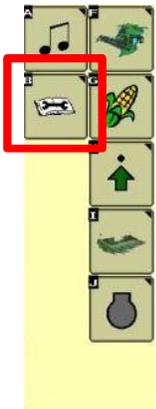


1. Temperature Calibration

Temperature calibration should be performed when the sensor has not been in direct sunlight or filled with grain. The reading should be an accurate reading of the surrounding air temperature. To be performed each season

1



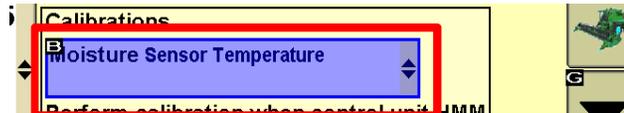
Select Button "B" from the combine main run page.

2



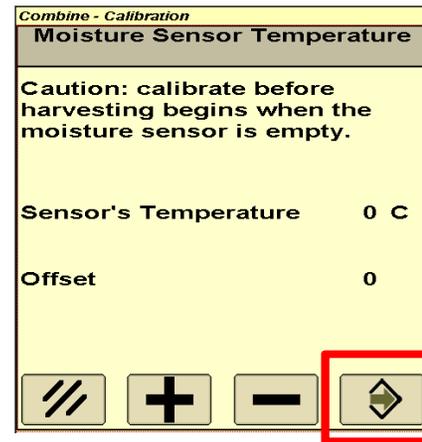
Select Button "G" for user calibrations.

3



Select "Moisture Sensor Temperature" from the list of calibrations and select the "accept" button.

4



Use the "+" and "-" buttons to accurately identify the offset between the air temperature and the moisture sensor temperature.

Select the "accept" button when complete.

2. Mass Flow Vibration Calibration

Be certain to select the correct crop in the combine setup prior to completing this calibration, this calibration will be saved under the crop identified in the combine setup. This calibration must be performed with the correct head on the combine and with the head in the operational position for harvest. To be completed with each crop.

1



Select Button "B" from the combine main run page.

2



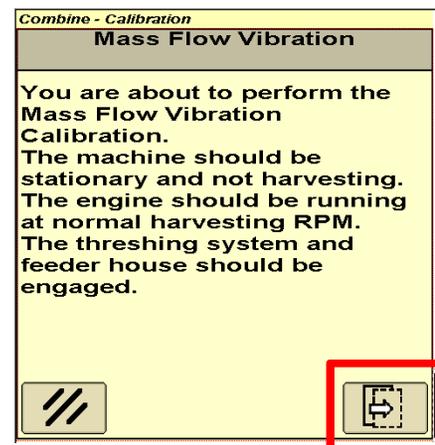
Select Button "G" for user calibrations.

3



Select "Mass Flow Vibration" from the list of calibrations and select the "accept" button.

4



With the combine running and empty of grain, engage the separator and header. While setting still at full engine RPM and the header in the operating Position select the accept button.

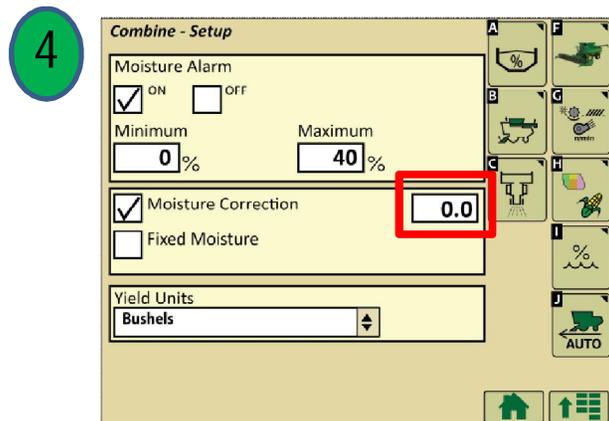
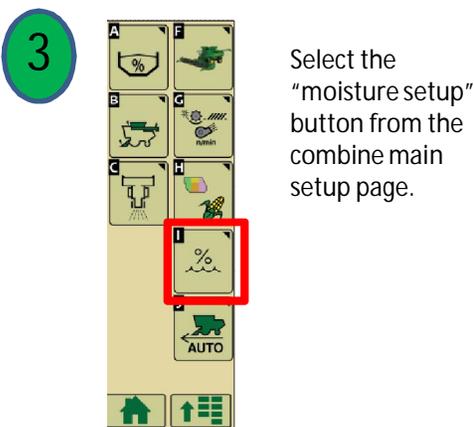
The calibration will take up to 60 seconds and a confirmation screen will appear when complete. Press the "accept" button again to accept the final calibration.

3. Moisture Sensor Correction

- Temperature calibration should be completed before this correction.
- Calibrate for each crop type
- Possibly avoid confusion by following steps 3 and 4 to set the moisture correction value to 0.0, and ensure the moisture correction box is checked before beginning this process.
- Take time to thoroughly clean the moisture sensor metal plates at the beginning of each season with glass cleaner or water.
- If moisture readings become erratic while harvesting high moisture grain, clean the moisture sensor with glass cleaner or water to remove buildup on metal capacitance plates.

1 Harvest one Grain tank of grain and note the average moisture displayed on the Harvest Monitor/Doc display.

2 Randomly sample the grain from several location in the grain tank to collect an average moisture sample for this gain tank, then measure the moisture of this sample using an accurate/trusted moisture tester.



Ensure there is a check mark in the moisture correction box. Then select the correction value, and enter the correct offset between the displayed value and actual measured value, and accept. This can be a positive or negative number.

Remember if there is a value in this box, that correction was applied to the moisture during the correction process, add or subtract the new offset from this value.

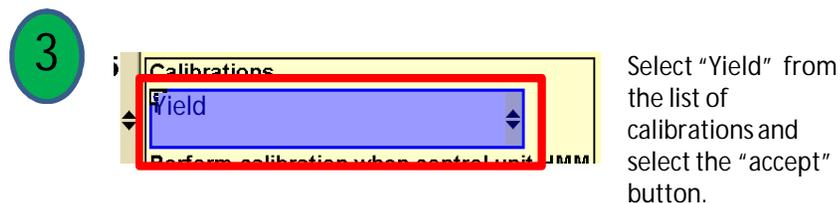
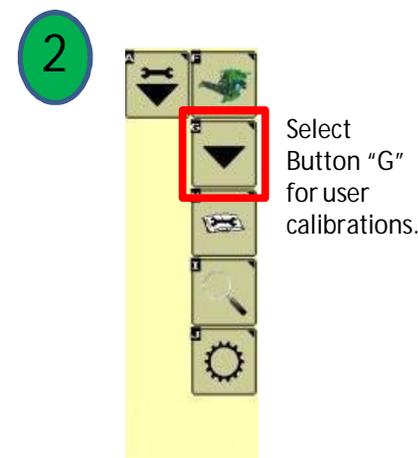
4. Weight Calibration

Note: Mass Flow Vibration and Moisture Sensor Temperature calibrations need to be completed before weight.

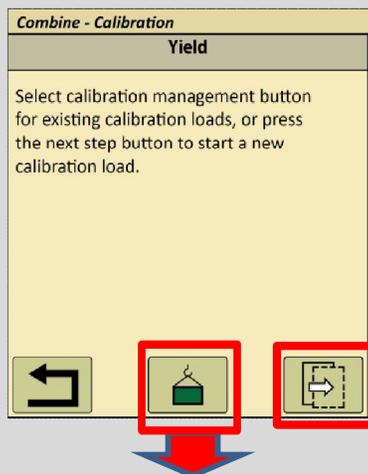
- Calibration loads need to be uniform in size and over 3,000 lbs.
- Weight calibration can be completed at any time during the season, it will not impact already harvested data.
- Use a constant flow rate during each calibration load
- Harvest each calibration load at a different flow rate. Grain Flow can be altered by changing ground speed (recommended) or different swath width.

Calibration load	1	2	3	4	5	6
Harvest Speed	- 1 MPH	- ½ MPH	Normal Harvest Speed	Normal Harvest Speed	+ ½ MPH	+1 MPH (if possible)

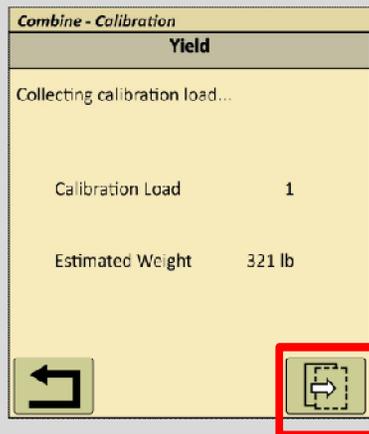
- For most accurate results use four to eight calibration loads
- To eliminate confusion make note of the harvest speed of each calibration load. 13 calibration loads can be stored, allowing up to 6 calibration loads for dry or wet corn (and one replacement calibration load), these loads do not need to be in any specific order.



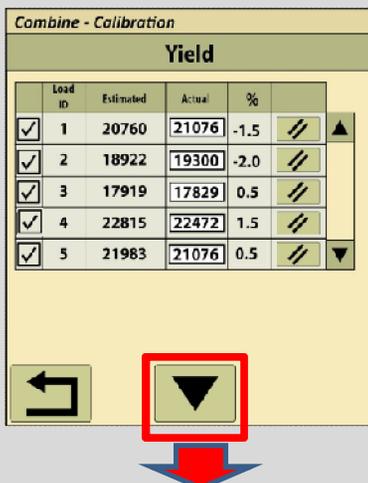
Weight Calibration Screen Overview



Selecting the "next" button will start the next available calibration load

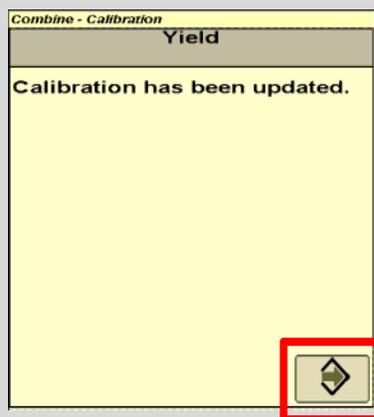
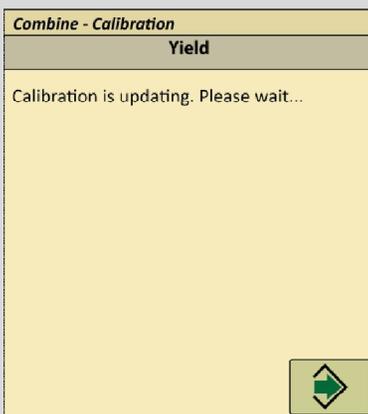


Selecting the "next" button again will complete the calibration load, scale weights will be entered in the calibration management screen



Calibration Management Screen

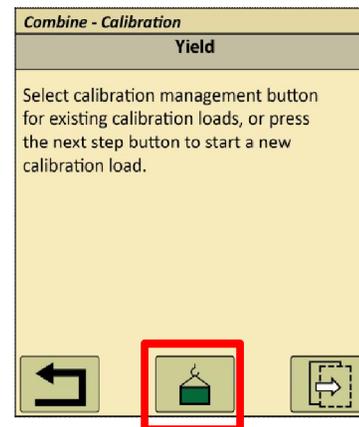
This is the main screen for interacting with calibration loads. The "Actual" column is where the scale weight for the given calibration load is entered, then a percent error will be displayed in the "%" column. Loads over 3% error should be deleted using the (delete button) and repeat that calibration load. Once these load have completed with a 3% or less error, select the corresponding completed calibration loads and press the "calibration" button at the bottom center of the screen.



Selecting the "accept" button will complete the weight calibration process.

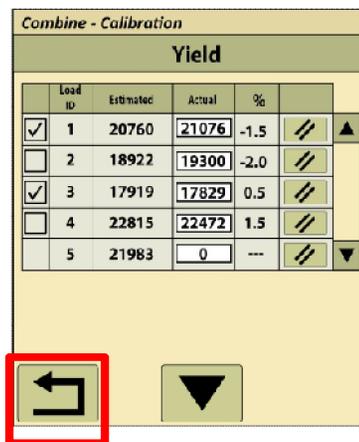
4. Weight Calibration Continued

4



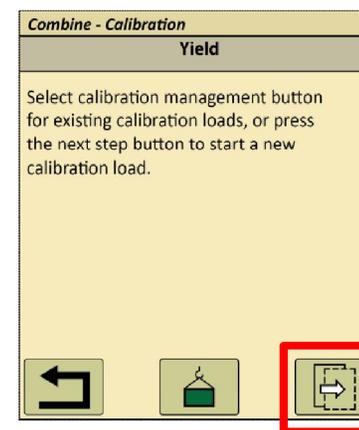
Selecting the "calibration load management" button and be sure to have enough clear calibration loads for the desired number of calibrations you intent to perform at different grain flow rates. Make room by deleting old or unwanted calibration loads.

5



Return to the main calibration page by selecting the "back" button.

6



Select the "next" button to begin the first calibration. Ensure that the combine grain tank is empty.

4. Weight Calibration Continued

7

The display will select the first open calibration load number in the “calibration load management” list each time a calibration is initiated. As the grains is harvested the combine estimated weight will increase. Be certain to keep speed (grain flow rate) constant during the calibration load, Harvest at least 3,000 pounds. Select the “next” button to complete the calibration load.

8

Repeat steps 6 and 7 for a minimum of four calibration loads at different flow rates (speeds).

9

Load ID	Estimated	Actual	%
1	20760	21076	-1.5
2	18922	19300	-2.0
3	17919	17829	0.5
4	22815	22472	1.5
5	21983	0	---

Enter the actual scale weight of each calibration load. This is done by selecting the open box in the “Actual” column next to the corresponding calibration load. A number entry pad will appear enter the weight and select “accept” button. This can be done after each load or later when all of the loads have been collected.

10

Load ID	Estimated	Actual	%
✓ 1	20760	21076	-1.5
✓ 2	18922	19300	-2.0
✓ 3	17919	17829	0.5
✓ 4	22815	22472	1.5
✓ 5	21983	21076	0.5

Place a check mark next to each of the calibrations that are recently completed at the different grain flow rates, have an error of less than 3.0%, and are to be used to generate the multi-point calibration. Select the “calibration” button and accept the final calibration when successful, this calibration will be saved under the crop identified in the combine setup.

Weight Calibration Helpful Hints

- Keep a log of your calibrations, this will be helpful in identifying them later. If using combine yield maps as part of your crop insurance practices, be certain to fill out the calibration log from your crop insurance agent.



- Calibrate once per season per crop – Treat wet corn and dry corn as separate crops.
- Calibrate in as uniform of crop as possible, avoid calibrating when opening a field.
- Check/confirm calibrations from time to time during the season.
- Re-Calibrate/confirm calibration with dramatic changes in grain (i.e. test weight changes more than 6 to 8 pounds or moisture changes more than 8-10 points on average).
- Calibrate to a good/accurate reference scale.
- Do not dump on the go while calibrating.

- Clean moisture and mass flow sensors before calibration.

- If after final calibration the error is over 3%, uncheck the load the the maximum error and re-perform the final calibration, You must still have over 4 loads checked to perform a full calibration.

- The greater the variability in the crop the more calibrations loads at varying grain flow rate (speeds) is recommended, up to 13 are possible.

- Less than 4 calibration loads will result in a linear calibration, it is recommend to always utilize more than four calibration loads for the greatest accuracy.

- Complete as much of the documentation setup in the display as possible before season.

- When preparing the combine, setting up the monitor, and make a test run in the barn yard for a few feet and check data, 0 bu./ac. yield data is still data.

- After harvesting part of the first field, or at least after harvesting the first field, Download data into Apex to verify that the data will transfer correctly.

- Update software prior to each season.