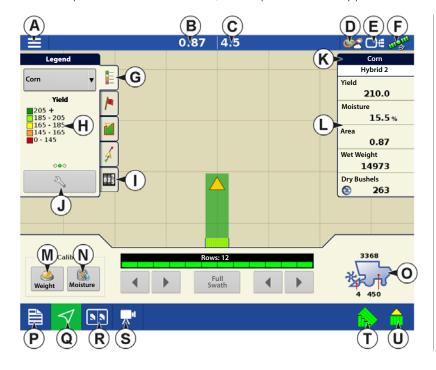
Map View

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. Resettable Counter
- J. Legend Select
- K. Crop
- L. Status Items
- M. Weight Calibration, See "Grain Weight Calibration" on page 7.
- **N.** Moisture Calibration, See "Moisture Calibration" on page 9.
- O. Harvest Diagnostics
- P. Event Summary
- Q. Map View button
- R. Split screen
- S. Camera
- T. AutoSwath™
- **U.** Logging Status





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

(L) 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.



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

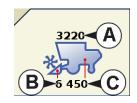
The Harvest Diagnostic button appears at the bottom right-hand portion of the Harvest Map screen. Pressing this button summons the Harvest Diagnostic screen.

- A. Bushels Per Hour Bushels harvested per hour (bu/hr).
- B. **Header Height** Percentage of header height.
- C. **Elevator Speed** Revolutions Per Minute (RPM)

(I) Resettable Counter

Resettable counters will automatically tally harvested crop any time that grain flow is seen.

- Counters keep tally based on crop type and will hold count through new events, fields, and product changes.
- Counters display wet weight bushels or pounds based on active crop type.
- Tap on the counter to reset to zero.





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.



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 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.

O = 09

3.2 bu/a

5.5%

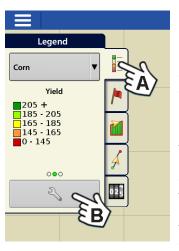
.16 ac

118 lb

376

Map Shift

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.

Follow View

Top-Down

50

✓ Data

▼ Travel Direction

Delay

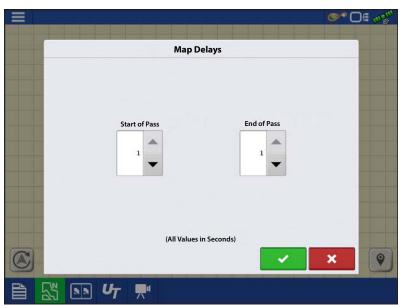


Start of Pass

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.



1.16 at 0.0 mph

Map Options

▼ Boundary

✓ Satellite Imagery

✓ Grid

▼ Row Outlines

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:



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



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

Load Configuration

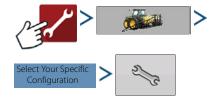


Press the Harvest app from the home screen. Follow Field Operation wizard prompts to load the configuration to the Mapping screen.

Harvest Calibration

A configuration and harvest product specific calibrations must be completed before operating. The configuration setup page will show up as the last step of building a configuration.

Access configuration setup anytime from:





Harvest Products

Grain weight calibrations are stored based on harvest products. A harvest product will need created for each crop type harvested. In some instances multiple harvest products per crop type may exist. In these instances each harvest product will require separate calibrations.



Calibrate Header Height Sensor

Prior to logging data the combine header height sensor must be calibrated for the harvest product to be used. Follow the instructions shown on the screen from the Calibrate Header Sensor wizard.





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

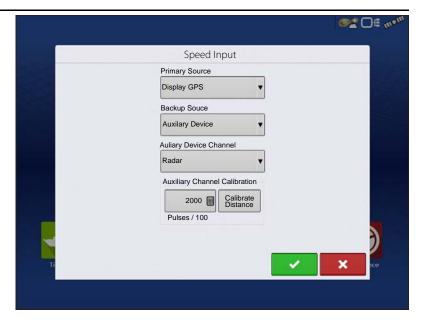
Calibrate Distance

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.

Speed Calibrate
Input Distance

i

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



Vibration Calibration

Vibration Calibration must be performed with the correct head on the combine, and repeated for each harvest product used. This is prompted the first time a harvest product is loaded to the Mapping screen. From configuration setup go to:



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



NOTE!: 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 may now be turned off.
- Notel: Rest of calibration accessed from mapping screen. See "Map View" on page 1.

Grain Weight Calibration

To accurately measure harvested crop, the Ag Leader Yield Monitor must be calibrated. For each harvest product a calibration load/loads must be harvested and paired with the actual load weight measured by a weigh system. Weight calibration can be completed at any time during the season; however it is recommended that calibration be completed at the beginning of the season. Follow the calibration guidelines based on weigh device for best results.

Calibration Methods

Calibration can be completed with one or two calibration loads. More than two calibration loads are possible, but should not be needed in most cases.

i

Note!: One and Two load Calibration is only available on InCommand v2.5+ Displays.

One Calibration Load

Accuracy good enough to see high/low yield trends in the field and make informed decisions based on yield. Accuracy is best when operating at normal operating grain flow rates.

Two Calibration Loads

High quality accuracy through standard grain flow ranges.



Extra calibration loads (more than 2) can be entered for grain flow rates where more accuracy is desired.

Calibration Load Flow Range

Follow suggestions based on how many calibration loads will be completed.

- 1st calibration load Harvest at normal full flow operating range for combine.
- 2nd calibration load Harvest at 50% normal operation range for combine
- Additional calibration loads –Harvest at Incremental speed/flow range changes excluding 1st and 2nd calibration load ranges

Taking a Calibration Load

1. Start new load



2. Harvest calibration load

A. Follow calibration load size suggestions based on weigh device used. See "Selecting Weigh Device" on page 10.

3. End calibration load

End Calibration

4. Empty grain tank

A. Empty the grain tank completely onto weight or transport device. Pay attention and verify all calibration load grain is accounted for.

5. Name calibration load

- **A.** Naming calibration loads is a simple way to track speed/flow range calibration load was taken at for later reference. Example: Combine Name-full flow
- B. to change load name

6. Weight and record calibration load weight

A. Record actual weight of calibration load taken from weigh device and enter

Auto Calibration



The AutoCal weight feature automatically adjusts grain weight calibration after an actual weight is entered into a calibration load, or a prior calibration load is checked/unchecked from the Weight Calibration page. AutoCal defaults to active. When AutoCal is unchecked the calibrate button must be pressed each time the calibration needs to be updated with new loads.

Adding and Removing Calibration Loads within Existing Calibrations



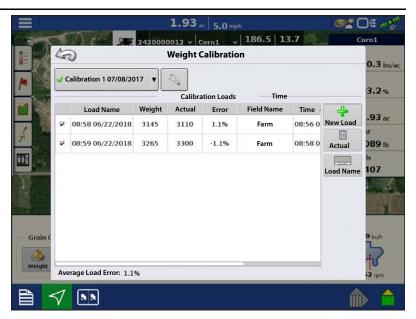
Calibration loads can be added or removed from the existing calibration at any time through the Weight Calibration page. This can be used to remove calibration loads taken that have a high error percentage or add calibration loads at specific flow ranges to improve calibration.

Only loads that are check marked are used in the active calibration.

 The active weight calibration for a machine will have a green checkmark. Other active calibrations for other machines using DisplayCast will still be listed, but will not have the green checkmark. Retired calibrations will not sync over through DisplayCast.



NOTE!: Only edit calibration loads that are within the weight calibration that has the green checkmark.





Moisture Calibration



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



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.



Temperature Calibration



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.

Retiring Calibration Loads



Harvest product calibrations can be retired. When pressed, all calibration loads associated with the harvest product will be removed from the system and a new calibration will be started. This will require a new vibration calibration, grain weight calibration, moisture calibration, and temperature calibration to be completed.

Selecting Weigh Device

Calibration can be completed using either a certified scale, weigh wagon, or a grain cart with calibrated scales. Determine the weigh device that best fits the needs of the operation. For best results use the same weigh device throughout the calibration process of a harvest product.

Certified Scale Guidelines

- 1. Calibration load size: 1 full combine grain tank.
- 2. Always start calibration loads with an empty combine and transport device.
- 3. Calibration loads must be transported and tracked separately from other harvested grain.
- 4. Avoid starting a calibration load opening a field or when switching between varieties.

Weigh Wagon Guidelines

- 1. Calibration load size: 3000lbs up to weight wagon max capacity.
- 2. Always start calibration loads with an empty combine and weigh device.
- 3. Use consistent load size for all calibration loads taken.
- 4. Entire calibration load must fit in weigh wagon without overfilling wagon or leaving grain in combine grain tank.
- 5. Unload from combine directly into weight wagon.
- **6.** Avoid starting a calibration load opening a field or when switching between varieties.

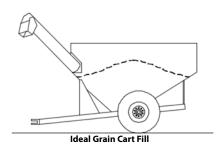
Grain Carts Guidelines

- 1. Calibration load size: 1 full combine grain tank.
- 2. Use consistent load size for all calibration loads.
- 3. Grain cart scale must be calibrated. Ideally calibration is/was completed using one full combine grain tank worth of grain. Recalibrating a grain cart is not the same as taring, or zeroing the scale. Follow calibration procedure within grain cart scale user manual.
- **4.** Before starting a calibration load, make sure the combine and grain cart have harvested and dumped at least 10-20 bushel of grain to prime the augers.
- 5. Always start calibration load with an empty combine and weigh device.
- 6. Only unload in a grain cart sitting still. Weigh calibration load before grain cart is moved to dump.
- 7. Unload into the grain cart when on level ground. Ideally slope should be less than 3.5%.
- 8. Unload directly into the center of the grain cart to achieve symmetrical loading.

Grain Cart Weighing Errors

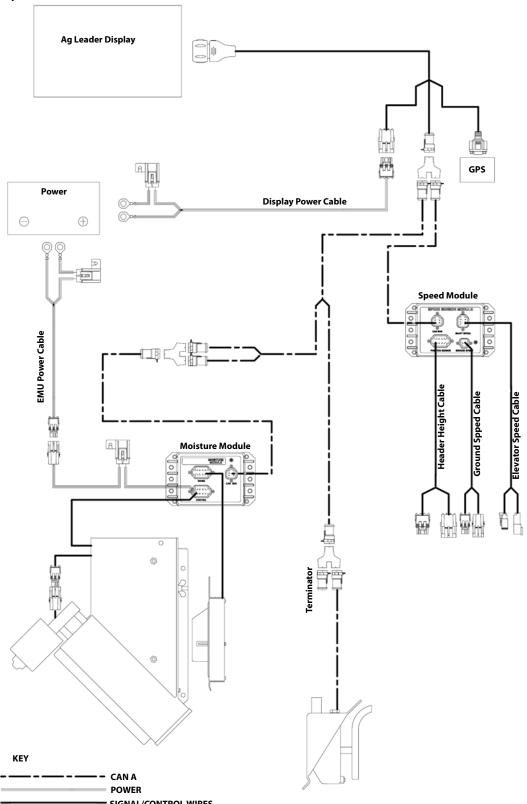
Grain carts with scales provide a convenient way for most operations to easily weigh calibration loads. Ag Leader has done extensive testing to understand how to get the best possible calibration accuracy when using grain cart scales. Through this testing many sources of error were discovered and documented. Follow the guidelines above to minimize common errors when calibrating using a grain cart to achieve an ideal grain cart fill.

For more information about sources of grain cart error and why visit www.support.agleader.com.



PN 2006016–ENG Rev. K 11

Harness Layout



Display Preparation

- Create display backup. 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.



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

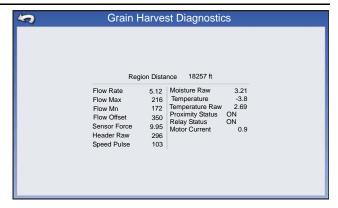
- Verify C1 value is between 0 and -100
 - New vibration Calibration
- Verify C2-C11 is not zero
 - Build new combine and configuration or use initial cal sheets to reset numbers.
- Check Elevator paddle clearance
 - Should be 1/2in or 1.25in for Lexion Combines
- Check Cabling from Monitor to Flow Sensor
- 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.



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