DECLINE N’ WEIGHT QUICKSTART GUIDE

Decline N’ Weight

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General Summary

This document is intended to provide the system operator with enough information to successfully operate the Decline N' Weight System. The information contained explains how to calibrate new products in a bin, micro-bin, or tank and then how to execute a blend. Supporting information for troubleshooting common problems and occurrences is also provided.

1. Product Calibration

Calibration is necessary if a new product that has not previously been processed is added to a bin, micro-bin, or tank. Multiple product calibrations can be stored in memory to a profile where different product profiles can be selected for easily changing between products. When calibrating a new product, be sure to empty the previous product completely. This can be done by running in manual to disperse remaining product.

***DO NOT** add product during calibration blend*

1.1 Main Bin Calibration

1.1.1 Ensure that the scale heads have been properly calibrated. You can do this by weighing the truck before loadout then dispensing **2,000 lbs.** from a single bin then weighing the truck after loading. If the truck weight is **2,000 lbs.** more then the scale head is calibrated correctly. Do this for **EVERY** bin.

1.1.2 Select the new product profile (see figure 3)

1.1.3 Enter an order of **10,000 lbs**. on the bin that is to be calibrated with the new product. (see figure 4)

1.1.4 From the "Time to Finish" page, adjust the max speed to 40 hz.

1.1.5 Run **10,000 lbs**. of product through bin. (see figure 4)

1.1.6 If the calibration number is still changing dramatically on the first or second significant digit **(e.g.** 0.000**32** LBS/(Hz*SEC)) repeat this process checking the calibration number each time. (see figure 5)

1.1.1 When the calibration number levels out your bin is successfully calibrated. This will be roughly **3-5 10,000 lb. loads**.

1.1.2 From the "Time to Finish" page, adjust the max speed to 90 hz.

1.2 Micro-Bin Calibration

1.1.7 Ensure that the scale heads have been properly calibrated. You can do this by placing a known amount of weight on the load cell and ensuring the weight displayed on the HMI is the correct amount.

1.2.1 Select the new product profile (see figure 3)

1.2.2 Place **container** between the **micro-bin** and the **main auger** to catch product. This **prevents mixing** the products from the **main bin** and products from the **micro-bin** together.

1.2.3 From the "Time to Finish" page, adjust the max speed to 40 hz.

1.2.4 Enter an order of **100 Lbs.** of product through the micro bin.

1.2.5 Run the blend.

1.2.6 If the calibration number is still changing dramatically on the first or second significant digit **(e.g.** 0.000**32** LBS/(Hz*SEC)) repeat this process checking the calibration number each time.

1.2.1 When the calibration number levels out your micro-bin is successfully calibrated.

1.2.2 From the "Time to Finish" page, adjust the max speed to 90 hz.

1.3 Tank Calibration

1.3.1 Select the new product profile (see figure 3)

1.3.2 From the "Time to Finish" page, adjust the max speed to 40 hz.

1.3.3 A main bin must have product ordered to discharge product from the tank

1.3.4 Place **hose** from liquid bin into **bucket preventing** the mixing of product from the **tank** with product of the **main bin**.

1.3.5 Enter an order of **2,000 lbs.** on a main bin and roughly **20 lbs.** of product through the tank. Refer to the "Time to Finish" Page and adjust the Liquid Dispense amount until it is going to start at between 40.00 and 60.00 Hz.

1.3.6 Do not dispense more liquid than can fit in the Bucket. If the Maximum amount of Liquid that can fit in the bucket is going to start at less than 30.00 Hz then decrease the Dry product.

1.3.7 Begin a Loadout, as the pump runs at more than 20.00 Hz the Sample calibration number should update every 10 seconds, and the Average Calibration number should adjust slightly with every 10 second sample.

1.3.8 If the calibration number is still changing dramatically on the first or second significant digit **(e.g.** 0.00032 LBS/(Hz*SEC)) repeat this process checking the calibration number each time.

1.3.9 When the calibration number levels out your tank is successfully calibrated.

1.3.10 From the "Time to Finish" page, adjust the max speed to 90 hz.

2. Normal Operation

2.1 *Standard Order Entry*

Orders can be entered on the Overview Page for bins, micro-bins, and tanks. (see figure 4)

2.2 Third-party Software Order Entry

Reference iBlend Guide document

2.3 Start a Blend

After an order has been placed a blend can be started by pressing the Load Out button. (see figure 4)

2.4 Pause a Blend

If a blend needs to be paused during operation press the Pause Load Out button on the Overview Page. (see figure 4)

2.5 Clear an Order

If for some reason an order needs to be "zeroed" or cleared the Clear Order button can be pressed on the Overview Page. (see figure 4)

2.6 Adding Product in Operation

During a blend, product will have to be added to the main bins as the level decreases. A solid light on the bin indicates that the level is decreasing, a flashing light indicates that the level is within 1000lbs of the low level setpoint.

When adding product perform a smooth dump of product to the bin. Do **NOT** *try and slowly trickle in the product. Do* **NOT** *rest the loader bucket on the bin.*

Micro-bins and tanks should **NOT** *have additional product added while in operation.*

3. General Troubleshooting & Tips

3.1 Inaccurate Dispensed Amount

3.1.1 ***The bin product is not properly calibrated****. Reference section 3.3 for checking the Percent Complete trend data. If the trend data is out of tolerance, repeat the calibration process in section 1 for that product and* bin.

3.1.2 ***The weigh scale is not properly calibrated****. Consult the manufacturer documentation of the weigh scale model being used to confirm accurate weight.*

3.2 Weigh Scale Displays Not Changing or Inaccurate

3.2.1 ***The weigh scale is not properly calibrated.*** *Consult the manufacturer documentation of the weigh scale model being used to confirm accurate weight*.

3.3 Disparate Order Amounts

If an order is entered with one product of a ***very high*** *order amount and another product with a* ***very low*** *order amount, there can be issues in the system being able to successfully disperse the blend in the amount of time given.* ***To overcome this****, adjust the* ***max-speed*** *to* ***90Hz*** *so the system can successfully dispense the blend (see figure 2).*

3.4 Bin Bridge Fault

3.4.1 ***Product is not falling from the bin.*** *Follow site lockout procedure and check the screw on the bin to verify product is not preventing the screw from turning*.

3.5 Motor Repeatedly Trips

3.5.1 ***The motor current is too high****. There is something preventing the motor from turning. Check the mechanical system for binding*.

3.6 Liquids Not Dispensing

3.6.1 ***The pump is "stopped up".*** *Check the pump and hoses.*

3.6.2 ***The pump does not attempt to run.*** *Check that dry product has been ordered. The liquid will not run unless dry product is also ordered and running.*

3.7 Blend Stopped on Low Level

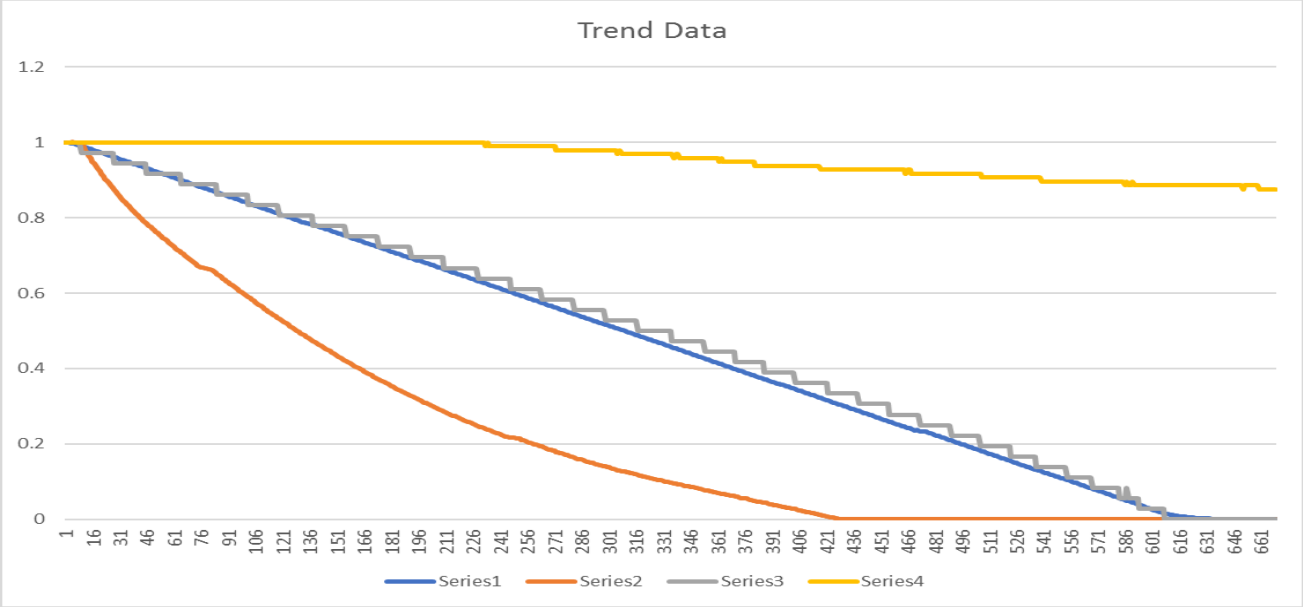
The system is designed to pause the blend if the low-level is reached. The blend can be resumed after the bin level has been replenished.

3.8 Understanding Trend Data

Trends can be viewed to assist in understanding if the system is running optimally. When a system is optimally calibrated, the graph will show lines that run parallel to each other. A trend that displays lines running away from the group indicates a potential problem with calibration. The weight trends can be viewed on the Trend Page (see figure 6)

Ex. A—A correctly calibrated system indicated by all the trend lines of data in parallel.

Ex. B — Trend of a blend that was not in calibration indicated by the trend lines bowed away from the other lines.



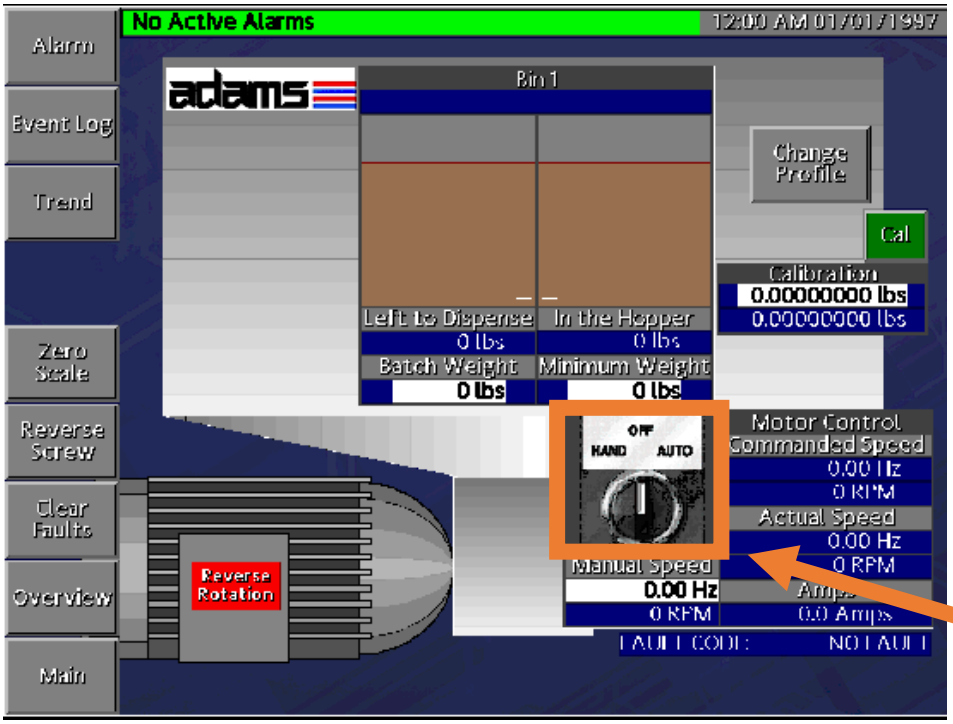
3.9 Use of Micro-Bins

Micro-bins are designed to provide low doses of additional products to the blends. Micro-bins typically hold between 1000 to 3000 lbs of product depending on capacity and product density. Micro-bins can NOT have product added during operation. If more product is needed in blend than what the micro-bin can hold then the blend will need to be split into batches.

4. Figures

Figure 1 – Clean Out Bin

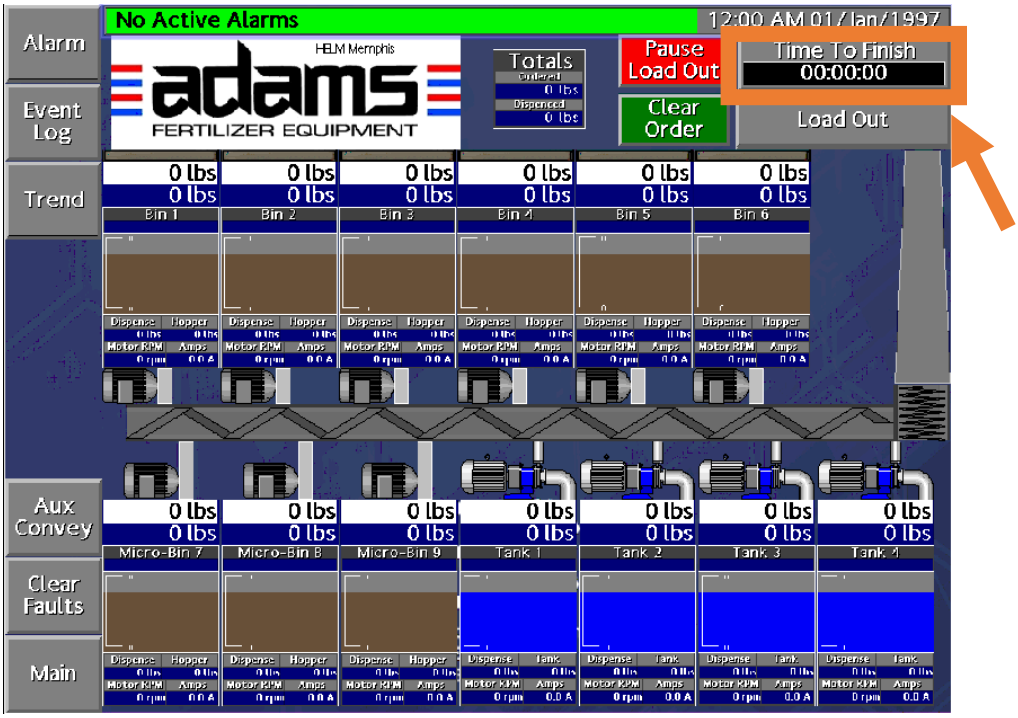
Bin Page



Press Hand to run in manual to empty bin.

Figure 2 - Adjust System Max Speed

Overview Page



System Speed Page

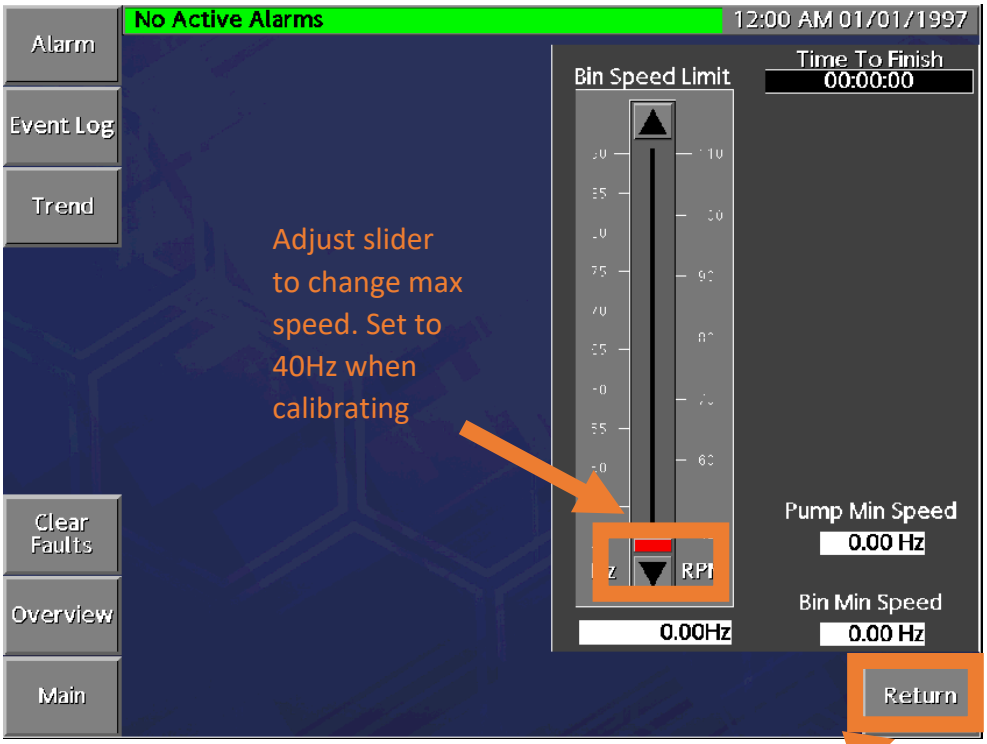
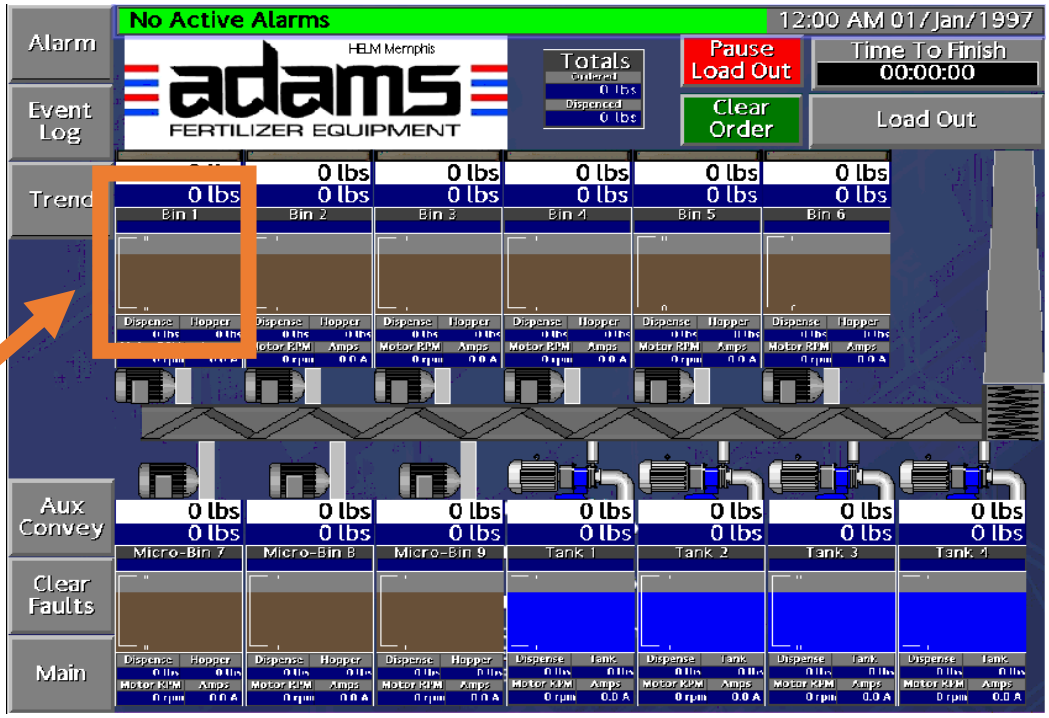


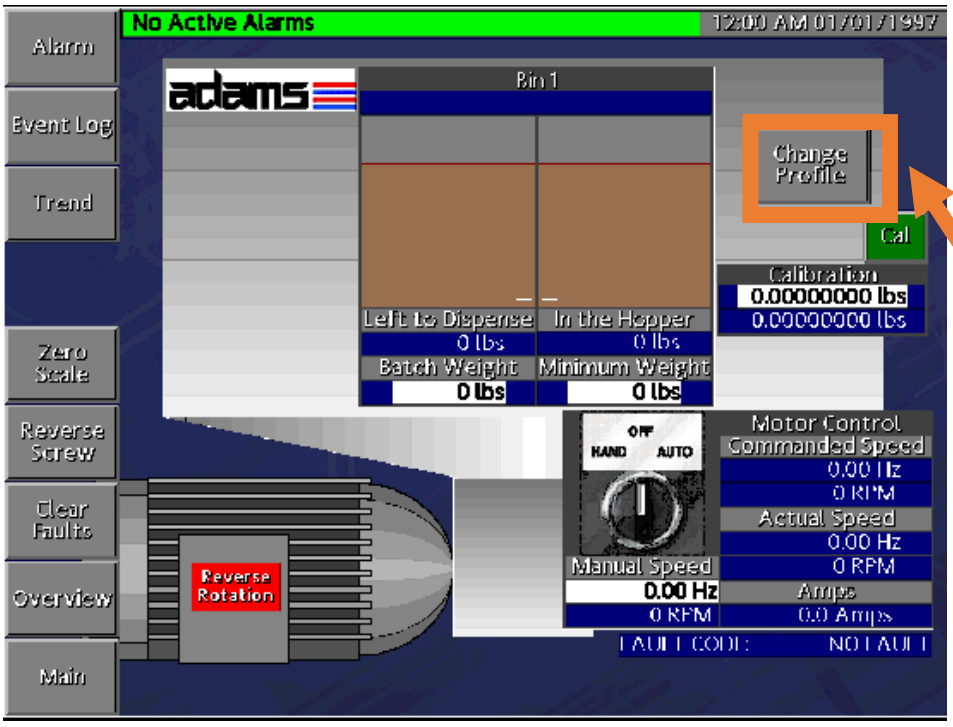
Figure 3 - Access Profiles

Overview Page



Press here to access information about a bin

Bin Page



Press here to access profile information

Profile Page

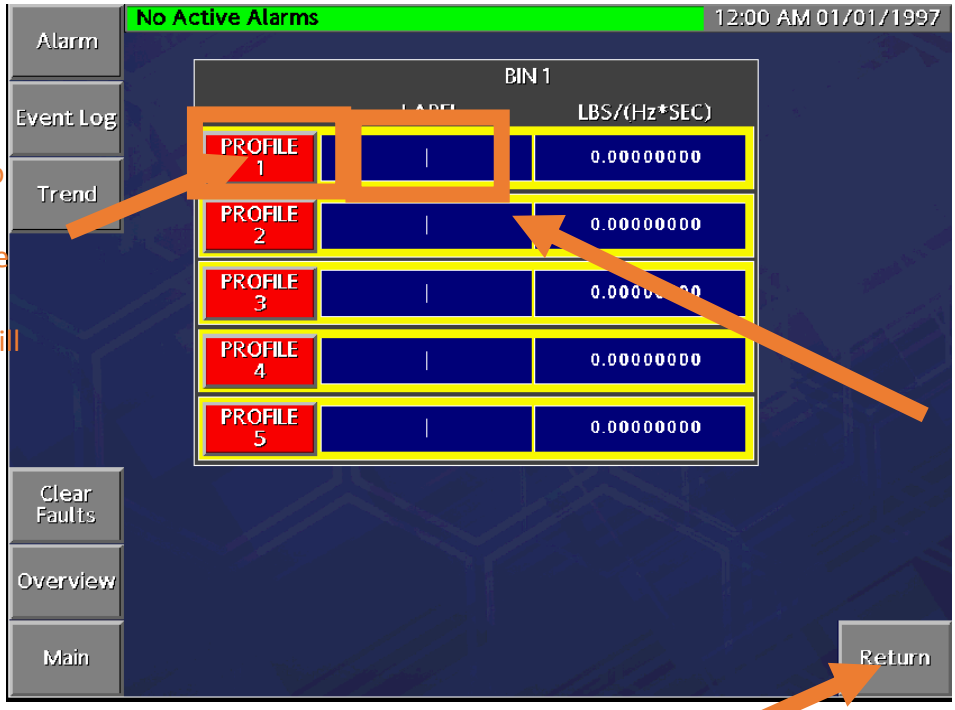


Figure 4 – General Operation

Overview Page

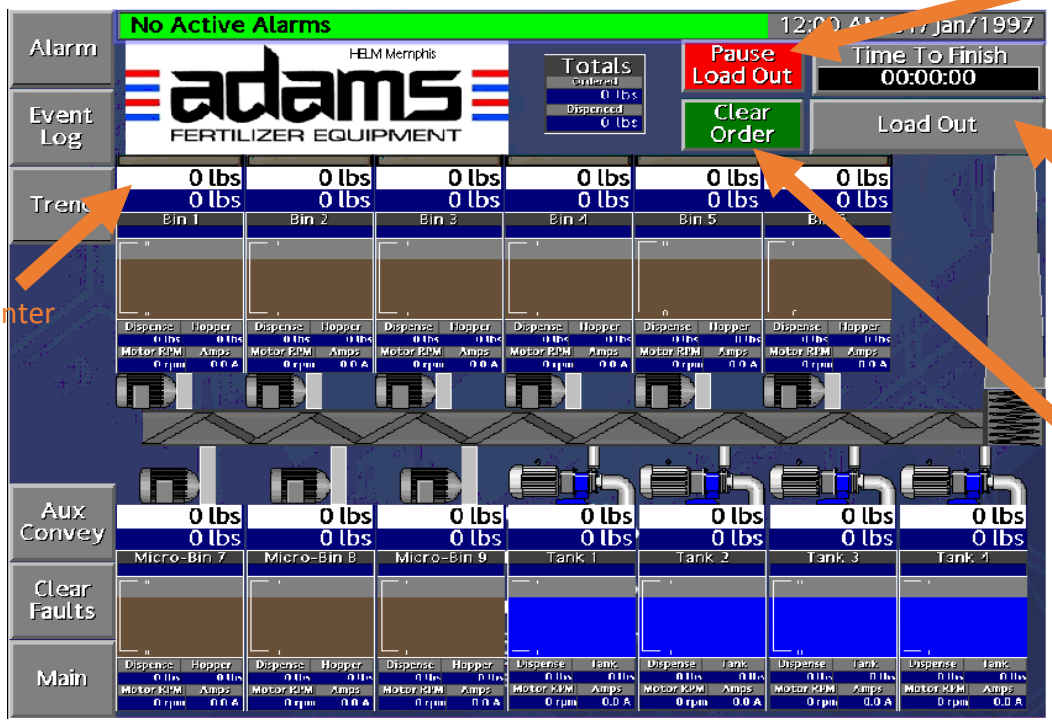
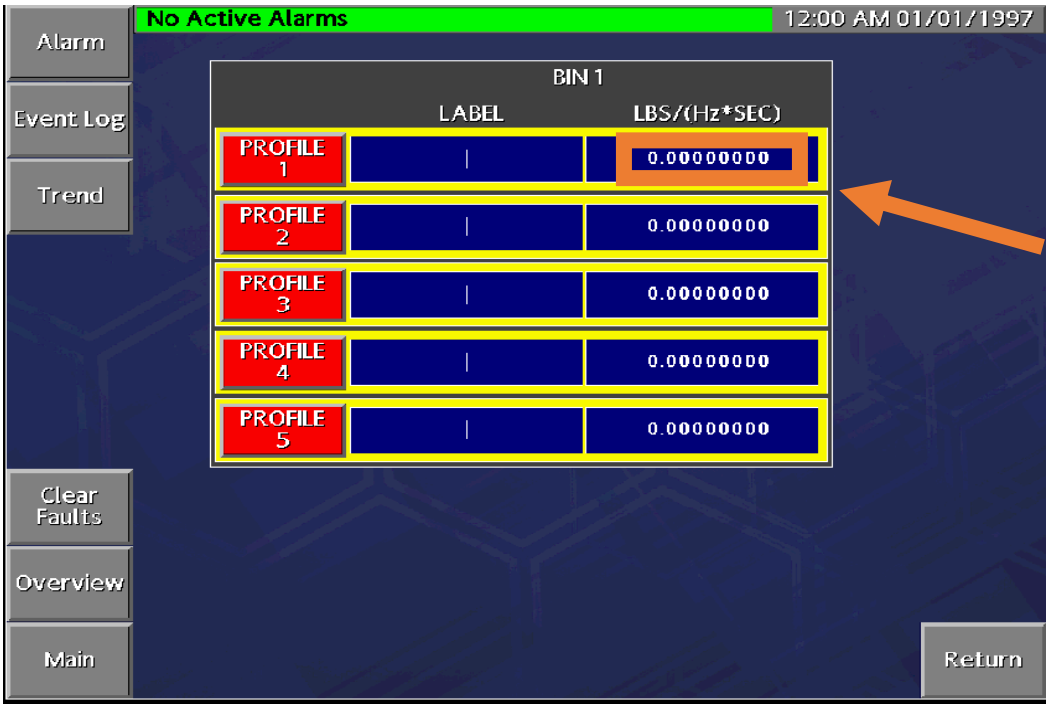


Figure 5 – Viewing Calibration Number

Profiles Page



Calibration number needs to be recorded between each calibration run. This number identifies when the calibration is complete.