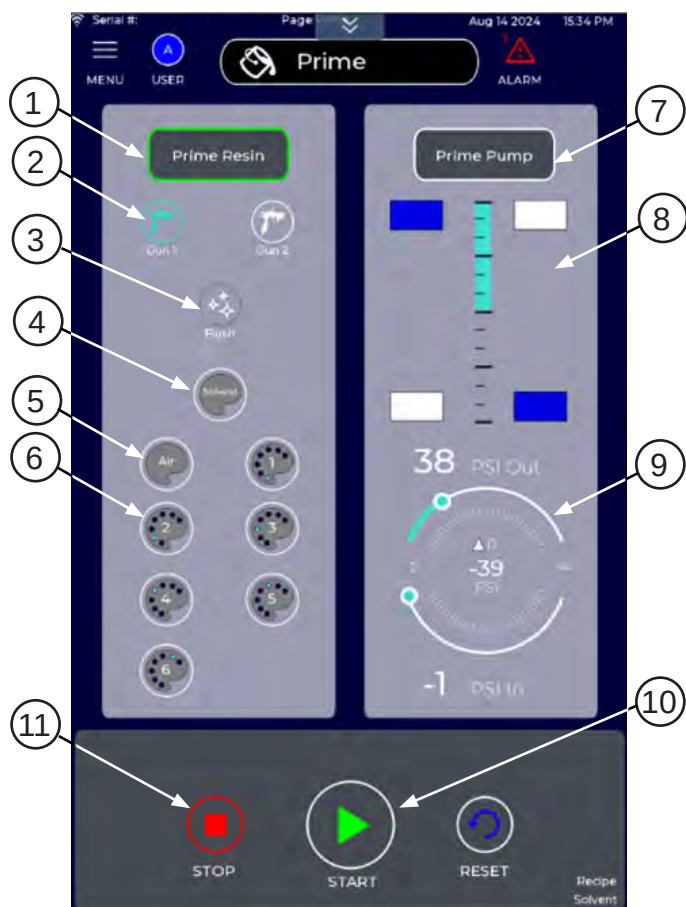
1. Color and gun load select
2. Colors currently loaded in the system
3. Flush and load sequence time frames
4. Estimated flush time
5. Start color change
6. Stop color change



06.4 LOW PRESSURE (LP) PRIME SCREEN

Use the LP prime screen to:

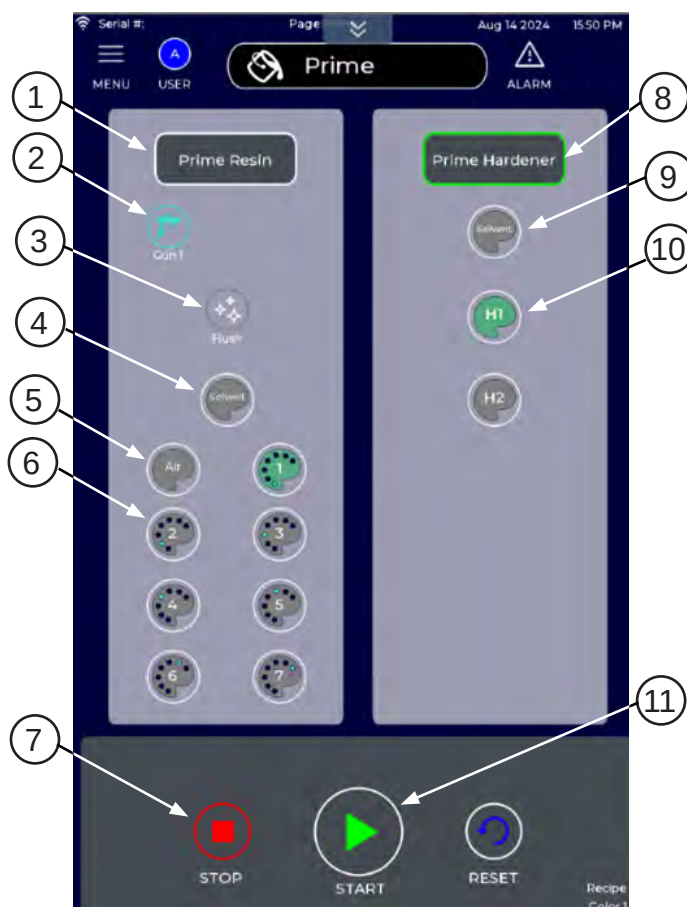
1. Prime component "A"
2. Select gun for priming (two gun configuration)
3. Flush using air chop
4. Select solvent for priming
5. Flush air option
6. Select color for priming
7. Prime dispense pump
8. Dispense pump motion and valve status
9. Dispense pump pressure
10. Start priming
11. Stop priming



06.5 MEDIUM PRESSURE (MP) PRIME SCREEN

Use the MP prime screen to:

1. Prime component "A"
2. Select gun for priming
3. Flush using air chop
4. Select solvent for priming
5. Flush air option
6. Select color for priming
7. Stop priming
8. Prime component "B"
9. Select solvent to prime pulse valves
10. Select which component "B" to prime
11. Start priming



06.6 ALARMS SCREEN

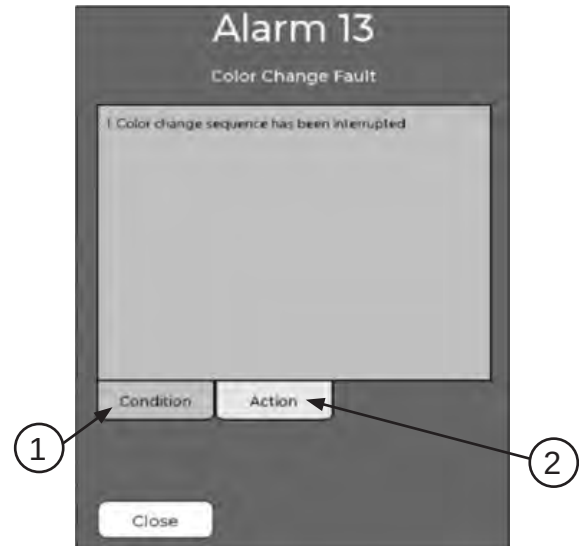
Use the alarms screen to view and monitor system alarms. Active alarms are highlighted. Press **RESET** on the run menu to resolve alarms. Disabled alarms will remain highlighted, but the alarm will not sound.

- Triggered alarms are indicated by a red background.
- Warnings are indicated by a yellow background.
- Non-triggered alarms (disabled alarms) are indicated by a white background.



Select the **Action** tab after the alarm description to open a pop-up screen showing:

- A description of the alarm condition (1).
- Actions to take to resolve the alarm (2).



06.7 STARTUP / PRIMING

06.7.1 STARTUP CHECKLIST

The table below shows the steps to take before the initial priming of the system. These steps should also be followed when restarting the system after it has been flushed and shut down.

#	✓	ACTION
1		Verify the frame is secured to the ground or wall and that all components are mounted securely to the enclosure, fluid panel, or mast.
2		Connect the control enclosure ground stud to the ground.
3		Check that all cables for electrical components are connected.
4		Verify all color change valve air lines are properly connected.
5		Verify that the air supply is connected to the air manifold.
6		If using atomization air or gun flush boxes, verify air connections to gun(s) and gun flush box(es) are complete.
7		Verify the component "B" supply line is connected to the inlet of the dispense pump or pulse valve.
8		Verify the solvent supply line is connected to the color stack solvent inlet.
9		Verify the component "A" supply line(s) are connected to the correct input connections in the color stack.
10		Verify the static mix tube is connected to the outlet of the mix block.
11		Connect the gun hose to the gun manifold.
12		De-energize energy sources and inspect the control enclosure interior for loose wires. Do not attempt to operate with loose wiring. Refer to the schematics section for wiring diagrams.
13		After wiring verification, it is safe to plug the system into a properly grounded AC receptacle.
14		Energize all fluid lines and check for leaks. If any are present, remove pressure and repair the leak before starting your system.
15		Verify system settings are correct.

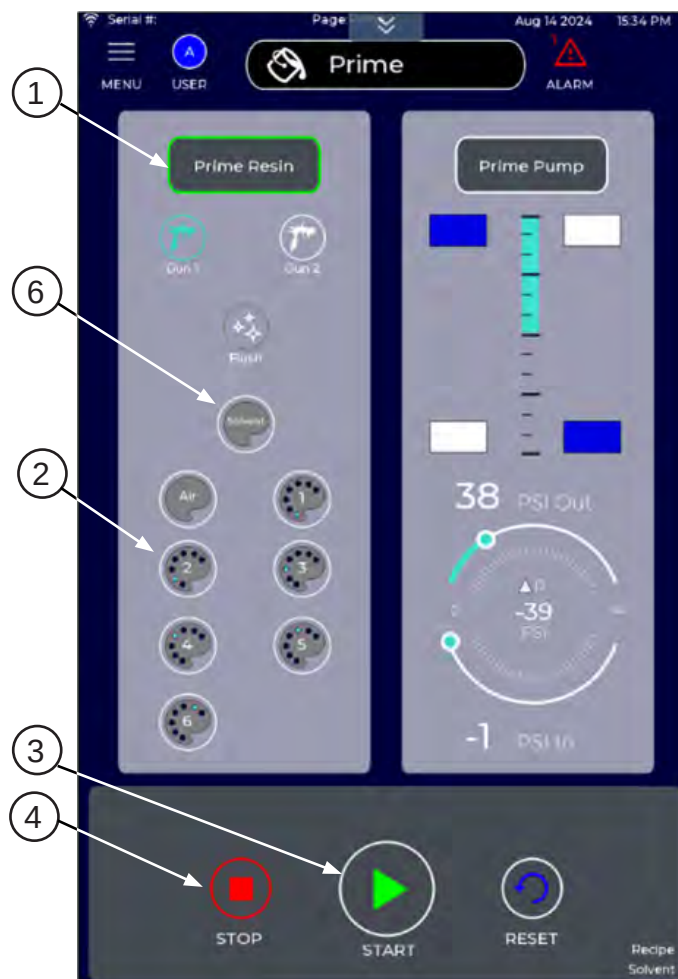
06.7.2 LP PRIMING INSTRUCTIONS

Before beginning normal operation, remove air from the lines and inner chambers of the machine by priming the system.

1. Ensure the gun is positioned correctly for fluid release:
 - a. Trigger the gun into a grounded metal waste container.
 - b. If using a gun flush box, place the gun in the gun flush box and close the lid.
2. Prime the system with component "A."
 - a. On the prime screen, select **Prime Resin** (1).
 - b. Select the palette icon of the color of component "A" to prime (2).
 - c. Press **START** (3).
 For systems with a gun flush box, the fluid flows once the button is pressed.
 For systems without a gun flush box, the user must trigger the gun to continue the priming process.
 - d. Watch for material to reach the input connection on the fluid panel.
 - e. Press **STOP** (4).
 - f. Prime additional colors that will be used.
3. Prime the system with component "B."
 - a. On the prime screen, select **Prime Pump** (5).
 - b. Follow steps 2c to 2d.
 - c. Once component "B" reaches the machine, allow the dispense pump to stroke for at least two full cycles. This typically takes around 30 seconds. Pump cycles are displayed on the prime screen.
 - d. Press **STOP** (4).
4. Prime the system with solvent:
 - a. On the prime screen, select **Prime Resin** (1) and then **Solvent** (6).
 - b. Follow steps 2c to 2e.

⚠ CAUTION

Follow the prime mode with a solvent load to flush out the fluid lines and prevent material from being sprayed or hardening in the system.



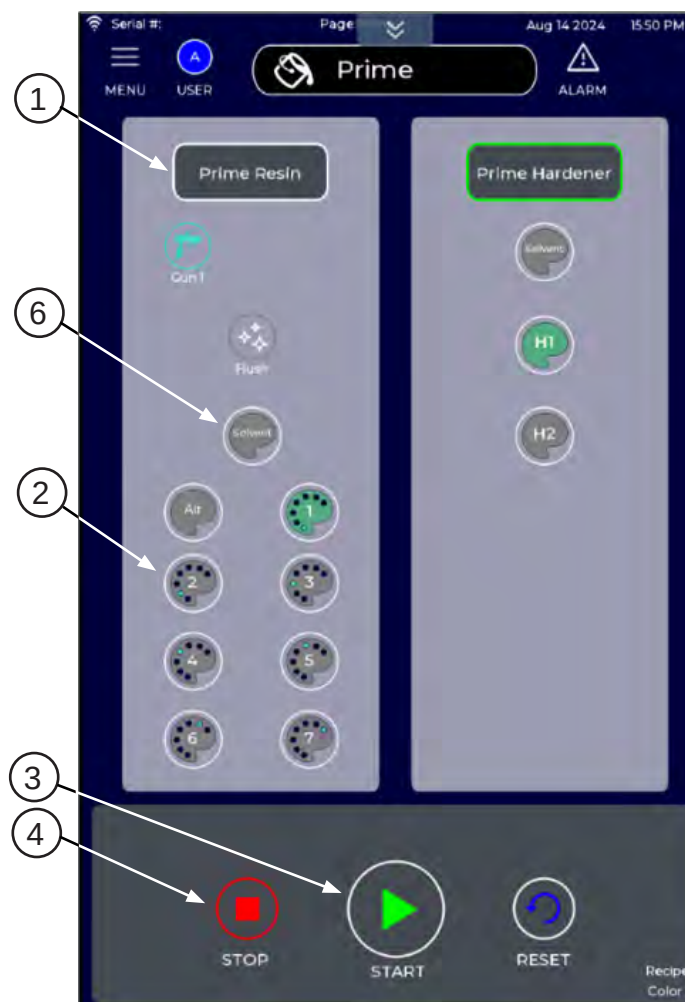
06.7.3 MP PRIMING INSTRUCTIONS

Before beginning normal operation, remove air from the lines and inner chambers of the machine by priming the system.

1. Ensure the gun is positioned correctly for fluid release:
 - a. Trigger the gun into a grounded metal waste container.
 - b. If using a gun flush box, place the gun in the gun flush box and close the lid.
2. Prime the system with component "A."
 - a. On the prime screen, select **Prime Resin** (1).
 - b. Select the palette icon of the color of component "A" to prime (2).
 - c. Press **START** (3).
 For systems with a gun flush box, the fluid flows once the button is pressed.
 For systems without a gun flush box, the user must trigger the gun to continue the priming process.
 - d. Once fluid begins to flow from either the gun or gun flush box (if using), the priming process is complete.
 - e. Press **STOP** (4).
 - f. Repeat for all the colors of component "A" you will be using.
3. Prime the system with component "B."
 - a. On the prime screen, select **Prime Hardener** (5).
 - b. Follow steps 2c to 2e.
4. Prime component "A" hoses with solvent.
 - a. On the prime screen, select **Prime Resin** (1) and then **Solvent** (6).
 - b. Follow steps 2c to 2e.
5. Prime component "B" hose with solvent.
 - a. On the prime screen, select **Prime Hardener** (5) and then **Solvent** (6).
 - b. Follow steps 2c to 2e.
 - c. Repeat the process if using a second component "B."

! CAUTION

Follow the prime mode with a solvent load to flush out the fluid lines and prevent material from being sprayed or hardening in the system.

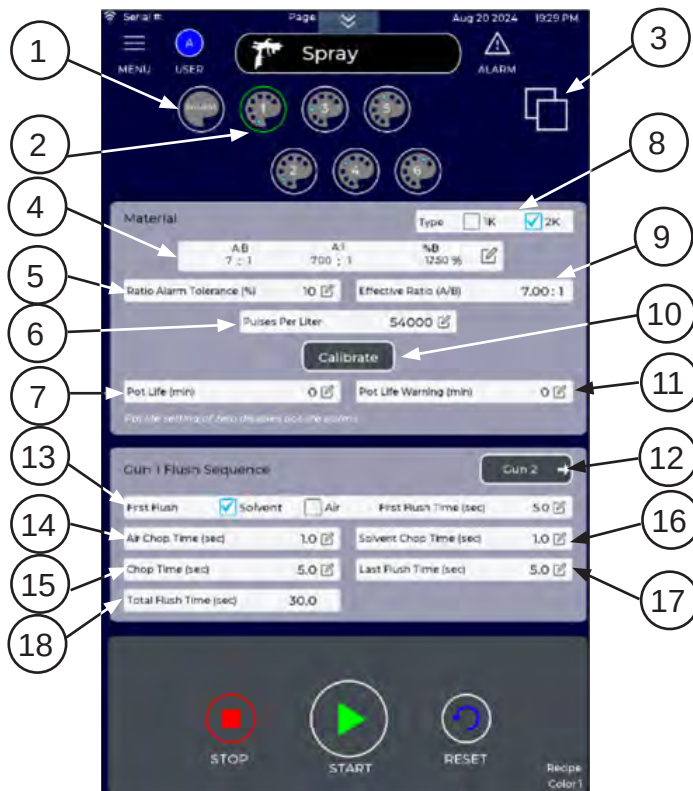


06.8 SETTING RECIPES

The recipe screen allows users to program settings specific to each color, including flow meter calibration, component ratios, pot life, gun flush sequences, and more. Creating recipes for each color saves time during later runs and ensures the spray works as intended.

06.8.1 LP RECIPE SCREEN

Use the recipe screen to set up parameters that are specific to the loaded color. Since some colors may be easier to flush than others, the recipe screen helps you fine-tune the flush settings for each color.



1. Select **Solvent** to enter solvent settings.
2. Palette icons display recipes for the different colors of component "A" used in your system.
3. Select the copy icon to open the copy recipe pop-up screen. This screen allows users to select which recipe to copy, where to copy it, and whether to copy all parameters or just flush parameters.
4. Enter material ratios. Refer to 06.8.7 Setting Material Ratios.
5. **Ratio Alarm Tolerance**: Select the pen and paper icon to set the allowable variance in ratio percentage before an alarm sounds.

6. **Pulses Per Liter**: The number of counts per liter of component "A" passing through the flow meter. The value depends on the material. Either enter a value manually or follow the calibration process to determine this value.
7. **Pot Life**: Set a minimum pot life for 2K material. Setting this value to zero disables the pot life alarm.
8. **Type**: Select 1K or 2K. Although selecting 1K material deactivates component "B," the dispense pump continues to measure and record flow rates. The maximum flow alarm will also still be active.
9. **Effective Ratio ("A"/"B")**: Displays the ratio entered in the "A":"B" material ratio box.
10. **Calibrate**: Select to calibrate the flow meter. Refer to 06.8.3 LP Flow Meter Calibration.
11. **Pot Life Warning**: Set a minimum value for triggering the pot life alarm.

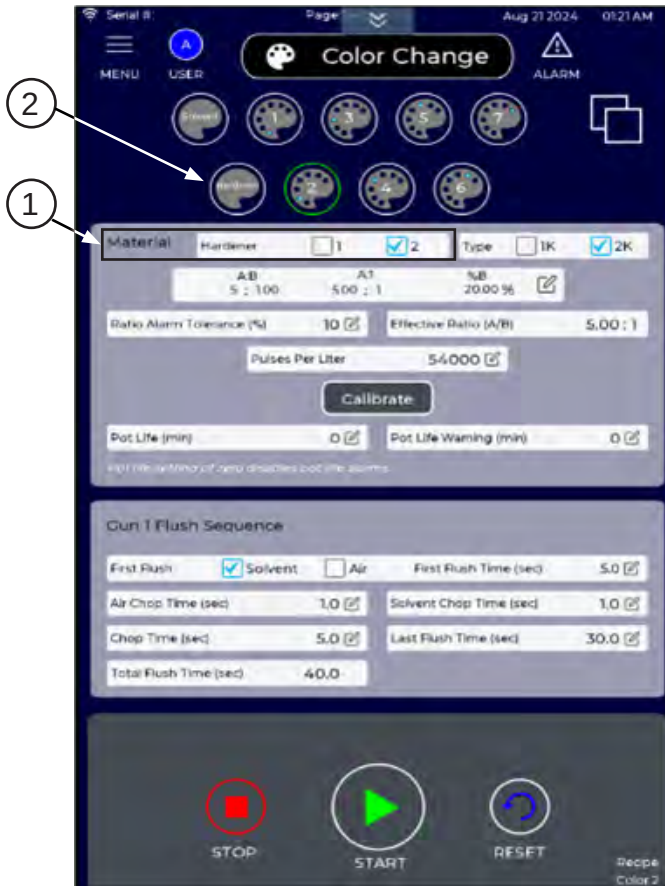
The remaining parts of the screen allow the user to define the flush sequence for each gun.

12. Select **Gun 2** to set parameters for the second gun, if installed.
13. **First Flush**: Select whether the first step of the flush sequence is via **Solvent** or **Air**. Enter the amount of time for the first step of the flush process in **First Flush Time**.
14. **Air Chop Time**: Enter the amount of time the air valve is active during the solvent/air chop.
15. **Chop Time**: Enter the amount of time for the second step of the flush process—alternating the solvent and air cleaning valves.
16. **Solvent Chop Time**: Enter the amount of time the solvent valve is active during the solvent/air chop.
17. **Last Flush Time**: Enter the amount of time the solvent valve is on during the final solvent flush. The final solvent flush is the final step of the flush sequence.
18. **Total Flush Time**: This tallies the total time entered for each part of the flush sequence.

06.8.2 MP RECIPE SCREEN

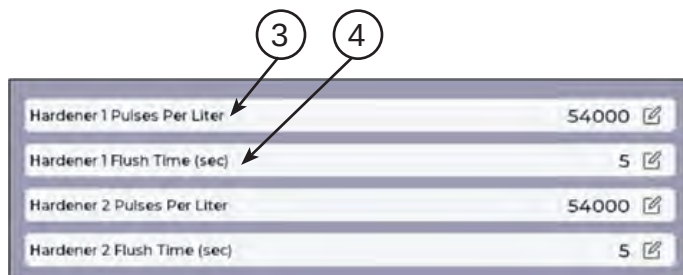
Depending on its configuration MP may also have options to set component "B" values. The rest of the recipe screen is identical to the LP system.

If the machine is configured for two types of component "B," users must select which component "B" to use per color. Choose between **Hardener 1** and **Hardener 2** (1).



To set component "B" recipes:

1. Select the **Hardener** palette icon (2). This opens a pop-up screen with options for component "B" settings.
2. Enter values for **Pulses Per Liter** (3) and **Flush Time** (4) for each component "B" you plan to use. To calculate the **Pulses Per Liter** automatically, refer to 06.8.4 MP Flow Meter Calibration.



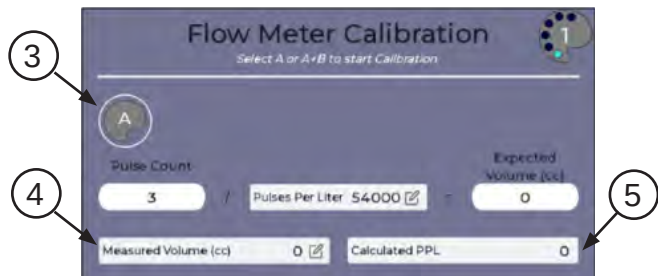
06.8.3 LP FLOW METER CALIBRATION

Calibrating the flow meter ensures its accuracy. To calibrate the flow meter for LP systems:

1. Ensure the color you wish to calibrate is loaded into the machine. Refer to 06.9 Daily Startup Procedure for more information on loading colors.
2. Select a color in the recipe screen (1).



3. Select **Calibrate** (2). This opens the flow meter calibration screen.



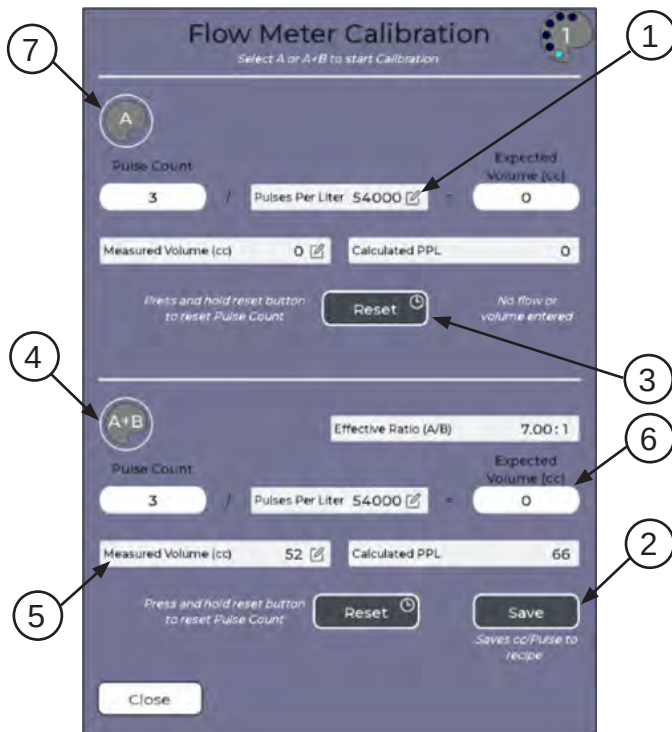
4. Calibrate the flow meter for component "A."
 - a. Select the component "A" palette icon (3). This opens the resin enable valve, allowing fluid to flow through the system.
 - b. Trigger the gun into an empty measuring cup. Collect a generous amount of material. Higher volumes increase the accuracy of the calibration.

NOTICE

Trigger a large amount of material into the measuring cup during calibration. The greater the volume of collected material, the greater the accuracy of the calibration.

- c. Enter the volume of the material into **Measured Volume** (4).
- d. **Calculated PPL** (5) will populate with the pulses per liter count determined by the calibration process.

- e. Users can also manually edit the **Pulses Per Liter** value by selecting the pen and paper icon in the corner of the box (1).



- f. Select **Save** (2) to save the value.
- g. Press and hold **Reset** (3) to reset the pulse count if necessary.
5. The LP does not include a way to calibrate component "B" flow from the dispense pump. To ensure the machine is working correctly, complete the "A" + "B" calibration.
- Select the "A" + "B" palette icon (4). This opens valves for components "A" and "B," allowing them to flow through the machine.
 - Trigger the gun into an empty measuring cup. Collect a generous amount of material. Higher volumes increase the accuracy of the calibration.
 - Enter the volume of the material into **Measured Volume** (5).
6. If the **Expected Volume** (6) differs from the **Measured Volume**:
- Do not run the machine. The difference in values indicates a problem with either the pump, such as a loose component, or a problem with the component "A" calibration.
 - Re-calibrate component "A" by selecting the "A" palette icon (7). If that is correct, verify the pump works correctly and the pump seals are not damaged.

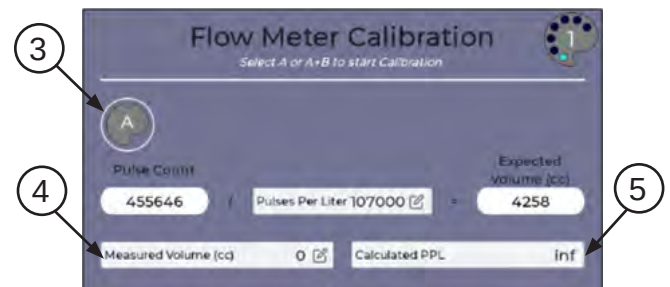
06.8.4 MP FLOW METER CALIBRATION

Calibrating the flow meter ensures its accuracy. To calibrate the MP flow meter:

- Ensure each color you wish to calibrate is loaded into the machine. Refer to 06.9 Daily Startup Procedure for more information on loading colors.
- Select a color from the recipe screen (1).



- Select **Calibrate** (2). This opens the flow meter calibration screen.



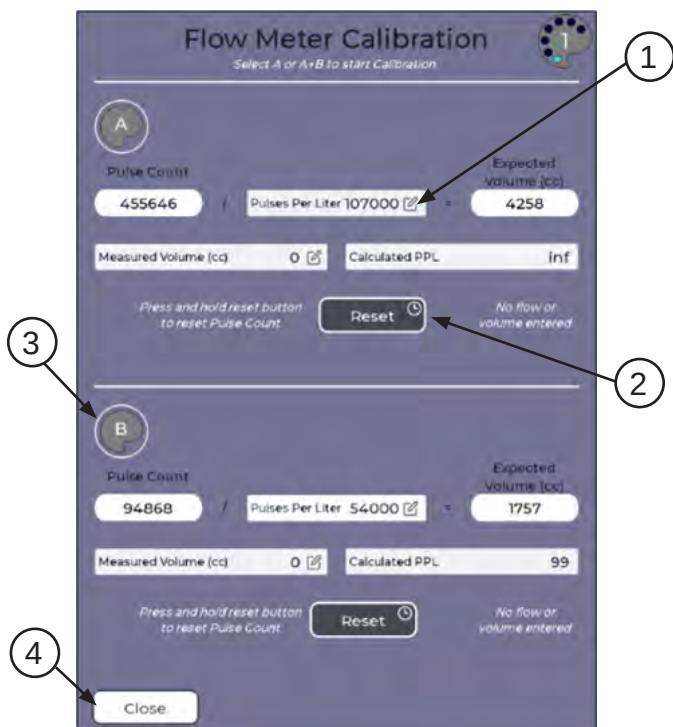
- Calibrate the flow meter for component "A."
 - Select the component "A" palette icon (3). This opens the resin enable valve, allowing fluid to flow through the system.
 - Trigger the gun into an empty measuring cup. Collect a generous amount of material. Higher volumes increase the accuracy of the calibration.

NOTICE

Trigger a large amount of material into the measuring cup during calibration. The greater the volume of collected material, the greater the accuracy of the calibration.

- Enter the volume of the material into **Measured Volume** (4).
- Calculated PPL** (5) will populate with the pulses per liter count determined through the calibration process.

- e. Users can also manually edit the **Pulses Per Liter** value by selecting the pen and paper icon in the corner of the box (1).



- f. Select the **Save** button that appears to the right of **Reset** (2) to save the value.
- g. Press and hold **Reset** to reset the pulse count if necessary.
4. Follow the same steps to calibrate the flow meter for component "B" (3). Note there is only one calibration value for each component "B" stored for all recipes. It is not necessary to calibrate component "B" for each recipe.
5. Select **Close** (4).

06.8.5 FLUSHING RECOMMENDATIONS

The table to the right lists flushing recommendations for the RM2. Refer to 06.8.1 LP Recipe Screen and 06.8.2 MP Recipe Screen for where to enter values for each component of the flush sequence.

The following factors influence flush sequence settings:

- Flushing air and solvent pressure: Higher pressures may reduce the time needed to flush the system but can create significant spitting from the gun during the process.
- Material viscosity: Highly viscous materials move more slowly and may require additional time to be purged from the system.

- Hose volume/length: Longer fluid lines encompass a larger volume and may require a longer flush time. Pressure drop through a longer hose or smaller diameter hose will affect the time required to purge components "A" and "B" and clean the system.
- Gun size: Small tips may restrict flow during a flush.

Flush sequence optimization tips:

- Use air instead of solvent for the first flush.
- Let the chop process do the majority of the cleaning.
- Don't use more solvent than necessary for the last solvent flush.

NOTICE

Follow the optimization tips to minimize solvent usage during color changes and flushes.

FLUSHING RECOMMENDATIONS

Flush Sequence Component	Suggested Initial Setting	Description
First flush	AIR	Choose between air or solvent for the initial flush of the fluid lines.
First flush time	15 seconds	Duration of the first flush. This flushes component A out of the system before thoroughly cleaning it with the chop process (alternating air and solvent).
Air chop time	1 second	Duration of each air burst in the chop process.
Solvent chop time	1 second	Duration of each solvent burst in the chop process.
Chop duration	30 seconds	Total duration of the chop process.
Last flush time	20 seconds	Duration of the last solvent flush. This should be timed to minimize solvent waste while loading the fluid lines with solvent.

06.8.6 SETTING SOLVENT RECIPES

The MP and LP systems follow the same process for setting solvent recipes:

1. Select the Solvent palette icon (1) on the recipe screen.
2. Enter the Pulses Per Liter value using the pen and paper icon (2).

This value depends on the flow meter size used in your system. The typical amount is 54,000.



3. Select the column that describes the desired method of expressing the ratio. Which option you choose depends on how the material ratio is displayed in the data sheet that comes with the material:
 - a. "A": "B" Entry (1)
 - b. Decimal Entry (2)
 - c. Percent Entry (3)



4. The value entered will display under Effective Ratio (A/B) on the recipe screen (4).

06.8.7 SETTING MATERIAL RATIOS

To set material ratios for LP and MP systems:

1. Select a color on the recipe screen (3).
2. Select the pen and paper icon in the box displaying material ratios (4). This opens the ratio pop-up screen.



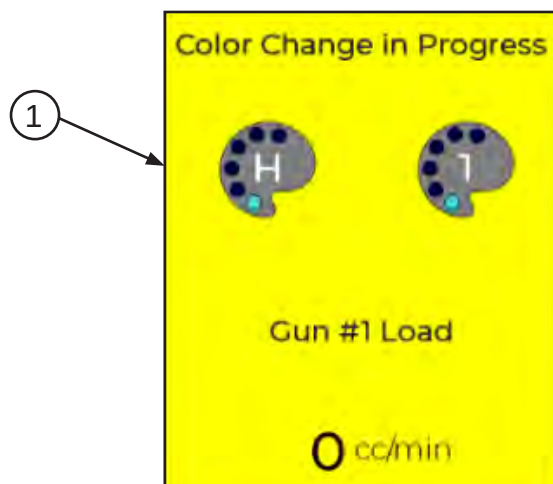
06.9 DAILY STARTUP PROCEDURE

Follow the steps below to ensure proper operation and optimal safety of the RM2. Reviewing the tips and procedures outlined here will reduce instances of alarms and the need for repairs. These daily procedures assume the machine has been primed and the fluid remains connected between each system use.

1. Tighten and secure all fluid and air connections. Ensure the fluid supply is adequate for the duration of the operation.
2. Check all valves on the system for fluid supply leaks. Correct if necessary.
3. Energize air supply. Maintain 75 psi (5 bar) minimum at all times to the system main air inlet.
4. Turn the main disconnect switch to the ON position.
5. Energize fluid supplies and open the valves supplying the system with components "A" and "B" and solvent.
6. Review alarms.
 - a. Navigate to **MENU > ALARMS**.
 - b. Verify there are no active alarms.
 - c. If an alarm has occurred, verify the problem has been resolved.
 - d. Select **Reset** to clear the alarm screen. The machine will not allow users to continue with active alarms.
7. Load material.
 - a. Navigate to **MENU > COLOR**.
 - b. Under **Load Color** (1), select either **Gun 1** or **Gun 2**. For systems configured with a single gun, the option to select a gun will not be available.
 - c. Select the palette icon of the color you wish to load. The circle around the icon will turn turquoise.
 - d. Select **START** (2).



- e. The color change pop-up screen will open (1).



For machines equipped with gun flush boxes, the color change will automatically begin.

For machines without gun flush boxes, users must trigger the gun to flush the currently loaded color and load the new color. Follow the on-screen prompts to ensure the correct gun is being loaded.

⚠ CAUTION

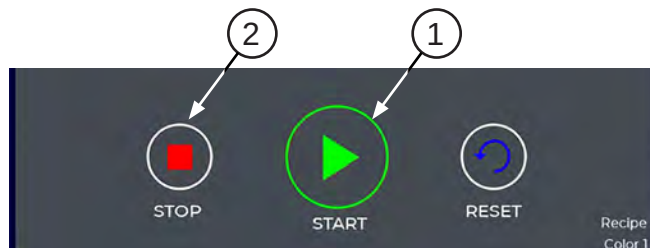
Before loading or flushing any material, trigger the fluid into a grounded metal waste container. If using a gun flush box, ensure the gun is in the box and the lid is closed before loading or flushing material.

- f. Once the color is loaded, the HMI will automatically display the spray screen.
- Note that the palette icon displaying the loaded color now appears in the upper right-hand corner.
8. For LP systems, verify that the inlet and outlet dispense pump pressures are correct for the application.
- Ensure the spray screen is configured to the pressure view.
 - Trigger the gun.
 - While the gun is spraying, verify the inlet pressure is 2–5% higher than the outlet pressure.
If the outlet pressure is higher than the inlet pressure, increase the inlet pressure.
9. Fine-tune gun settings for the application.
- If you change component "A" pressure to adjust the flow rate at the gun, match the change in pressure to component "B" to maintain the 2–5% higher inlet pressure.
 - If using atomization air for spraying, fine-tune atomization air pressure.
 - Fine-tune fan control.

06.10 SPRAY PROCEDURE

Once the setup and startup procedures are ready, the system is ready to spray.

- Navigate to the spray screen via **MENU > SPRAY**.
- Press **START** (1) on the run menu.



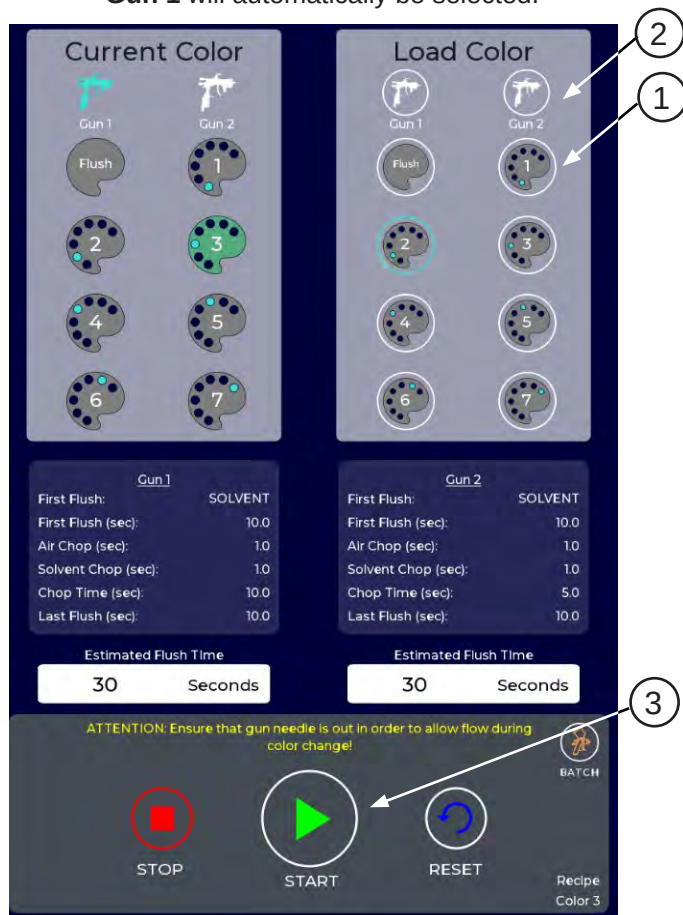
- Trigger the gun to spray. If using a gun flush box, remove the gun from the box before triggering the gun.
- Press **STOP** (2) on the run menu to stop spraying.

06.11 COLOR CHANGE PROCEDURE

- Navigate to the color change screen via **MENU > COLOR**.
- The currently loaded colors are displayed under **Current Color** (3).



3. Select the new color to load under **Load Color** (1).
 - a. If your machine is configured to two guns, select which gun you intend to use before selecting the color to change (2).
 - b. If your machine is configured to a single gun, **Gun 1** will automatically be selected.



4. Select **START** (3) in the run menu. The color change pop-up screen (4) will appear.



5. Trigger the gun to flush out the original component "A" with solvent.

Systems equipped with a gun flush box automatically begin the color change without triggering.

For systems equipped with two guns, trigger guns asynchronously during the color change. Triggering the guns simultaneously may cause the solvent to take the path of least resistance and not completely flush one gun.

The screen will indicate which gun to flush at each step.

For systems equipped with two guns and gun flush boxes, the guns will automatically trigger asynchronously to ensure both guns are completely flushed.

6. Trigger the gun(s) to load the new component "A."

Systems equipped with gun flush box(es) automatically load the new component "A" once the old is flushed from the system.

7. Once the new component "A" is loaded, the HMI will switch to the spray screen.

Note that the new component "A" will display in the upper right-hand corner (1).



8. For systems equipped with an atomization air cut-off valve (ACO), the ACO valve will enable atomization air after the preset gun air delay time has passed.
9. The system is ready for spraying.

06.12 END-OF-DAY FLUSHING PROCEDURE

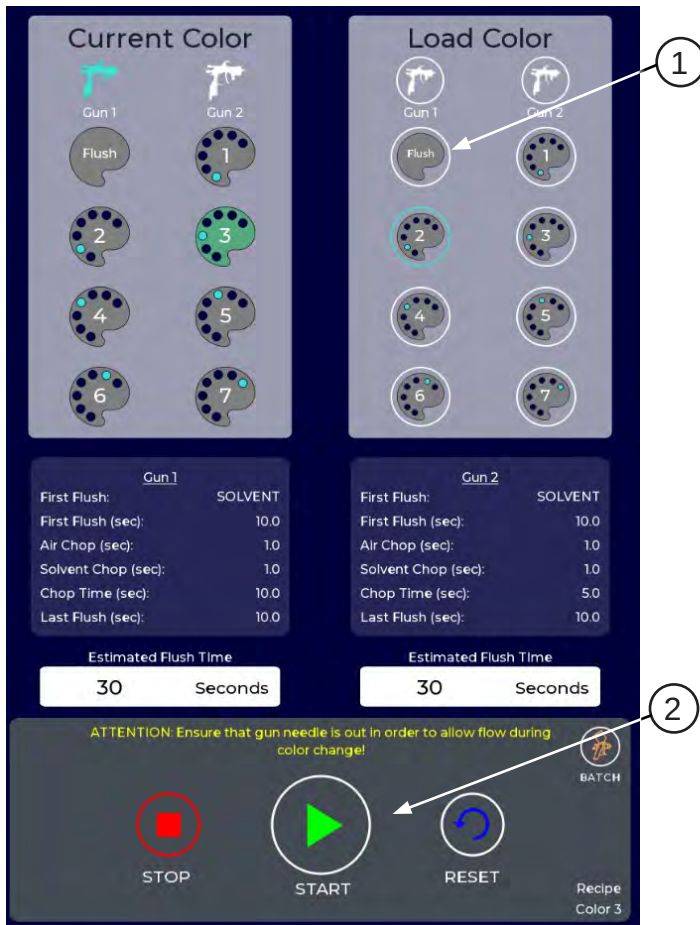
Follow the steps below to shut down the machine overnight or for longer periods of non-operation.

1. Ensure the gun(s) will empty into a grounded metal waste depository.
2. Navigate to **MENU > COLOR**.

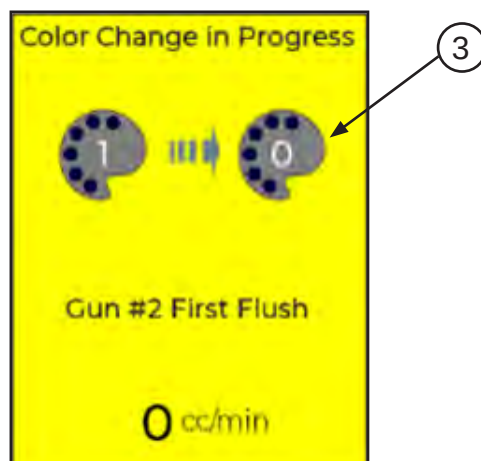
3. Select **Flush** (1) under **Load Color**.

For systems equipped with two guns, select which gun to flush first.

For MP systems, the option to flush component "B" will appear the first time the flush option is selected.



4. Select **START** (2) on the run menu. This opens a pop-up screen (3) showing that the flush is in progress.



5. Trigger the gun to flush material from the system.

Systems equipped with gun flush boxes automatically begin flushing without triggering.

For systems equipped with two guns, trigger guns asynchronously during the color change. Triggering the guns simultaneously may cause the solvent to take the path of least resistance and not completely flush one gun.

The screen will indicate which gun to flush at each step.

For systems equipped with two guns and gun flush boxes, the guns will automatically trigger asynchronously to ensure both guns are completely flushed.

6. The system will enter the configured air/solvent chop mode.

Use the recipe screen to configure this mode. Refer to 06.8.5 Flushing Recommendations for more information on configuring gun flushes.

7. Once the flush is complete, the HMI automatically changes to spray mode.

The multipurpose indicator will change to **Flushed** (1) and the current color display will be **0** (2).



8. The solvent remains in the material lines after the flush to ensure residual material doesn't clog lines.

9. Shut off component "A," component "B," and solvent supply to the system.

10. Turn the main disconnect switch to OFF to power down the machine.

⚠ CAUTION

Always shut down the machine with solvent-loaded, fully flushed fluid lines. Residual air or material in the system may cause clogs that block system components.

06.13 REPORTS SCREEN

The reports screen allows process data to be tracked as jobs. Storing or loading data saved as a job helps users track how things were done and repeat processes.

1. View job details, including name, customer, start and end dates, and author.
2. View data on the use of the gun for the job.
3. Change units displayed on the screen by time and amount.
4. View component "A," component "B," and solvent usage for the job.
5. Displays job name.
6. Select to create a new job or load a job.
7. Select to resume or end the current job.

The screenshot shows the Reports Screen with the following elements:

- 1**: Job Name, Customer, Start Date, End Date, Author fields.
- 2**: Spray section with tables for Gun 1 and Gun 2 data.
- 3**: Unit selection buttons (Seconds, Minutes, Hours, CC, Liters, Gallons).
- 4**: Color Change section with tables for Color 1 through Color 7.
- 5**: Job Name input field at the bottom.
- 6**: New/Load button at the bottom.
- 7**: Resume Job button at the bottom.

Jobs can be stored in CSV format on a USB stick installed in the HMI USB slot.

Once the jobs are stored, users can upload and view these jobs on CSV viewing software, such as Microsoft Excel.

Previously completed jobs can be removed or reloaded into the system from an outside file via the USB stick.

To create a new job:

1. Insert a USB stick in the HMI USB slot.
2. Select **New/Load** on the reports screen. This opens a pop-up screen.
3. Enter job **Name** (1), **Customer** (2), and **Author** (3) by opening the associated pen and paper icons on the right-hand side of the screen.
4. Select **Create** (4).

The screenshot shows the 'Create New Job' pop-up screen with the following elements:

- 1**: Name input field.
- 2**: Customer input field.
- 3**: Author input field.
- 4**: Create button.
- 5**: Load Previous button with a USB icon.

To load a previous job from the USB stick:

1. Insert the USB stick in the HMI USB slot.
2. Press **New/Load** on the reports screen. This opens a pop-up screen.
3. Select the USB icon under **Load Previous** (5). This opens a list of folders.
4. Navigate to the job storage location. The USB stick is located at "/mnt/usbmemory/".
5. Select the job you wish to load then select **Open** on the dialog screen.

06.14 MP PULSE VALVE ADJUSTMENT

The flow range gauge on the spray screen for the MP systems is used to verify that the pulse valve is operating within a normal range.

The pulse valve output, represented by a blue diamond, must be within the range.

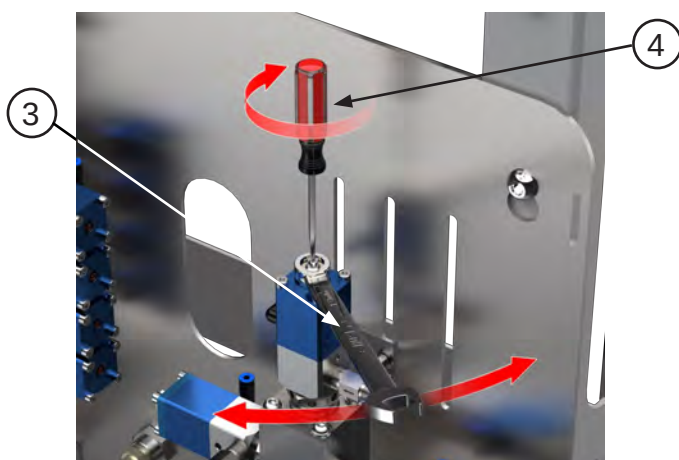
06.14.1 PULSE VALVE ADJUSTMENT: BELOW RANGE VALUE

The blue diamond indicating the valve output (1) is left of the green zone and therefore below the normal range (2).



To adjust the pulse valve:

1. Loosen the jam nut on the adjustment screw by turning a 13 mm wrench counterclockwise (3).



2. Turn the adjustment screw clockwise (4) until the blue diamond moves to the center of the green zone range on the spray screen. The valve output will reach 50%.
3. Turn the wrench clockwise (3) to set the adjustment screw in position.

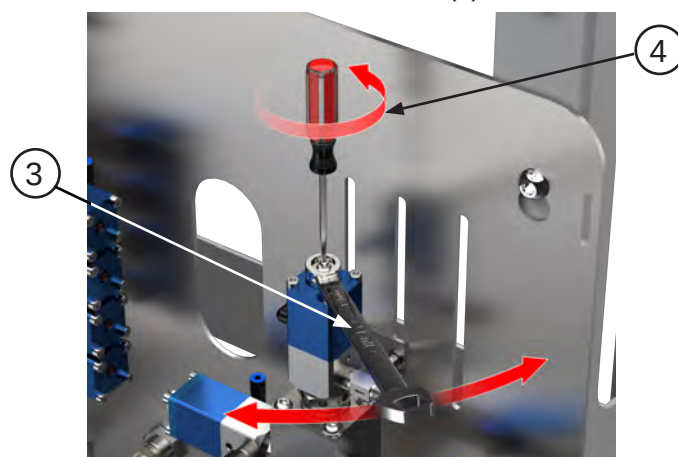
06.14.2 PULSE VALVE ADJUSTMENT: ABOVE RANGE VALUE

The blue diamond indicating the valve output (1) is right of the green zone and therefore above the normal range (2).



To adjust the pulse valve:

1. Loosen the jam nut on the adjustment screw by turning a 13 mm wrench counterclockwise (3).

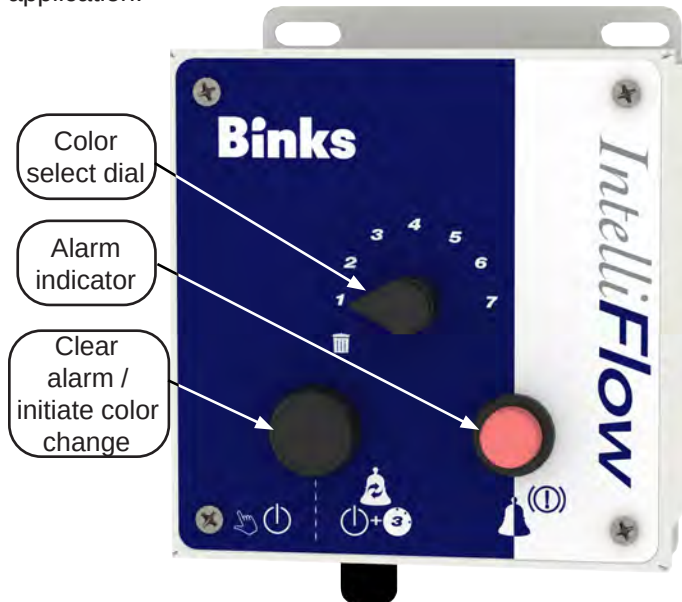


2. Turn the adjustment screw counterclockwise (4) until the blue diamond moves to the center of the green zone range on the spray screen. The valve output will decrease to 50%.
3. Turn the wrench clockwise (3) to set the adjustment screw in position.

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07 REMOTE COLOR CHANGE BOX

The remote color change box is an optional feature for the RM2 system. The feature allows users to change colors remotely instead of using the touchscreen or cloud application.



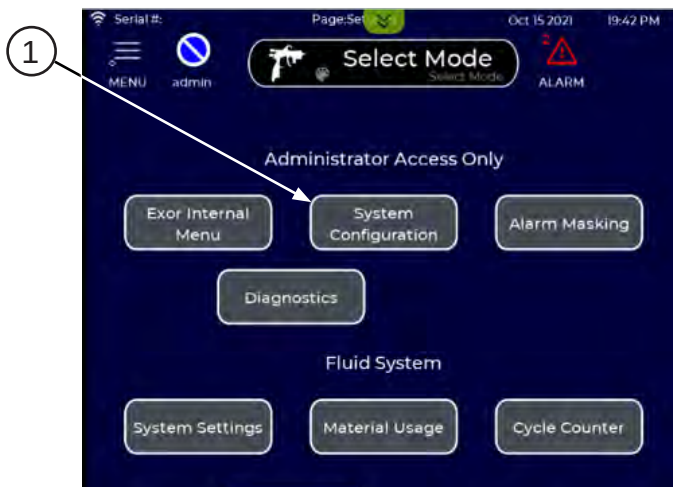
The color change box is connected through an intrinsic safety barrier (Zener barrier) located outside the area that is hazardous to the machine.

Installation instructions are included with the color change box.

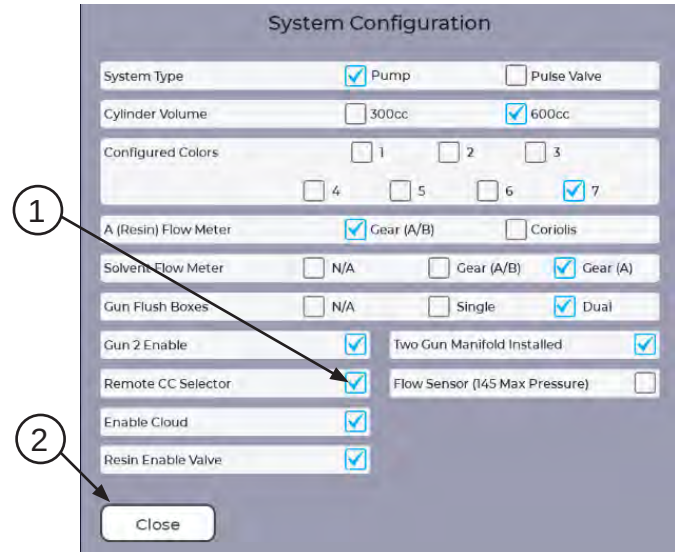
07.1 REMOTE COLOR CHANGE BOX CONFIGURATION

The "In-Booth Control" setting is available for machines with the remote color change option installed. To configure the system control for the remote color change option:

1. Navigate to **MENU > SETTINGS > System Configuration** (1).



2. Select **Remote CC Selector** (1).



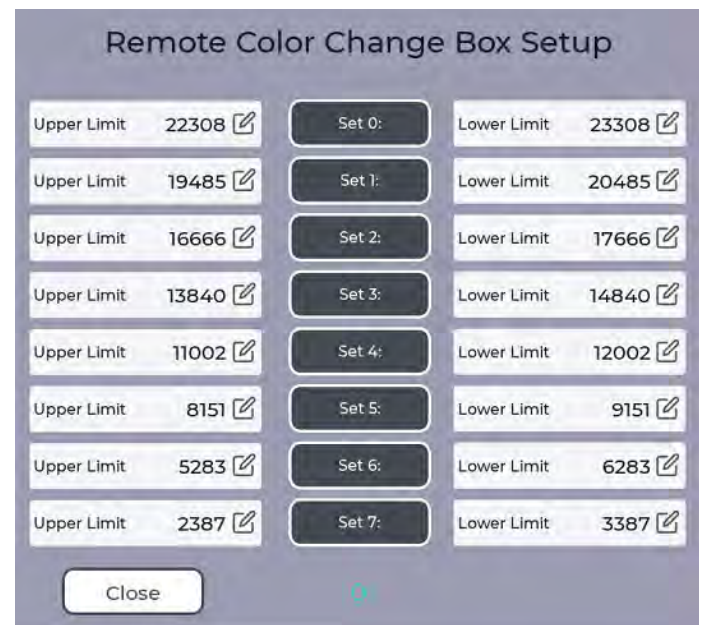
3. Select **Close** (2).

07.2 REMOTE COLOR CHANGE BOX CALIBRATION

Calibrating the remote color change box requires two users to work together. One user must be in the operation booth and the other user at the machine touchscreen.

To calibrate the remote color change box:

1. Navigate to **MENU > SETTINGS > System Settings > In-Booth Control**. This opens the remote color change box setup screen (below).



2. Set limits for each of the colors configured to your machine.

1. To calibrate limits automatically:
 - a. In the booth, turn the dial on the color change box to select a color or the flush icon.
Press and hold the color change button.
 - b. When the booth operator holds down the color change button, the digital value of the option they selected will show at the bottom of the screen.
 - c. While the button is held down, the operator at the touchscreen must select the corresponding color switch selector.
Choose **Set 0** to calibrate the flush setting.
 - d. The system will automatically set levels 500 cc above and below the measured value to establish upper and lower limits.
 - e. Repeat for all colors configured on your machine.
2. To set the limits manually, enter values in the associated fields.

07.3 REMOTE COLOR CHANGE BOX OPERATION

To use the remote color change box:

1. Select a color by twisting the dial (1) to the associated number.



2. Press the button (2) to initiate the color change.
3. Initiating a color change halts operation and triggers the alarm indicator.
4. To clear the alarm and restart operation, press and hold the button for three seconds.

MANUAL CHANGE SUMMARY		
Date	Description	Version
08/2024	1st Draft. Split manual into multiple sections, put into new format, and restarted at Rev 1.0	R1.0
05/2025	Updated manual to latest Binks standards	R2.0

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WARRANTY POLICY

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