KIBBLE EQUIPMENT

COMBINE CALIBRATION GUIDE

S-Series

JOHN DEERE

TEMPERATURE CALIBRATION

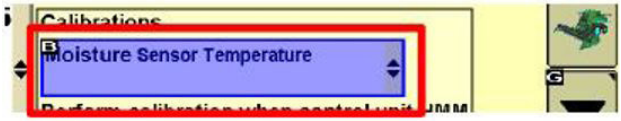
Temperature calibration is best performed in the morning when the sensor has not been in direct sunlight or filled with grain. The reading should be an accurate reading of the surrounding air temperature. To be performed each season.

1. Select button “B - Diagnostics” from the combine main run page.

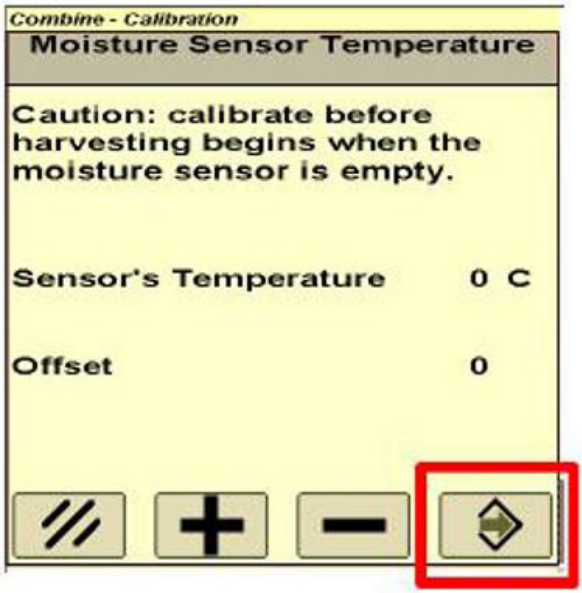
2. Select button “G” for user Calibrations.

TEMPERATURE CALIBRATION

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. Change until Sensor’s Temperature matches the surrounding temperature. Select the “accept” button when complete.



MASS FLOW VIBRATION CALIBRATION

Be certain to select the correct crop in the combine setup prior to completing the calibration. This calibration will be saved under the crop identified in the combine setup. To be completed with each crop. This will filter out normal vibration of the flow sensor impact plate from the crop flow.

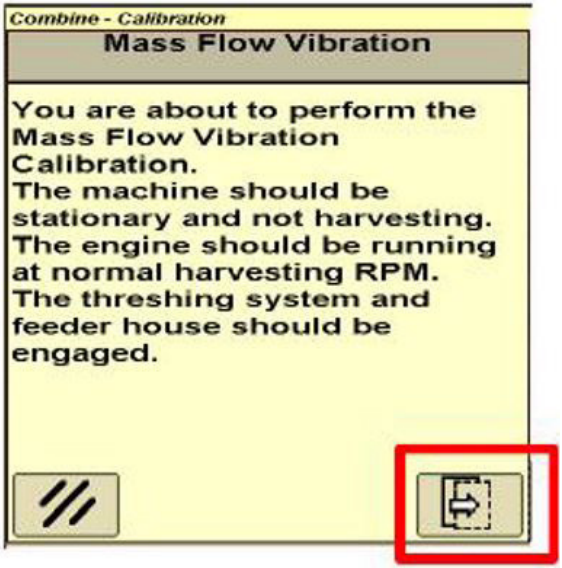
1. Select button “B” from the combine main run page.

2. Select button “G” for user Calibrations.

MASS FLOW VIBRATION CALIBRATION

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 sitting still at full engine RPM and with the correct header in the operating position (but not while resting on the ground), select the “Accept” button.



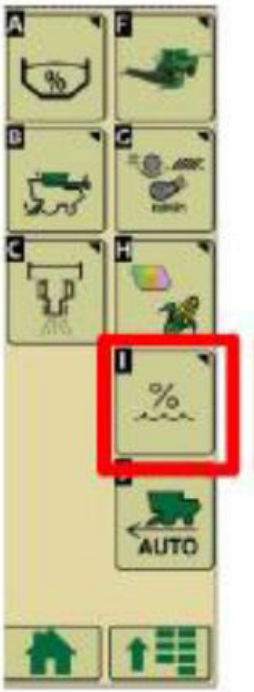
The calibration will take up to 60 seconds and a confirmation screen will appear when complete. Press the “Accept” button again to accept the final calibration.

MOISTURE SENSOR CORRECTION

1. Harvest one grain tank of grain with moisture correction checked, and note the average moisture displayed on the Harvest Monitor/Doc display.

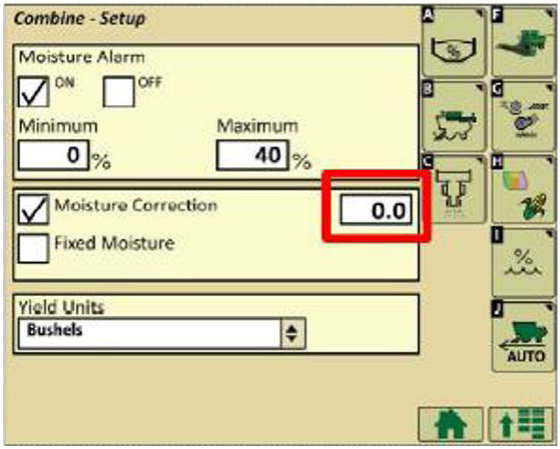
2. Randomly sample the grain from several locations from this load to collect an average moisture sample, then measure the moisture of this sample using an accurate/ trusted moisture tester.

3. Select the “Moisture setup” button from the combine main setup page.



MOISTURE SENSOR CORRECTION

4. Ensure that there is a checkmark in the moisture correction box. Then select the correction value, and enter the correct offset between the actual measured value and the displayed value, and press accept. This can be a positive or negative number and needs to be added to any existing offset. Example: elevator moisture (13%) minus combine measured moisture (12%) = moisture offset (+1%).



Helpful Hints:

- **Temperature calibration should be completed before this correction.**
- **Take time to thoroughly clean the moisture sensor metal plates at the beginning of each season with glass cleaner or water.**
- **Calibrate for each crop type at the beginning of the season.**
- **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.**

WEIGHT CALIBRATION

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

Helpful Hints:

• Calibration loads must be uniform in size and over 3,000 lbs.

• Weight calibration should be completed early in the season as it will not automatically correct already harvested data.

• Harvest with a constant flow rate during each calibration load. Do not turn on ends or cross levees while calibrating. Look at flow rate (bu/hr) in the performance monitor.

• Harvest each calibration load at a different flow rate. Change flow rate by changing ground speed.

	Crop: _____						
	Calibration Load						
	1	2	3	4	5	6	7
Harvest Speed	110% Normal Harvest Speed	Normal Harvest Speed	90% Normal Harvest Speed	80% Normal Harvest Speed	70% Normal Harvest Speed	60% Normal Harvest Speed	50% Normal Harvest Speed
Flow Rate (Bu/Hr)	write down the Flow Rate from Performance Monitor						
% Moisture	write down the % Moisture from Harvest Monitor						

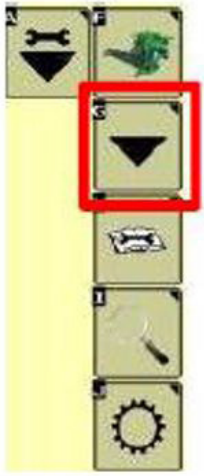
- **A maximum of 13 cal loads could be used for each crop, but for the most accurate results, use 5-7 loads for each crop. If high accuracy is not desired, 1-3 loads can be performed near the normal flow rates.**

WEIGHT CALIBRATION

Make note of the flow rate (bu/hr) for each calibration load. These loads do not need to be in any specific order.

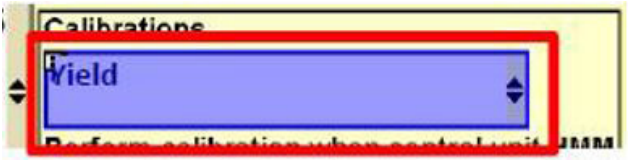
1. Select button “B” from the combine main run page.

2. Select button “G” for user Calibrations.

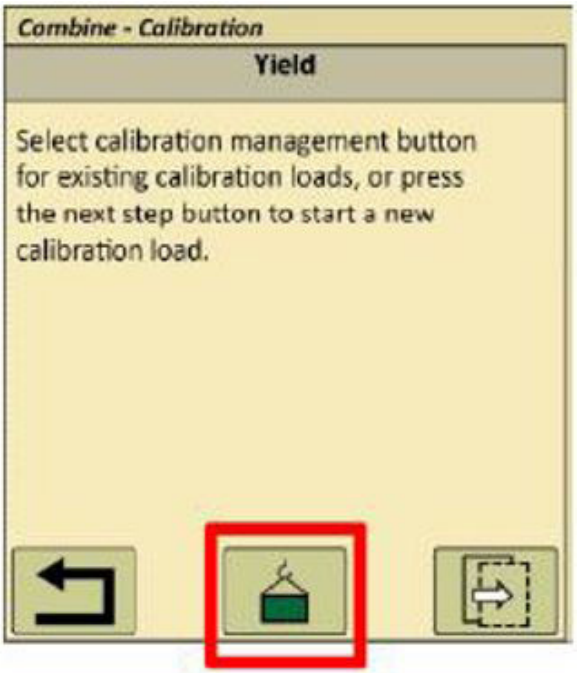


WEIGHT CALIBRATION

3. Select “Yield” from the list of calibrations and select the “accept” button.

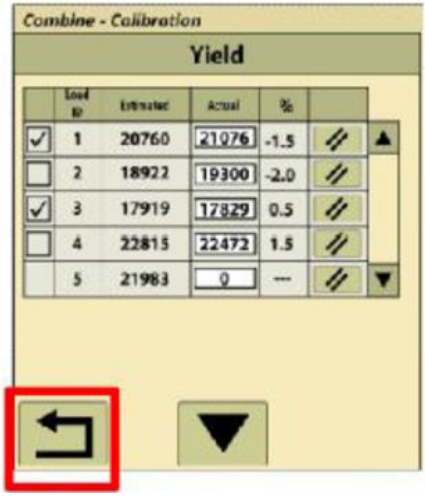


4. Use the calibration load management button to delete unwanted calibration loads (high % error, inconsistent flow rate).

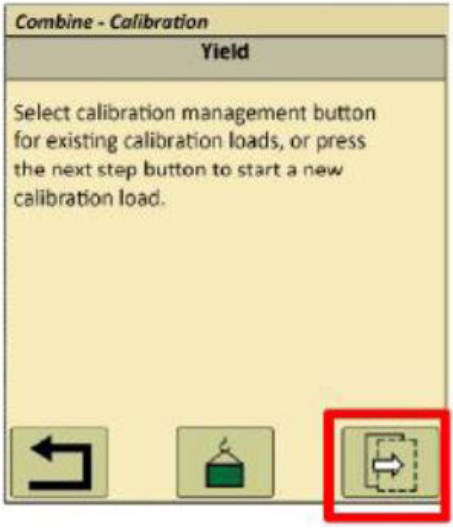


WEIGHT CALIBRATION

5. Return to the main calibration page by selecting the "Back" button.

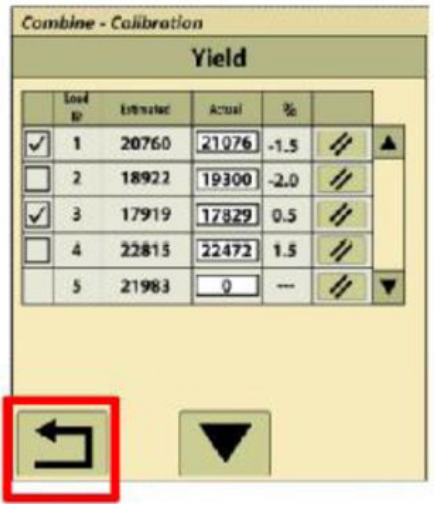


6. Select the "Next" button to begin each calibration load. Ensure the combine grain tank is empty.



WEIGHT CALIBRATION

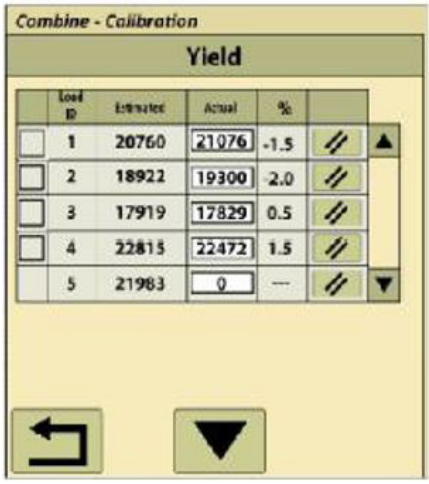
7. The display will select the first open calibration load number in the calibration load management list, each time a calibration is initiated. As the grain is harvested, the combine estimated weight will increase. Be certain to keep speed (grain flow rate) consistant during the calibration load, harvest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



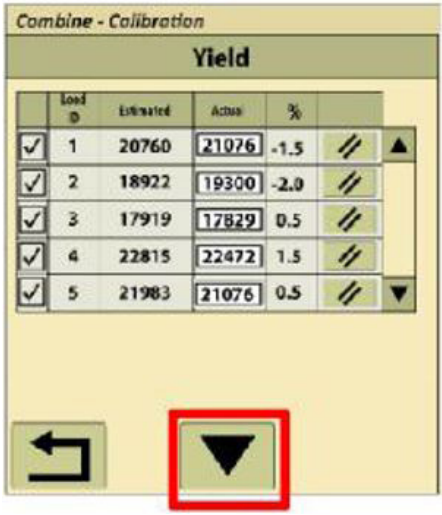
8. Enter the actual scale weight of the calibration load. This is done by selecting the open box in the "actual" column next to the corresponding calibration load. A number entry pad will appear enter the weight and select the "Accept" button.

9. Place a checkmark next to the calibration and select "calibrate". Repeat steps 6 thru 8 for a minimum of four calibration loads at different flow rates (speeds). After each load, uncheck the previously calibrated load. This will gradually dial in the % to a lower number.

WEIGHT CALIBRATION



10. After you have 4 or more loads within 3.0%, place a checkmark next to each load and select the "calibration" button. This will create a final multi-point calibration. Select "Accept". This calibration will save 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.

	Crop: _____						
	Calibration Load						
	1	2	3	4	5	6	7
Harvest Speed	110% Normal Harvest Speed	Normal Harvest Speed	90% Normal Harvest Speed	80% Normal Harvest Speed	70% Normal Harvest Speed	60% Normal Harvest Speed	50% Normal Harvest Speed
Flow Rate (Bu/Hr)	write down the Flow Rate from Performance Monitor						
% Moisture	write down the % Moisture from Harvest Monitor						

• Calibrate all loads at the same time, 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 when dramatic changes in grain (i.e. test weight changes more than 6 to 8 lbs. if moisture changes more than 8-10 points on average.)

WEIGHT CALIBRATION

Helpful Hints Continued:

- **Clean moisture and mass flow sensors before calibration.**

- **If after final calibration the error is over 3%, uncheck the load with the maximum error and re-perform the final calibration, you must 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, but 5-7 are recommended.**

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

- **When preparing the combine, set up the monitor, and make a test run in the yard for a few feet and check data, 0 bu/ac yield data is still data. Unload the data to the desktop software to verify that the data is being transferred correctly. Unload frequently throughout the season.**

- **Update software prior to each season.**

NEED ASSISTANCE? CONTACT US!

Belle Plaine, MN	952-873-2224
Bird Island, MN	320-365-3445
Blue Earth, MN	507-526-2714
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Garretson, SD	605-594-3476
Hollandale, MN	507-889-4221
Huron, SD	605-352-8519
Madison, SD	605-256-4575
Mankato, MN	507-387-8201
Marshall, MN	507-537-1523
Milbank, SD	605-432-5523
Minnesota Lake, MN	507-462-3828
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Northwood, IA	641-324-1154
Osage, IA	641-732-3719
Owatonna, MN	507-451-4054
Redwood Falls, MN	507-644-3571
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Wabasso, MN	507-342-5171
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