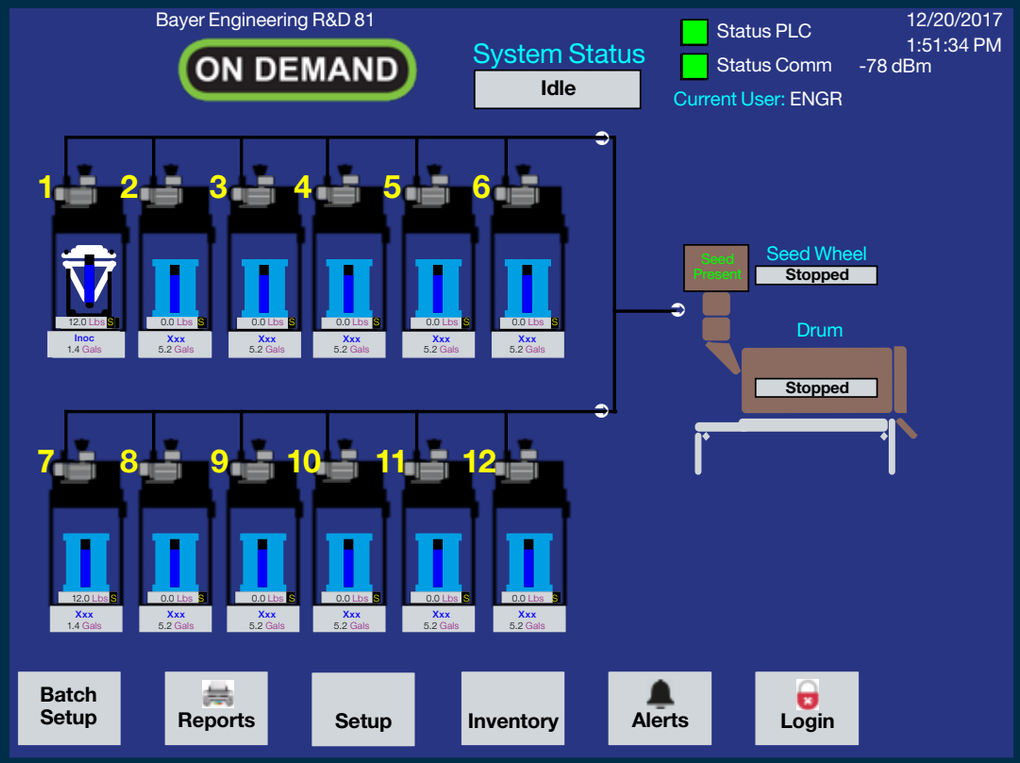
USER MANUAL

ON DEMAND™
HMI OPERATIONS GUIDE



MENU

This is an interactive PDF. Click on an icon tile and navigate to a chapter of interest.

LEGAL & SAFETY

This manual contains technical information regarding Bayer SeedGrowth™ Equipment. Please read and understand these instructions completely before proceeding to install and operate the equipment. Bayer reserves the right to change specifications, models, components, or materials at any time without notice. For additional equipment information contact us at 1.800.634.6738. Please have this manual available when contacting Bayer.

Always use caution and common sense when working with any chemical. Read the product label and SDS carefully and follow their instructions exactly as described.

Optimal operating conditions for this piece of equipment requires an ambient temperature 32° F to +104° F (0° C to +40° C), relative humidity less than 90% (minimum condensation). Make necessary provisions to protect this piece of equipment against excessive dust, particles containing iron, moisture and against corrosive and explosive gases.

Our technical information is based on extensive testing and is, to the best of our current knowledge, true and accurate but given without warranty as the conditions of use and storage are beyond our control. Variables, such as humidity, temperature, change in seed size or variety and viscosity of chemical products can all affect the accuracy of the chemical application and seed coverage. To ensure the desired application rate and optimum seed coverage, check the calibration periodically throughout the day, and make adjustments as needed.

Any person who is involved in the installation or periodic maintenance of this equipment should be suitably skilled or instructed and supervised using a safe system of work. Isolate the treater before removing guards for maintenance.

EXPOSURE CONTROL

Always use caution and common sense when working with chemicals. Read the product label and SDS carefully and follow their instructions exactly as described. The following Personal Protective Equipment (PPE) recommendations and best practices help promote safe use in seed treatment.

Note: Exposure Control signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Wear protective clothing

Wear disposable or reusable coveralls with long sleeves.

Hand protection required

Wear chemical-resistant gloves.

Wear rubber boots

Wear chemical resistant rubber boots.

Labels

Label recommendations and directions for handling must be followed, including treatment procedure (use of sticker) as well as the safety requirements.

Treatment products

Keep products in a locked room that has been approved for crop protection products.

Wear a mask

Wear respiratory protection.

Eye protection required

Wear protective eyewear.

Calibration

Seed treatment equipment must be checked and calibrated regularly to ensure accurate and safe application.

Clean seed

Use well cleaned seed to avoid creation of polluted dust that will contaminate the machine, treating facility, workers, farmers and the environment during sowing.

Cleaning

Use a vacuum to clean machines. Avoid using compressed air for cleaning.

Laundry

Wash soiled reusable clothing separately. Workers must take a shower after each shift.

Empty containers

Non-returnable empty containers must be triple rinsed before they can be disposed. For others the recommendation of the producer must be followed.

Spillage

Spillage must be avoided; it must be thoroughly cleaned up to avoid contaminating the environment and waterways.

Maintenance

Keep machinery clean between treating sessions.

REFERENCE SYMBOLS

Symbols and signal words are used to identify the level of hazard and help avoid personal injury.

Note: Safety signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Shock Hazard

Alerts that dangerous voltage may be present.

Warning

Alerts that a hazard may cause serious injury or death.

Caution

Alerts that a hazard may cause minor or moderate injury.

Hand crush - moving parts

Alerts crushing is possible.

Pinch point

Keep hands away from pinch points.

Rotating shaft

Do not wear loose clothing around turning parts.

Disconnect

Disconnect to de-energize before opening.

Tools

Required tools for installation and maintenance.

Use guards

Keep guards in place. Do not remove during operation.

Parts

Required parts for installation and maintenance.

Lifting

Requires two people to safely lift an item.

Tip

Calls attention to special information.

Lift points

Requires the use of proper rigging and lifting techniques based on the lift plan.

Note

Emphasizes general information worthy of attention.

Center of gravity

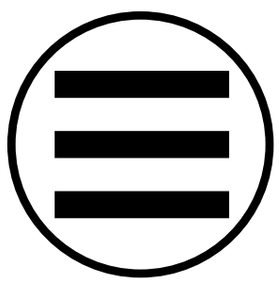
Indicates the center of gravity of the machine to help assist when rigging and lifting.

Example

Provides a problem or exercise that illustrates a method or principle.

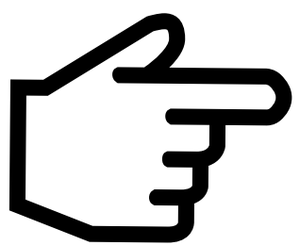
PICTOGRAMS

Each Signifier displayed here is specific to this User Manual.


Menu


Previous


Advance

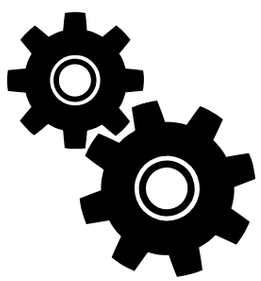

Hand Cursor


RH Treater


Like


Initiate HMI


Touchscreens


Configuration

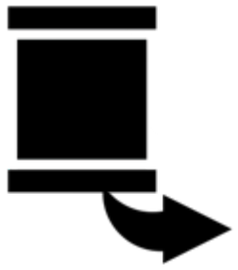

Pump Stations


Inventory

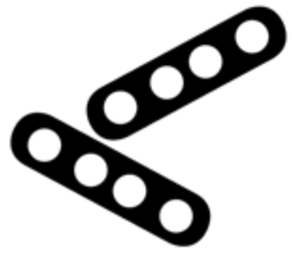
Calibration


Batch Setup


Batch Run


Keg Swap


Flex Tank


Conveyors


Reports


Barcode Scanner


Alarms


Pump

INITIATE HMI

Main Control Panel

Main Control Panel
Switch in **ON** position

HMI Control Box

The HMI power source should be maintained 24/7.

Step 1: Turn **ON** the Main Control Panel Power Lever - flip the large red lever into the **UP** position, as shown left.

Step 2: Press and hold (5 seconds minimum) the HMI Boot Computer push button.

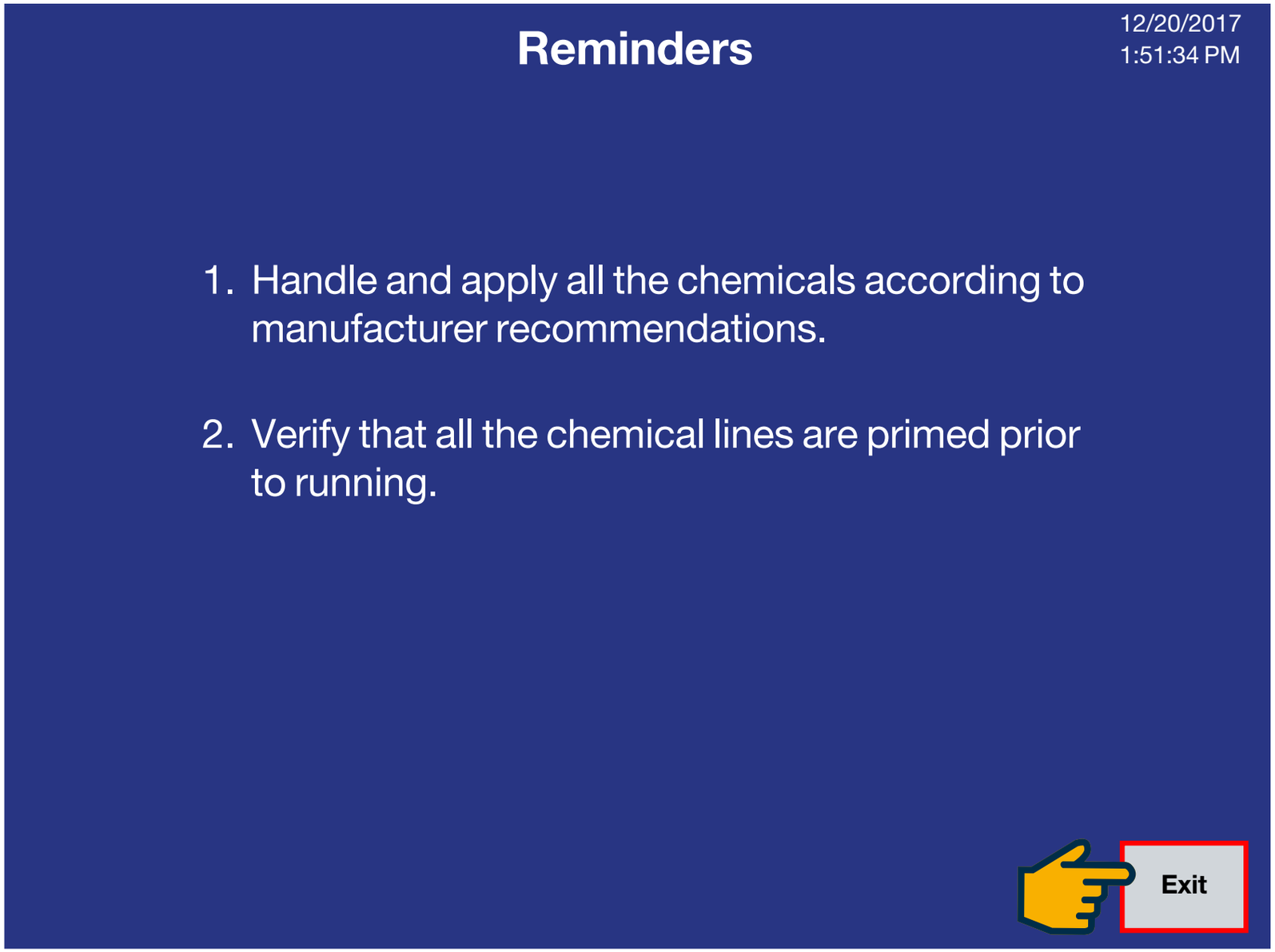
- The Windows application program will boot up (recipes, varieties, and customers must be set up on the website prior to treating per the installation guide).
- When all system checks are successful, the program displays the **Reminders Screen ➲**

HMI Controller

NOTICE

INTERNAL BATTERY
REQUIRES POWER 24/7

TO SHUTDOWN COMPUTER
FOR STORAGE GO TO SETUP
SCREEN & PRESS SHUTDOWN



REMINDERS SCREEN

Users should be mindful of the notices that are displayed on the **Reminders Screen**, as shown above.

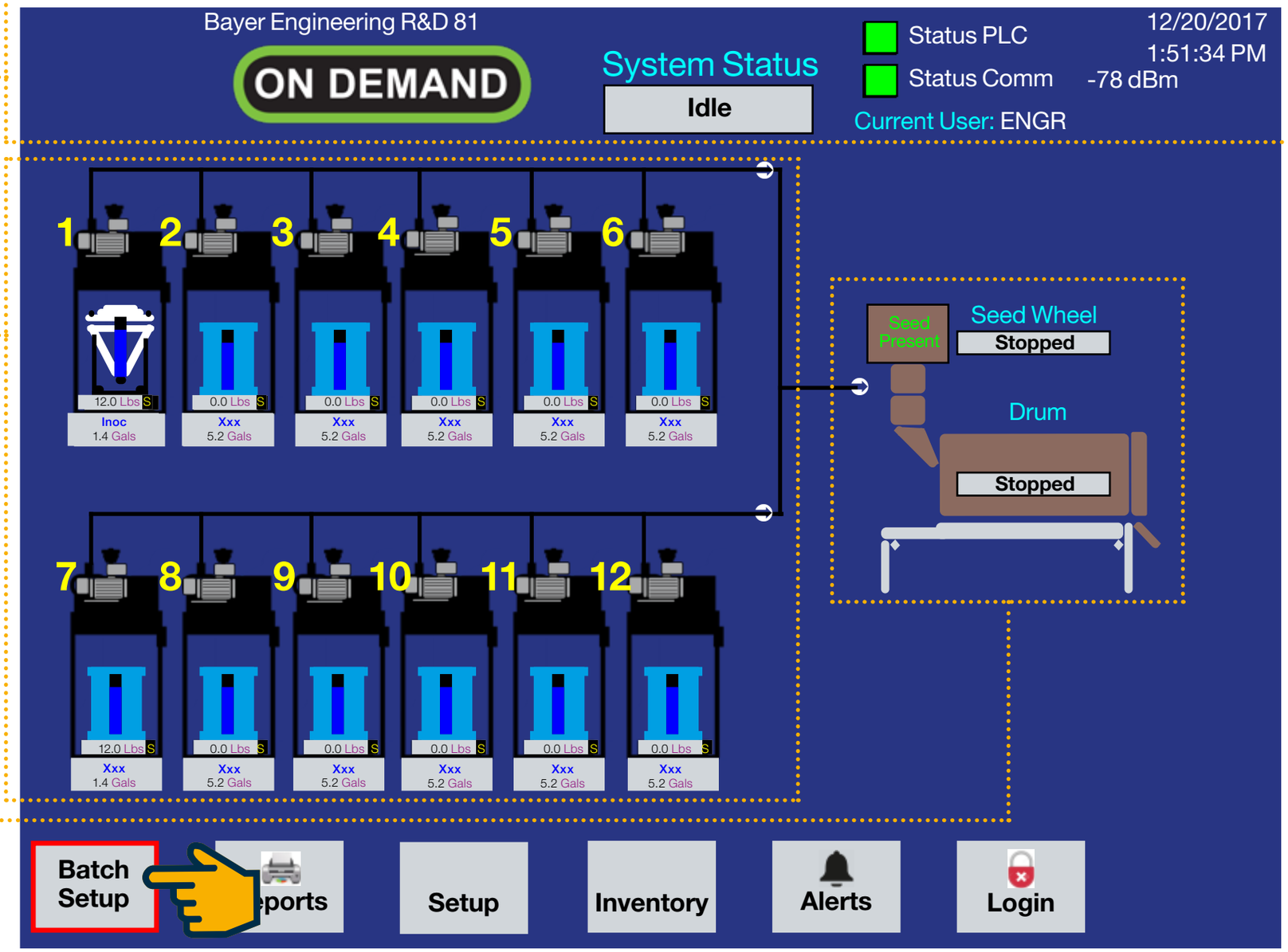
Step 1: Touch the **Exit** button icon: navigates to the **Main Screen** ➲

TOUCHSCREENS

System Name and Status: Bayer Test Treater, Idle, Paused, Stopped.
Date, Time, Current User, Connectivity

Pump Stations (1-12) previously added on the SET-UP SCREEN by the installer.
Batch-time Indication: the blue stripe in the middle of each tank displays the current chemical level (turns black when empty). The list below the Pump Tank icon displays total Gallons, # Sds (number of seed Units Treatable - 1 Unit = 50lbs of seed), and % motor speed. These numbers display current Tank/Pump activity while the system is running.

Treater Seed Wheel and status: Idle, Paused, Stopped.
Treater Drum and status: Idle, Paused, Stopped.



MAIN SCREEN

The **MAIN SCREEN** displays a graphical representation of the operating system. Displayed right is a sample configured system. When the system first boots, none of the devices are displayed; they must first be allocated for use and then enabled to operate. After allocation and enabling, device icons will populate the screen.

Step 1: Touch the **Batch Setup** button icon: navigates to the **BATCH SETUP SCREEN** ➲

Operator:

*Full Access

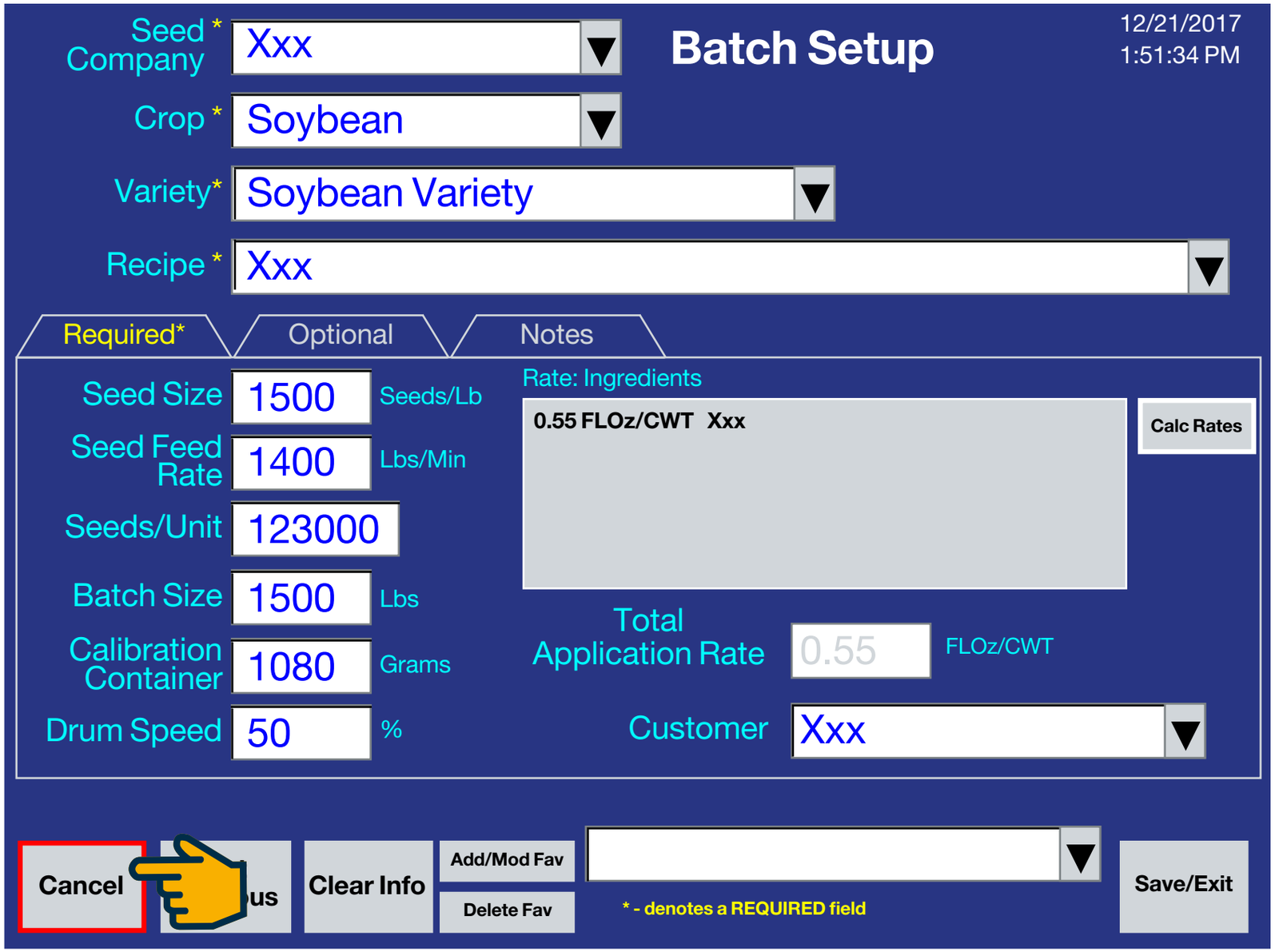
Install:

*Full Access

BATCH SETUP SCREEN*

The **Batch Setup Screen** is used to select information regarding the specific batch which is to be run. Batch Setup procedures will be covered in detail later on in the manual: **Batch Setup**.

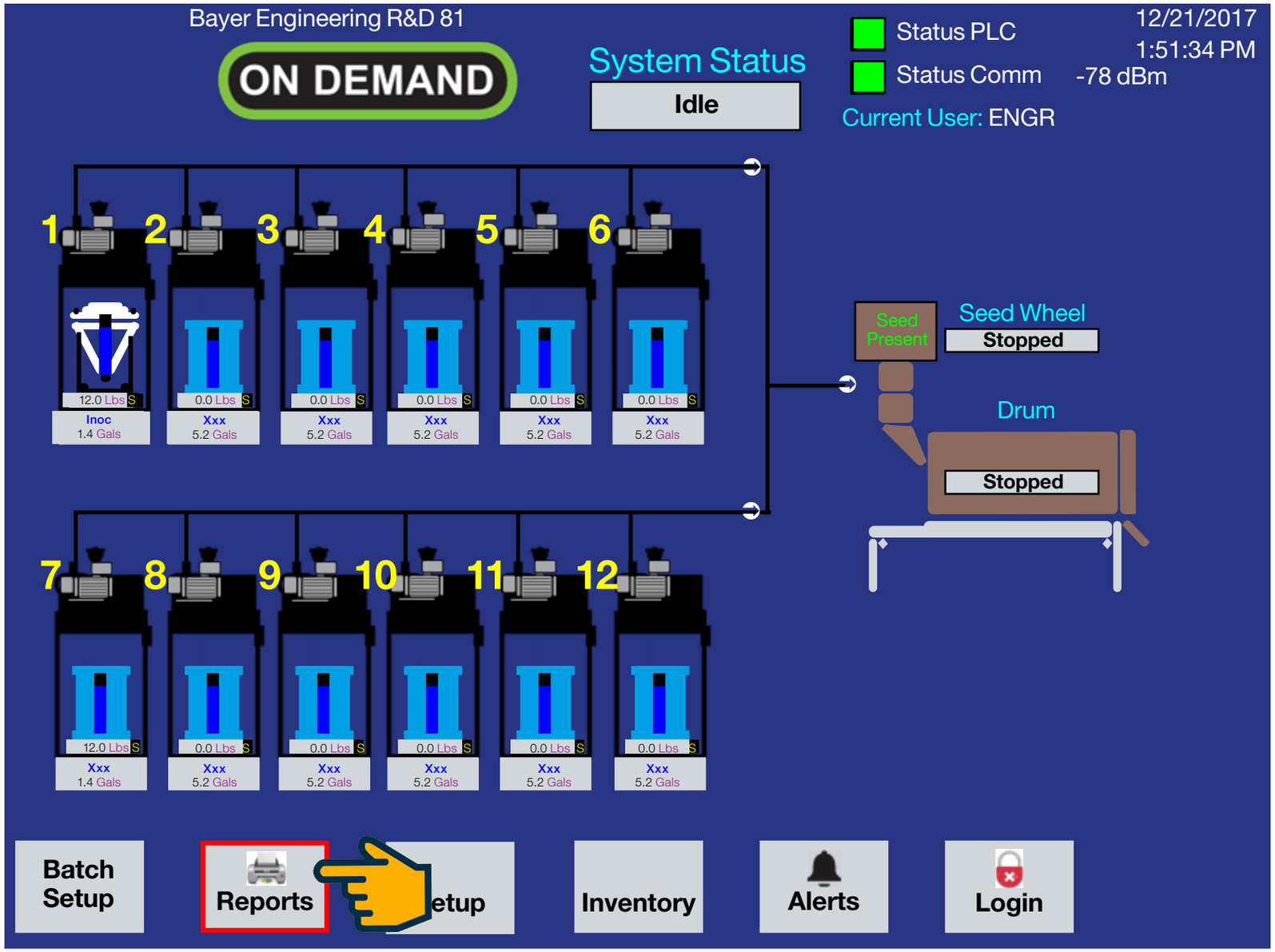
Step 1: Touch the **Get Previous** button icon: navigates to **Get Previous Screen ➲**



BATCH SETUP - GET PREVIOUS SCREEN

The **Get Previous Screen** allows users to run a batch based on a previous customer setup, as shown above. Batch Setup procedures will be covered in detail later on in the manual: **Batch Setup**.

Step 1: Touch the **Cancel** button icon: navigates back to the **Main Screen** ➲



MAIN SCREEN

Batch reports are stored on the PLC and may be retrieved later to be viewed or printed. Reports will be covered in detail later on in the manual: **Reports**.

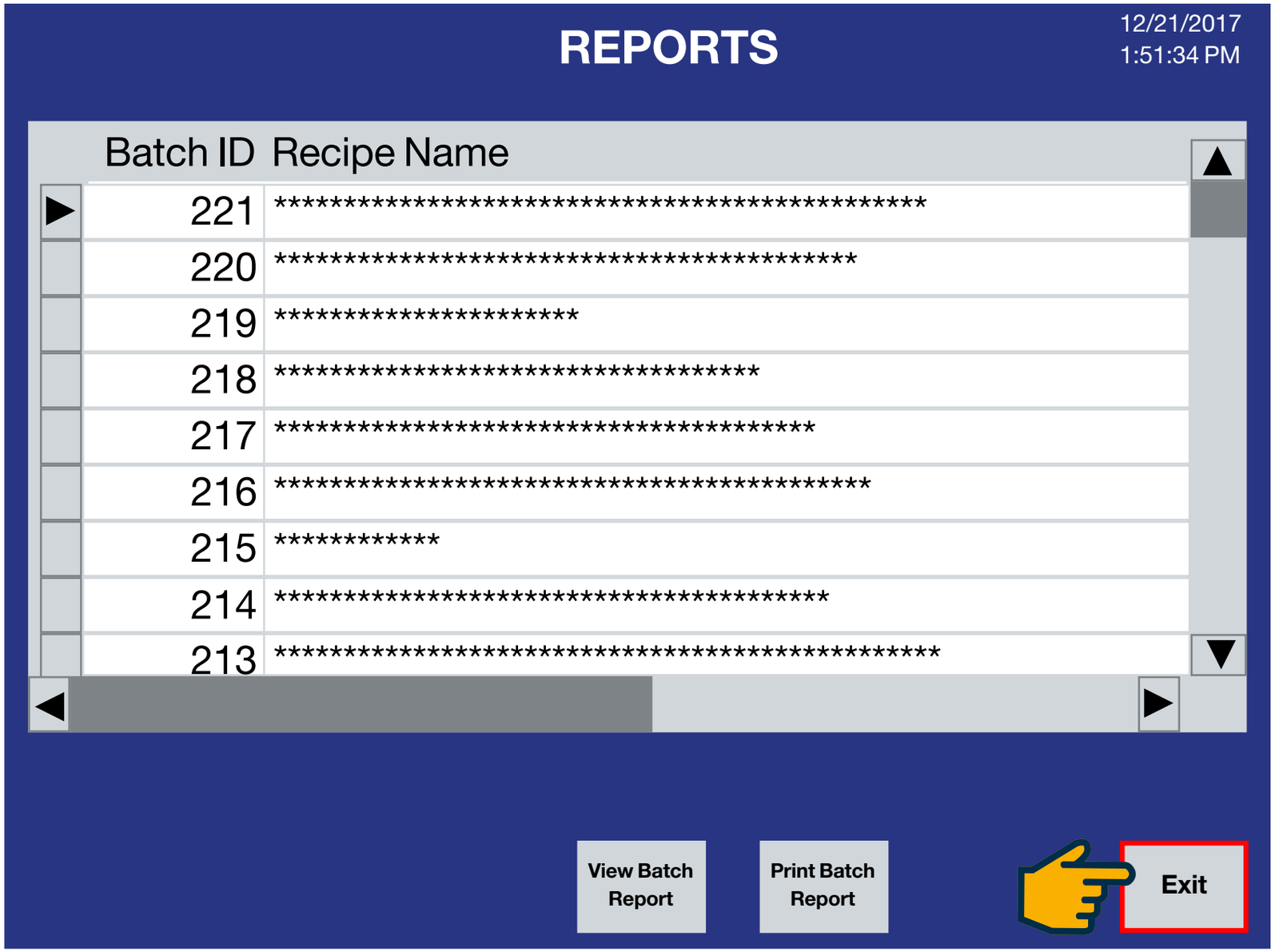
Step 1: Touch the **Reports** button icon: navigates to the **Reports Screen** ➲

Operator:

*Full Access

Install:

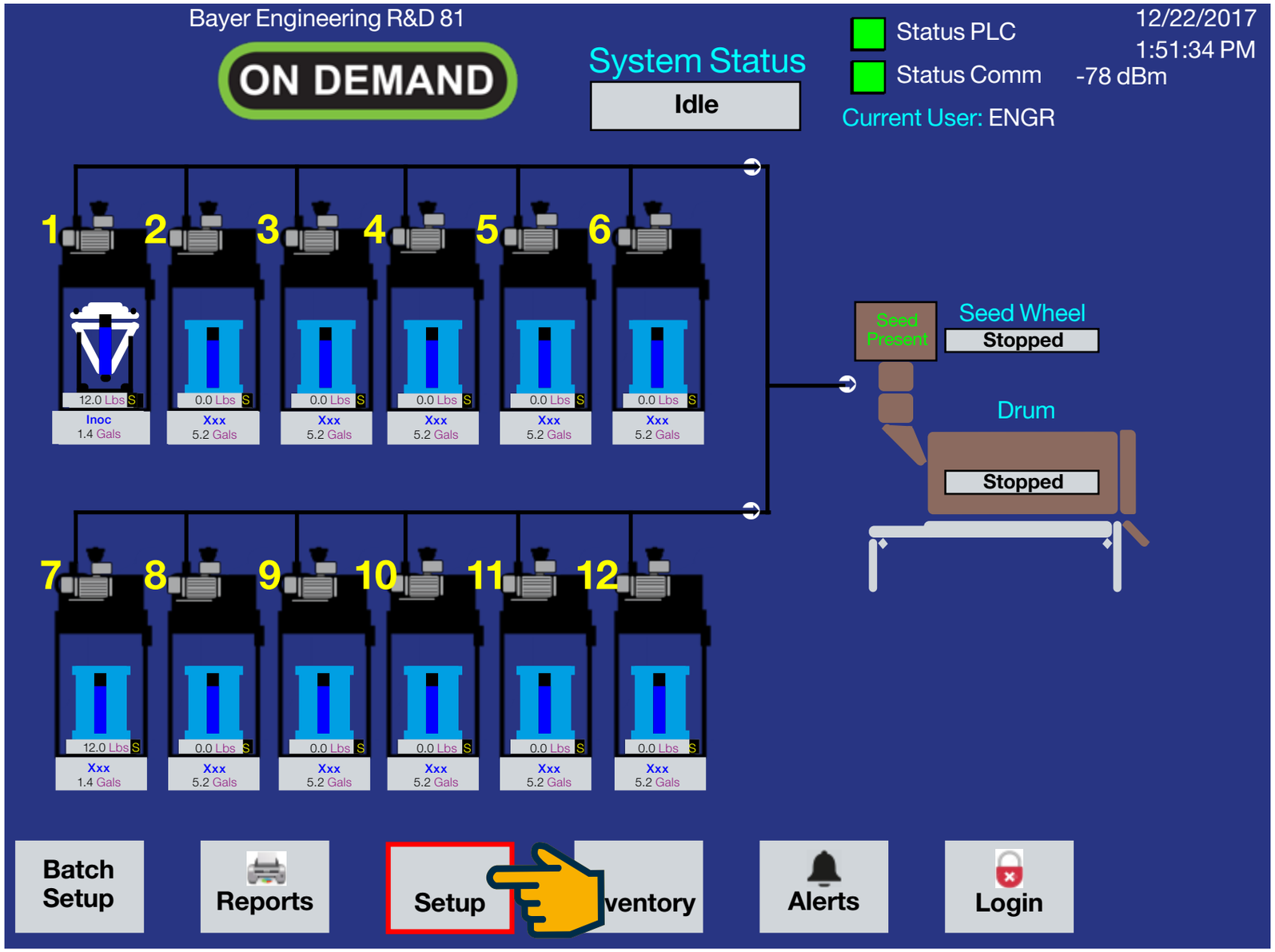
*Full Access



REPORTS SCREEN

Batch reports are stored on the PLC and may be retrieved later to be viewed or printed. Reports will be covered in detail later on in the manual: **Reports**.

Step 1: Touch the **Exit** button icon: navigates back to the **Main Screen** ➲



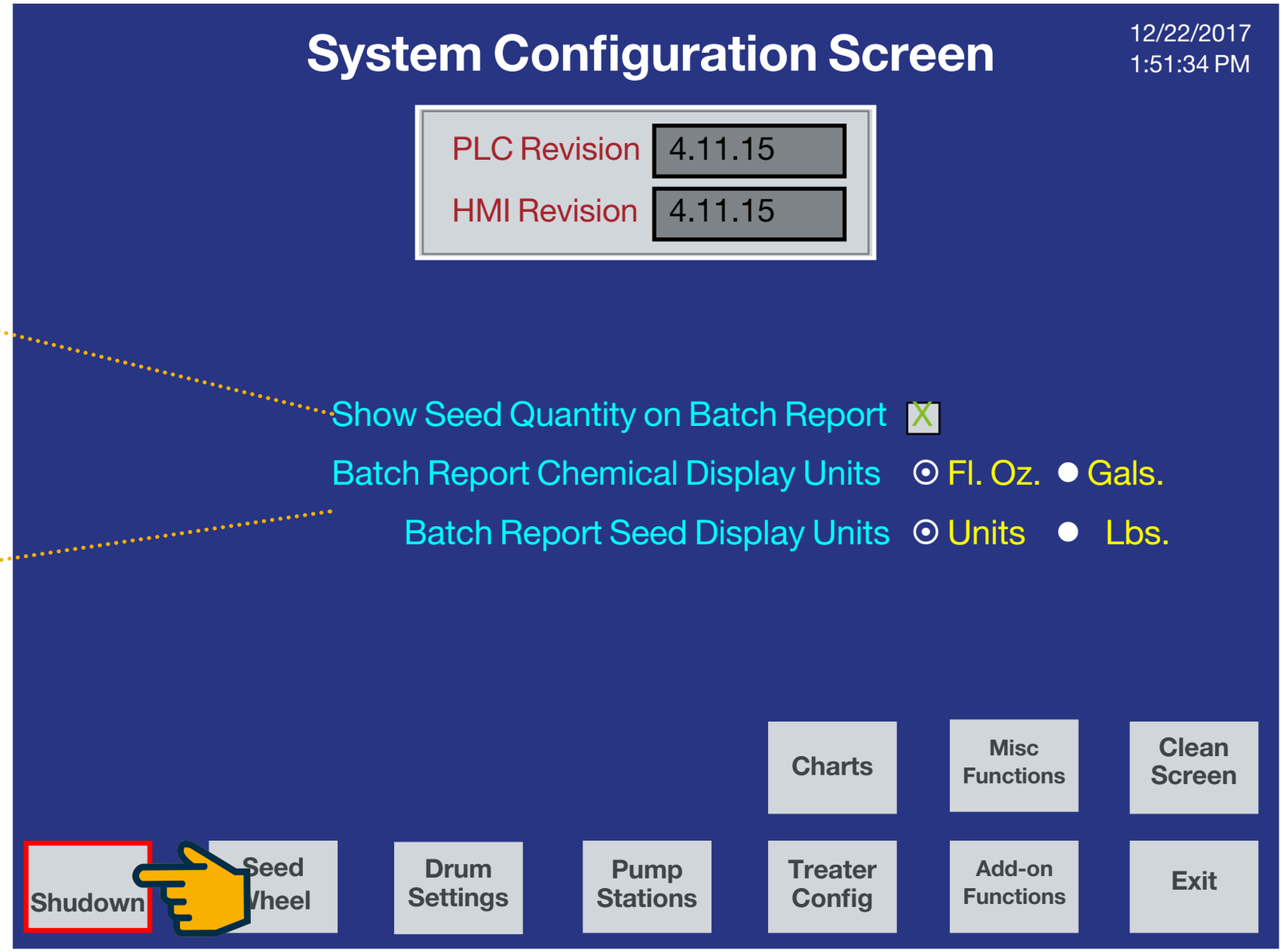
MAIN SCREEN

System setup will be covered in detail later on in the manual: **System Config Setup**.

Step 1: Touch the **Setup** button icon: navigates to the **System Configuration Screen** ➲

Note: if the Show Seed Quantity on Batch Report box (right) is not checked, the seed quantity will not appear on the Batch report.

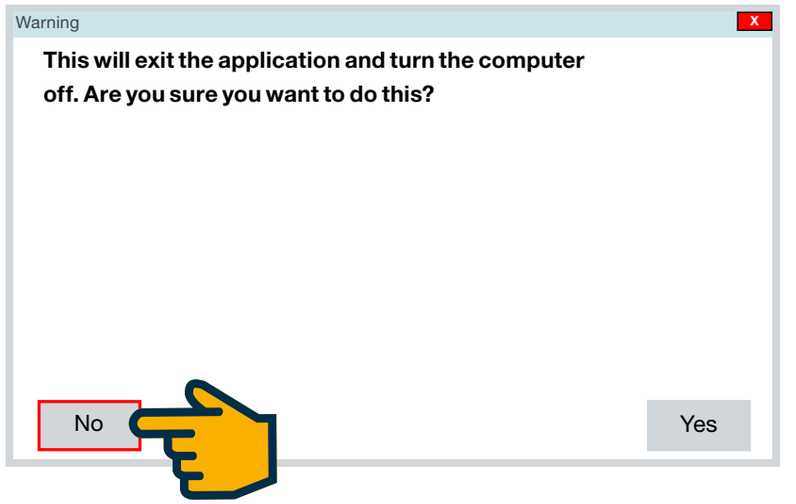
Note: the Chemical and Seed Batch reports will display Units according to which combination the users chooses on this screen. Chemical display = FL OZ or Gals.; Seed display = Units or Lbs.

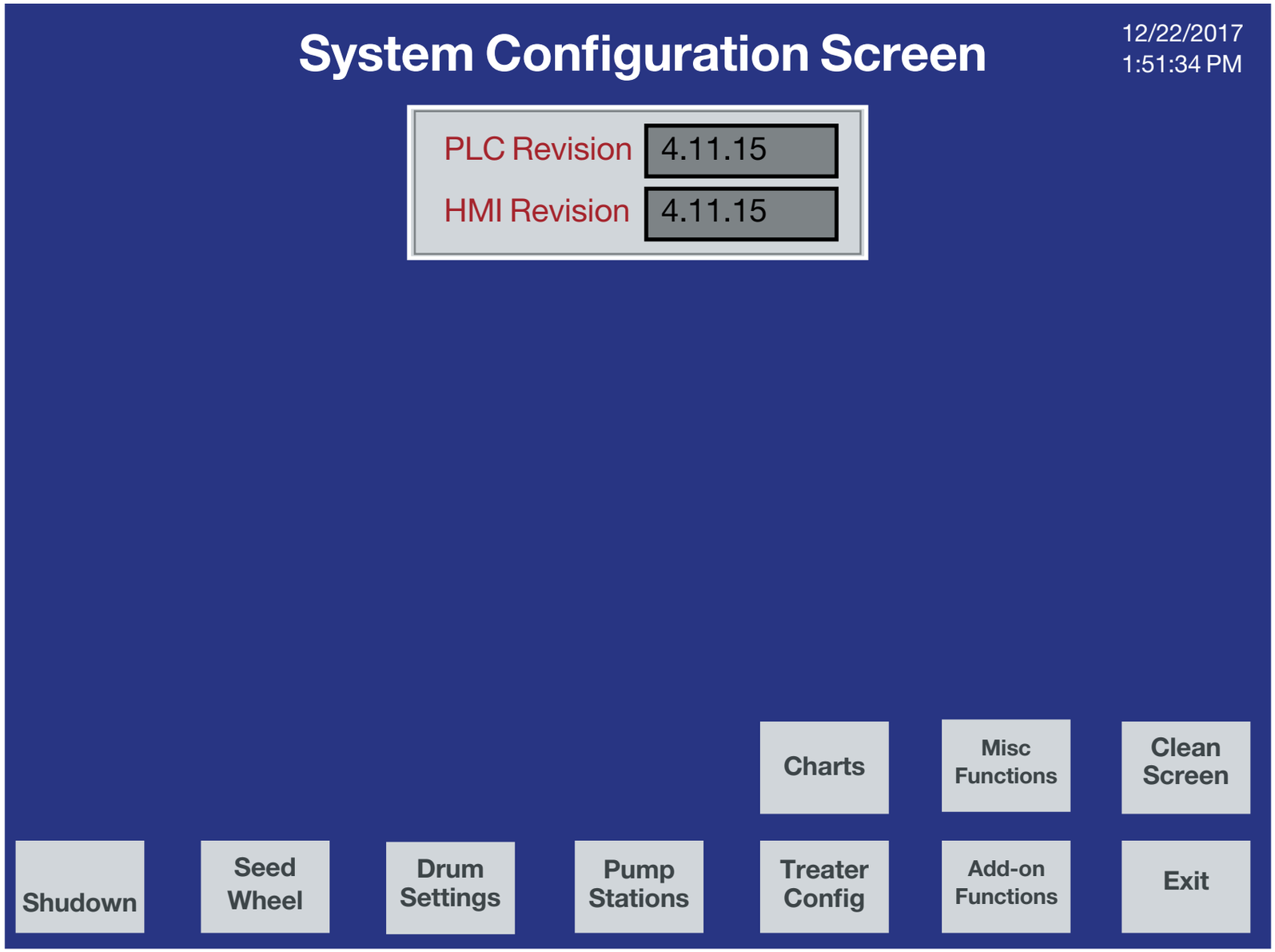


SYSTEM CONFIGURATION SCREEN

The System Configuration Screen allows users to navigate to each specific part of the system without leaving the System Configuration Screen (screens within screens).

Step 1: Touch the **Shutdown** button icon: navigates to the **Shutdown Screen** ➲

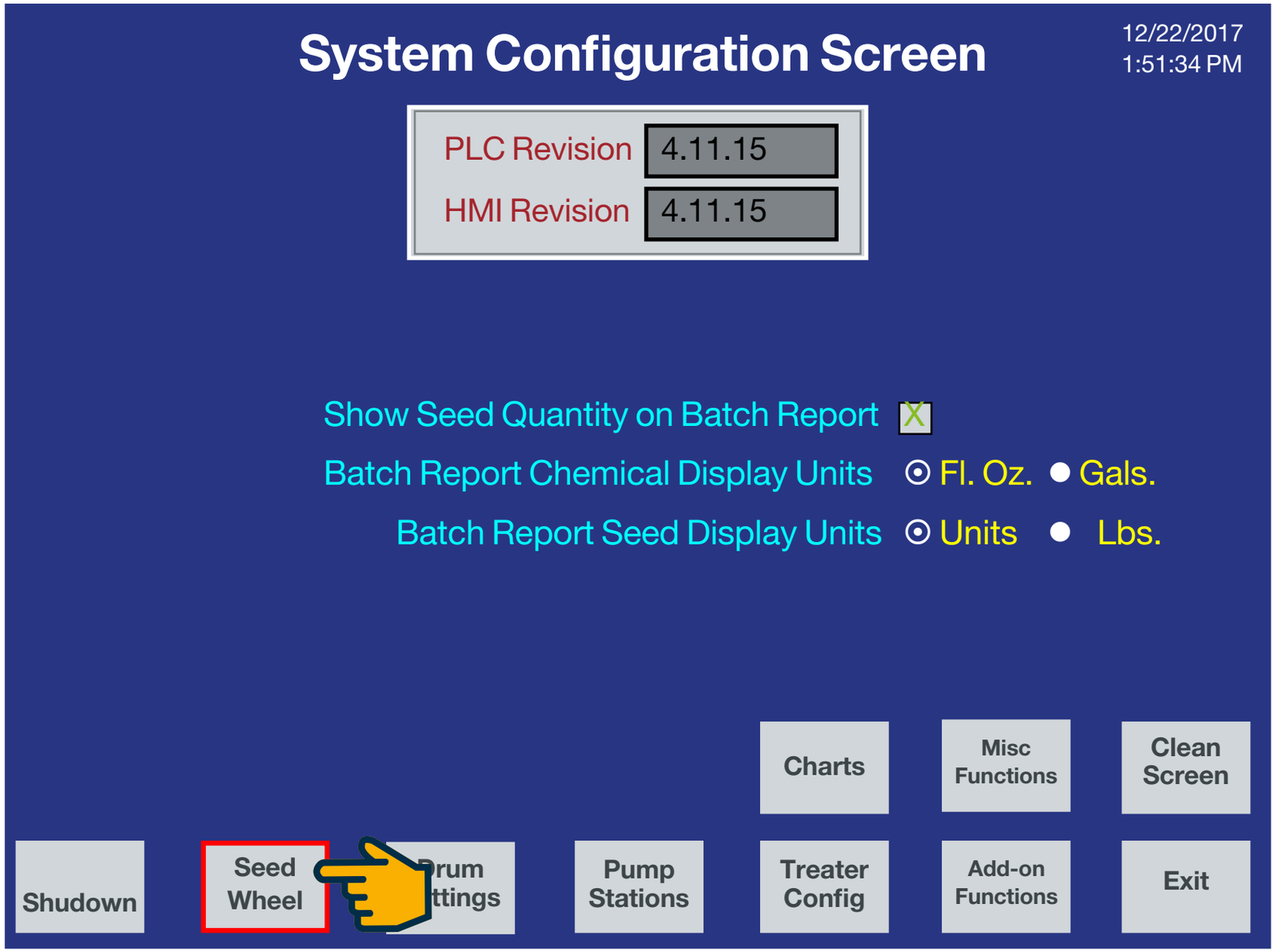




SYSTEM CONFIGURATION SCREEN - SHUT DOWN WARNING POP-UP

The Warning pop-up allows users to answer **No** (changes will not turn off computer) or answer **Yes**, in which case the HMI will exit the application program and turn the computer off.

Step 1: Touch the **No** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

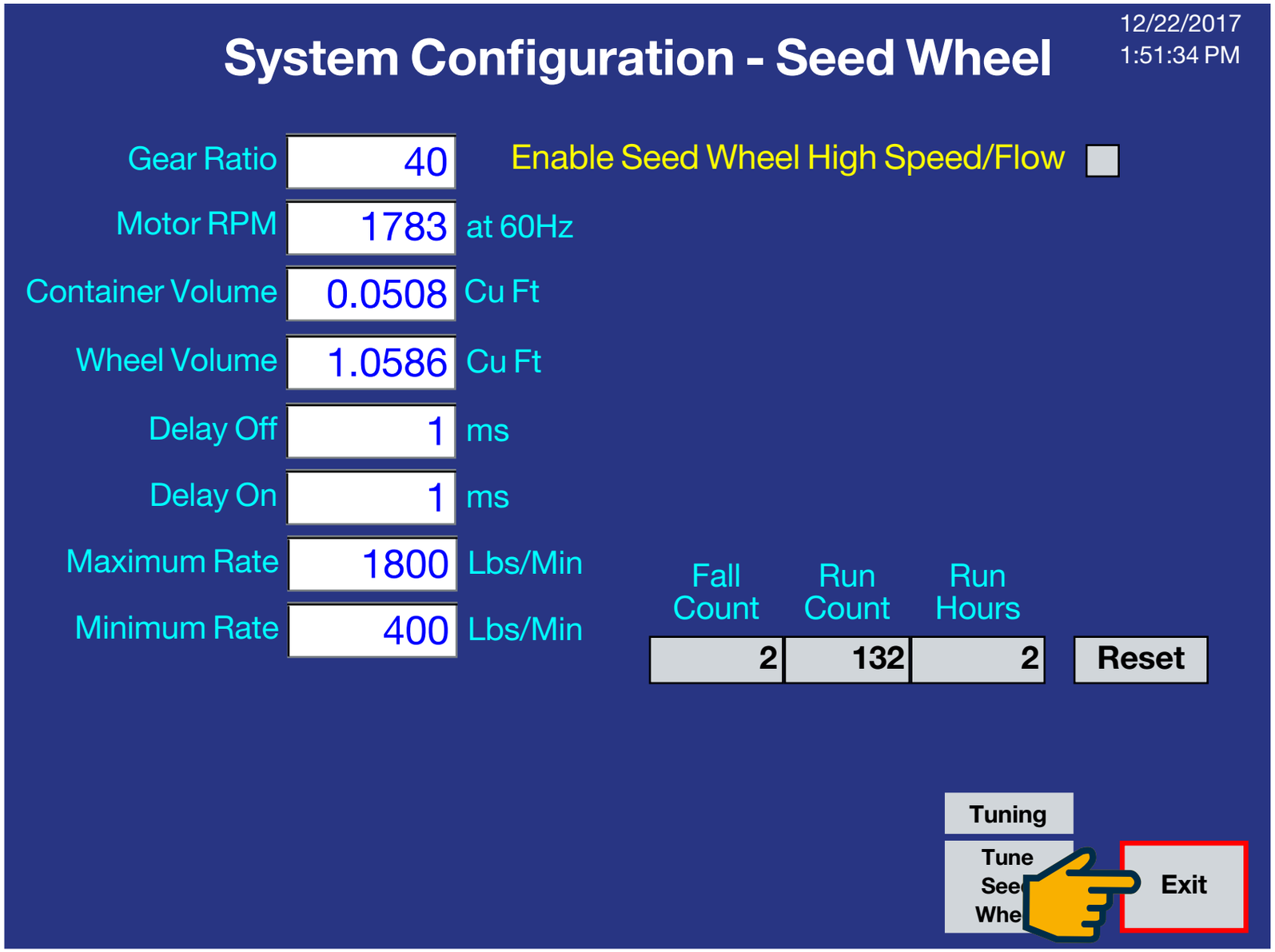
Step 1: Touch the **Seed Wheel** button icon: navigates to the **Seed Wheel Screen** ➲

Operator:

*Read Only

Install:

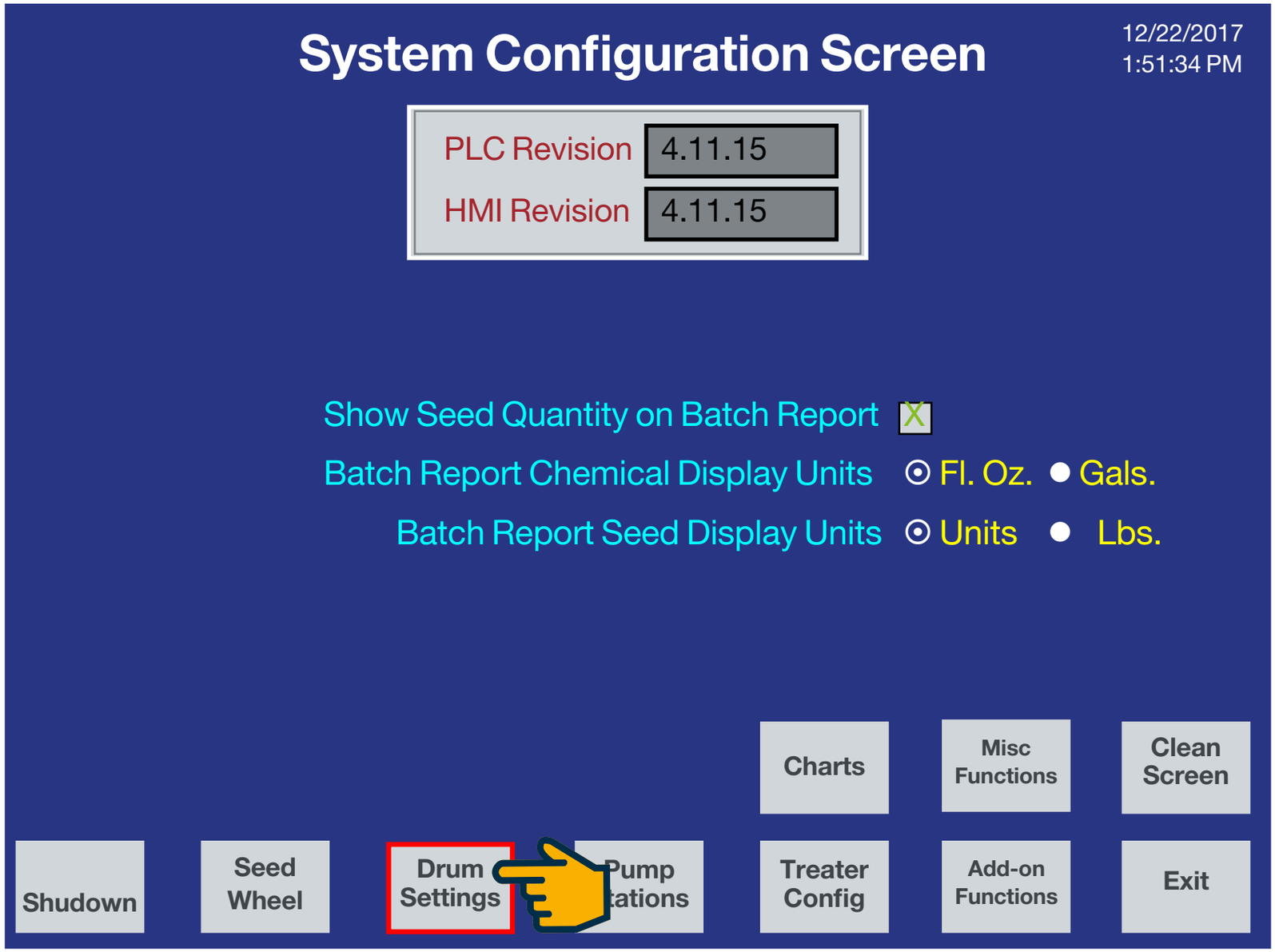
*Full Access



SYSTEM CONFIGURATION SCREEN - SEED WHEEL

Users can view the parameters that have been set during the installation process (refer to **System Config Setup**).

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Drum Settings** button icon: navigates to the **Drum Settings Screen** ➲

Operator:

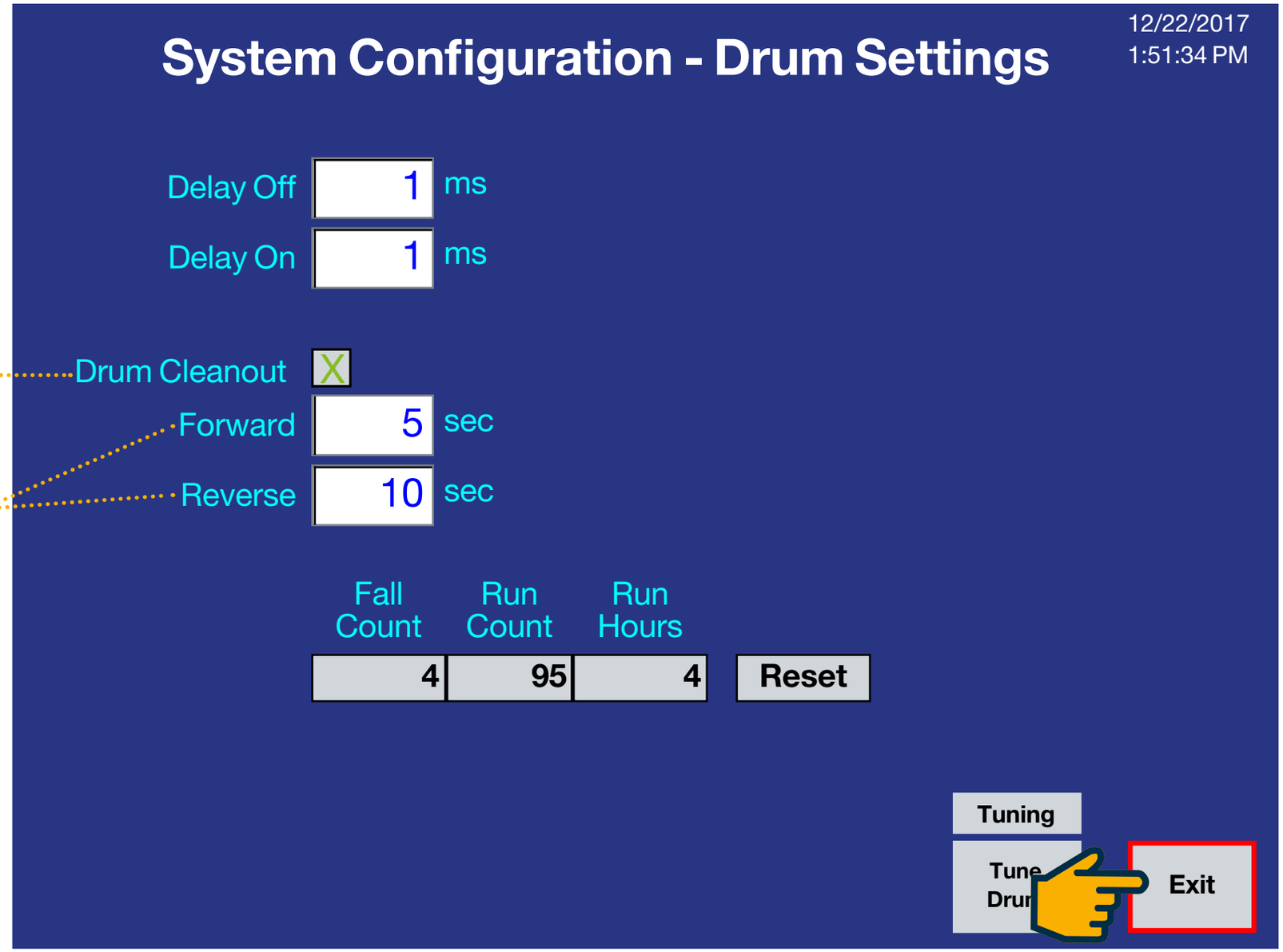
*Read Only

Install:

*Full Access

If the drum clean out option is not enabled, touch the **Drum Clean out** square to enable the option.

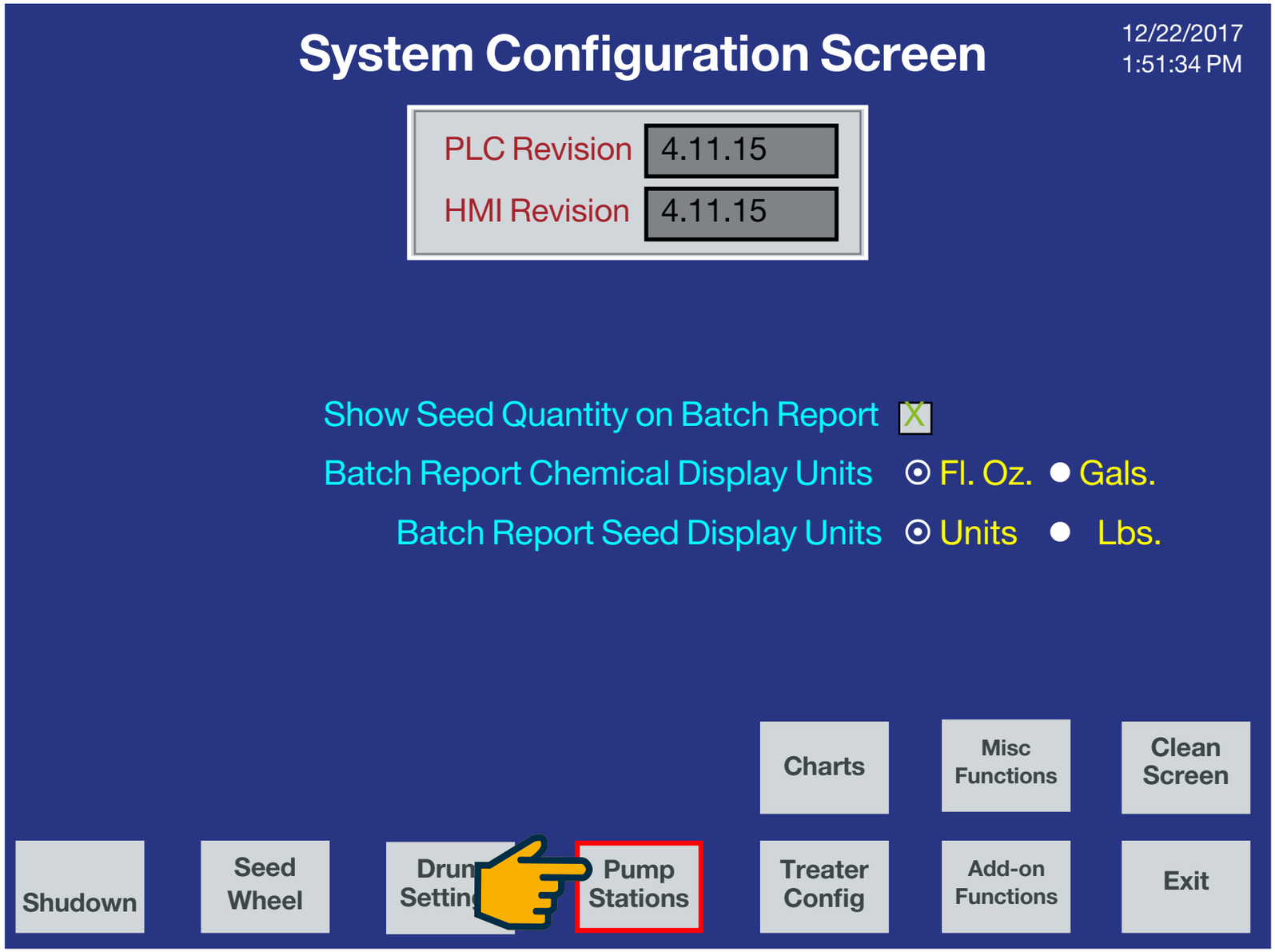
Touch the two numerical fields and enter the **Forward** and **Revers** times value on the keypad pop-up.



SYSTEM CONFIGURATION SCREEN - DRUM SETTINGS

Users can view the parameters that have been set during the installation process (refer to **System Config Setup**).

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲

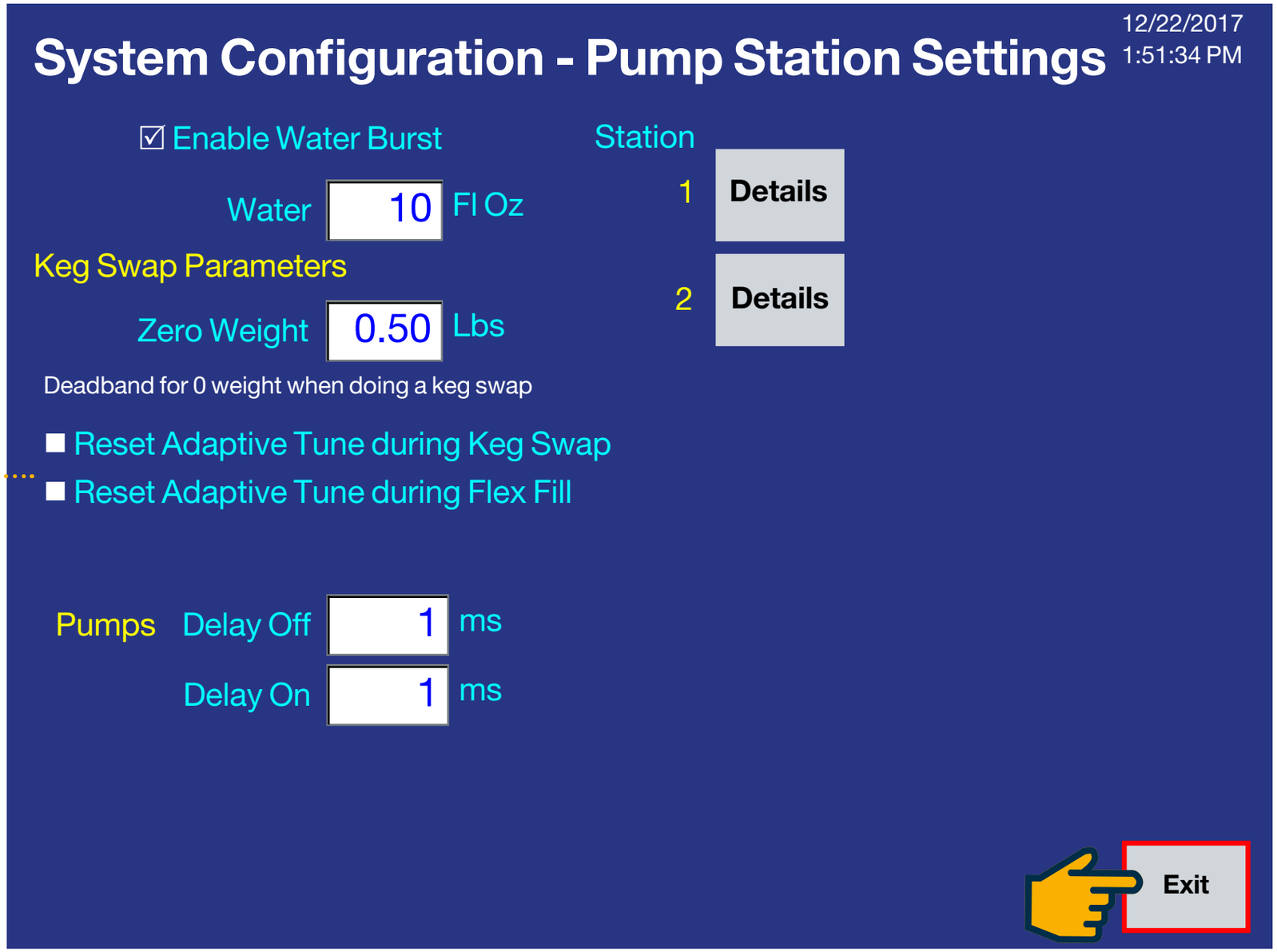


SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Pump Stations** button icon: navigates to the **Pump Stations Screen** ➲

Operator:
*Read Only
Install:
*Full Access

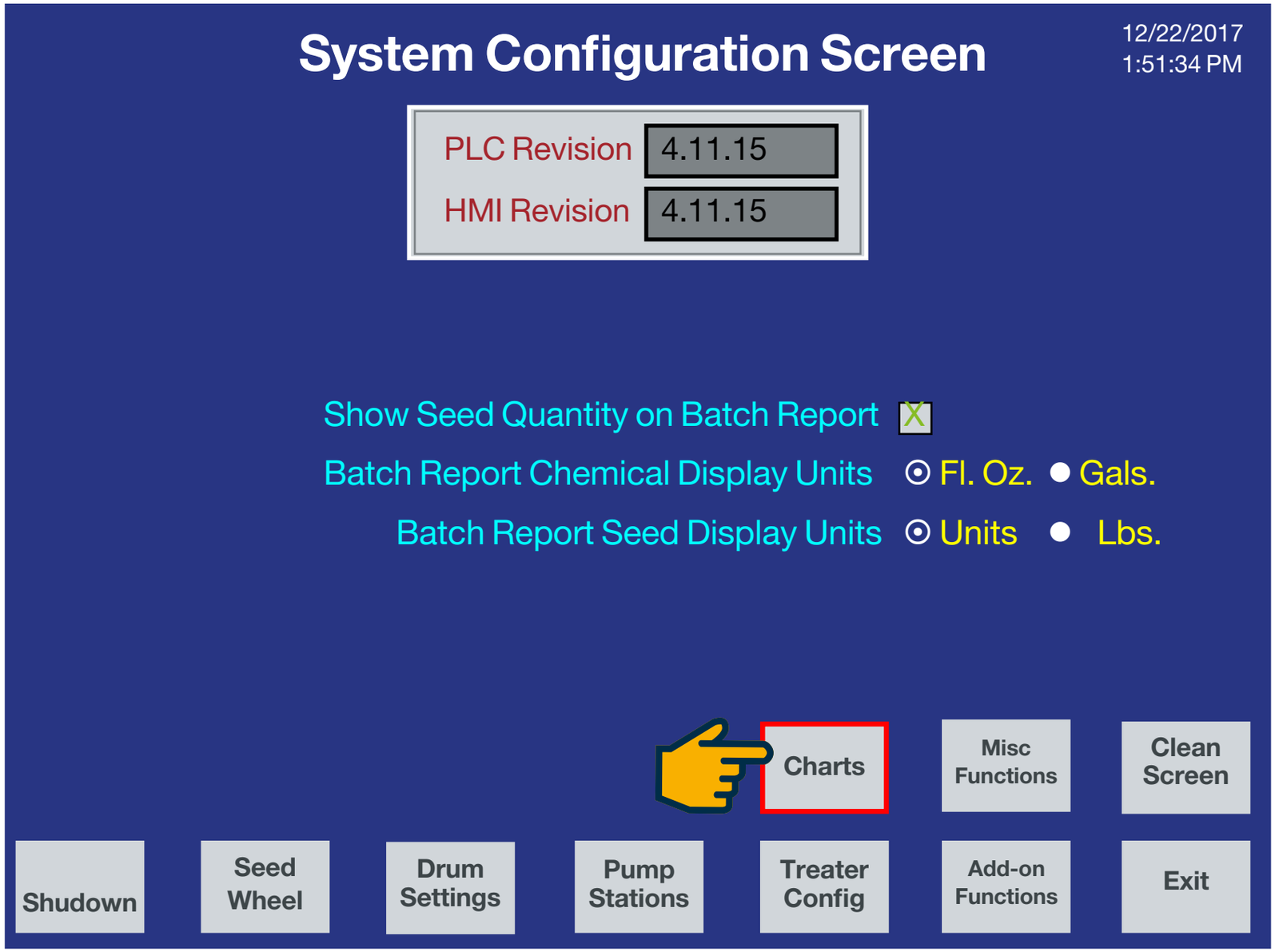
Note: if checked (either Keg swap or Flex Fill box or both) the PLC will automatically reset the Adaptive Tune (pump speed starting point) after a keg swap or flex fill.



SYSTEM CONFIGURATION SCREEN - PUMP STATION SETTINGS

Users can view the parameters that have been set during the installation process (refer to **System Config Setup**).

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

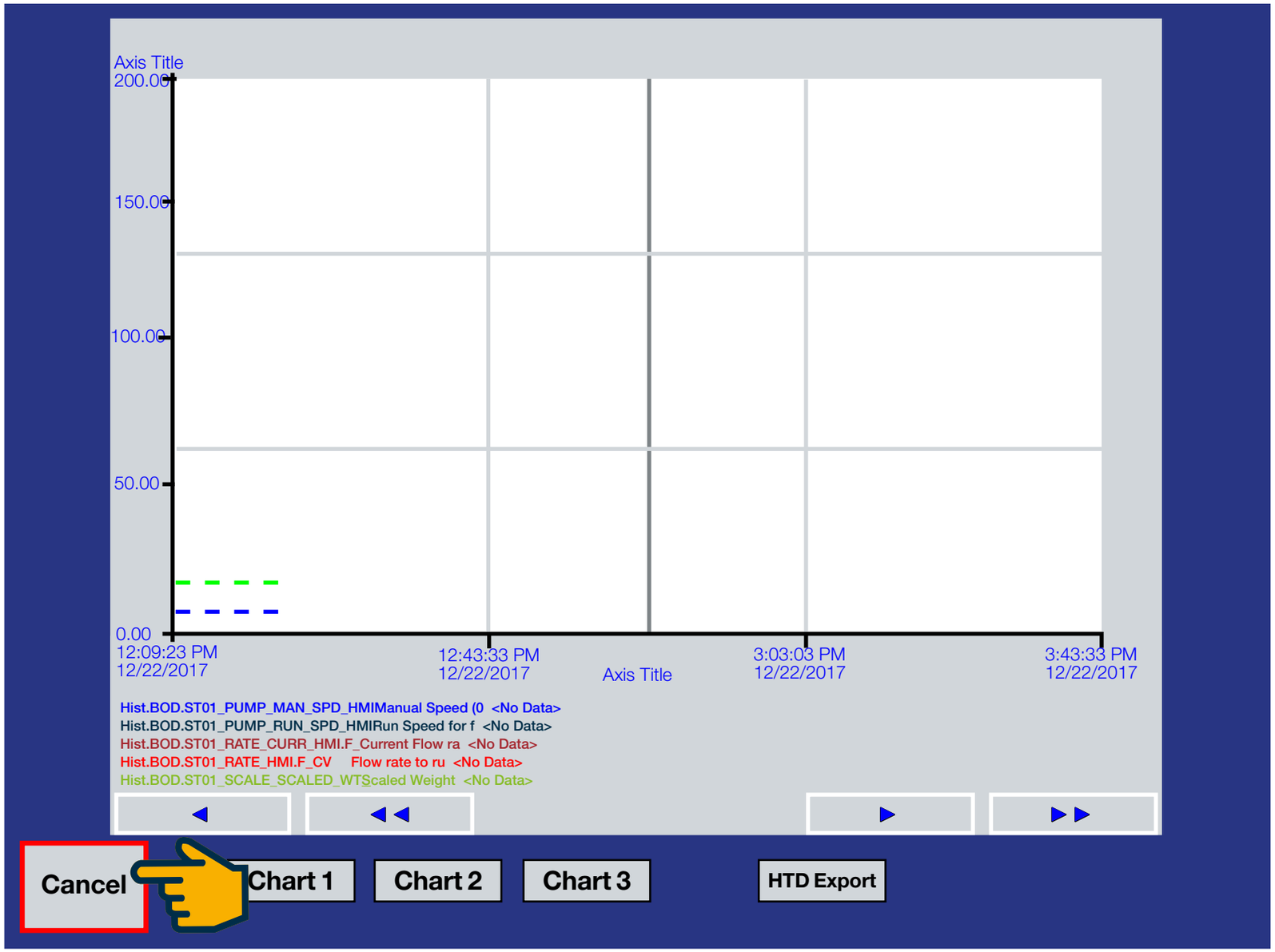
Step 1: Touch the **Charts** button icon: navigates to the **Charts Screen** ➲

Operator:

*Full Access

Install:

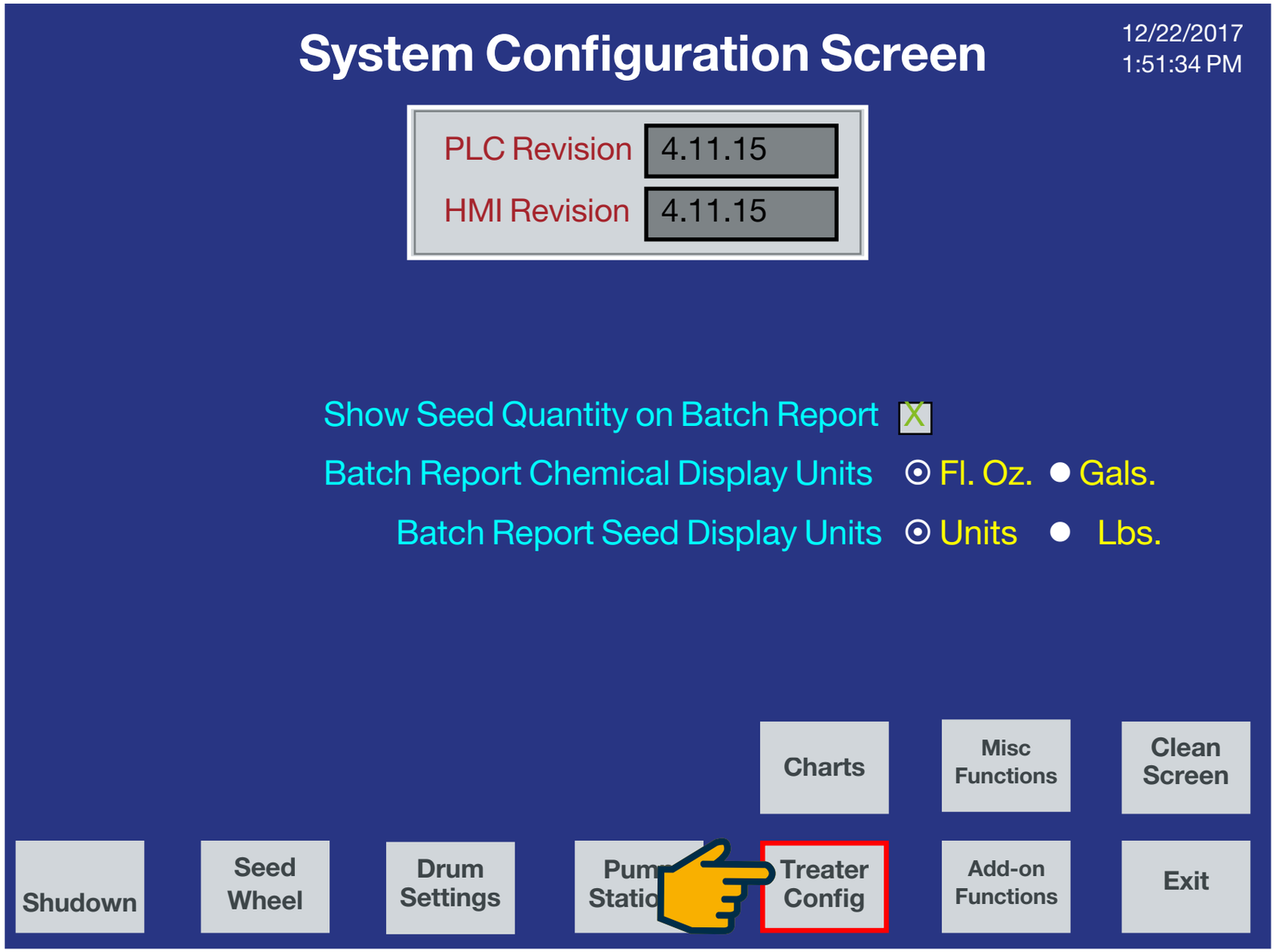
*Full Access



SYSTEM CONFIGURATION SCREEN - CHARTS

Display screen only.

Step 1: Touch the **Cancel** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Treater Config** button icon: navigates to the **Treater Config Screen** ➲

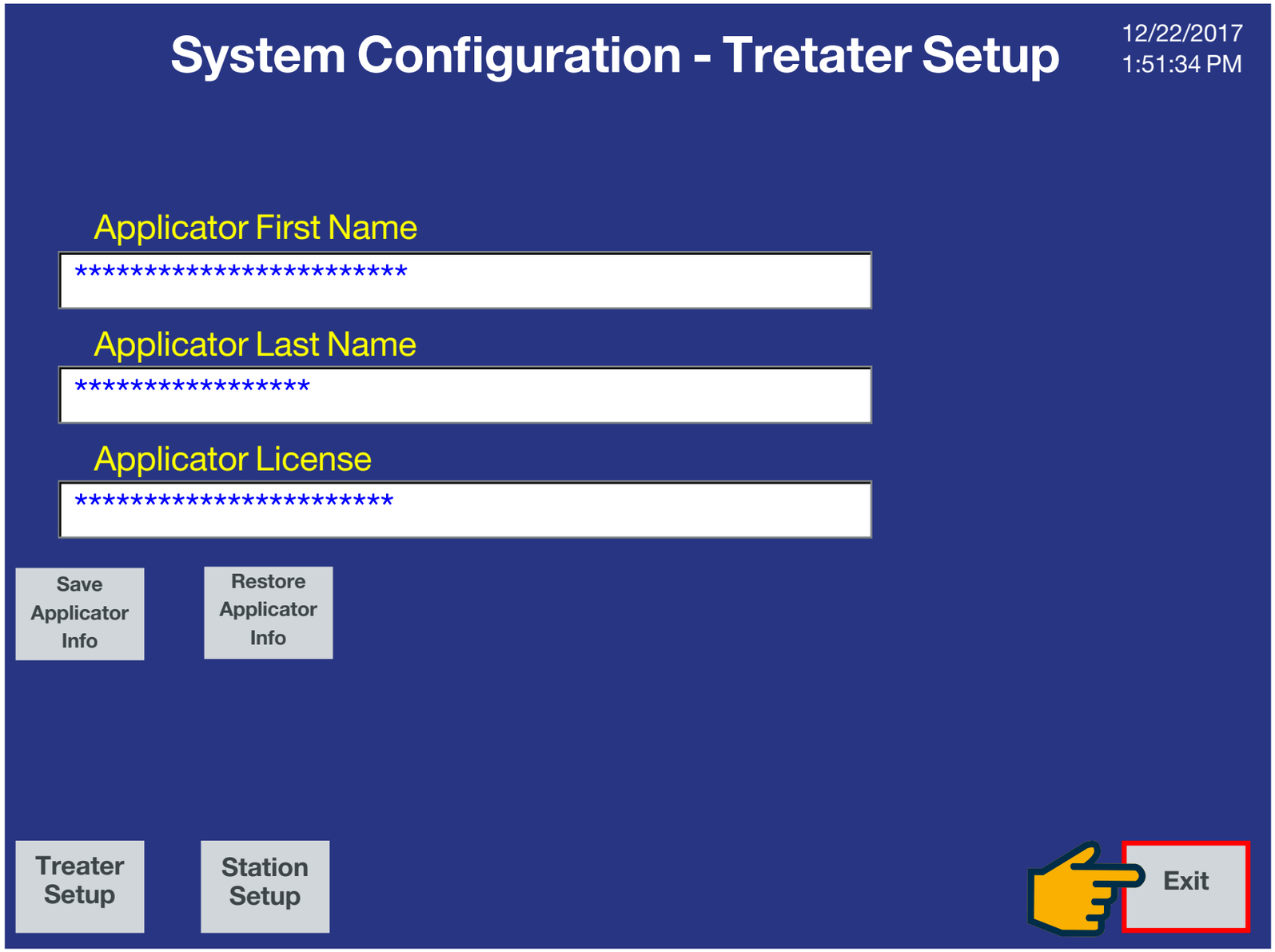
Operator:

*Full Access to Treater Config screen

*No Access to Treater Setup or Station Setup Screens

Install:

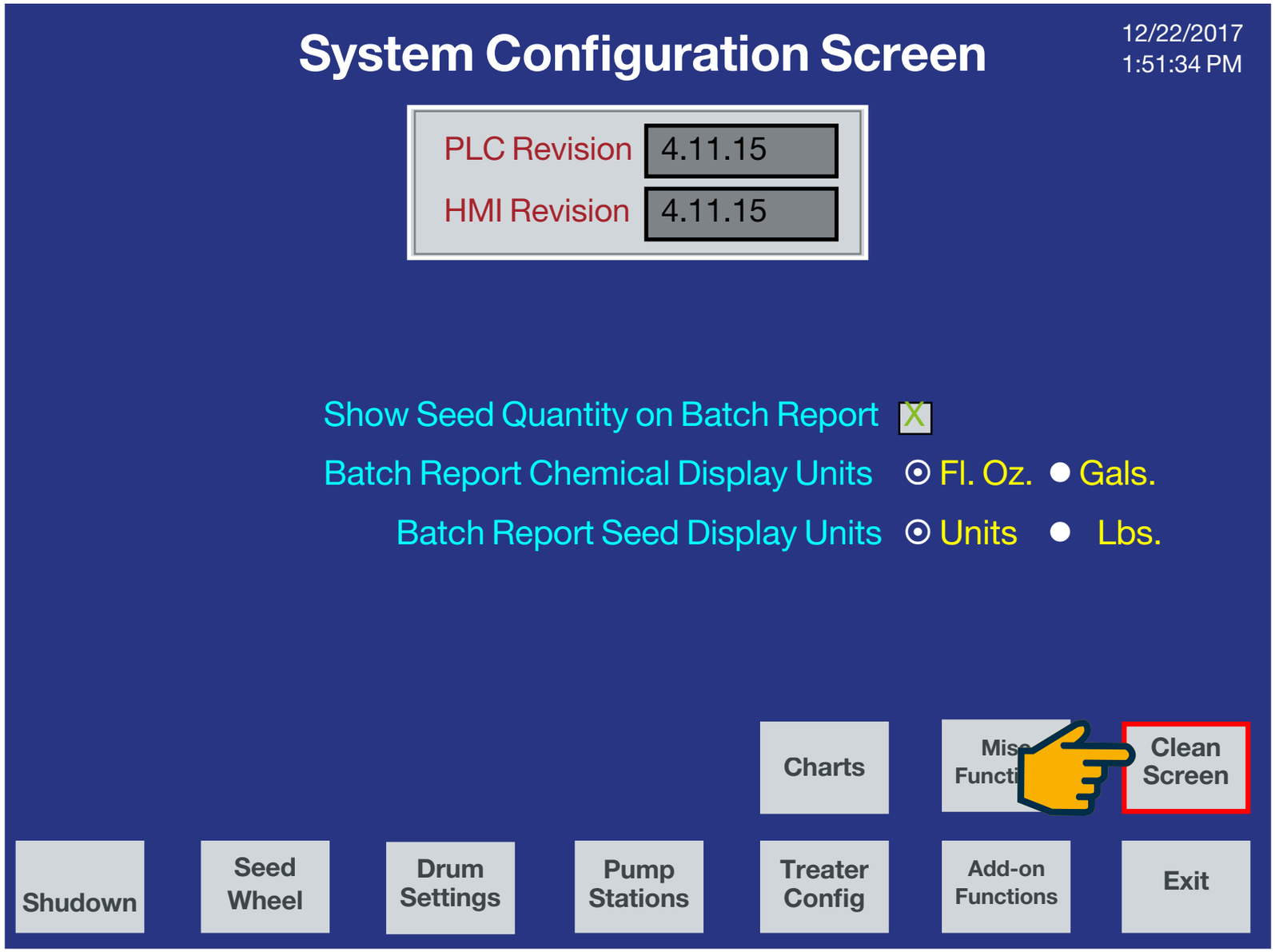
*Full Access



SYSTEM CONFIGURATION SCREEN - TREATER SETUP

Users can provide their own identification that will display on the Reports to identify Users to Batches run. Touch each field to enter the information on a keyboard pop-up. Touch the Save Applicator Info button icon to save this information or touch the Restore Applicator Info button to restore previous information.

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Clean Screen** button icon: navigates to the **Clean Screen** ➲

Operator:

*Full Access

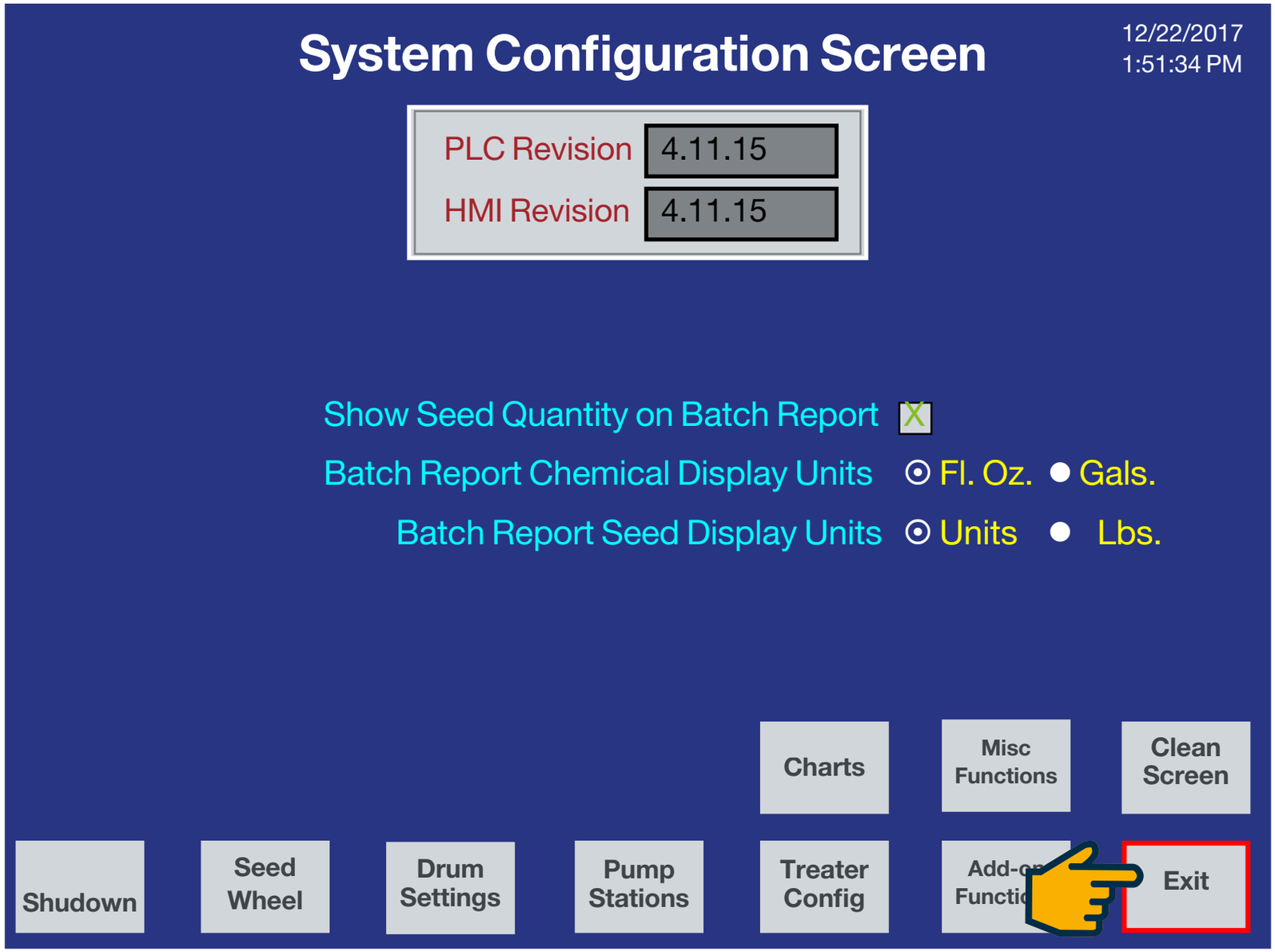
Install:

*Full Access

SYSTEM CONFIGURATION SCREEN - CLEAN SCREEN

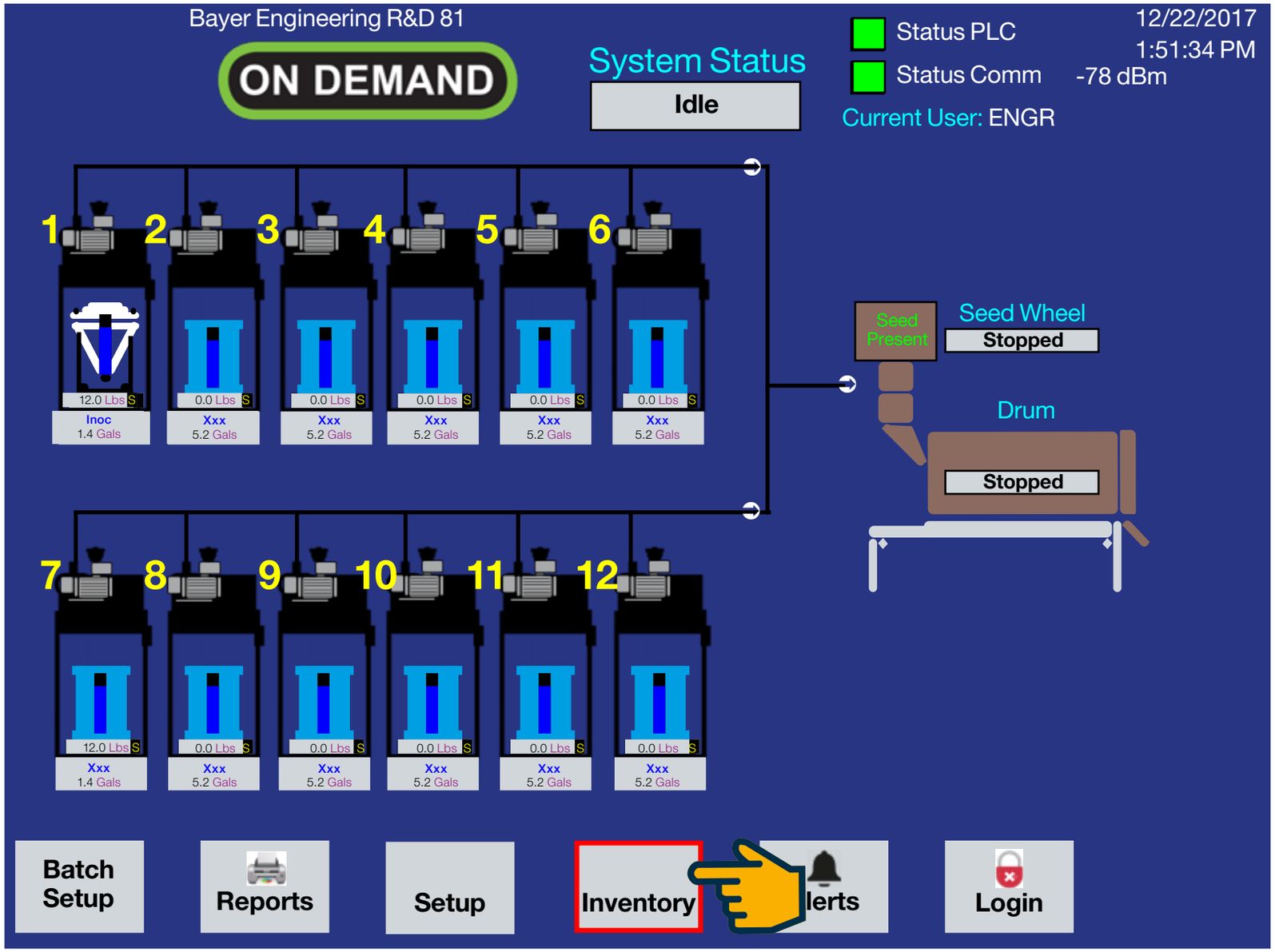
This screen allows users to physically wipe finger prints off of the touch screen without touching the navigation buttons displayed on the System Configuration Screen. Recommend using an anti-static/anti-fog lens wipe designed for glass, plastic and polycarbonate surfaces.

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **Main Screen** ➲



MAIN SCREEN

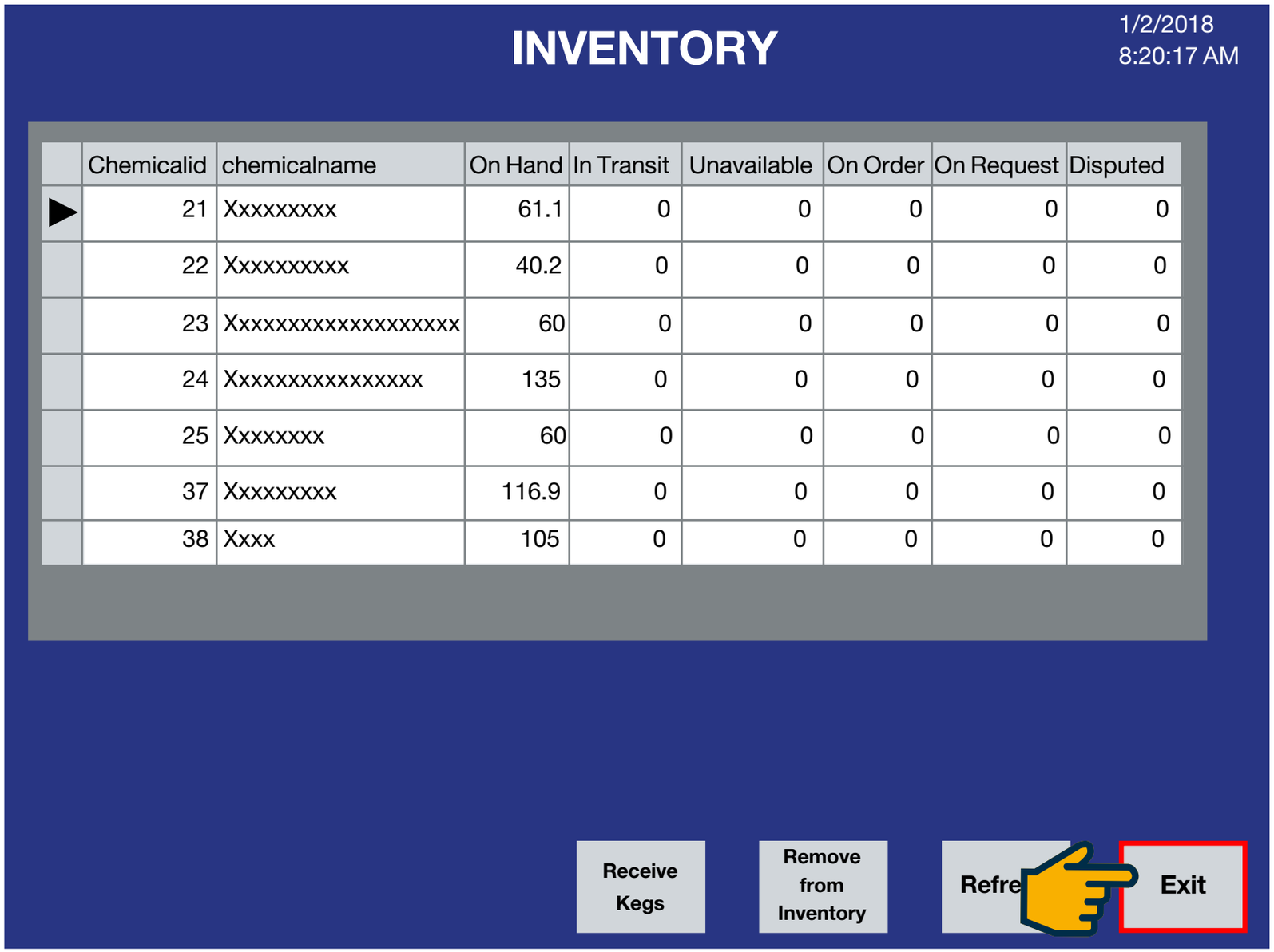
Step 1: Touch the **Inventory** button icon: navigates to the **Inventory Screen** ➲

Operator:

*Full Access

Install:

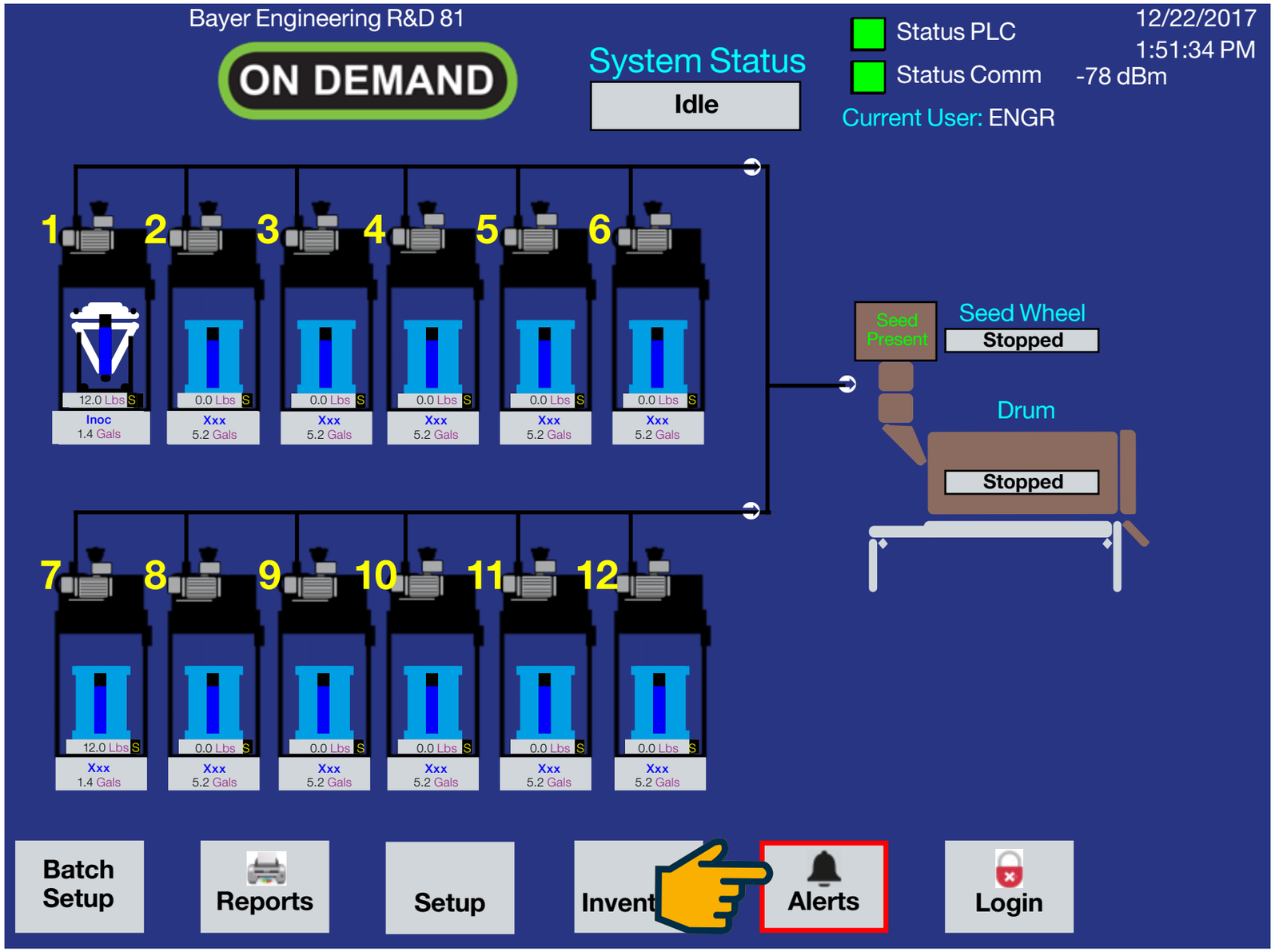
*Full Access



INVENTORY SCREEN

The populated Inventory detail displayed above is **READ ONLY**. Inventories take approximately 3-10 minutes to update and populate the Inventory detail screen from the website once the keg is scanned. This will be covered later on in the manual: **Add Inventory**.

Step 1: Touch the **Exit** button icon: navigates to the **Main Screen** ➲



MAIN SCREEN

Step 1: Touch the **Alerts** button icon: navigates to the **Alerts Screen** ➲

ALERTS SCREEN

The following machine errors will cause an **Alert** pop up message to display, as shown right; the system will stop:

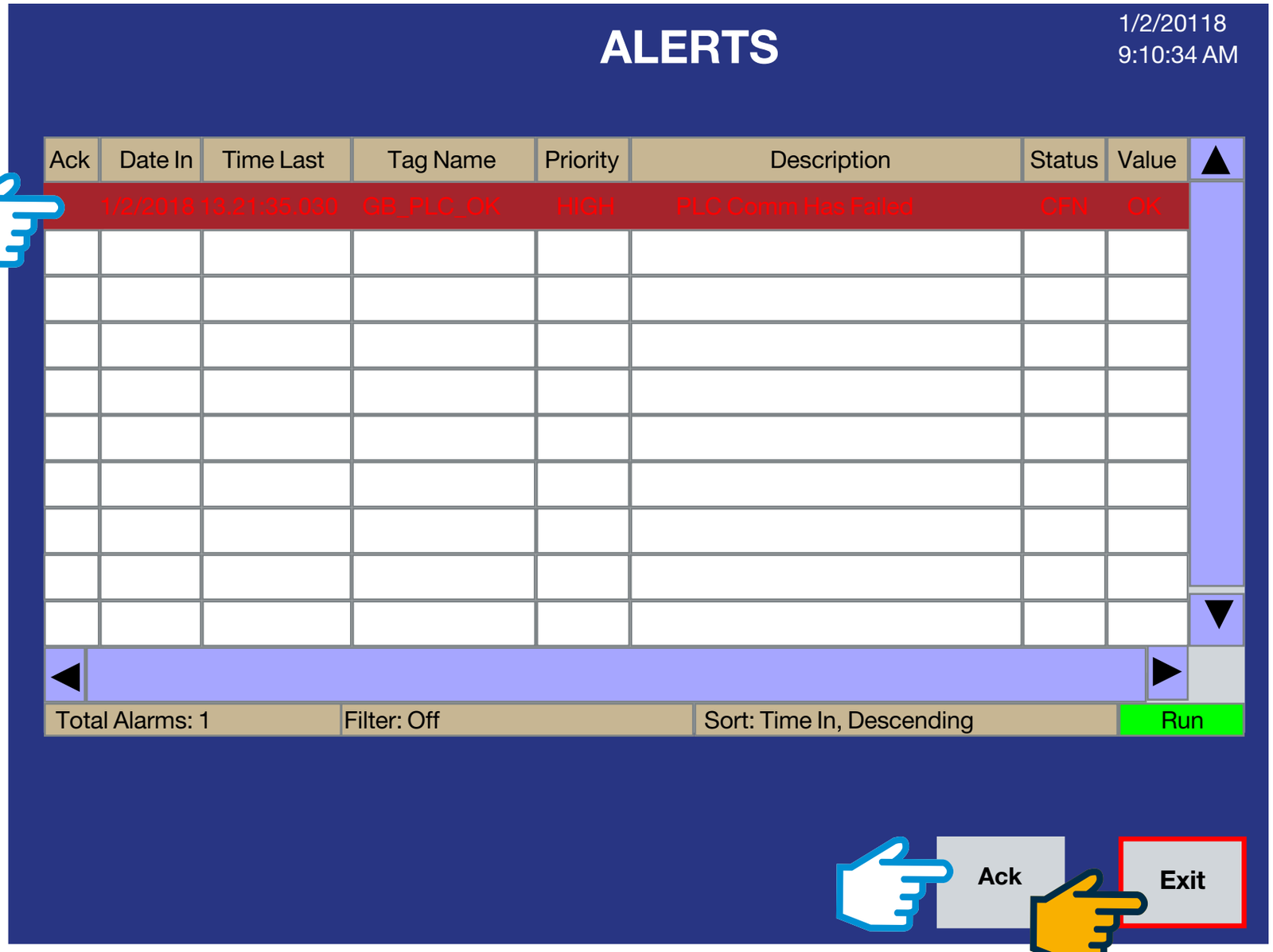
- **Scale failure**
- **Seed wheel motor failure**
- **Drum motor failure**
- **Pump failure**

Step 1: Touch a **displayed alert**

Step 2: Touch the **Ack** button icon to acknowledge the alert.

- Operators can create an **Alert** ticket on the website.

Step 3: Touch the **Exit** button icon: navigates to the **Main Screen** ➲



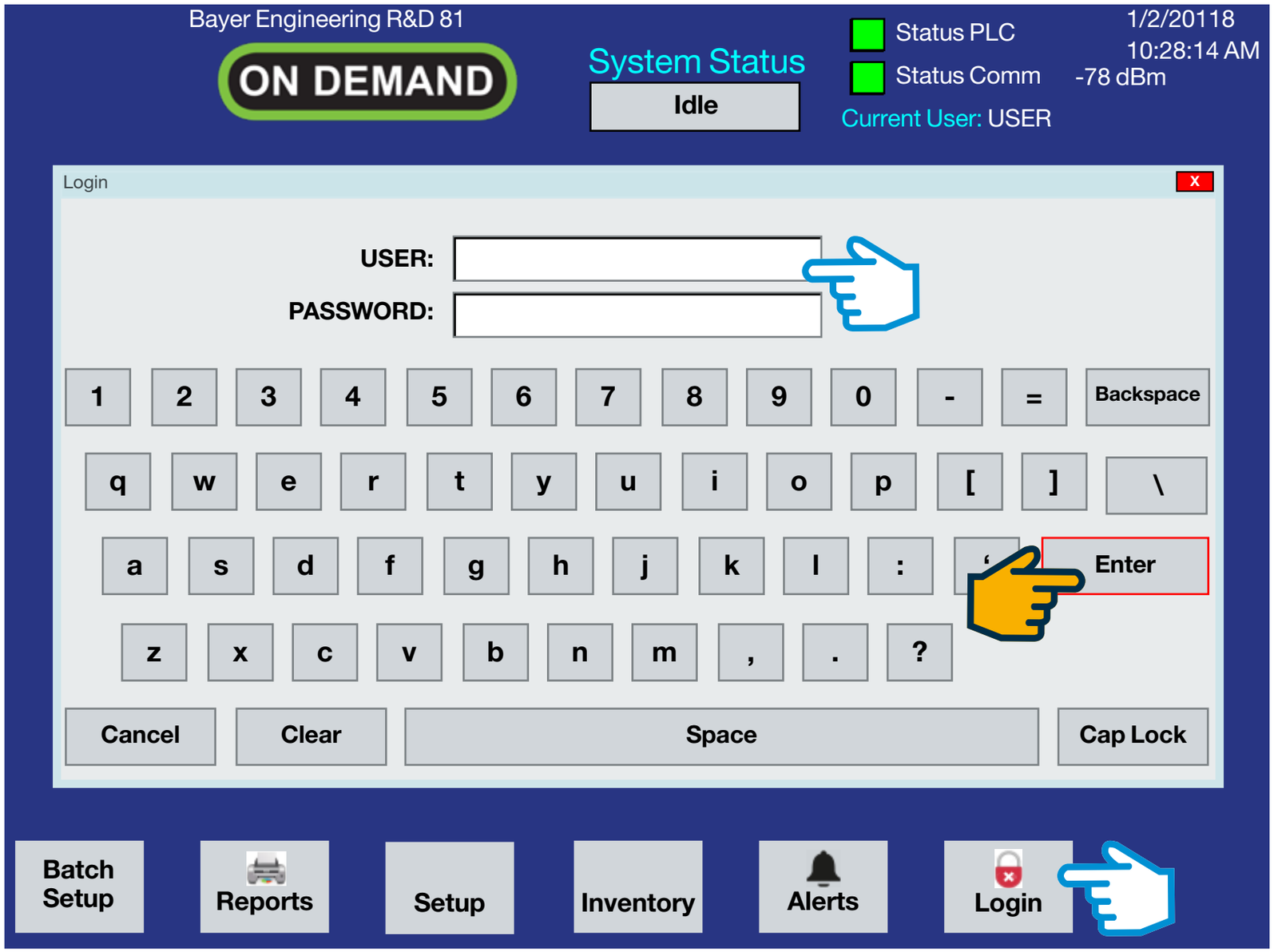
MAIN SCREEN - LOGIN POP-UP

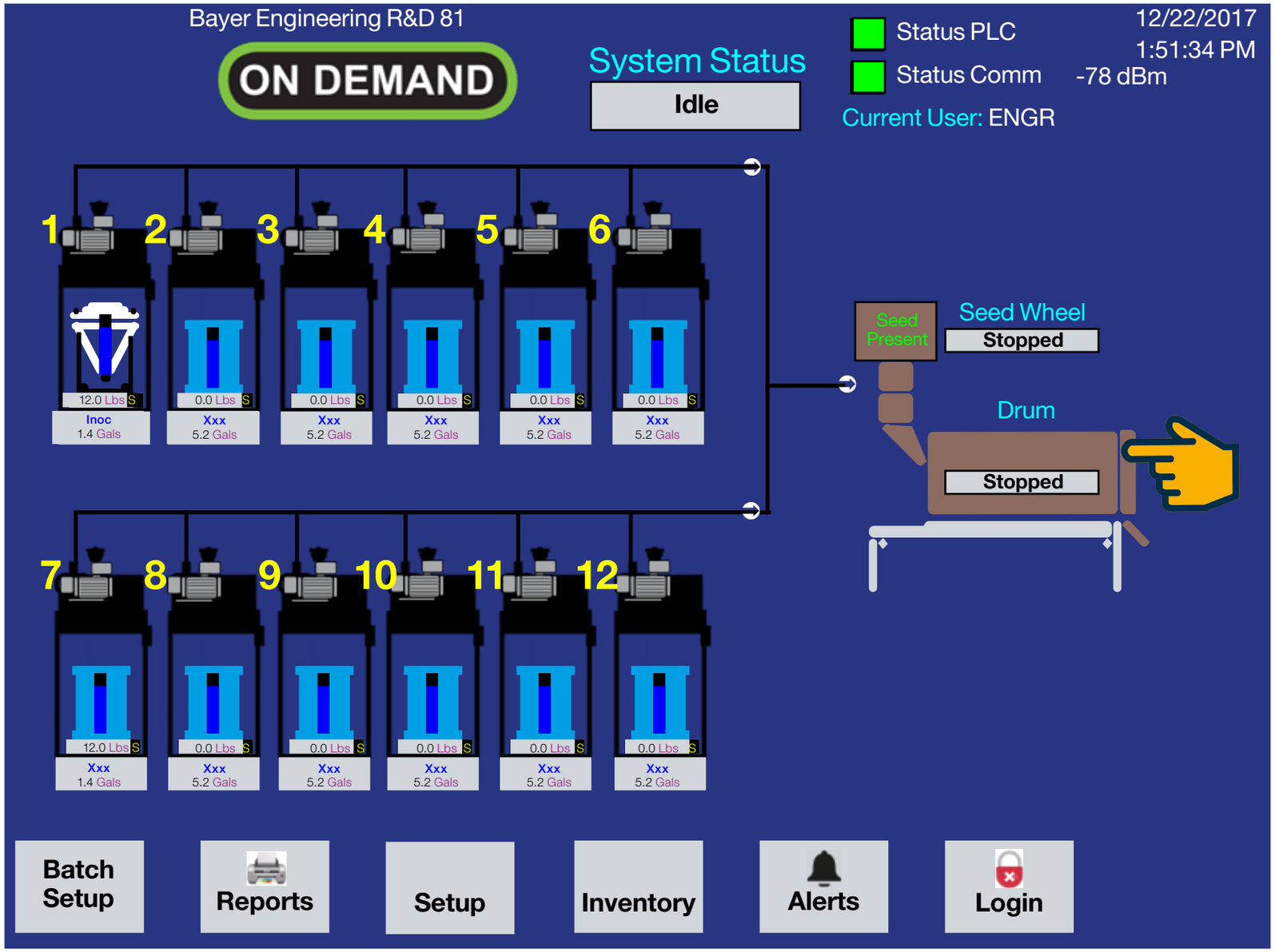
When the system boots up initially (refer to page 5), the HMI automatically logs into the application system at the **USER** level (or at the level it was last logged into, such as installer). To perform certain functions, users will need to log in at the installer level as follows...

Step 1: Touch the **Login** button icon: displays the **Login** pop-up touch pad, shown above.

Step 2: Touch the **USER** & **PASSWORD** fields to enter a protected User name and Password.

Step 3: Touch the **Enter** button icon: **Login** pop-up closes.





MAIN SCREEN

Step 1: On the **Main Screen**, touch in the area of the treater graphic icon (as shown above): navigates to the **Treater Detail Screen ➲**

TREATER DETAIL SCREEN

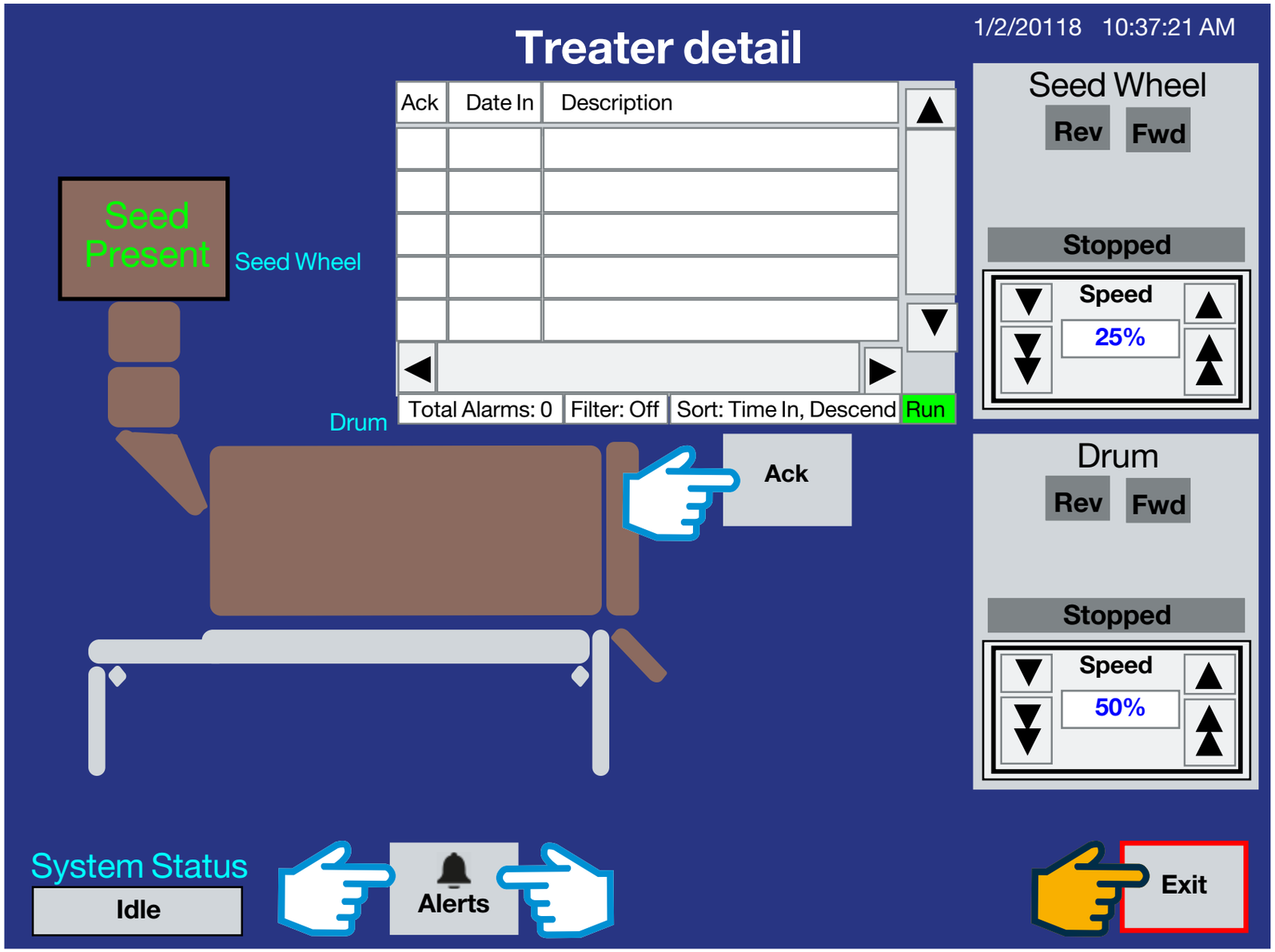
This screen allows users to see treater details and functionality of the Seed Wheel and the Drum VFD. Users can enable a smaller image of the **Alerts Screen** to display as a layer on top of the **Treater Detail Screen** as follows...

Step 1: Touch the **Alerts** button icon: displays the **Alerts** pop-up screen, shown above (this is not the full **Alerts Screen**). Users can keep the **Alerts Screen** pop-up layer active.

Step 2: Touch the **Ack** button icon underneath the pop-up to acknowledge an alarm when one appears.

Step 3: To remove this pop-up, touch the **Alerts** button icon: the **Alerts** pop-up screen closes.

Step 4: Touch the **Exit** button icon: navigates to the **Main Screen** ➲

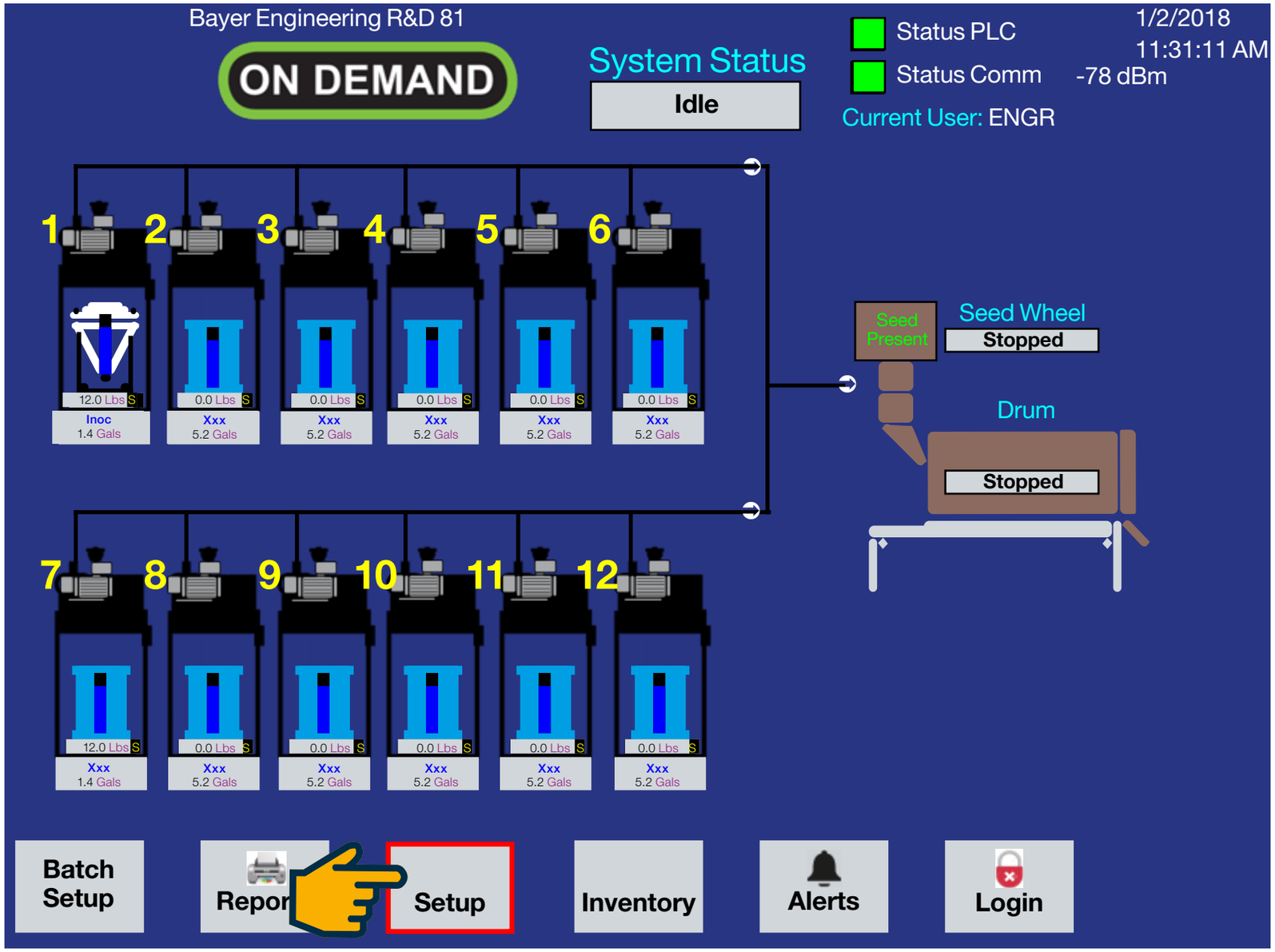


SYSTEM CONFIG SETUP

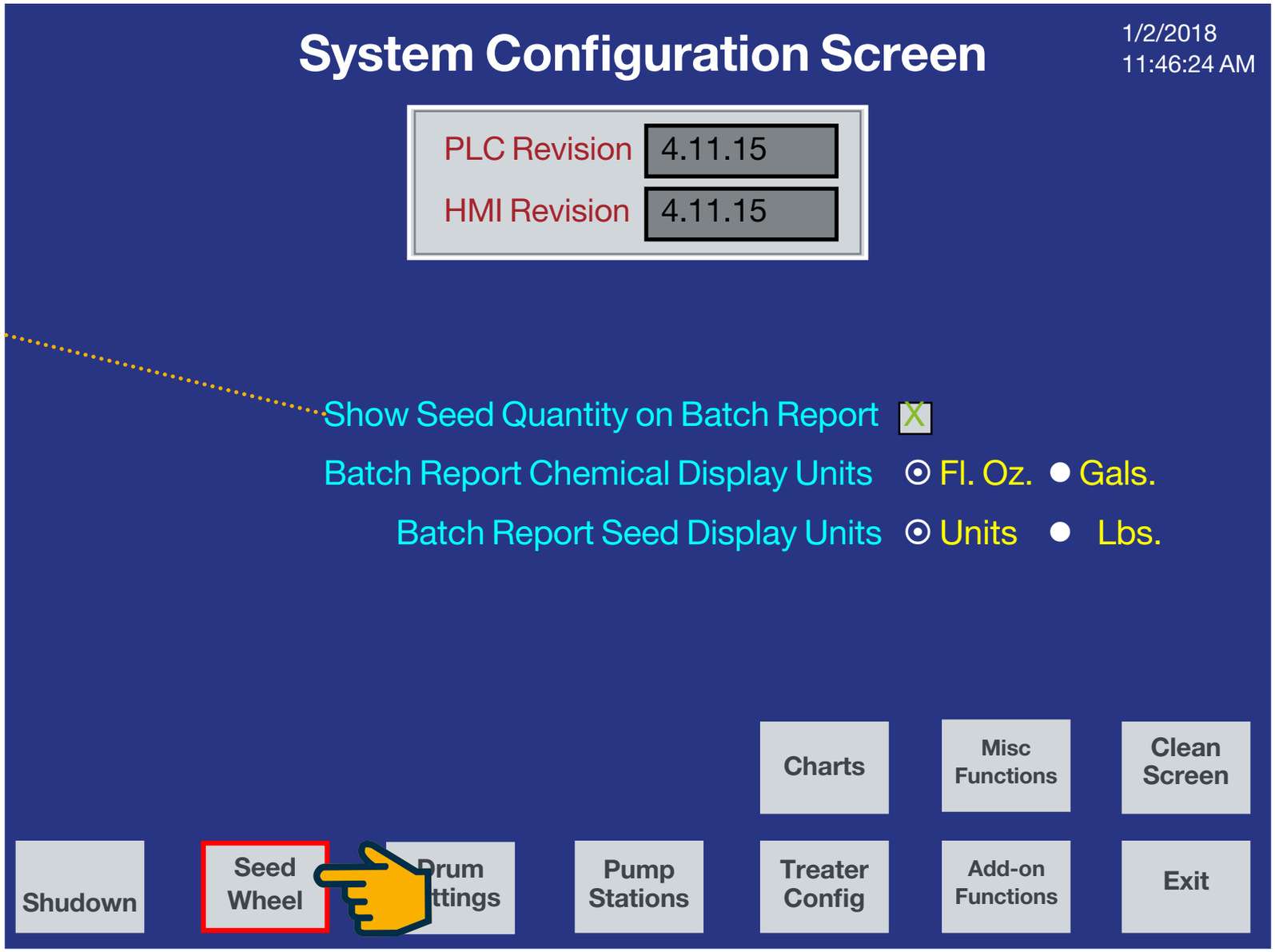
Main Screen - System Config Setup

At the beginning of a treating season, ensure the following system checks are made to ensure proper system functionality. Users will need to be logged into the system as Installer.

Step 1: Touch the **Setup** button icon: navigates to the **System Configuration Screen ➲**



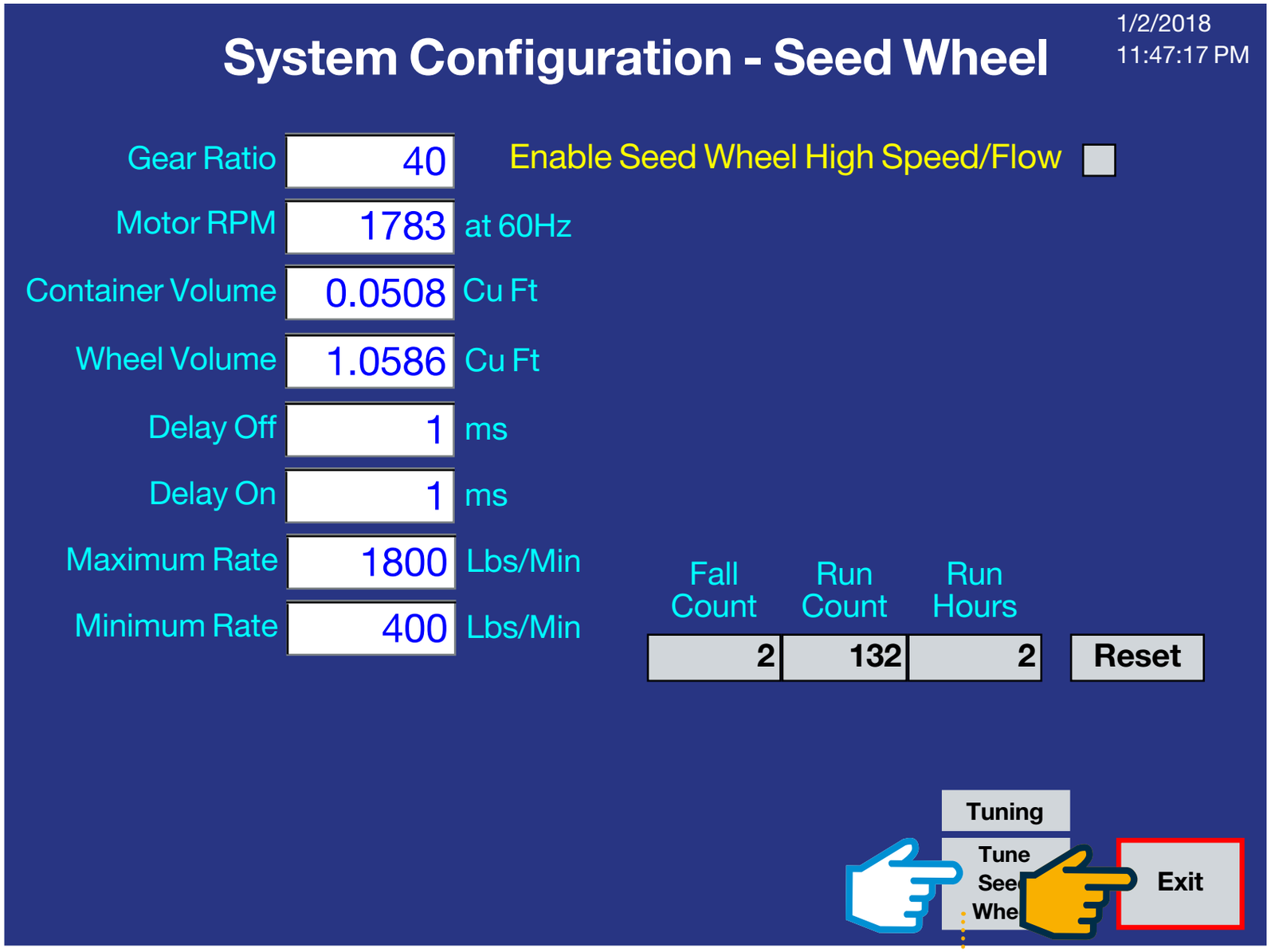
Note: if the Show Seed Quantity on Batch Report box (right) is not checked, the seed quantity will not appear on the Batch report.



SYSTEM CONFIGURATION SCREEN

The System Configuration Screen allows users to navigate to each specific part of the system without leaving the System Configuration Screen (screens within screens). Ensure the Show Seed Quantity on Batch Report box is checked (enabled, as shown above). Touch to enable/disable this function.

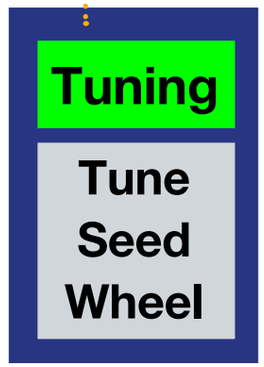
Step 1: Touch the **Seed Wheel** button icon: navigates to the **Seed Wheel Screen** ➲

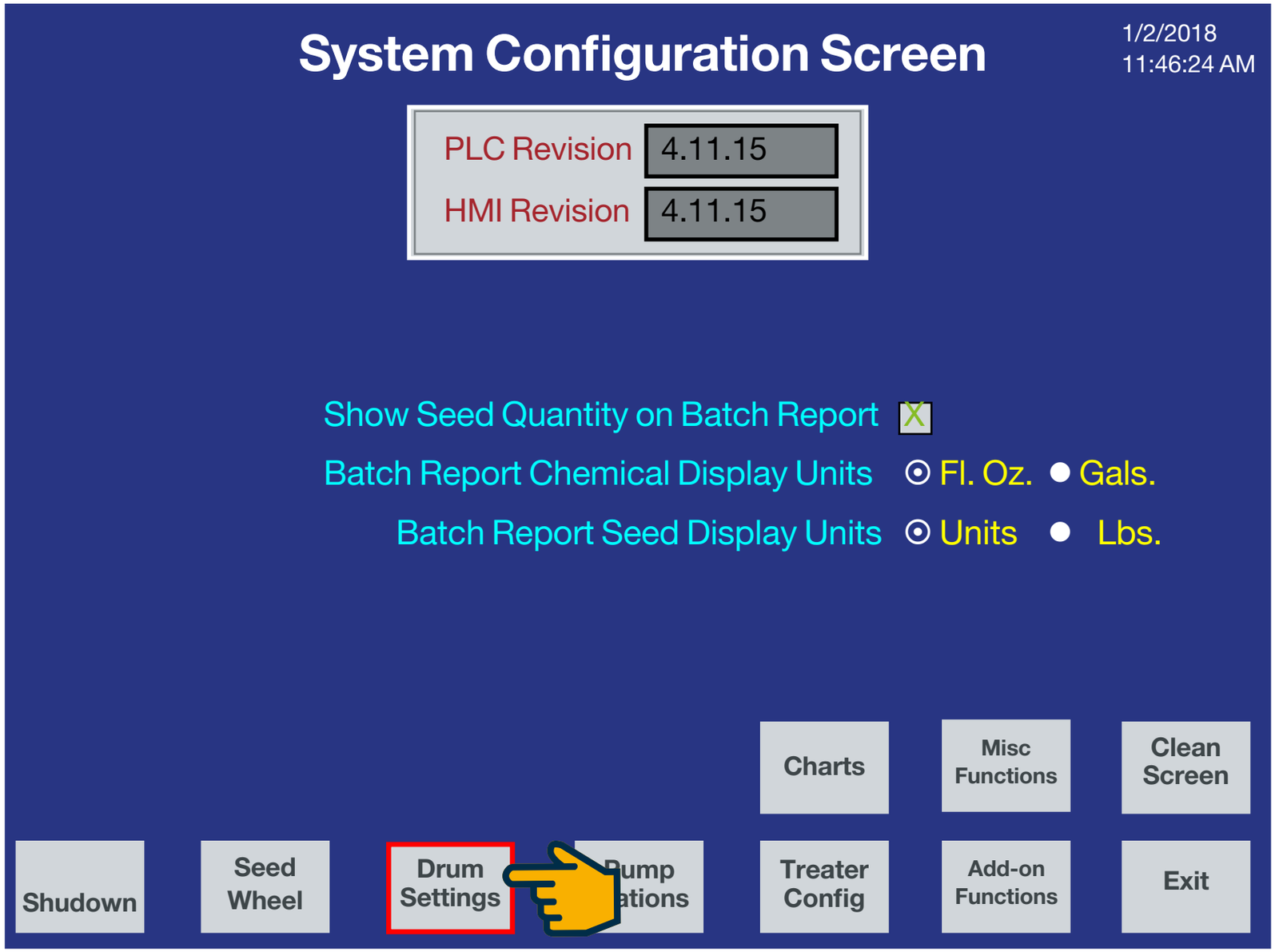


SYSTEM CONFIGURATION - SEED WHEEL SCREEN

Step 1: Touch the **Tune Seed Wheel** button icon. The **Tuning** graphic above the button will turn green (as shown below) while the seed wheel tunes.

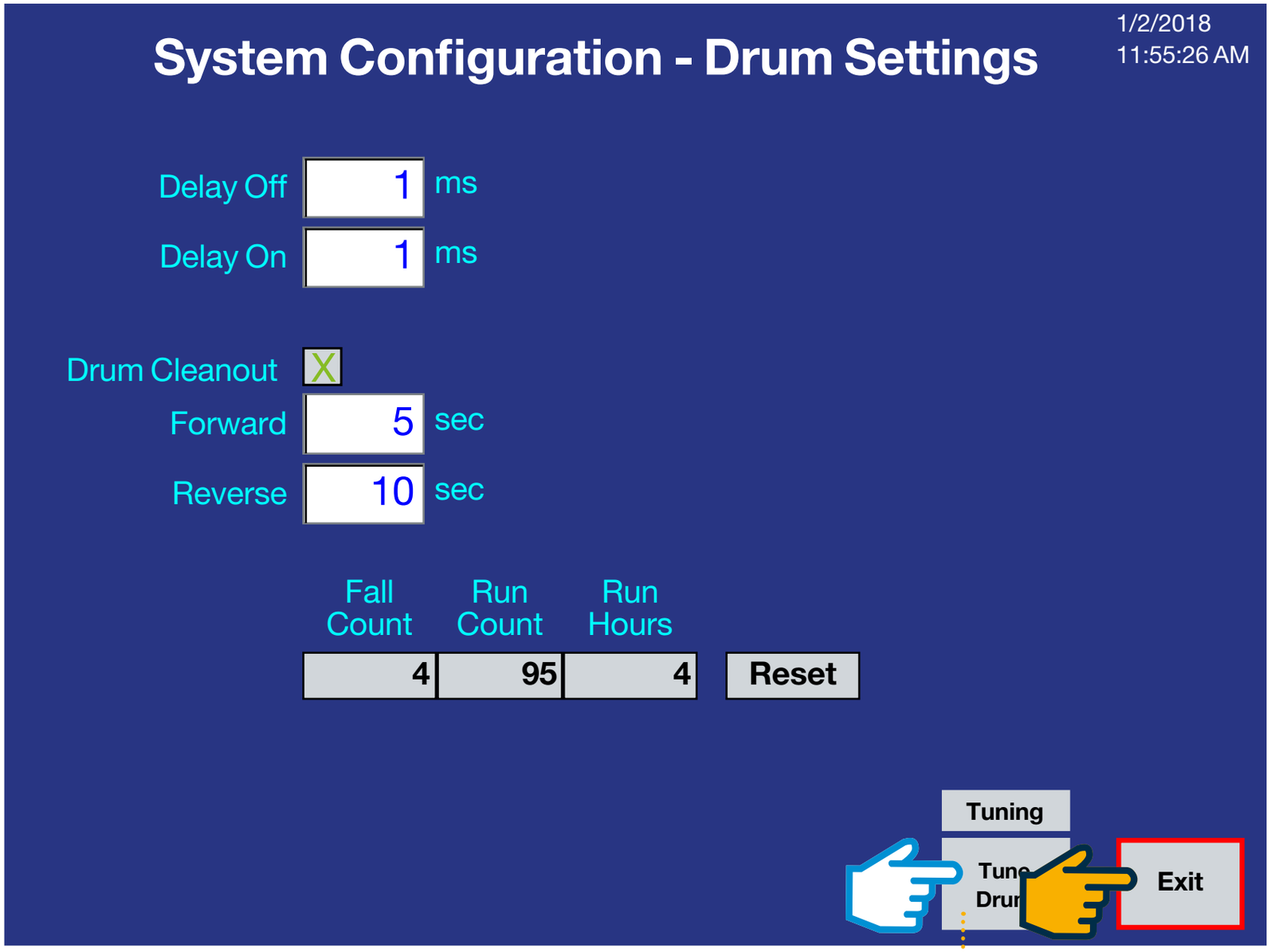
Step 2: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲





SYSTEM CONFIGURATION SCREEN

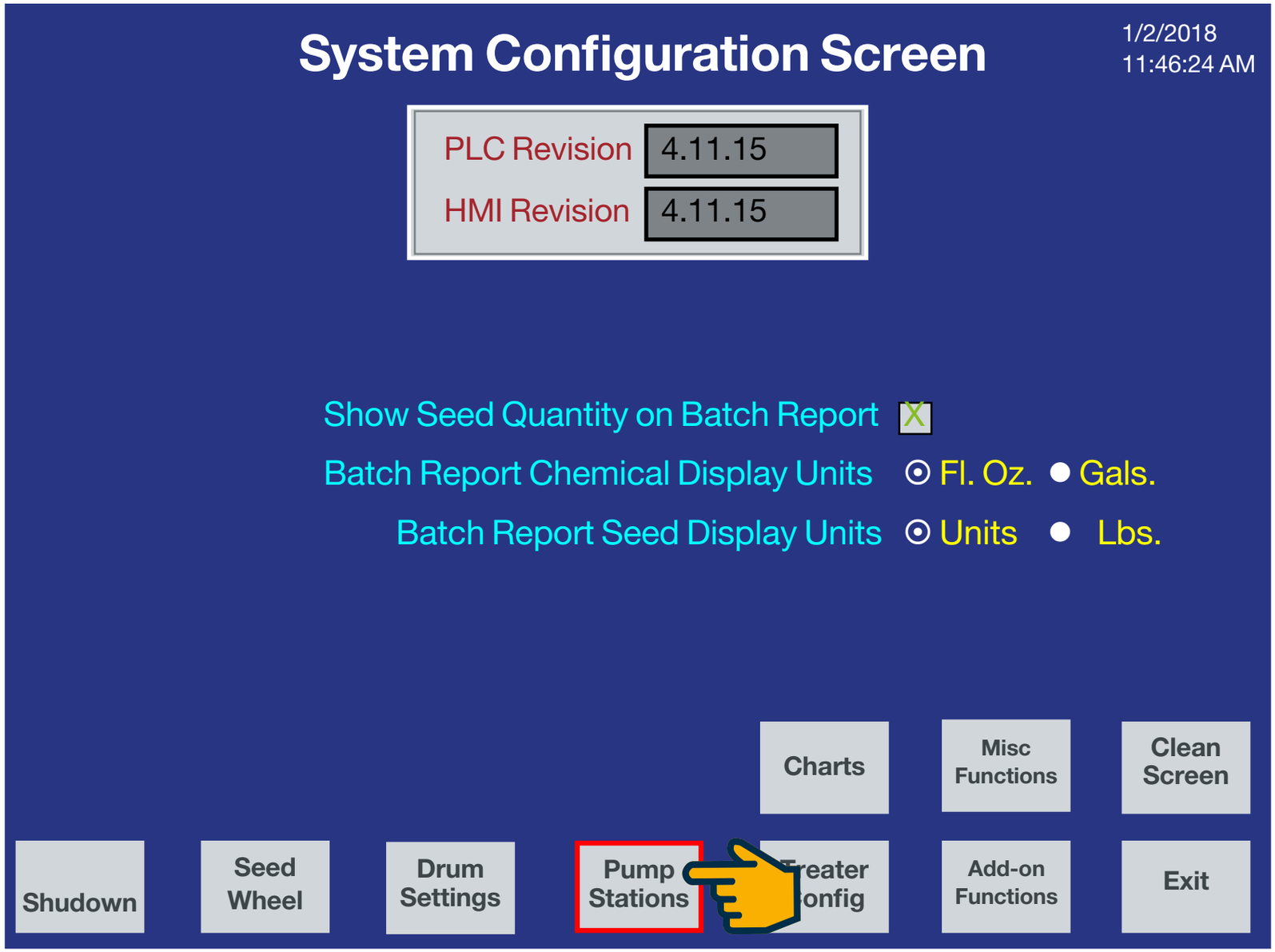
Step 1: Touch the **Drum Settings** button icon: navigates to the **Drum Settings Screen** ➲



SYSTEM CONFIGURATION - DRUM SETTINGS SCREEN

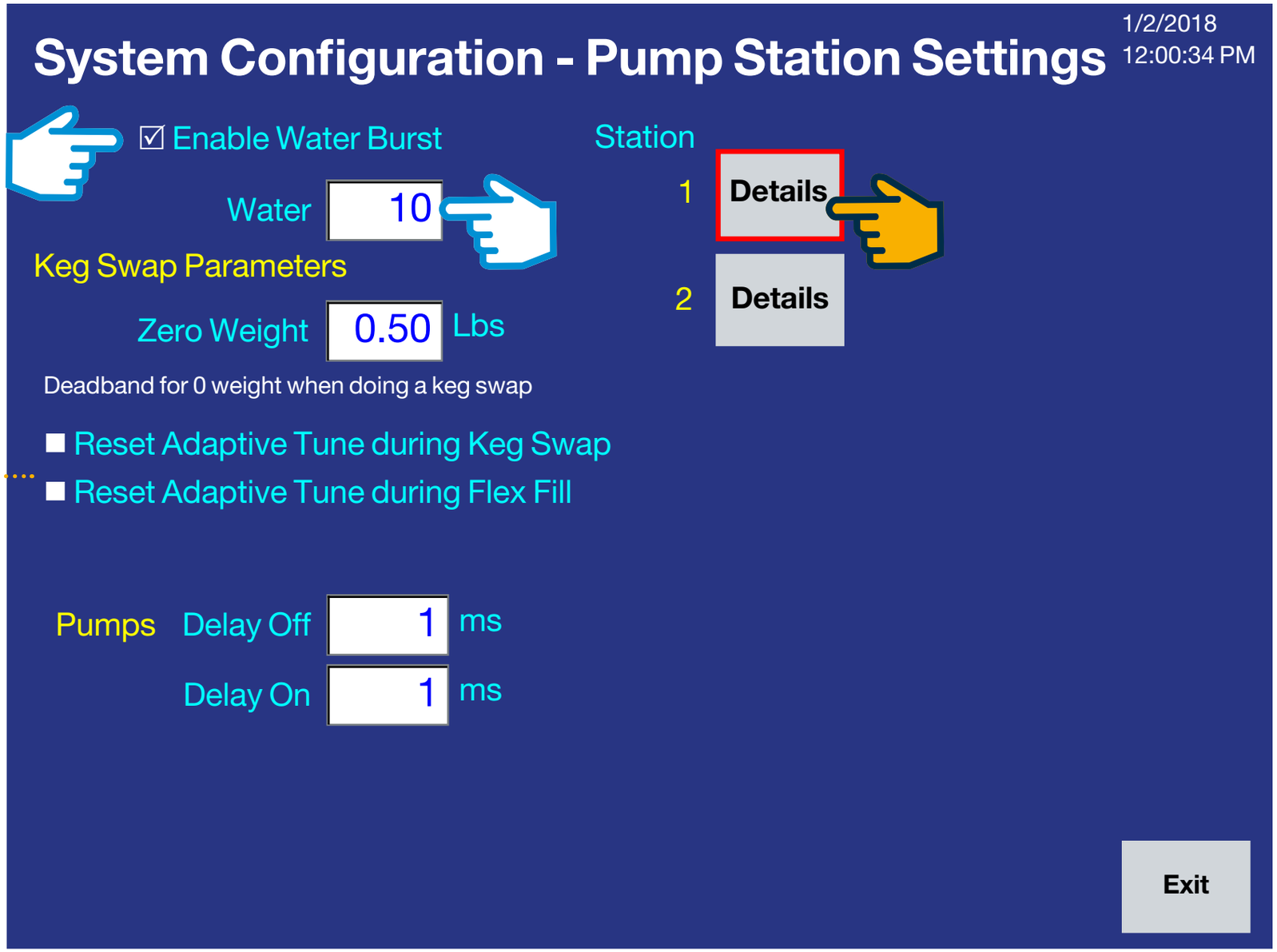
Step 1: Touch the **Tune Drum** button icon. The **Tuning** graphic above the button will turn green (as shown below) while the drum tunes.

Step 2: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Pump Stations** button icon: navigates to the **Pump Station Settings Screen** ➲

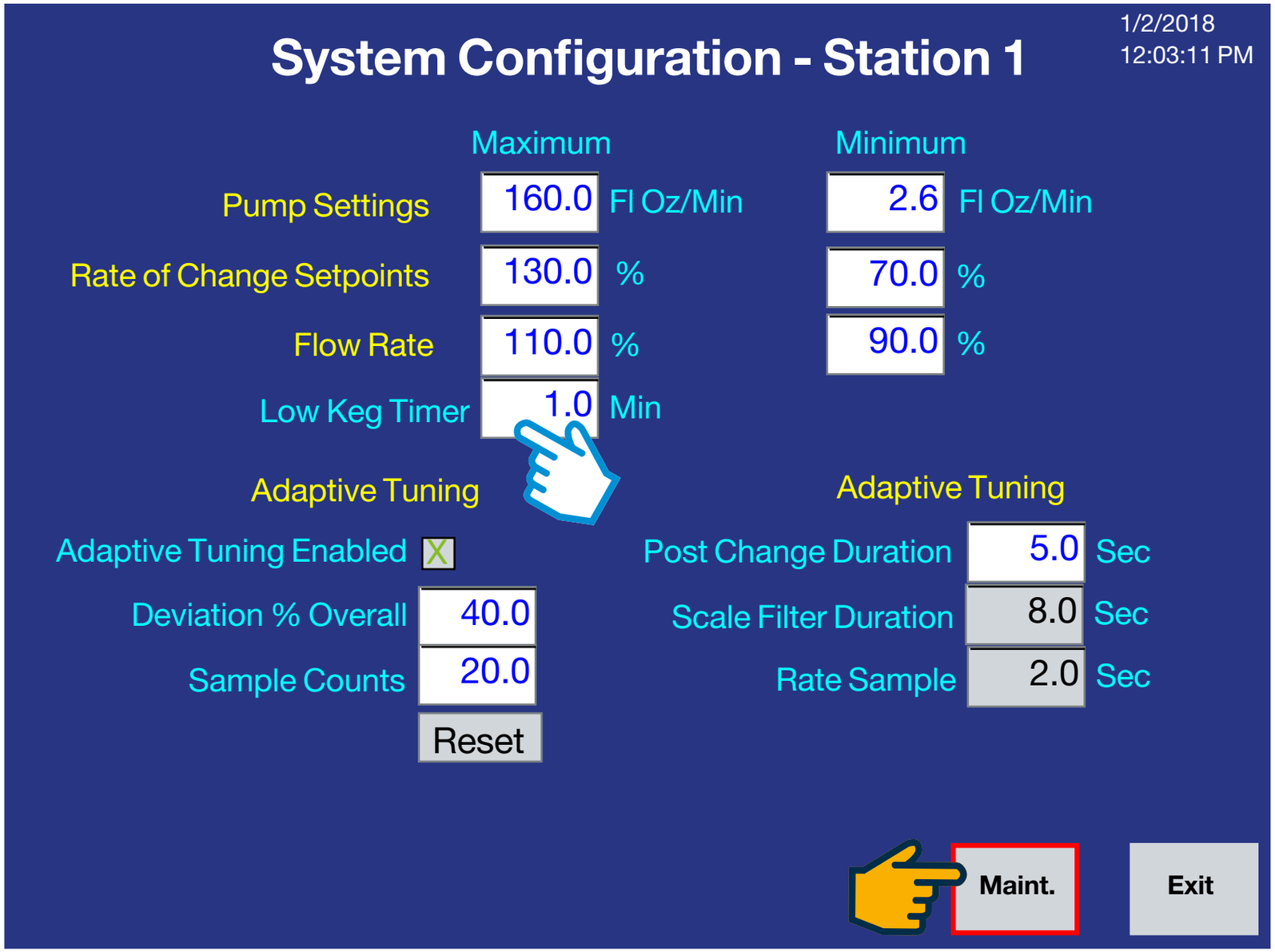


Note: if checked (either Keg swap or Flex Fill box or both) the PLC will automatically reset the Adaptive Tune (pump speed starting point) after a keg swap or flex fill.

SYSTEM CONFIGURATION - PUMP STATIONS SCREEN

To **Enable Water Burst Option**, a water Flex Tank Pump Station will need to be set up during the installation process. A water tank can also be added later, as described: **Station Setup**. Touch the square (check mark appears, as shown above). Also touch the Water numerical field. Enter the fluid ounces required to purge the chemical inlet tube at the end of a batch run on the keypad pop-up (10floz is a recommended amount, as shown above).

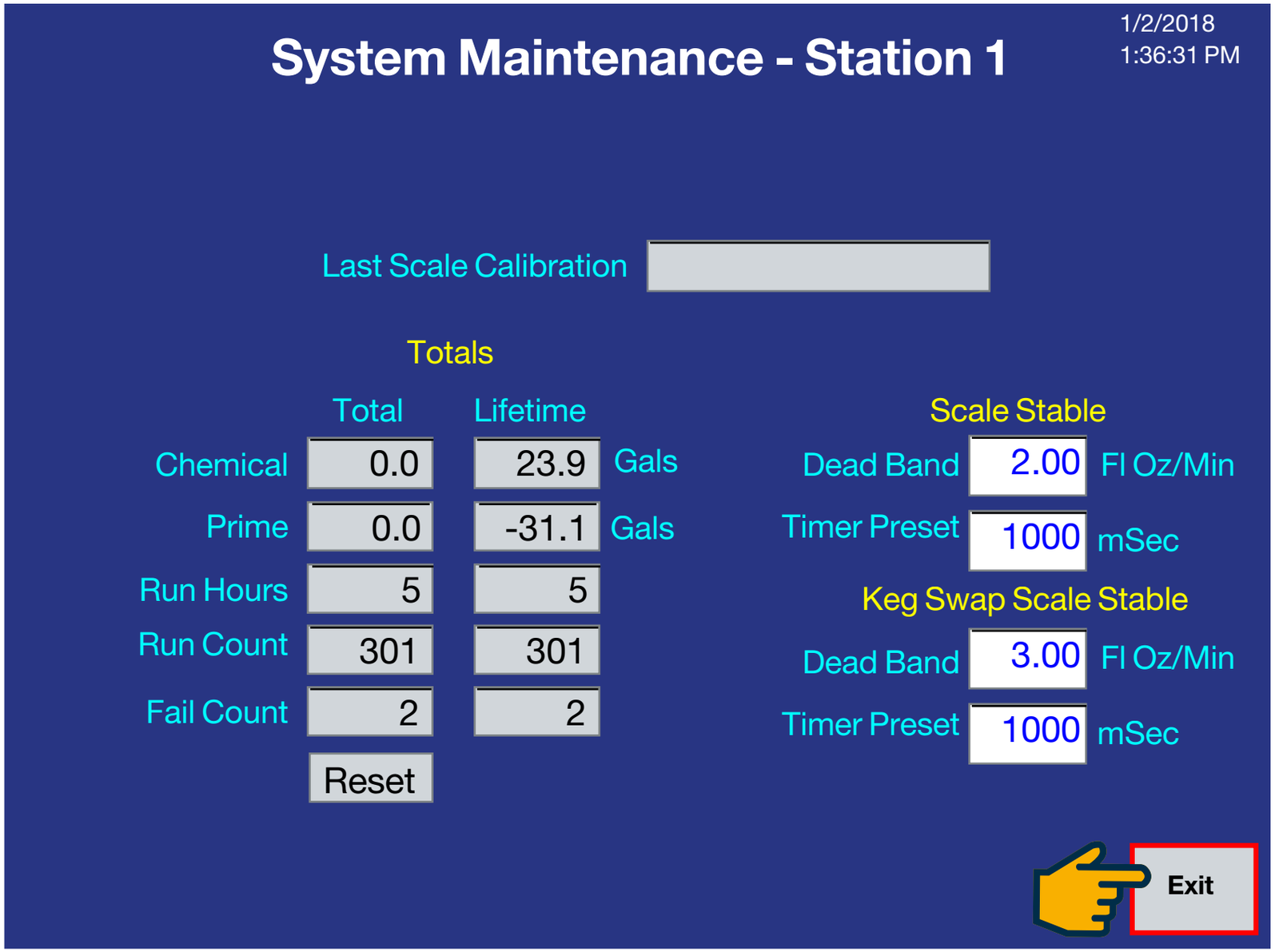
Step 1: Touch the Station 1 **Details** button icon: navigates to the **Station Configuration - Station 1 Screen ➲**



STATION CONFIGURATION - STATION 1 SCREEN

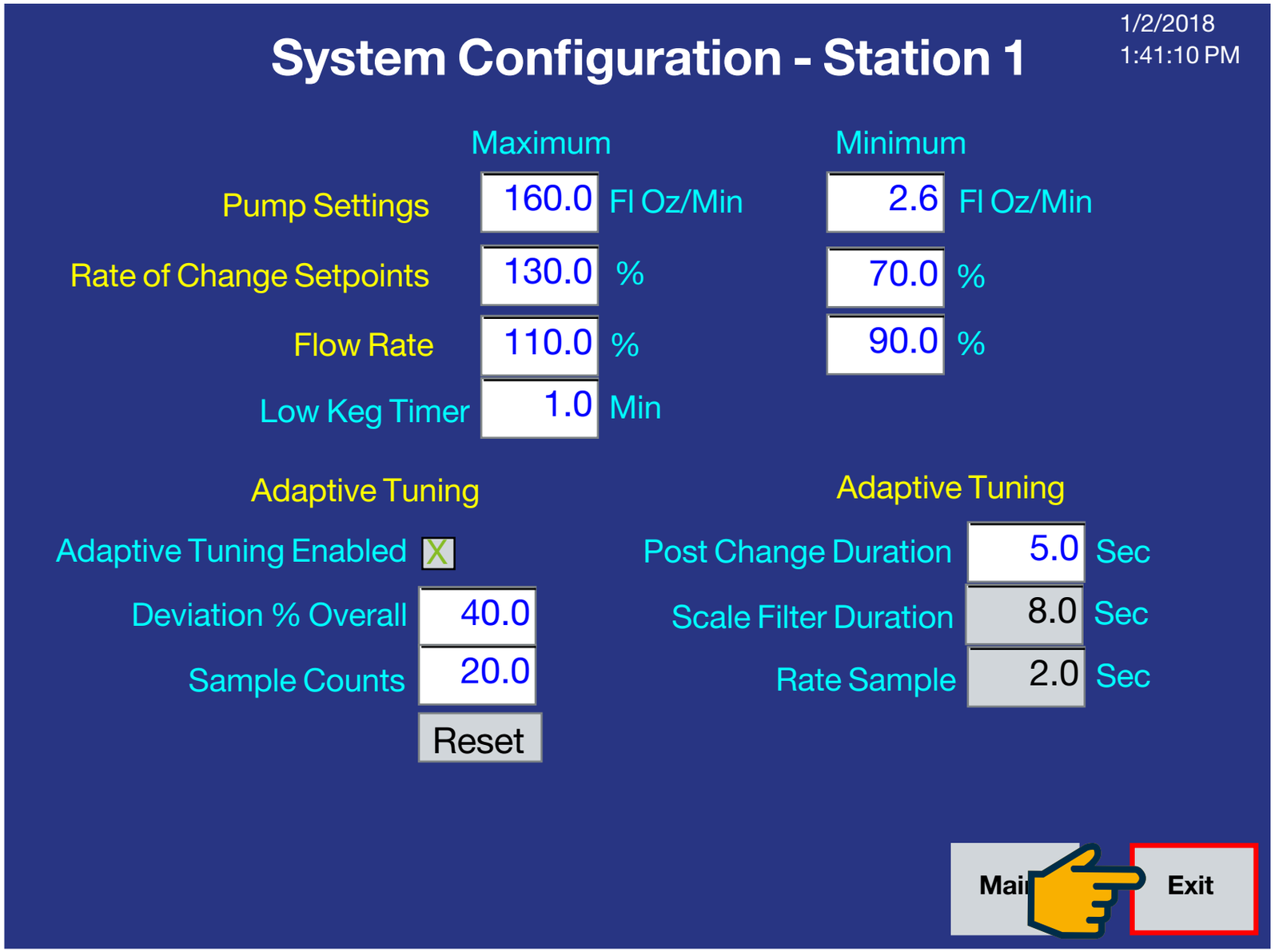
The Low Keg Timer function defaults at 10.0 minutes warning that a keg will run out of chemical. Touch this field to change the 2.0 minute time be shorter/longer.

Step 1: Touch the **Maint.** button icon: navigates to the **Station Maintenance - Station 1 Screen** ➲



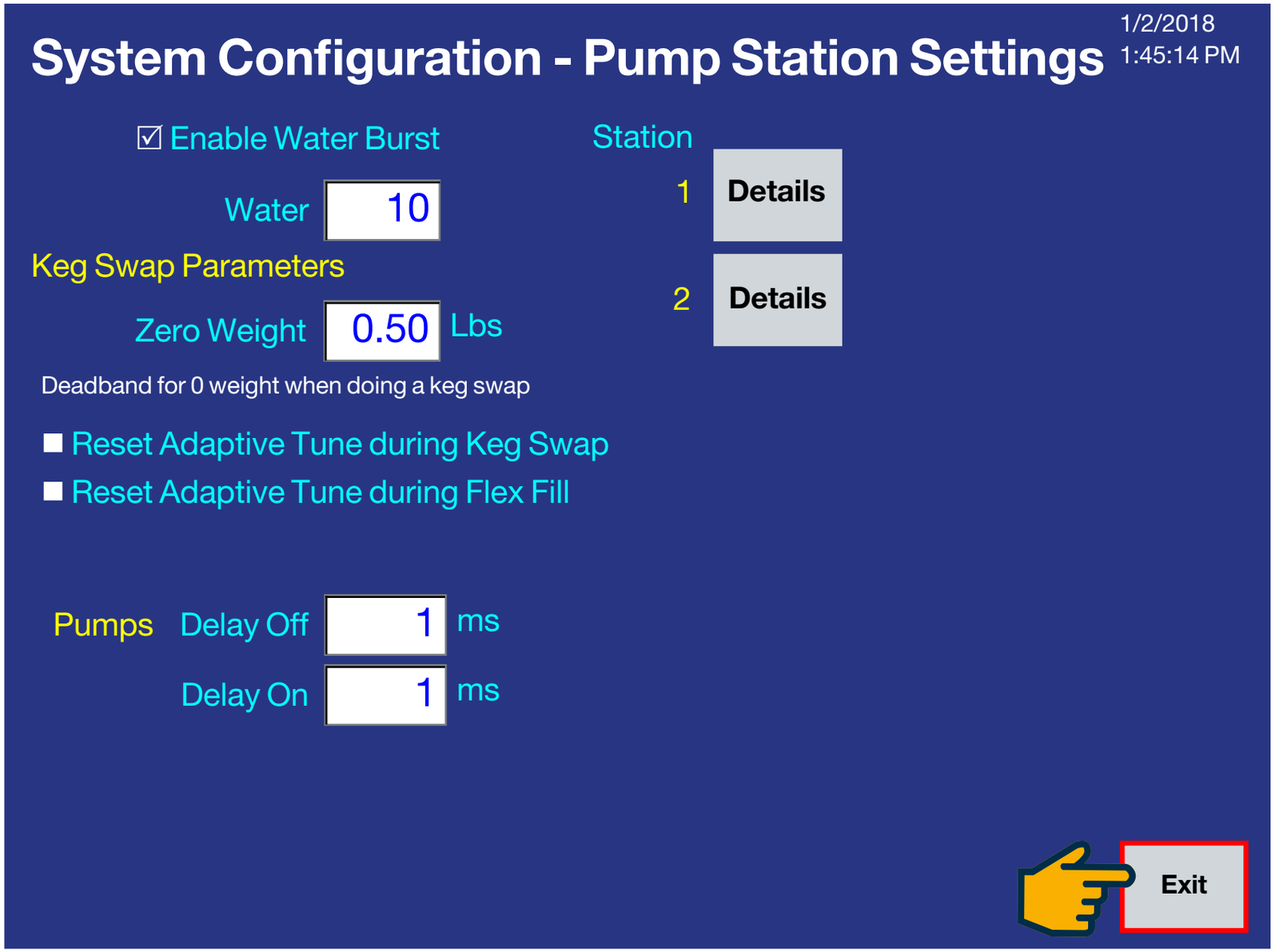
STATION MAINTENANCE - STATION 1 SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **Station Configuration - Station 1 Screen** ➲



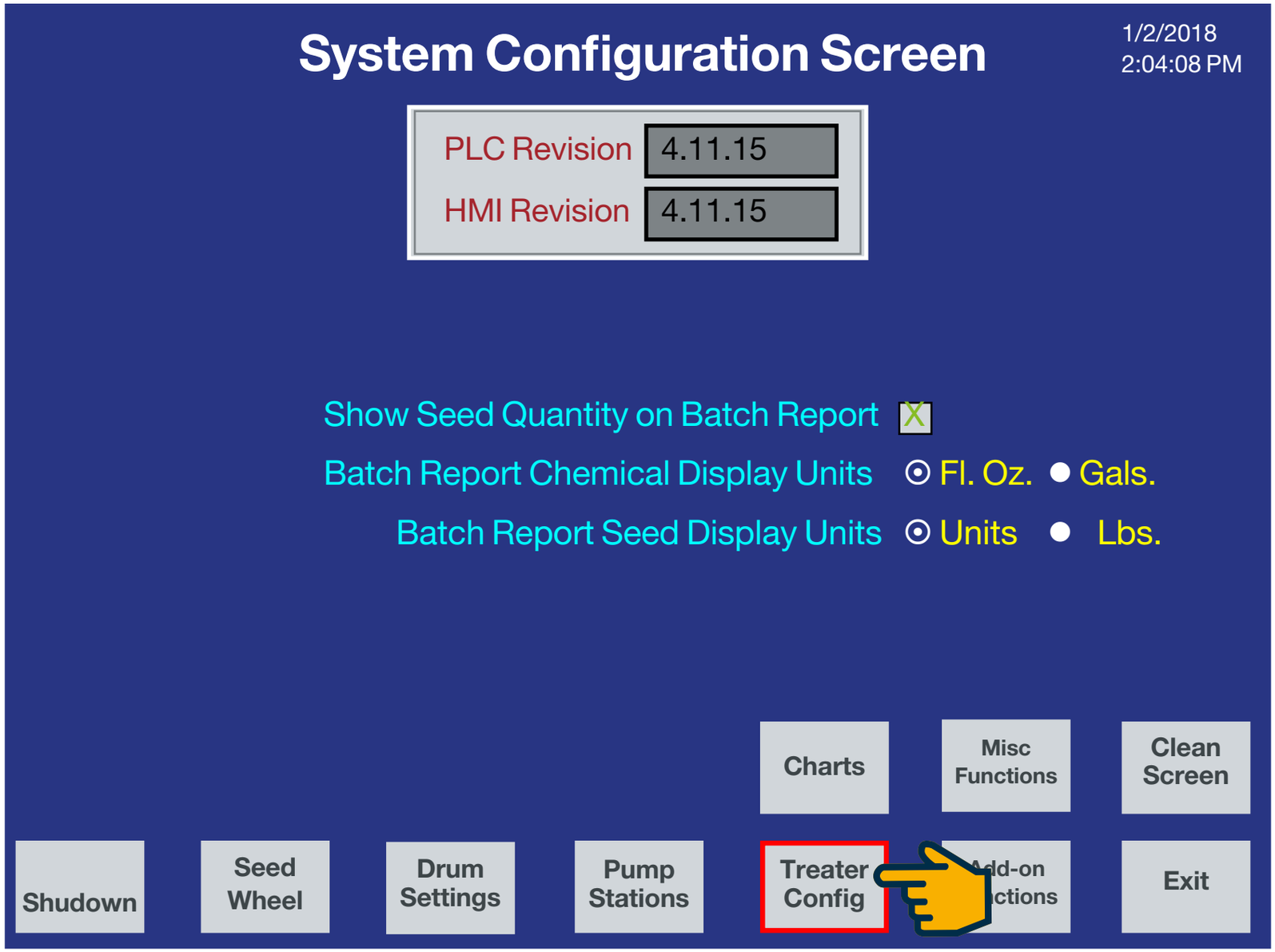
STATION CONFIGURATION - STATION 1 SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration - Pump Station Settings Screen** ➲



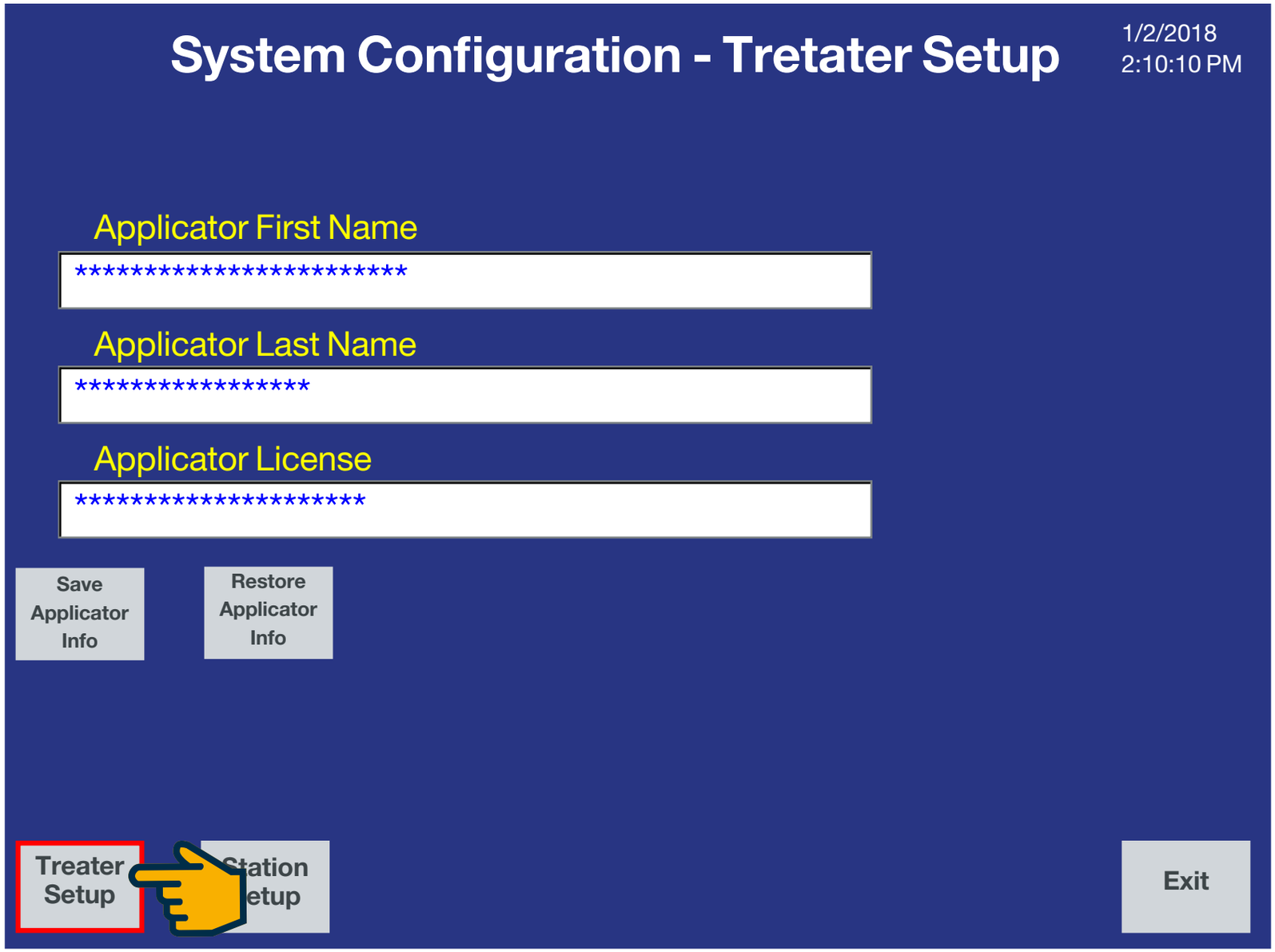
SYSTEM CONFIGURATION - PUMP STATION SETTINGS SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



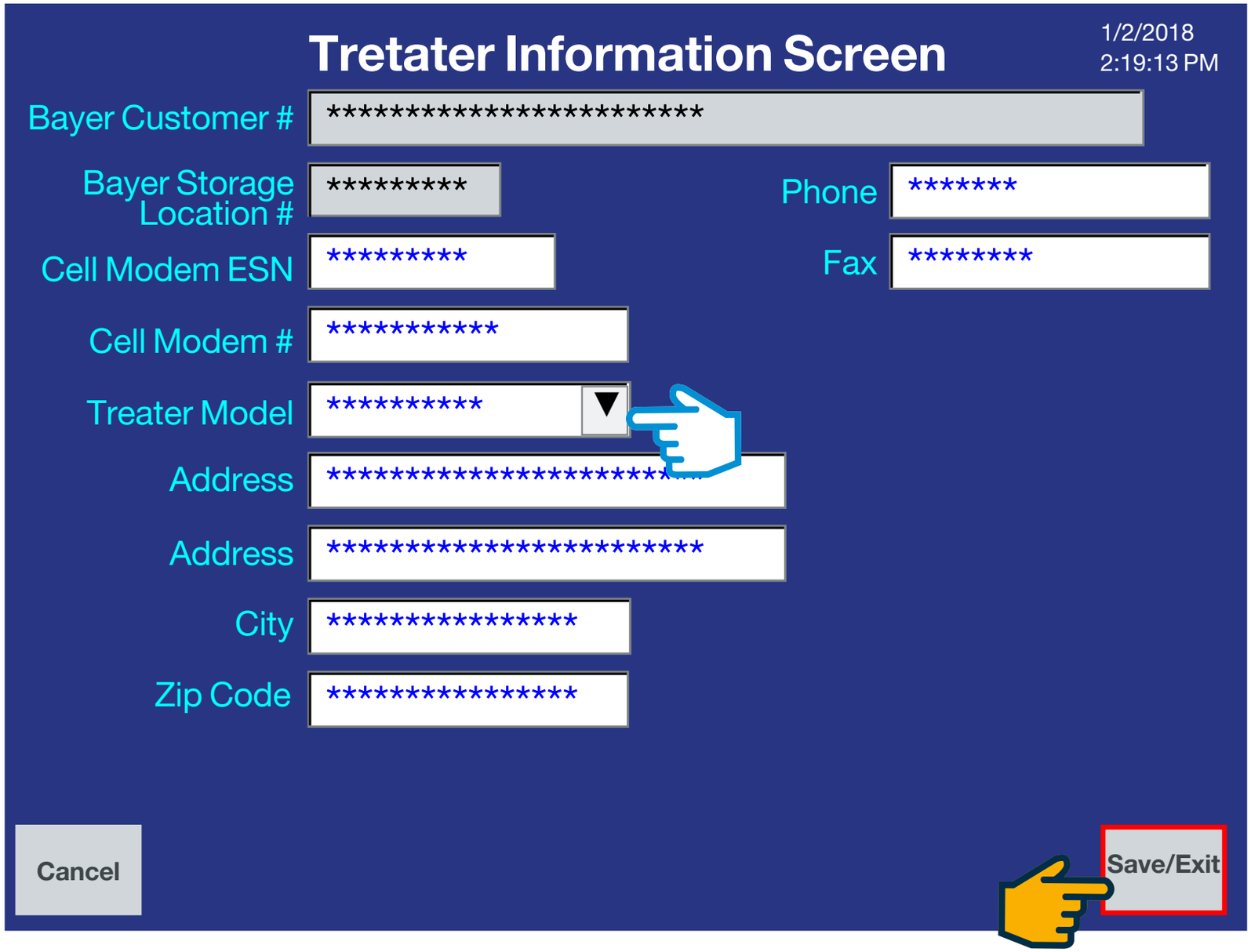
SYSTEM CONFIGURATION SCREEN

Step 1: Touch the **Treater Config** button icon: navigates to the **System Configuration - Treater Setup Screen ➲**



SYSTEM CONFIGURATION - TREATER SETUP SCREEN

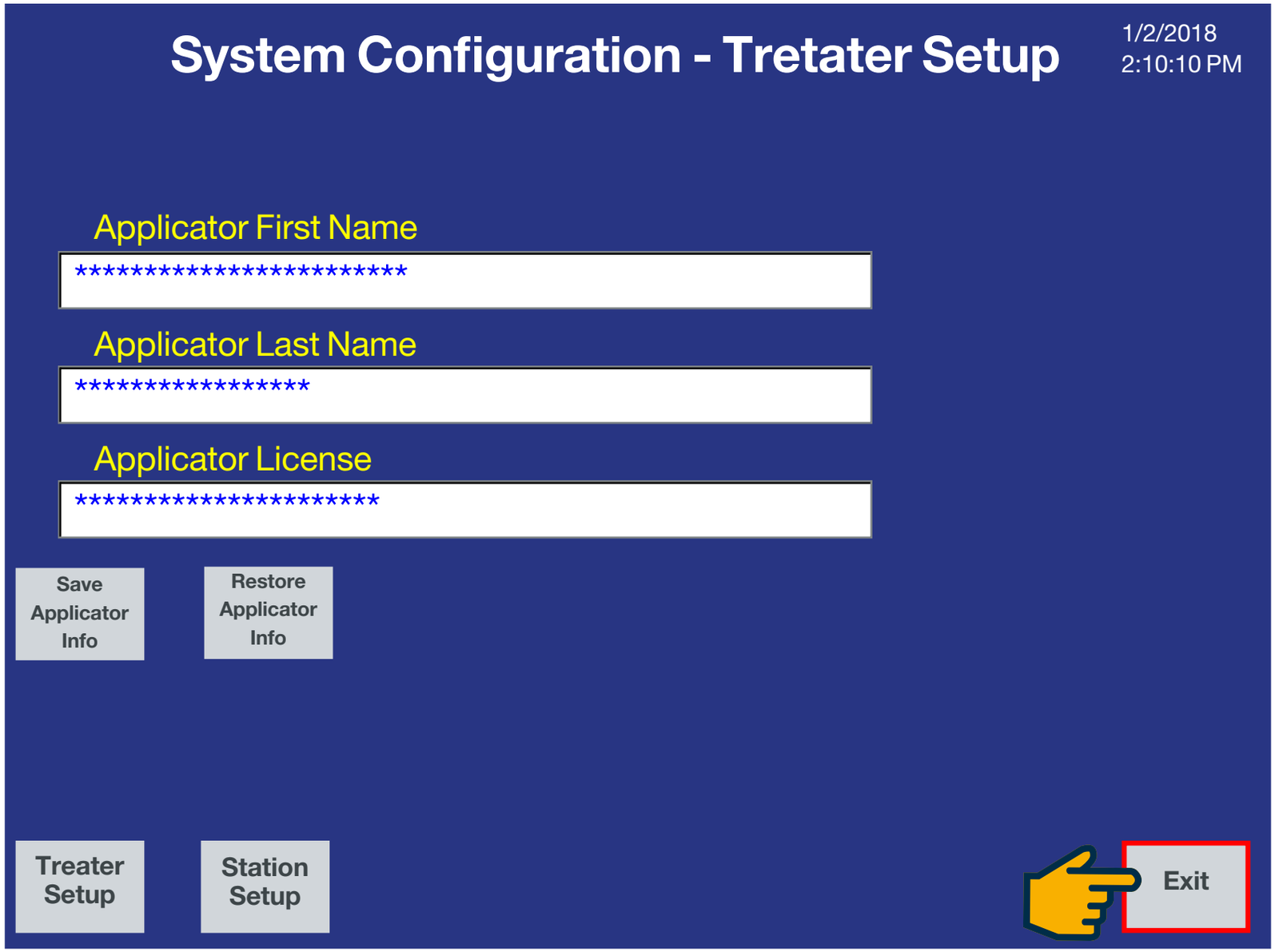
Step 1: Touch the **Treater Setup** button icon: navigates to the **Treater Information Screen** ➲



TREATER INFORMATION SCREEN

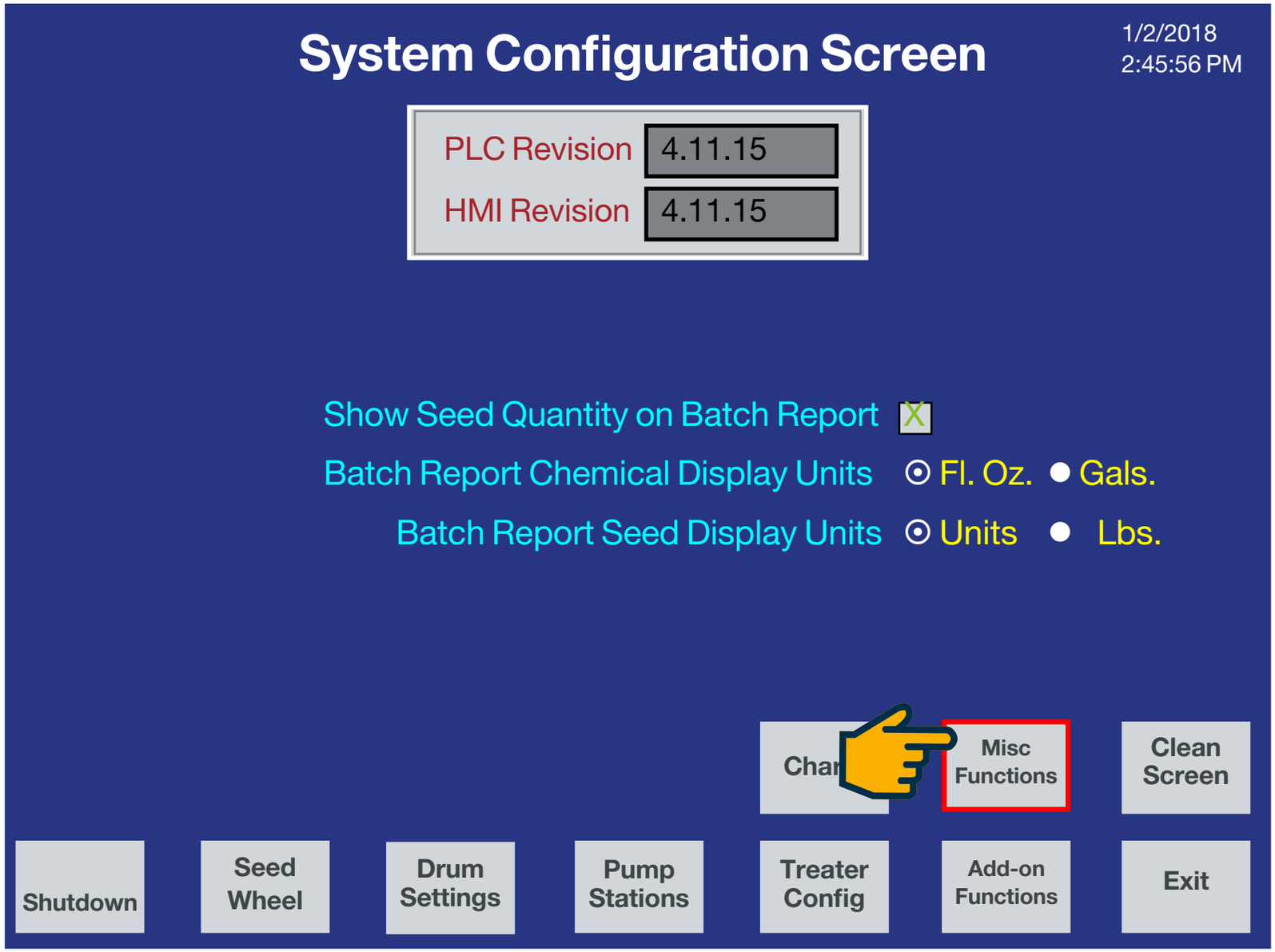
Touch each field and enter/change treater configuration information on the keyboard pop-up.

Step 1: Touch the **Save/Exit** button icon: navigates to the **System Configuration - Treater Setup Screen ➲**



SYSTEM CONFIGURATION - TREATER SETUP SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

A series of preset functions are required prior to treater start-up.

Step 1: Touch the **Misc Functions** button icon: navigates to the **System Configuration - Misc. Functions Screen ➲**

SYSTEM CONFIGURATION - MISC. FUNCTIONS SCREEN

Preset functions as follows...

Step 1: Touch the **Save Totals from PLC** button icon: displays a pop-up window. Answer Yes, then OK. Pop-up window closes.

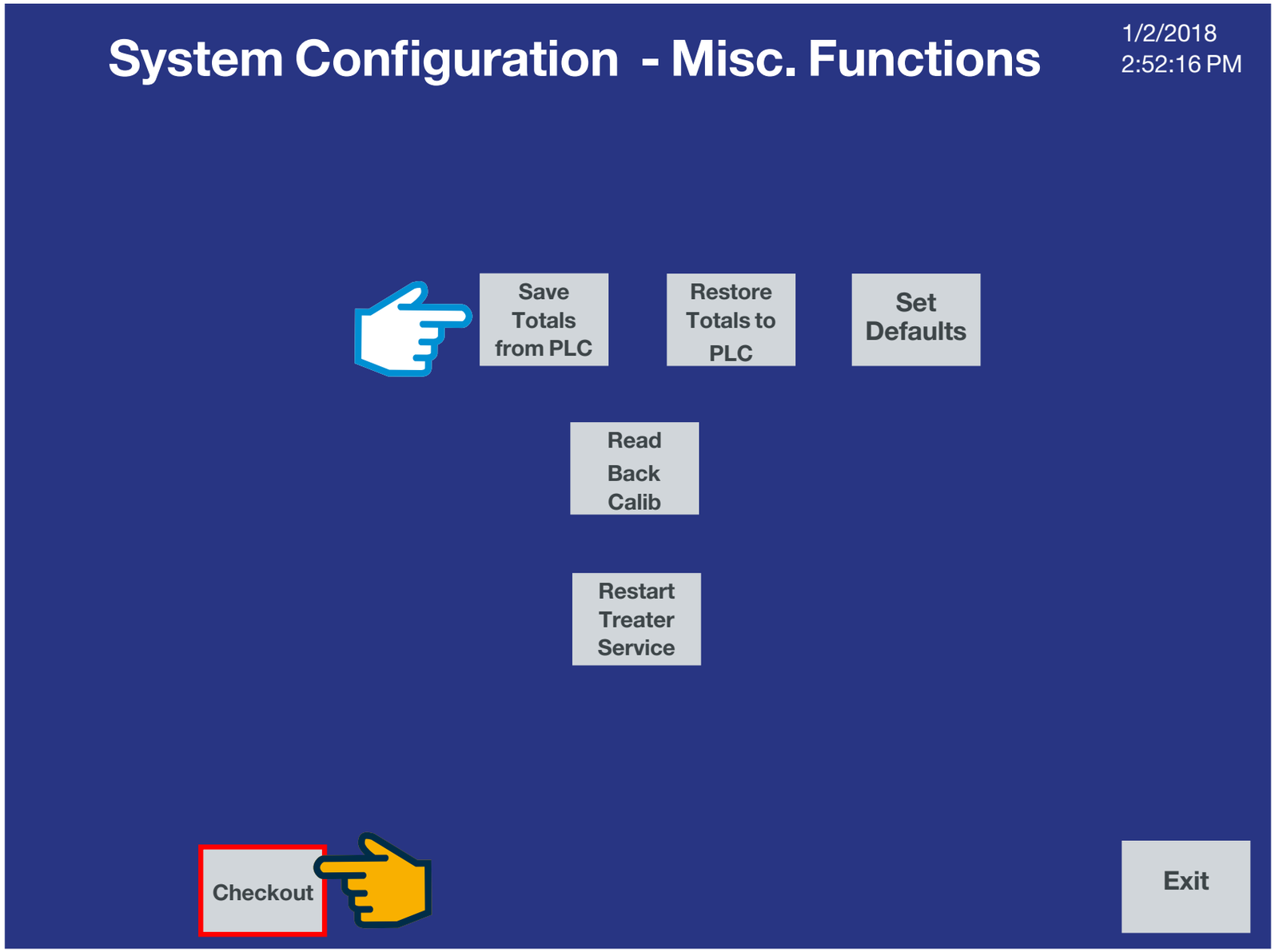
Step 2: Touch the **Restore Totals to PLC** button icon: displays a pop-up window. Answer Yes, then OK. Pop-up window closes.

Step 3: Touch the **Set Defaults** button icon: displays a pop-up window. Answer Yes, then OK. Pop-up window closes.

Step 4: Touch the **Read Back Calib.** button icon: displays a pop-up window. Answer Yes, then OK. Pop-up window closes.

Step 5: Touch the **Restart Treater Services** button icon: displays a pop-up window. Answer Yes, then OK. Pop-up window closes.

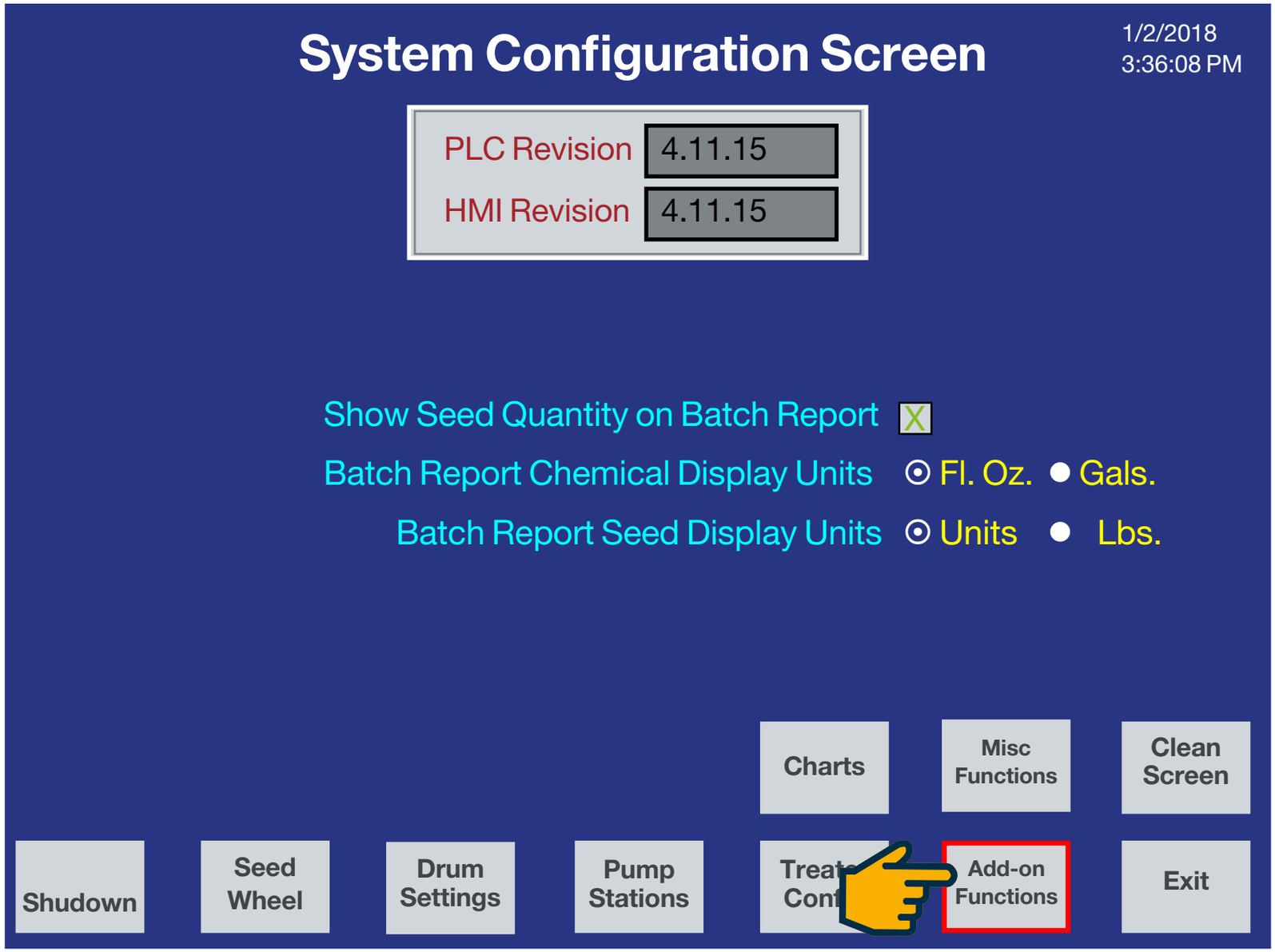
Step 6: Touch the **Checkout** button icon: navigates to the **Checkout Screen** ➲



CHECKOUT SCREEN

The **Checkout Screen** is a systems overview that can be used to run each devise in Forward/Reverse/Stop and Jog (Prime) chemical from each Pump Station to the Treater Chemical Inlet above the Atomizer.

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

If the Optional Inlet Conveyor Control is installed, it will first need to be enabled on the application program as follows...

Step 1: Touch the **Add-On Functions** button icon: navigates to the **System Configuration - Add-On Functions Screen ➲**

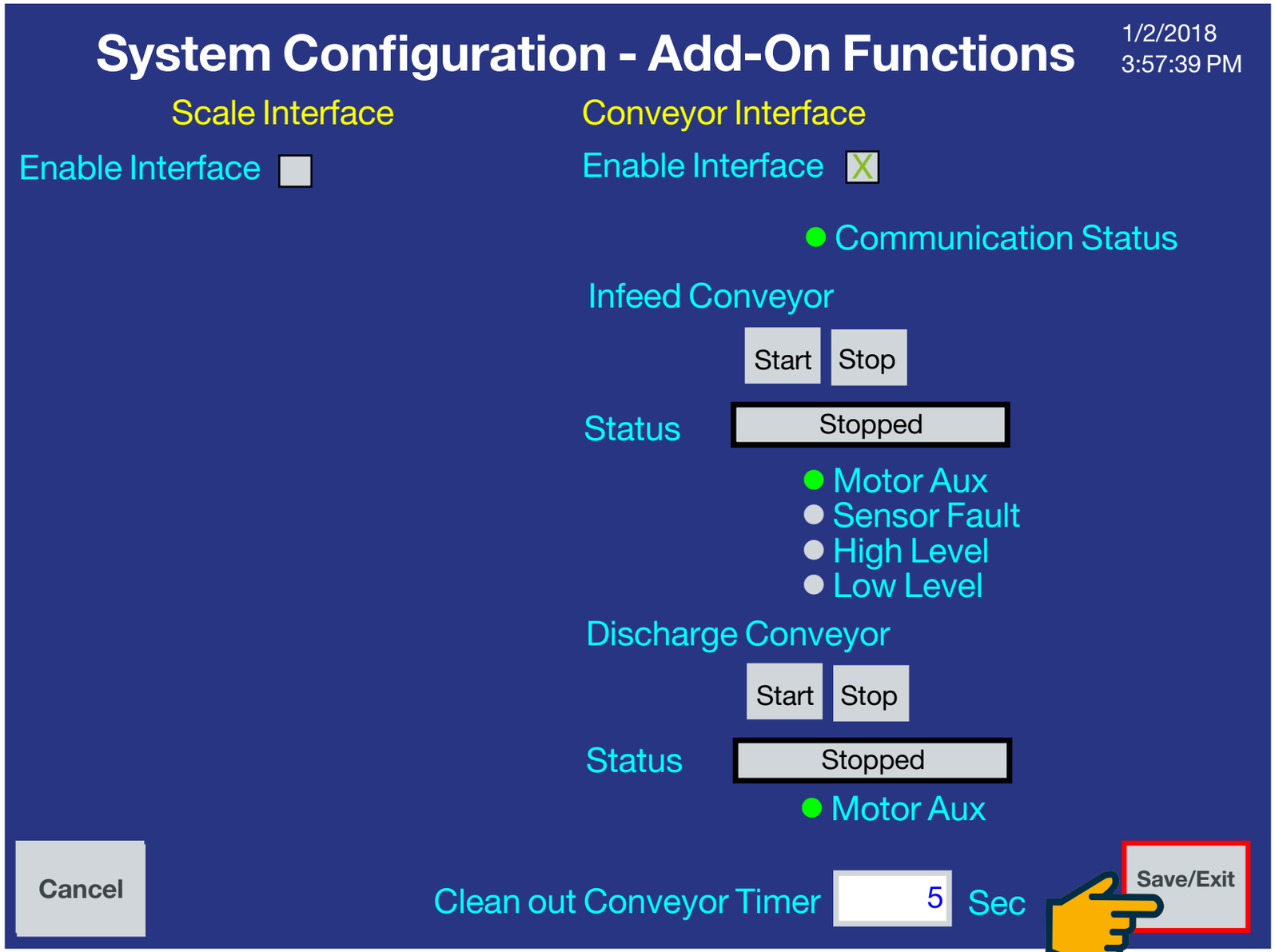
SYSTEM CONFIGURATION - ADD-ON FUNCTIONS SCREEN

Touch the Conveyor Interface **Enable Interface** check box icon (as shown above, green **X**).

The Clean out Conveyor Timer function defaults to 5 seconds after the drum has stopped. Touch this field to change the 5 second run time be shorter/longer.

-Verify the Conveyor control is powered up and connected to the main panel.
-Touch the Conveyor Interface....
-Infeed Conveyor Manual controls
-Status Lights for Infeed Conveyor
-Discharge Conveyor Manual controls
-Status Light for Discharge Conveyor
-The Clean out conveyor....

Step 1: Touch the **Save/Exit** button icon: navigates to the **System Configuration Screen** ➲

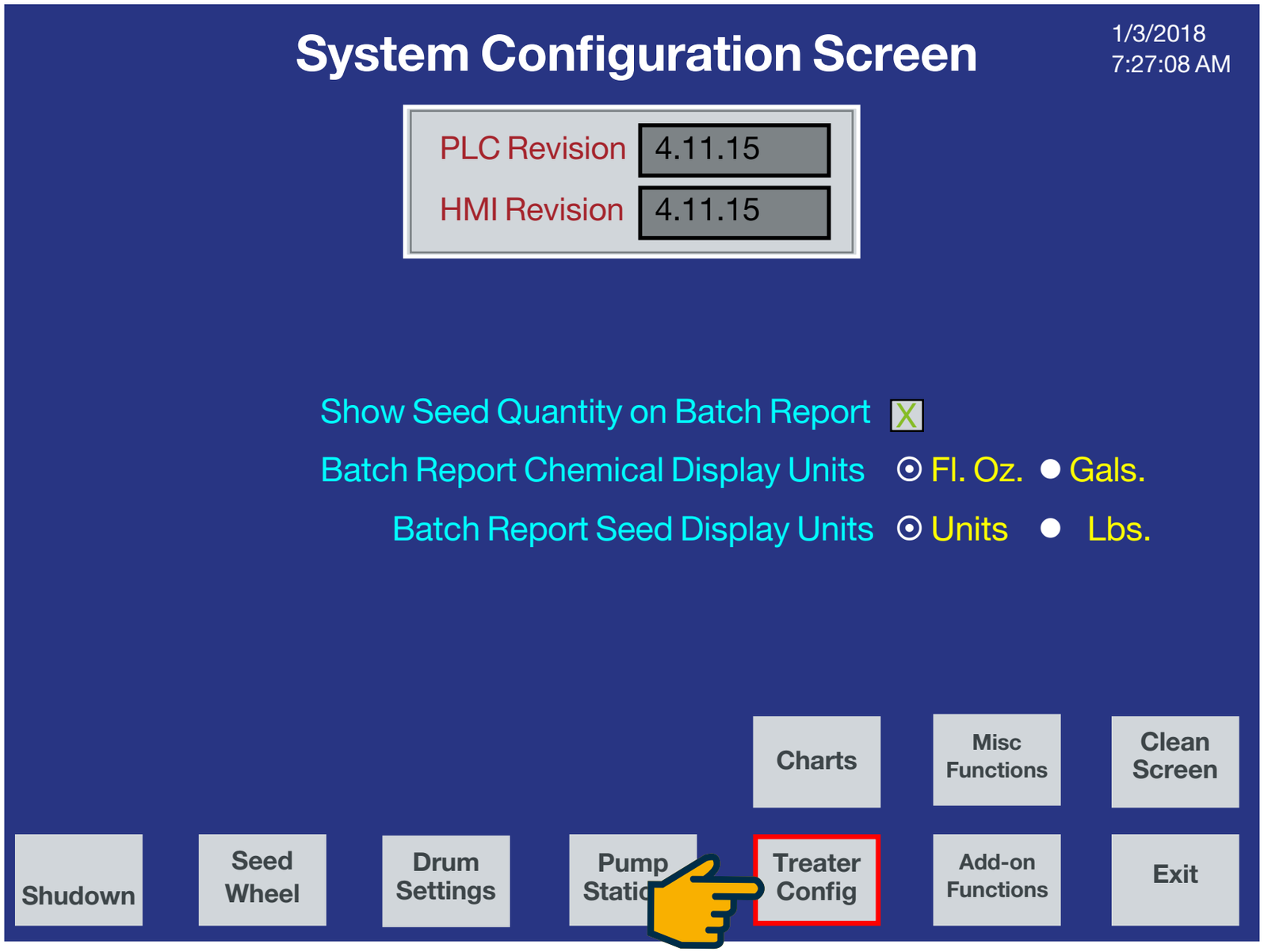


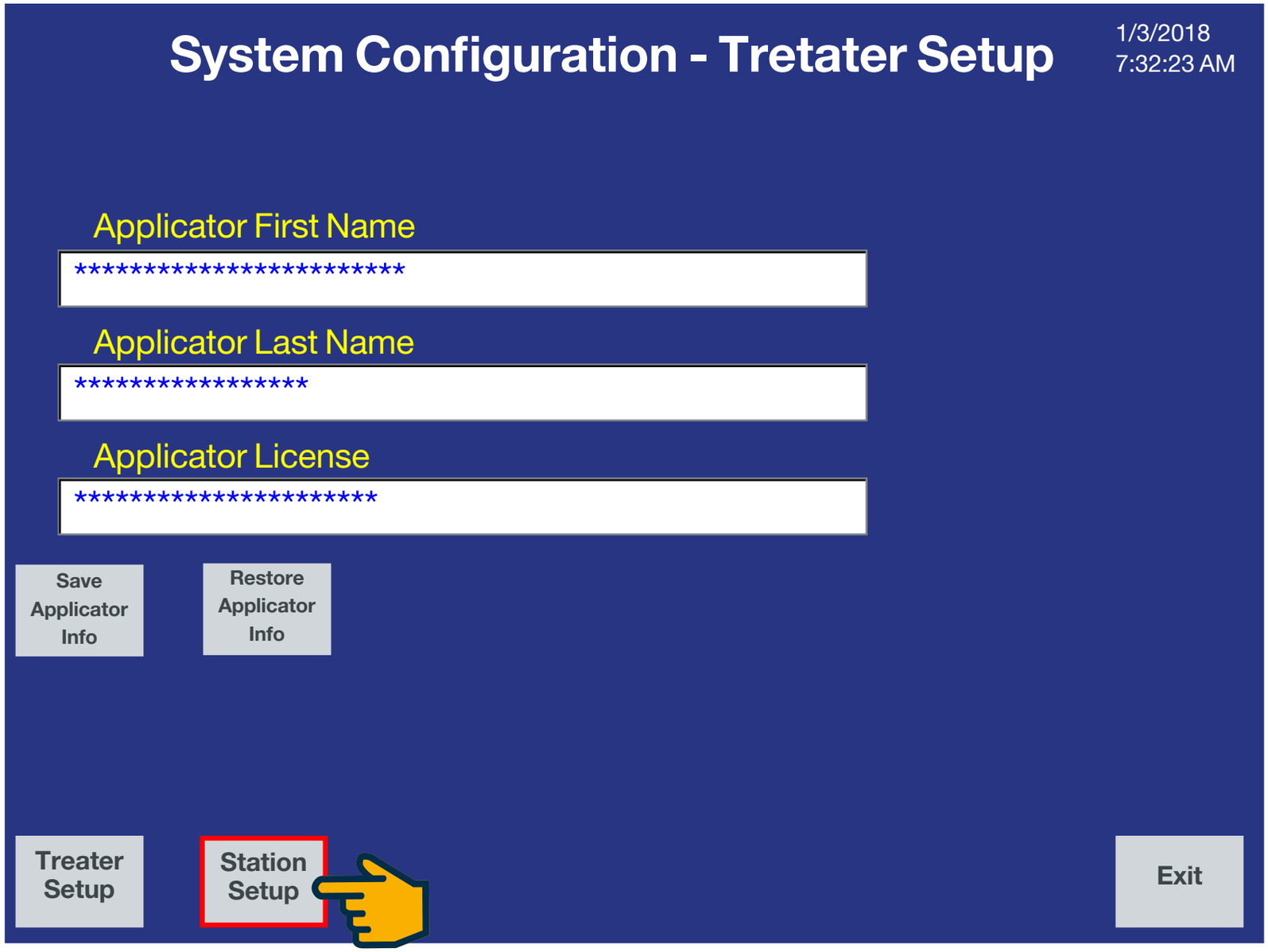
PUMP STATION SETUP

SYSTEM CONFIGURATION - STATION SETUP

Pump Stations are physically assembled along with the treater during the installation process. Additional Pump Stations (up to twelve total) can be added. Each Pump Station Graphic Icon needs to be added on the **One-Time Setup Screen** (Station Setup) which represent each physically installed Pump Station (1-12). Once configured on the screen, their use can be enabled.

Step 1: Touch the **Treater Config** button icon: navigates to the **System Configuration** ➲

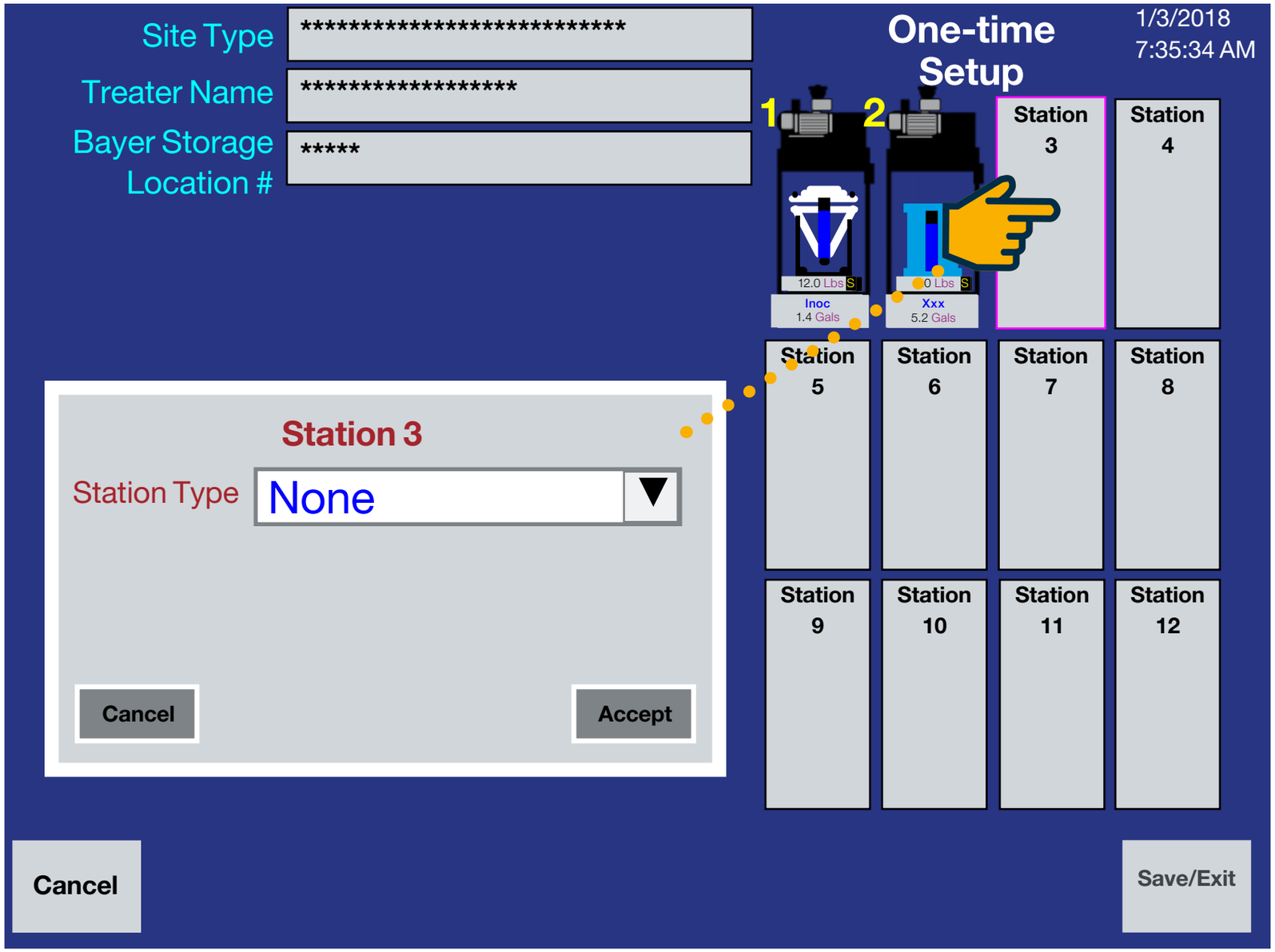




SYSTEM CONFIGURATION - TREATER SETUP SCREEN

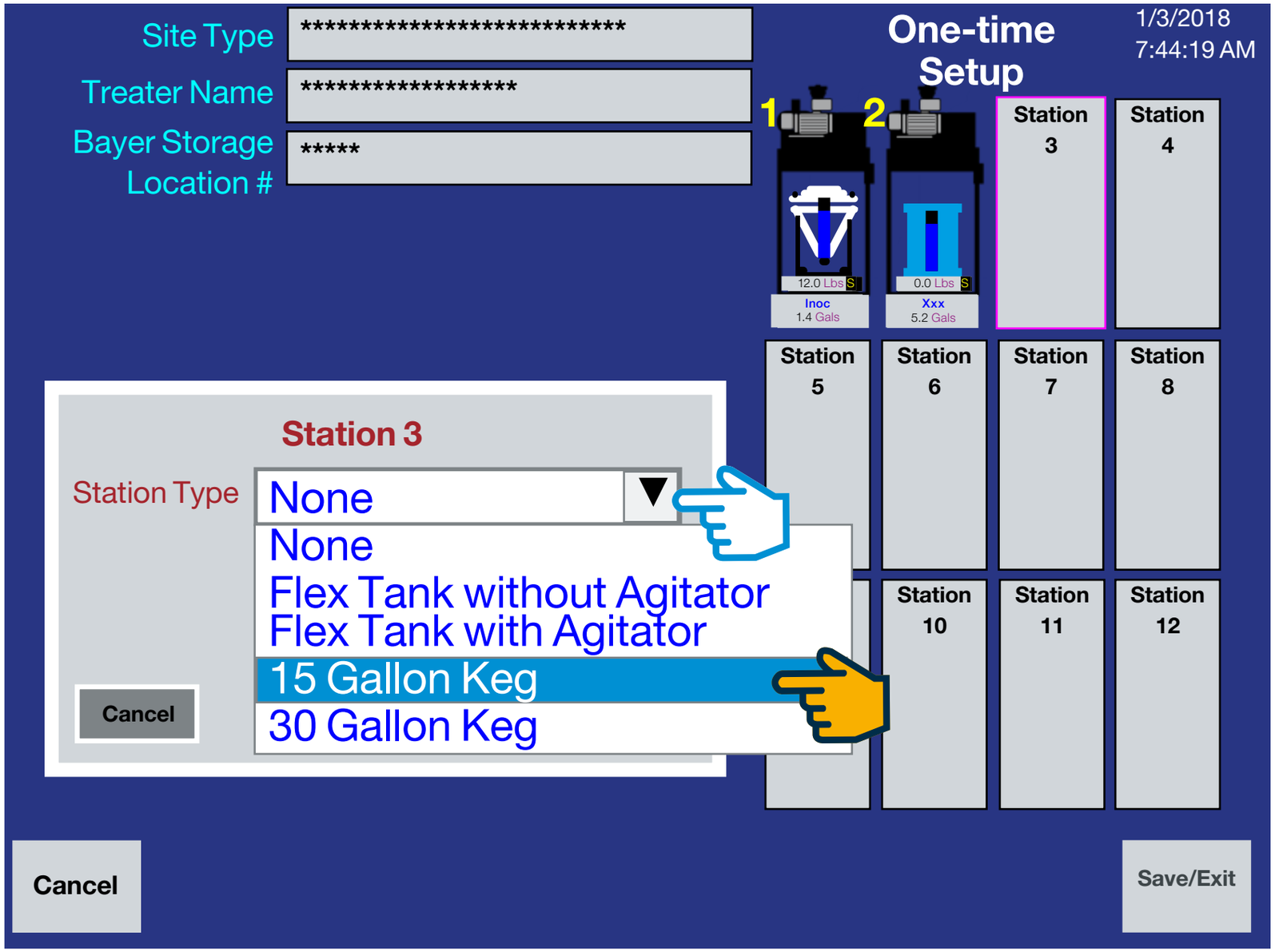
Step 1: Touch the **Station Setup** button icon: navigates to the **One-Time Setup Screen** ➲

Example: set up **Station 3** for a new 15 gallon keg.



ONE-TIME SETUP SCREEN

Step 1: Touch the **Station 3** gray rectangle graphic icon: the gray rectangle graphic icon will form a pink outline and display the **Station 3** pop-up question box (as shown above) ➲

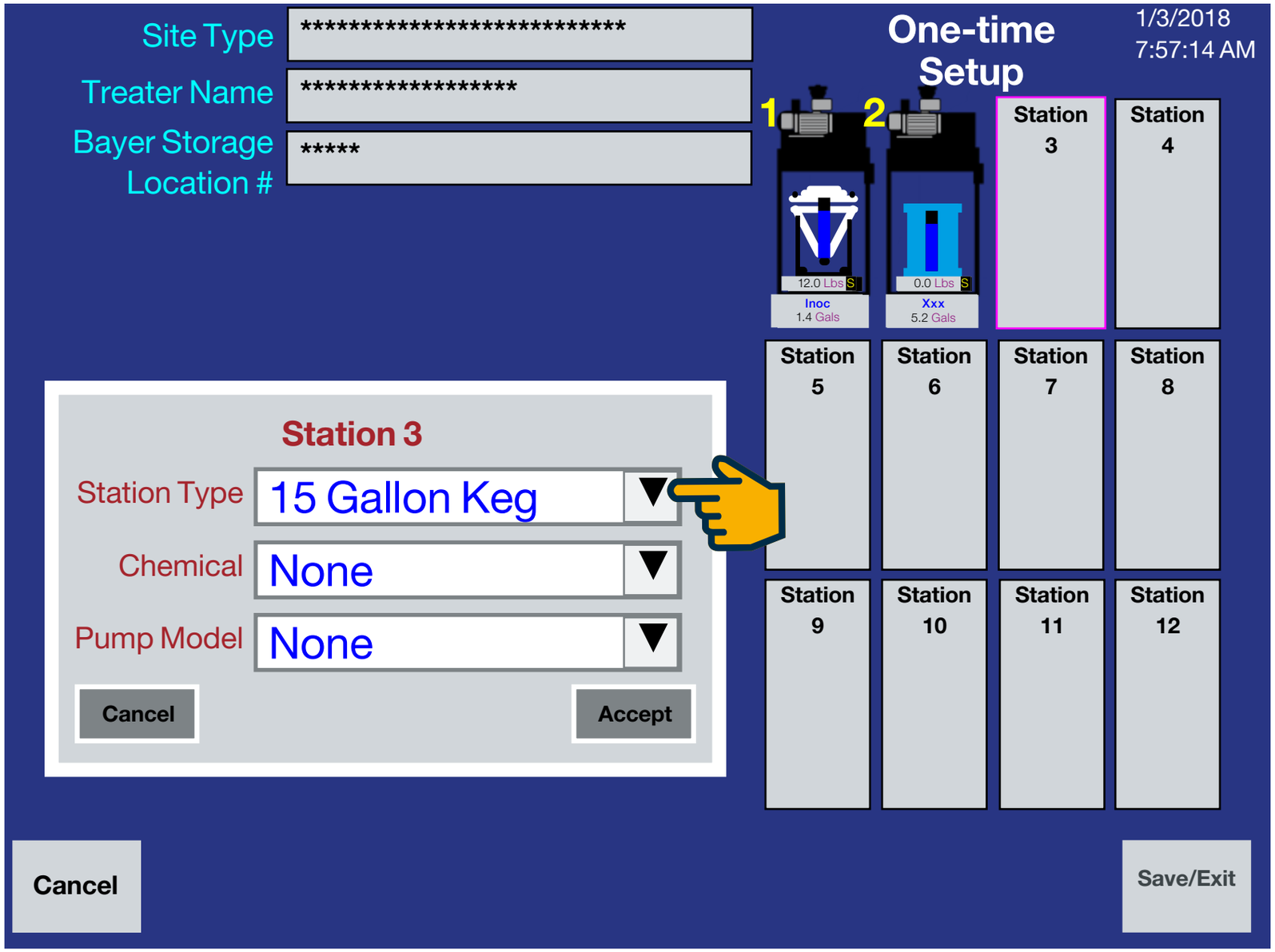


ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

Question 1: Select the **Station Type:** choose from the drop-down list, as follows...

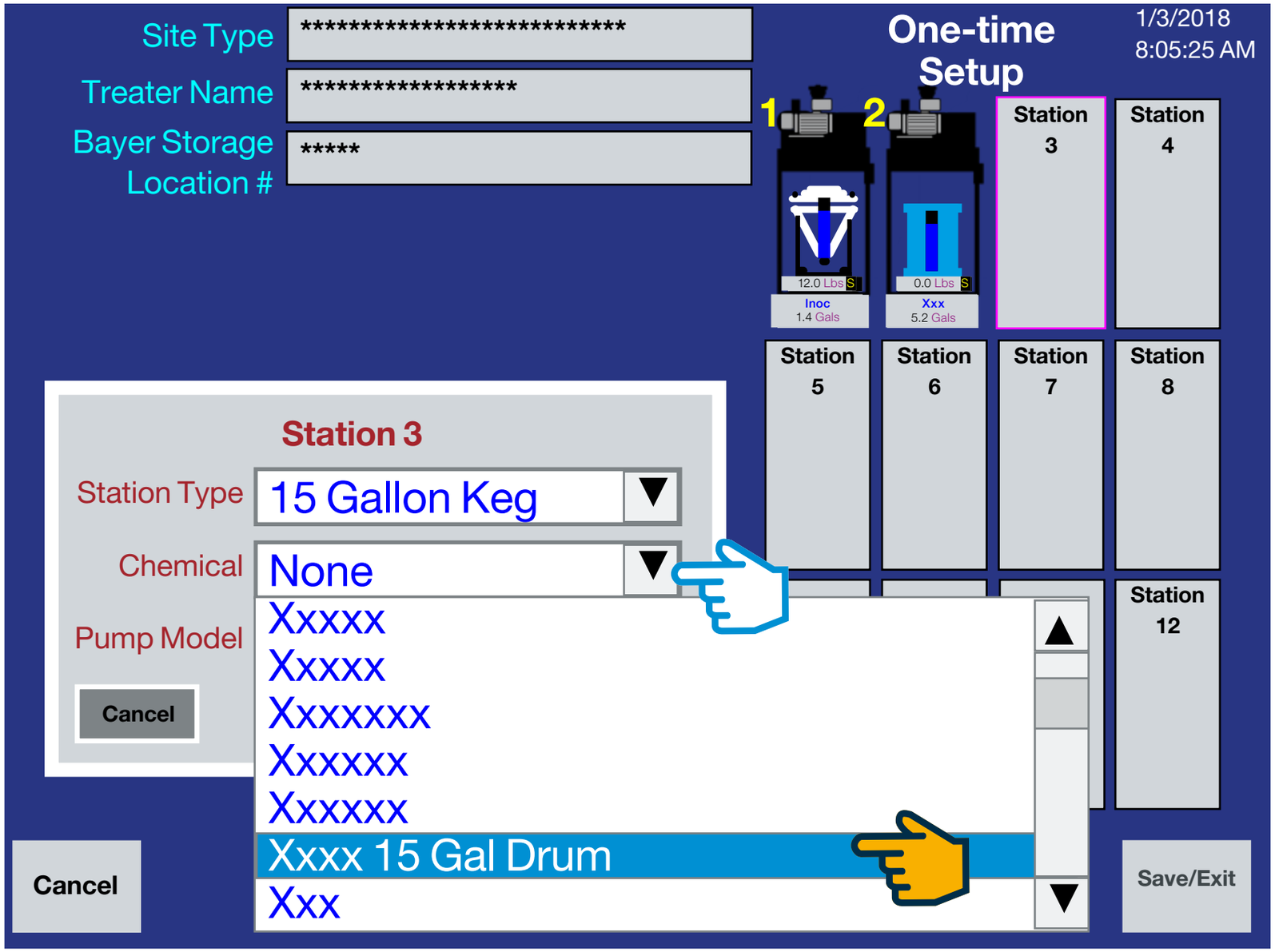
Step 1: Touch the Station Type **Drop-down Arrow**.

Step 2: Touch **15 Gallon Keg** ➲



ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

Station Type: now displays 15 Gallon Keg, as shown above ➲

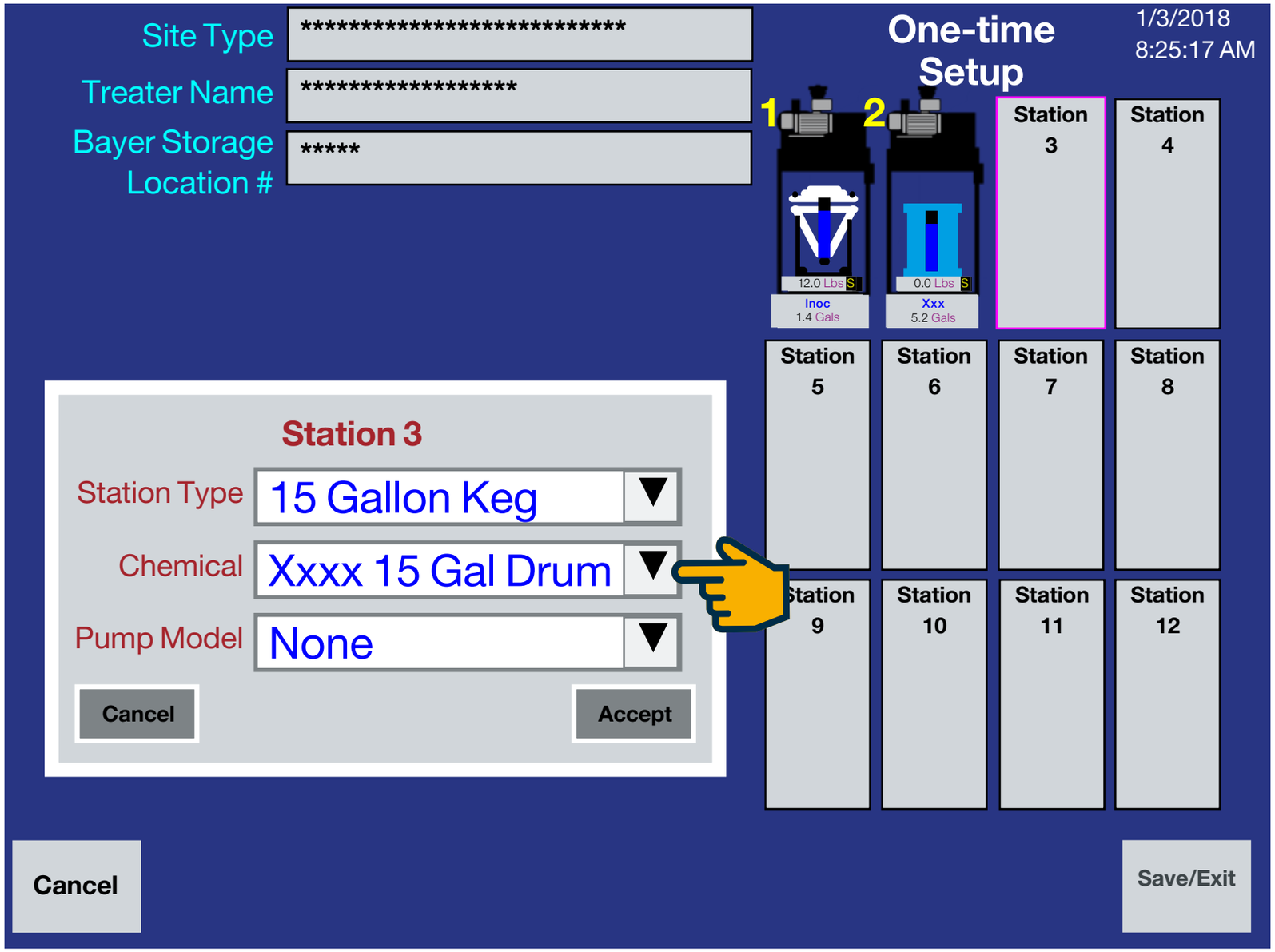


ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

Question 2: Select the **Chemical:** choose from the drop-down list, as follows...

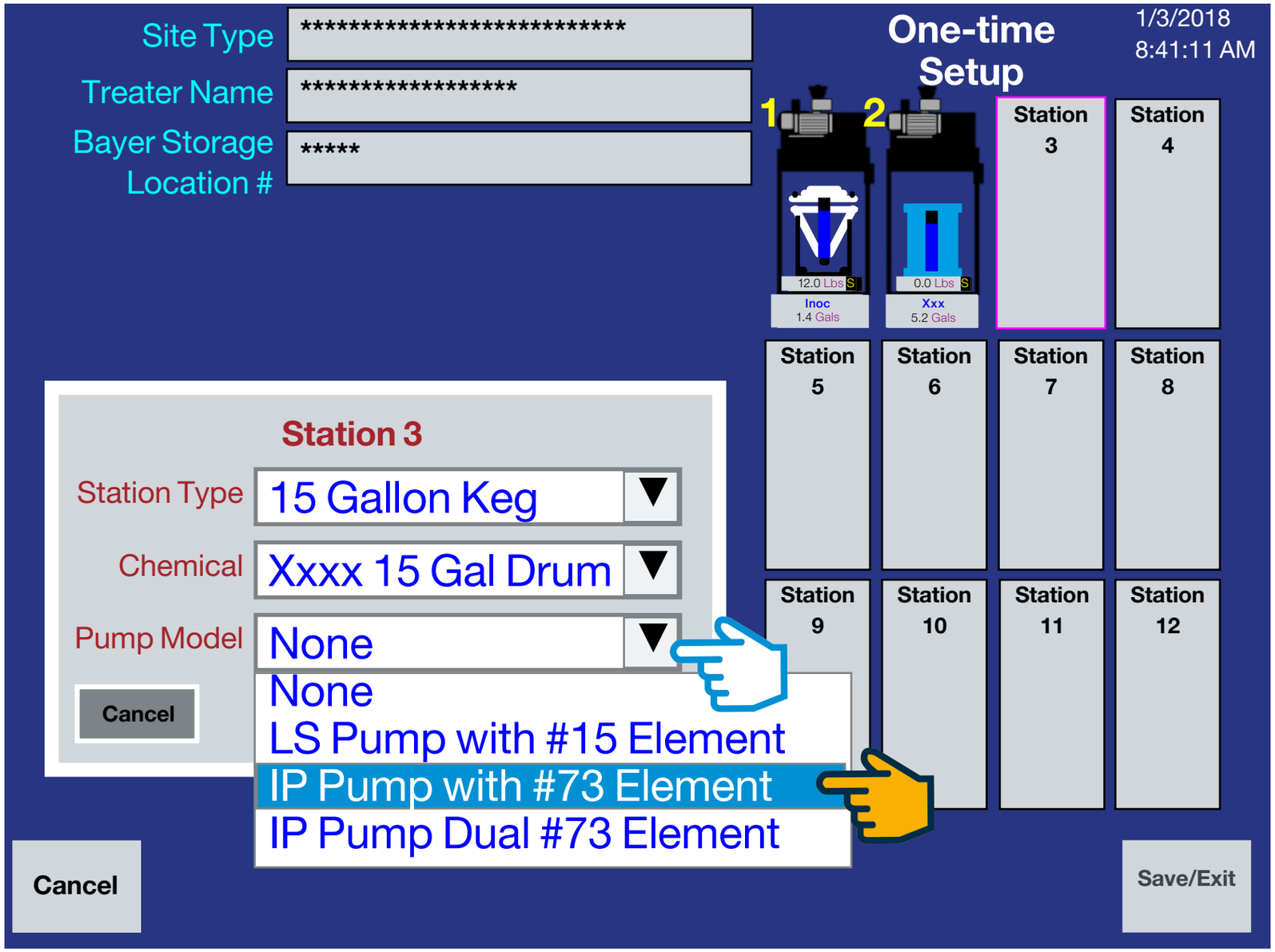
Step 1: Touch the Chemical **Drop-down Arrow**.

Step 2: Touch **Xxxx 15 Gallon Drum** ➲



ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

Chemical: now displays **Xxxx 15 Gallon Drum**, as shown above ➲

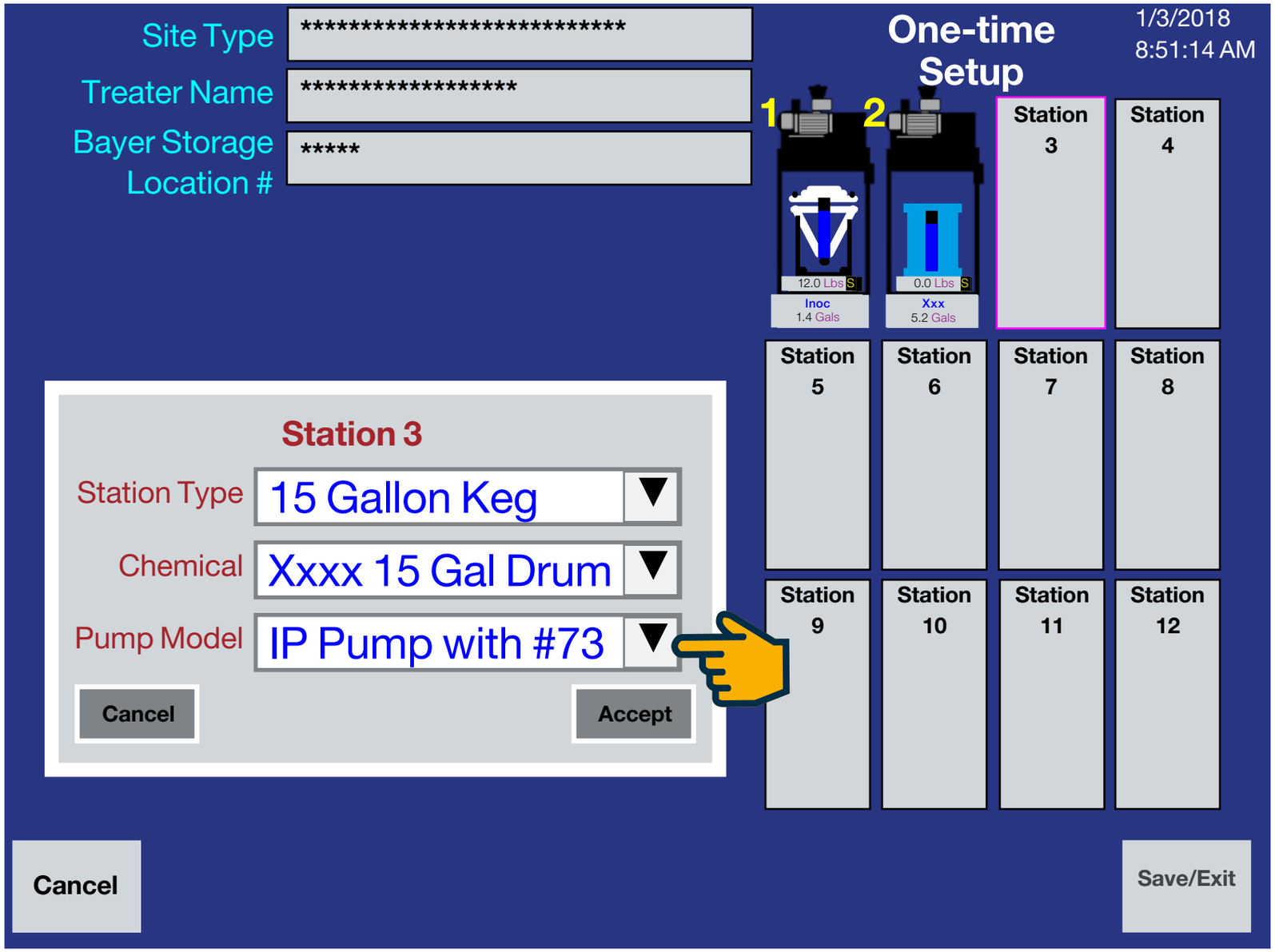


ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

Question 3: Select the **Pump Model:** choose from the drop-down list, as follows...

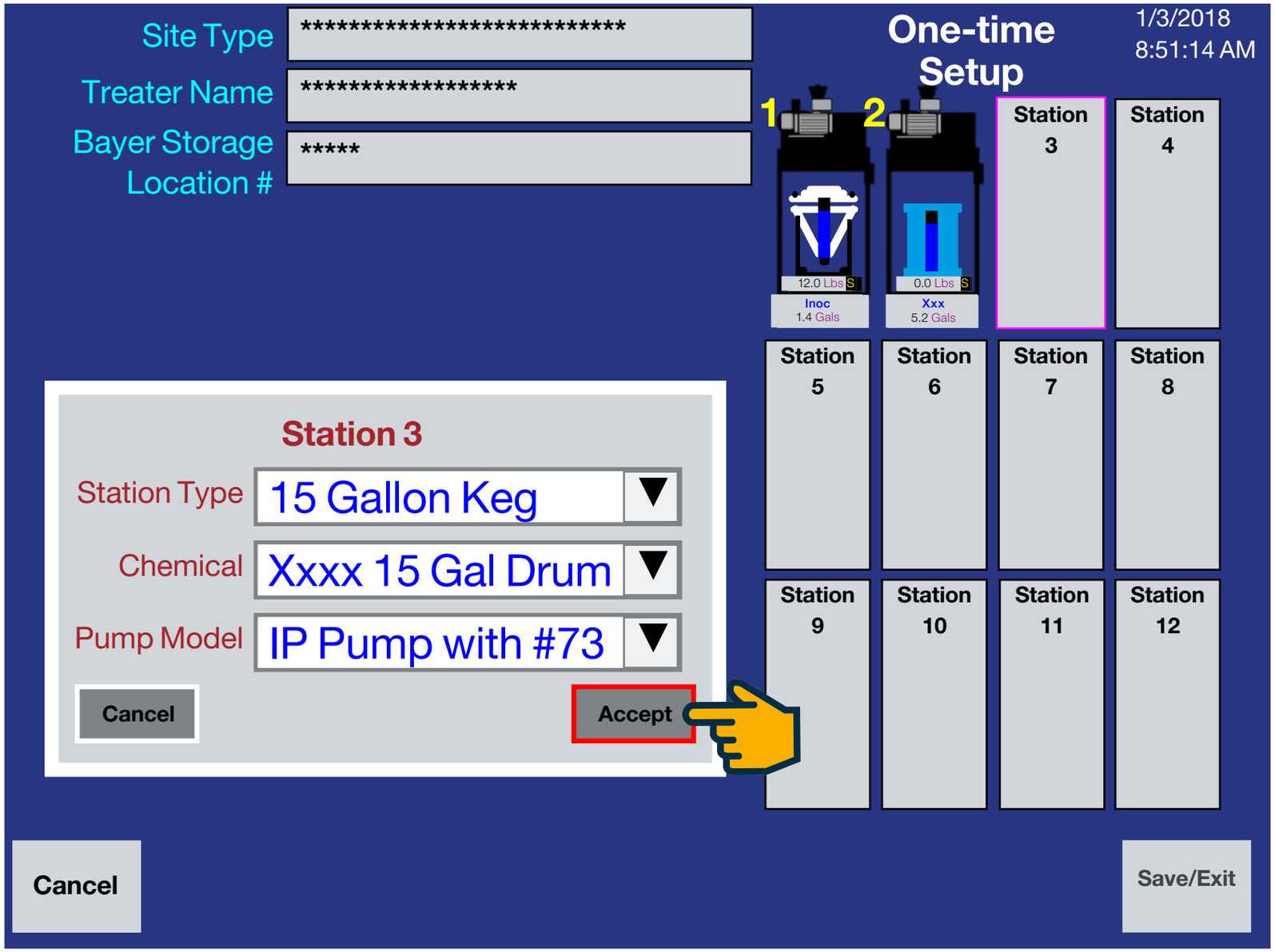
Step 1: Touch the Pump Model **Drop-down Arrow**.

Step 2: Touch **IP Pump with #73 Element** ➲



ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

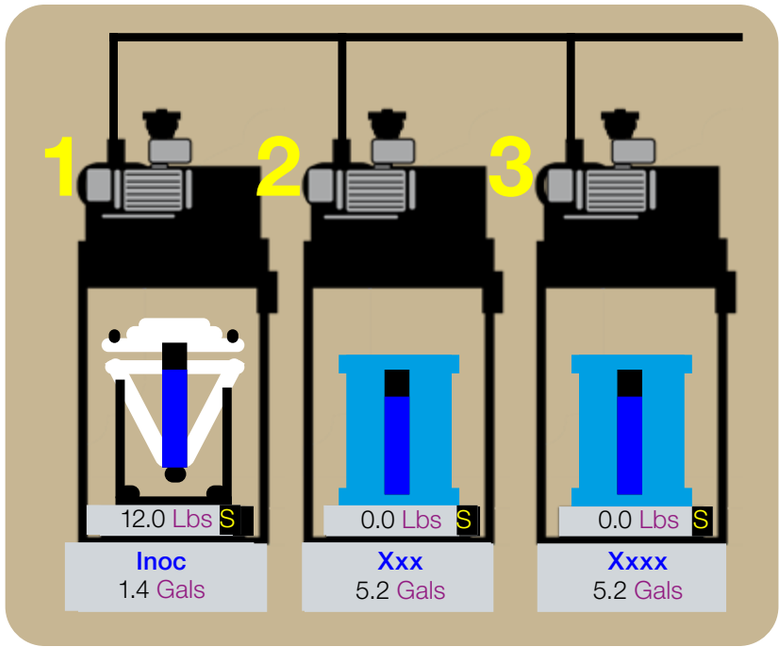
Pump Model: now displays **IP Pump with #73 Element**, as shown above ➲

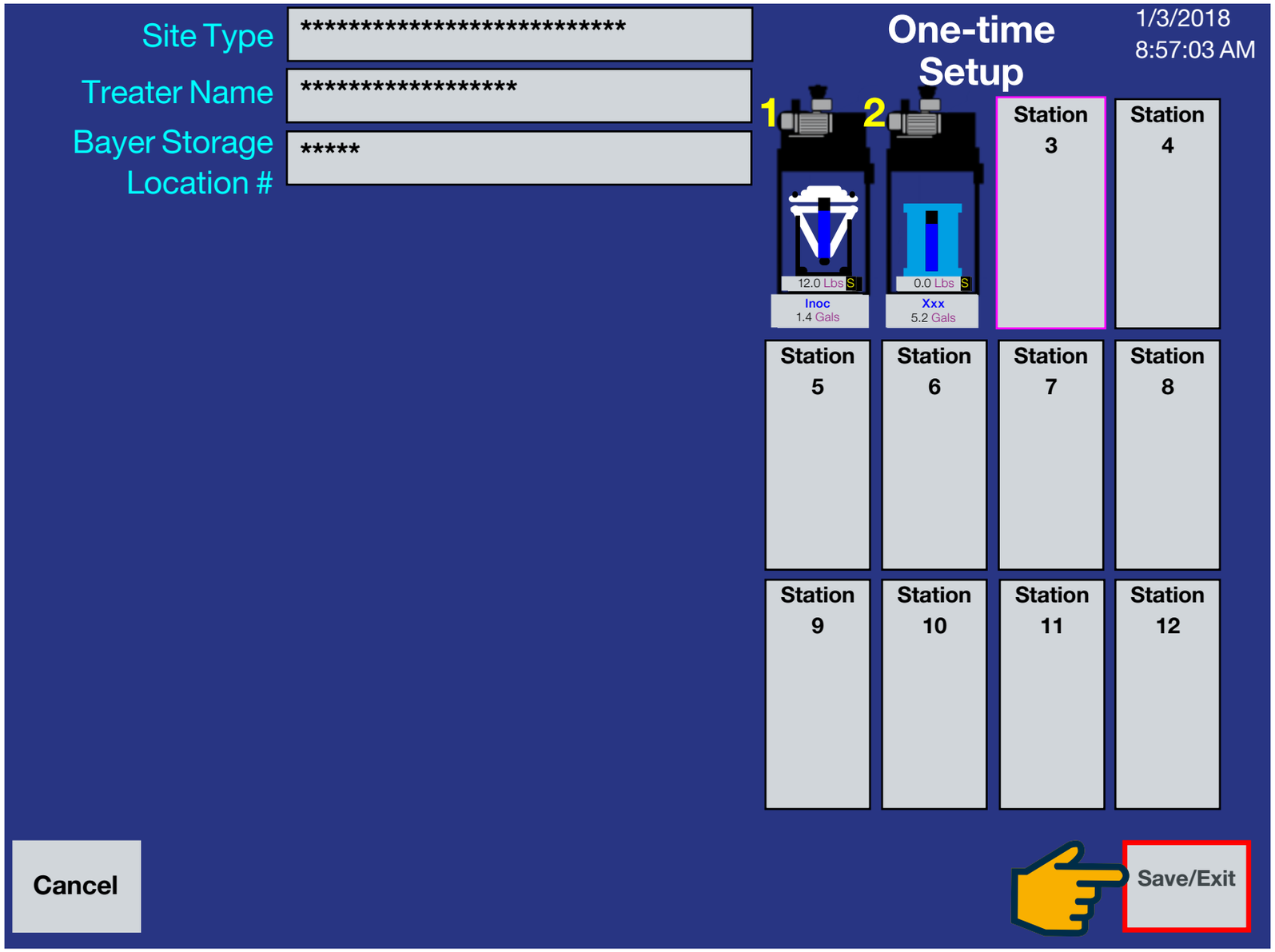


ONE-TIME SETUP SCREEN - STATION 3 QUESTION POP-UP

All fields need the be filled out.

Step 1: Touch the **Accept** button icon: Questions pop-up closes ➲



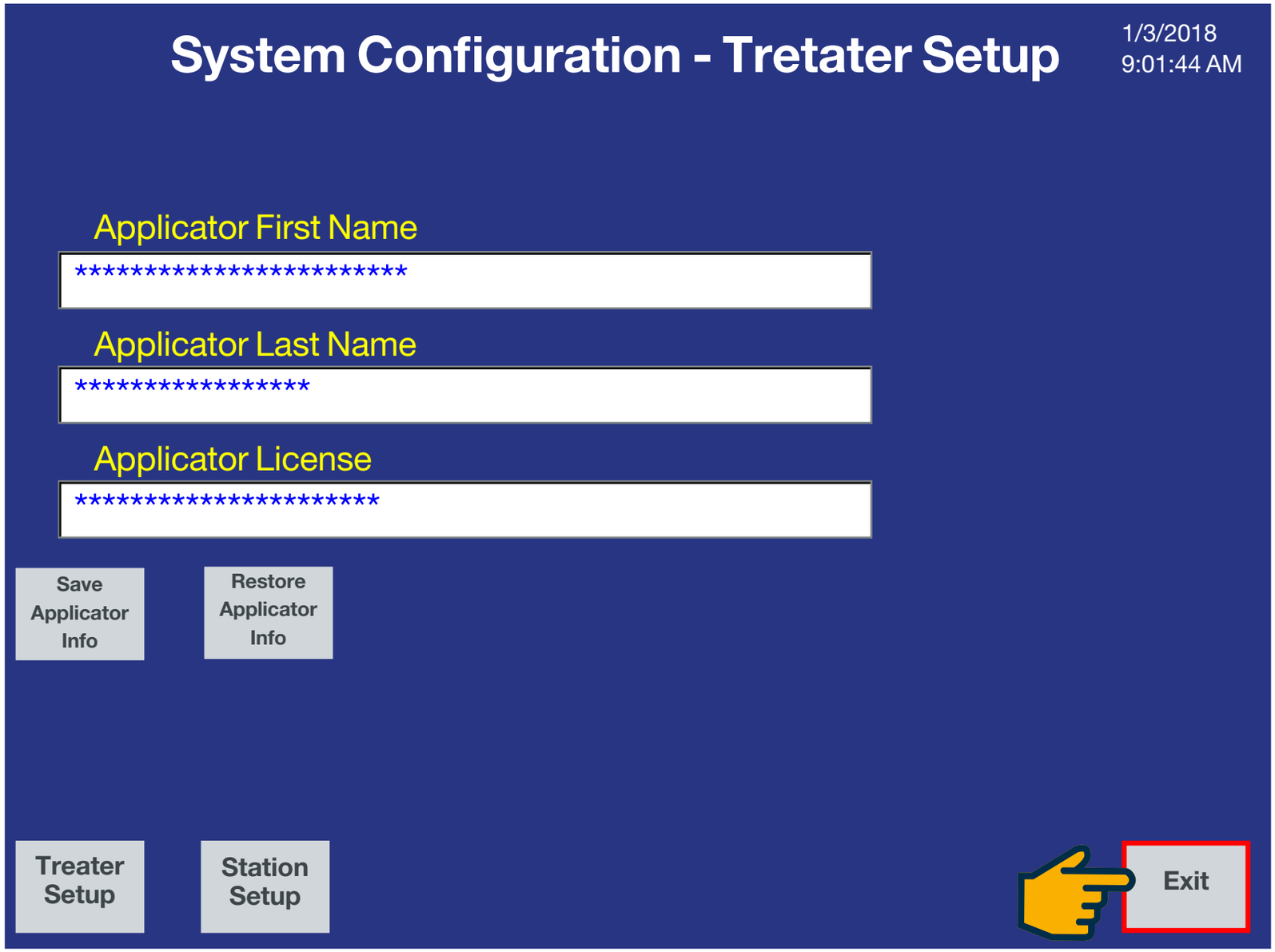


ONE-TIME SETUP SCREEN

Station 3 has been successfully set up for a new 15 gallon keg of Xxxx, as shown above. The **Main Screen** will then display **Station 3** added after **One-time Setup** (shown left).

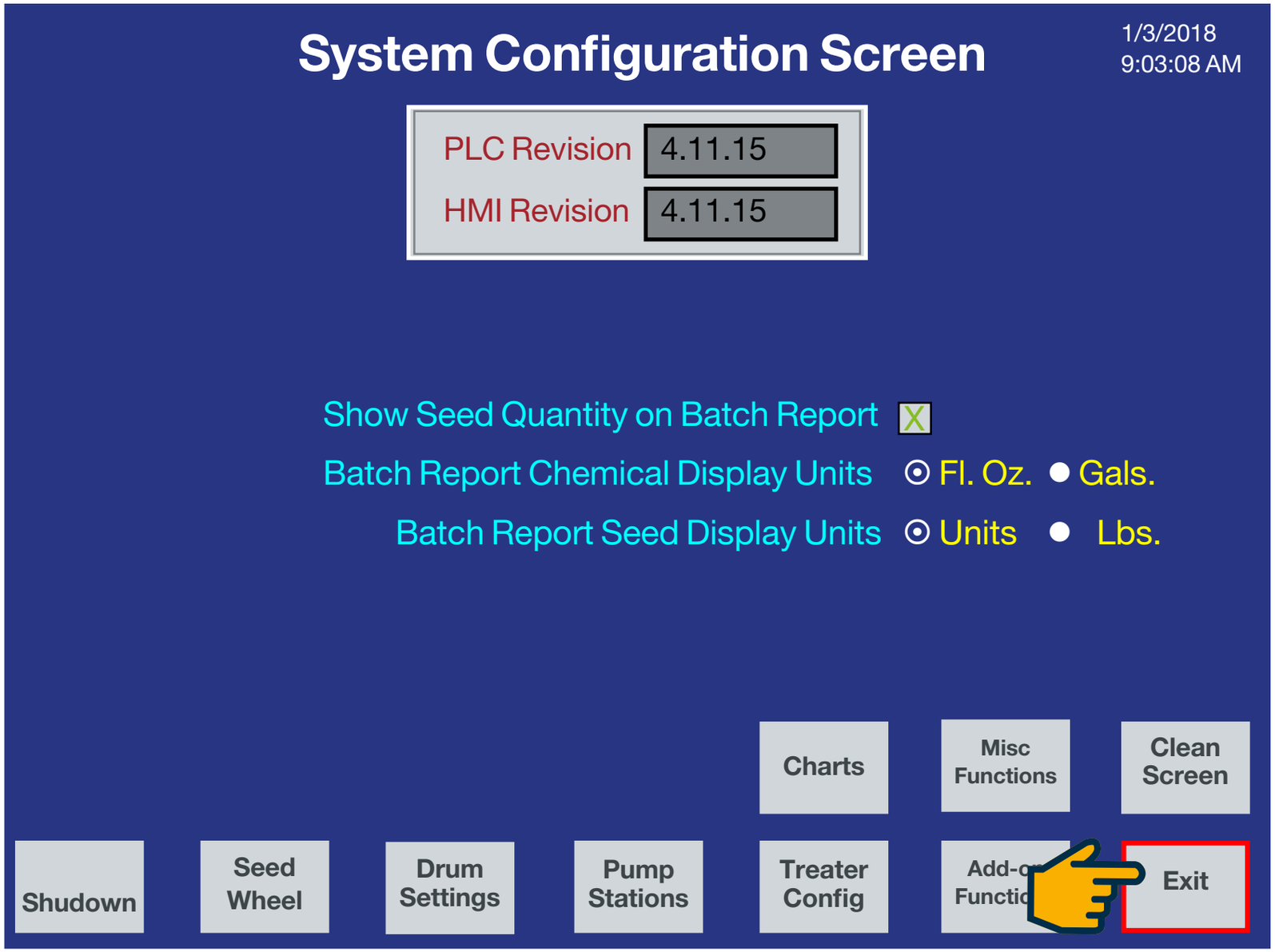
>>Repeat this **One-time Setup** procedure when adding additional Stations.

Step 1: Touch the **Save/Exit** button icon: navigates to the **System Configuration - Treater Setup Screen** ➲



SYSTEM CONFIGURATION - TREATER SETUP SCREEN

Step 1: Touch the **Exit** button icon: navigates to the **System Configuration Screen** ➲



SYSTEM CONFIGURATION SCREEN

This completes **Station 3** Setup.

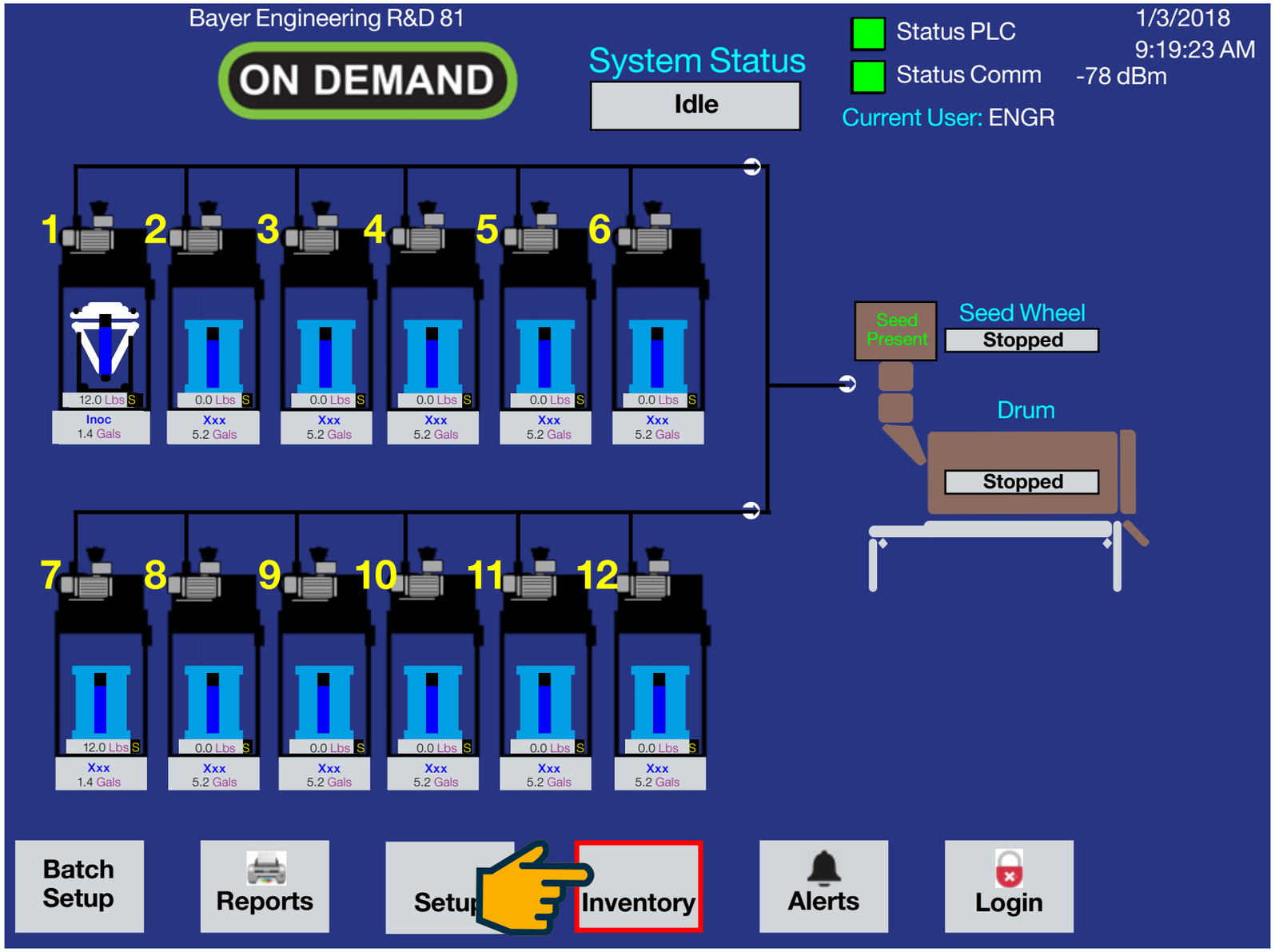
Step 1: Touch the **Exit** button icon: navigates to the **Main Screen** ➲

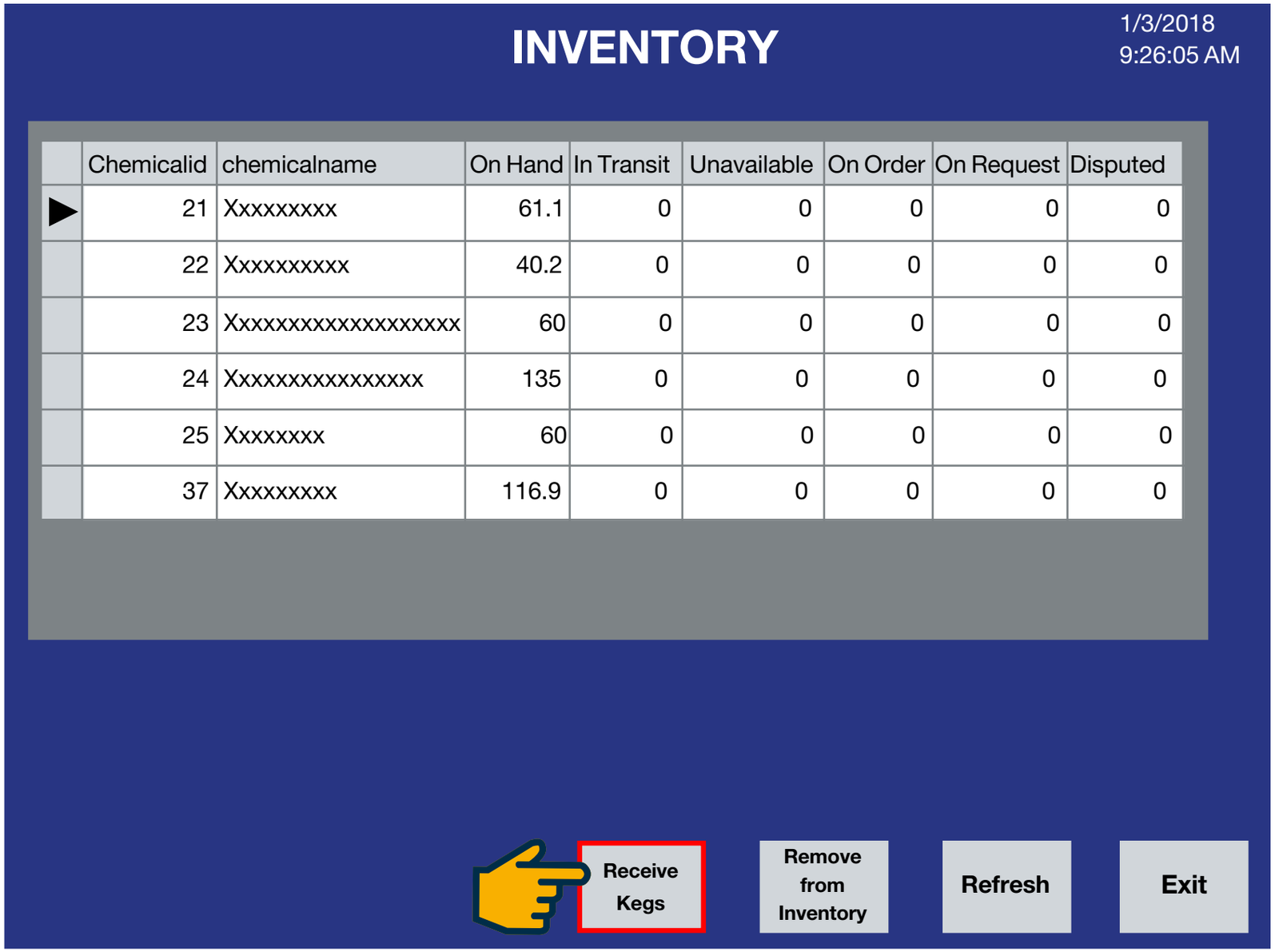
ADD INVENTORY

MAIN SCREEN - ADD INVENTORY

Chemical (keg) inventory will need to be added into inventory prior to setting up a batch run. Best practice to ensure that all inventory is added, scan your kegs immediately upon arrival. This ensures each keg is added into inventory prior to switching a keg or running a batch.

Step 1: Touch the **Inventory** button icon: navigates to the **Inventory Screen** ➲





INVENTORY SCREEN

The inventory screen displays the current keg inventory that was set up during installation.

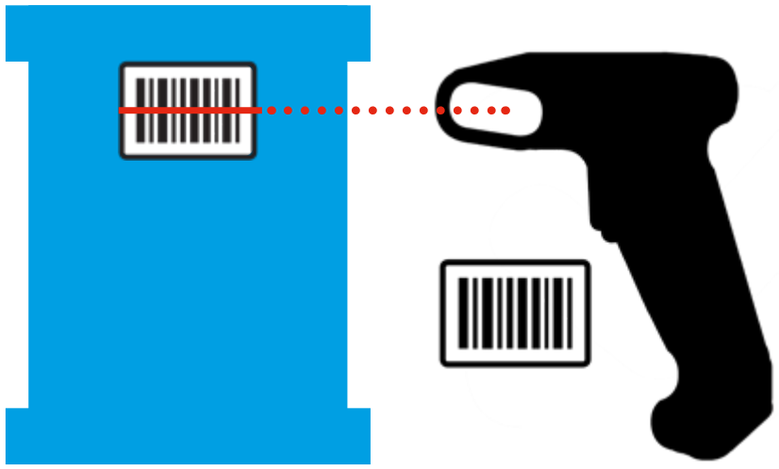
>>To Add additional inventory to the existing list...

Step 1: Touch the **Receive Kegs** button icon: navigates to the **Receive Inventory Screen** ➲

RECEIVE INVENTORY SCREEN

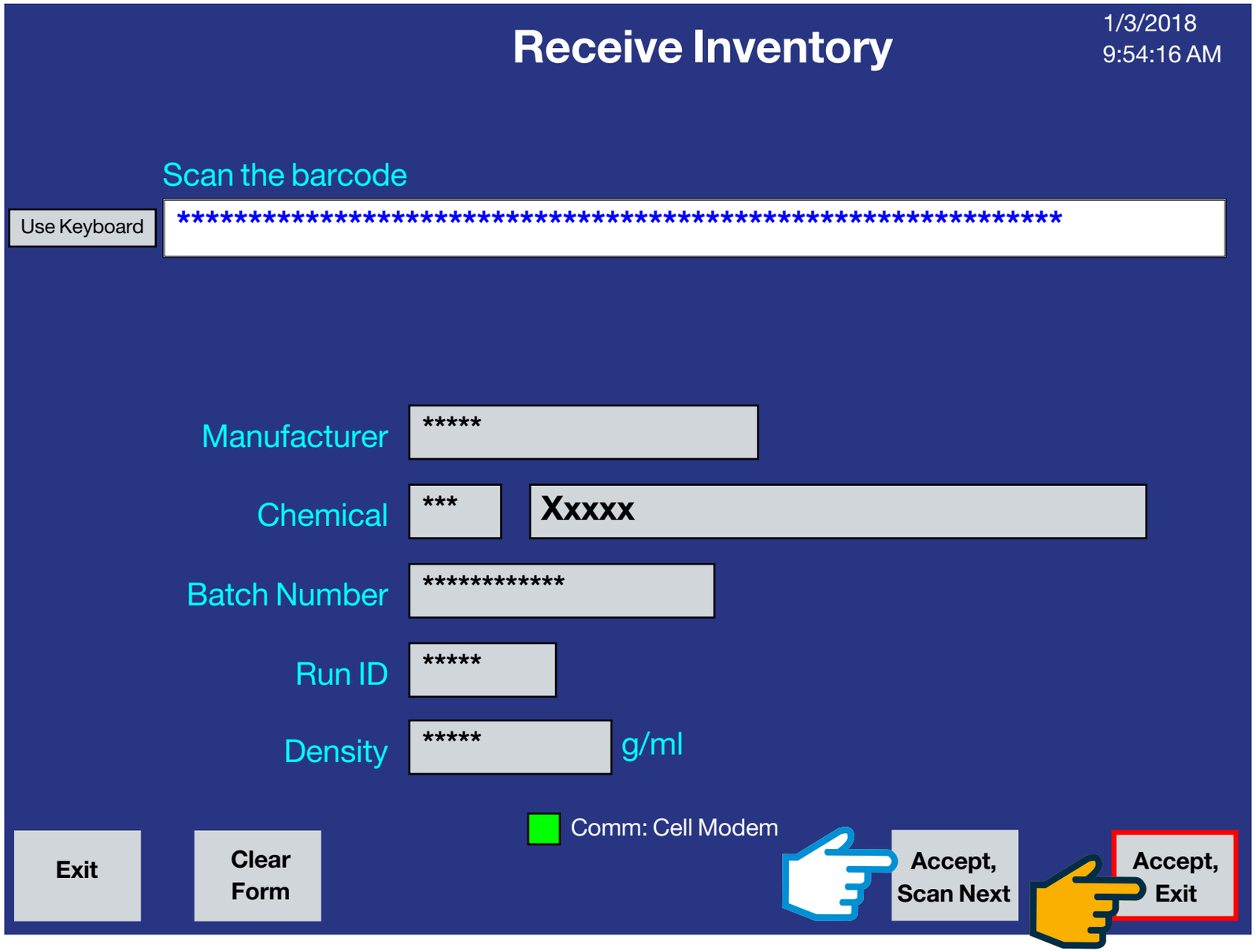
Step 1: Remove the scanner from the base. Pull the trigger to wake up the scanner (will beep, meaning it woke up). The second beep indicates communication link to the base.

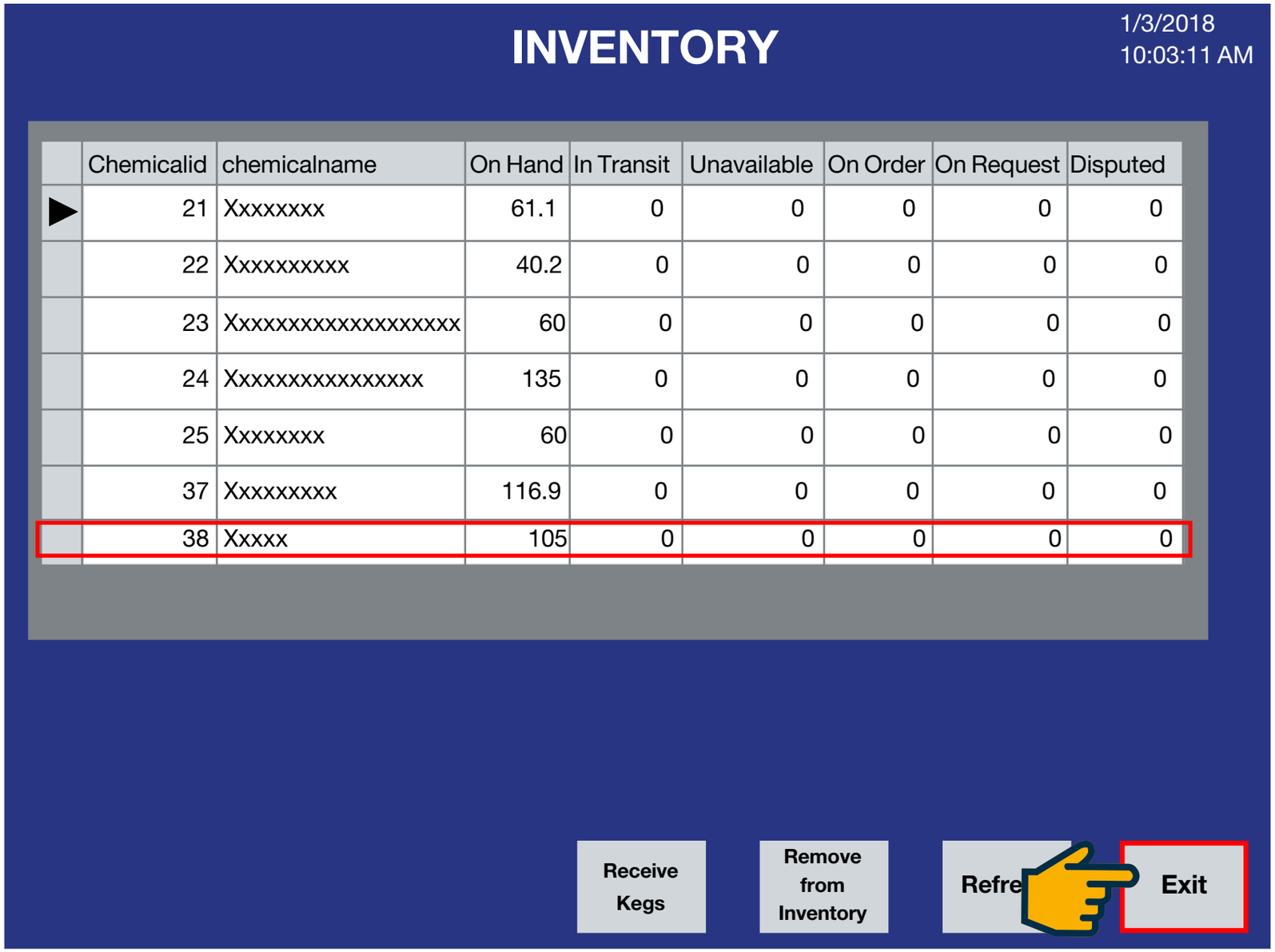
Step 2: Bring the scanner over to a new keg and scan the keg barcode label, as shown below. The scanner will beep, indicating the barcode has been scanned. Wait approximately 5 minutes for the barcode information to go to the cloud for verification, and return to the HMI. The keg information from the barcode then populates on the Receive Inventory screen, as shown right.



Step 3: If scanning multiple Kegs, scan one keg, then touch the **ACCEPT SCAN NEXT** button icon: the current scan will be accepted and a new blank screen will appear. Repeat the scan process to add additional Kegs to inventory.

Step 4: When finished scanning kegs, touch the **Accept/ Exit** button icon: navigates to the **Inventory Screen** ➲





INVENTORY SCREEN

The inventory information is transferring to the cloud and will display on the inventory screen via the cell signal to the treater and to your desktop. You have successfully added **Xxxxx** to the OnDemand inventory.

Step 1: Touch the **Exit** button icon: navigates to the **Main Screen** ➲

SCALE CALIBRATION

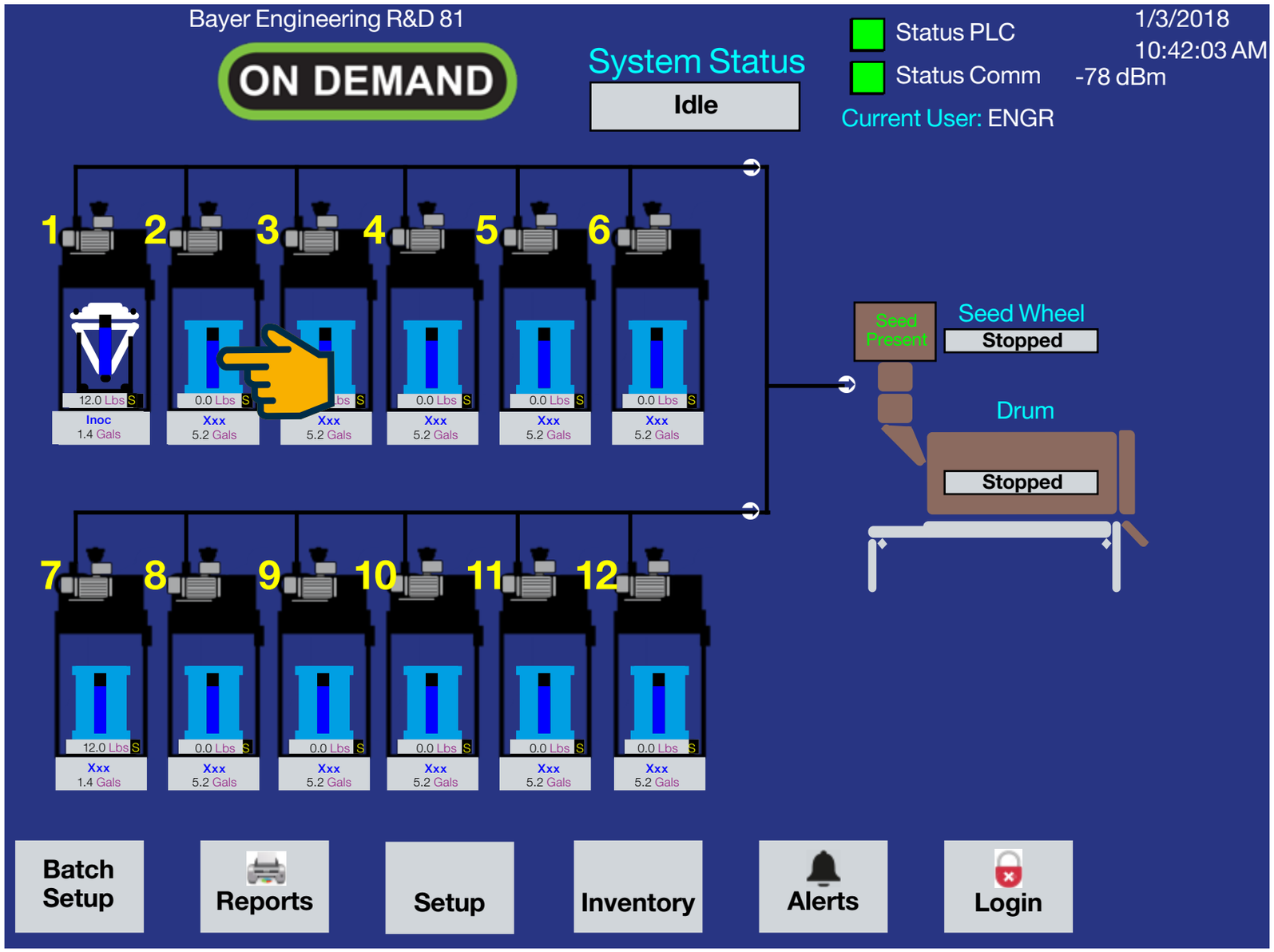
Example: start of season: **Pump Station 2**

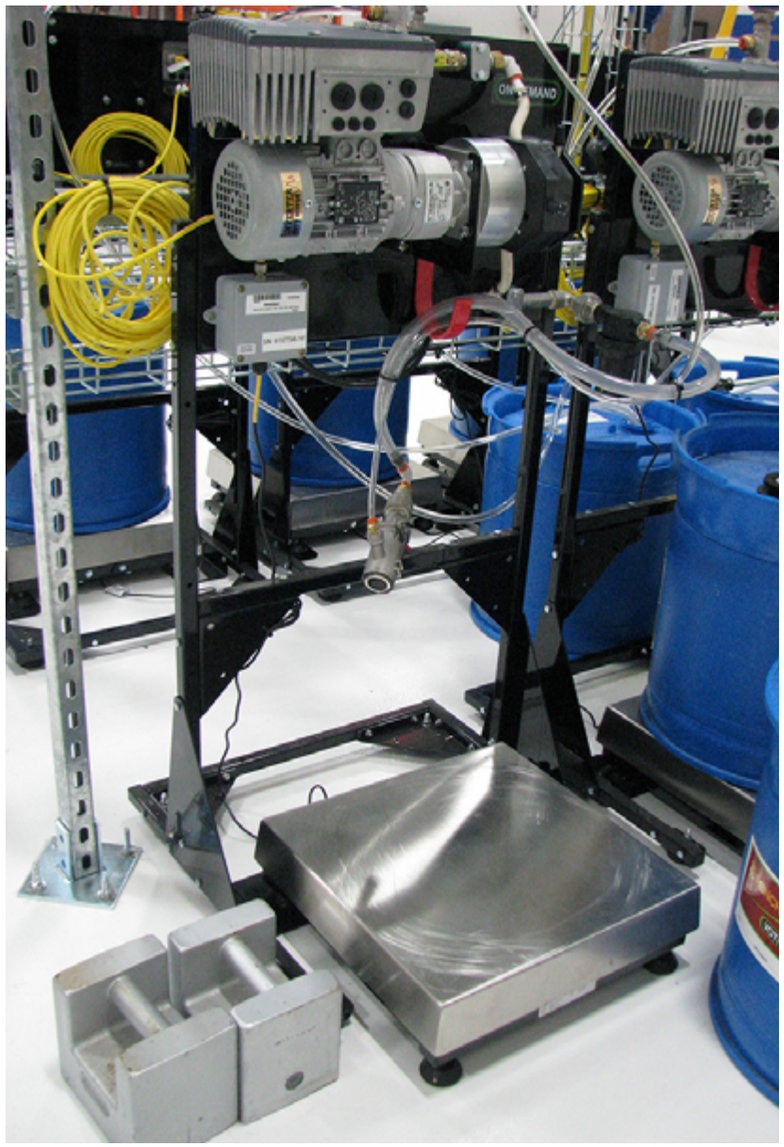
Tip: do not calibrate scale after each keg swap or flex tank fill!

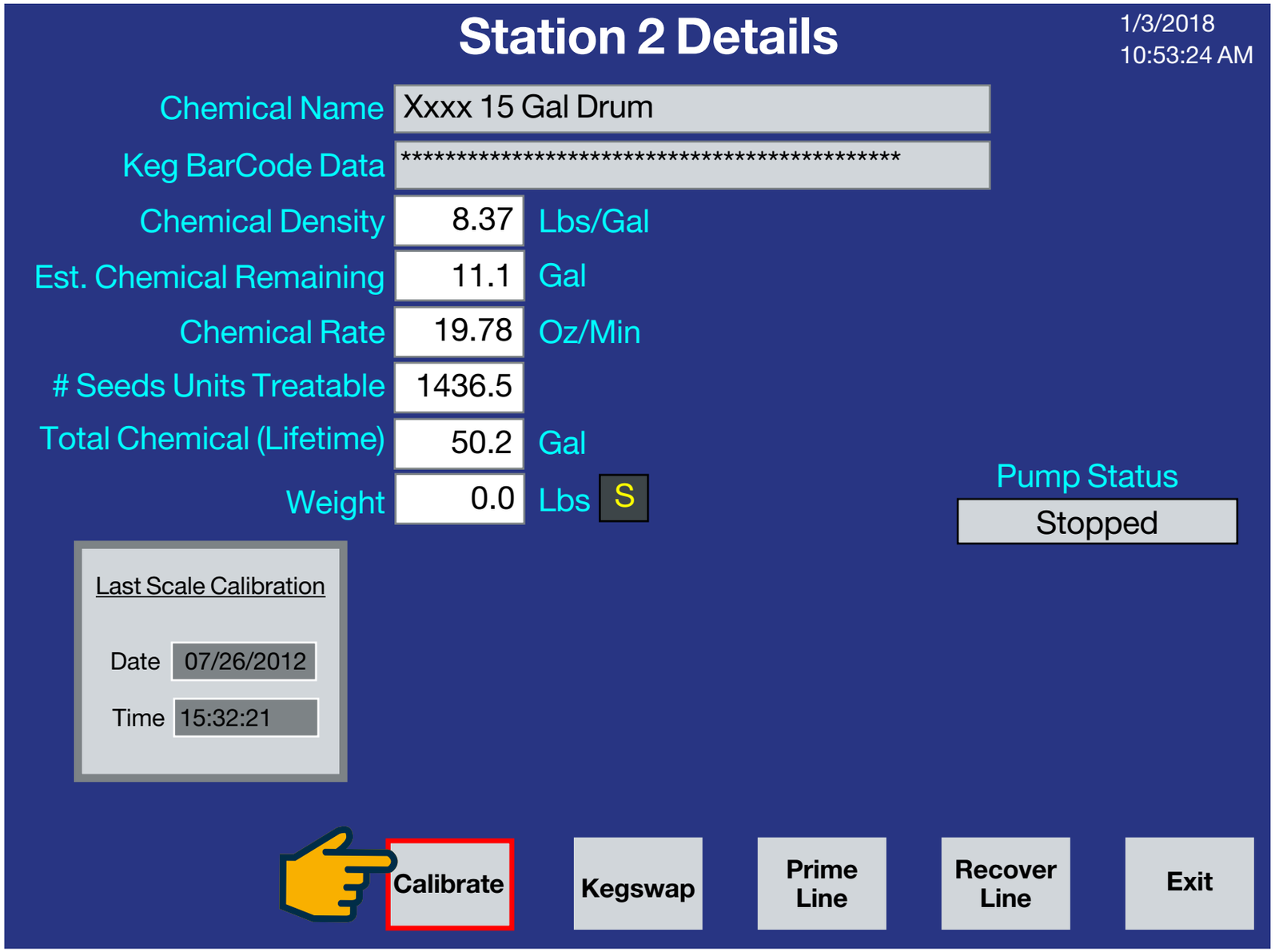
MAIN SCREEN - CALIBRATE PUMP STATION SCALES

Each Pump Station Scale requires annual calibration, at the start of each treating season, or if an alarm indicates a negative value reading. This must be done when logged into the system as Install.

Step 1: Touch the **Pump Station 2** graphic icon on the Main Screen: navigates to the **STATION 2 PUMP DETAIL SCREEN ➲**





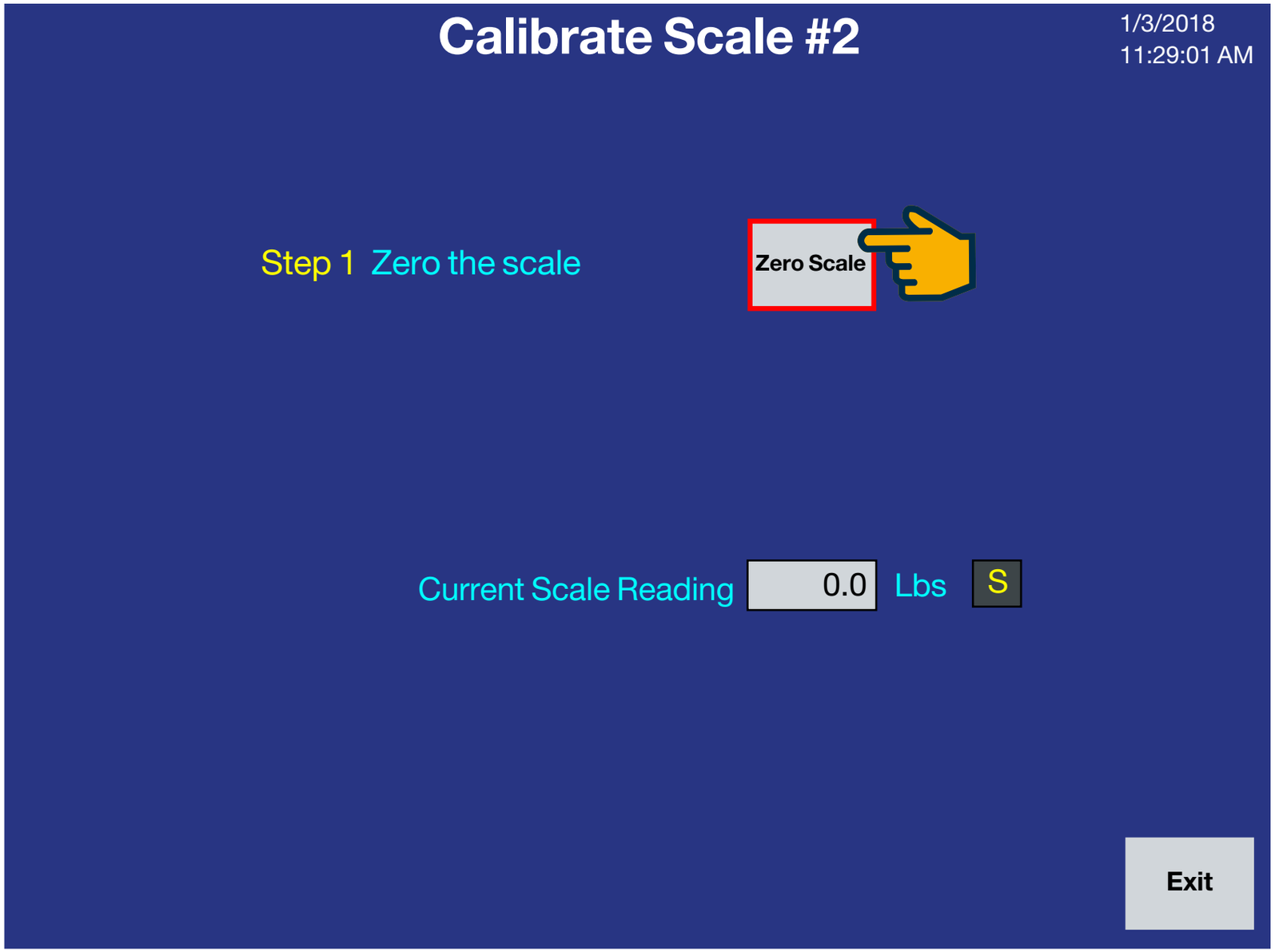


STATION 2 DETAILS SCREEN

< The Scale must be empty without a Keg or Flex Tank on the Scale, as shown left.

The **Weight** field should display a value of **0.0**, as shown above.

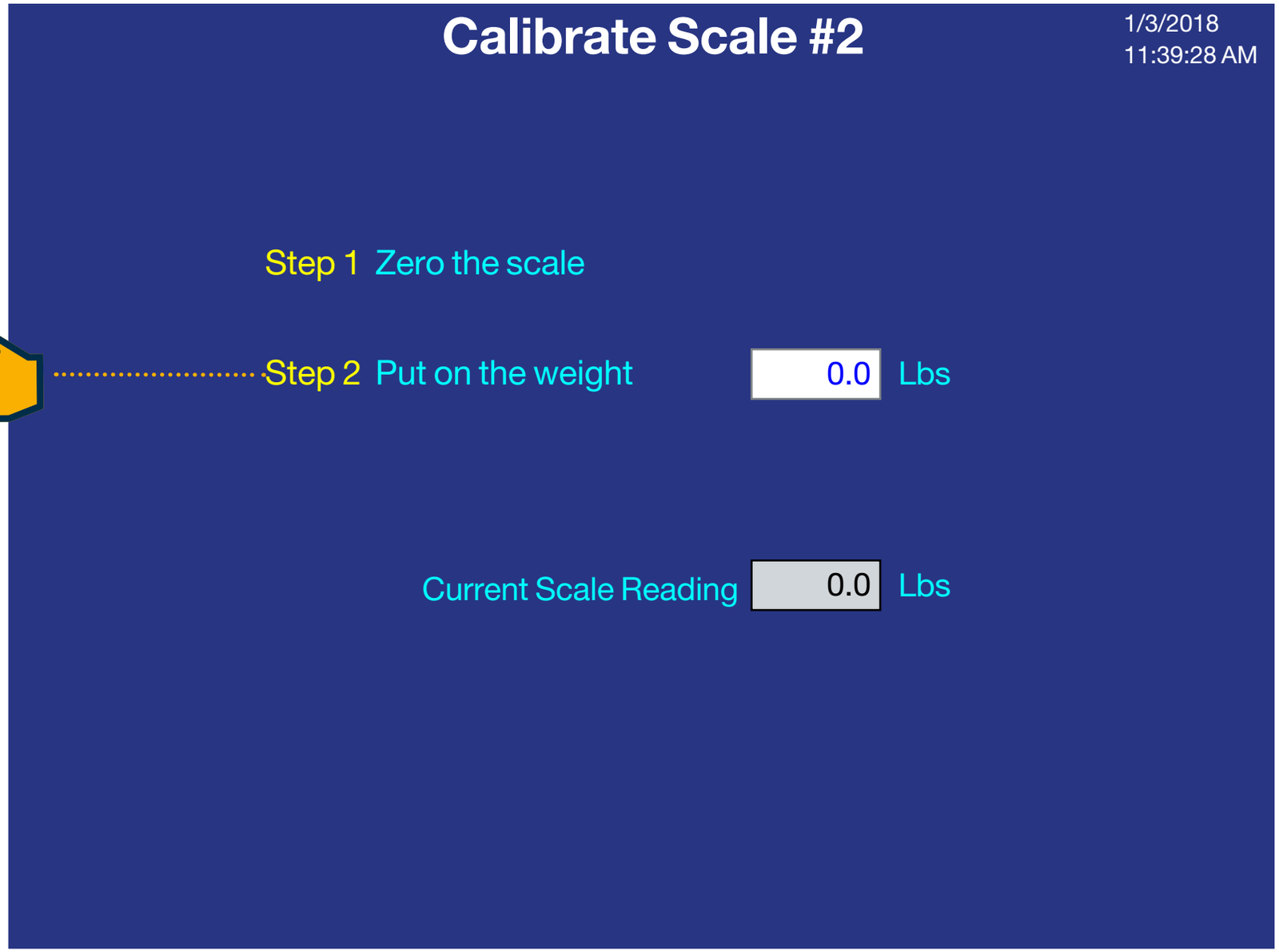
Step 1: Touch the **Calibrate** button icon: navigates to the **CALIBRATE SCALE #2 SCREEN ➲**



CALIBRATE SCALE 2 SCREEN

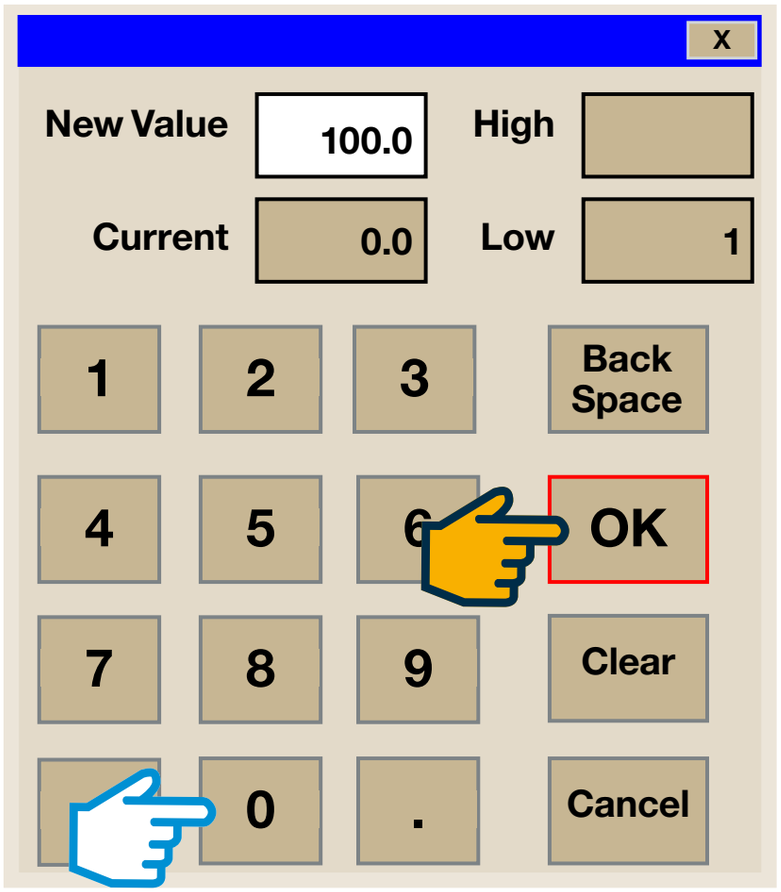
Step 1: Touch the **Zero Scale** button icon.

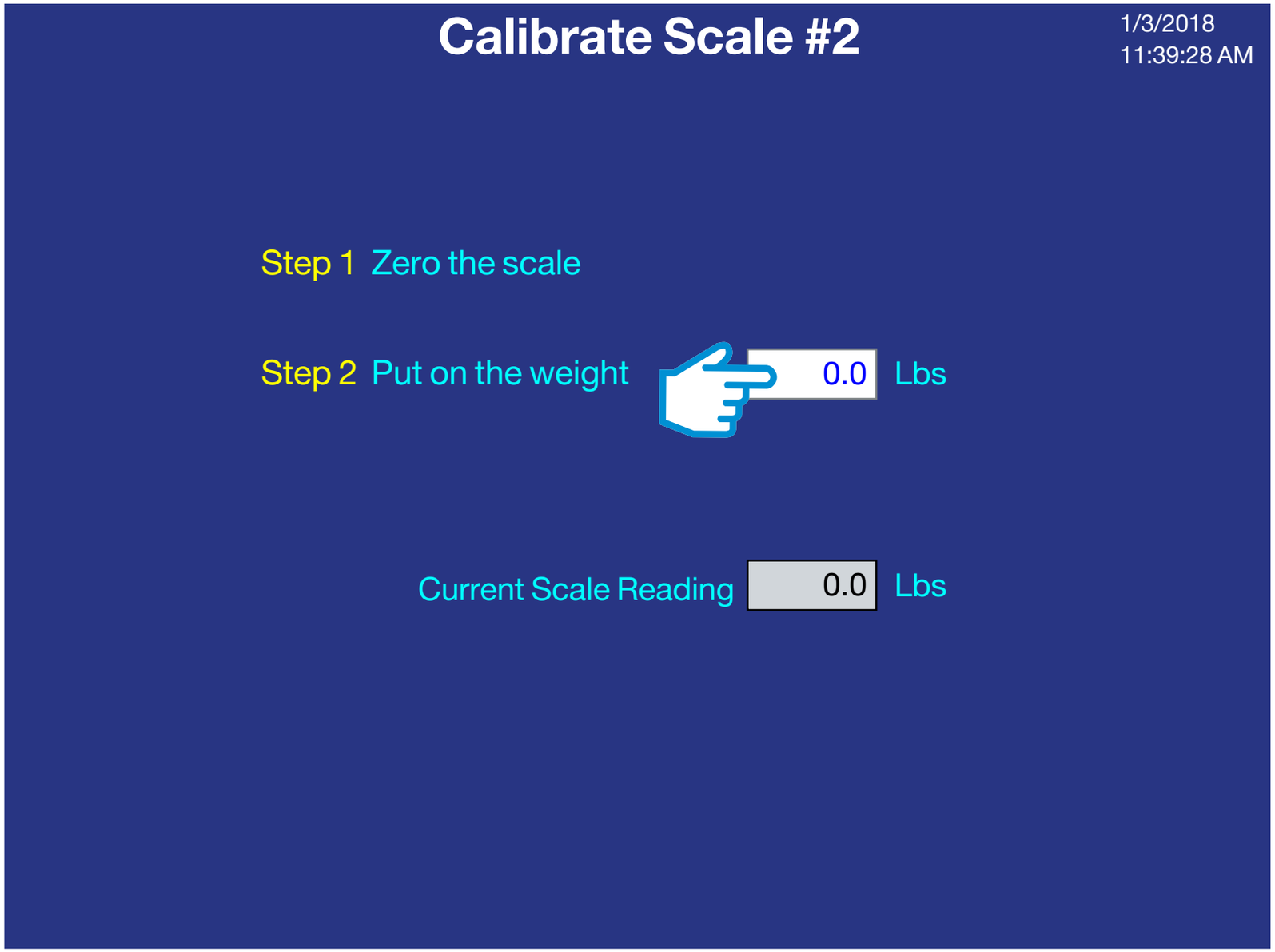
>> Wait for the PLC to zero out the scale: **Current Scale Reading 0.0** ➲



DRUM DETAIL SCREEN - SYSTEM PAUSED

Step 2: Place two 50 pound weights on the Scale, as shown left**.**

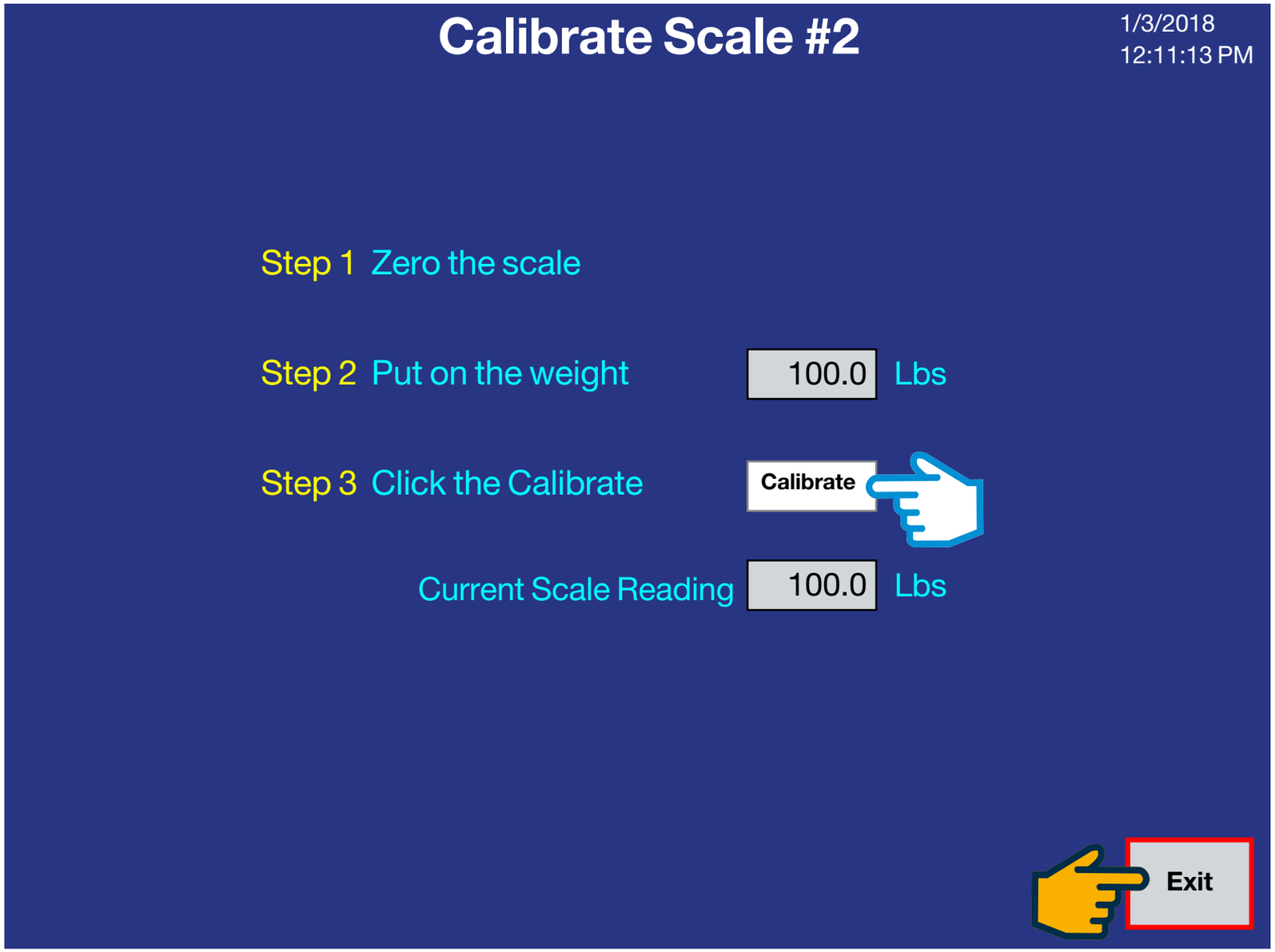




CALIBRATE SCALE 2 SCREEN

Step 1: Touch the **Weight** field: displays a key pad pop-up).

Step 2: Enter **New Weight** value (**100.0** lbs) on key pad pop-up, then touch **OK**: key pad pop-up closes ➲

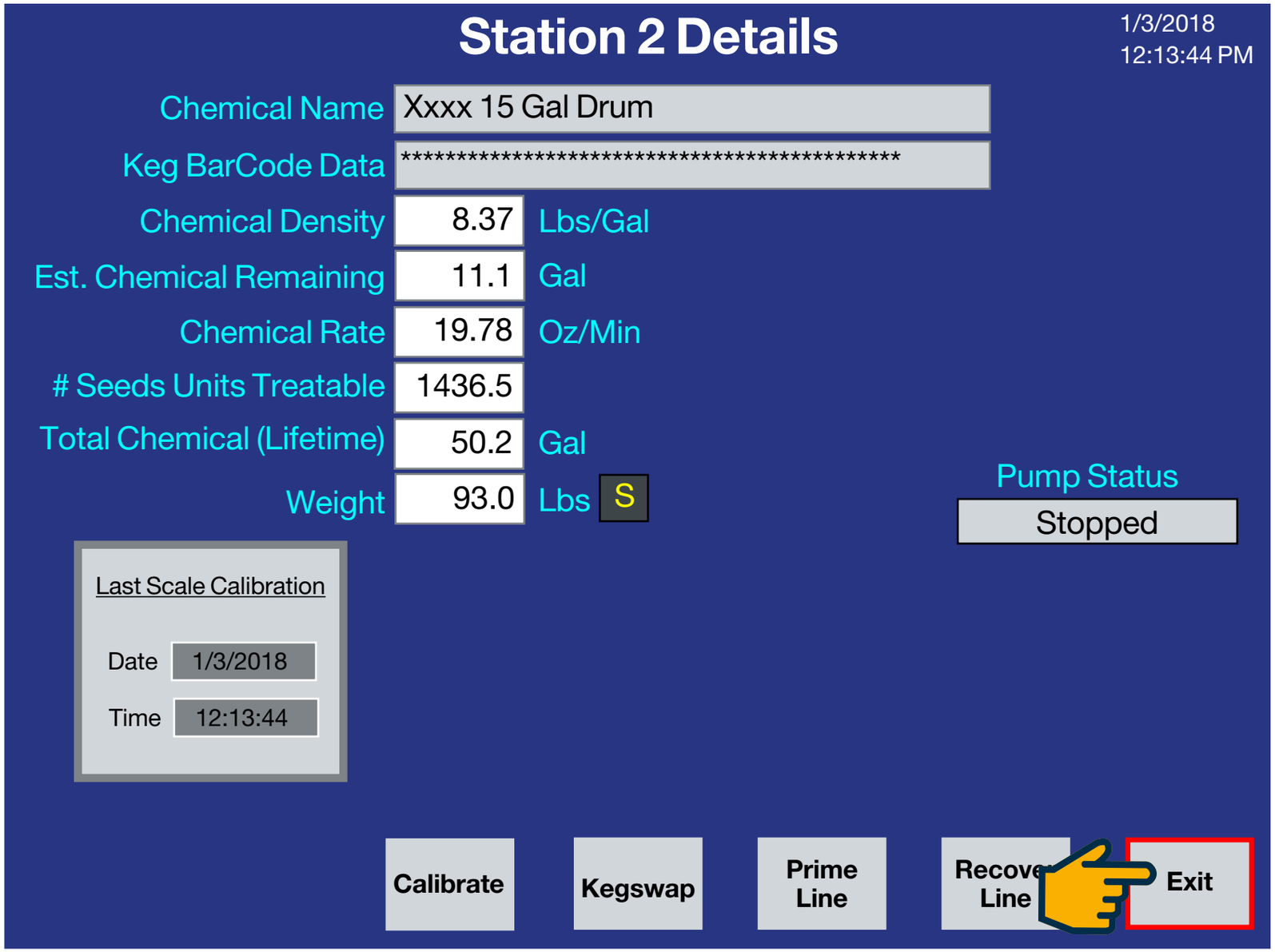


CALIBRATE SCALE 2 SCREEN

Step 1: Touch the **Calibrate** button icon...

>Verify the **Current Scale Reading** now displays **100.0** value, as shown above.

Step 2: Touch the **Exit** button icon: navigates to the **STATION 2 PUMP DETAIL SCREEN ➲**



STATION 2 DETAILS SCREEN

Repeat **Scale Calibration** procedure for each Pump Station used with the system.

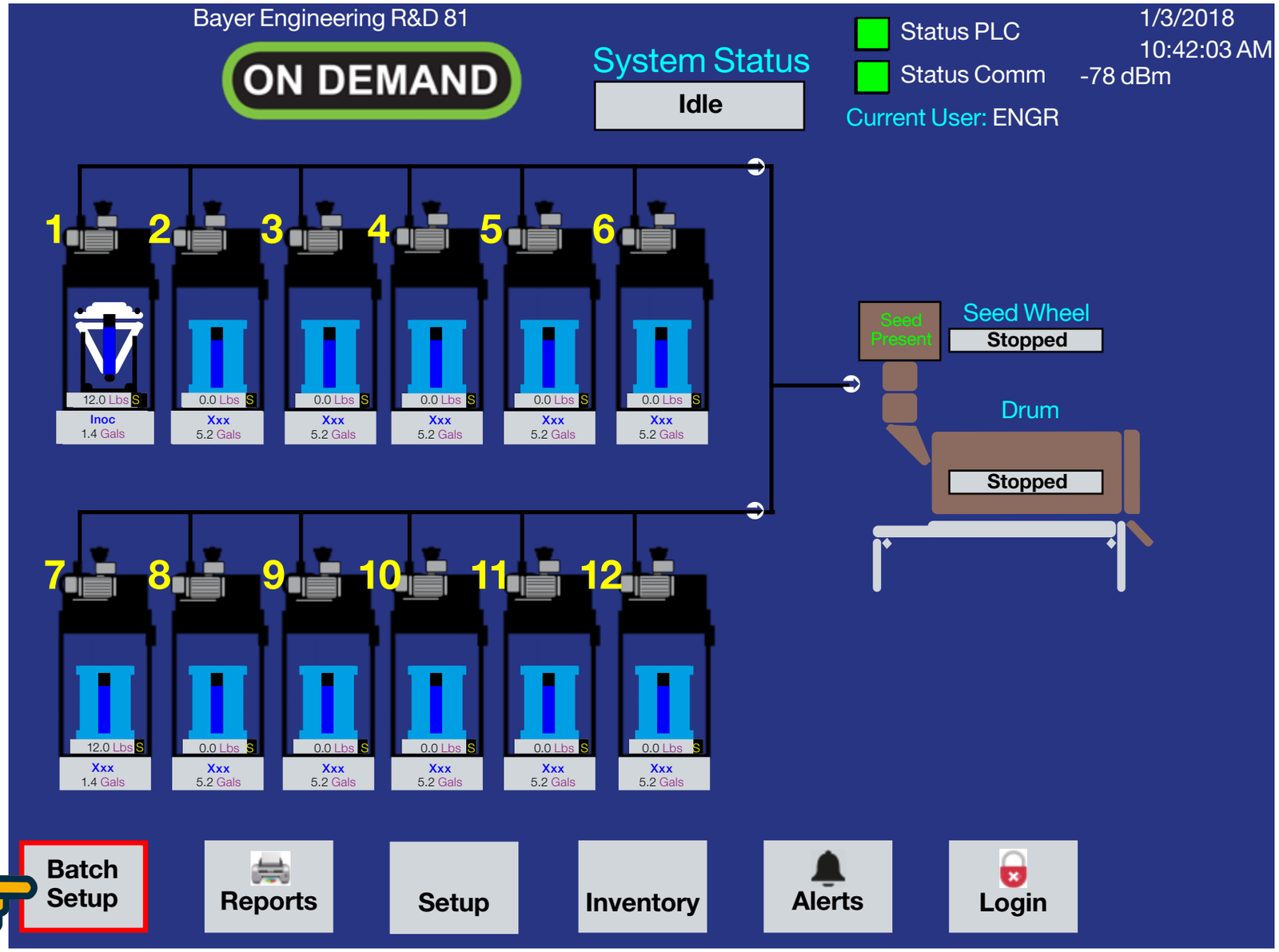
Step 1: Touch the **Exit** button icon: navigates to the **MAIN SCREEN ➲**

BATCH SETUP

Note: Prior to Batch Setup, recipes submitted through the website and either self approved or approved by a chemist. Please allow 10 days for recipe approval!

MAIN SCREEN - BATCH SETUP

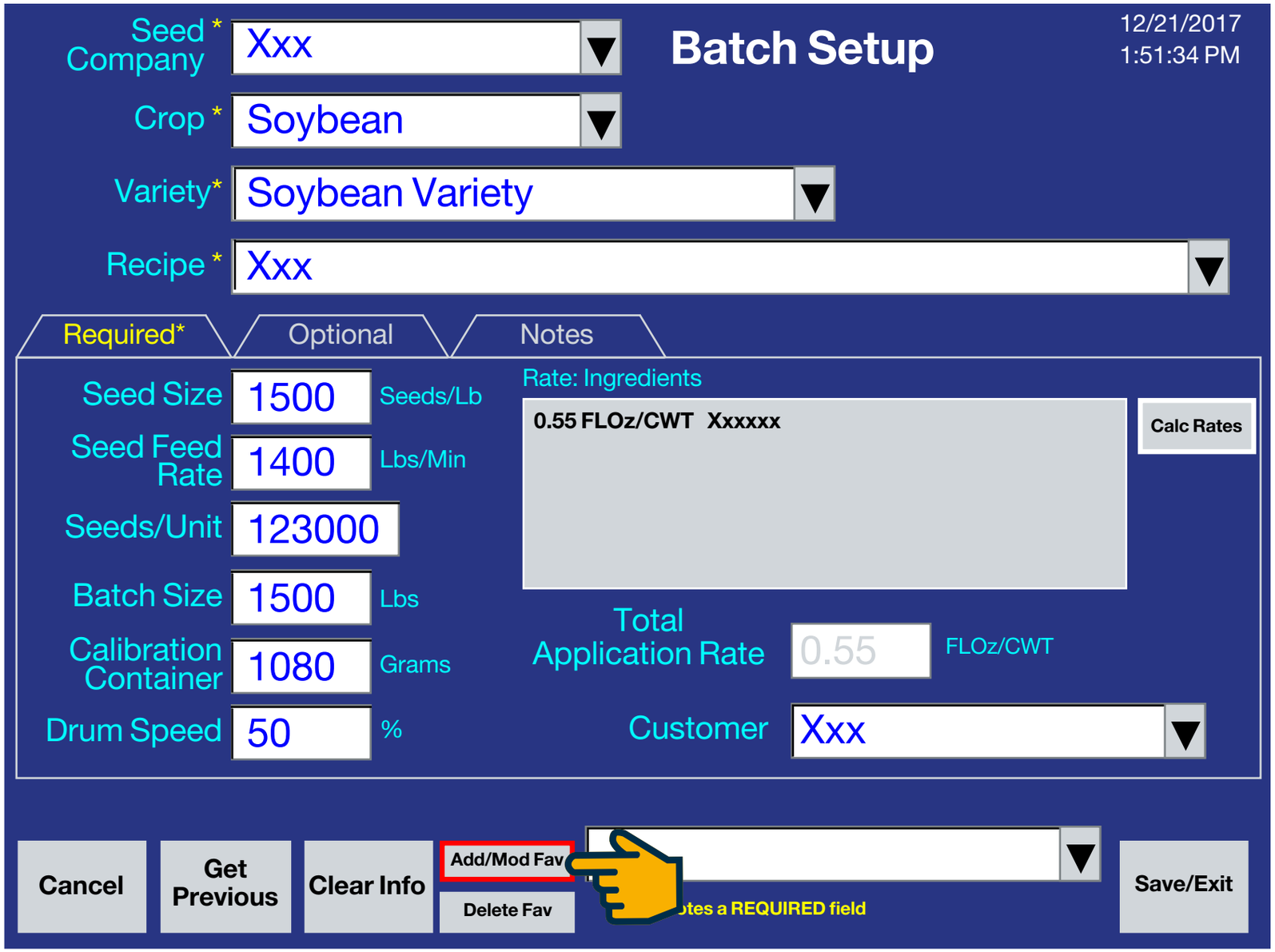
Step 1: Touch the **Batch Setup** button icon: navigates to the **BATCH SETUP SCREEN ➲**



BATCH SETUP SCREEN

When the **Get Previous** button icon is touched, the **Batch Setup Screen** populates with the last used batch information. If no other batch information was previously used, the **Batch Setup Screen** will not populate with data if the **Get Previous** button icon is touched. Users will need to create a new batch (see page 88).

Step 1: Touch the **Get Previous** button icon: navigates to the **Batch Setup Screen** ➲



BATCH SETUP SCREEN - CREATE A FAVORITE RECIPE

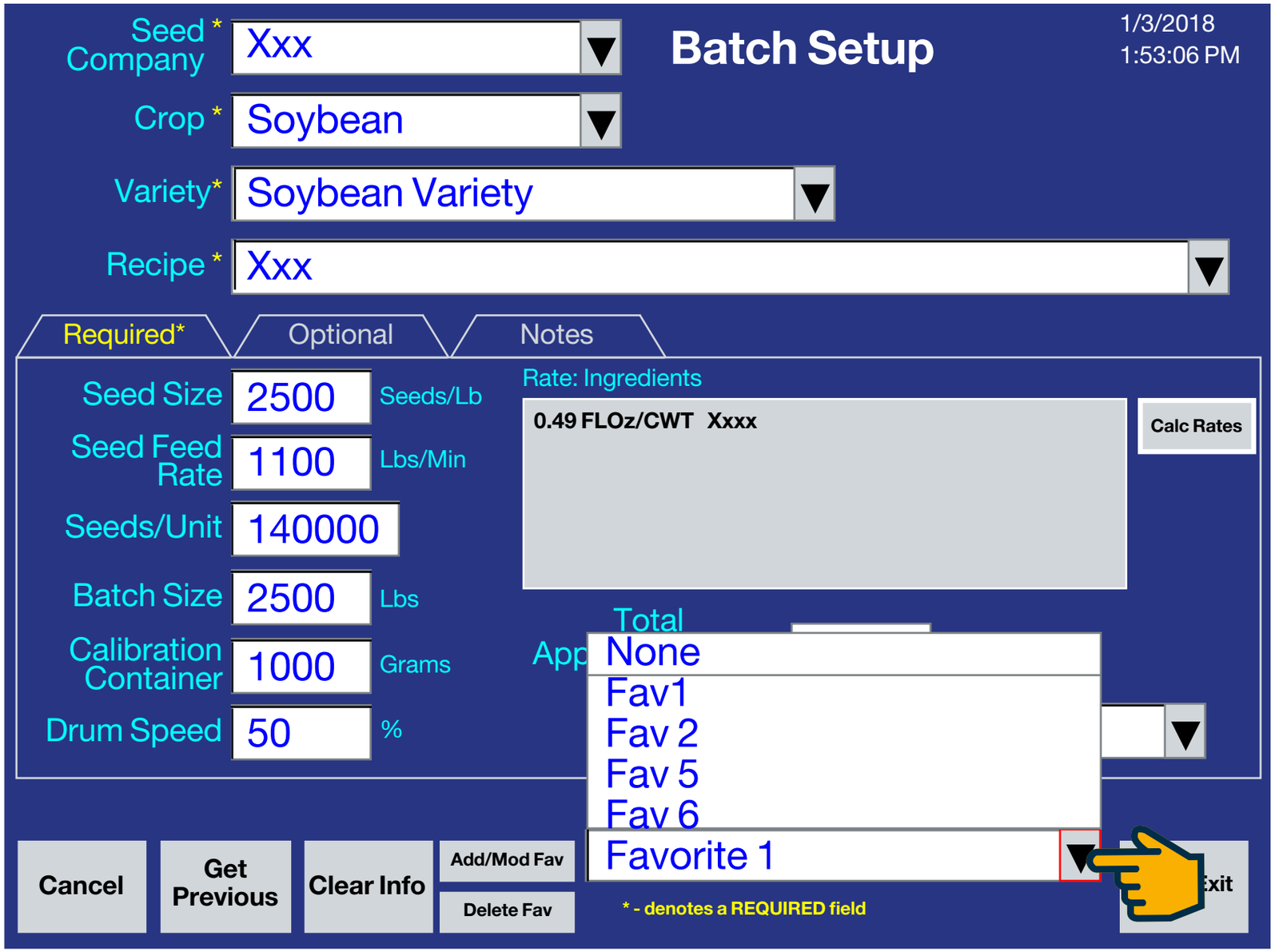
To create a new or modify an existing favorite batch information...

Step 1: Touch the **Add/Mod Fav** button icon: navigates to display the **Enter a Name for the Favorite pop-up window** ➲

BATCH SETUP SCREEN - CREATE A FAVORITE RECIPE

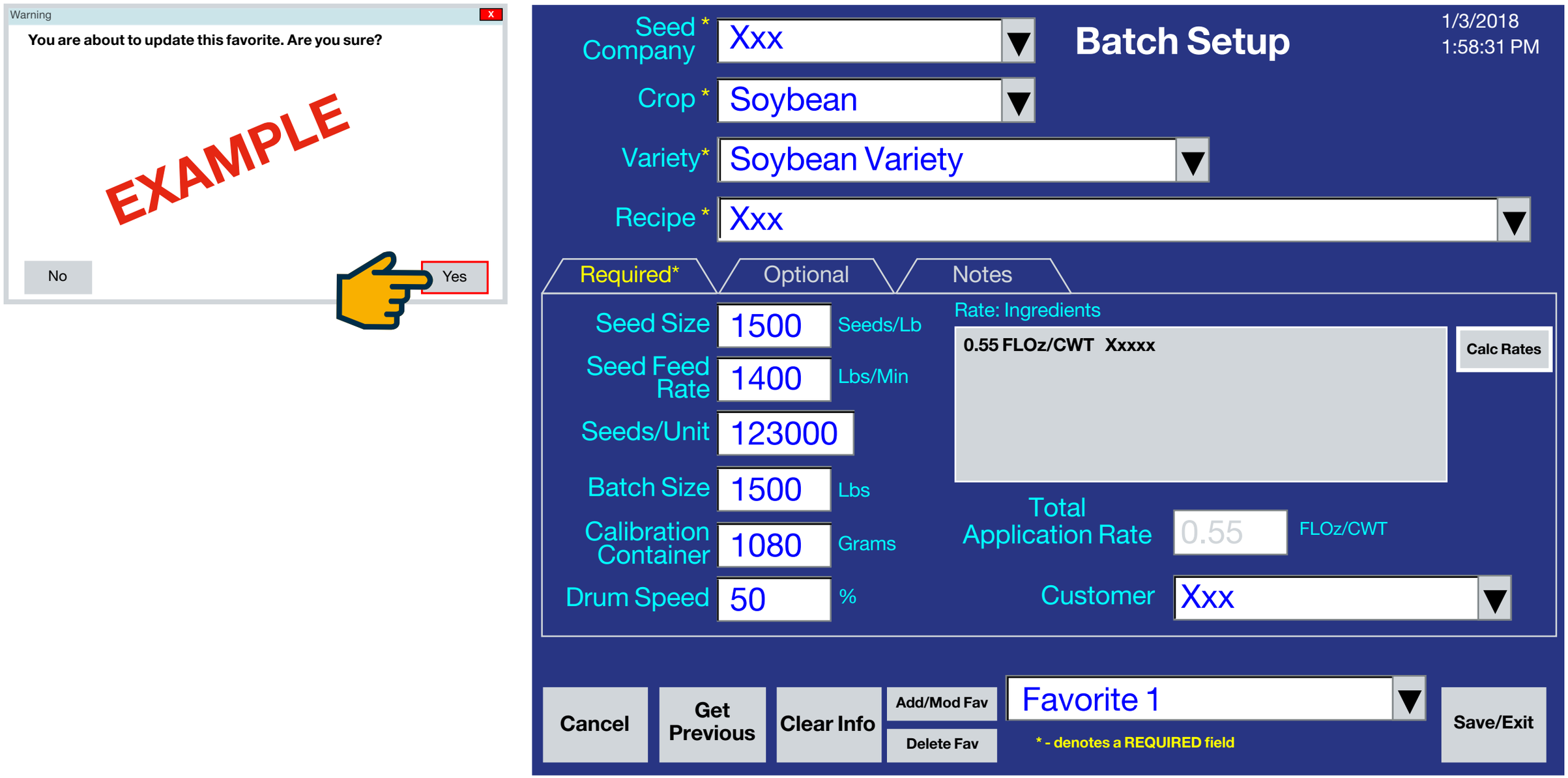
Use the keyboard pop-up to create the name of a new favorite batch.

Step 1: Touch the **Enter** button icon: keyboard pop-up window closes ➲



BATCH SETUP SCREEN - MODIFY A FAVORITE RECIPE

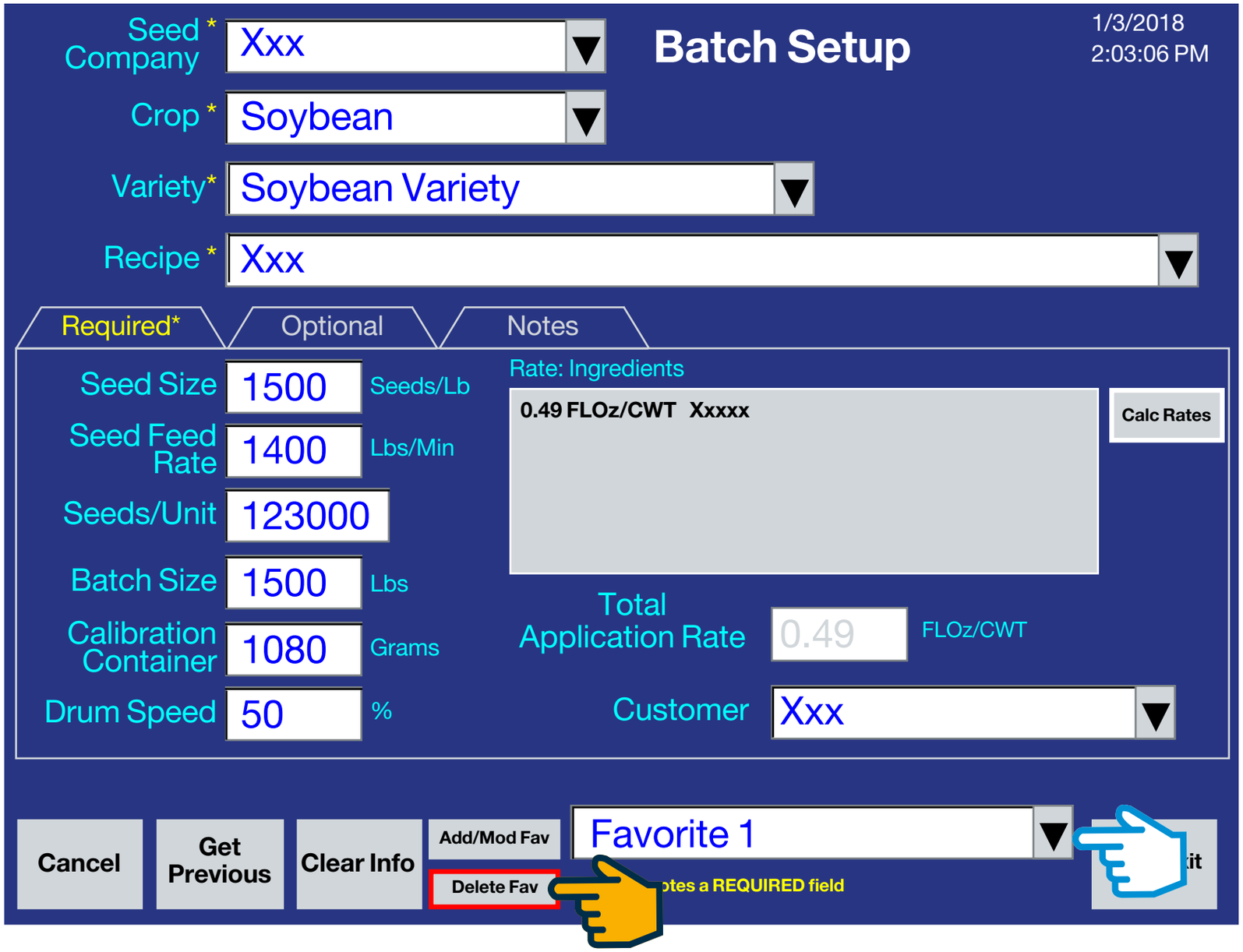
Step 1: Touch the **Favorites** drop down arrow: select from previous favorites; select **favorite 1** ➲



BATCH SETUP SCREEN - MODIFY A FAVORITE RECIPE

Once **favorite 1** has been selected, the **WARNING** pop-up will appear, as shown left.

Step 1: Touch the **Yes** button icon: the **WARNING** pop-up closes ➲

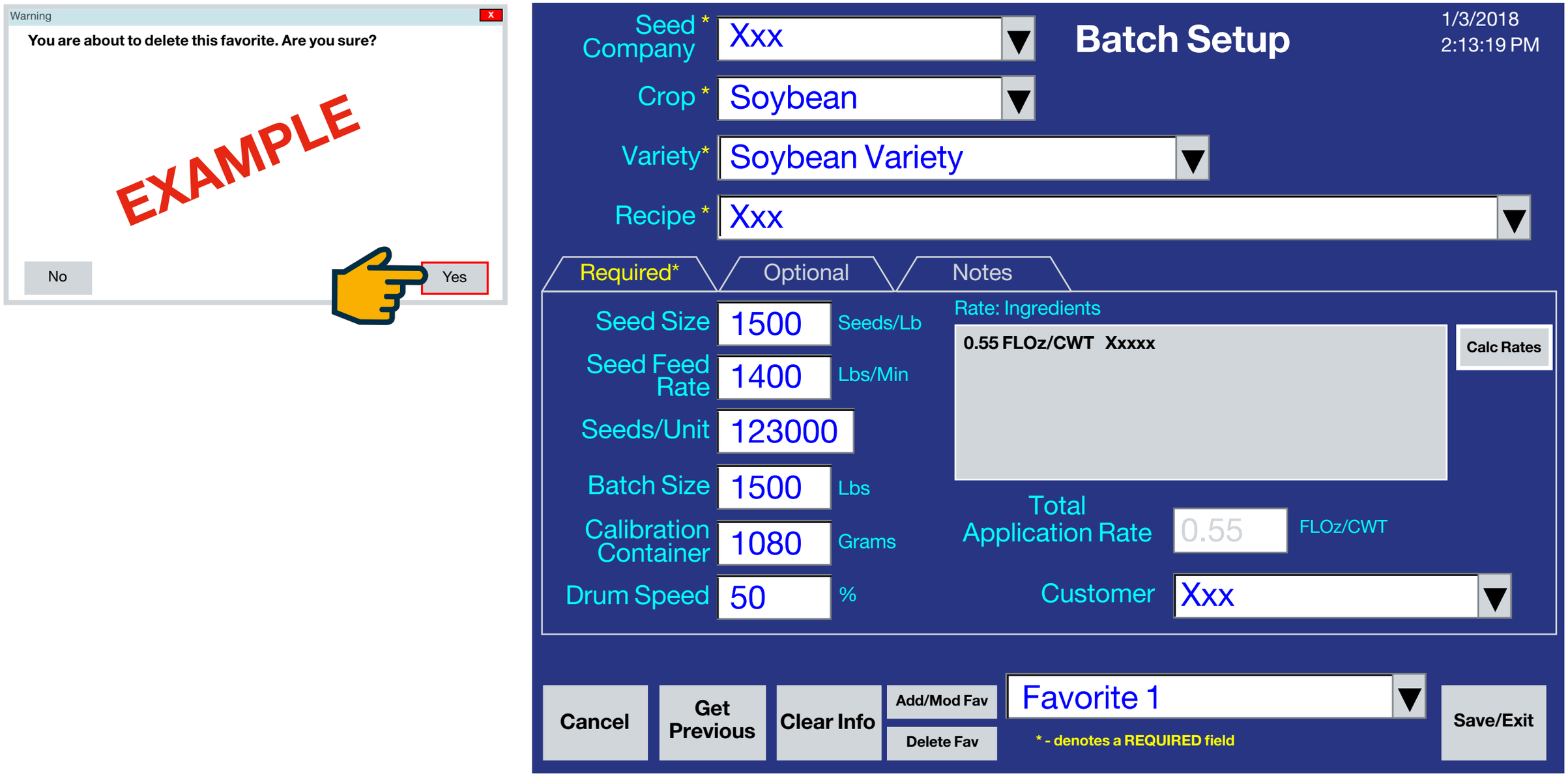


BATCH SETUP SCREEN - DELETE A FAVORITE RECIPE

To delete a favorite from the list...

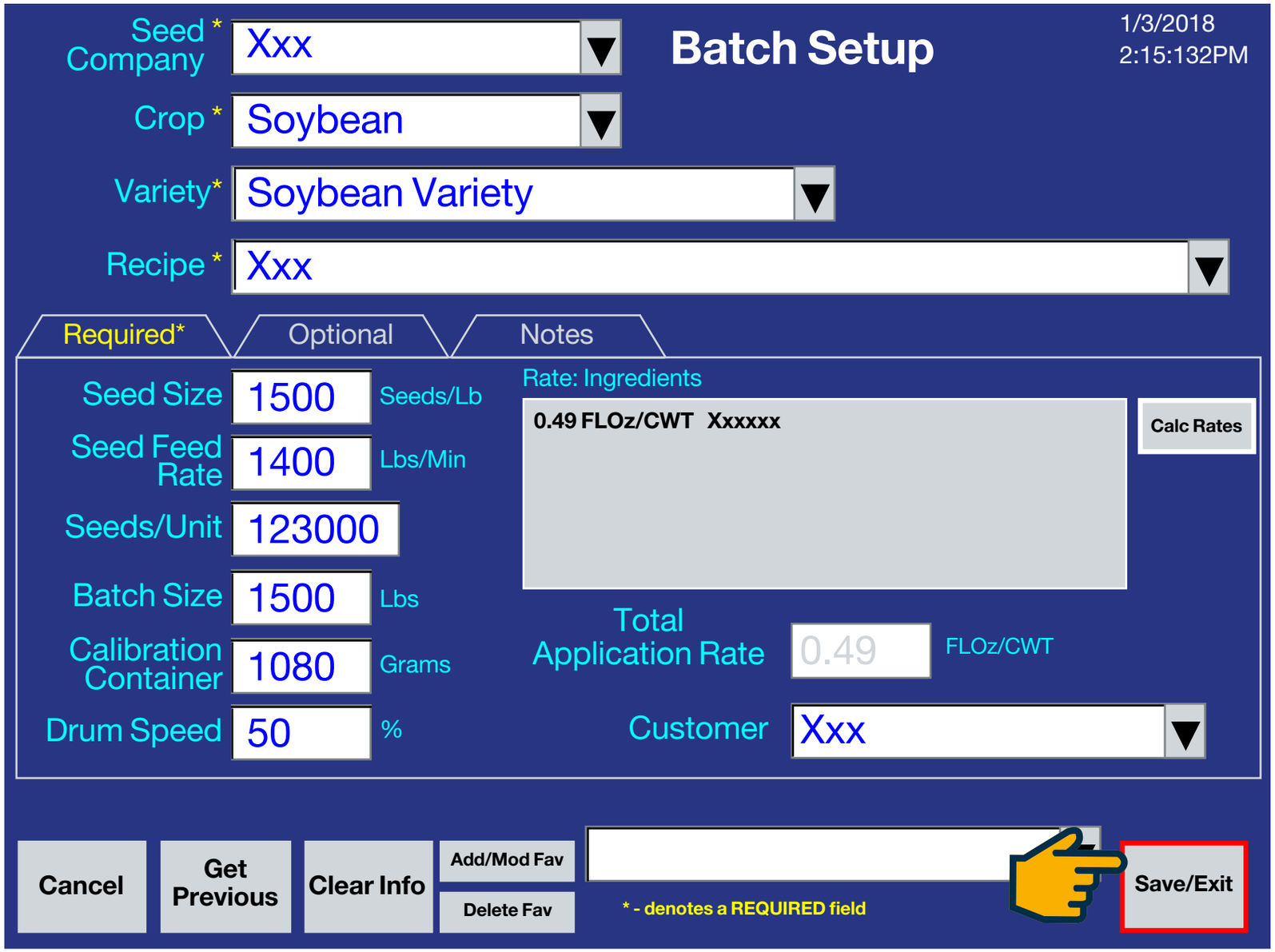
Step 1: Touch the **Favorite** down arrow and select the favorite you would like to delete.

Step 2: Touch the **Delete Fav** button icon: navigates to display the **WARNING pop-up window** ➲



BATCH SETUP SCREEN - DELETE A FAVORITE RECIPE

Step 1: Touch the **Yes** button icon: the **WARNING** pop-up closes ➲



BATCH SETUP SCREEN - DELETE A FAVORITE RECIPE

Step 1: Touch the **Save/Exit** button icon: navigates to display the **Batch Setup Screen** ➲

Note: a seed company must be set up on the website first and selected from the drop-down list on the Batch Setup Screen.

BATCH SETUP SCREEN - CREATE A NEW RECIPE

The **BATCH SETUP SCREEN** is used to select information regarding the specific batch which is to be run.

Step 1: Touch the **Seed Company** drop down arrow: select from a predefined list: **Bayer Seed** ➲

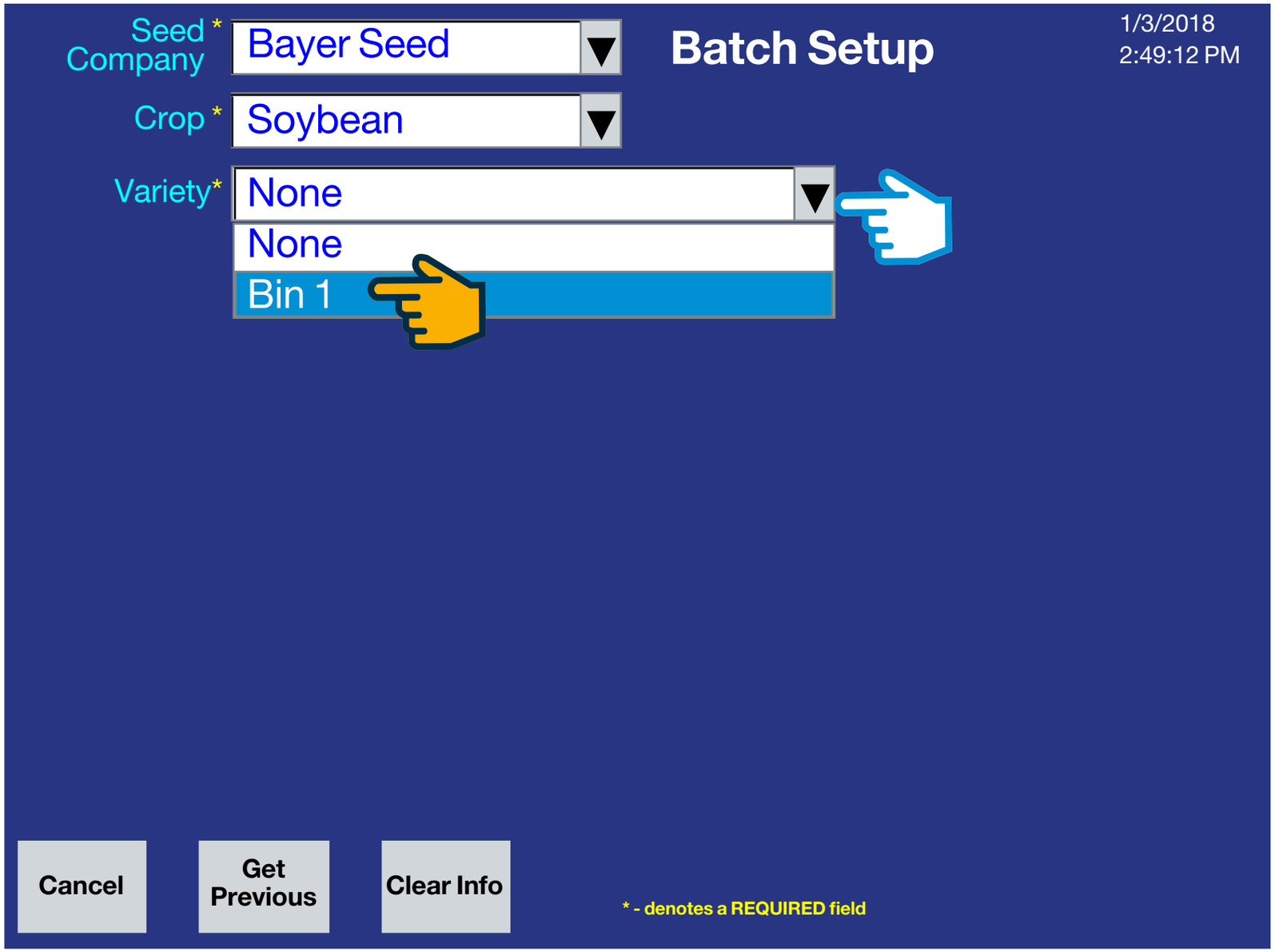
Create a New Recipe

BATCH SETUP SCREEN

Step 1: Touch the **Crop** drop down arrow: select from a predefined list: **Soybean** ➲

Note: additional varieties can be added via the website. Users will need to allow 5-10 minutes for the information to replicate, before the new variety can be selected from the predefined list on the HMI.

Create a New Recipe

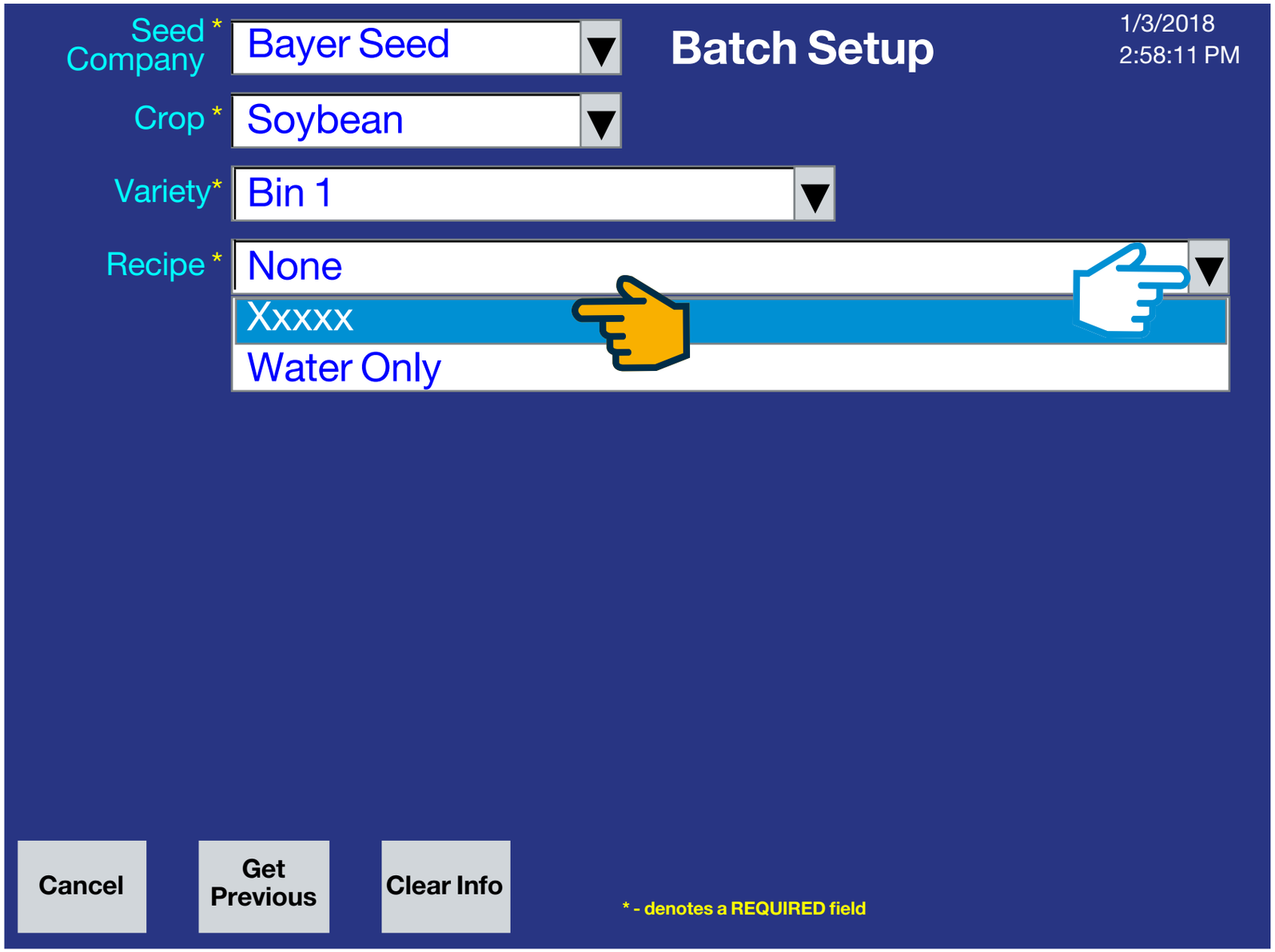


BATCH SETUP SCREEN

Step 1: Touch the **Variety** drop down arrow: select from a predefined list of seeds: **Bin 1** ➲

Note: additional recipes can be added via the website. Users will need to allow 5-10 minutes for the information to replicate, before the new recipe can be selected from the predefined list on the HMI. Please allow 10 days for recipe approval!

Create a New Recipe



BATCH SETUP SCREEN

Step 1: Touch the **Recipe** drop down arrow: select from a predefined recipe list: **Xxxxx** ➲

Create a New Recipe

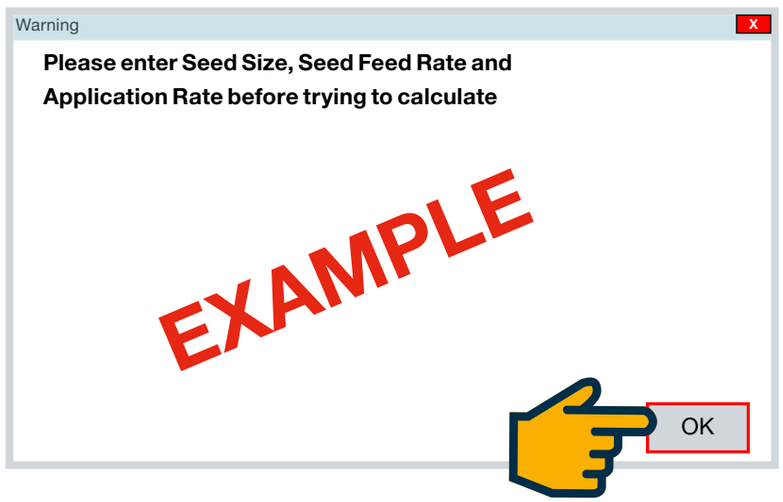
BATCH SETUP SCREEN

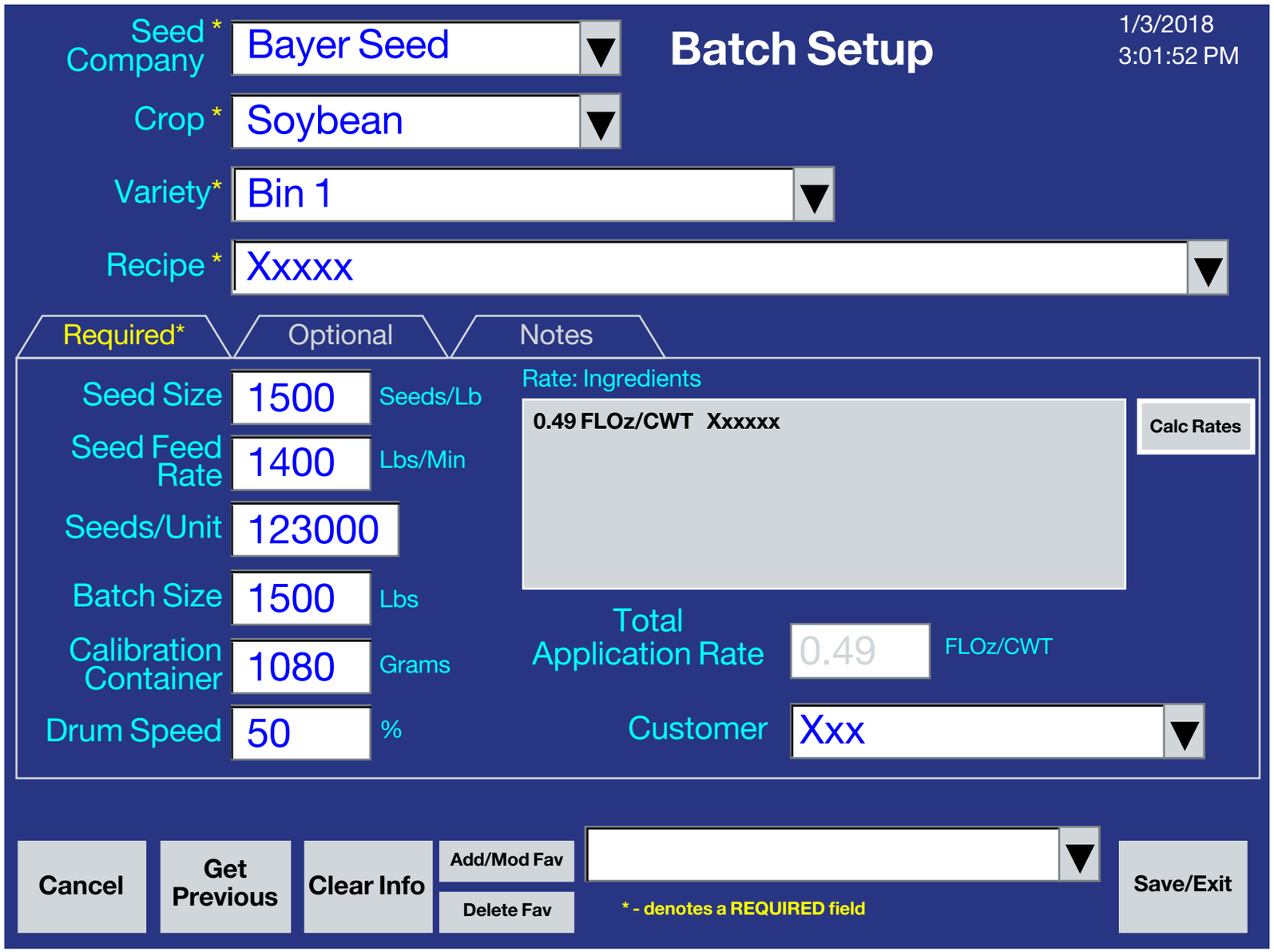
A new batch has been set up. Three tabs now display under the **Recipe** touch field:

- **Required**
- **Optional**
- **Notes**

The system defaults to display the **Required** tab first, as shown right.

Step 1: Step 1: Read the warning pop-up note, then touch the **OK** button icon: warning pop up closes ➲





Note: The seed wheel requires calibration each time a new batch of seed (as either seed size and or seed variety) is introduced into the treating system!

BATCH SETUP SCREEN - REQUIRED TAB

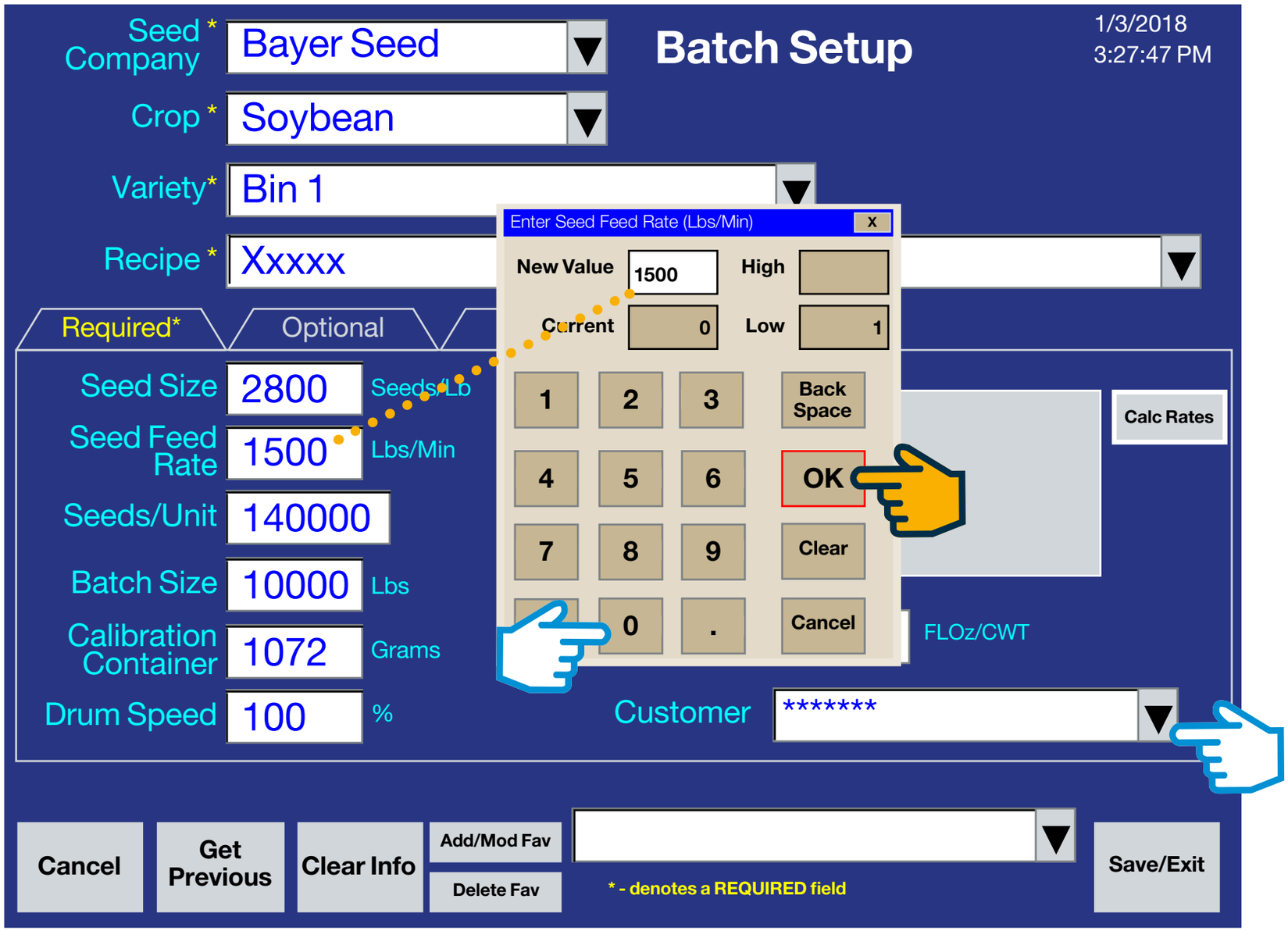
Step 1: Touch the following fields and enter customer information. A pop-up window will appear for each field, where values can be entered. Enter values, then touch the **OK** button: pop-up window closes.

- **Seed Size (Seeds/Lb)** - amount is printed on the seed bin tag
- **Seed Feed Rate (Lbs/Min)** - how many lbs/min the seed wheel delivers seed to the treater drum (output)*
- **Batch Size (Lbs)** - determined by user
- **Drum Speed** (%, preset from the factory, change only if necessary)

Customer (touch drop down arrow and select from a predefined list).

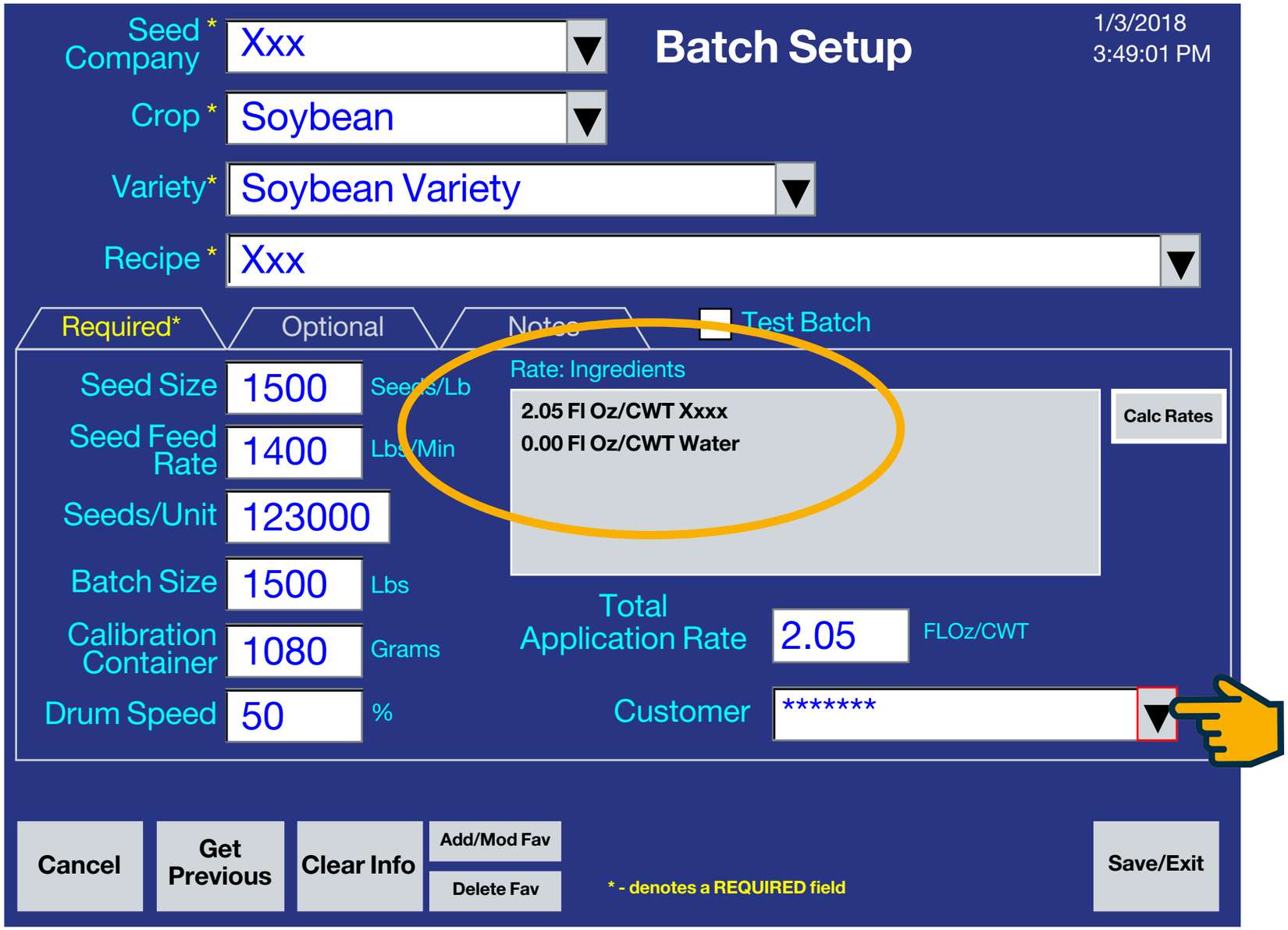
Additional customers can be added via the website.

Users will need to allow 5-10 minutes for the information to replicate, before the new customer can be selected from the predefined list.



*To determine the correct **Seed Feed Rate (Lbs/Min)** of the seed wheel, consult the chart below...

Calibration Container Weight (g)	Seed Feed Rate (lbs/min) expected low - high output range
600g	500 - 1200g
800g	800 - 1500g
1000g	1000 - 2100g
1200g	1200 - 2400g



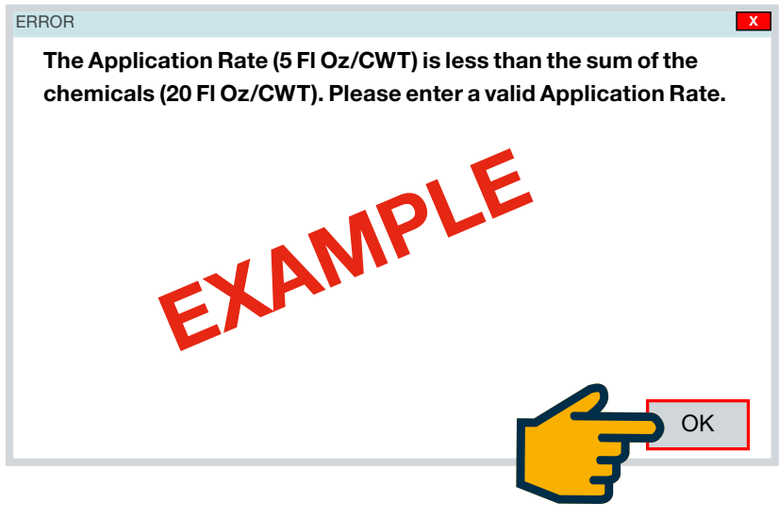
BATCH SETUP REQUIRED TAB (changes from previous page now displayed above)

Rate Ingredients: in text

Customer: name displayed

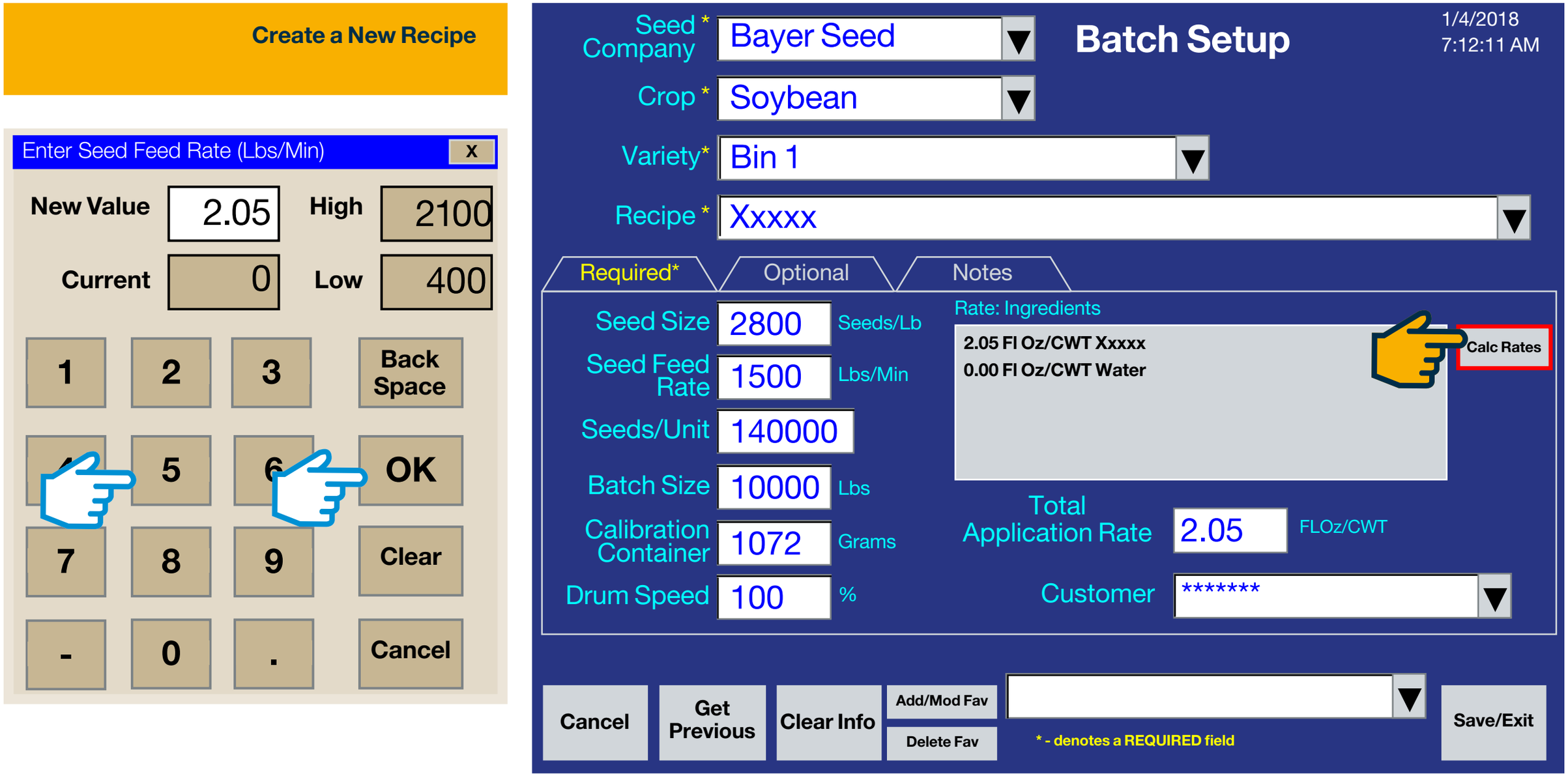
Total Application Rate (TAR): not available if user does not have a water tank.

Step 1: To change the **Total Application Rate**, touch the **Total Application Rate** field ➲



BATCH SETUP SCREEN - REQUIRED TAB

Step 1: If an **Error** message appears, read the note, then touch the **OK** button icon to close the **Error** pop up ➲



BATCH SETUP SCREEN

Step 1: Enter a new value for **Total Application Rate (TAR)** on the pop up keypad, then touch the **OK** button, pop-up window closes.

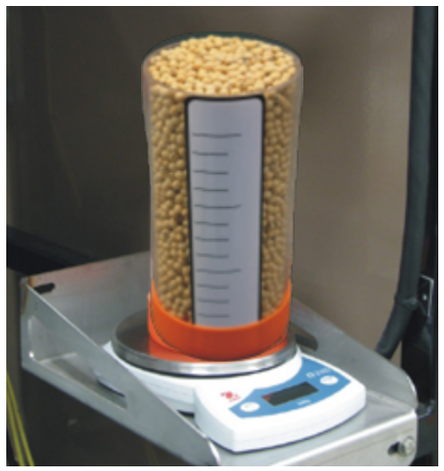
Step 2: Touch the **Calc Rates** button icon to totalize the new **Rate**: Ingredients displayed in the box ➲

BATCH SETUP SCREEN - SEED WHEEL CALIBRATION

Note the **Total Application Rate** field displays **2.05** Fl Oz/ CWT value on the Batch Setup Screen (circled, right).

Step 1: Fill the Calibration Container with seed (e.g. soybeans). Screed off excess with a straight edge.

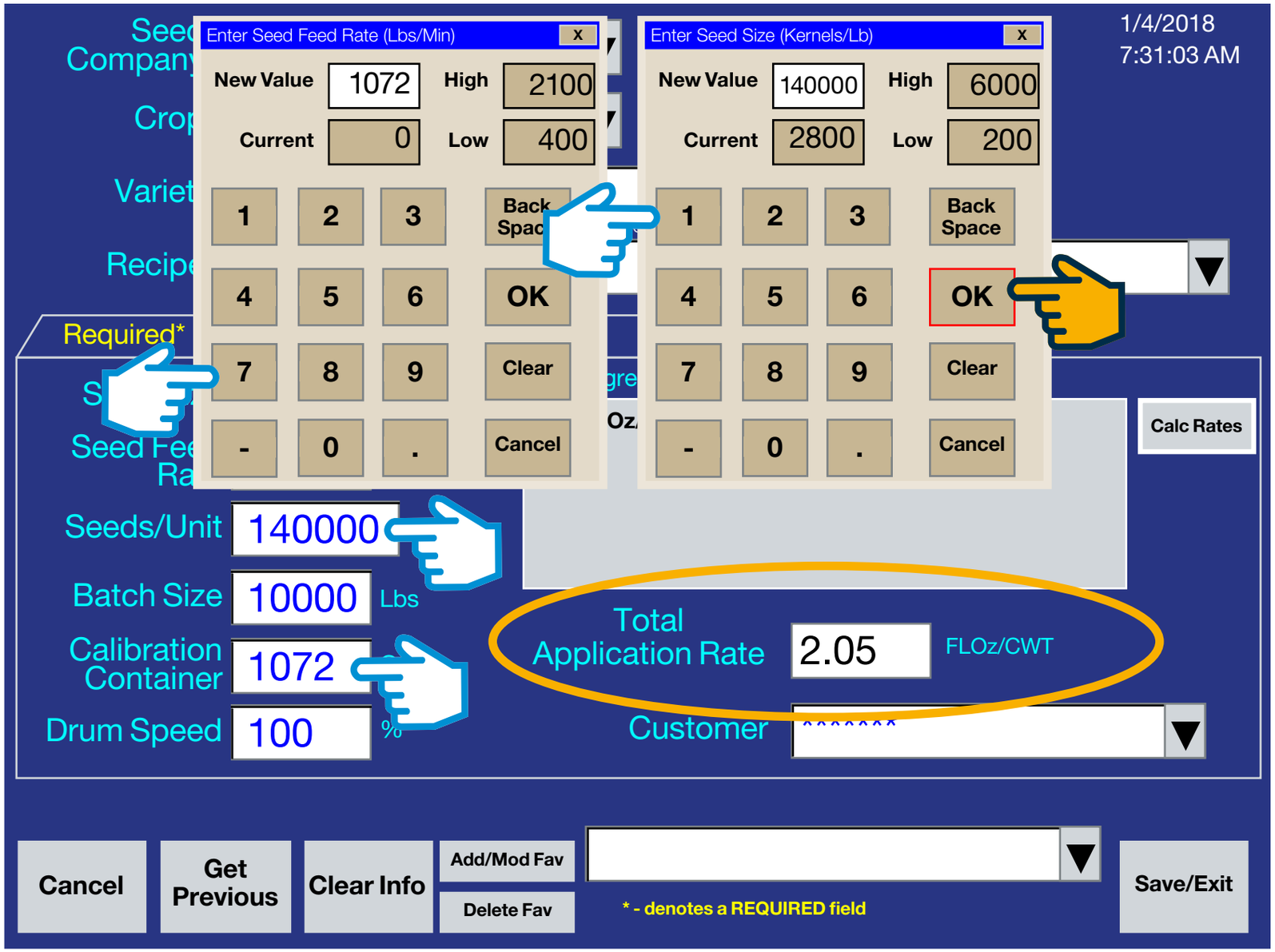
Step 2: Weigh the filled container on the grams scale e.g. soybeans = **1072 grams.**



Step 3: On the Batch Setup Screen touch the **Calibration Container** field: navigates to **Enter Calibration Container (Grams)** pop-up window. Enter a seed weight value (e.g. **1072**), then touch **OK**. Window closes.

Step 4: Touch the **Seeds/Unit*** field: navigates to **Enter Seeds per Unit** pop-up window. Enter a value (e.g. **140,000** seeds/unit), then touch **OK**, pop-up window closes ➲

***Seeds/Unit** - the website uses this value for unit calculations that are generated on web reports.



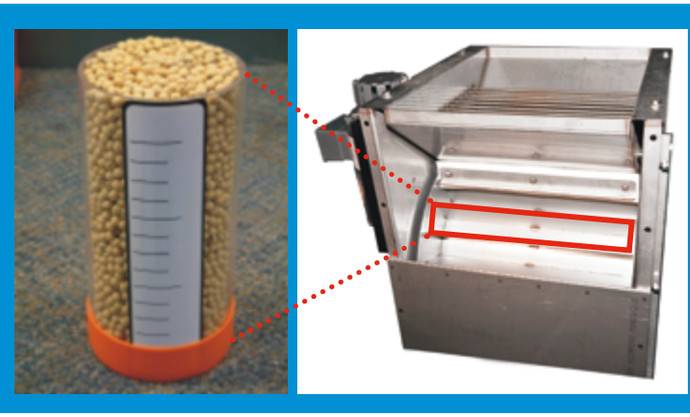
BATCH SETUP SCREEN

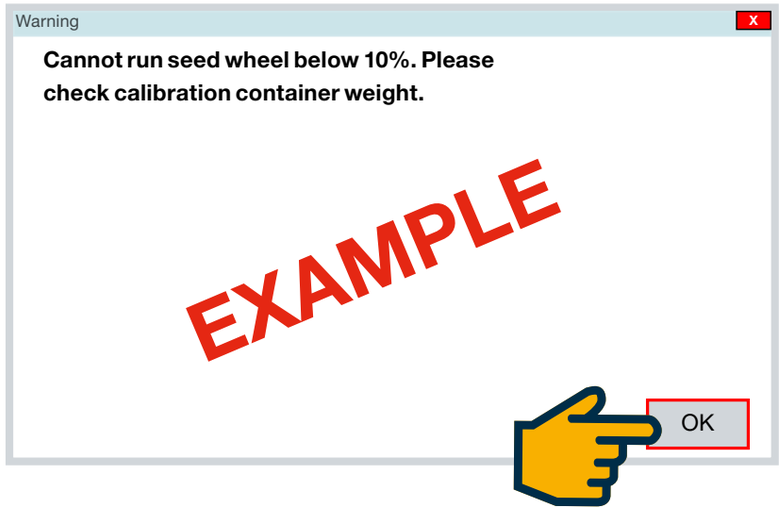
Displayed on the **BATCH SETUP SCREEN** right...

- The **Calibration Container** field now displays a total of **1072** Grams.
- The **Seeds/Unit** displays a value of **140000** (reflecting steps 3 & 4 on the previous page).

The Calibration Container (left) represents the total volume of one pocket of the Seed Wheel (right). The Seed Wheel calibration process must be completed each and every time a new seed size and or seed variety is introduced into the treating system.

Failure to calibrate the Seed Wheel can result in over/ under treatment of seed.





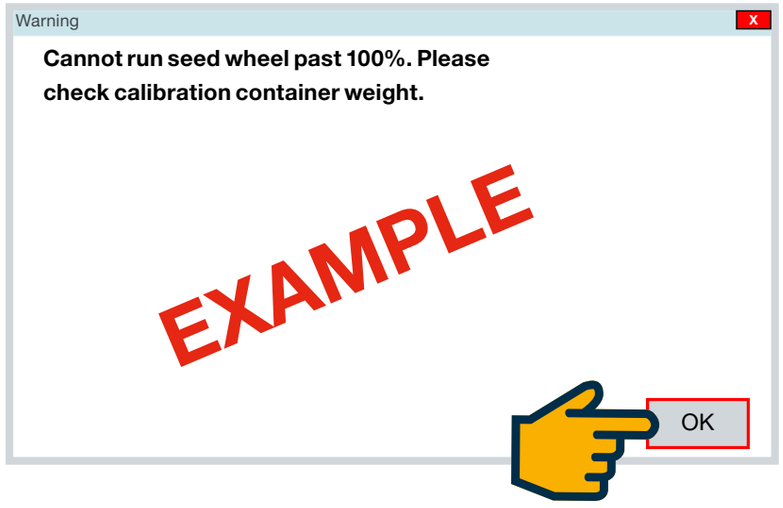
BATCH SETUP SCREEN - EXAMPLE - WARNING MESSAGE

A **WARNING** pop-up displays any errors the system encounters, e.g., **BELOW 10% SEED WHEEL SPEED**

>>Refer to **Seed Wheel Calibration** page 93 and /or increase the **Seed Feed Rate**.

Step 1: Acknowledge the message, then touch the **OK** button icon: pop-up closes ➲

Create a New Recipe

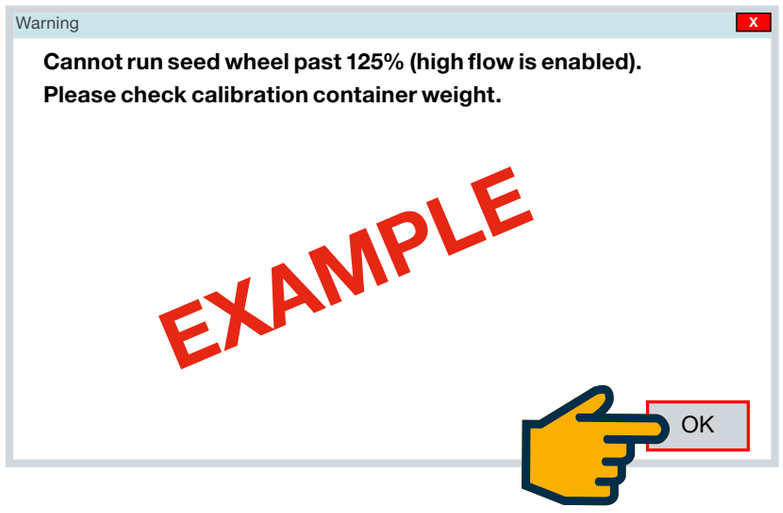


BATCH SETUP SCREEN - EXAMPLE - WARNING MESSAGE

A **WARNING** pop-up displays any errors the system encounters, e.g., **ABOVE 100% SEED WHEEL SPEED**

>>Refer to **Seed Wheel Calibration** page 93 and /or decrease the **Seed Feed Rate**.

Step 1: Acknowledge the message, then touch the **OK** button icon: pop-up closes ➲

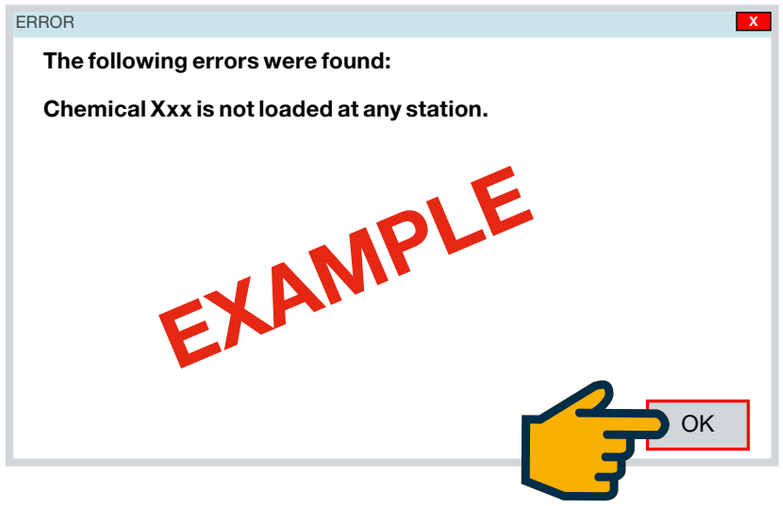


BATCH SETUP SCREEN - EXAMPLE - WARNING MESSAGE

A **WARNING** pop-up displays any errors the system encounters, e.g., **PAST 125% SEED WHEEL SPEED**

>>Refer to **Seed Wheel Calibration** page 93.

Step 1: Acknowledge the message, then touch the **OK** button icon: pop-up closes ➲



BATCH SETUP SCREEN - EXAMPLE - WARNING MESSAGE

An **ERROR** pop-up displays any errors the system encounters, e.g., **CHEMICAL NOT ON STATION**

>>A Keg must be loaded on the Pump Station Scale in order to treat.

Step 1: Acknowledge the message, then touch the **OK** button icon: pop-up closes ➲

BATCH SETUP SCREEN - EXAMPLE - WARNING MESSAGE

An **ERROR** pop-up displays any errors the system encounters,e.g., **WATER RATE OUTSIDE PUMP RANGE***

Acknowledge the message, then touch the **OK** button icon: pop-up closes.

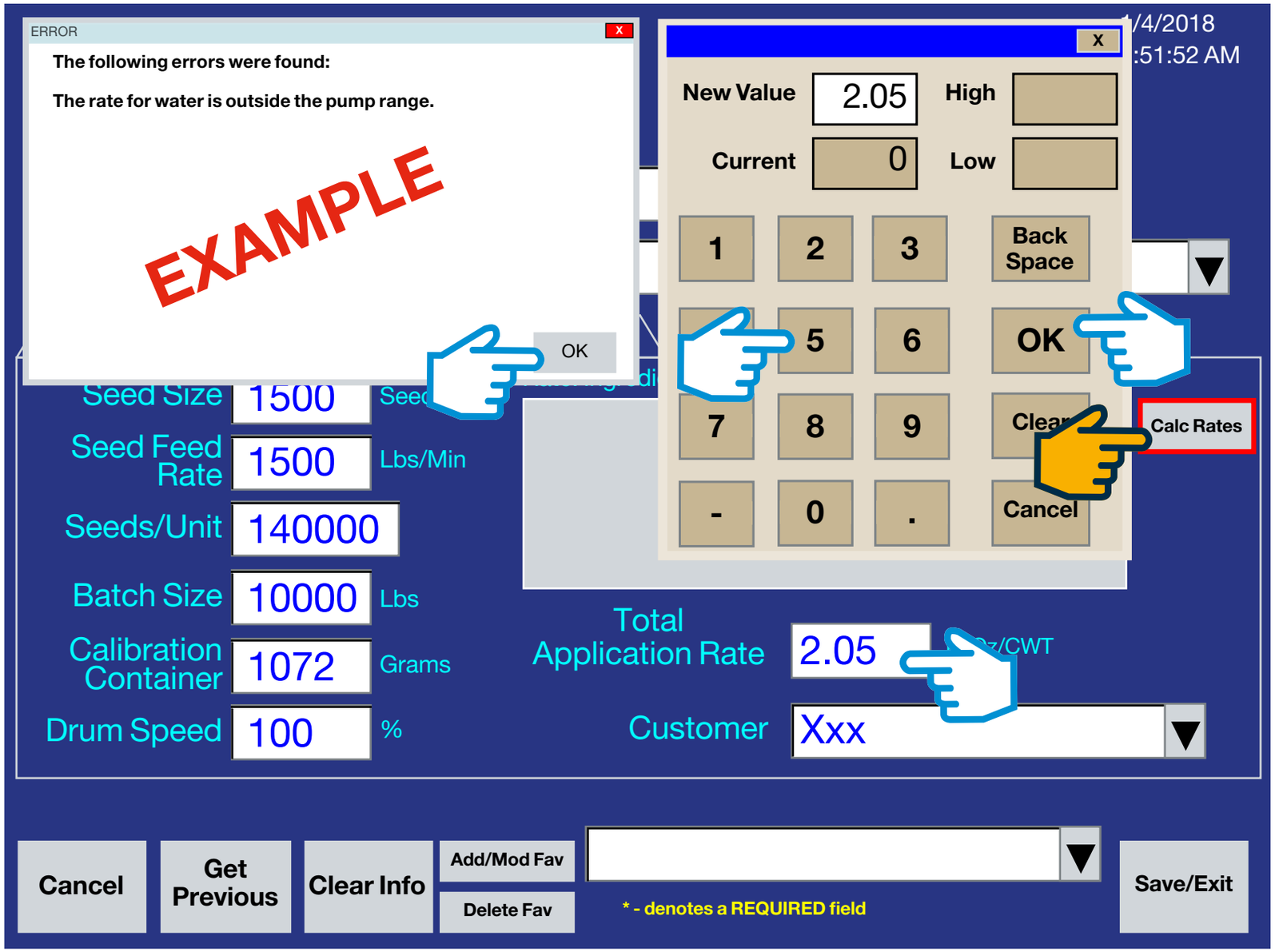
*Lower **TAR** to complete recipe or change pumps as follows...

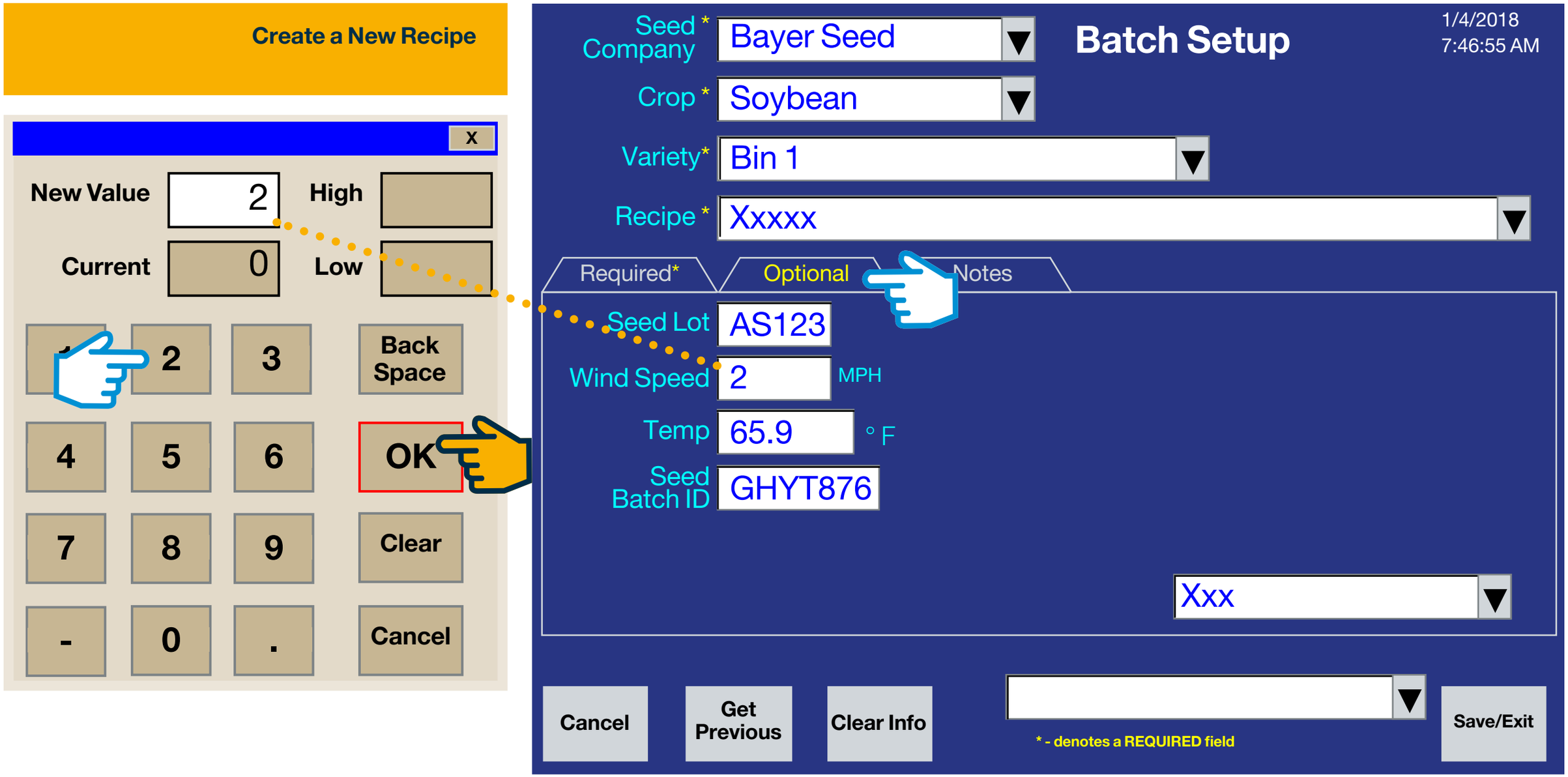
Low Rate Pump = 3-20 oz/min. High Rate Pump = 20-150 oz/min.

Step 1: To change the **Total Application Rate**, touch the **Total Application Rate** field.

Step 2: Enter a new value for **Total Application Rate (TAR)** on the pop up keypad, then touch the **OK** button, pop-up window closes.

Step 3: Touch the **Calc Rates** button icon for new totalized **Rate**: Ingredients displayed in the box ➲



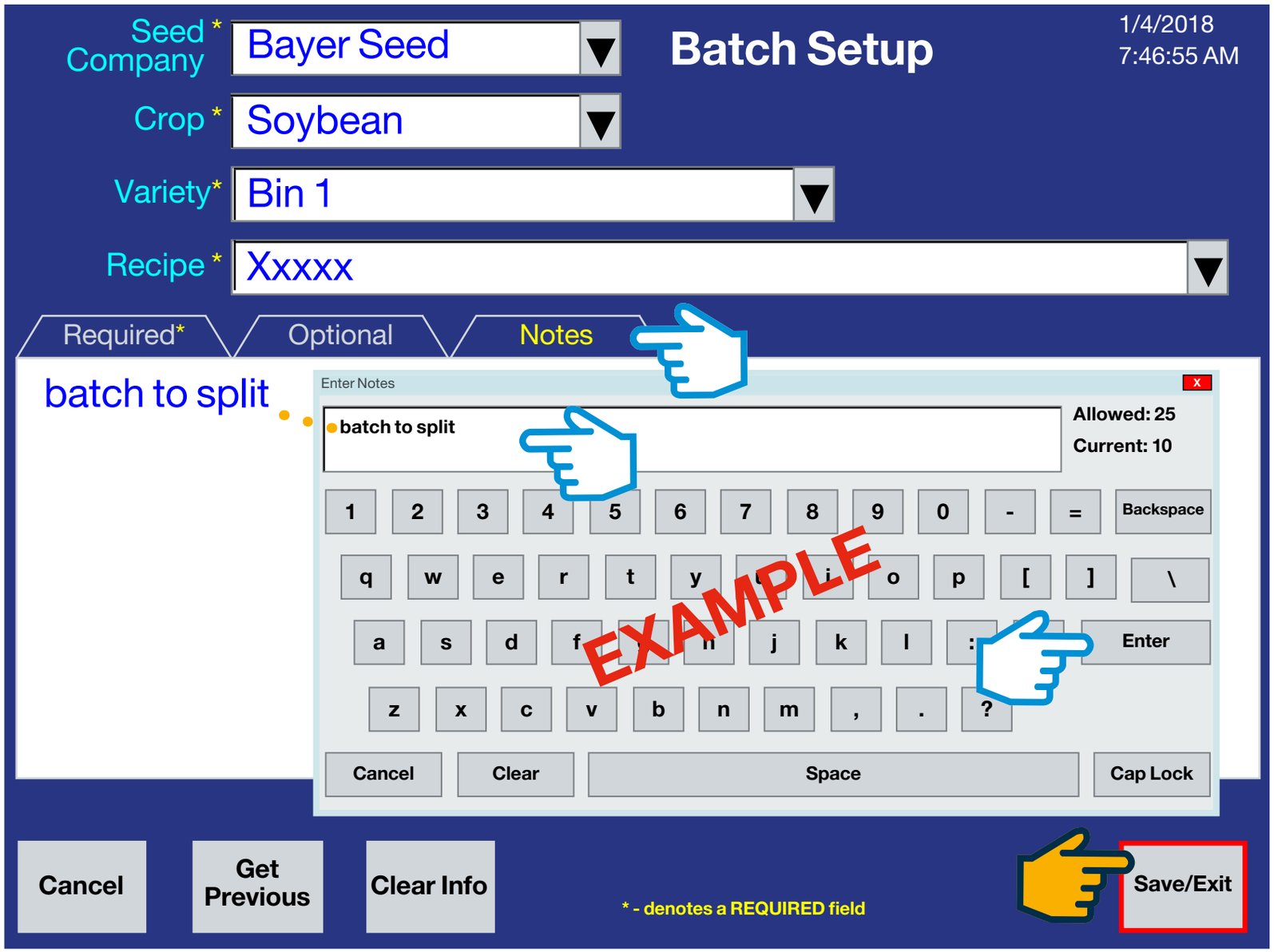


BATCH SETUP SCREEN - OPTIONAL TAB

Step 1: Touch the **Optional** tab. Data can be entered (not required). Touch each field and enter data on the pop up...

Seed Lot
Wind Speed
Temp
Seed Batch ID

Step 2: Touch the **OK** button icon: pop-up closes ➲



BATCH SETUP SCREEN - NOTES TAB

Step 1: Touch the **Notes** tab. Specific notes for reference can be entered: navigates to pop-up key board (not required). Use the **Enter Notes** pop-up keyboard to enter notes or use barcode scanner to scan any keg info...batch to split or **000078574012938810NK44BX0123210001901110.**

Notes can be added at anytime during the batch. When finished entering notes, touch the key board **Enter** button icon: pop-up keyboard closes. Notes will appear on the **Notes** screen, as shown above (batch to split).

Step 2: The batch has been created. Touch the **Save/Exit** button icon: navigates to the **MAIN SCREEN ➲**

BATCH RUN

Messages and colors indicate what is happening with the system, as follows...
Green indicates which devices are enabled and ready to use or are running.
Red indicates which devices are disabled and have stopped.
Yellow indicates which devices are disabled and are paused.

MAIN SCREEN - BEGIN BATCH RUN

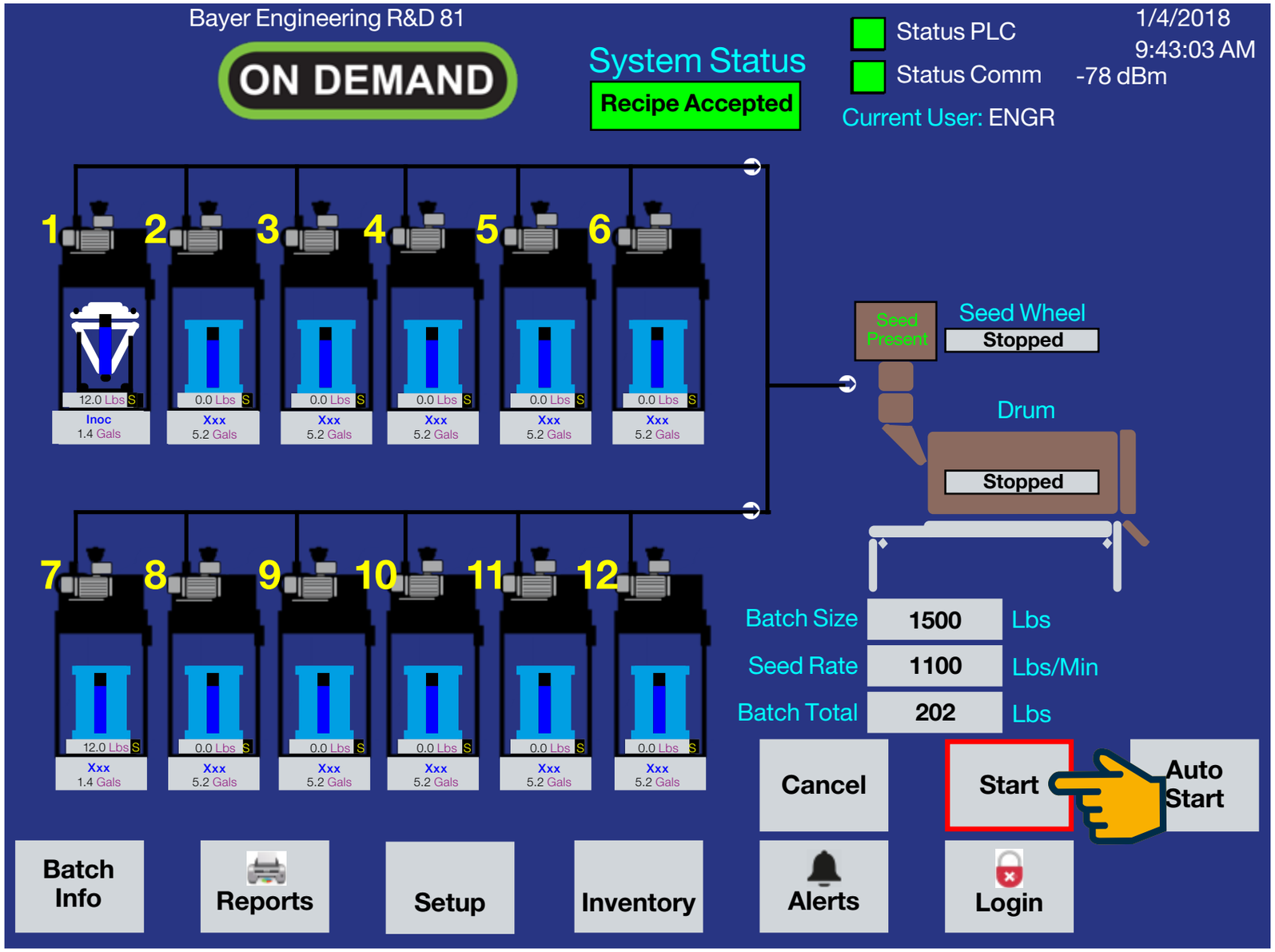
Once the recipe is accepted without errors, the **System Status** field displays the message: **Recipe Accepted** at the top of the **MAIN SCREEN**.

Cancel, Start and **Auto Start** button icons now display. The **Batch Setup** button icon changes to **Batch Info**. The **Start** button icon will not appear until seed is sensed in the Inlet Hopper (indicated by the green '**Seed Present**' message inside the inlet hopper, as shown above).

Only **Auto Start** will appear if there is no seed detected. If **Auto Start** is touched, as a delay, the treater will not begin running until seed is sensed in the Inlet Hopper.

If seed is sensed in the Inlet Hopper (indicated by the green '**Seed Present**' message inside the inlet hopper, the **Start** button will appear on the screen (as shown right).

Also displayed on the **MAIN SCREEN** are the Batch parameters (**Batch Size, Seed Rate** and **Batch Total**).



Step 1: Ready to start treating seed? Touch the **Start** button icon ➲

MAIN SCREEN - SYSTEM RUNNING

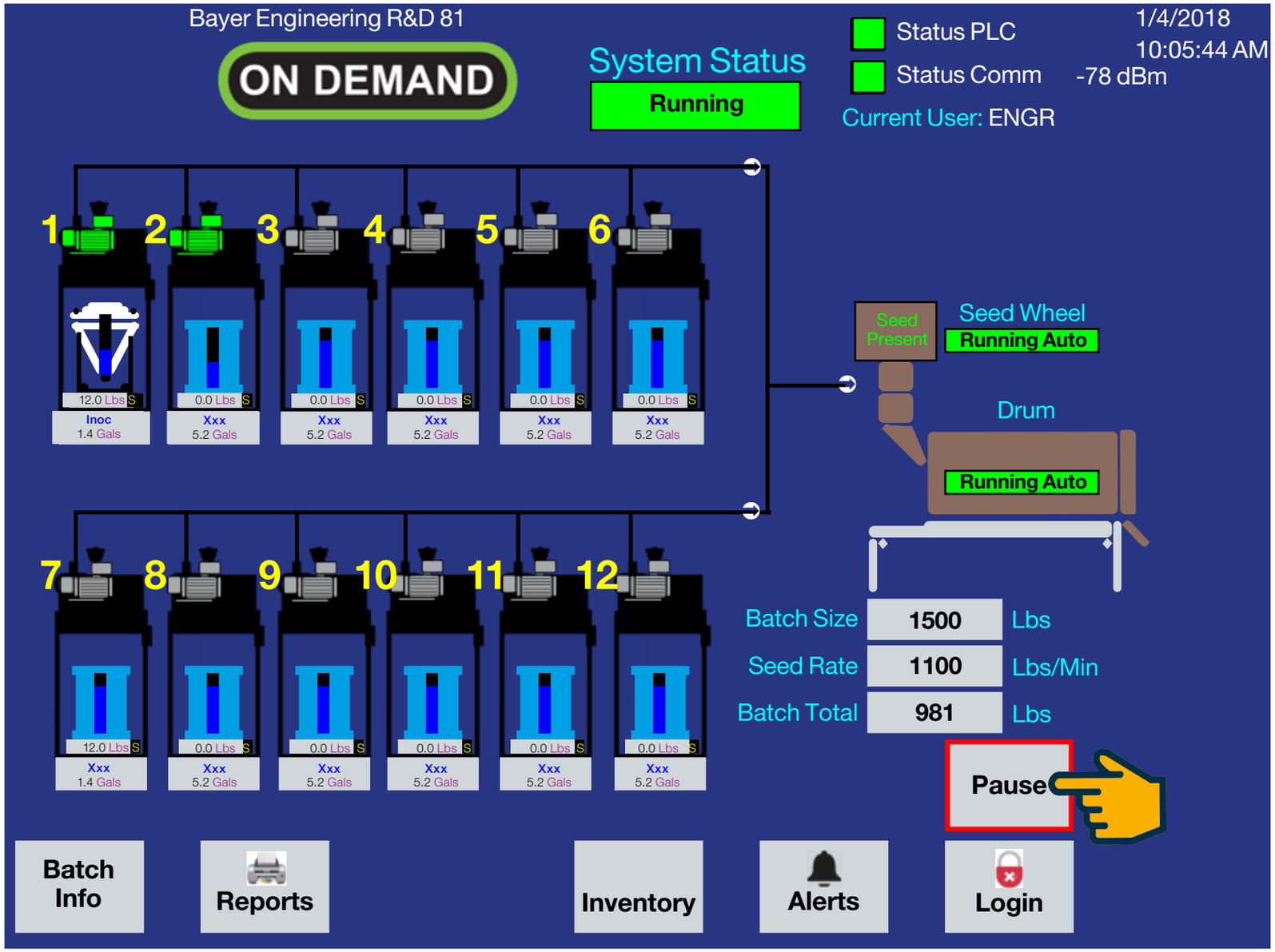
The system will begin treating seed after first verifying seed presence in the hopper (indicated by the green '**Seed Present**' message inside the inlet hopper, as shown above).

Pump Station Pumps turn green when activated (as shown). Drum & Seed Wheel indicate: **Running Auto** in a green field (as shown). The **System Status** field displays the message: **Running** at the top of the **MAIN SCREEN** (as shown).

The **Setup, Cancel, Start** and **Auto Start** button icons will not display on the **MAIN SCREEN** when the system is running (as shown). The **Start** button icon toggles to display **Pause** (as shown).

Events, such as **Alerts, Low Chemical, Stopped** or **Pause** will pause/stop the system.

Step 1: Touch the **Pause** button icon; treating process pauses: navigates to the **TREATER DETAIL SCREEN** ➲



TREATER DETAIL SCREEN - SYSTEM PAUSED

Drum clean out runs automatically every time the system is paused. This is a pre-set option if it is enabled (refer to **Drum Clean out Option** on page 18). This option must be enabled prior to running a batch, in order for it to run automatically when the system is paused.

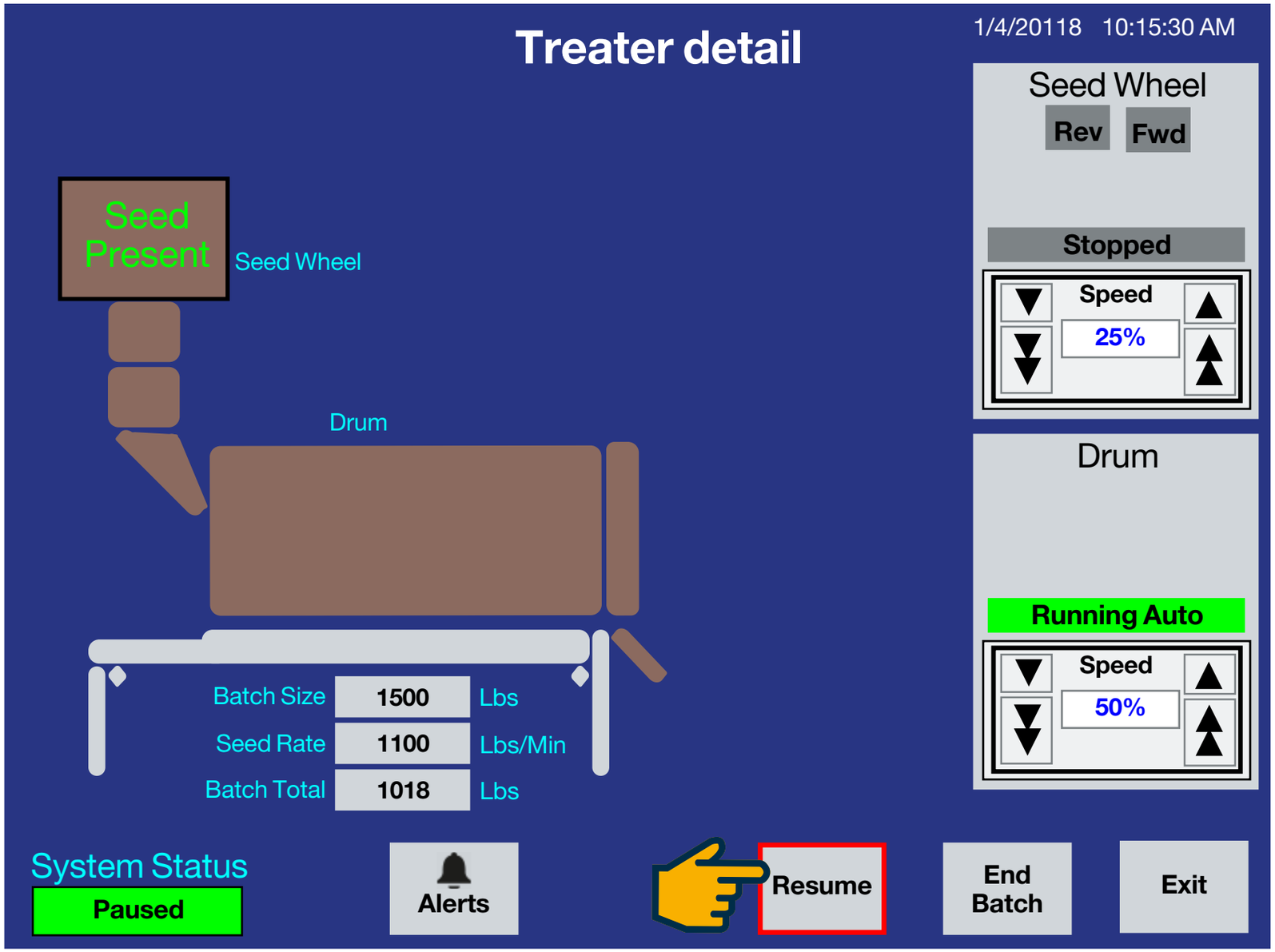
> **System Status** displays: **Paused**.

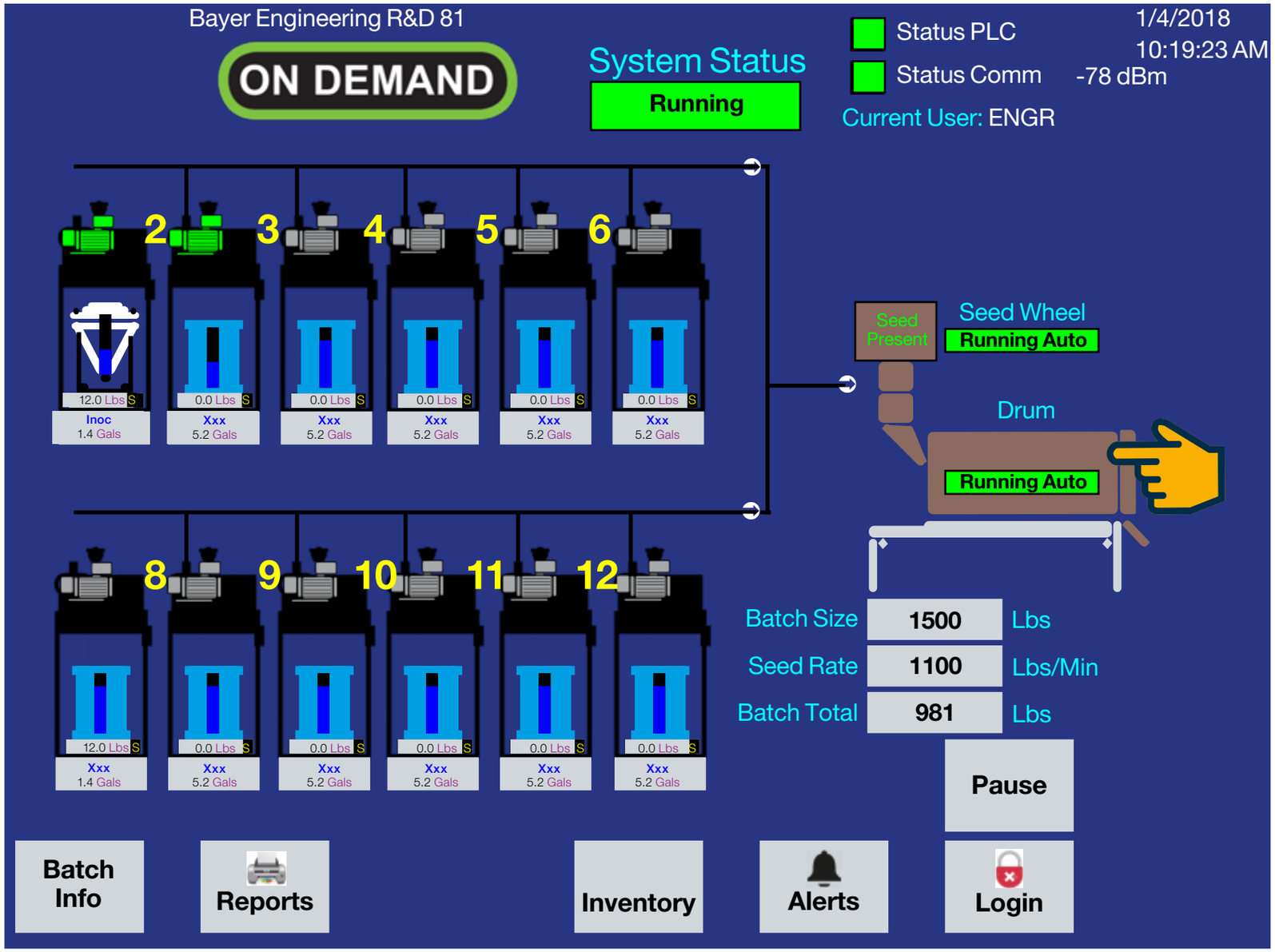
> **Drum Status** displays: **Running Auto**.

> **Seed Wheel** displays: **Stopped**.

RESUME TREATING

Step 1: Touch the **Resume** button icon: the **TREATER DETAIL SCREEN** closes: the batch resumes the treating session where it left off: navigates to the **MAIN SCREEN** ➲





MAIN SCREEN - SYSTEM RUNNING

The system will resume treating seed where it left off after being paused. Events, such as **Alerts, Low Chemical, Stopped** or manually touching **Pause** will pause the system and navigate to the **TREATER DETAIL SCREEN.**

> At the end of the batch run, the system will automatically pause and navigate to the **TREATER DETAIL SCREEN.**

Step 1: Touch in the area of the treater graphic icon: navigates to the **Treater Detail Screen ➲**

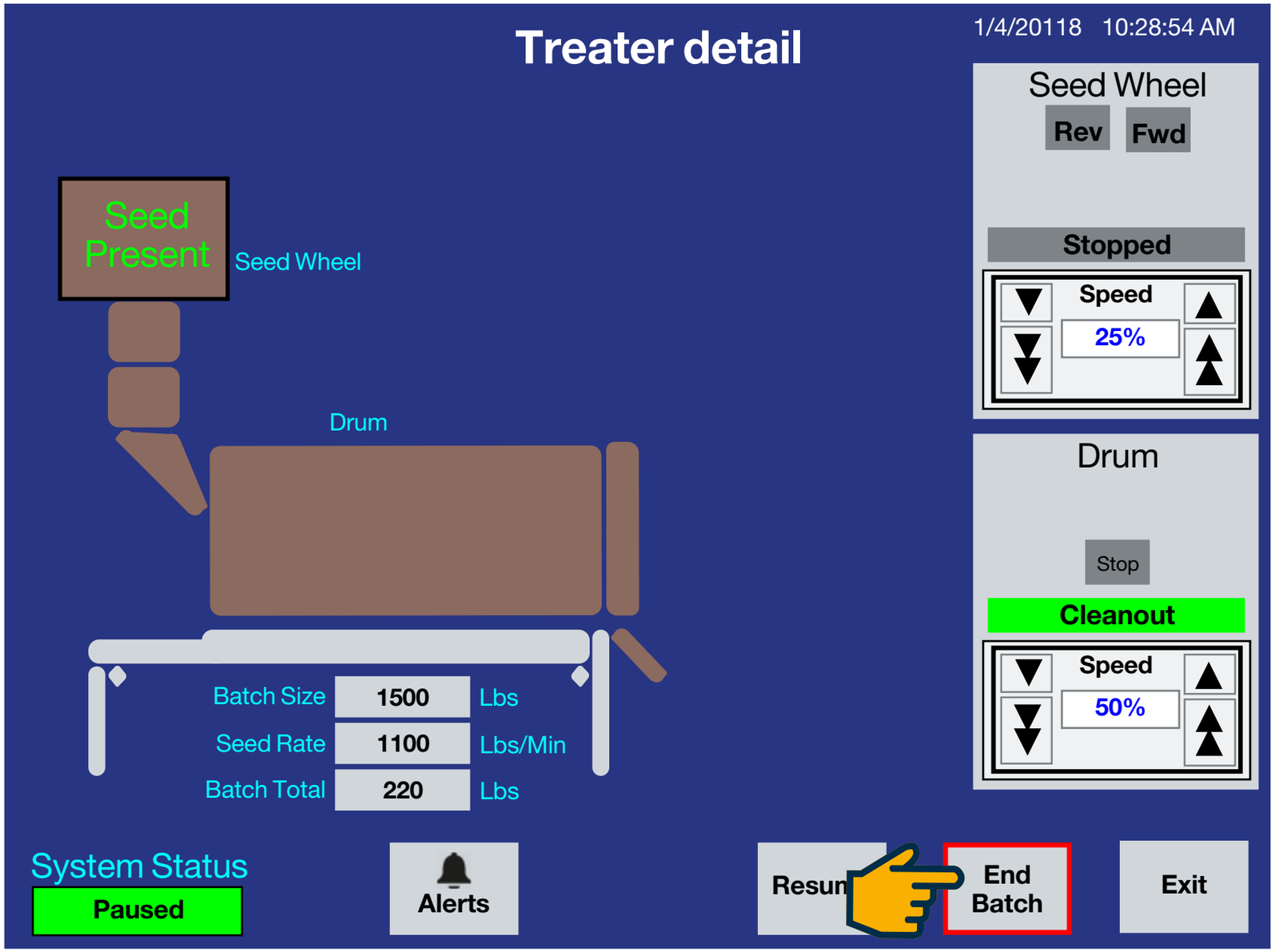
TREATER DETAIL SCREEN - SYSTEM PAUSED - END OF BATCH RUN

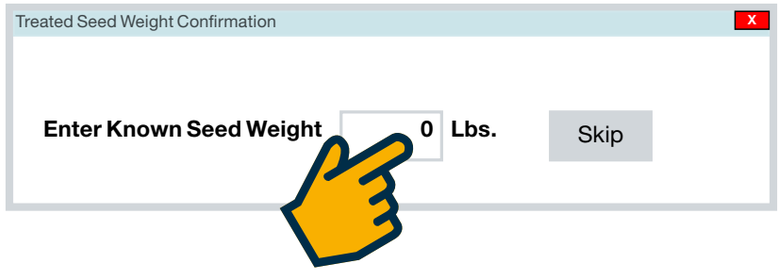
> **System Status** displays: **Paused**.

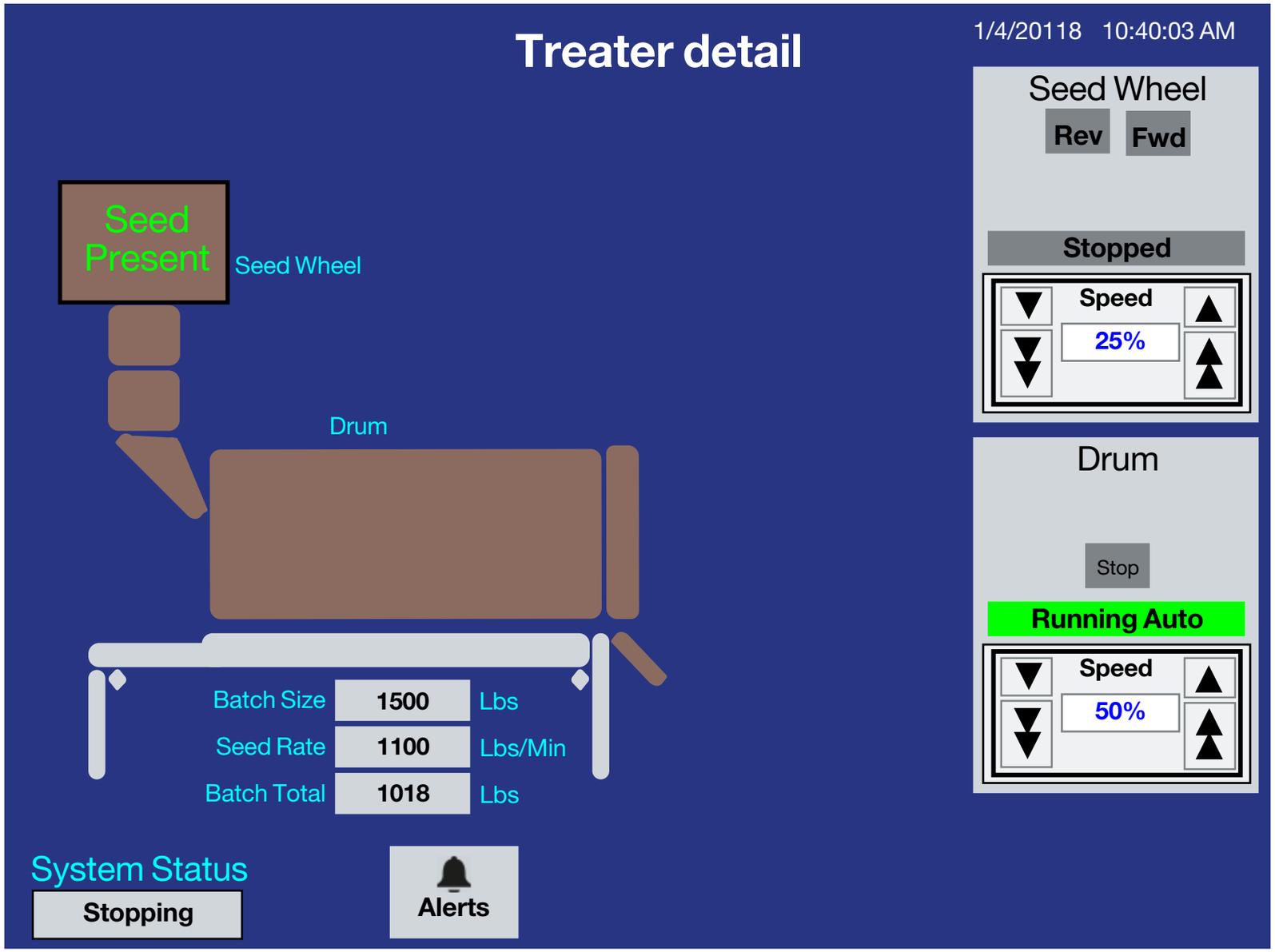
> **Drum** displays: **Clean out** in green box, as shown above. Drum clean out runs automatically. When drum clean out is finished...

> **Drum** displays: **Stopped**.

Step 1: Touch the **End Batch** button icon: navigates to the **TREATER DETAIL SCREEN ➲**



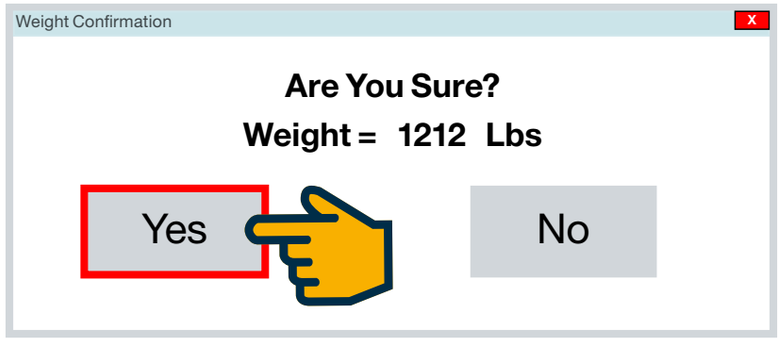


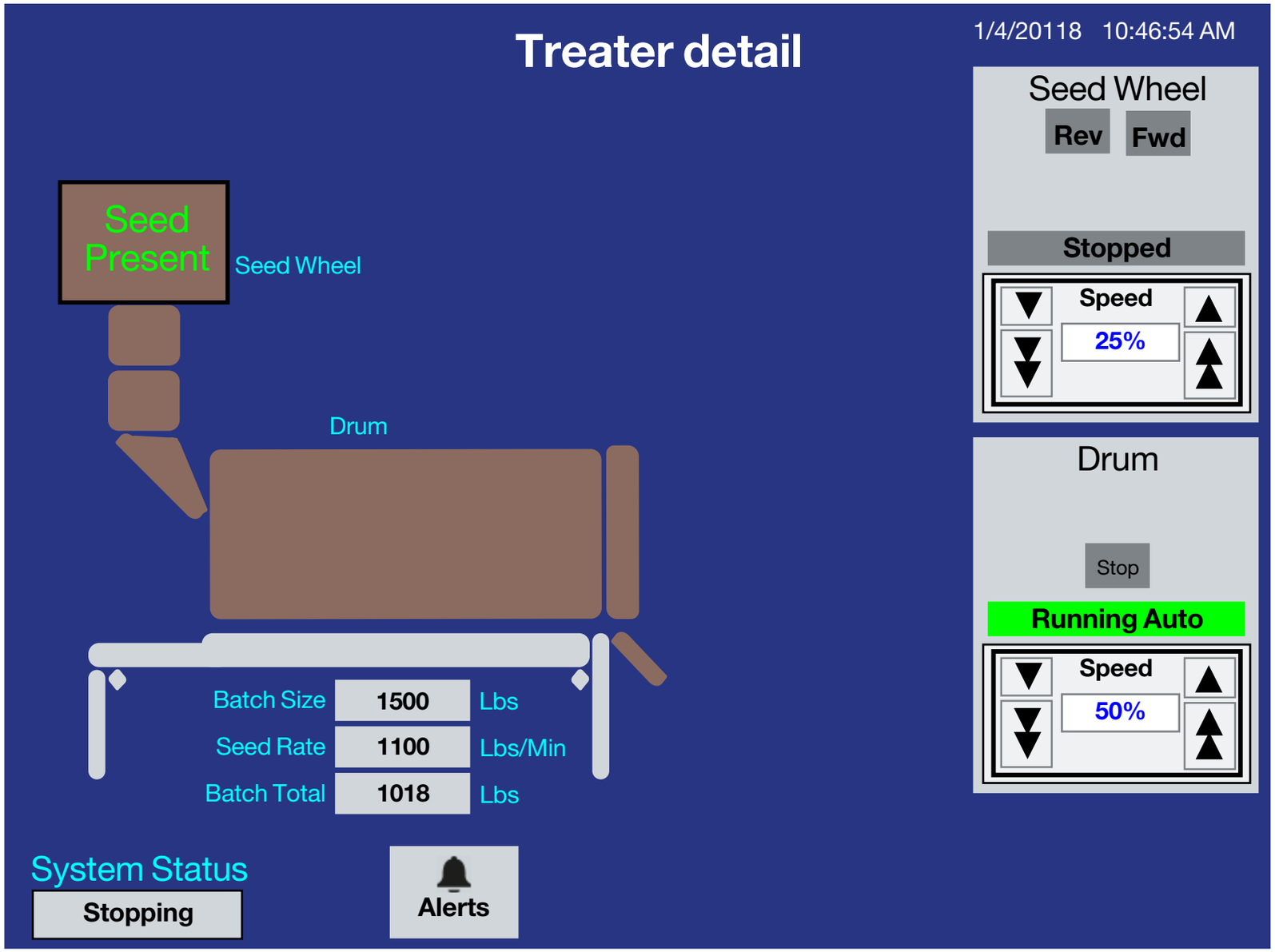


TREATER DETAIL SCREEN - SYSTEM STOPPING - END BATCH

The **Treated Seed Weight Confirmation** pop-up window displays as a layer on top of the **TREATER DETAIL SCREEN**, as shown left.

Step 1: Touch the **Enter Known Seed Weight** numerical field. Enter the known weight of seed value on the keypad pop-up ➲





TREATER DETAIL SCREEN - SYSTEM PAUSED - END BATCH

The **Weight Confirmation** pop-up window displays. Answer **Yes** or **No** to the question: **Are you sure?** Is the weight value entered on the keypad pop-up (refer to previous page) correct?

Step 1: Touch the **Yes** button icon: pop-up closes: navigates to the **MAIN SCREEN ➲**

KEG SWAP

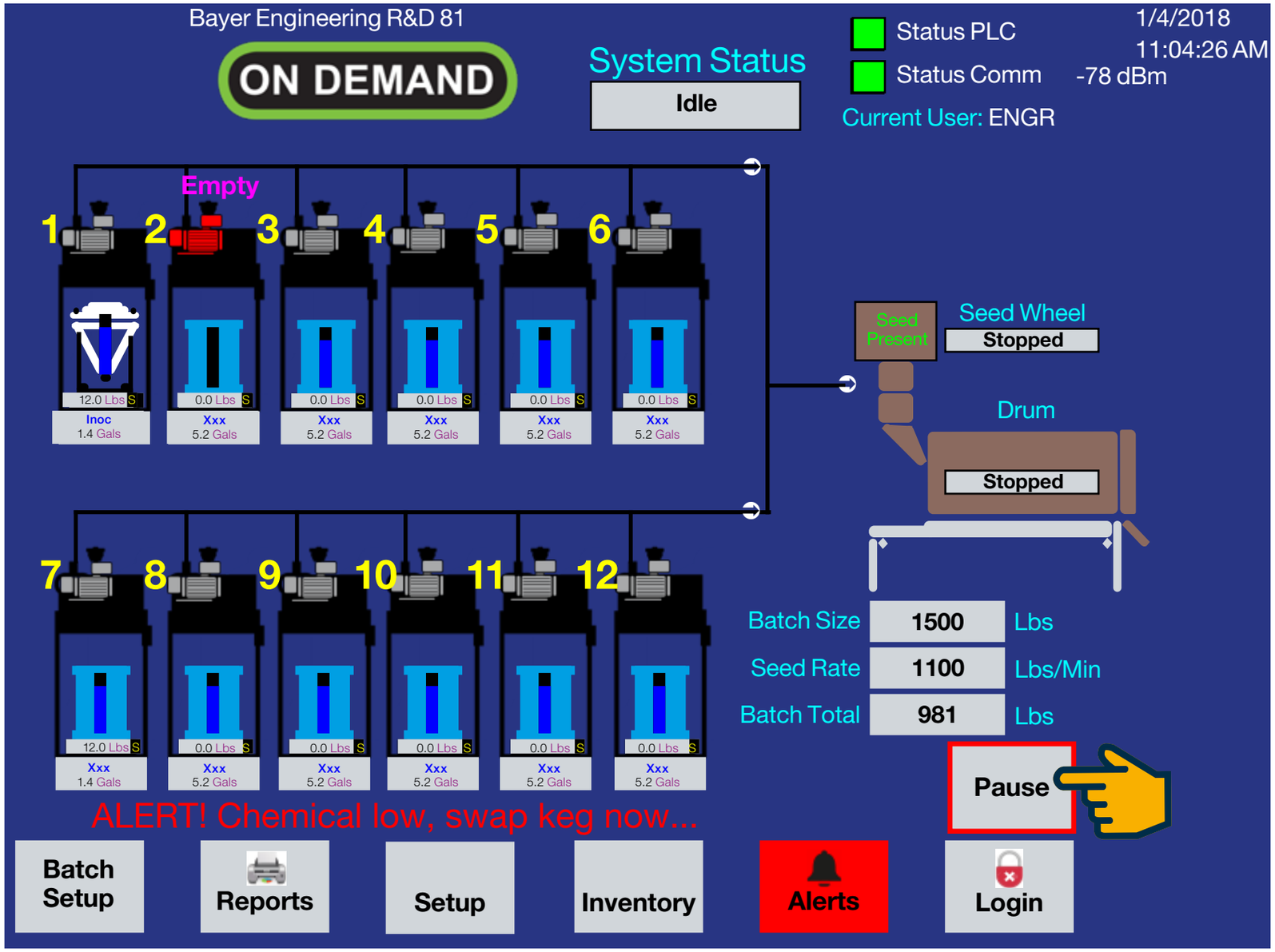
MAIN SCREEN - KEG SWAP

The system, running at the current seed rate, will alert operators (according to the low keg timer, which can be adjusted from 1 min to 10 min see page 42 for instructions) before a keg runs empty and needs to be swapped (the **Alerts** button icon turns red, as shown right).

The operator can pause the system (touch the **Pause** button icon) at any time if it appears that during the treating session a keg may run out even prior to the system alert.

Operators can also swap a keg if they prefer to leave a partial quantity in the keg before it gets completely empty in the middle of a treating session.

When the keg runs completely empty, the system will stop the treating session: navigates to the **TREATER DETAIL SCREEN ➲**



Example: For **Option 1**, select the **Continue using chemical** option

TREATER DETAIL SCREEN - SYSTEM PAUSED - KEG SWAP PAUSE

An **Empty Station Detected** event pop-up window will appear. Warning message: **Low flow detected at chemical station 2**

Events, such as **Alerts, Low Chemical, Stopped** or **Pause** will pause/stop the system. The low keg timer may trip the alert as low as 2-3 gallons because the system senses the Keg is empty if the lines have not been properly primed first thing in the morning or due to heavy chemical viscosity issues.

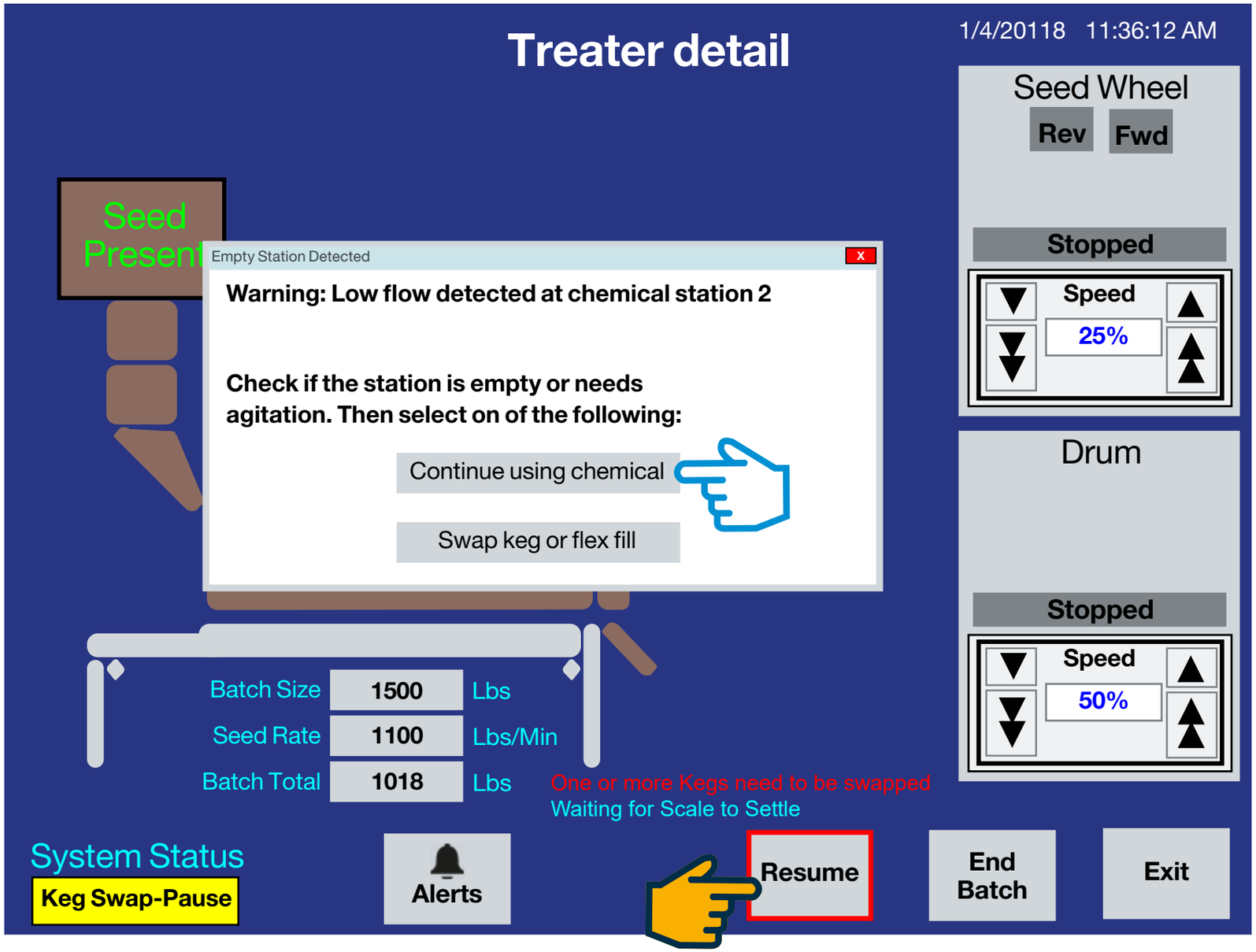
Option 1 below enables the operator to run the Keg completely empty before the actual Keg Swap is necessary.

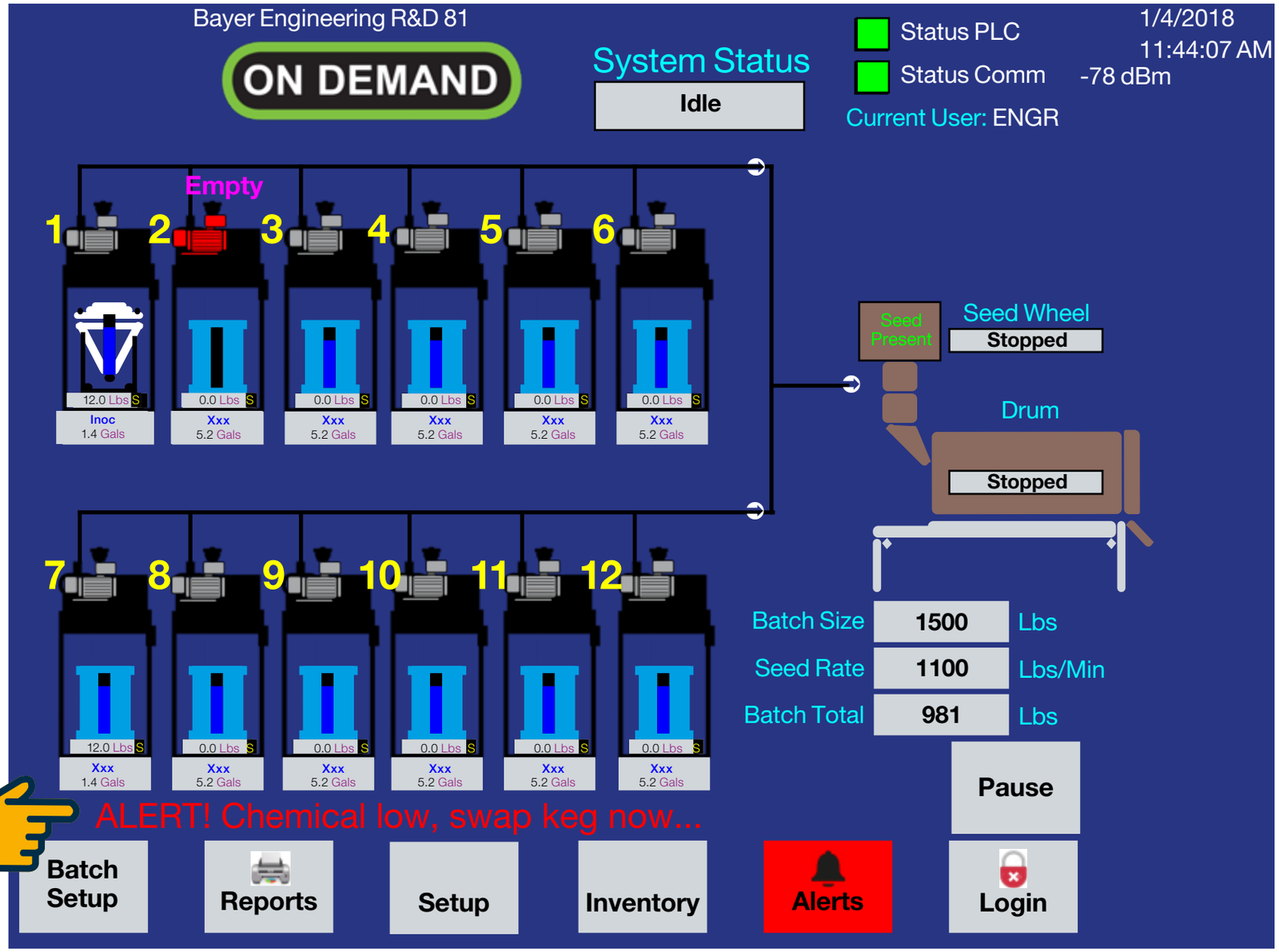
Option 1: Continue using keg...

The **Empty Station Detected** pop-up window will appear if the system alerts the Keg is empty, as shown above. Two options appear on the pop-up window: **Continue using chemical** or **Swap keg or flex fill**.

Step 1: Touch the **Continue using keg** button icon: the **Empty Station Detected** pop-up window closes.

Step 2: Touch the **Resume** button icon: the batch resumes the treating session where it left off: navigates back to the **MAIN SCREEN** ➲





TREATER DETAIL SCREEN - SYSTEM IDLE - KEG SWAP

When the Keg runs completely empty using up the extra 2-3 gallons, the system will automatically stop the treating session: navigates to the **TREATER DETAIL SCREEN**, **Option 2 Swap keg or flex fill ➲**

Example: For **Option 2**, select the **Swap keg or flex fill** option

TREATER DETAIL SCREEN - SYSTEM PAUSED - SWAP KEG

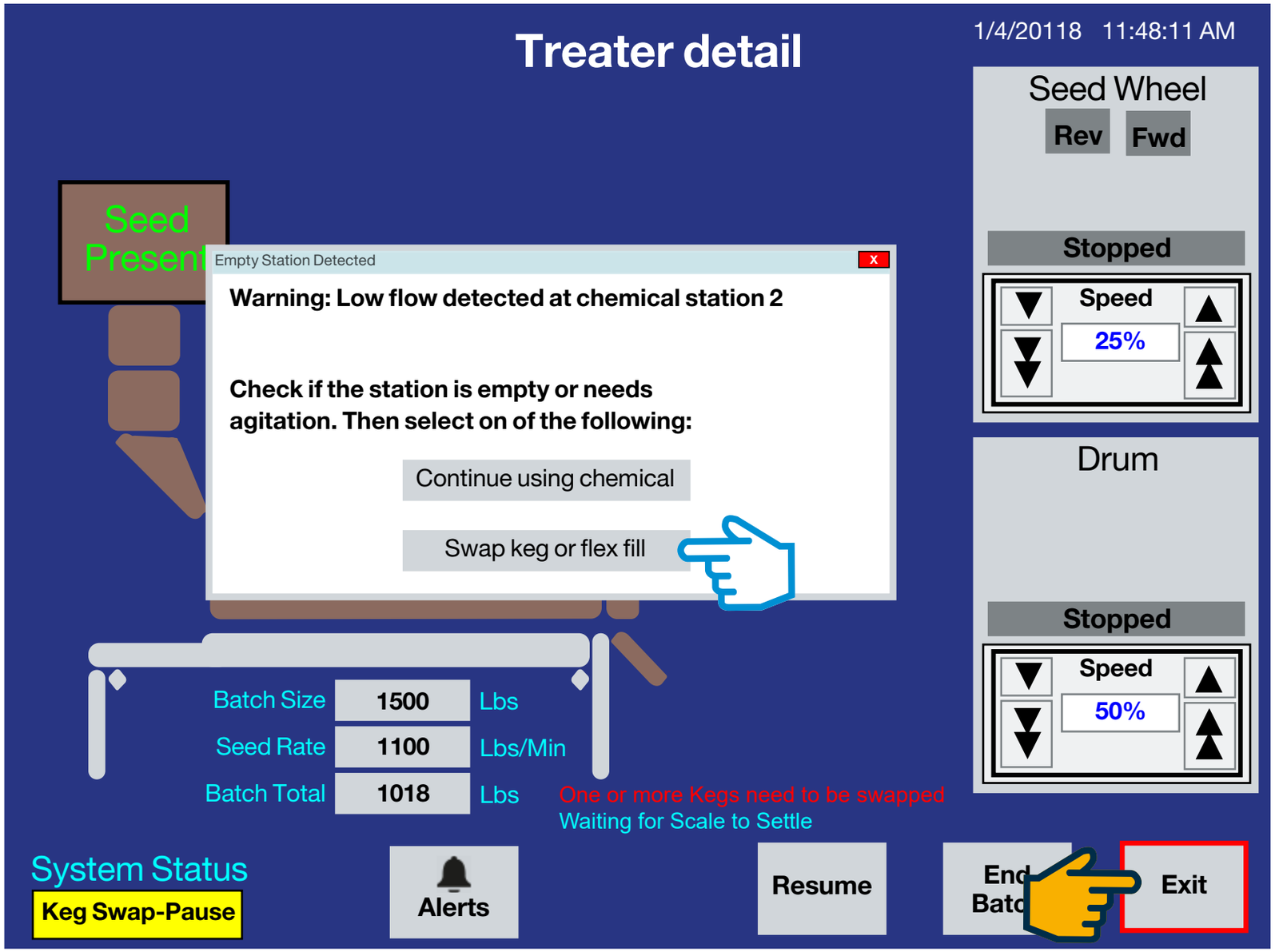
An **Empty Station Detected** event pop-up window will appear. Warning message: **Low flow detected at chemical station 2**

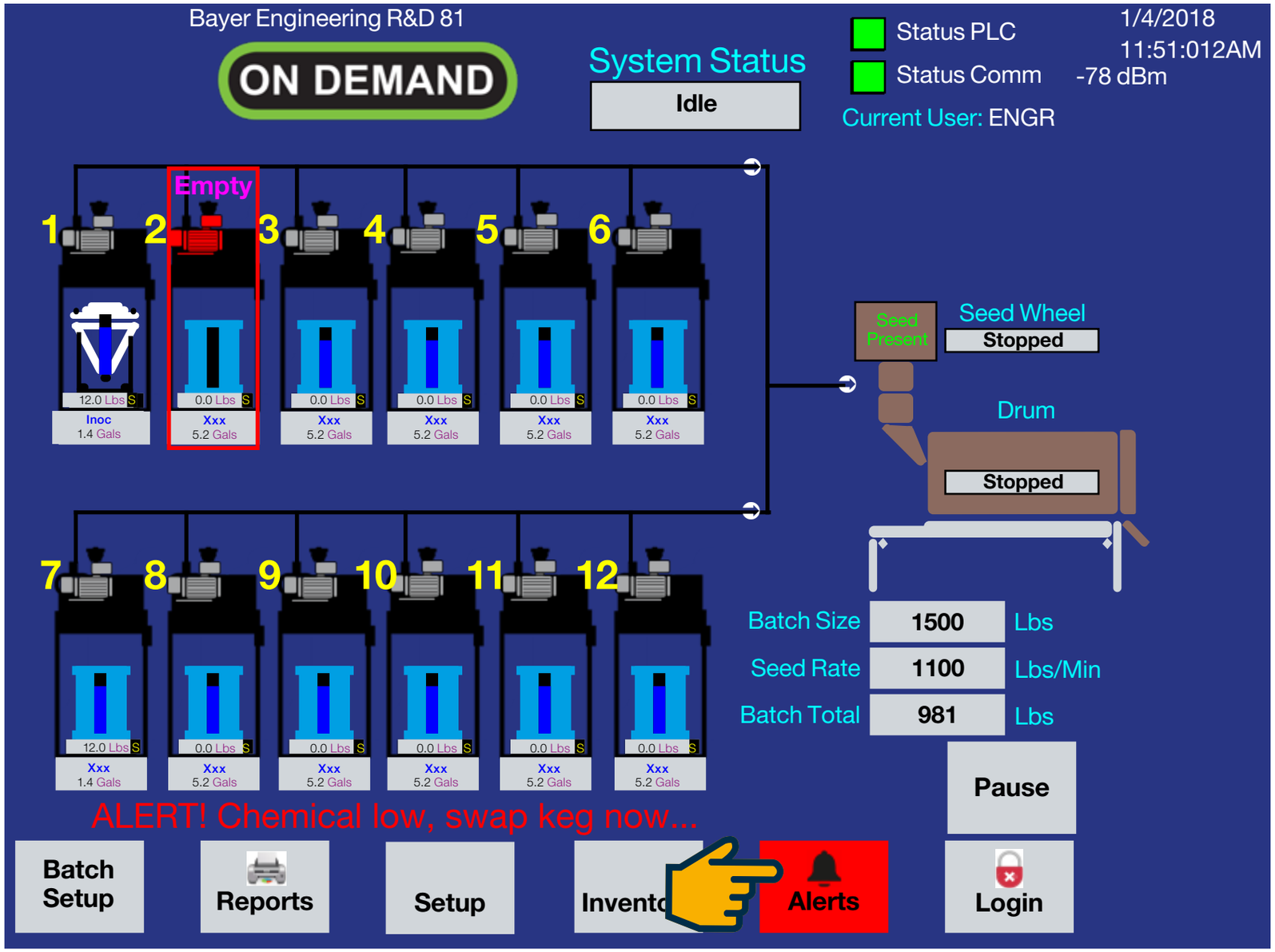
Option 2: Swap keg or flex fill

Step 1: Touch the **Swap keg or flex fill** button icon: navigates to the **DRUM DETAIL STOP SCREEN**

Flashing message: **One or more Kegs need to be swapped**

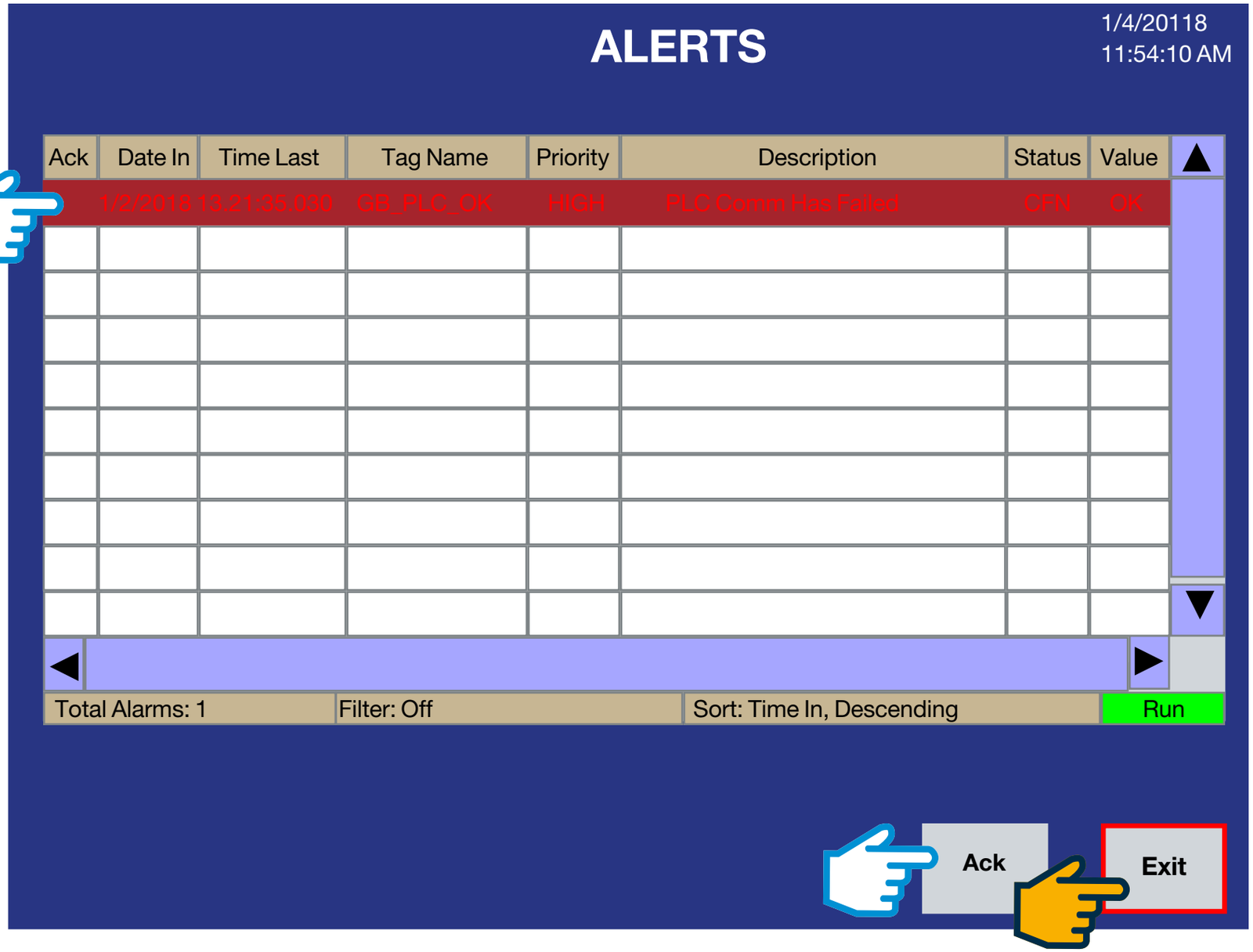
Step 1: Touch the **Exit** button icon: navigates to the **MAIN SCREEN ➲**





TREATER DETAIL SCREEN - SYSTEM IDLE - KEG SWAP

Step 1: Touch the **Alerts** button icon to acknowledge the alert ➲

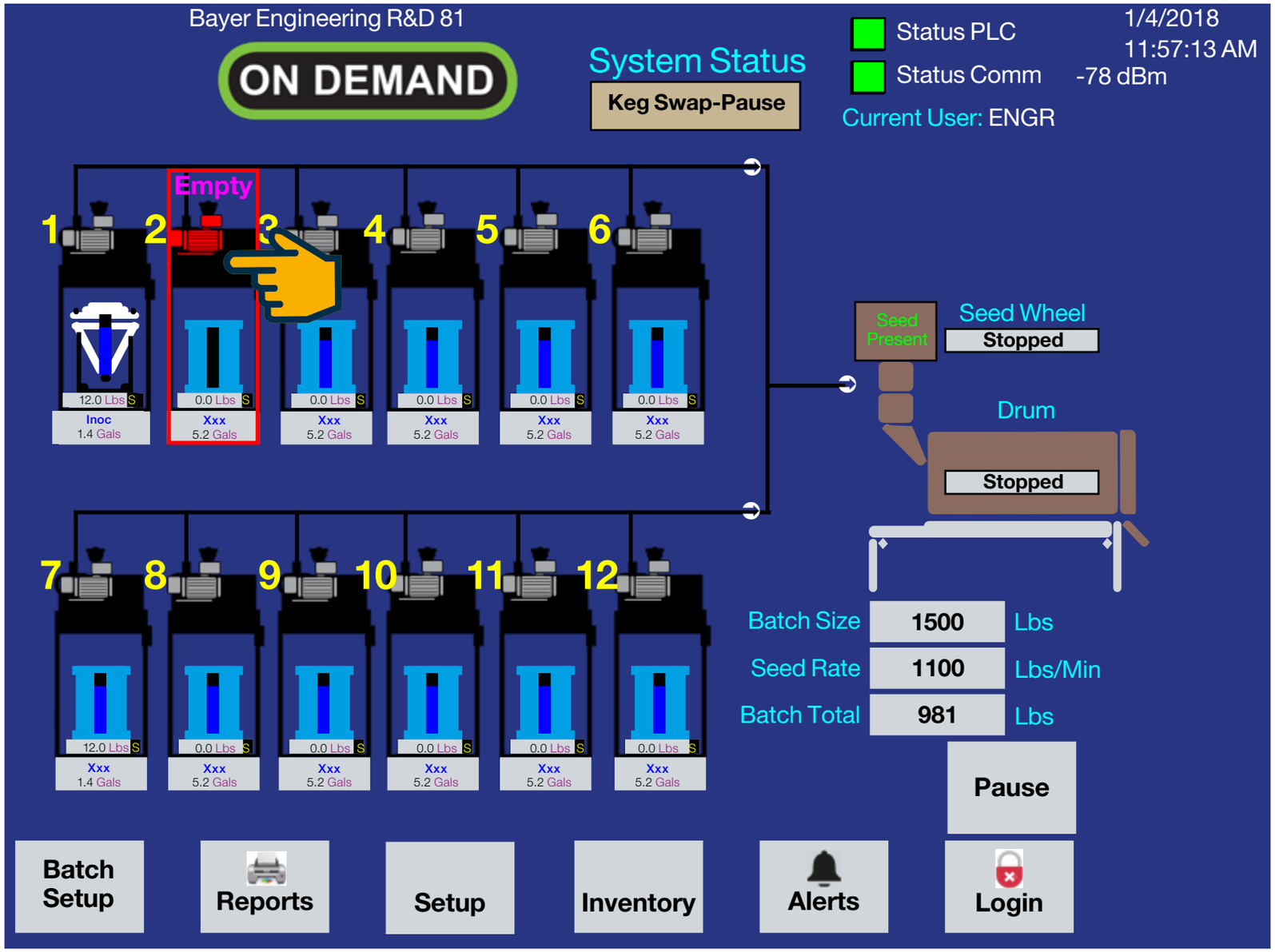


ALERTS SCREEN

Step 1: Touch a **displayed alert**

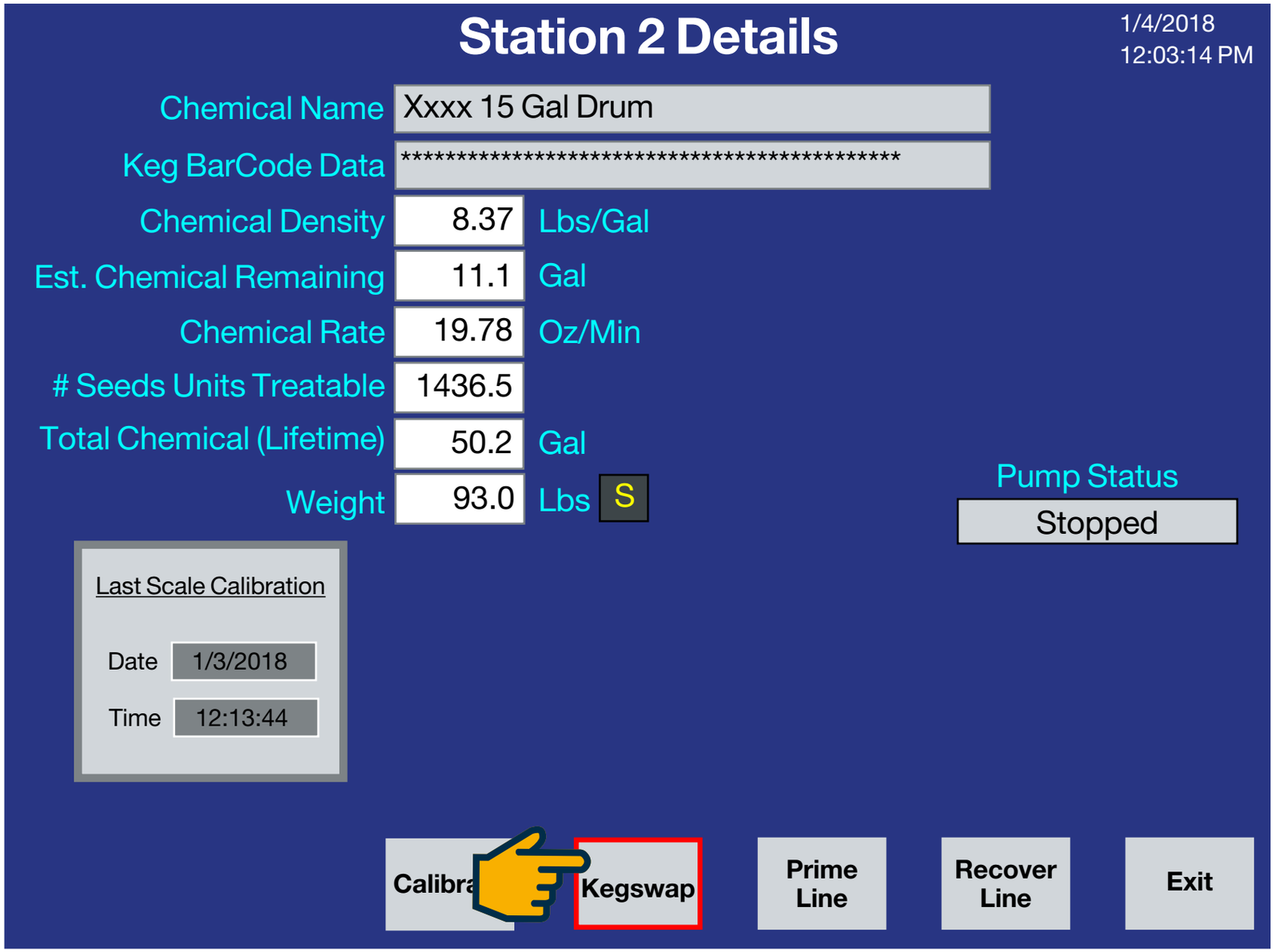
Step 2: Touch the **Ack** button icon to acknowledge the alert.

Step 3: Touch the **Exit** button icon: navigates to the **Main Screen** ➲



TREATER DETAIL SCREEN - SYSTEM IDLE - KEG SWAP

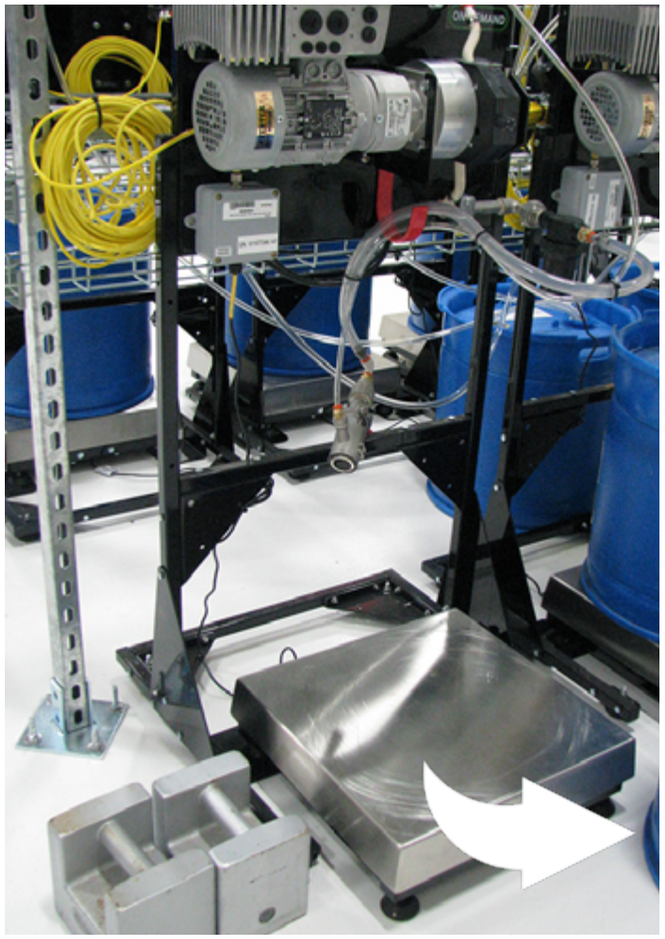
Step 1: Touch the **Pump Station 2** graphic icon that is flashing: navigates to the **STATION 2 PUMP DETAILS SCREEN ➲**

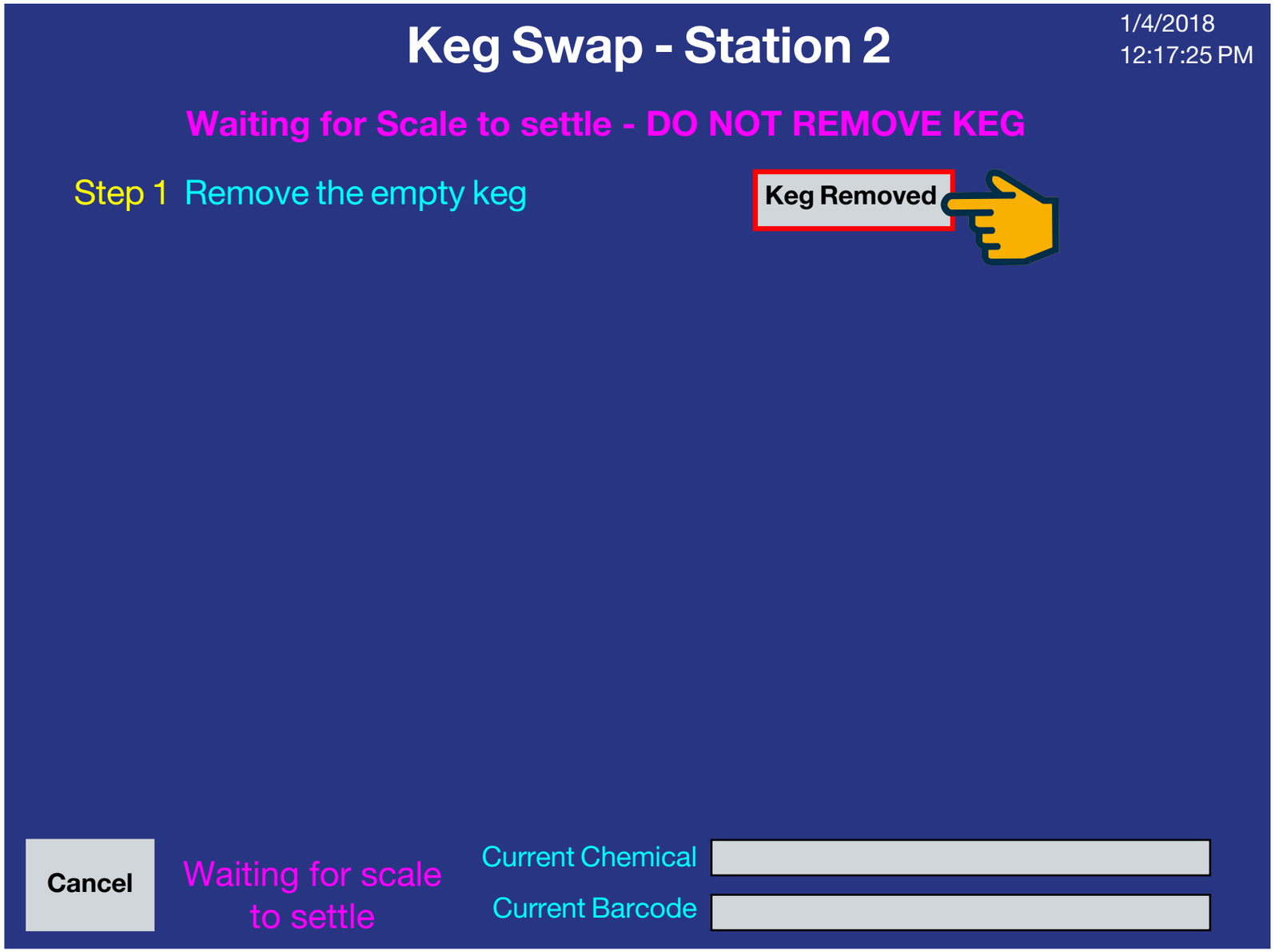


STATION 2 PUMP DETAILS SCREEN - KEG SWAP

Step 1: Touch the **Keg Swap** button icon: navigates to the **KEG SWAP - STATION 2 SCREEN ➲**

Note: if the keg is removed from the scale before the screen indicates, the pop-up message box will appear (as shown middle of screen right). Follow each step prompt to resume to keg swap.



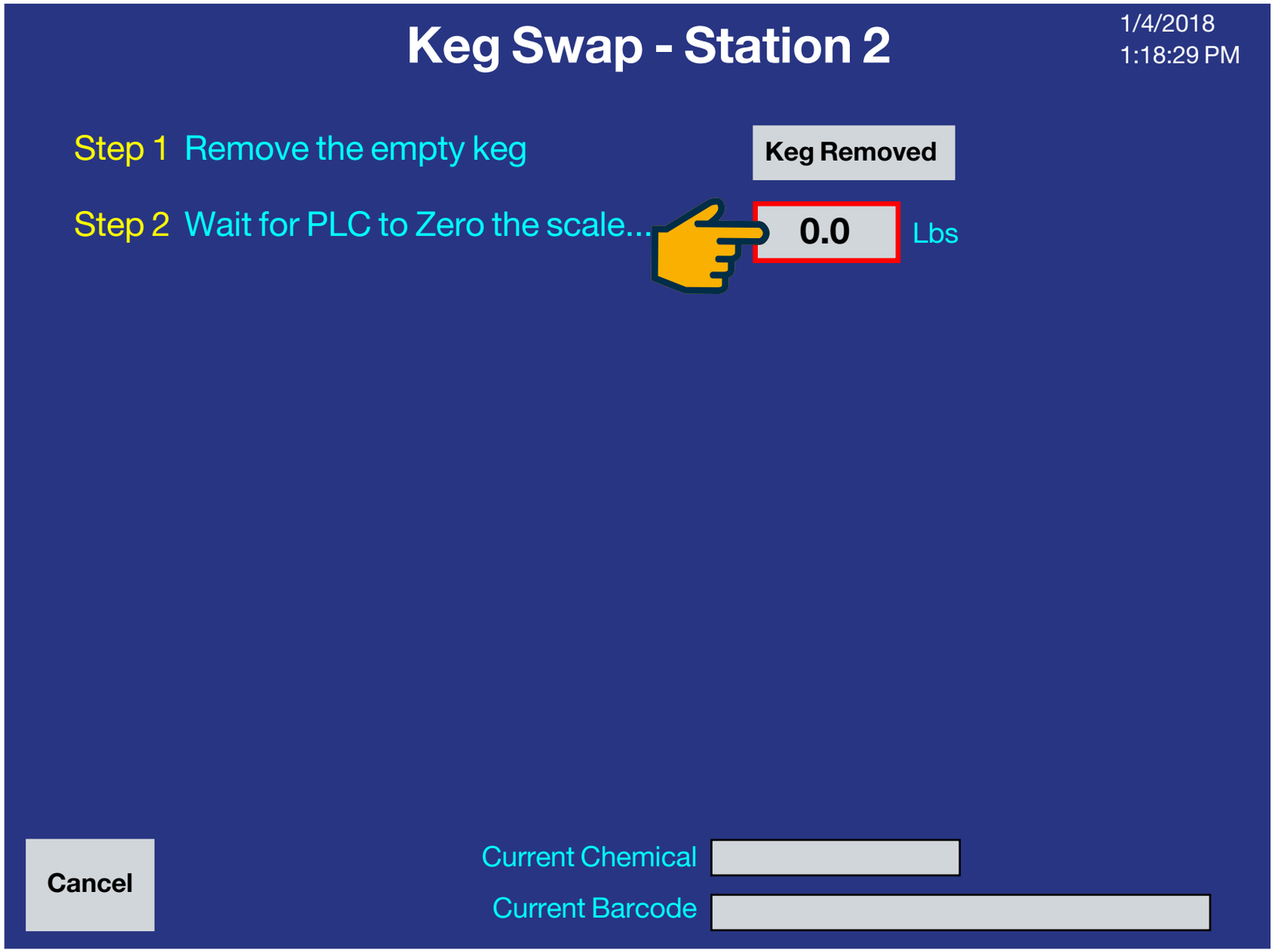


KEG SWAP SCREEN - KEG SWAP

Step 1: Remove empty Keg from the Pump Station Scale, as shown left.

Step 2: Touch the **Keg Removed** button icon.

Step 3: Lift the handle **UP**, twist **LEFT** and remove the Coupler Assembly from the top of the Keg and hang it on the Pump Station Hook. Continued, next page ➲

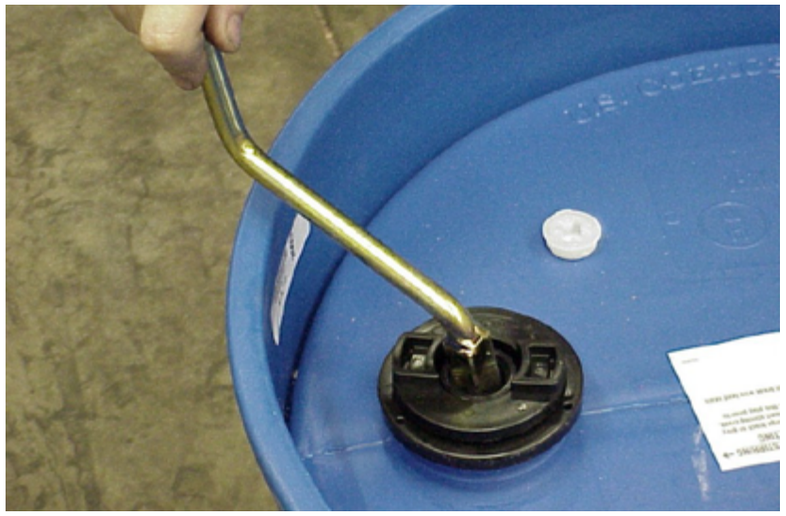


KEG SWAP SCREEN - KEG SWAP

Step 2: Wait for the PLC to zero the scale: displays **0.0** (as shown above).

Continued ➲

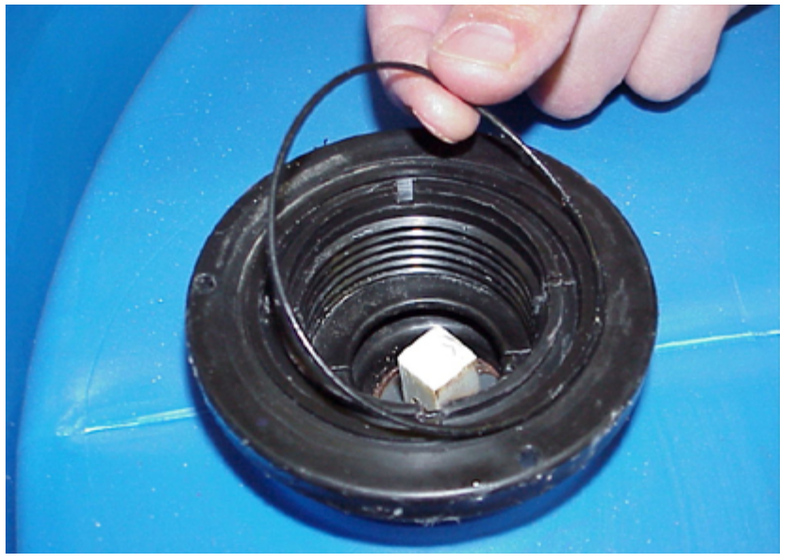
Step 1: Use a large slot screwdriver or T-handle, as shown below, to remove the white insert plug from the new Keg and set aside.



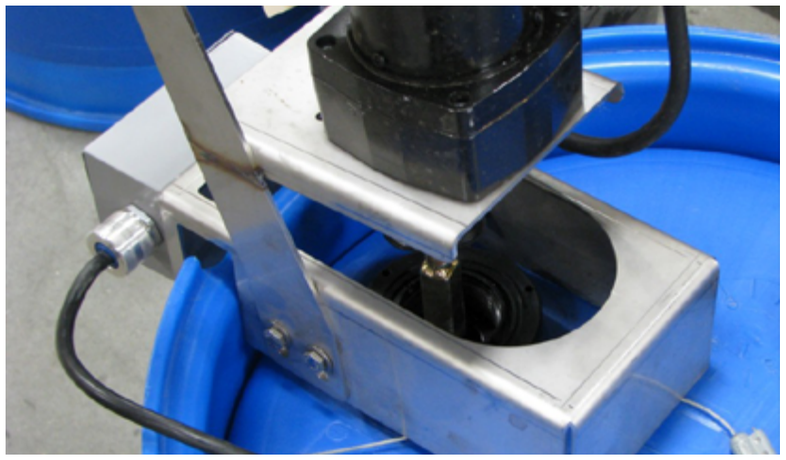
Step 2: Insert the stir rod handle as shown. Manually mix the chemical before connecting and using the electric Mixer Assembly. Remove the stir rod handle. Replace the white insert plug (previously removed).

Step 3: Use a crescent wrench to first loosen, then unscrew by hand and remove the top half of the black Keg stir cap (the White insert plug stays in the cap).

Continued ➲



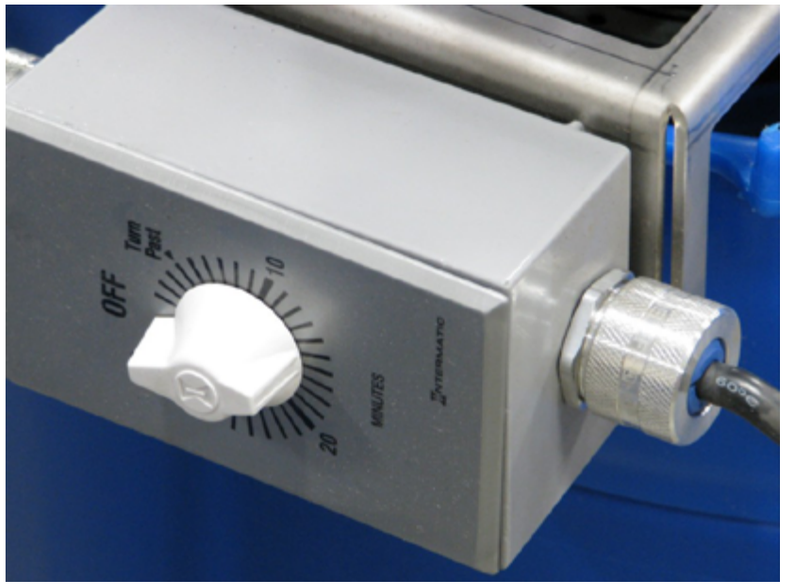
Step 4: Set the black Keg stir cap aside (previously removed). **DO NOT LOOSE THE O-RING!**



Step 5: Set the electric Mixer Assembly onto the stir rod inside the Keg bung, as shown.

Step 6: Adjustments can be made so the Mixer is properly attached to the stir rod. Use Allen wrench to loosen the set collar and move the mixer up or down for proper fit adjustment. Tighten set collar in place. Place Mixer on stir rod. Plug in 120V AC power cord to external power source. Use Mixer Timer to operate (ON/OFF) the Mixer.

Continued ➲

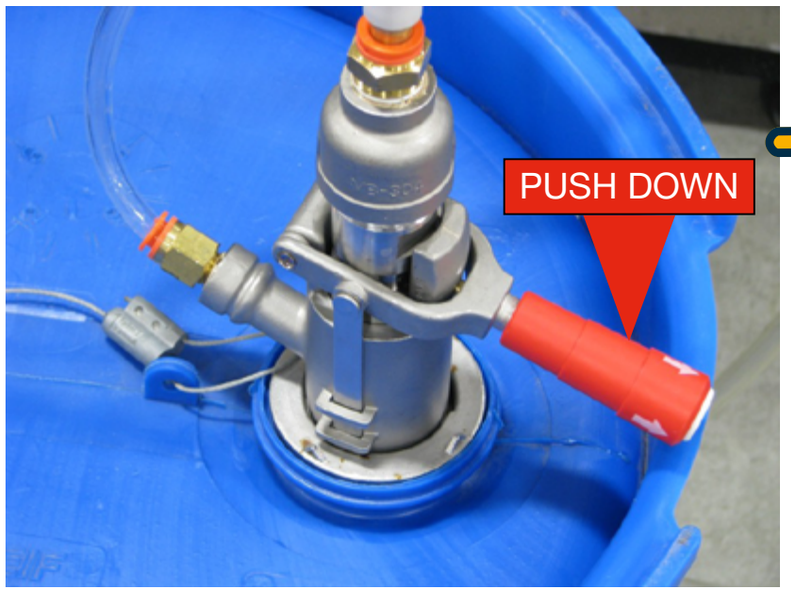


Step 7: Adjust the Mixer Timer for proper agitation. Consult chemical label for optimal mixing duration times.

Step 8: Remove the yellow keg bung cap.

Continued ➲

Step 9: Insert the Plumbing Assembly into the Keg tank bung. Hold the Assembly with both hands, apply slight pressure, twist **RIGHT**.



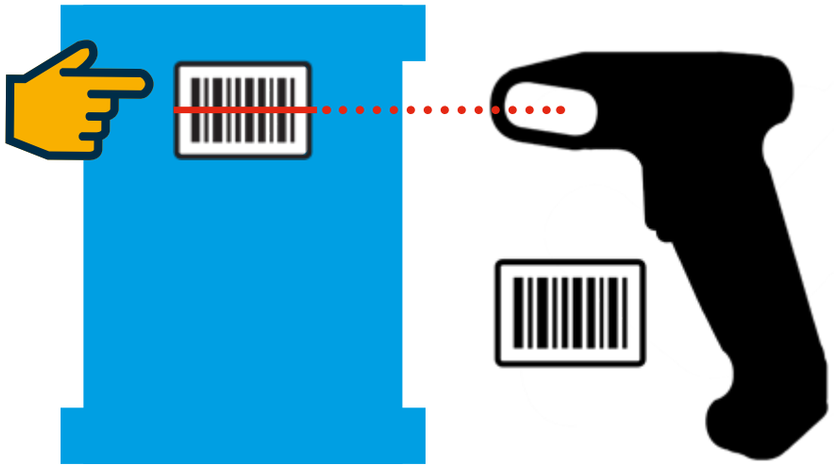
Step 10: Then lock the Assembly in place by pushing the Red Handle **DOWN**, as shown. The new Keg is now ready to use.

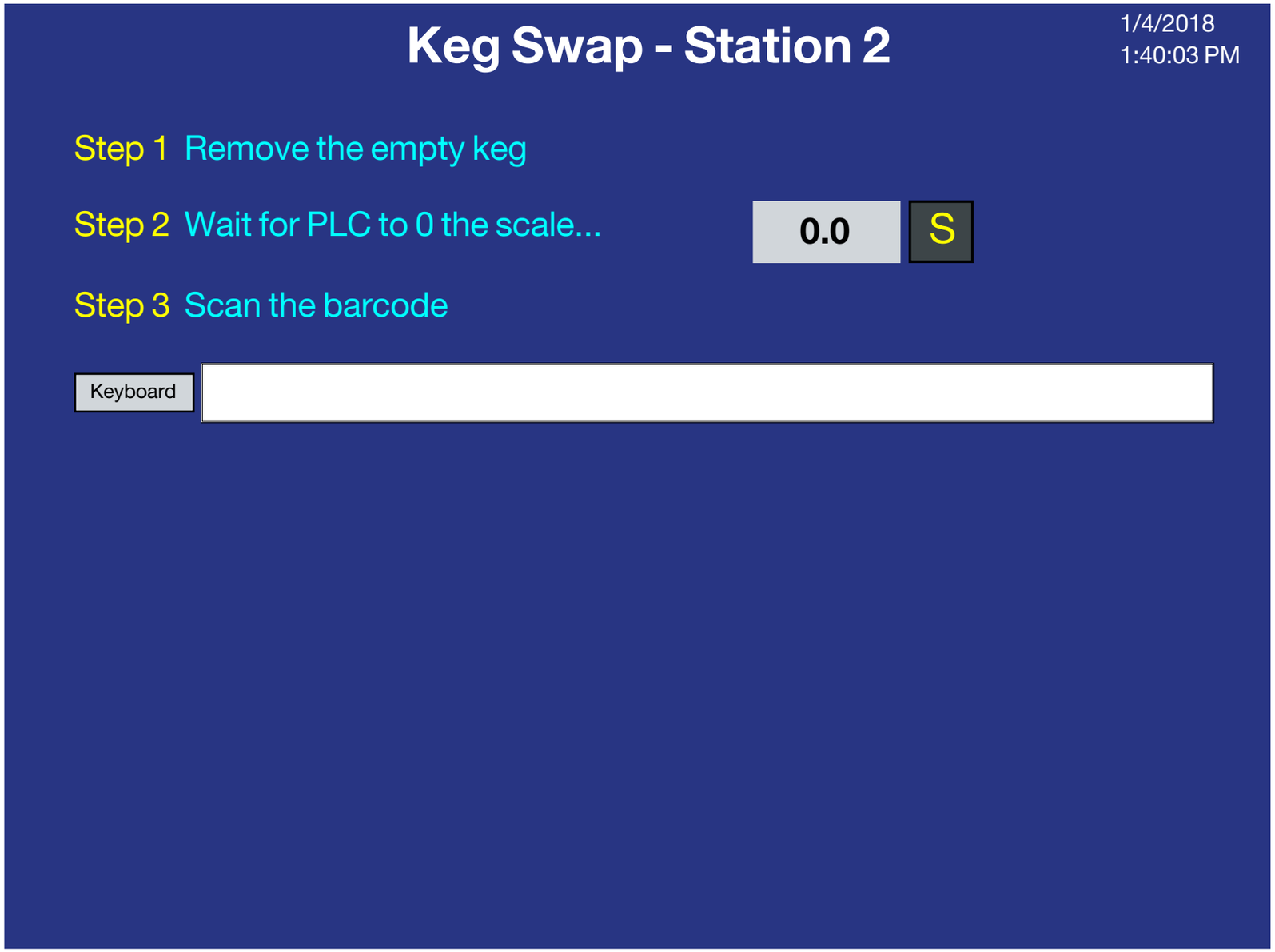
Continued ➲

RECEIVE INVENTORY SCREEN

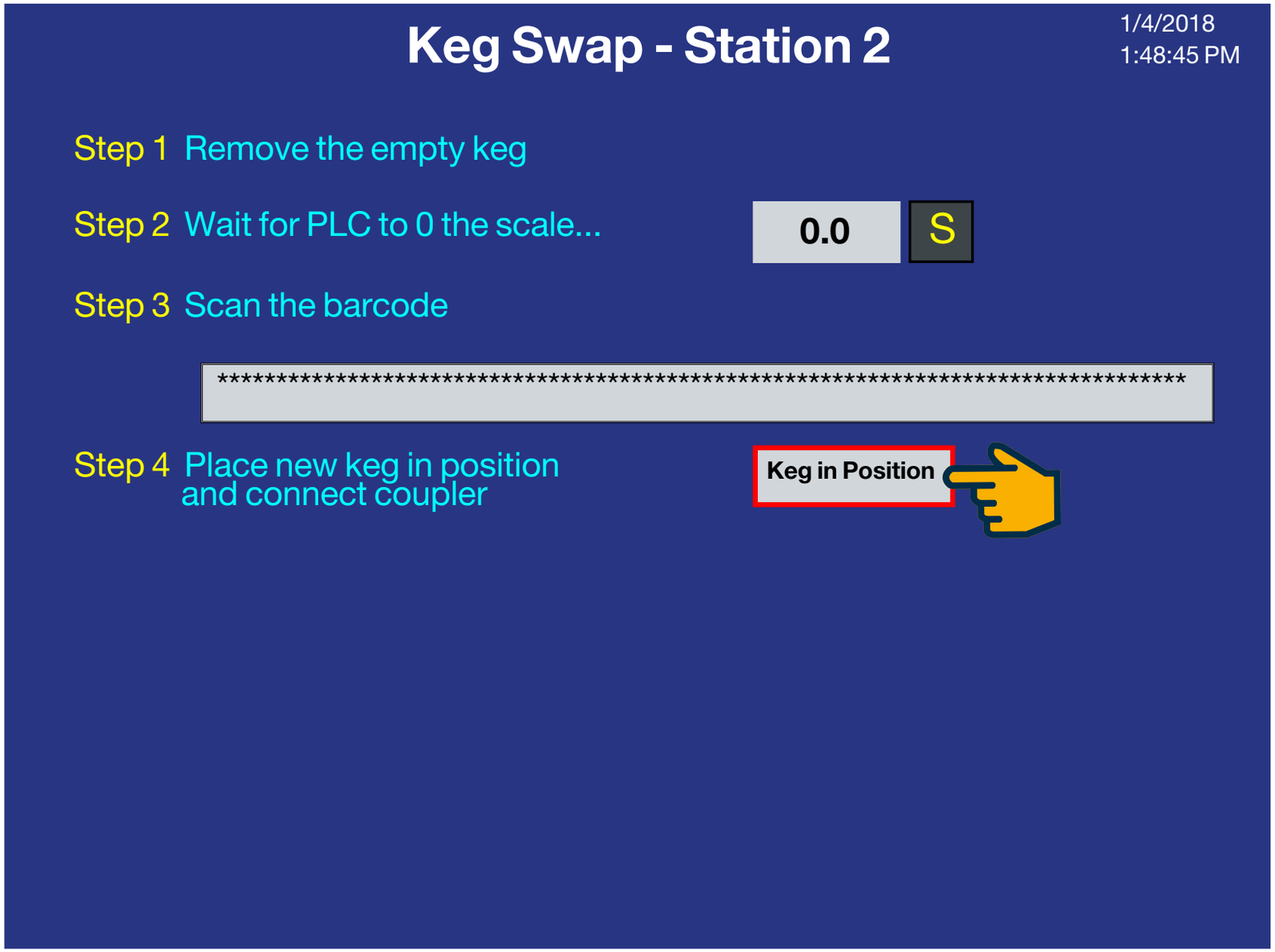
Step 1: Remove the scanner from the base. Pull the trigger to wake up the scanner (will beep, meaning it woke up). The second beep indicates communication link to the base.

Step 2: Bring the scanner over to a new keg and scan the keg barcode label, as shown below. The scanner will beep, indicating the barcode has been scanned. Wait approximately 5 minutes for the barcode information to go to the cloud for verification, and return to the HMI.





Warning! Requires two people to lift a full keg of chemical onto the scale!

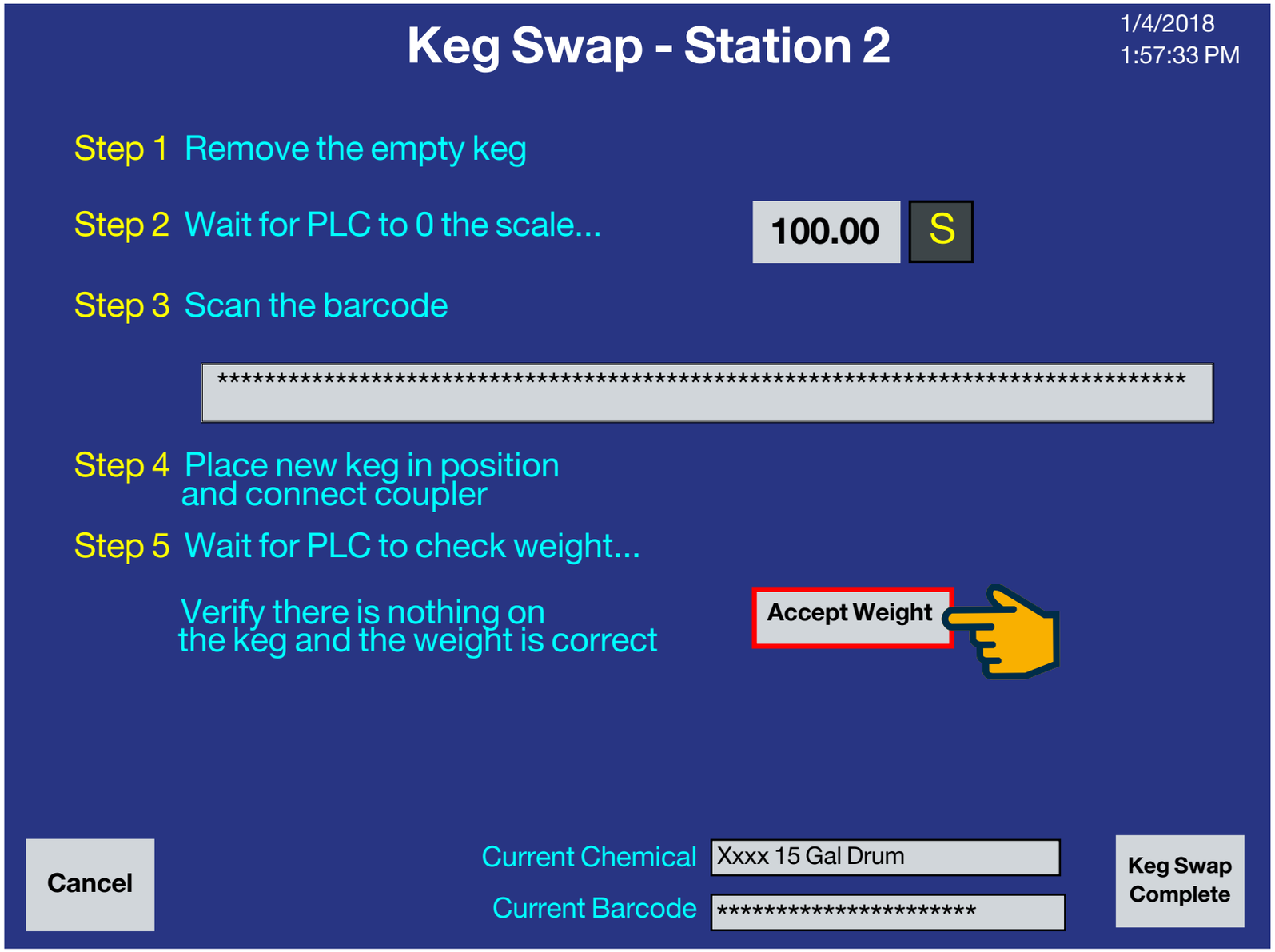


KEG SWAP - STATION 2 - SCREEN - KEG SWAP

New Keg information is verified and accepted in the system. The keg information from the barcode then populates on the Receive Inventory screen, as shown above.

Step 1: Place new Keg on the Pump Station Scale (two people required).

Step 2: Touch the **Keg in Position** button icon ➲



KEG SWAP - STATION 2 - SCREEN - KEG SWAP

Wait for the PLC to check new Keg weight on the Pump Station Scale. Displays Keg weight **100.0**

Step 1: Touch the **Accept Weight** button icon ➲

KEG SWAP - STATION 2 - SCREEN - KEG SWAP

Step 1: Touch and hold the **Jog** button icon. This primes chemical from the Keg, through the pump head and up to the treater chemical inlet.

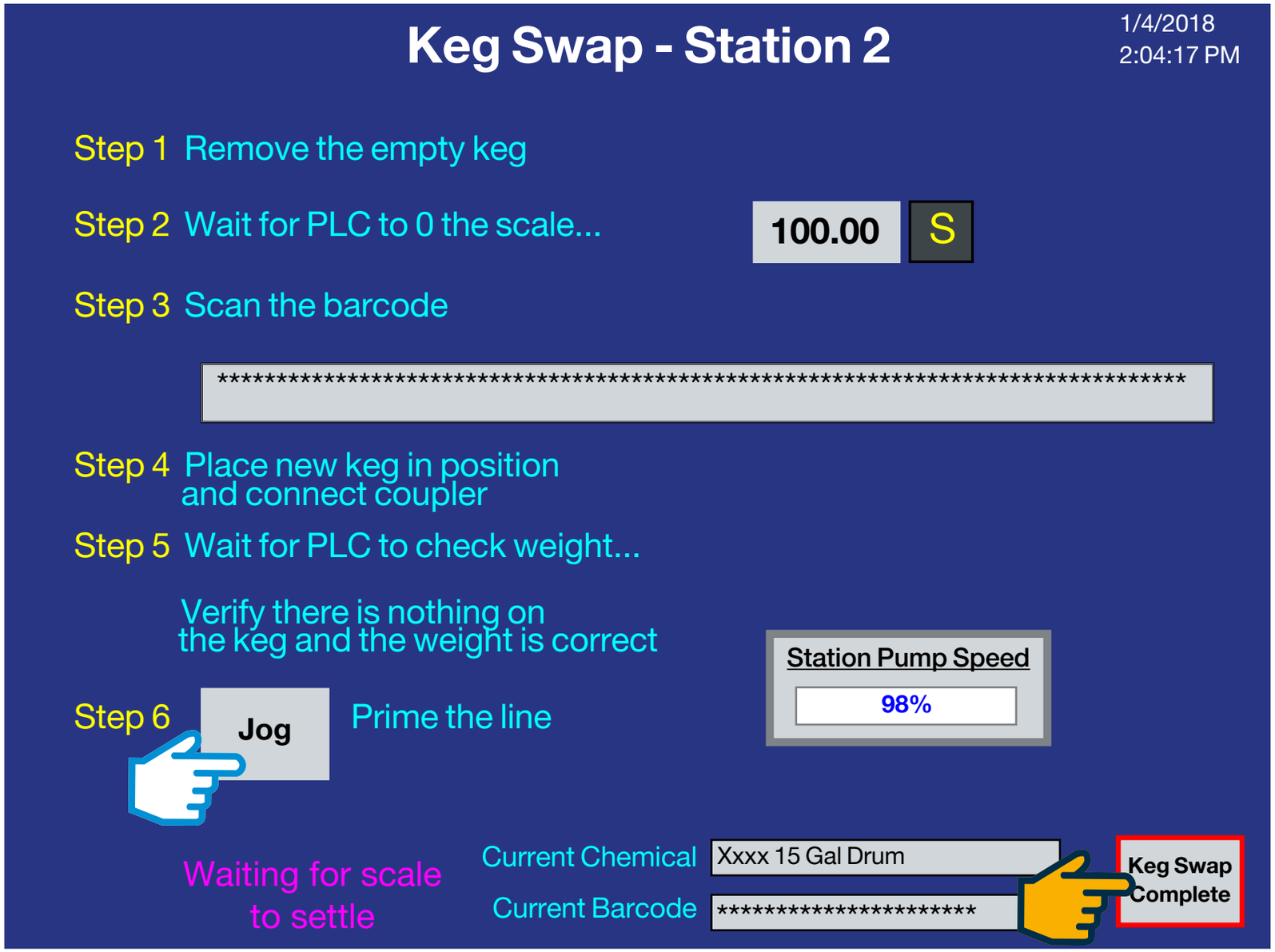
Release the **Jog** button icon once chemical reaches the treater chemical inlet. This removes air pockets in the chemical lines.

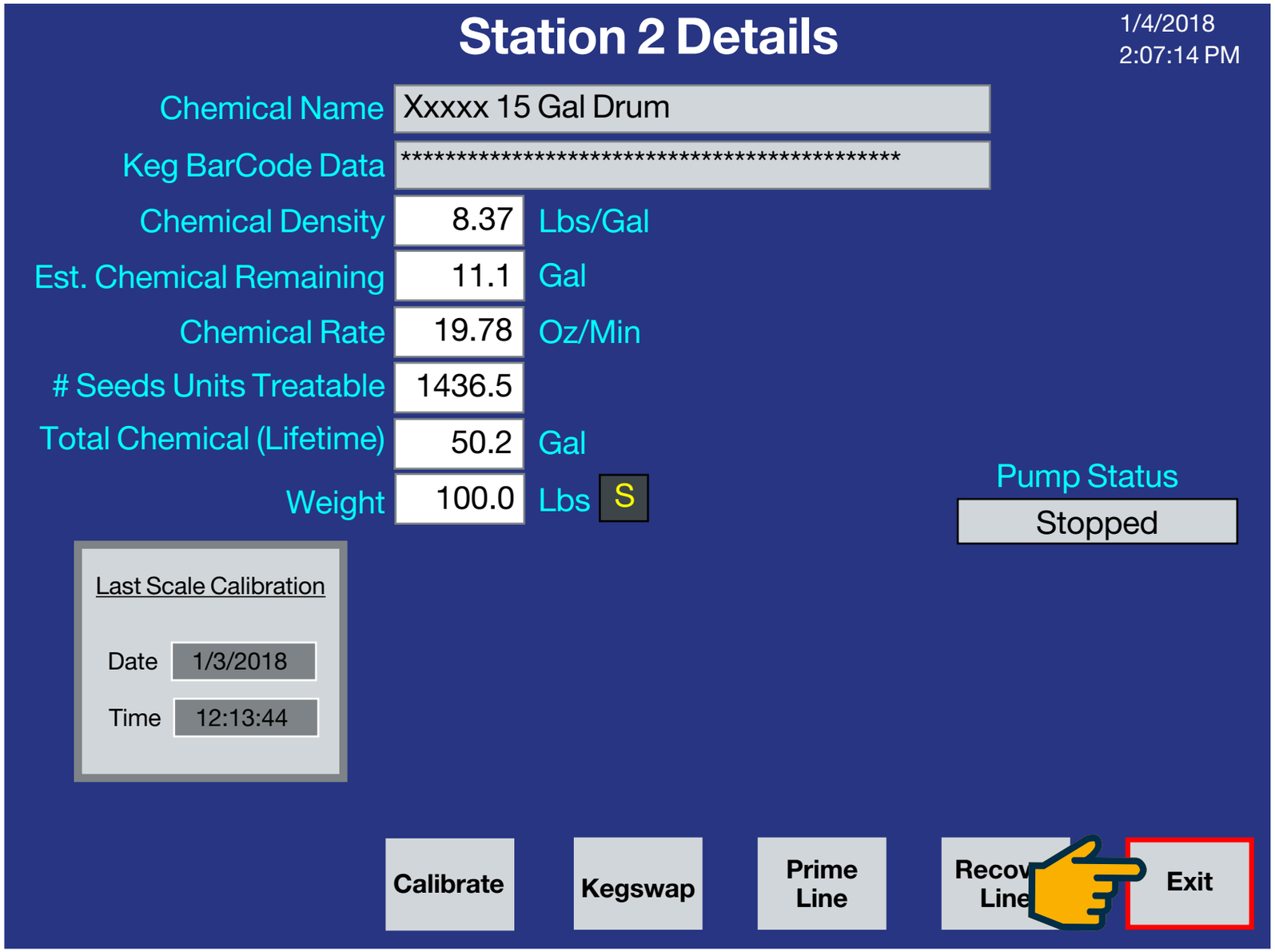
>>Run the LS Pump at 50% pump speed for 10 seconds. Adjust speed as needed.

>>Run the I/P Pump at 10% pump speed for 10 seconds. Adjust speed as needed.

>>When swapping partial kegs, the chemical lines must be completely primed!

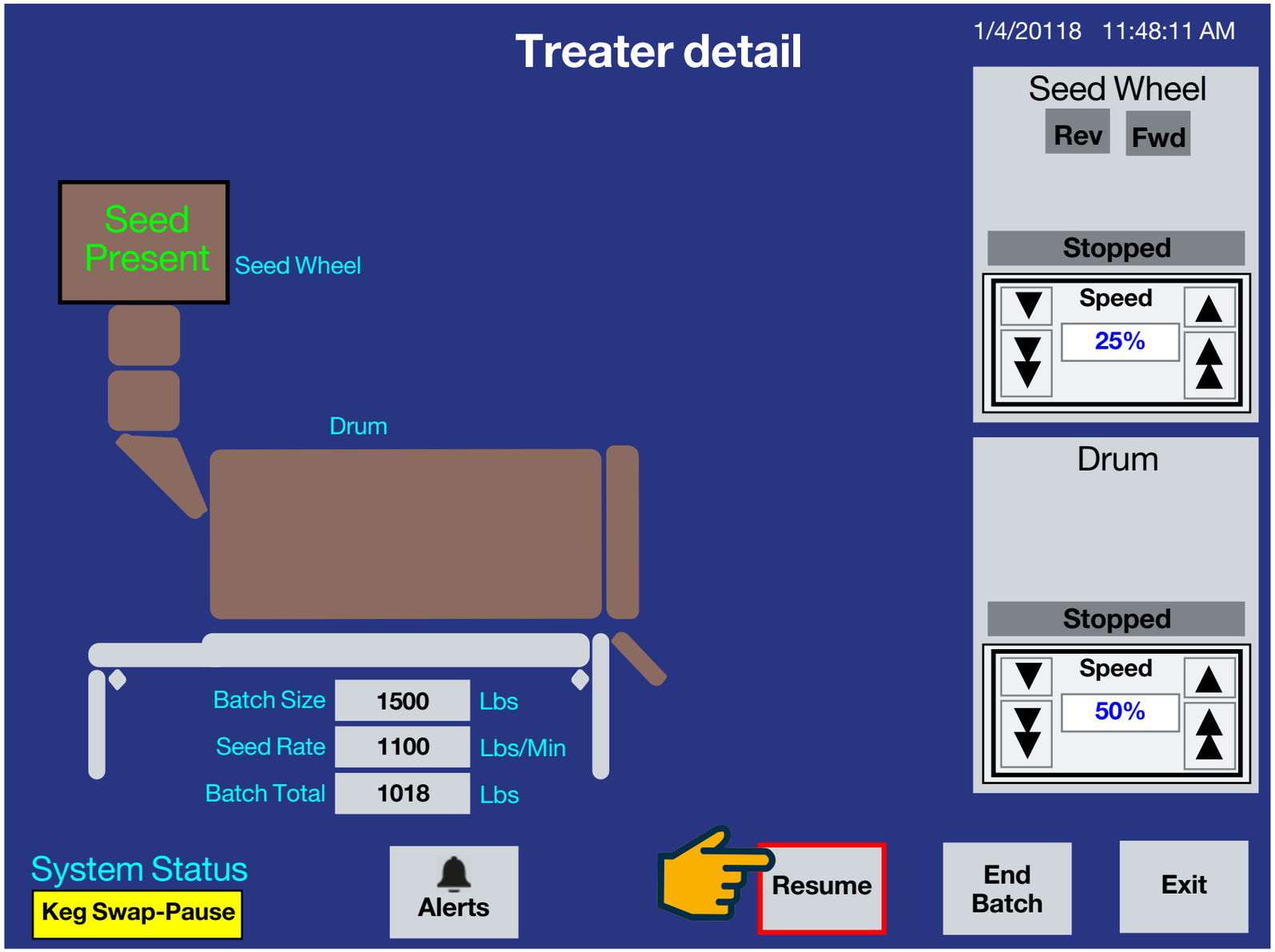
Step 2: Touch the **Keg Swap Complete** button icon: navigates to the **STATION 2 PUMP DETAIL SCREEN ➲**





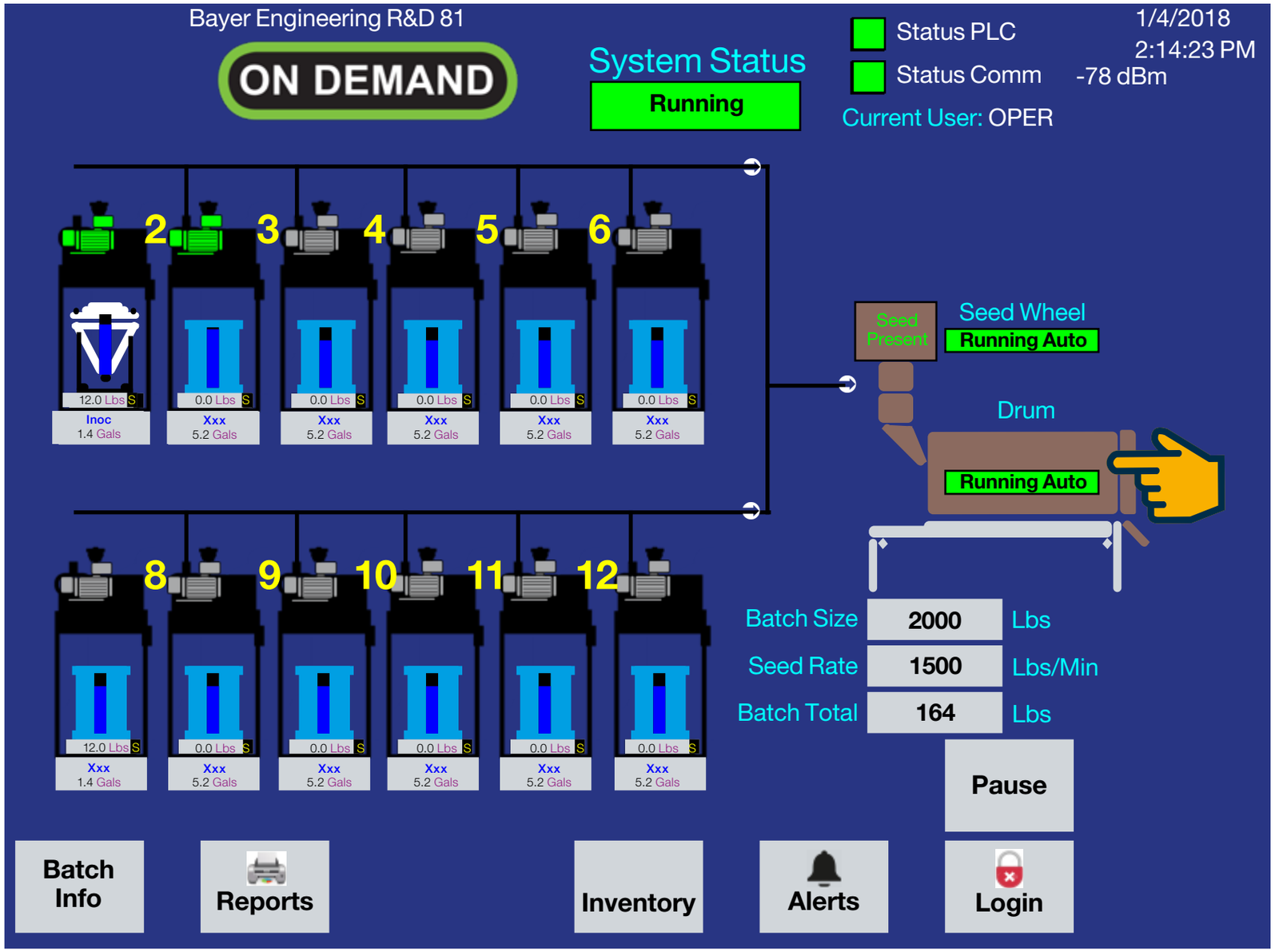
STATION 2 DETAILS - SCREEN - KEG SWAP

Step 1: Touch the **Exit** button icon: navigates to the **DRUM DETAIL SCREEN ➲**



DRUM DETAIL SCREEN - KEG SWAP - PAUSE

Step 1: Touch the **Resume** button icon: navigates to the **MAIN SCREEN** ➲



MAIN SCREEN - SYSTEM RUNNING

All devices displayed on the **MAIN SCREEN** above indicate **GREEN**; the system is running and the batch has resumed the treating session where it left off prior to Keg swap.

Step 1: Touch the Treater icon to advance to Flex Fill: navigates to the **MAIN SCREEN** ➲

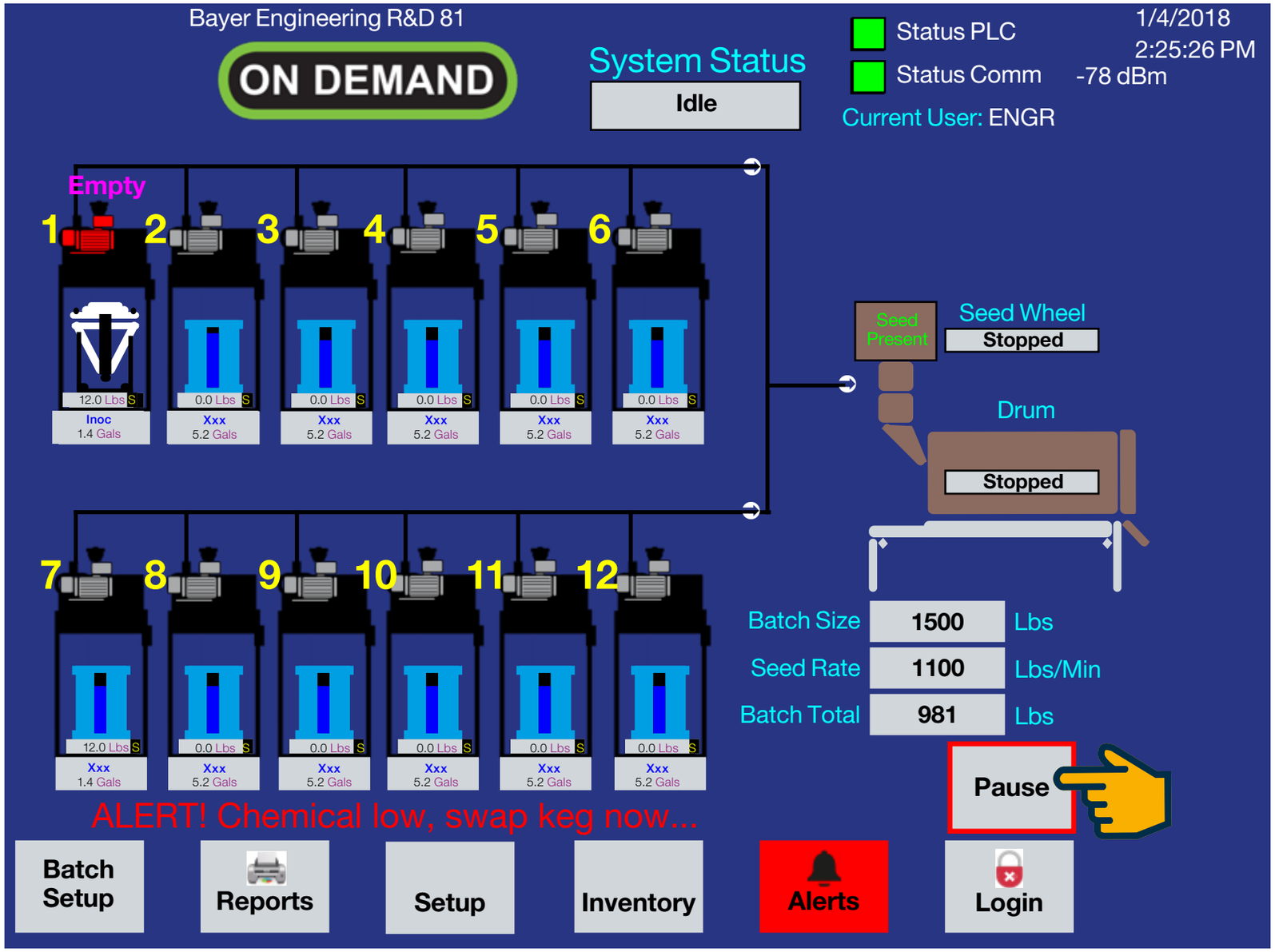
FLEX TANK FILL

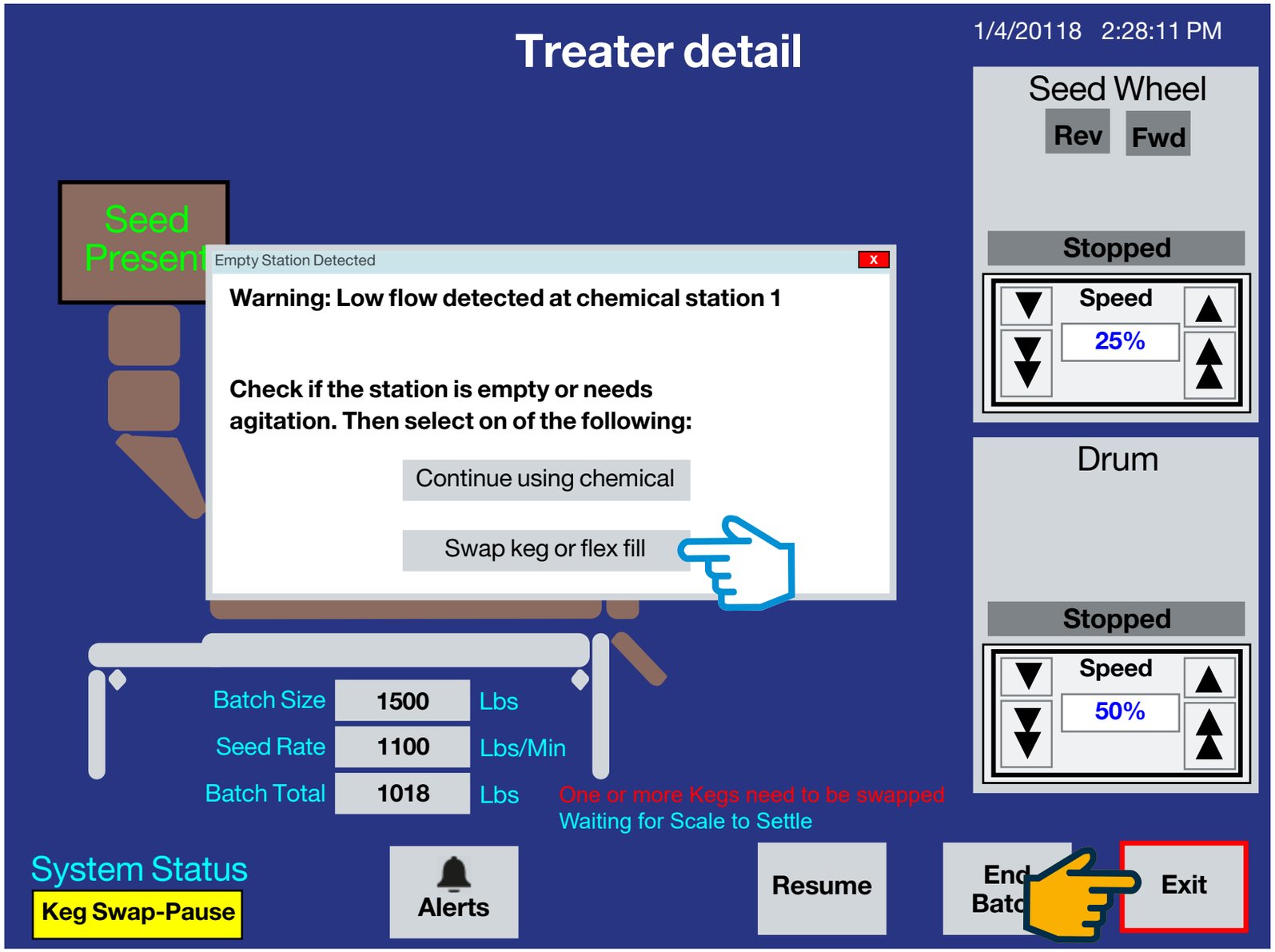
MAIN SCREEN - FLEX TANK FILL

The low keg timer may trip the alert as low as 2-3 gallons approximately ten minutes (which can be adjusted from 1 min to 10 min see page 42 for instructions) before the Flex Tank runs empty, at the current seed rate (**Alert** button icon turns red, as shown above).

The operator can pause the system (touch the Start/Pause button icon) at any time if it appears that during the treating session a Flex Tank may run out prior to the system alert. Operators can also swap a Flex Tank if they prefer to leave a partial quantity in the Tank before it gets completely empty, in the middle of a treating session.

When the Flex Tank runs completely empty, the system will automatically stop the treating session and display the message: **ALERT! Chemical low, fill tank now...** (Tank Station displays: **Empty**, Seed Wheel: **Stopped**, Drum: **Stopped** and the System Status displays: **Idle**) and navigates: to the **TREATER DETAIL SCREEN**.





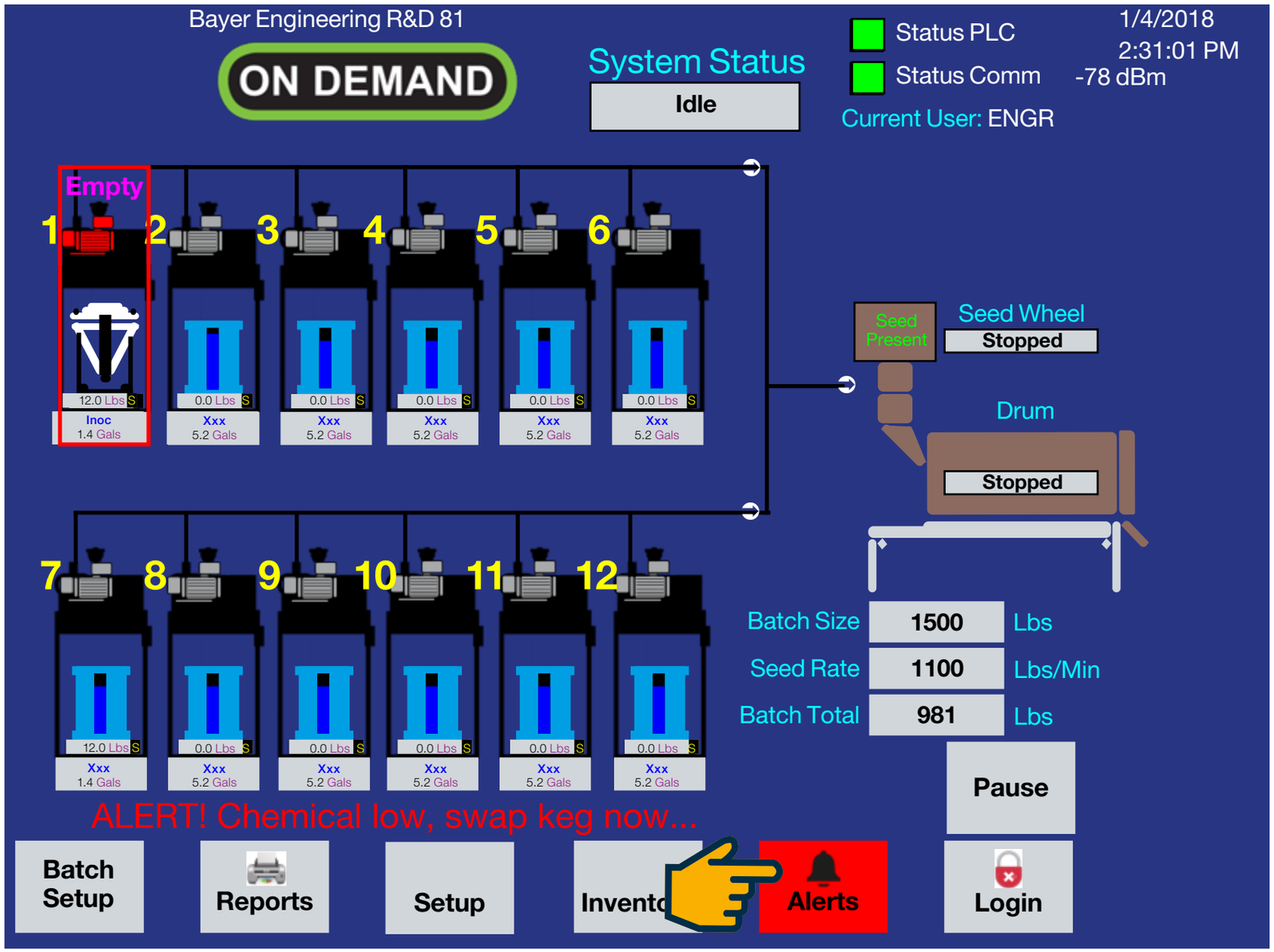
TREATER DETAIL SCREEN - FLEX TANK FILL - KEG SWAP - PAUSE

An **Empty Station Detected** event pop-up window will appear. **Warning: Low flow detected at chemical station 1**

Step 1: Touch the **Swap keg or flex fill** button icon: navigates to the **TREATER DETAIL STOP SCREEN**

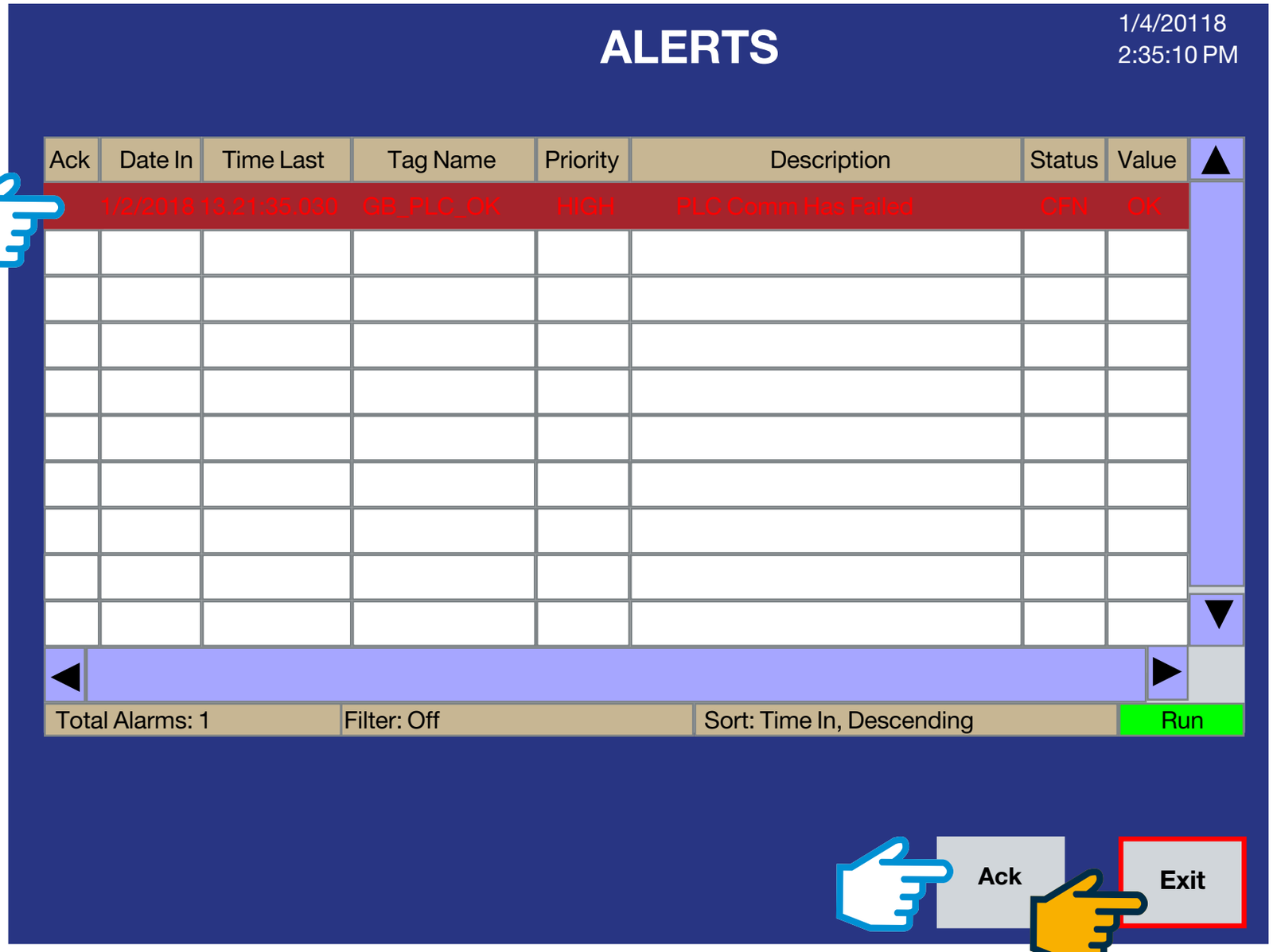
Flashing message: **One or more Kegs need to be swapped**

Step 2: Touch the **Exit** button icon: navigates to the **MAIN SCREEN ➲**



MAIN SCREEN - FLEX TANK FILL

Step 1: Touch the **Alerts** button icon: navigates to the **ALERTS SCREEN** ➲

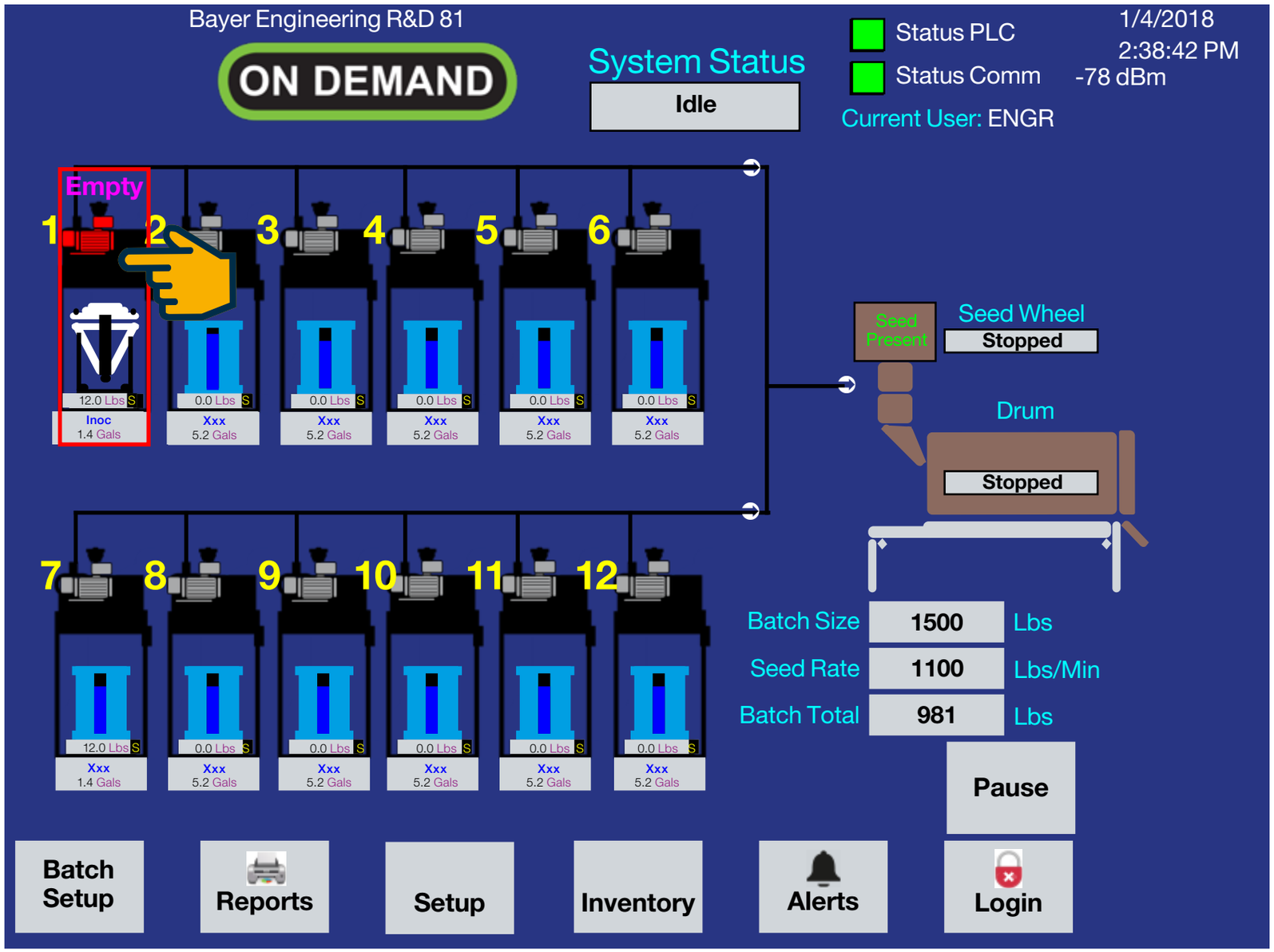


ALERTS SCREEN

Step 1: Touch a **displayed alert**

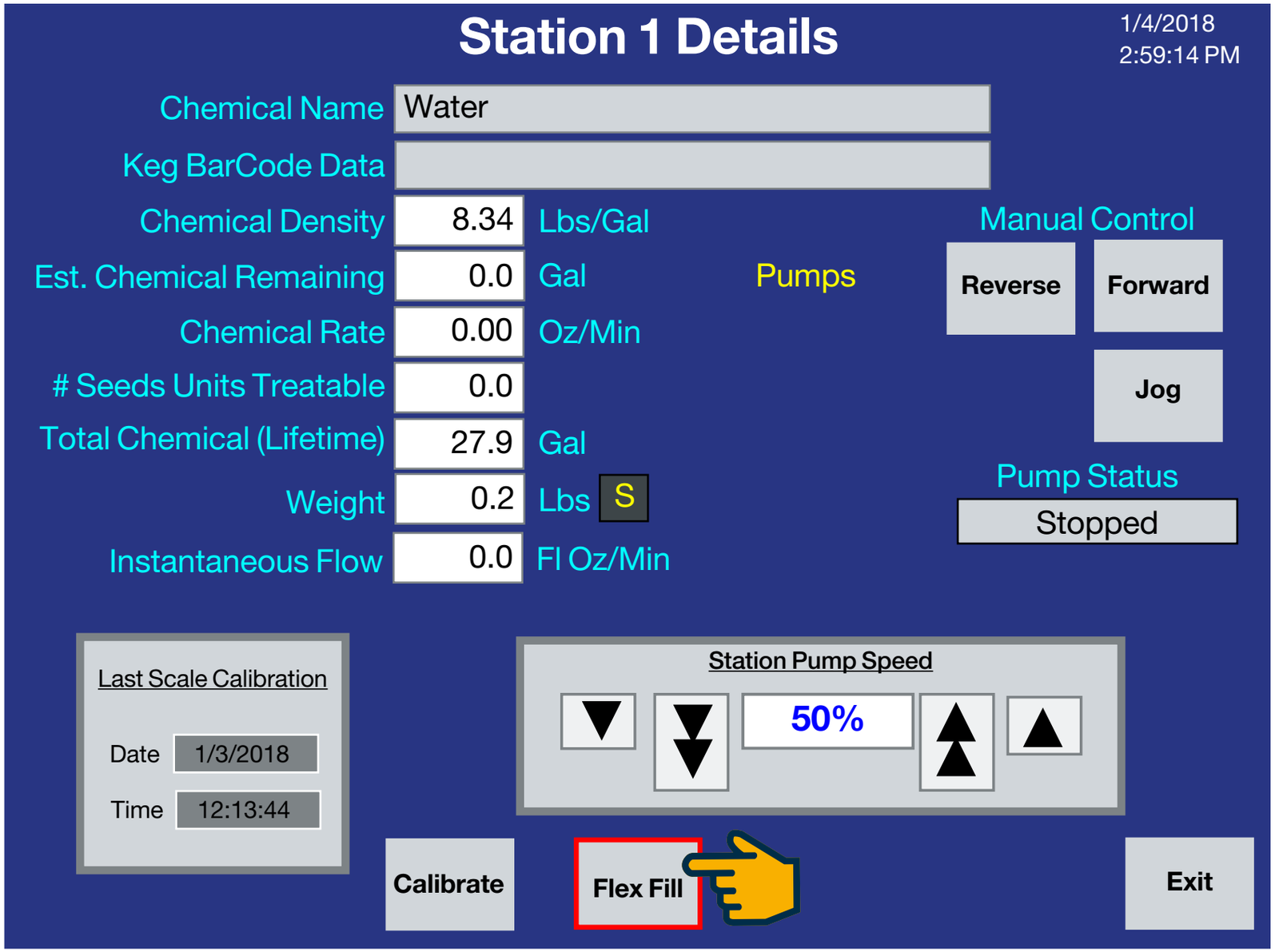
Step 2: Touch the **Ack** button icon to acknowledge the alert.

Step 3: Touch the **Exit** button icon: navigates to the **Main Screen** ➲



TREATER DETAIL SCREEN - SYSTEM IDLE - KEG SWAP

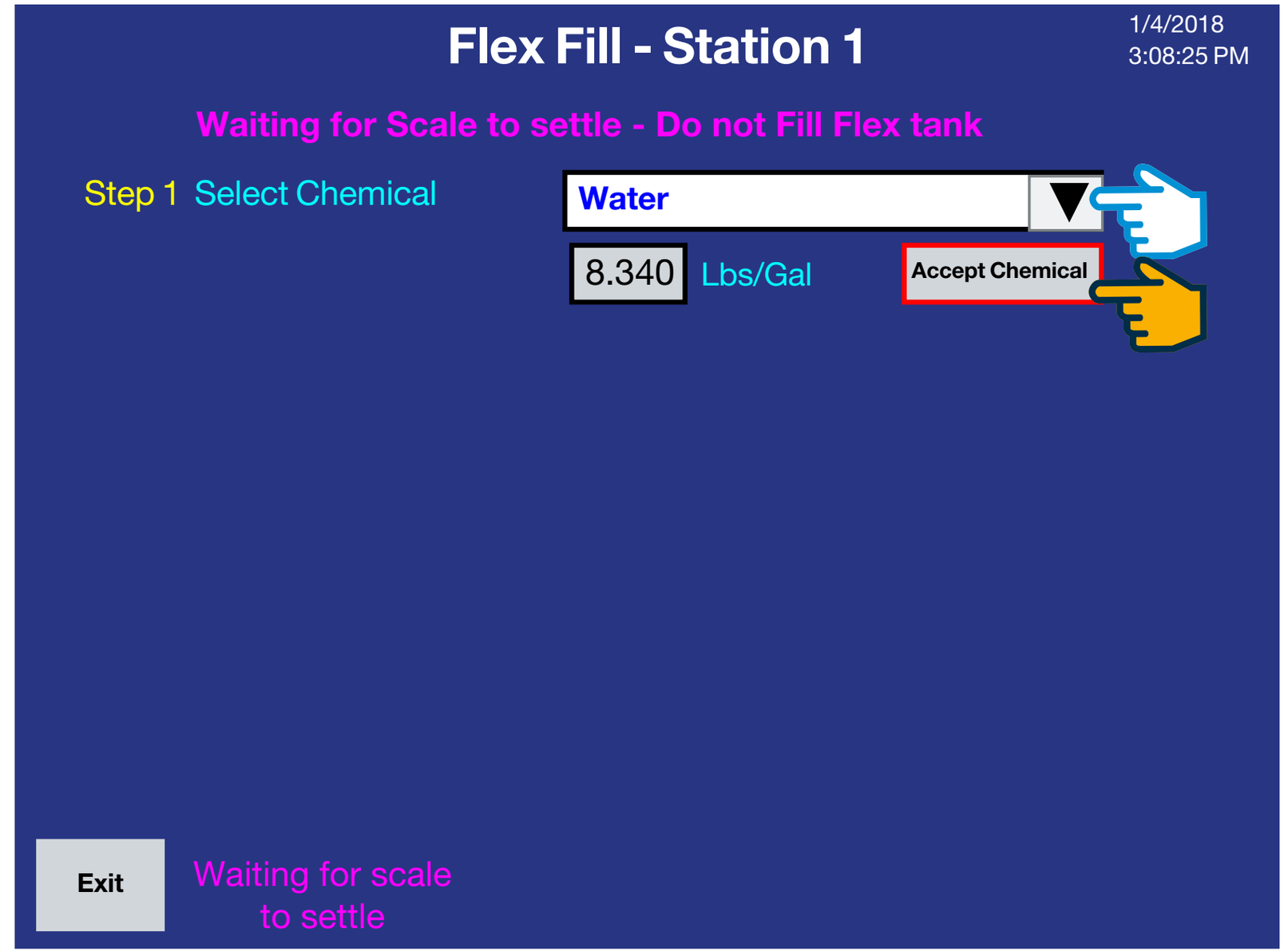
Step 1: Touch the **Pump Station 1** graphic icon that is flashing: navigates to the **STATION 1 PUMP DETAILS SCREEN ➲**



STATION 1 DETAILS SCREEN - FLEX TANK FILL - KEG SWAP - PAUSE

Step 1: Touch the **Flex Fill** button icon ➲

Note: if the flex tank is removed from the scale before the screen indicates, the pop-up message box will appear for a keg swap. Follow the steps to resume to flex fill swap.



FLEX FILL STATION 1 SCREEN - FLEX TANK FILL

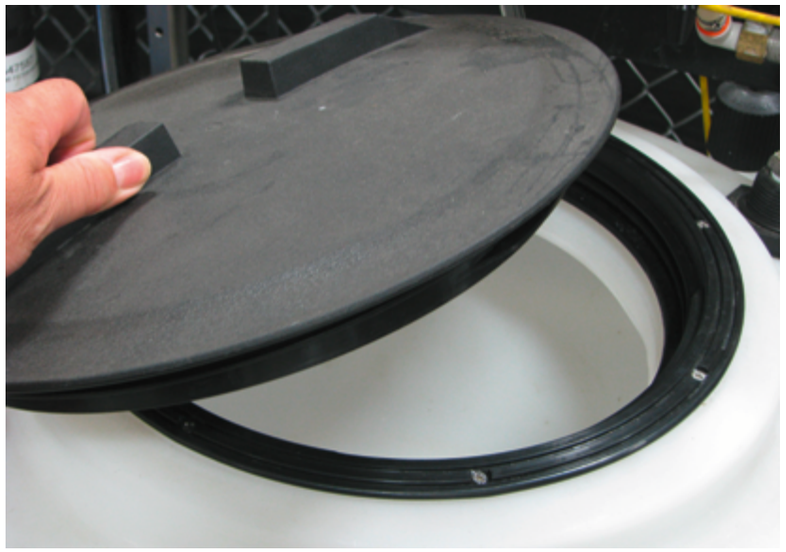
Step 1: Flex Tanks can be used for Water, Inoculant or Nutritions. To change Tank contents, touch the drop down arrow to select from a list of options.

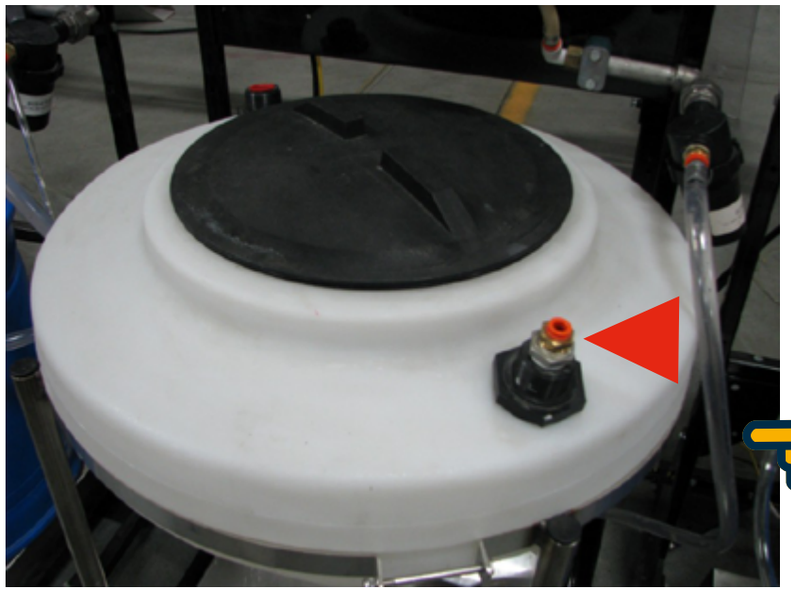
>For this demonstration, as before, **Water** will remain as the working contents of the Flex Tank.

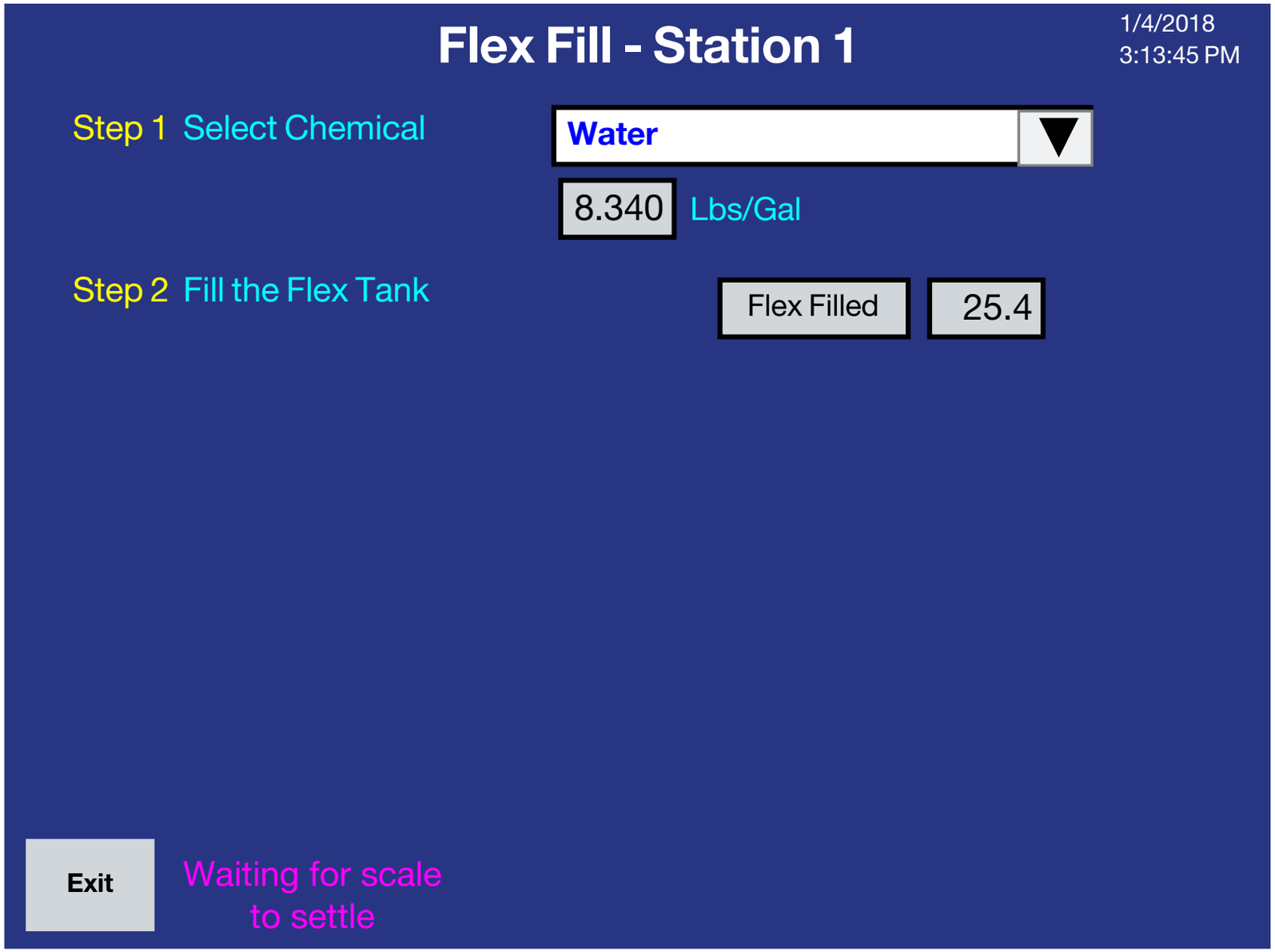
Step 2: Touch the **Accept Chemical** button icon ➲

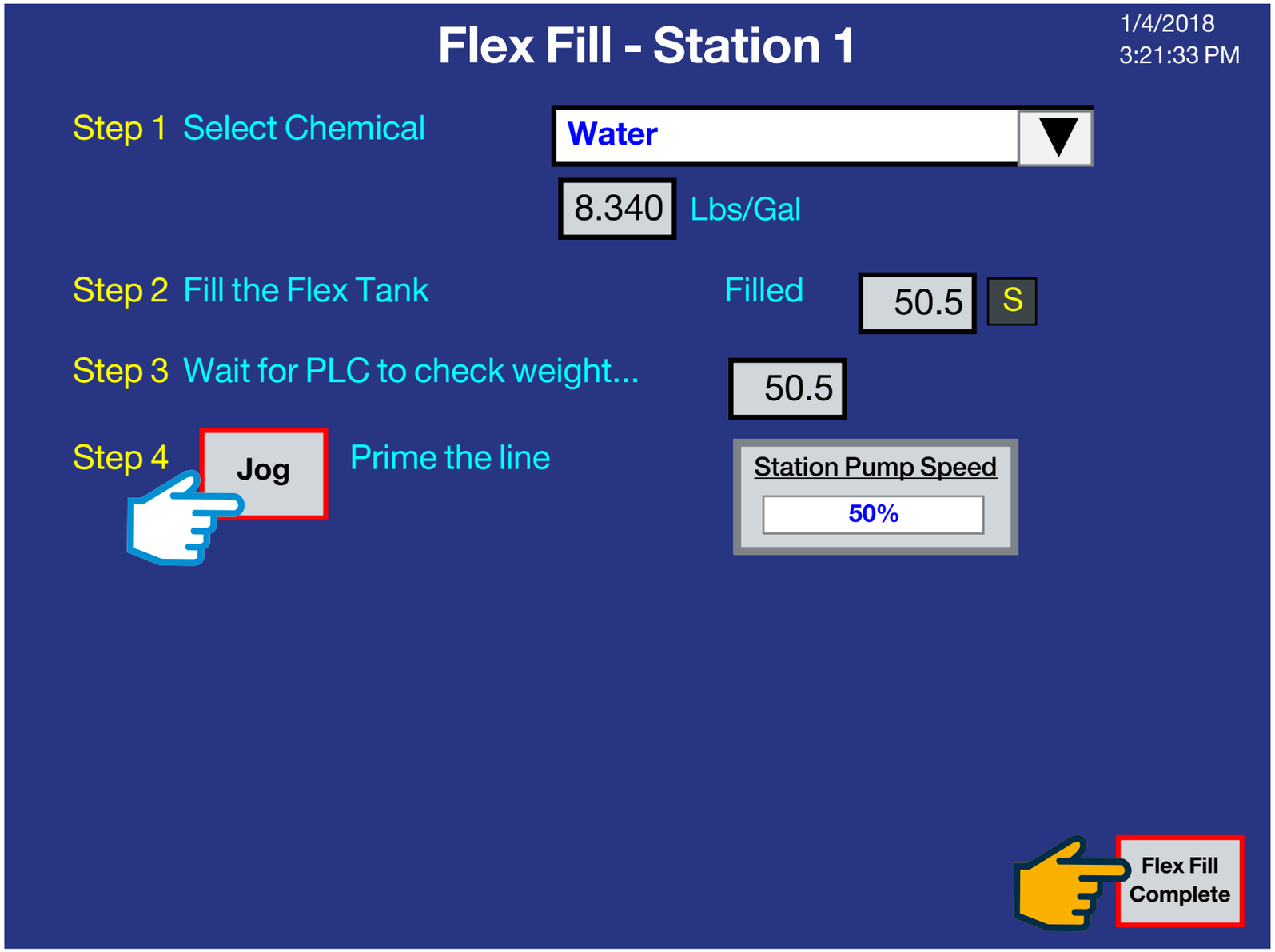
FLEX FILL STATION 1 SCREEN - FLEX TANK FILL

Step 1: Remove the Flex Tank lid or connect tubing to the press-lock fitting to fill the Tank. The scale will read the Tank content weight as it is added, indicated by the digital value displayed and the message at the bottom of the screen, as shown right.







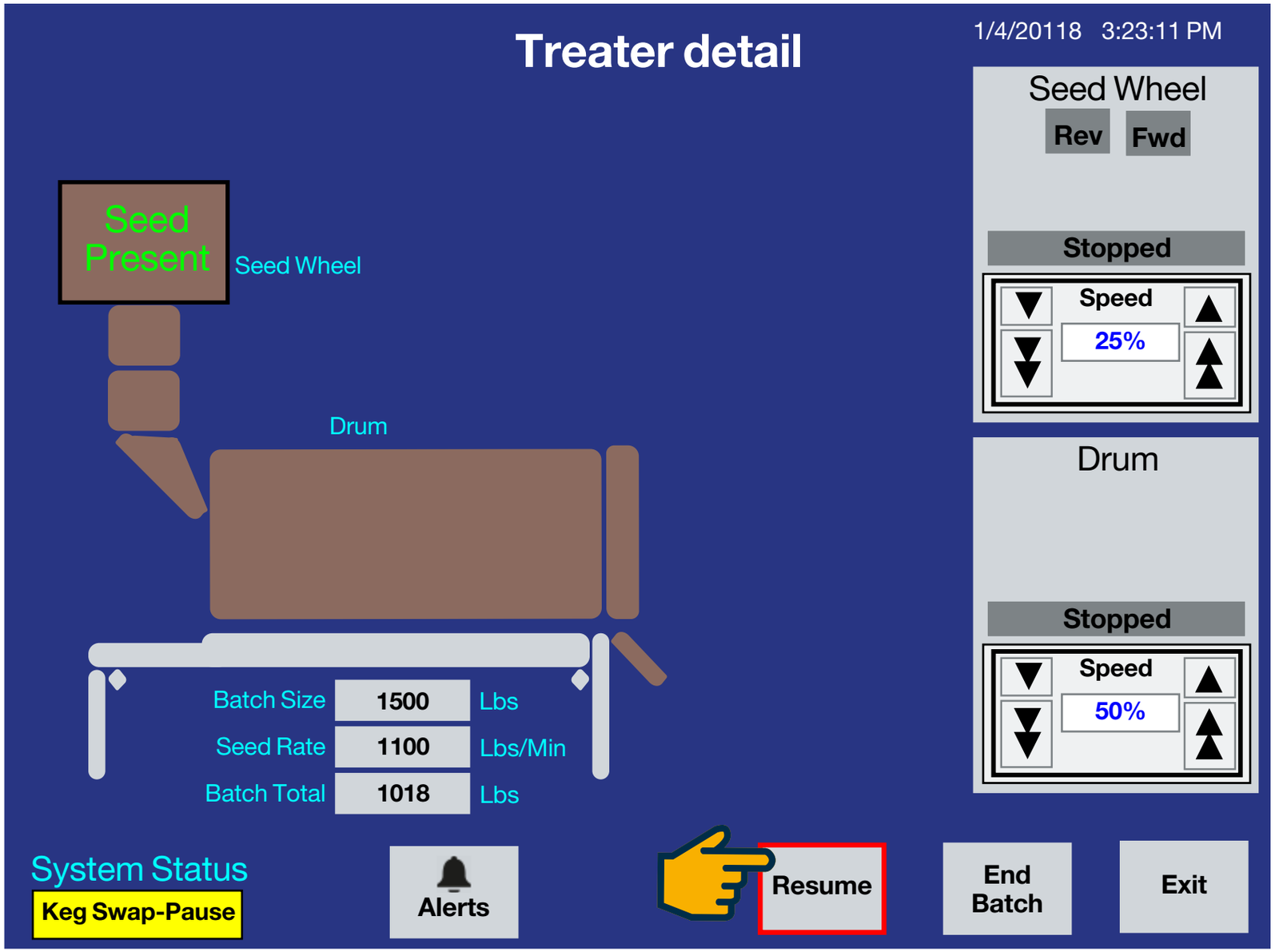


FLEX FILL STATION 1 SCREEN - FLEX TANK FILL

Step 1: Touch and hold the **Jog** button icon until water/chemical fills the tubing leading up to the Pump.

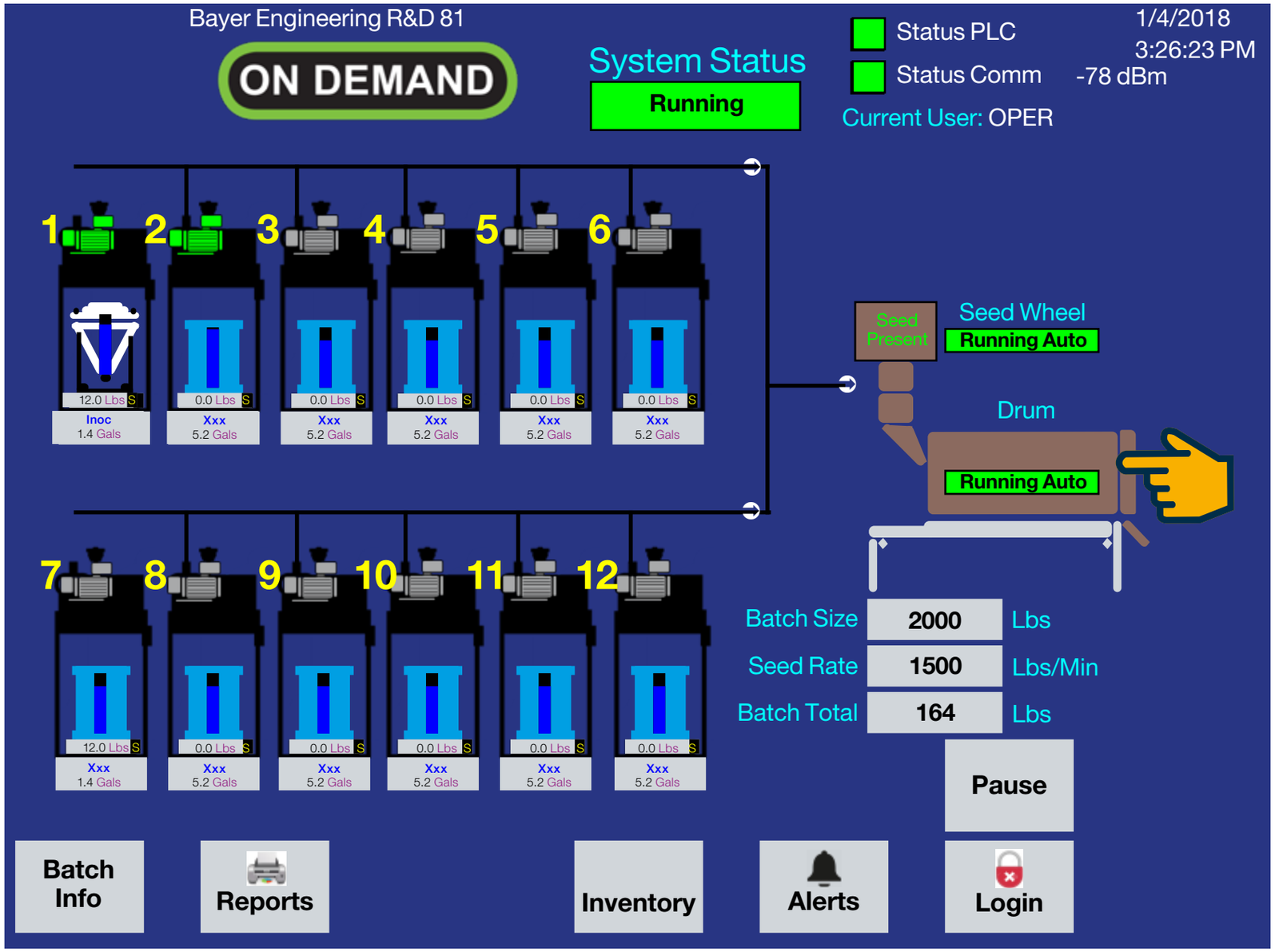
>>Optional - Operators can increase/decrease the Pump speed by touching the **Station Pump Speed** field.

Step 2: When complete, touch the **Flex Fill Complete** button icon: navigates to the **DRUM DETAIL SCREEN ➲**



DRUM DETAIL SCREEN - KEG SWAP - PAUSE

Step 1: Touch the **Resume** button icon: navigates to the **MAIN SCREEN** ➲



MAIN SCREEN - SYSTEM RUNNING

All devices displayed on the **Main Screen** above indicate **GREEN**; the system is running and the batch has resumed the treating session where it left off prior to Keg swap.

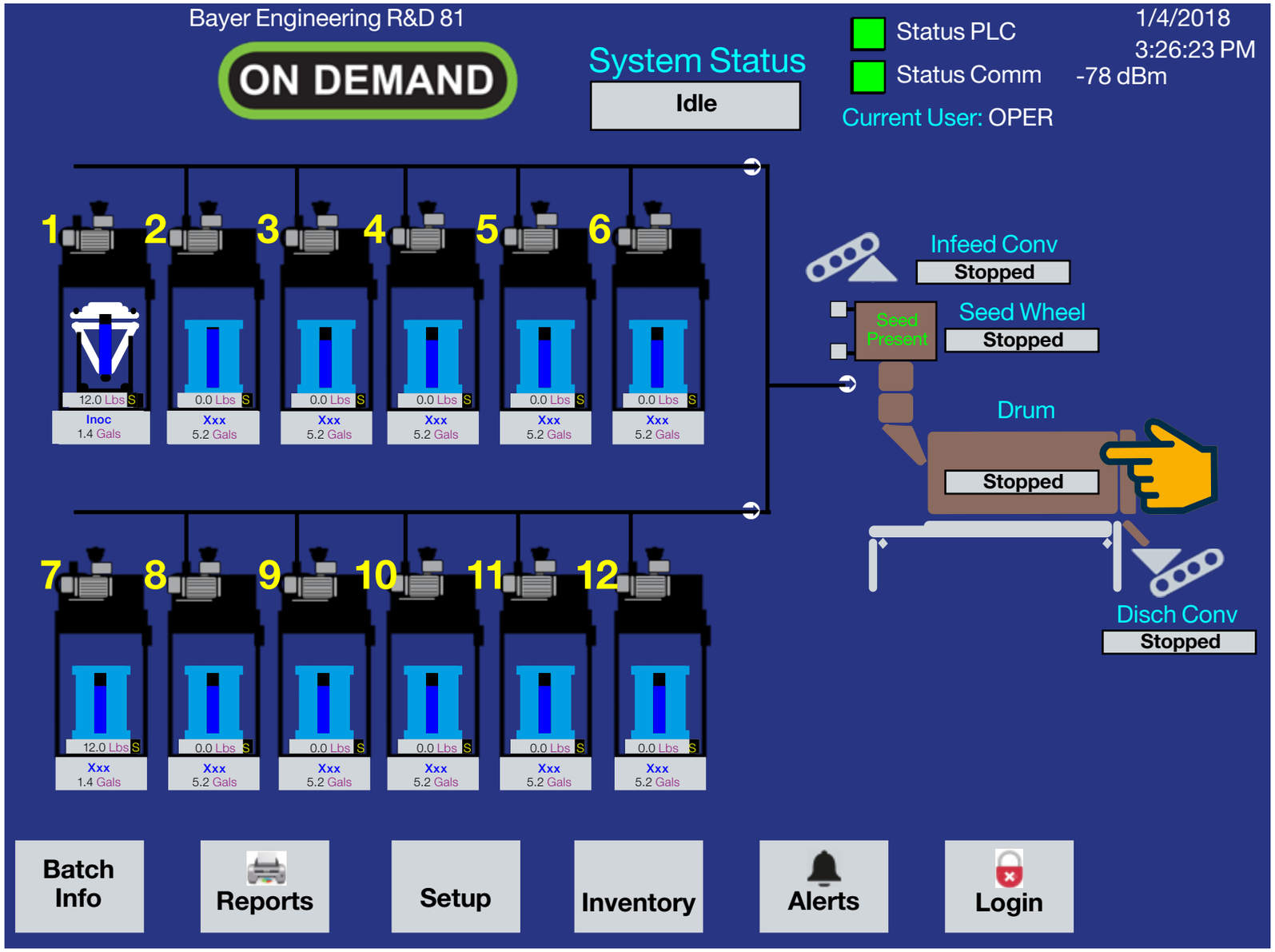
Step 1: Touch the Treater icon to advance to Conveyors: navigates to the **MAIN SCREEN ➲**

CONVEYORS

MAIN SCREEN - CONVEYORS

The Inlet Conveyor and Discharge Conveyor graphics will not appear on the Main Screen (as shown right) until the Conveyor Option is enabled (refer to **Conveyor Option** page 54 on how to enable the system with Optional Conveyors).

Step 1: On the **Main Screen**, touch in the area of the treater graphic icon (as shown above): navigates to the **Treater Detail Screen** ➲



TREATER DETAIL SCREEN

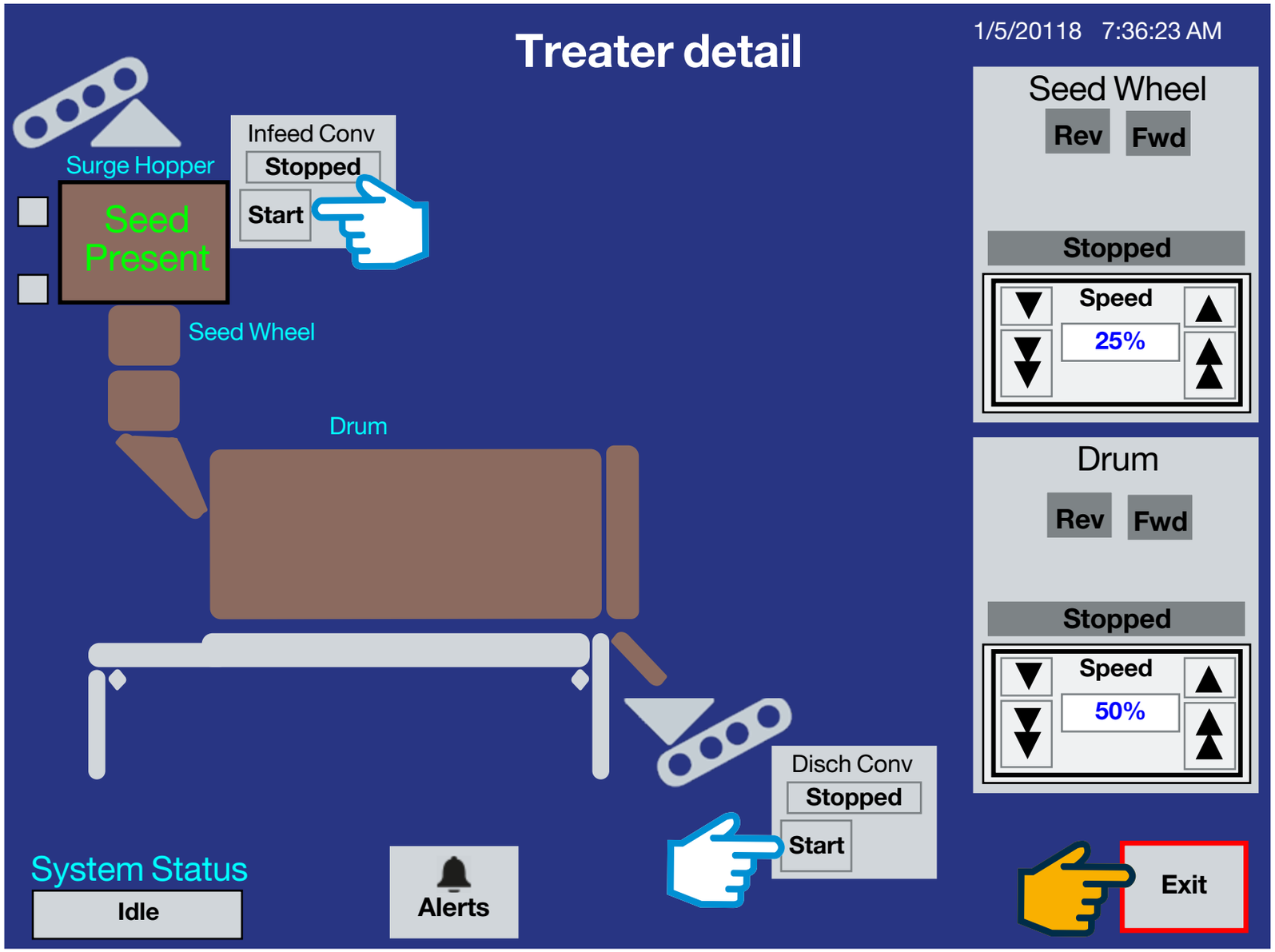
The Conveyor Control Option allows users to view when the conveyors are running or stopped on the **TREATER DETAIL SCREEN** shown right. The conveyors will turn on at the start of the batch.

Users will need to manually touch the **Start** button icon on both the **Inlet** and **Discharge Conveyors**. When started, the conveyor icons turn green, the message changes from Stopped to Running (green) and the Start button icon will be removed and the Stop button icon will display.

Once started, the Inlet Conveyor runs and fills the Surge Hopper. The Seed Wheel moves seed along into the Drum and taken away from the machine with the Discharge Conveyor. The Inlet Conveyor stops only when seed is detected by the Surge Hopper High Level Sensor (too much seed, avoids over filling) or if the user touches the Inlet Conveyor **Stop** button icon.

Restart of the Inlet Conveyor requires users to manually touch the **Start** button icon. The Discharge Conveyor continues to run as long as the drum is running. To stop the discharge conveyor, the drum must come to a complete stop, then the user can either use the manual stop or the delay timer.

Step 1: Touch the **Exit** button icon: navigates to the **MAIN SCREEN** ➲



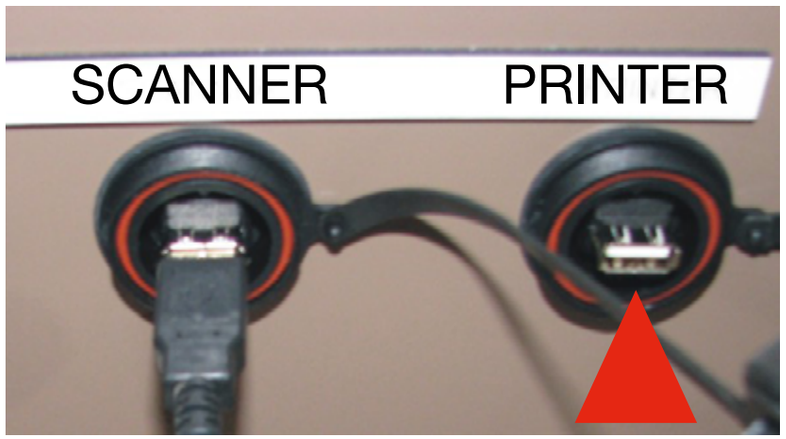
REPORTS

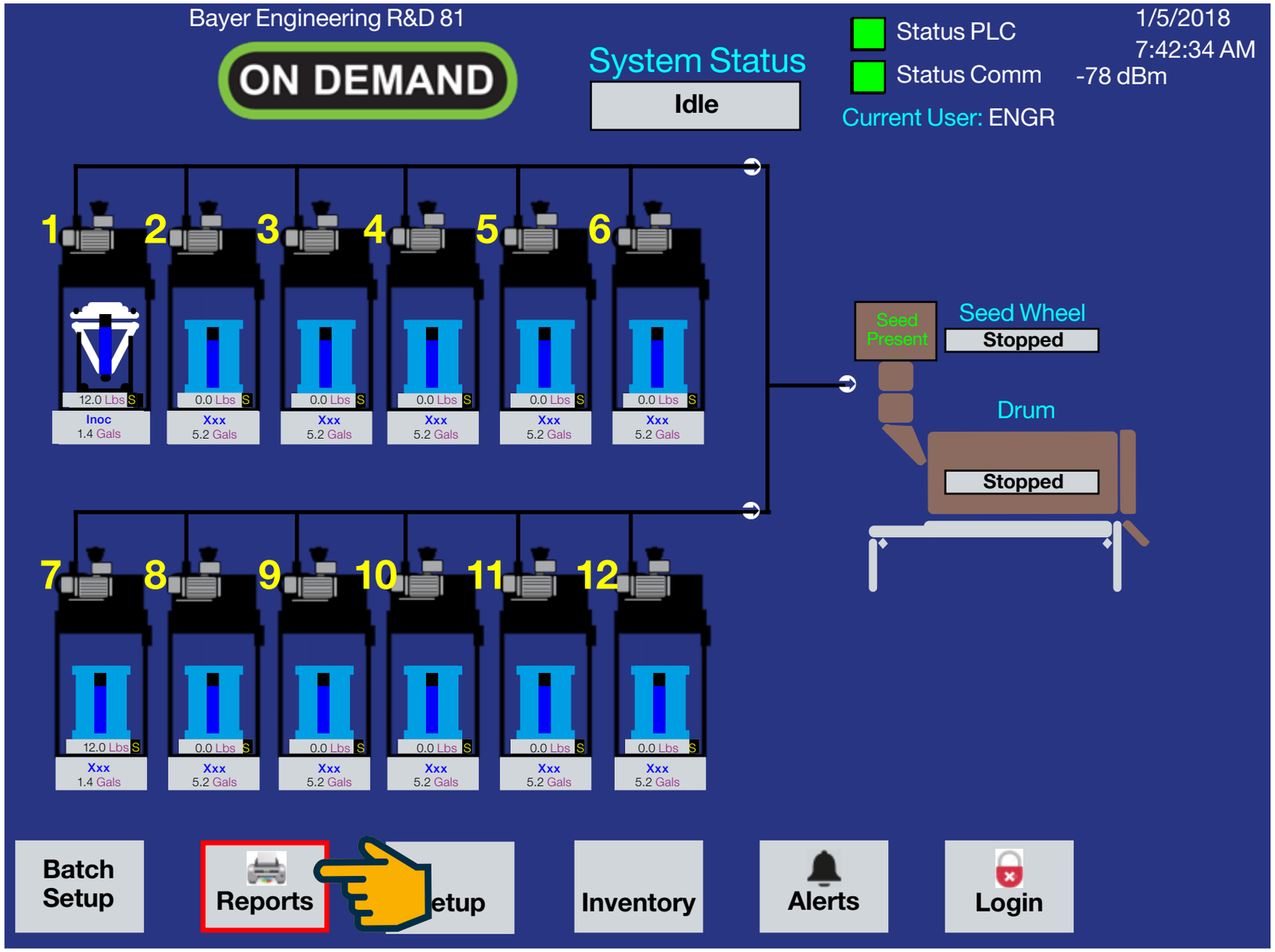
MAIN SCREEN - REPORTS

Additional Screens: REPORT, SEED WHEEL DETAIL, DRUM DETAIL, INVENTORY, ALERTS, HELP and **SUPPORT** screens are all support functions of the PLC program, which allow users to view, print and make changes to the system.

USB Receptacles provided underneath the HMI Control Box for connecting a printer (as labeled).

Step 1: Touch the **Reports** button icon: navigates to the **REPORTS SCREEN** ➲





REPORTS SCREEN

Batch reports are stored on the PLC and may be retrieved later to be viewed or printed.

OPTION 1

Use the **UP/DOWN** arrows to scroll through the stored reports. Touch the report listed, then...

Step 1: Touch the **View Batch Report** button icon: displays the selected report.

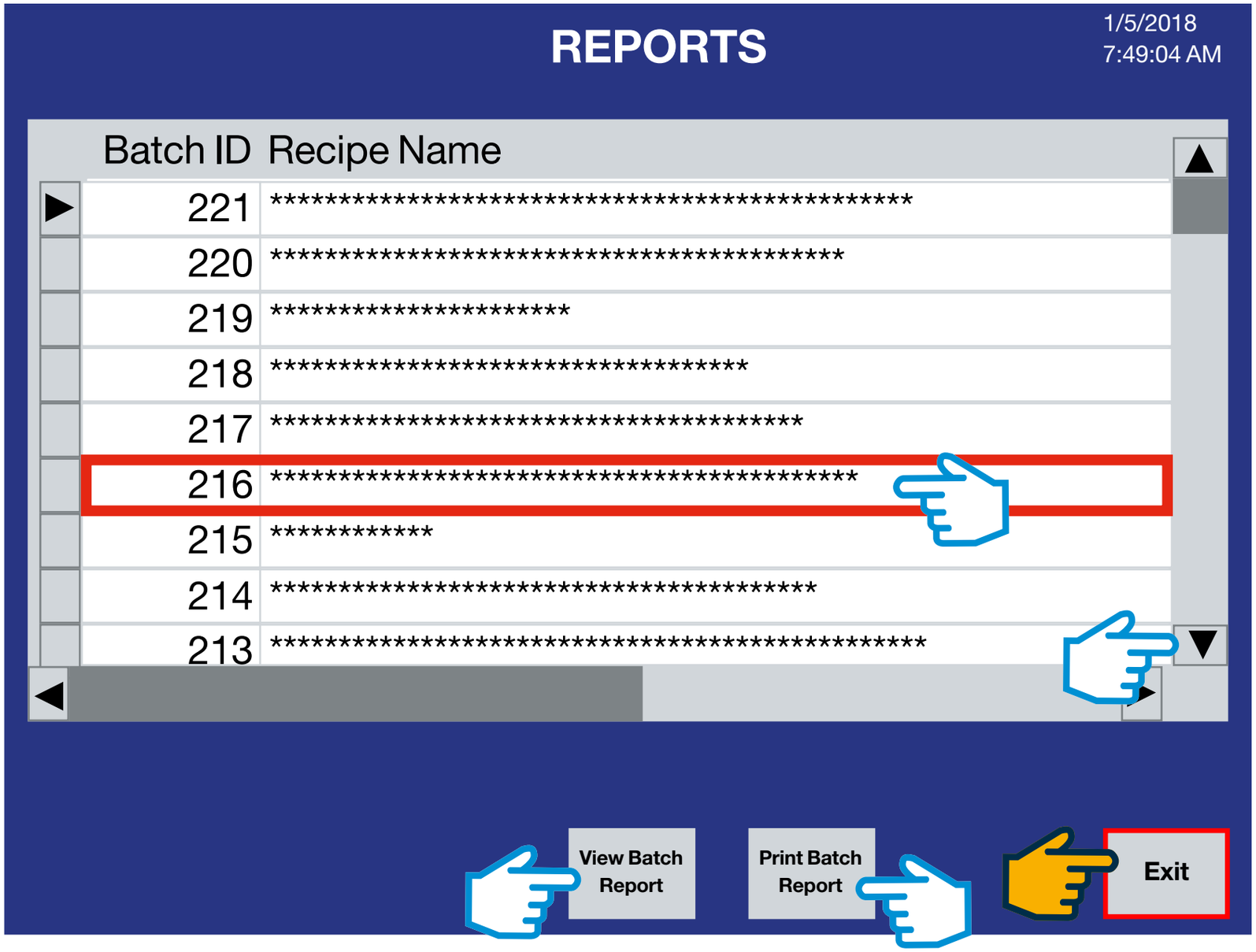
Step 2: Touch the **Exit** button icon: navigates to the **MAIN SCREEN** ➲

OPTION 2

Use the **UP/DOWN** arrows to scroll through the stored reports. Touch the report listed, then...

Step 3: Touch the **Print Batch Report** button icon: displays the selected report. Ensure a printer is connected to the HMI Control Panel (see previous page). Select to print. Call for printer set up.

Step 4: Touch the **Exit** button icon: navigates to the **MAIN SCREEN**.



SCANNER SETTINGS

<< GS1-128 AIM ID - RESET DEFAULT SETTINGS RECOMMENDED FOR BARCODE SCANNER (#80224745) UPDATE

ENTER/EXIT PROGRAMMING MODE

IF GLOBAL AIM ID IS DISABLED AND DISPLAYS THIS SYMBOLOGY:]C1,]C2 OR]C3

- The user needs to connect the scanner to the On Demand control.
- With the scanner active, scan the enter/Exit barcode >>>and wait 3 seconds.

GS1-128 AIM ID = Disable

- Scan the Program barcode >>> and wait 3 seconds.

Continued ➲

• Then scan the enter/exit barcode again. >>>The scanner will make a series of beeps.

• Then the user/installer needs to test the scanner barcode >>>to make sure the fix worked. The easiest way is to go into the batch setup notes and scan a barcode with this issue.

Standard Product Default Settings

• If the scanner will not connect after re-programing, reset the factory default setting. Factory settings can be restored by scanning the “Standard Product Default Settings” barcode (refer to Scanner Operations Manual, page 12).

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