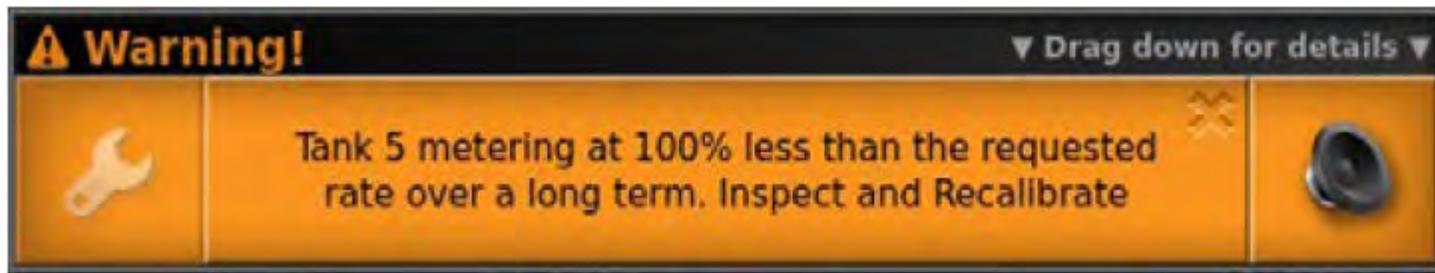# DYNACAL WEIGHT ERROR ALARMS

The Dynacal settings for your 9000 tank are pre-set in your implement profile and depending on which size of 9000 tank you have, those settings will match the load cells for each tank as well the scale UT setup and X35 scale setup pages.

During seeding, there are Dynacal calculations being processed that track the actual product weight decrease vs the theoretical weight decrease in each tank and compare the two figures.

There are two types of errors that could occur, we've broken them down to better understand them.

1. **A large % error (11% and over)** which is based off of actual **product weight** <u>VS</u> **application rate over time.**

2. **A small % error (1 to 10%)** which is based off of actual **product weight** <u>VS</u> **application rate over time.**

1. **Any tank that is metering at over 11% less than requested rate over a long term. INSPECT AND RECALIBRATE**

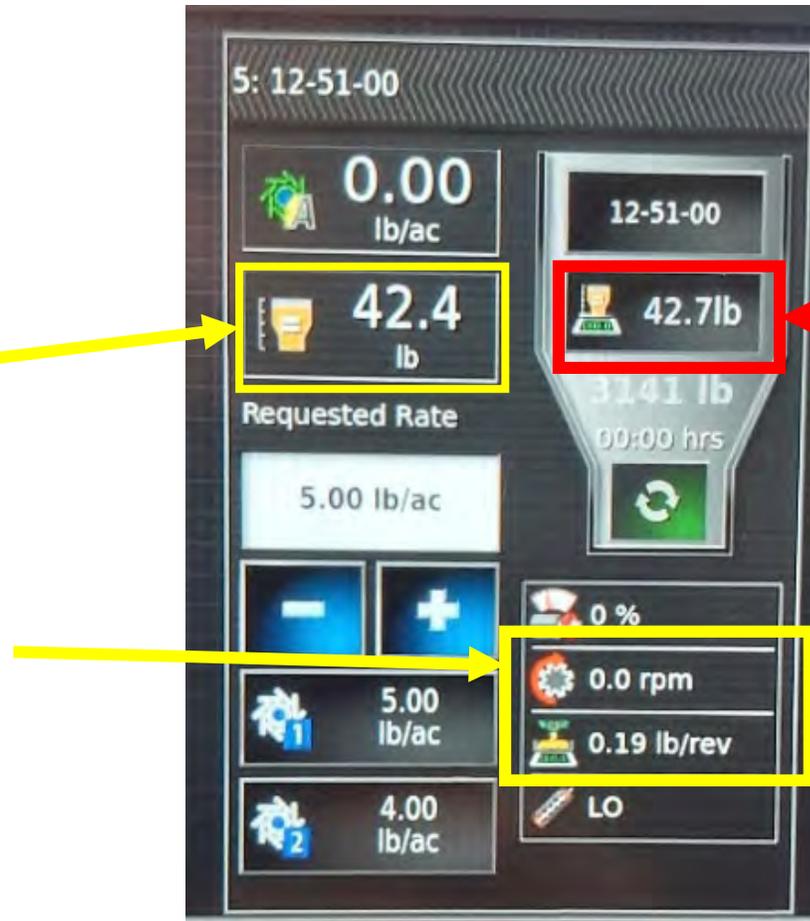Have the specific tank and metering components inspected for problems.

- This could be a blockage inside the tank (bridged product)

- Could be a build up of product coating on the meter auger over time, causing loss of product delivery (lb/rev delivery of product is reduced)

- Also, did you perform a calibration of the product in the tank before you went seeding?

- The Theoretical weight reduction is based off of shaft RPM and the currently used CAL factor for the product while seeding (lb/REV).

   - If you are using an old CAL factor from last year, this could account for the error in Measured weight to Theoretical weight difference as the density may have changed with the new product.

This area is the Theoretical weight counter.

Theoretical weight decrease is based off of the current CAL factor and RPM of the metering shaft during seeding.

This area is the Measured tank weight counter.

Measured weight decrease is based off the weigh system monitoring each tank weight as product is metered out during seeding.

- Once a problem has been found and corrected, you will need to reset your Theoretical weight to equal your Measured weight to have the alarm reset.
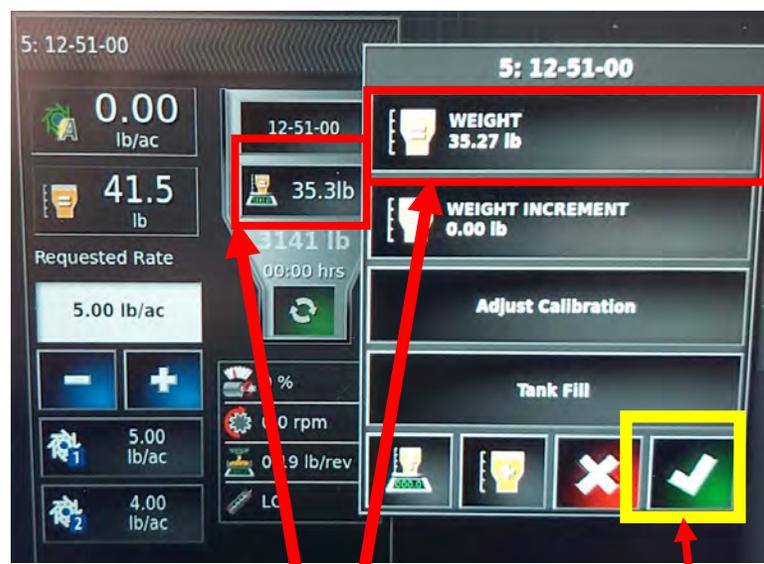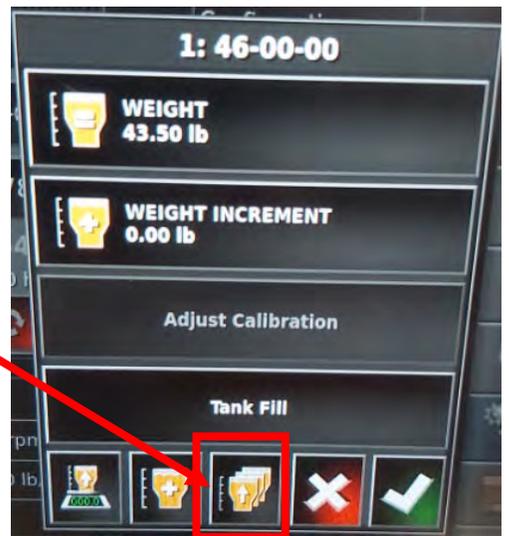

Select this weight icon

It will open this tank fill miniview

Select this icon if you have one tank you're adjusting Theoretical weight for.

Alternatively, if you have more than one tank you wish to reset after repair or at any time, you can select this icon for multiple tank reset and this will fill every tanks Theoretical to the Measured weight for that tank.

Now your weight should match the measured weight readout to the left rounded to nearest .1 lbs.

Select the check mark once you've noted the weights are the same. This will reset the alarm and start monitoring over a new time period.

Theoretical tank Weight.

Measured tank weight

- Once you've matched the theoretical weight with the measured weight the alarm window will then reset and **measure a "new time window" of product over time decrease.**

  - **Also this alarm window will be reset by changing the product, cal # or Theoretical weight as shown previously.**

  - **If you forget to reset your theoretical weight** after your last "tank fill", you can reset it at any time and have the "window" restart from that point.

    - You don't need a full tank of product to perform the weight matching. If the scale for that tank weighs any amount of product, you can then match the 2 weights as shown above.

If you notice this "Adjust Calibration" icon during a reset of a tanks Theoretical weight, one thing to note:
    - This icon takes into account an instant snapshot of your measured VS theoretical weight and provides an ALWAYS changing cal factor.

For example: during seeding, you can view this "Adjust Calibration" icon 5 different times over 1 minute. Each time you go into this icon, the cal factor will be different.
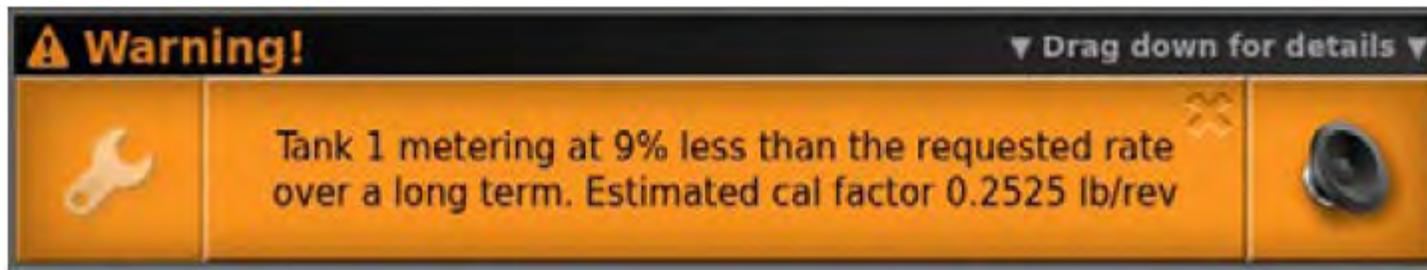
It is only taking what the weigh scale for that specific tank shows for a weight at that exact moment you touch this icon and gives you a "different" cal factor every time.

DO NOT USE THIS BUTTON TO ADJUST CAL FACTOR!!!!

IF YOU DECIDE TO USE THIS BUTTON TO ADJUST CALIBRATION FACTOR WHEN A LARGE % ERROR OCCURS, YOU LIKELY ARE IGNORING A LARGE PROBLEM WITH THE METERING SYSTEM.

You must get out and visually check the reason you are metering far more OR far less than expected.
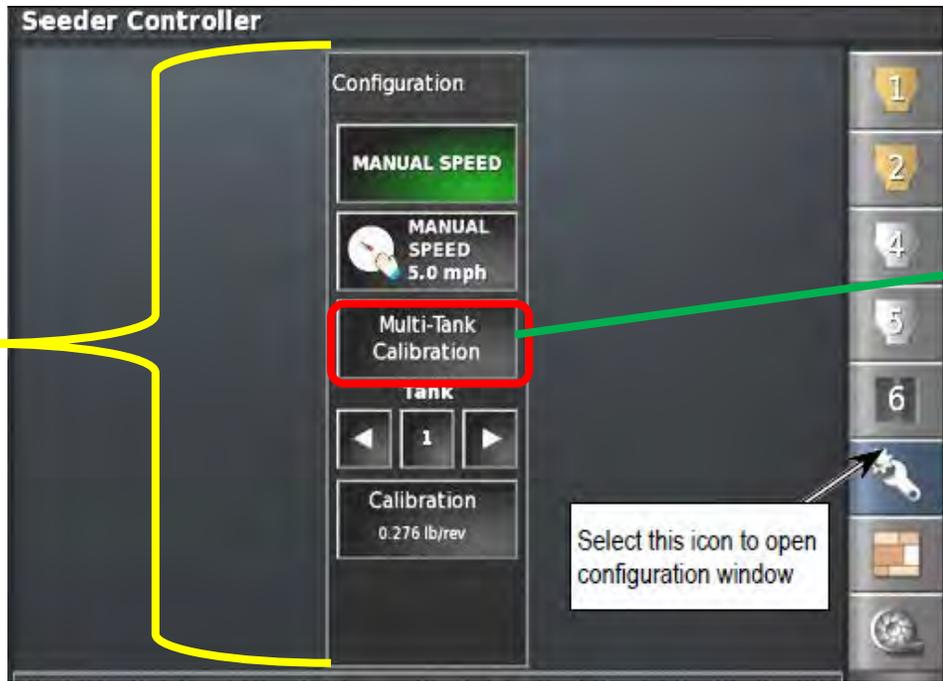
Warning! ▼ Drag down for details ▼

Tank 1 metering at 9% less than the requested rate over a long term. Estimated cal factor 0.2525 lb/rev

2. **Any tank** that is metering at **under 10% less** than requested rate over a long term. ENTER NEW CALCULATED CALIBRATION FACTOR GIVEN IN THE ALARM.

-this alarm is a **small error alarm,** meaning that the actual weight decrease out of the tank VS the application rate is very close but not the same and has been monitored by DynaCal over a longer term to get an accurate Cal number.
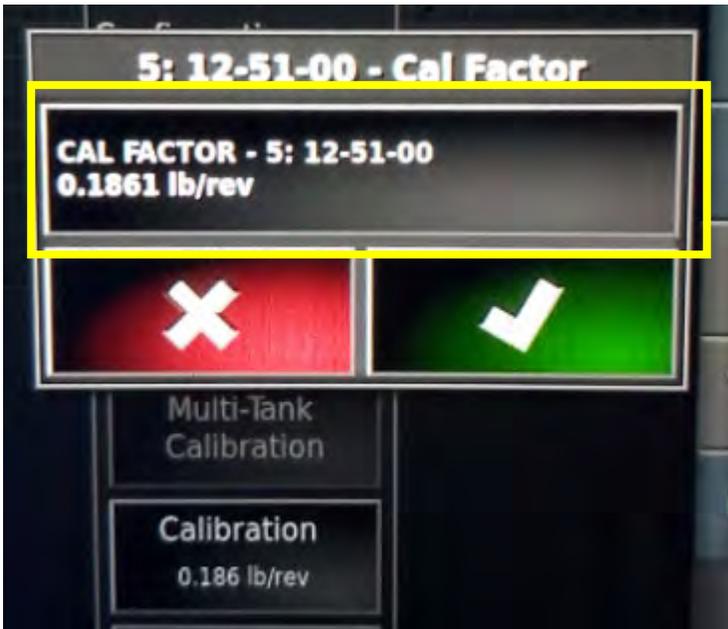
-the monitor will advise a "new" calibration number
-Operator will need to input the new calibration number in the appropriate tank calibration field.

Depending on how many active tanks you're using, this could change the display look.

Seeder Controller

Configuration

MANUAL SPEED

MANUAL SPEED
5.0 mph

Multi-Tank Calibration

Tank
◄ 1 ►

Calibration
0.276 lb/rev

Select this icon to open configuration window

Select manual entry

5: 12-51-00 - Calibration Method

Manual Entry

Automatic Calibration

Area Test

Reset Weigh Scale Data

5: 12-51-00 - Cal Factor

CAL FACTOR - 5: 12-51-00
0.1861 lb/rev

Multi-Tank Calibration

Calibration
0.186 lb/rev

Select the CAL factor icon and then input the "monitor calculated CAL factor" in with this keypad.

Accept the change

7	8	9	⇐
4	5	6	±/∓
1	2	3	✖
0	.	✔	

- After you have adjusted the cal factor, you can reset your Theoretical weight to equal your Measured weight.

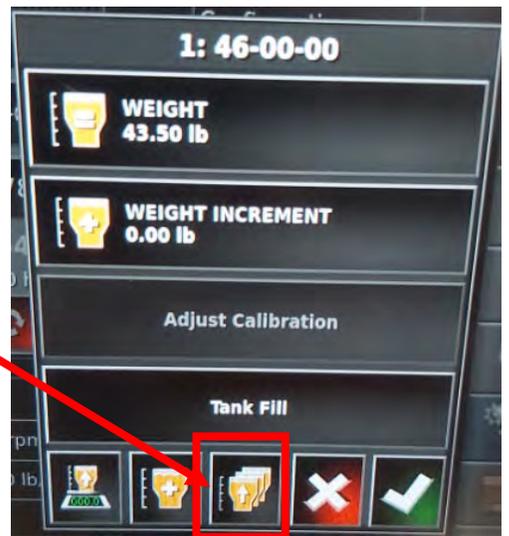Select this weight icon

It will open this tank fill miniview

If after you make an adjustment to the cal factor and you forget to reset your Theoretical weight to match your Measured weight, DON'T WORRY!!!

The Theoretical and Measured weights don't have to match exactly during seeding. The two numbers only have to decrease at the SAME RATE for the system to be functioning correctly.

Select this icon if you have one tank you're adjusting Theoretical weight for.

Alternatively, if you have more than one tank you wish to reset after repair or at any time, you can select this icon for multiple tank reset and this will fill every tanks Theoretical to the Measured weight for that tank.

Now your weight should match the measured weight readout to the left rounded to nearest .1 lbs.

Select the check mark once you've noted the weights are the same. This will reset the alarm and start monitoring over a new time period.

2. Small Error Procedure

Theoretical tank Weight. Before starting seeding, this needs to match your Measured tank weight.

Measured tank weight

Once you've matched the theoretical weight with the measured weight the alarm window will then reset and **measure a "new time window" of product over time decrease.**

- **Also this alarm window will be reset by changing the product, cal # or Theoretical weight as shown previously.**

- **If you forget to reset your theoretical weight** after your last "tank fill", you can reset it at any time and have the "window" restart from that point.

-You don't need a full tank of product to perform the weight matching. If the scale for that tank weighs any amount of product, you can then match the 2 weights as shown above.

If you chose NOT to match your Theoretical weight to Measured weight after a repair has been made, you can simply follow the procedure below to have the DynaCal error alarm "RESET" and keep seeding.
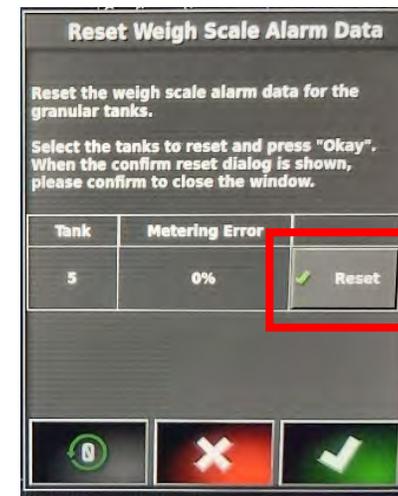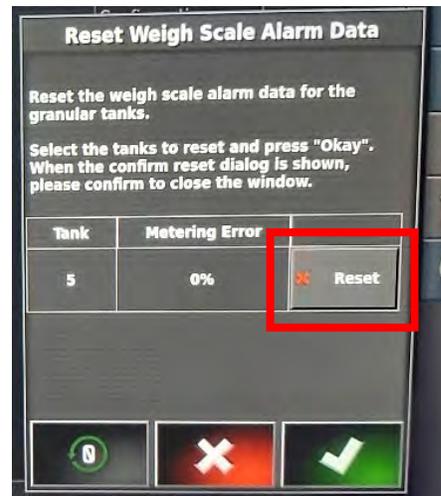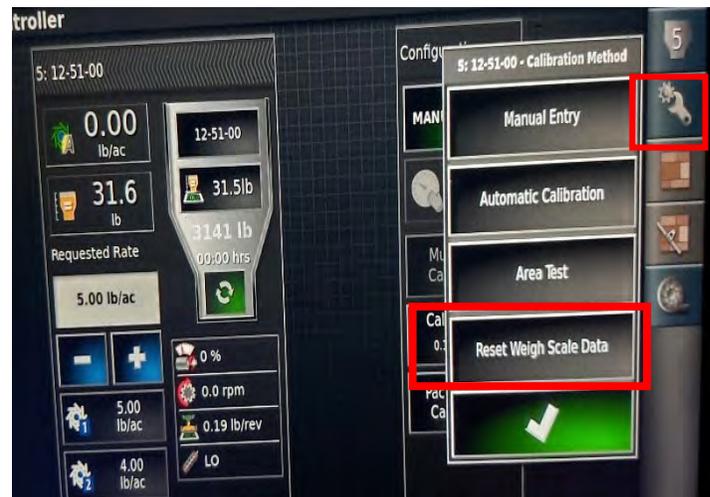
Select the configuration icon "wrench" and then the icon for "RESET WEIGH SCALE DATA".

If you have multiple tanks to reset, you can view them here.

Select the ones desired for reset.

Once selected the reset icon will have a green check mark

Select the green check to accept the changes to reset the weigh scale alarm data.

Thank you for watching!