

# Yield Calibrations

South Country Equipment Combine Clinic



ERE

# Calibration Options

- **No Calibration:** Limited accuracy. Calibration procedure has not been performed. Not recommended. System defaults to a fixed internal calibration value which may not be adequate for machine and field conditions. Accuracy decreases with combine component wear.
- **Single Point Calibration:** Calibration procedure collecting one calibration load at a fixed speed. Not recommended. Usually adequate for checking accuracy, as conditions change.
- **Multi-Point Calibration:** Four or more loads are required. Multi-Point is the best for fields where there is yield variability conditions, where grain flow rate is not consistent.

# Multi-Point Calibration

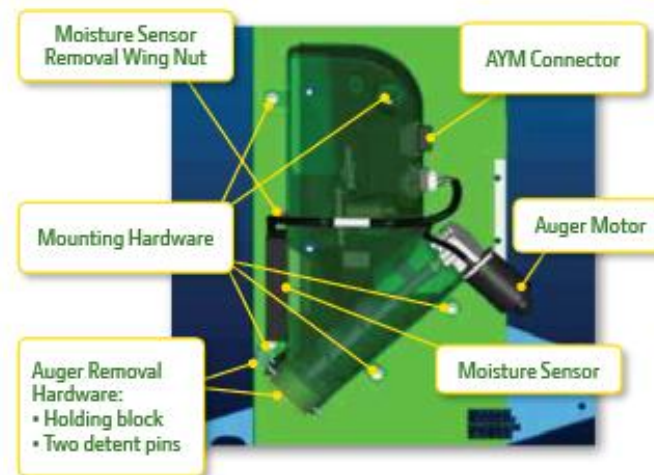
- For the best accuracy and consistency, always perform a Multi-Point Calibration once per crop, at the beginning of each season.
- Multi-point yield calibration provides the best performance when the harvested field is expected to have varying yields or machine is operated at varying speeds with varying grain flows.
- This type of calibration collects each calibration load at each expected flow condition.
- For each calibration load, harvest one FULL grain tank.

# Calibration Sequence – S Series

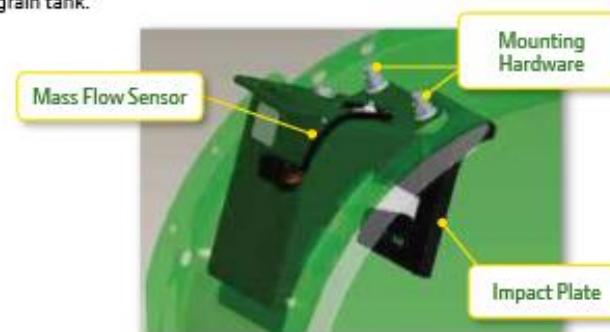
1. Temperature Calibration
2. Mass Flow Vibration Calibration
3. Moisture Correction and Calibration
4. Weight (Yield) Calibration

## Moisture and Yield System

Moisture sensor is mounted within the Elevator Mount Unit on the side of the clean grain elevator.







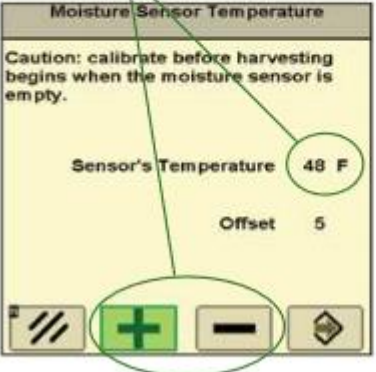

Mass Flow sensor is mounted on the transition housing, inside the grain tank.



# 1. Temperature Calibration

The reading should be an accurate measurement of the surrounding air temperature. Perform once a season and be sure the moisture meter is empty.

**Why:** To correct for inaccurate temperature measurements.  
**When:** Before harvest season begins in a temperature controlled environment. Moisture sensor needs to be empty and the machine has been setting in a constant temperature environment

1. From the combine home page press B. 
2. Next press G for user calibrations. 
3. Select "Moisture Sensor Temperature" from the calibration list and press accept.   

4. Use the "+" or "-" button until the sensor temperature matches the surrounding. 
5. Select the accept button when complete. 

## 2. Mass Flow Vibration Calibration

Select the correct crop type as this calibration will be saved under the crop identified in the combine setup. Perform this calibration with the correct head on the combine in the harvest operating position. Perform in each crop type.

**Why:** To establish a no load vibration baseline.  
**When:** Calibrate per each crop harvested with the applicable front end equipment installed. Important that the combine is completely empty when the calibration is performed.

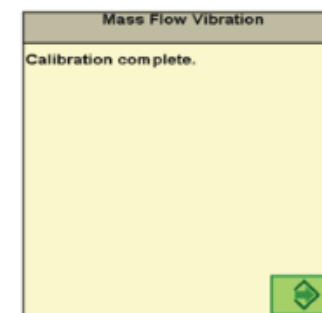
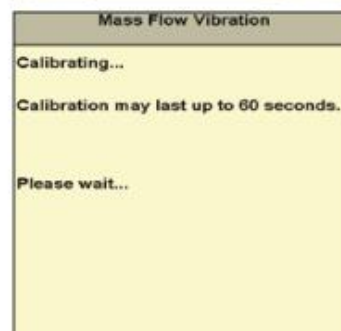
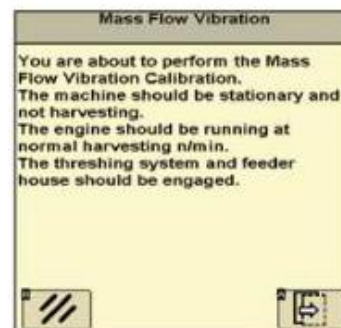
1. From the combine home page press B.



2. Next press G for user calibrations.



3. Select "Mass Flow Vibration" from the calibration list and press accept.



4. Follow the instructions in the calibration. Engage the header and separator, with the header in the harvesting position take the engine speed to high idle, be sure the header is not resting on the ground and the grain tank is empty.

# 3. Moisture Correction/Calibration

Temperature calibration should be performed before this correction. Ensure moisture sensor metal plates are clean at the beginning of each season. Plates may be cleaned with glass cleaner or water. Calibrate moisture for each grain type.

**Why:** To match the moisture measurements to the grain elevators moisture readings.  
**When:** Each season. May need to perform adjustment for each crop harvested or when crop conditions change dramatically.

1. From the combine home page press H.



2. Then press D for "Moisture Setup".



3. Check mark the box labeled "Moisture Correction".

Combine - Setup Moisture

Moisture Alarm

ON  OFF

Minimum 1% Maximum 40%

Moisture Correction 0.0

Fixed Moisture

Yield Units

Bushels

4. Next be sure the numerical box reads 0.0, if it does not highlight and change. You may return to the combine home page if desired.

5. Harvest a load of grain and note the "Avg. Moisture" on the Harvest Monitor. Example: 13%.
6. Randomly sample the grain from several locations in the grain tank to collect an average moisture sample. Then measure the average moisture of this sample using an accurate/trusted moisture tester. Example: 12%.
7. Return to the "Moisture Setup" page and enter the difference in the "Moisture Correction" numerical box. Example: Moisture tester (12%) minus the Combine displayed "Average Moisture" (13%) equals -1.0.

Combine - Setup Moisture

Moisture Alarm

ON  OFF

Minimum 1% Maximum 40%

Moisture Correction -1.0

Fixed Moisture

Yield Units

Bushels

8. Repeat as necessary until satisfied.

If moisture readings become erratic in high moisture grain, clean the moisture sensor with water or glass cleaner to remove build up from the metal (fin shaped) capacitance plates.

## 4. Weight (Yield) Calibration

- Perform Temperature and Moisture Correction before Weight Calibration.
- Calibration loads should be uniform in size and be a minimum of 3,000 lbs.
- A maximum of 13 calibration loads can be saved for each crop type.
- For more accurate results use 4 to 8 calibration loads.
- Harvest each calibration load at a different flow rate (ground speed).
- Calibrate for each crop type.

**Why:** To improve the accuracy of the yield data collection.

**When:** At a minimum a single load calibration is recommended for each crop harvested, this should get the system within 4%. Without this single load calibration the system is only accurate within 20%. To improve accuracy up to 13 loads can be used in the yield calibration.

Process:

1. From the combine home page press B.



2. Next press G for user calibrations.



3. Then select "Yield" from the list of calibrations and press "accept".



**NOTE:** This screen will be the first Yield calibration screen if there is no pending calibration.



This screen will allow the following options:

• Manage existing calibration loads



• Start new calibration load



• Cancel the calibration process



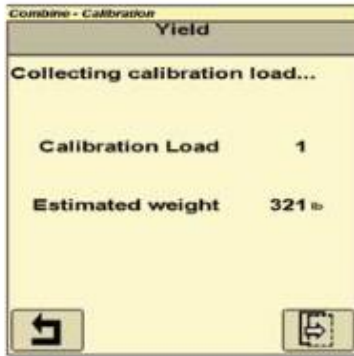
4. Select the "next" button to begin the calibration, be sure the grain tank is empty.



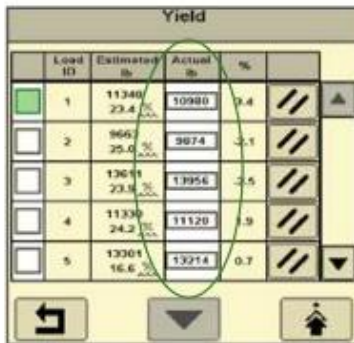


# 4. Weight (Yield) Calibration

5. The display will list the first available load number. Begin to harvest, and unload only after accumulating 3,000 lbs. or more.



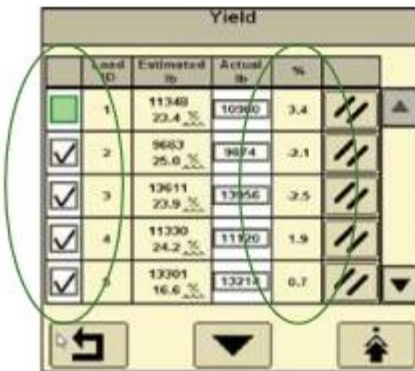
6. Unload and record the actual scaled weight. Select the "next" button and enter the "Actual" scale weight in the numerical box



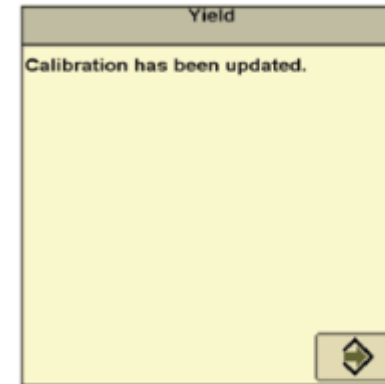
7. Return to the "Yield Calibration" page by pressing the "return" icon. Press the "next" icon and repeat steps 4 through 7 at different ground speeds.



8. After completing your calibration loads return to the "Calibration Management" screen and check mark the boxes next to the load ID numbers with the "%" between the range of -3.0 and 3.0.



9. Now press the "Calibration" icon.



Once the calibration has completed updating press the "accept" icon to exit.



10. To delete unwanted calibration loads or make space for new loads press the "delete" icon next to the corresponding load ID. This will permanently delete the cal load.

