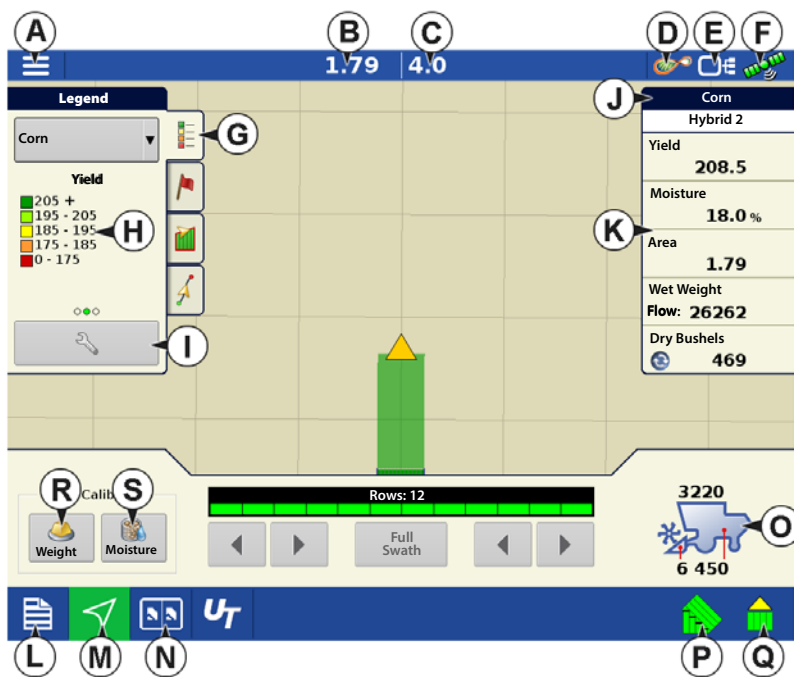## Map View

Once a configuration has been completed, and a field operation has been started, the Map View screen appears.

A. Menu button

B. Total Logged Field Area

C. Ground Speed

D. AgFiniti Status Indicator

E. Diagnostics Status Indicator

F. GNSS Status Indicator

G. Legend Tab

H. Map Legend (varieties)

I. Legend Select

J. Crop

K. Status Items

L. Event Summary

M. Map View button

N. Split screen

O. Harvest Diagnostics

P. AutoSwath

Q. Logging Status

R. Weight Calibration, See "Grain Weight Calibration" on page 7.

S. Moisture Calibration, See "Moisture Calibration" on page 7.

ℹ️ Pressing the Map View button (M) will cycle between the available mapping screen views.

(K) Harvest Status Items

- **Yield** — Displays the instantaneous yield while there is grain flow and the average yield when grain flow is not present.

- **Moisture** — Displays the instantaneous moisture when there is grain flow and the average when there is no grain flow.

- **Area** — Shows the area harvested for the current region.

- **Wet Weight** — Shows the actual weight that has been harvested for the current region.

- **Wet Bushels** — Shows the actual bushels that have been harvested for the current region.

- **Dry Bushels** — Displays the actual number of bushels at the specified dry moisture percentage.

  - If the actual moisture is below the set dry moisture percentage and "Expand Bushels for All Grains Below Dry %" is not checked, it will show actual bushels.

  - If the actual moisture is below the set dry moisture percentage and "Expand Bushels for All Grains Below Dry %" is checked, it will display bushels as if the moisture of the grain is at the specified dry percentage.

ℹ️ The **Wet Bushels** and **Dry Bushels** Status Items do not appear if you are using metric system measurements.

(O) Harvest Diagnostic Button on Map Screen

The Harvest Diagnostic button appears at the bottom right-hand portion of the Harvest Map screen. Pressing this button summons the Harvest Diagnostic screen.

A. **Bushels Per Hour** — Bushels harvested per hour (bu/hr).

B. **Header Height** — Percentage of header height.

C. **Elevator Speed** — Revolutions Per Minute (RPM).
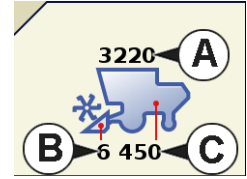
Tracking Varieties (InCommand 1200 Only) and Changing Regions
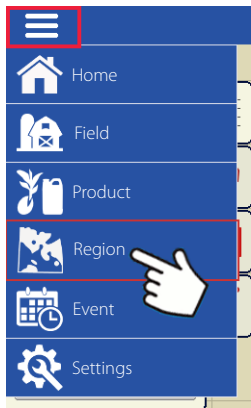
Use the Options screen to enable the display to track varieties that were planted earlier and are now being harvested.

Types of variety tracking:

•Automatic Variety Tracking

•Automatic Region Changing.

The Options Screen is the last step before completing the harvest operational wizard. This can also be accessed from the Mapping screen by pressing the menu button followed by region.

The illustration shows how the display could track two different varieties. In this example, when the harvester reaches the end of Variety 1, and moves to Variety 2, a message appears that either a new variety has been detected and the operator is notified to change regions (Automatic Variety Tracking,) or that a variety has been detected and the display is automatically changing regions. (Automatic Region Changing).

(A) Region Selection

Press ➕ to create new regions.

Use the drop-down to manually select or change regions.

(B) Automatic Variety Tracking

Automatic Variety Tracking gives users the ability to track hybrids from planting/seeding operations during harvest. This gives quick access to yield information based on hybrids planted in the summary screen. Enable by checking the Automatic Variety Tracking box.
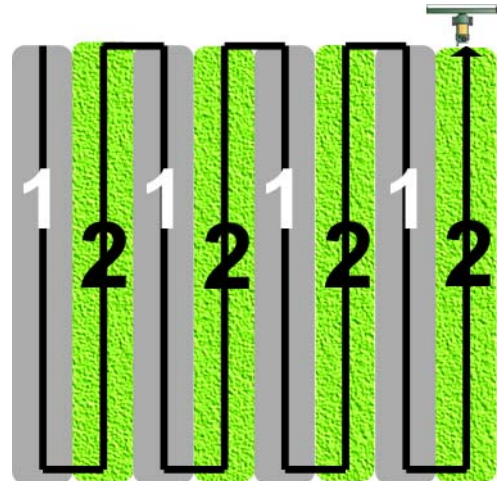
ℹ️ A variety map must be present to enable Automatic Variety Tracking.

If no variety map is present, then you can either

• (E) Manually assign a variety from the Variety Tracking List, located to the right of the Automatic Variety Tracking check box.

OR

• (D) Import a variety reference map.

(C) Automatic Region Changing

To enable the Automatic Region Changing feature, select both the Automatic Variety Tracking check box, and the Automatic Region Changing check box. Automatic Region Changing will auto-sort varieties into regions as you go through the field.

- Automatic Region Changing tracks both varieties and regions, so the display changes the region automatically.

In-Field Variety Tracking Messages

- With Automatic Variety Tracking selected, the message, "Variety detected. Go to the Region Selection screen to change Region and Variety" display's each time the variety changes in the field. The message stays active until dismissed.

- With Automatic Region Changing selected a message noting the variety detected and region the display changed to appears each time the variety changes.

(D) Importing Variety Maps

Variety maps can be imported from SMS software. SMS software uses planting data to create a variety reference map which is saved as an .AGSETUP file. This .AGSETUP file can then be exported to the display for use with the Automatic Variety Tracking and Automatic Region Changing features.

Importing Variety Map Procedure

Select Reference File

The File Selection screen appears. Use [▲] / [▼] to scroll through the files and select the desired reference (.AGSETUP) file. Press [✔] when finished.

Error Messages at Variety Map Import

If the display failed to import a variety map, it is likely that one of three error messages appeared on the display:

Error Message: "Crop type of Variety Reference Map does not match crop type of field."

> **Possible Cause:** A different crop type was selected in the Harvest Operation Wizard than is shown in the variety reference map.
>
> **Solution:** Either create a Harvest Operation with a different crop; or choose a variety reference map with an appropriate crop.

Errror Message: "Variety Reference Map does not match location of field."

> **Possible Cause:** A different farm or field was selected in the Harvest Operation Wizard than is shown in the variety reference map.
>
> **Solution:** Either create a Harvest Operation with a different field, or choose a variety reference map with an appropriate field.

Error Message: "Too many zones to show complete Variety Reference Map. Variety Tracking will work on all zones, even those not mapped on screen."

> **Possible Cause:** The reference file selected exceeded the allowable memory limit used to load reference maps.
>
> **Solution:** Continue harvest operations. All variety tracking and region information will be logged. However, the entire reference map may not be visible on the display's Mapping screen.

AutoSwath Sensitivity Settings

AutoSwath adjusts the swath width when crossing field boundaries and already-harvested areas. The display changes the swath width being harvested, even though no mechanical change takes place. AutoSwath is useful when harvesting point rows or where harvesting a full head width is not possible. When performing a Harvest operation, the AutoSwath feature includes sensitivity levels, which compensate for varying levels of GPS accuracy. If swath adjustments are performing inaccurately, adjust the sensitivity accordingly. Sensitivity 3 is the default setting. This setting is adjusted from the Configuration Setup menu.

 Other settings include:

Sensitivity 5 — Use with RTK or DGPS (GPS6500 RTK or TerraStar with SteerCommand).
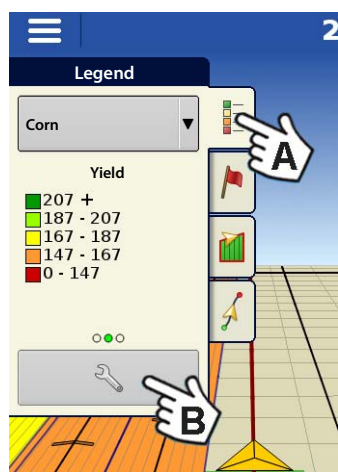
Sensitivity 4 — Use with RTK or sub-meter DGPS. Terrain compensation recommended (GPS6000 or GPS6500 with Steering).

Sensitivity 3 — Use with sub-meter accurate DGPS (most SBAS receivers like GPS6000).

Sensitivity 2 — Use with 1+ meter accurate GPS.

Sensitivity 1 — Swath sections are all on or all off. Use with 1+ meter accurate GPS.
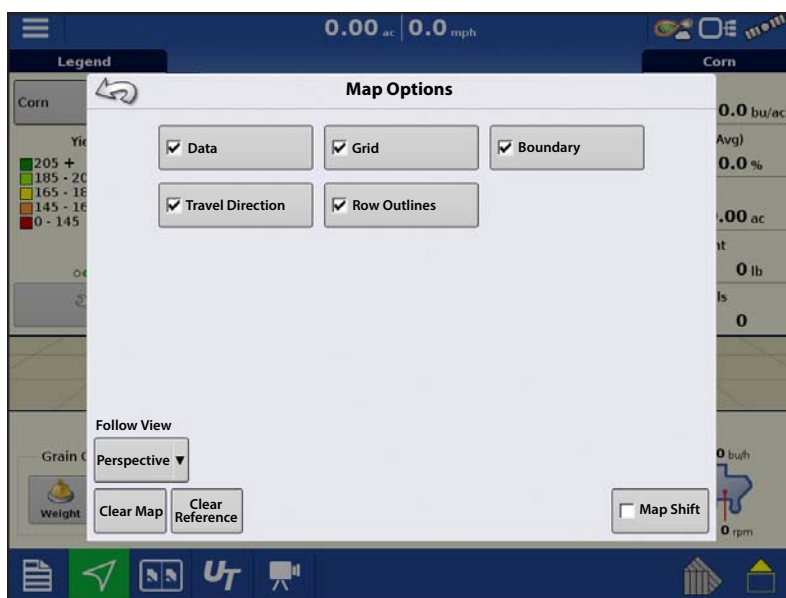
Map Options

During Harvest operations, the Mapping screen displays three types of items in the Legend: Yield, Moisture, and Coverage.

The Legend Setup button on the Map Legend Tab of the Mapping Toolbox opens the Map Options screen.

- Press Data, Guidance, Boundary, Marker, Reference, Grid, Travel Direction, and Row Outlines to show or hide those items on the Map screen.

- Press Clear Map to permanently remove all map data from the active field operation

- Press Load Reference to load a map from a previous operation performed in that field to view as a background map.

Delay

 > ⚙ **Settings** > **Configuration Settings** > **Map Delays**

- **Start of Pass**

  The time between when the header is lowered and when the row starts. This compensates for a delay between when header is lowered and when it begins taking in the crop.

- **End of Pass**

  The time between when row ended and when the header is raised. This compensates for a delay between when the header finishes taking in the crop and when the header is raised.
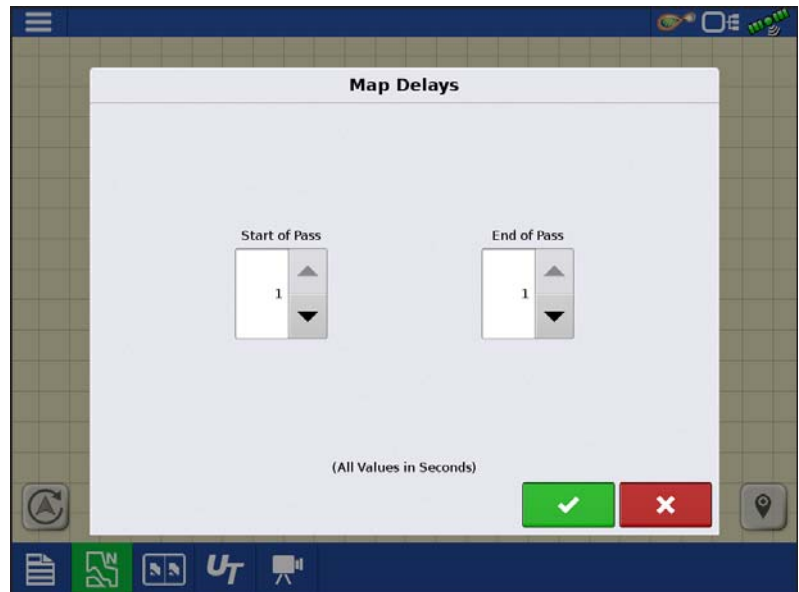
Create Configuration

A wizard is used to select or create a configuration that includes Combine, Header and Crops settings.

The configuration can be started in two places:

 > ➕

 > ⚙ **Settings** > **Configuration Settings** > ➕ > **Harvest**

Upon completion, the Operating Configuration will then be viewable when starting a new Field Operation with the Harvest Operation Wizard.

ℹ️ The **Manage Equipment** button can be used to create or edit specific vehicles and implements.

Load Configuration

  Press the Harvest app from the home screen. Follow Field Operation wizard prompts to load the configuration to the Mapping screen.

Calibration

A configuration and calibration must be completed before operating. This section will work through the various steps involved.

The configuration setup page will show up as the last step of building a configuration using the operation wizard. If a configuration is built using the setup menu the configuration setup will need to be accessed using the following steps:

 > 🚜 > **Select Your Specific Configuration** > 🔧
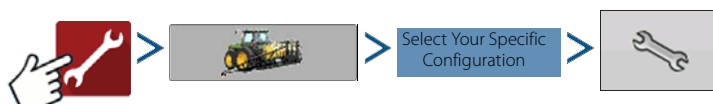
(A) Calibrate Distance

If you are not using GPS for ground speed, you must calibrate the ground speed input for accurate speed and area calculations. If you are using GPS, it is recommended to calibrate distance in the event of GPS loss. Follow the instructions shown on the screen.

i Calibration settings can be manually adjusted if desired by pressing button above Pulses/100 ft and making small changes to the setting.

(B) Calibrate Header Sensor

Prior to logging harvest data, the header sensor must be calibrated. Crops must be set up within the system to proceed with the calibration routine. Follow the instructions shown on the screen.

IMPORTANT!: The header sensor must be calibrated for each crop type used.

IMPORTANT!: If Reset All is pressed the sensor will have to be calibrated for all headers!

(C) Input Header Offset

If the header is mounted offset to the vehicle's center, an offset value can be entered to compensate for the distance between the center of the vehicle, and the center of the header's swath.

1. **Measure distance** — Measure the distance between the center of the vehicle (A) and the center of the header's swath (B).
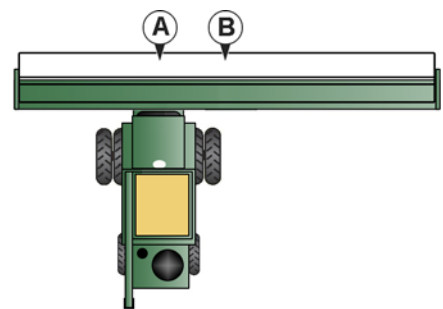
(A) Center of Vehicle

(B) Center of Swath

2. **Enter the distance amount** —The Header Offset screen appears. Enter the distance amount by using [ ].

Select **to the left** or **to the right** from drop-down menu.

Press [✔] when finished.

(D) Vibration Calibration

[Grain Calibration] > [🔧] > [Perform Vibration Calibration]

The vibration calibration must be performed with the correct head on the combine, and repeated for each crop harvested. This is prompted at the Home screen the first time a crop type is harvested. A harvest product must be in the system before vibration cal will be available.

1. **Run Separator** — Start the separator and feeder house with the proper header attached. Run at full speed.

Do not harvest a crop during the Vibration Calibration process.

2. **Press Start** — With the combine separator running at full operating speed with the header engaged, press the Start button. The display counts down 60 seconds.

3. **Calibration Number Displayed** — When the vibration calibration is complete, a message appears underneath the Start button stating "Calibration Complete." Next to this, the vibration calibration number is displayed. Press to return to the Calibration Tab. The separator can now be shut off.

ℹ️ **The rest of the calibration process is accessible from the Mapping screen. See "Map View" on page 1.**

Temperature Calibration

[Moisture] > [Temperature]
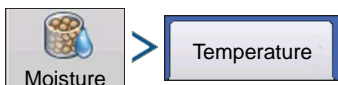
A Temperature Calibration only needs to be performed once per season. Changing this calibration will affect harvested data collected after the calibration.

👆 Only calibrate the temperature before harvesting begins.

1. **Place Combine in Shady Spot** — Leave the combine parked in a shaded area or a shed for a few hours. The temperature calibration should not be performed if the sensor has been in direct sunlight.

2. **Take Air Temperature Reading** — Take an accurate air temperature reading using a thermometer in the same shaded area.

3. **Enter Outside Air Temperature** — Use [▲] / [▼] to enter the known outside air temperature. Make the proper adjustments until the Calibrated Temperature shown at the top of this screen reflects the correct air temperature.

   Press [✔] when finished.

Moisture Calibration

[Moisture] > [Moisture]

A moisture calibration only needs to be done once per crop, per season. Changing this calibration will affect all previously-harvested data.

1. **Measure Moisture on Grain Samples** — Randomly sample grain harvested into an active region, then measure moisture using an accurate moisture tester.

2. **Adjust Moisture** — On the Moisture Calibration screen, use [▲] / [▼] to adjust the moisture so that it matches the known moisture of the sample.

   Press [✔] when finished.

Manual Moisture Setting

[Moisture] > [Moisture] > [☑ Use Manual Moisture]

The "Use Manual Moisture" setting allows users to adjust moisture for a specific region. Unlike the Moisture Calibration, which affects all previously-harvested data, a Manual Moisture setting only affects data within a specified Region.

1. Check the Use Manual Moisture check box.

2. Use [▲] / [▼] to adjust the moisture to the desired value.

   Press [✔] when finished.

Grain Weight Calibration

A Grain Weight Calibration must be performed before the display can accurately calculate yield and harvested weights. The display is calibrated by harvesting four to six calibration loads and entering in the actual load weights measured by an accurate scale. The Grain Weight Calibration can be completed at any time during the season; however it is recommended that the calibration be completed at the beginning of the season.

> **Each calibration load should be at a different grain flow rate through the combine, ranging from low flow through high flow. This can be accomplished by varying speed or swath width between calibration loads**.

> Start the calibration procedure with the combine stopped, the combine grain tank empty, and a hauling vehicle empty.

1. **Start New Load —**

   [Weight] > [New Load]

2. **Calibration Load warning** — Read warning, press [✓] when finished.

3. **Harvest Calibration Load** — Harvest a load - ideal load weights are between 3,000 and 6,000 pounds.

4. **End Load** — Press [End Calibration].

5. **Calibration Load warning** — Read warning, press [✓] when finished.

6. **Name Load** — Display will give load a default name of time and date. Use [⌨] to change the load name.

7. **Empty Grain and Weigh Load** — Empty the grain tank completely onto a truck or wagon, and weigh it with an accurate scale. Record each individual load weight to be entered into the display. (No grain from any other combine should be unloaded into this hauling vehicle).

8. **Weigh and Record Load Weight** — highlight the load in the Weight Calibration screen and enter the actual value.

   • If a weigh wagon is used to weigh the grain, make sure the wagon has been calibrated properly.

   • Only use one scale during this calibration process.

   • Use the same vehicle for all calibration loads.

   • Do not use a semi truck, as this vehicle's capacity is too large for a calibration load.

9. **Uncheck Loads With Excessive Error Percentages** — At the Grain Calibration screen, take note of any calibration loads that have excessive error percentages.

   After a calibration is completed, an average error of 3% or less should be achievable. If the average error is more than 3%, uncheck the load with the maximum error.

   Any load that is checked is automatically included in the calibration.

Turn On/Off Auto Calibration

The display defaults to AutoCal Weigh checked. AutoCal Weight can be turned off by unchecking the check box. The AutoCal weight feature will automatically adjust the calibration after each calibration load is finished. With AutoCal not checked, the user must press the calibrate button each time they would like to update the calibration with a new load.

[Weight] > [🔧] > [☑ AutoCal Weight]

Harness Layout

KEY

— · — · — · — · — **CAN A**

═══════════════ **POWER**

━━━━━━━━━━━ **SIGNAL/CONTROL WIRES**

NOTE: Header Height, Ground Speen and Elevator Speed Cables may have different connectors than shown.
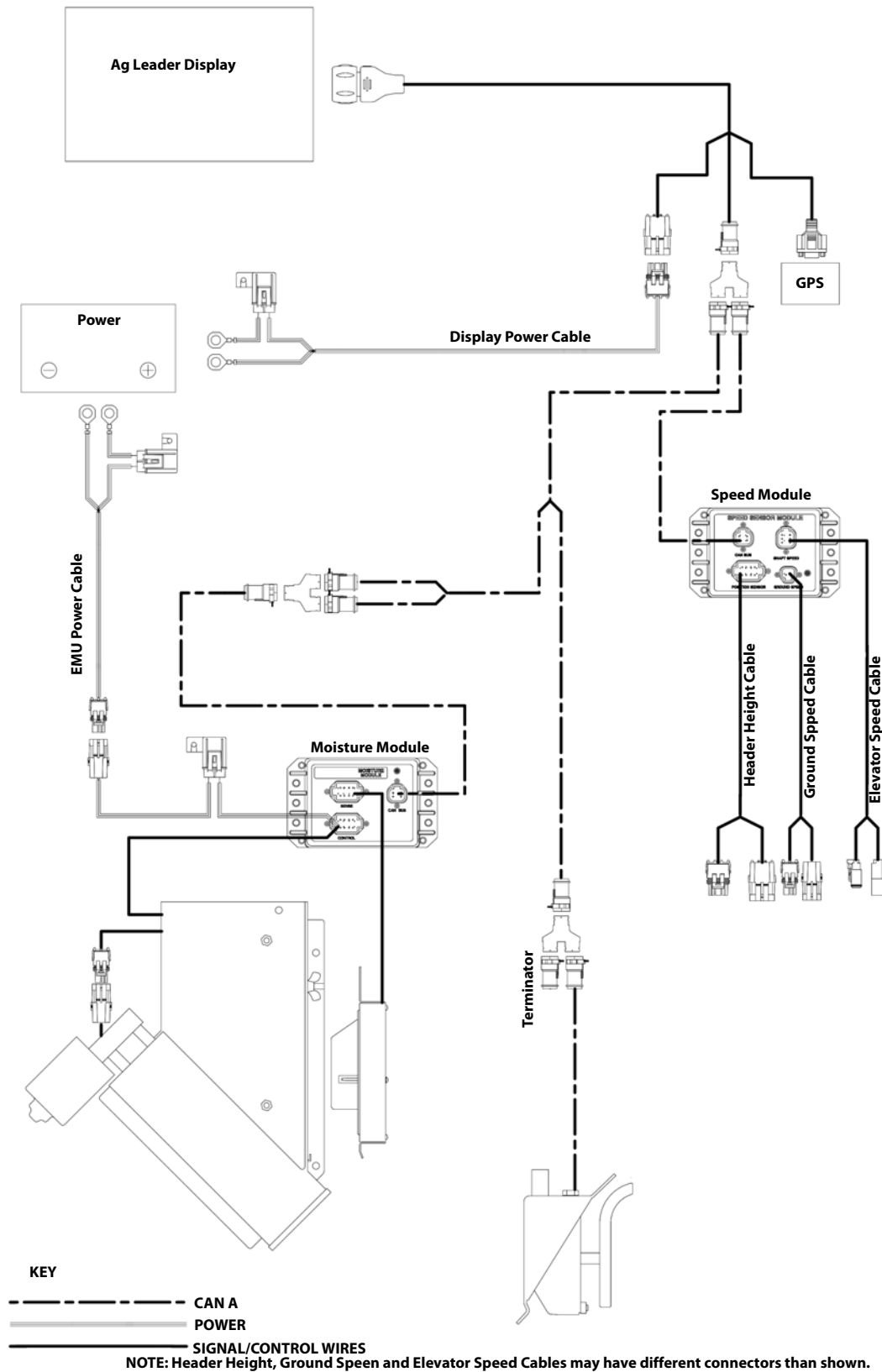
Display Preparation

- Create a backup of your spring information. Go to the Setup/Display menu to create a backup. Select Copy All Files to save the spring data to the USB Flash Drive or AgFiniti.

- Make sure your display firmware and all connected modules are up to date.

- If you have purchased a new combine or new heads, create new configurations for any setup that is different from last fall. Remove all old configurations.

ℹ️ Removing old configurations will remove data logged by that configuration from the display.

Harvest Pre Season Checklist

When preparing your yield monitor system for harvest there are several items that need to be checked over before going to the field. Schedule time out well in advance so that replacement parts can be ordered and shipped before you have to go to the field. You may need to schedule services from your dealer or some equipment may need to be shipped to a central facility for repairs or upgrades.

1. Ag electronics get power from the combines batteries so pay special attention to the power system on the machine with a well maintained alternator/generator, inspect for clean electrical ground connections all around.

2. There are several yield monitor components that are interconnected by a cable harness. The wires in the harness need to be inspected for wear damage that may cause a short circuit. Start with the main power cable at the battery up to the monitor in the cab, and then back to each of the sensors.

3. The flow sensor is mounted in the top of the clean grain elevator. Check the elevator deflector and impact plate for wear. Verify you have the proper clearance at the top of the clean grain elevator. Clearance should be between 3/8" and 5/8" (0.95 cm to 1.59 cm). Verify proper installation and paddle clearance. Check for worn out or broken deflectors that channel the grain towards the sensor. Make sure that the impact plate is not worn thin or broken. You may want to look at a picture of a new one in the installation instructions to verify that everything is like it should be. Also be on the lookout for rodent damage to flow sensor wires on the load cell.

4. Next is the grain moisture/temperature sensor. Check for excessive wear and make sure the sensor is clean and free of mud or crop residue, also verify that you have good clean electrical ground. The Ag Leader system uses a motorized auger to keep grain moving past the moisture sensor, check the fuse, switch and relay then verify that the auger turns free.

5. A header position sensor is mounted on the feeder-house of the combine. Check to make sure that the arm is attached properly so that it moves as the header is raised and lowered and that no wires are being pinched.

6. The elevator speed sensor is located on the end of the shaft that drives the clean grain elevator. Make sure that the tee cable is properly connected so that speed output is available to both the combine gauges and the yield monitor.

7. The ground speed sensor is located at the top of the transmission and also uses a tee cable to share speed output between the combine gauges and the yield monitor.

8. Check the Monitor/Display that it has the latest firmware (program) upgrades installed. Check for the proper date (this may indicate a problem with the internal battery) that it has the latest upgrades installed.

9. Make sure you have a working usb drive and that last years data is removed. Hook up the GPS receiver and get out in the open to verify that you are getting position and speed data to the yield monitor.

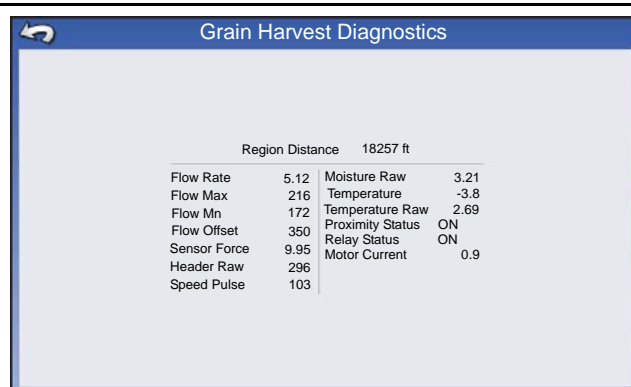For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=8

Grain Harvest Diagnostics

When performing a Harvest operation, access the Harvest Diagnostic screen by pressing "(O) Harvest Diagnostic Button on Map Screen" on page 2.

The Grain Harvest Diagnostics screen includes the following information:

- **Flow Rate** — Grain flow rate

- **Flow Max, Flow Min and Flow Offset** — Raw flow values used for diagnostic purposes.

- **Sensor Force** — Force of grain flow

- **Header Raw** — Raw value of header sensor.

- **Speed Pulses** — Number of ground speed pulses from the combine.

- **Moisture Raw** — Raw value of moisture sensor.

- **Temperature** — Air temperature

- **Temperature Raw** — Raw value of temperature sensor.

- **Proximity Sensor** — Shows if Elevator Mount Unit sensor is covered with grain.

- **Relay Status** — shows on or off.

- **Motor Current** — Measure of Elevator Mount Unit (EMU) current, shown in amps.

Troubleshooting Flow

No Flow

- Verify C1 value is between 0 and -100

    New vibration Calibration

- Verify C2-C11 is not zero

    Build new combine and configuration or use initial cal sheets to reset numbers.

- Check Elevator paddle clearance

    Should be 1/2in or 1.25in for Lexion Combines

- Check Cabling from Monitor to Flow Sensor

- Check for flow sensor damage from rodents

- Make sure deflector plate, impact plate, and flow sensor are installed correctly

For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=1023

High/Low Flow

- Verify Correct crop type has been selected

- Check elevator speed- should be around 400RPM and stable

- Grain flow is too low for sensor- take larger swath or drive faster

- Acres not being counted- Verify header stop height for crop type and elevator speed

- Verify differential GPS and secondary speed source has been calibrated

- Moisture calibration is too far off

    Recalibrate moisture

- Verify Weight/Volume value is set correctly per the crop type

- "Expand Grain Below Dry" is set to Yes – change to No

For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=613

Moisture Troubleshooting

Moisture is not changing
- Check to see if EMU motor is turning
- Check 5amp fuse near emu power connection
- Verify 12v power on EMU control cable 2pin connection on the fused line

   Verify 30 amp fuse on EMU battery cable
- Verify EMU is clean of debris and grain can flow freely
- Plug battery power connection directly into EMU motor

   This will verify that the emu motor Is still good
- Adjust proximity switch

   IF LED light on proximity switch comes on but the motor doesn't turn the moisture module may need replaced

Moisture is zero
- Check harvest diagnostics for raw moisture reading if value is present
- Verify temperature sensor is reading correctly

   If -460 degrees moisture sensor is either unplugged or bad

For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=1036

Adjusting Proximity Switch

1. Remove the cover from the elevator mount protecting the wiring.
2. Locate the adjustment screw on the back of the proximity switch.

> **i**   NOTE!: This screw sets the sensitivity of the switch.

3. Plug the power cable back into the elevator mount.
4. Use the small screwdriver that came with the Elevator mount unit and turn the adjustment screw COUNTER CLOCKWISE until the adjustment screw turns freely.

> IMPORTANT: Adjusting the proximity switch is critical for the accurate operation of the moisture sensor.

5. Turn the adjustment screw CLOCKWISE until the auger motor comes ON with no grain in elevator mount.
6. Turn the adjustment screw back COUNTER CLOCKWISE three full turns and leave it set there.

For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=620

Elevator Speed Troubleshooting

No Speed
- Verify connection into proper sensor
- Check for cut or broken wires going from speed module to sensor
- Verify sensor is adjusted properly

   This may require the combine manual or consulting the OEM dealer
- Check for power on combine side of elevator speed connector
- Check elevator speed channel

Incorrect speed
- If A post speed and display speed are both incorrect

Ag Leader Tees into the elevator speed connector

Adjust elevator speed sensor

Remove Ag Leader connection to verify same issue with just combine cable connected

- If only Ag Leader sensor is incorrect

Check pulses/rev and # of sprocket teeth within combine settings

This should be set automatically based off of the combine chose within the configuration. Create new combine configuration and compare numbers between both configurations

Inconsistent speed

- Verify good connections between elevator speed sensor and speed module

Many times poor system grounding or signal noise are causing for inconsistent elevator speed

- Verify sensor is adjusted properly

This may require the combine manual or consulting the OEM dealer

Header Height Troubleshooting

- Verify Tee Cable connections are fully seated
- Header Height calibration has been completed
- If possible, verify header height sensor is appearing on the combine readout (A post)
- Header Channel is set properly

Channel 1: New Holland and Lexion combines

Channel 4: all other combines

- Check for Broken or binding header sensor rod (Utilizing AG Leader header height sensor)

Manually move potentiometer rod

For more information: https://dealer.agleader.com/kbp/index.php?View=entry&EntryID=960

Ground Speed Troubleshooting

- Verify speed source 1 and 2 are set properly — In most cases speed source 1 is GPS and 2 is wheel speed
- If utilizing wheel speed verify it is properly calibrated — Check wheel speed connections and cabling out to sensor