

Software Update 2010-1

Release Notes

Important Notes:

- To ensure proper functionality, you should use the most current version of display software and Apex desktop software (2.5.x.xxx). Please reference software versions at the end of this document.
- StellarSupport™ posts the latest versions of operator manuals available and includes additional information concerning changes in Software Update 2010-1. Please see this site to review your latest manual:

http://stellarsupport.deere.com/en_US/support/OperatorManual-UserGuide.html

- For shapefile users, to ensure proper functionality and compatibility with the shapefile converter and controllers, you must have the latest controller versions installed from SDS.

Customer Contact Center Information

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Release Notice

These are the Software Update 2010-1 Release Notes for the GreenStar™ Displays and Pro Modules for the GreenStar™ 2 (GS2) 2600 display. Apex™ Farm Management Software Release Notes can be found on StellarSupport.com.



Software Update 2010-1

Release Notes

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Summary

Resolved Issues

Displays

GreenStar™ 2 2600 - Documentation

- Product Rates for Locked Tank Mixes can now be viewed
- Raven Sidekick™ is now recognized
- Shapefile Conversion is now possible
- Zero Rate Areas are now shown
- 70 series combine ADU now accepts “zero” cut widths when using Overlap Control

GreenStar™ 2 1800

- New option to turn Activations ON / OFF
- Red X alarm no longer appears after 10 improper shutdowns

Receivers

StarFire™

- New computer Configurator for StarFire 300

Crop Solutions

GreenStar™ 2 Rate Controller

- Dual Boom valves now open during a rinse cycle
- NH₃ or liquid fertilizer sections now properly controlled with GS2 Rate Controller and Swath Control Pro™ for seeding tools and a SeedStar™ 2 Air Cart
- Rate Smoothing can now be user defined from 3% to 15%

Swath Control Pro™

- NH₃ or liquid fertilizer sections now properly controlled with GS2 Rate Controller and Swath Control Pro for seeding tools and a SeedStar 2 Air Cart

Known Issues

Displays

GreenStar™ 2 2600 - Documentation

- Recording performs improperly on combines with a side-mount moisture sensor when using Overlap Control.

Crop Solutions

GS2 Rate Controller

- Inactive status bar when reprogramming a GS2 Rate Controller
- Product Application information lost when SeedStar is connected after GS2 Rate Controller

Swath Control Pro

- Headland Control does not function on interior headlands
- (European Use Only) Product Details function not supported by APEX and some preferred partner desktop software
- Unable to select "Front Rigid 3pt" as connection type for sprayers with front-mounted booms

Items of Interest

Displays

GS2 2600

- 13-Digit Serial Number displayed on activation page
- Auxiliary Control additional features
- "Controller Not Yet Available" message when implement screens unavailable
- DN345 Drawn Dry Box Spreader compatibility
- GPS Accuracy displayed on coverage map
- GreenStar Lightbar support
- Layout manager updates

GS2 2600 - Documentation

- Prescription Rate Unit message added for condition of mismatched rate units
- Raven Sidekick on "hold" is not recognized by the GS2 2600 display
- GS2 can now convert shapefiles on data card
- GS2 can hold a maximum of 254 rates in the prescription shapefile
- GS2 has a limit of 20 characters for naming prescription shapefiles
- Prescription Rate will appear blank when Recording is turned Off
- User must create an "Rx" folder on the data card for saving prescription shapefiles

GS2 1800

- Coverage and guidance accuracy alarms
- GPS Accuracy displayed on coverage map
- GS2 1800 user interface improvements

Receivers

StarFire Receivers

- Dual RTK base station corrections
- TCM calibration message now only appears if fore/aft settings have changed

Guidance

iGuide™

- New GPS diagnostic screen on GS2 2600
- Tuning Guide available on StellarSupport

Crop Solutions

GS2 Rate Controller

- Component approval for GS2 Rate Controller applications
- Flowmeter calibration and units
- GS2 Rate Controller main page
- Multi-Section NH₃
- PWM/PWM Close Control Valve compatibility

Swath Control Pro

- Headland Control prevents product application to headlands
- Home page options

Details

Displays

GS2 2600

Items of Interest

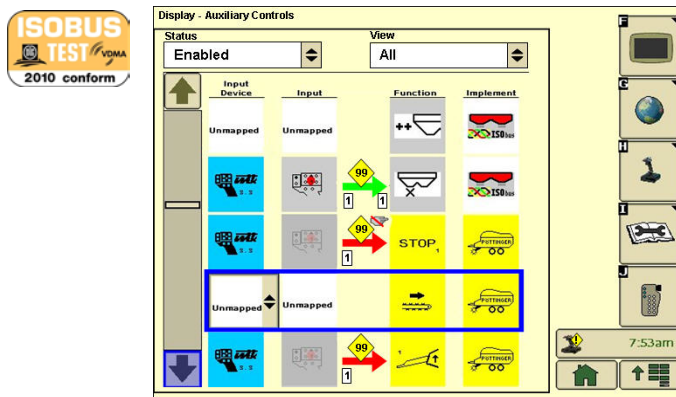
13-Digit Serial Number displayed on activation page – All 13 digits of the display serial number are now displayed on the Activations page. The first 7 digits are important for identifying different display models and remanufactured displays when obtaining activation numbers from StellarSupport.

Auxiliary Control additional features – Auxiliary Control now supports the following features:

Preferred assignment – The implement can request preferred assignments for a specific input based on the implement / input device configuration

Single assignments – When an implement sets a single assignment, this function can only be mapped to *one* button on the input device. And, one button on the input device can only be mapped to a *single* function.

Assignment lock – The implement automatically requests a function that cannot be changed manually



“Controller Not Yet Available” message when implement screens unavailable –

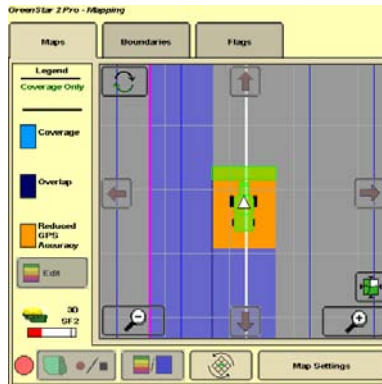
Previous Software: When an implement screen (example: SeedStar, SprayStar™) is selected in a Home Page and no GreenStar 2 application screens are selected, the Home Page setup will not always save after shutdown. This occurs because the implement controller takes more time to load than the display.

Software Update 2010-1: Implement screens setup on Home Pages will save after shutdown. A “Controller Not Yet Available” message will appear when the implement screen is unavailable. There are four possible causes for this message:

- 1) The implement controller is loading slowly
- 2) The implement has been disconnected
- 3) The implement controller has stopped communicating with the display
- 4) The implement screen is shown on a second ISOBUS display on the same CAN bus

DN345 Drawn Dry Box Spreader compatibility – The GS2 2600 display will now automatically detect the DN345 drawn dry box spreader implement type and automatically populate the default dimensions. Then, the operator will be able to manually edit the offsets and implement width.

GPS Accuracy displayed on coverage map – Swath Control Pro and other operations on your GreenStar system may not function properly with degraded GPS signal quality. The level of GPS signal quality is currently shown by the bar graph under the StarFire receiver icon. The blue coverage map can now be set to paint orange when GPS signal quality drops below the level necessary for proper functionality. This level is dependent on the StarFire signal type. Turn on the feature by checking the INDICATE GPS ACCURACY box in Map Settings.



GreenStar Lightbar support – The GS2 2600 display is now compatible with the GreenStar Lightbar.

Layout manager updates – Updates have been made to the GS2 2600 display to help with Home Page setup in Layout Manager:

- Titles for Home Page layout screens in layout manager
- Current Home Page numbers on the home page button
- Larger Home Page selection screens

GS2 2600 – Documentation

Resolved Issues

Product Rates for Locked Tank Mixes can now be viewed –

Previous Software: The operator cannot view product rates for a locked tank mix. The button is grayed out and viewing is not possible on the display.

Software Update 2010-1: The operator can now view base rates for a locked tank mix on the display.

Raven Sidekick is now recognized –

Previous Software: The Raven Sidekick controller is not recognized.

Software Update 2010-1: The Raven Sidekick controller is now recognized as a valid controller for applying prescriptions through Field Doc™ Connect.

Shapefile Conversion is now possible –

Previous Software: The GS2 cannot convert ESRI shapefile prescriptions into a usable format.

Software Update 2010-1: The GS2 can now convert ESRI shapefile prescriptions into the John Deere GreenStar™ format.

Zero Rate Areas are now shown –

Previous Software: The GS2 does not show zero rate areas in the prescription.

Software Update 2010-1: Zero rate prescription areas will now appear black on the GS2.

70 series combine ADU now accepts “zero” cut widths when using Overlap Control –

Previous Software: When passing through previously covered areas while using Overlap Control, a “zero” cut width is encountered. This message causes the combine ADU to revert to a full cut width setting and causes an area mismatch between the GS2 and ADU.

Software Update 2010-1: The ADU will now accept a “zero” cut width.

Known Issues

Recording performs improperly on combines with a side-mount moisture sensor when using Overlap Control –

After updating to the newest software version, it is possible that recording functions may not perform correctly when using Overlap Control on combines with side-mount moisture sensors. It is recommended to turn off Overlap Control and use manual adjustments. If Overlap Control is required, do not update to the newest software version or if the update has occurred, revert back to software version 2.4.1156 before use.

Items of Interest

Prescription Rate Unit message added for condition of mismatched rate units – When formulating a prescription, an operator can select rate units that do not match from the drop down menus. As a result, the Enter button is grayed-out. Now, a warning message informs the operator that the units do not match and a prescription cannot be applied.

Raven Sidekick on “hold” is not recognized by the GS2 2600 display – When the operator switches the Raven Sidekick from Run to Hold to Stop Application, there is no message sent to the display. Therefore, the GS2 2600 display will not indicate that the controller is not in the Run position.

GS2 2600 can now convert shapefiles on data card – The GS2 data card is capable of holding 120 prescription shapefiles. Conversion time varies depending on the size of the prescription shapefile. If the data card is removed during the conversion process or the engine is shut off, the shapefile must be reconverted. Shapefiles must be in the standard ESRI format using the non-projected WGS-84 reference frame before the GS2 will convert the shapefile into a usable format. Customers using AgVance® must update to the most recent version of AgVance software before the GS2 will convert AgVance prescription shapefiles.

It is recommended that prescription shapefiles that use grid cells have a cell size of 50 feet by 50 feet (15 by 15 meters) to optimize the performance of the GS2 Shapefile Converter. Shapefiles that have a grid cell size smaller than 50 feet by 50 feet (15 by 15 meters) will still convert properly in the GS2 but conversion time will be increased.

GS2 can hold a maximum of 254 rates in the prescription shapefile – If more than 254 rates are present in the prescription shapefile, the GS2 will automatically reduce the number of rates (to 254 rates) by minimizing the differences between the shapefile and the generated prescription.

GS2 has a limit of 20 characters for naming prescription shapefiles – When naming prescription shapefiles, make sure that the product name (potash, MAP, DAP) is included in the first 20 characters. This will allow users to know which prescription shapefile and product is being converted. Example: **MAPSmithFarmsHome**

Prescription Rate will appear blank when Recording is turned Off – Prescription Rate will appear blank on the GS2 if Recording is turned OFF, but the Target Rate will still be populated. The Prescription Rate will appear when Recording is turned ON.

User must create an “Rx” folder on the data card for saving prescription shapefiles – When saving prescription shapefiles to the data card, an “Rx” folder must be created on the compact flash card. All prescription shapefiles *must* be saved to this folder.

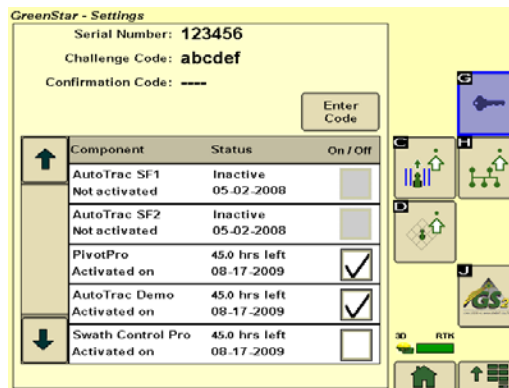
GS2 1800

Resolved Issues

New option to turn Activations ON / OFF –

Previous Software: On Swath Control Pro capable implements (example: SeedStar 2) the Swath Control Pro 15-hour Demo is active. The user can accidentally turn ON Swath Control Pro and not be aware of it.

Software Update 2010-1: AutoTrac and Swath Control Pro activation buttons can now be hidden or shown by checking the activation ON or OFF on the Activation Page. Removing unused buttons simplifies navigation and reduces the chance of errors. The Swath Control Pro activation will be OFF by default. Notice that turning a Demo activation OFF will only hide the corresponding button. It will not stop the Demo activation time from counting down if the activation has been setup and started.



Red X alarm no longer appears after 10 improper shutdowns – Installing a display without a constant power connection will not allow the display to shutdown properly when the vehicle key is switched off. This will cause a loss of data and settings.

Previous Software: The GS2 1800 display will lock up on a red X alarm following 10 consecutive improper shutdowns.

Software Update 2010-1: The display will no longer lock up with the red X alarm after Option 1 or Option 2 is completed. Remember, the best solution is to connect both switched and unswitched power so data is not lost.

Option 1:

Install Software Update 2010-1 and the fix will take effect the *next* time the display is updated.

Option 2:

- 1) Install Software Update 2010-1
- 2) Install the previous software version using Message Center or a USB
- 3) Install Software Update 2010-1 again

Items of Interest

Coverage and guidance accuracy alarms – Map distortion and accuracy loss can occur when recording a coverage map or guidance track a long distance from the first recorded coverage (reference) point or the track’s “A” point. Now messages inform the user when operating at a

distance greater than 20 miles from the reference point or “A” point. The messages have convenient shortcut buttons for the user to change fields or tracks.



GPS Accuracy displayed on coverage map – Swath Control Pro and other operations on your GreenStar system may not function properly with degraded GPS signal quality. The level of GPS signal quality is currently shown by the bar graph under the StarFire receiver icon. The blue coverage map can now be set to paint orange when GPS signal quality drops below the level necessary for proper functionality. This level is dependent on the StarFire signal type. Turn on the feature by checking the INDICATE GPS ACCURACY box in Map Settings.

GS2 1800 user interface improvements – Several improvements have been made to the GS2 1800 based on customer feedback:

- Text on softkeys for GreenStar main page improves navigation (English only)
- Color changes to some of the icons make them more visible and recognizable
- Guidance Track Change button placed on the Run Page allows user to change guidance tracks without leaving the Run Page



- Clear Coverage Maps button placed on the Field Setup page for quicker and more intuitive access



A shortcut button to clear coverage maps was also placed on the message that appears when the coverage map has reached its memory size limit

- New Track button added to the Guidance Setup page for more intuitive setup

Receivers

StarFire™ Receivers

Resolved Issues

New computer Configurator for StarFire 300 –

Previous Software: The StarFire 300 receiver must be configured with a display.

Software Update 2010-1: Operators can now configure the StarFire 300 receiver with a laptop or personal computer. A configurator tool is available through StellarSupport.com. No display is required to configure the StarFire 300 receiver.

Items of Interest

Dual RTK base station corrections – When the iTC receiver identifies corrections from more than one base station, the iTC will display a message to inform the operator and ask the operator to verify that the network IDs are unique.

TCM calibration message now appears only if fore/aft settings have changed –

Previous Software: When the iTC receiver is moved from one vehicle to another, the iTC will display a message informing the operator to recalibrate the TCM.

Software Update 2010-1: The iTC will only display a message informing the operator to perform a TCM calibration if the fore/aft settings (which are read from the SSU) have changed. The message is not displayed when moving the iTC between identical platforms (example: from an 8330 Tractor to an 8530 Tractor).

Guidance

iGuide

Items of Interest

New GPS diagnostic screen on GS2 2600 – GS2 2600 GPS diagnostics screen (page 2) has changed. In addition to the current information, this page now displays the following information:

Inline Distance – Distance from Machine receiver to the Implement receiver.

Lateral Distance – Distance from the center of the machine to the implement receiver (Receiver Lateral Offset).

Since dimensions are critical for iGuide performance, this information can be used to verify that dimension offsets are correctly entered in the GS2 display.

Tuning Guide available on StellarSupport – A tuning guide is posted for iGuide that will facilitate the work of dealers and customers when performing setup and tuning iGuide. The guide can be found at this site:

http://stellarsupport.deere.com/en_US/support/pdf/iGuid_docs/iGuideTuningGuide.pdf

Crop Solutions

GreenStar 2 Rate Controller

Resolved Issues

Dual Boom valves now open during a rinse cycle –

Previous Software: The Dual Boom valve will not open during a rinse cycle.

Software Update 2010-1: The Dual Boom valve will now open during a rinse cycle.

NH₃ or liquid fertilizer sections now properly controlled with GS2 Rate Controller and Swath Control Pro for seeding tools and a SeedStar 2 Air Cart –

Previous Software: When using GS2 Rate Controller on a seeding tool and a SeedStar 2 air cart, Swath Control Pro improperly controls NH₃ or liquid fertilizer sections if the number of NH₃/liquid fertilizer sections is less than or equal to the number of tanks on the air cart.

Software Update 2010-1: Swath Control Pro now properly controls the NH₃/liquid fertilizer sections.

Rate Smoothing can now be user defined from 3% to 15% –

Previous Software: The Rate Smoothing on the Rates Tab is set to 3% and cannot be changed by the operator.

Software Update 2010-1: The Rate Smoothing on the Rates Tab can be defined by the operator. The percentage can be between 3% and 15%.

Known Issues

Inactive status bar when reprogramming a GS2 Rate Controller – When reprogramming a rate controller, it is possible that the status bar will not update correctly and appear unresponsive even though the controller is updating. It is advised to wait 10 minutes before cycling power. The GS2 Rate Controller softkey will be available on the menu page when the reprogramming is complete.

Product Application information lost when SeedStar is connected after GS2 Rate Controller – If SeedStar is connected after the GS2 Rate Controller and product application information has already been entered, this information will be lost due to a controller hierarchy conflict. It is advised to input documentation information after all controllers are connected.

Items of Interest

Component approval for GS2 Rate Controller applications – To accommodate additional configurations and platforms, the GS2 Rate Controller is approved to work with specific components (section valves, flow control valves, flowmeters, clutches, etc). Additional information in the Operator Manual is provided to allow custom harnesses to be created in the field to support additional, unique platforms beyond those supported with harnesses through AMS. The Drivers table at the back of the operator manual has been updated also.

Flowmeter calibration and units – Two additional Flowmeter Units, 10 gal and 10 L, have been added to give the operator the ability to better tune the Flowmeter calibration number. Therefore, operators using a Raven Flowmeter will not have to divide the number by 10 if they use the 10 gal or 10 L units. The Flowmeter units will default to “gal”.

GS2 Rate Controller main page – The tank icon has been changed to a circle for NH₃ applications to be more representative of an NH₃ tank.

Multi-Section NH₃ – The GS2 Rate Controller now supports up to ten sections in NH₃ applications. A “Bleed Section Test” has been added to the Diagnostics Test section for NH₃. Previous versions supported one section in NH₃ applications.

PWM/PWM Close Control Valve compatibility – The GS2 Rate Controller is now compatible with PWM (pulse width modulation) and PWM Close valves for liquid applications on self-propelled sprayers, pull-type sprayers, and liquid fertilizer tools. It is recommended that an external pump on/off switch is wired into the cab if one is not already present. This will allow the operator to shut off the pump. Refer to the pump manufacturer’s Operator Manual for more information.

Swath Control Pro

Resolved Issues

NH₃ or liquid fertilizer sections now properly controlled with GS2 Rate Controller and Swath Control Pro for seeding tools and a SeedStar 2 Air Cart –

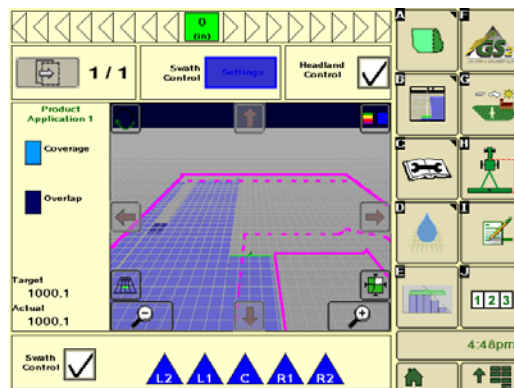
Previous Software: When using GS2 Rate Controller on a seeding tool and a SeedStar 2 air cart, Swath Control Pro improperly controls NH₃ or liquid fertilizer sections if the number of NH₃/liquid fertilizer sections is less than or equal to the number of tanks on the air cart.

Software Update 2010-1: Swath Control Pro now properly controls the NH₃/liquid fertilizer sections.

Known Issues

Headland Control does not function on interior headlands –

Headland Control is designed to prevent product from being applied to exterior headlands; however, it does not function on interior headlands. Replacing the interior headland with an internal boundary is one way to work around this issue. Swath Control Pro will recognize the interior boundary and stop applying product when arriving at the boundary.

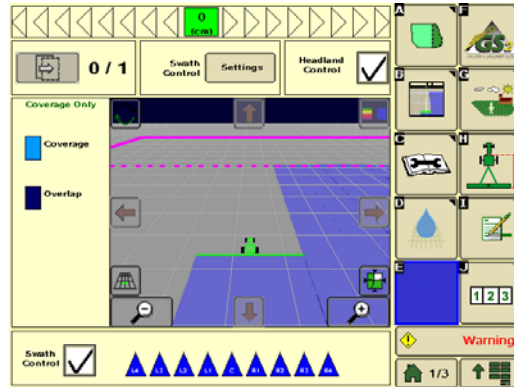


(European Use Only) Product Details function not supported by APEX and some preferred partner desktop software – Product details data will be available in the GS2 display, but this data will not be available in Apex and several other desktop software. Please contact your desktop software provider for any additional product details and information.

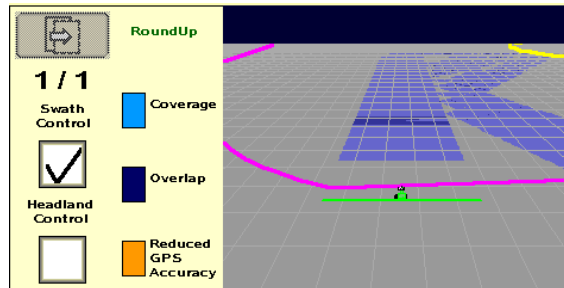
Unable to select “Front Rigid 3pt” as connection type for sprayers with front-mounted booms – The connection type “Front Rigid 3pt” is not available for self-propelled sprayers. It is advised to set up the machine as a tractor with a front-mounted implement to accommodate a front-mounted boom sprayer.

Items of Interest

Headland Control prevents product application to headlands – With Headland Control enabled, Swath Control Pro will apply product to the main portion of the field but will not apply product on the exterior headlands. This functionality may be a useful tool for planting/seeding operations. For more details, please go to www.stellarsupport.com and read the section “Swath Control Pro” in the GS2 Basic Operator Manual.



Home page options – A Swath Control Pro half-screen option has been added to include more useful information for the operator.



January Software Update 2010-1

Release Notes

Software Versions

Version #	Description	Software Update	N/A Key	EU Key
2.5.1111	GS2 2600 Display	PFA10006		
2.3.177	GS2 1800 Display	PF81371		
ITC 1.02 J	StarFire 3000	PFA10027	PFA10027	
ITC 3.60 D	StarFire Receiver iTC	PFA10025	PFA10025	PFA10025
LCR 1.01 D	StarFire 300	PF81250	PF81250	PF81250
SF 7.70 B	StarFire Receiver Gen II	Included in SU	On Keycard	On Keycard
TCM 1.09 A	TCM	Included in SU	On Keycard	On Keycard
ATU 1.13 A	ATU	PFA10029	PFA10029	PFA10029
ATU 2.13 B	ATU 200	PFA10030	PFA10030	PFA10030
GRC 3.10 F	GS2 Rate Controller	PF81203		
RG2 2.01 E	Universal Row Guidance	PF81368		
CAT 1.00 W	AutoTrac Controller	PF81369		
GSD 1.97 B	Original GreenStar Display	Included in SU	PF353147	PF366125
HMCT 1.06 B	Harvest Monitor Cotton SCM	Included in SU	On Keycard	
CMFS 2.07C	Cotton Mass Flow Sensor CMFS	Included in SU	On Keycard	
SMON 1.73 A	Original Harvest Monitor SPFH	Included in SU	On Keycard	On Keycard
HMON 1.20 C	Harvest Mon for Combine with In-Tank Moisture	Included in SU	On Keycard	On Keycard
MST 7.01 B	Harvest Mon for Elevator Mount Moisture Board	Included in SU		
AC2 11	Original Air Cart	Included in SU	On Keycard	
SMVR 1.01M	SeedStar Gen II	Included in SU		
CDOC 3.56 A	Field Doc Connect		On Keycard	On Keycard
FDOC 3.57 A	Field Doc Basic		On Keycard	
TRAC 5.06A	Keycard		On Keycard	On Keycard
ADOC 1.25 A	Field Doc AirCart		On Keycard	
PDOC 3.55 A	Field Doc Planter		On Keycard	
PDOC 6.78 A	Field Doc Planter			On Keycard
SDOC 3.44 A	Field Doc Sprayer		On Keycard	On Keycard
HDCT 1.13 A	Harvest Doc Cotton		On Keycard	
HDSP 4.13 A	Original Harvest Doc SPFH		On Keycard	On Keycard
HDOC 1.54 A	Harvest Doc Combine		On Keycard	On Keycard
YMAP 6.61 A	Combine Yield Mapping		On Keycard	
MST 6.60 B	Combine Yield Monitor (Gen I Moisture Sensor – ISO 2.5v Dual CAN)		On Keycard	On Keycard
MST 5.60 A	Combine Yield Monitor (Gen I Moisture Sensor – Deere 4/5 CAN)		On Keycard	
1.12A	Lightbar	Via Service Advisor		
YWW0D6_6.Y12	Reprogramming back to Combine Yield Mapping			
3.31G	GS2 Harvest Doc SPFH (controller)	Via Service Advisor		
---	Harvest Lab Sensor	See John Deere Dealer		

Please visit the Software Delivery System (SDS) to view and/or update all other controllers