Generation 4 Displays
20-3 Software

Software Update

Package	Version
Generation 4 OS	10.18.1754-89
Generation 4 OS Help	10.5.91-7
AMS Applications	10.18.1754-89

Generation 4 OS installation time: Approximately 20 minutes, with no existing data. Installation time will vary depending on the amount of existing data and the software version currently on the display. The latest packages for the Generation 4 Displays can be downloaded and installed over-the-air or using a USB drive and John Deere Software Manager. Reference "Software Installation Instructions" in Software Updates section of the Stellar Support website for more information.

Over-the-air reprogramming

https://youtu.be/XSG7O3_9KGI?list=PL1KGsSJ4CWk4fhvFOaBZz261XGwPfXvqk

Machine Application Software Updates

Machine applications are located under Machine Settings in the Generation 4 Display menu. A John Deere dealer will be required to install any required updates to machine application software using Service ADVISOR™.

Other Controller Software Updates

Software for the controllers listed below can be updated using the Generation 4 display.

Controller
Application Controller 1100
Application Controller 1100 (S.N. PCXL01C201000-)
Application Controller 1120
Application Controller 1120 (S.N. PCXL02C201000-)
AutoTrac™ Universal 100
AutoTrac™ Universal 200
AutoTrac™ Universal 300
GreenStar™ Rate Controller Dry
GreenStar™ Rate Controller
StarFire™ 3000 Receiver
StarFire™ 6000 Receiver
AutoTrac™ Vision Guidance

Important Note

- A new operational reminder has been added to the display which will appear each time the display performs a cold boot. The intent of this message is to remind operators to read the operator's manual prior to using the product.

  Common conditions that trigger the display to perform a cold boot and display this reminder:
  - o 20 warm boots have been completed since last cold boot.
  - o Constant (unswitched) electrical power is removed from display. This commonly occurs when a battery disconnect switch is used.
  - o Certain display processes, such as changing display language, request a cold boot.

ⓘ Operational Reminder

Read Operator's Manual Prior to Using this Product
The Operator's Manual for this display can be found in the Help App

[↱ **Embedded Operator's Manual**]

Download Operator's Manual/ Purchase/ Request Printed Copy

Scan the QR code with a mobile device
or visit https://techpubs.deere.com/
or contact your local John Deere dealer

[✔ OK]

New Features and Improvements

AutoPath™

- AutoPath™, a new activation type and guidance track is now available on tractors, combines, cotton harvesters, and self-propelled sprayers with Generation 4 4600 CommandCenter™ or 4640 Universal Displays. The AutoPath™ activation will be included as part of the Automation 4.0 activation or subscription bundle. AutoPath™ uses recorded operation data, machine offsets, and track spacing to create guidance lines for subsequent operations in that field. AutoPath™ reduces guesswork and operator input needed to accurately navigate through standing crops. AutoPath™ lines reduce setup time, wrong guess rows, and crop damage from inaccurate guidance setup.

Before using AutoPath™ guidance lines, import AutoPath™ line data from John Deere Operations Center. AutoPath™ line data is included in the setup file. From the Guidance Track List, select AutoPath™ to create guidance lines. Once the AutoPath™ lines are generated, the date and type of the source operation are displayed. On the map, guidance lines are displayed in blue and rows are displayed in yellow. Shift track is compatible with Autopath™ to compensate for position errors introduced in source data, however there is a limit to the amount that Autopath™ lines can be accurately shifted.

NOTE: *Only one AutoPath™ file can be imported per field. If a second AutoPath™ file is imported, the older file is overwritten. AutoPath™ files cannot be exported from the display.*

Link to feature demonstration video: https://youtu.be/S-PxKpnIK2w

AutoPath™ Source Operation Requirements:

The source operation is the recorded operation that is used to generate AutoPath™ lines.

NOTE: *The accuracy of AutoPath™ lines depends on the accuracy of the source operation data. When recording the source operation, active implement guidance or AutoTrac™ implement guidance is recommended.*

NOTE: *Verify that TCM is calibrated on all receivers (machine and implement).*

Compatible source operations are planting and tillage.

If the source operation does not include row data, any subsequent operation in that field, such as planting, product application, or harvesting, must contain defined rows for AutoPath™ to generate guidance lines.

Source operation data sent to John Deere Operations Center must be recorded using:

- StarFire™ Receivers with SF3 signal level or greater on both the machine and the implement.
- A 4640, 4600, 4240, or 4200 Display.

  NOTE: *John Deere Generation 4 Displays must have software version 10.10.404-XXX or newer.*

AutoPath™ Source Operation Compatible Implements:

- John Deere planter with a SeedStar™ 2 monitoring system or newer
- Non-John Deere ISOBUS planter
  - o Working width must be set as rows
  - o If row width is greater than 254 cm (100 in), subsequent operations require defined rows.
- Virtual planter (implement without a control unit)
  - o Working width must be set as rows
- John Deere tillage implement with control unit
  - o It is recommended to set the working width as rows.
  - o If the working width is not set as rows, or if the row width is greater than 254 cm (100 in), subsequent operations require defined rows.

AutoPath™ Usage Requirements:

- Setup file from John Deere Operations Center contains AutoPath™ data.
- 4600 or 4640 Display must have an AutoPath™ activation and software version 10.18.1754-XX or newer.
- Machine is equipped with a StarFire™ Receiver using SF3 signal level or greater.

  NOTE*: AutoPath™ machines must use the same correction level that was used when recording the source operation. Mixing correction level between the source operation and AutoPath™ operations will result in accuracy issues when using AutoPath™.*

- Machine is equipped with integrated AutoTrac™.
- Crop type must be corn, popcorn, cotton, edible beans, soybeans, sugar beets, or sunflowers.

AutoPath™ Usage Compatible Machines:

- John Deere machines equipped with integrated AutoTrac™ and compatible with Generation 4 4640 displays or 4600 CommandCenter™.
- Hagie sprayers equipped with integrated AutoTrac™ and compatible with Generation 4 4640 displays or 4600 CommandCenter™.

  NOTE: *For optimal performance, use RowSense™ with AutoPath™.*
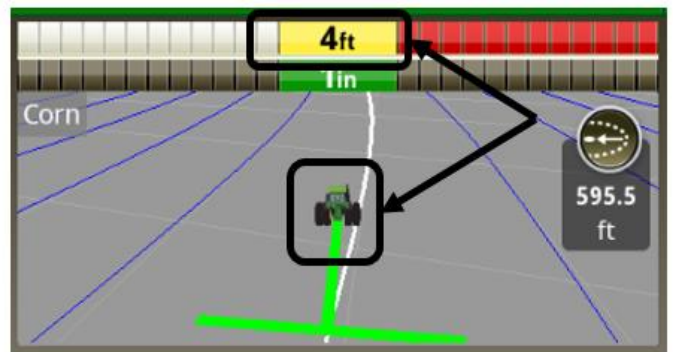
AutoTrac™ Implement Guidance

- Implement guidance light bar is now added automatically to default guidance run page and large map modules when AutoTrac™ Implement Guidance is enabled.
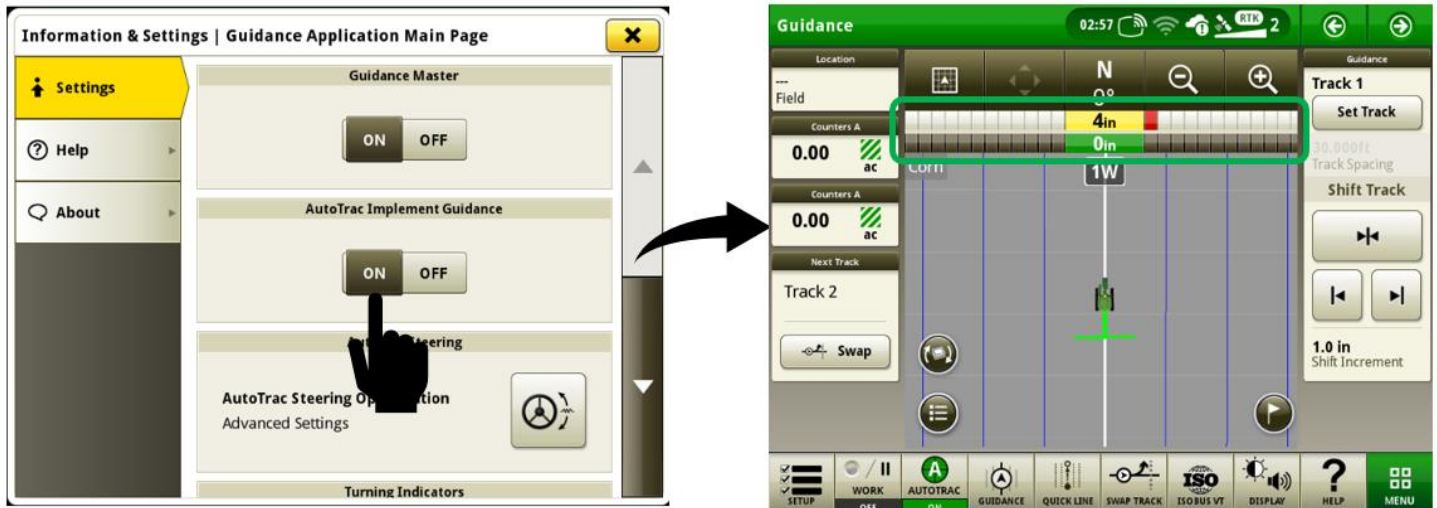
- Machine guidance light bar now displays the off-track error of the machine in relation to the guidance track when AutoTrac™ Implement Guidance is enabled. In previous software versions, the machine guidance light bar displayed the off-track error of the machine in relation to the desired machine position to keep the implement on the guidance track. With this change, it is normal to see a larger off-track error displayed on the machine guidance light bar when the system is intentionally steering the machine off the track to maintain the position of the implement on the guidance track.
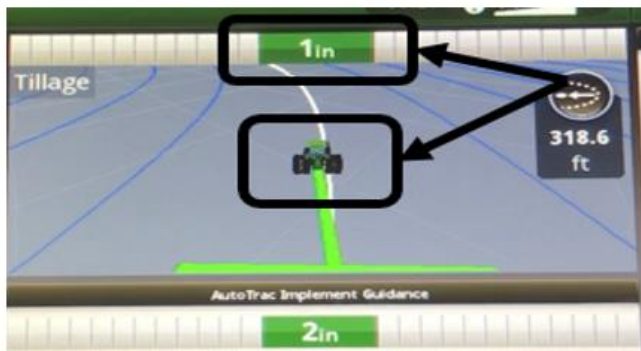

Behavior prior to 20-3 software

Behavior with 20-3 software

- When AutoTrac™ Implement Guidance is enabled, the track is now selected (highlighted with a thicker white line) based on the machine position. This allows an operator to engage AutoTrac™ when the machine is within 40% of track spacing. In previous software versions, the track was selected when the center of the implement was within 40% of track spacing.

Machine Sync

- Generation 4 Machine Sync now supports multiple harvesting platforms in addition to combines by allowing both tractors and self-propelled forage harvesters to be the leader machine. To further support various harvesting operations, the following features have been added in this update:

  o A U-shaped operational zone allows for unloading on the right side, left side, or behind the leader machine. The operator of the leader machine can change the operational zone shape in Machine Sync Information & Settings. The U-shaped operational zone is adjustable in both interior length and width to support different harvesting implements.

  o The ability to set multiple home points has also been added. The operator of the follower machine can enable or disable multiple home points in Machine Sync Information & Settings.

  o Controlled traffic allows the follower to track on a guidance line while still having its speed controlled by the leader. The follower will only be able to be nudged forward and backward while in controlled traffic mode. The operator of the follower machine can enable or disable the controlled traffic feature in Machine Sync Information & Settings.

  o Home point can automatically be updated to the machines new location after being nudged. The operator of the follower machine can enable or disable "Save Nudges for Next Connection" in Machine Sync Information & Settings.

  o If in a tractor, go to Machine Sync Information & Settings to define the tractor as either the leader or follower.
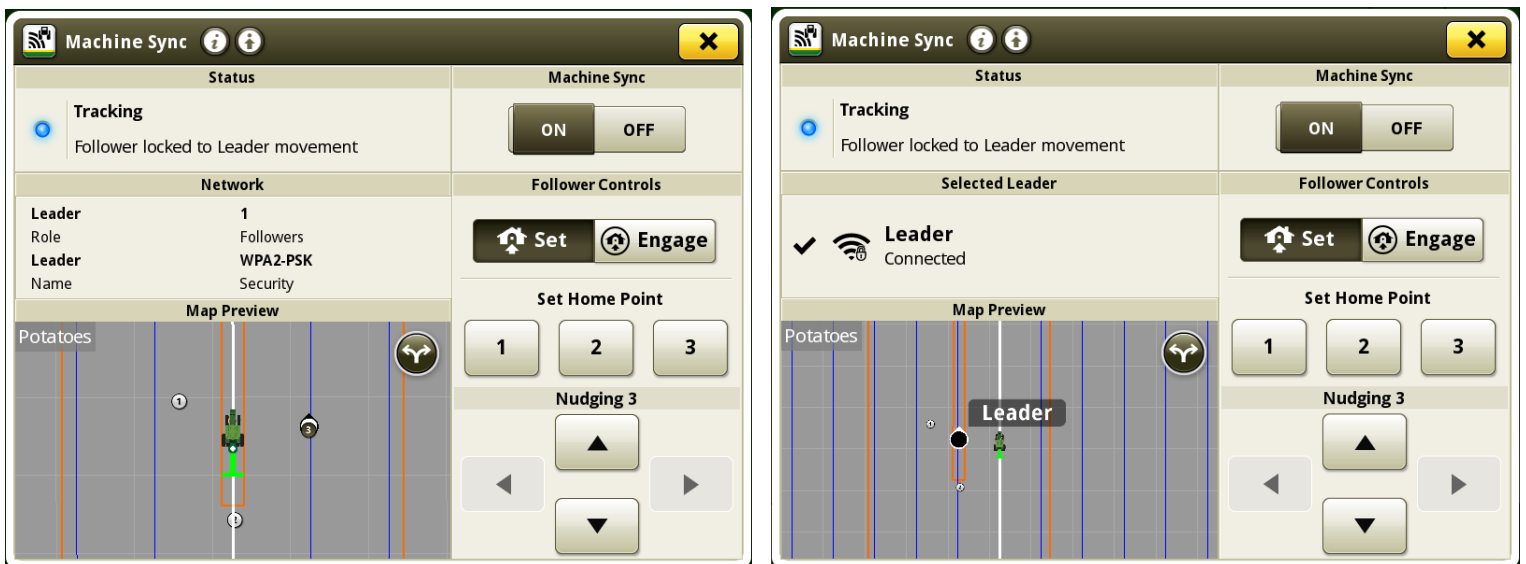
View from both a leader and follower machine with a U-shaped operational zone, multiple home points, and controlled traffic enabled.

Equipment Manager

- Tractor machine profiles can now support a single front implement with an AEF certified ISOBUS control unit. Additionally, tractor profiles are now capable of operating with simultaneous use of both a single front implement and single rear implement with AEF certified ISOBUS control units.

- Additional machine-based recording triggers are now available within the virtual (non-detected) tractor machine profile. Examples of these recording triggers would include SCV's, PTO, hitch, etc.

    NOTE: *This functionality is only available on machines that publish recording triggers on the CAN Bus for displays to use.*

Universal Display Compatibility

- 4640 Universal Display is now compatible with John Deere 50 and 60 series combines. This enables documentation with the moisture sensor on these machines.

    NOTE: *VIN detection is not supported on these machines.*

COM Port Settings

- LH 5000 device support has now been added. Configure this device within the COM Port settings application. Select Device Type as "Field Doc Connect" and Manufacturer as "LH Technologies". LH 5000 will display as a profile in Equipment Manager after it is configured. Within Equipment Manager, the LH 5000 can then be attached to any implement or machine profile that is a seeder, spreader, or sprayer.

Users & Access

- Additional access group options have been added within the System tab, File Manager application to prevent operator profiles from modifying settings for Display Registration, Data Sync – Work Data and In-Field Data Sharing.
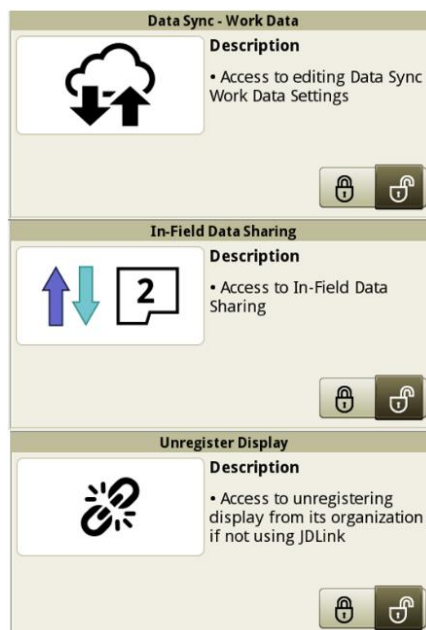
Sharing

- Grain tank fill level is now displayed as a percentage instead of a fraction within Machine Sync run page modules. Combines that are connected to the sharing workgroup will have the grain tank icon with the tank fill percentage shown. If a combine is using Machine Sync, but not connected to the sharing workgroup, then the grain tank icon is shown, but no fill level will be available for that machine.

- A new run page module has been added to allow operators to quickly view grain tank fill status of combines in a sharing workgroup. The module displays the fill status of up to six detected combines in the workgroup. In addition to fill status, the module also displays an unloading auger icon when a machine is actively unloading. No fill status percentage is shown if a status is not provided by the machine or if the fill level is below the minimum value reported by the machine. If an operator appears with the label "---", they can resolve this by ensuring that operator license setting is enabled (Work Setup > Advanced Settings > Enable Operator License) and then enter their desired name in the Details section of the Work Setup application.
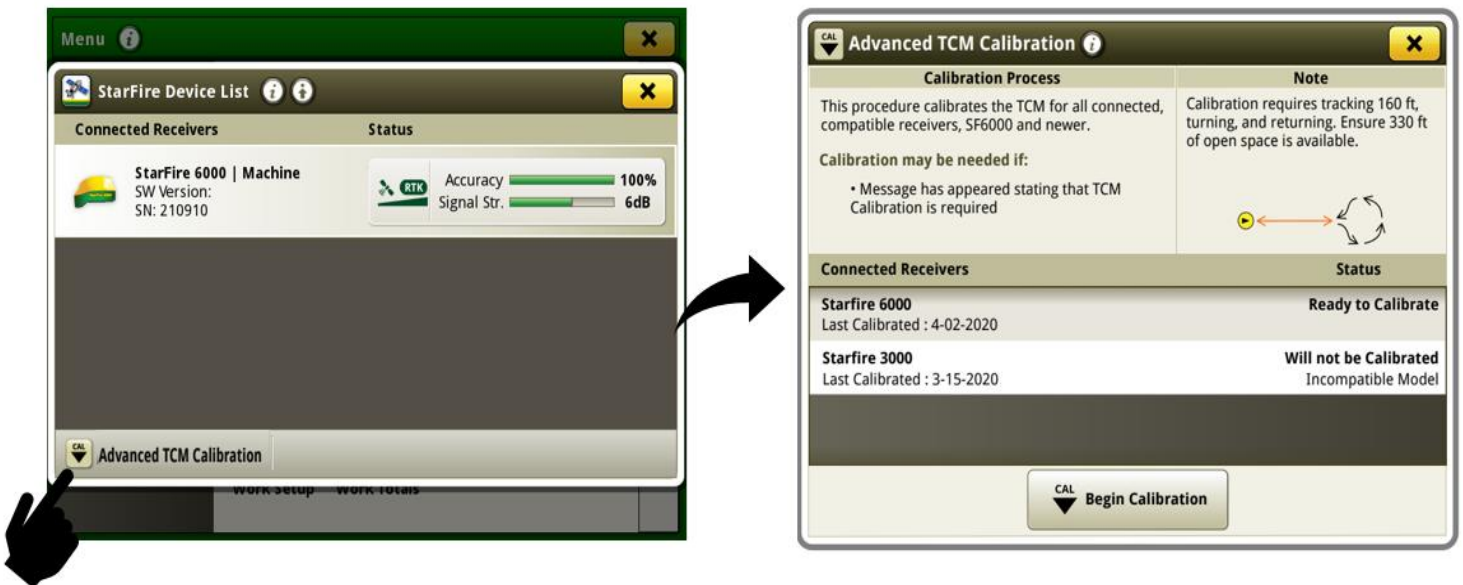
StarFire™

- A new TCM calibration procedure called Advanced TCM Calibration has been added to provide an easier and more precise method of achieving an accurate TCM calibration. Advanced TCM calibration can calibrate the TCM of multiple receivers at once and does not require the machine or implement to be located on level ground. From the Menu, select Applications, then the StarFire™ application. In the StarFire™ application, there is now a button for Advanced TCM Calibration. Select this button, then read the calibration page. Errors are shown in the status section if a condition is present that will prevent the calibration from starting. Verify that the receiver status shows "Ready to Calibrate". Ensure that 101 meters (330 feet) of open space is available around the machine, then press Begin Calibration. Proceed through the onscreen prompts to allow the machine to complete the calibration.

Requirements:

  o StarFire™ 6000 with software version 4.40N (software bundle 20-2) or newer

  o Generation 4 4600 CommandCenter™ or 4640 Universal Display with 20-3 software

  o Valid AutoTrac™ activation

StarFire™ Shared Signal

- 4200 CommandCenter™ and 4240 Universal display now support shared signal functionality between StarFire™ receivers.

Software Manager

- The software release bundle name has been added to the System Information tab within the Software Manager application. This helps with quickly identifying which Gen 4 OS software release is installed on displays without looking up the specific version number. Software release bundle numbers identify the last two digits of the year in which the release occurred, followed by the sequential production release number for that year. For example, 20-3 would identify the third Gen 4 OS release bundle of 2020.


Maintenance & Calibrations

- The range available for manually adjusted radar frequencies has been expanded. Previously, the display would accept values between 32.11 – 39.25 Hz/kph (51.67 – 63.16 Hz/mph). The display will now accept values between 0.1 to 62.13 Hz/kph (0.1 – 99.99 Hz/mph). This does not affect the acceptable range for the radar calibration procedure, which will still fail if the calibration value is outside of 32.11 – 39.25 Hz/kph (51.67 – 63.16 Hz/mph).

Settings Manager

- iTEC™ sequences and Run Pages (including short cut buttons) can be stored within a settings configuration in the Settings Manager application. These settings configurations can be exported to a USB in order to import the settings to another machine display.

  Settings configuration from John Deere trailed sprayer (Series M700, R700, M900, R900) can be stored in the Settings Manager application and exported to another machine display in order to re-use settings from this machine.
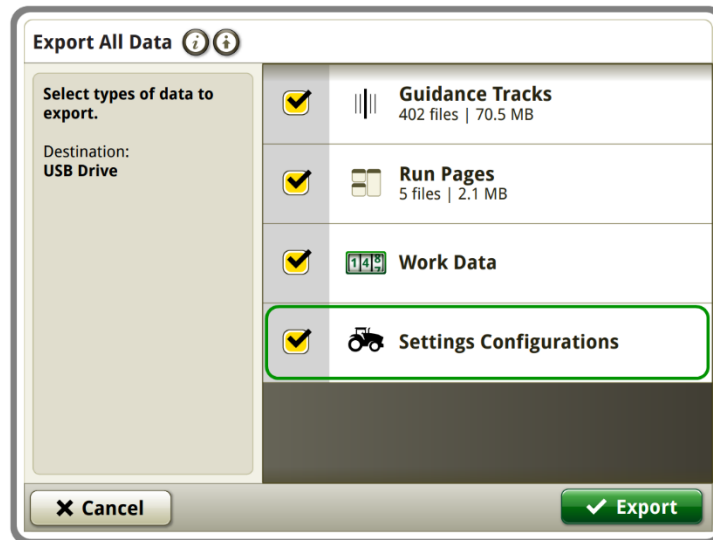
NOTE: *John Deere trailed sprayers must have software version 10.20 or higher installed. John Deere trailed sprayers are not available in every country.*

Diagnostics Center

- Additional values are now displayed within MTG and Network pages on the Network tab of the Diagnostics Center application. These values can help to diagnose network connection issues or performance issues with features that require internet connection.

11
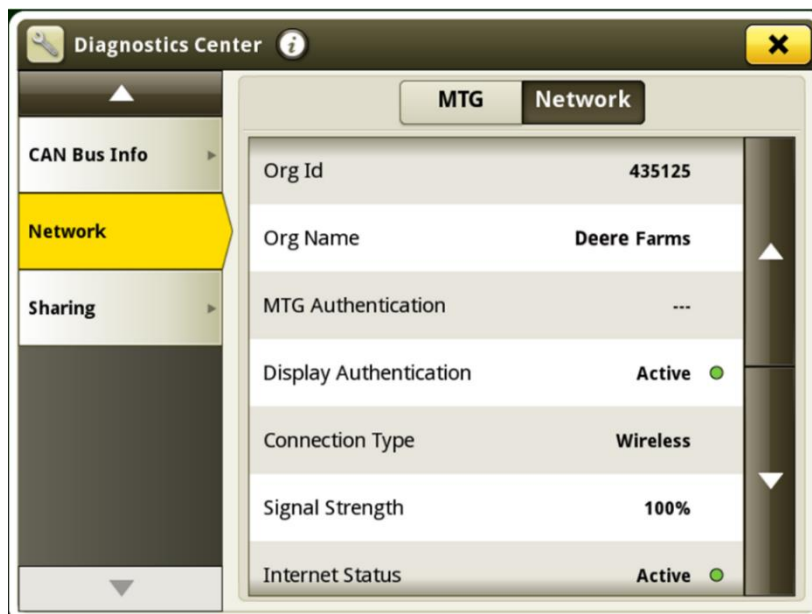
Resolved Issues

The following issues are fixed in software update 10.18.1754-89:

General (May Apply to Multiple Field Operations)

- Generation 4 CommandCenter™ displayed "---" for wheel slip and speed when configured in dual display mode
- Generation 4 Universal Display's default offsets were incorrect for 9030T series, model year 2012-2014 9RT, 8030T series and model year 2010-2013 8RT tractors
- Repetitive side to side off-track error (S-ing) may be experienced while exiting headland using AutoTrac™ Turn Automation and AutoTrac™ Implement Guidance
- Data Sync could become unresponsive and prevent In-Field Data Sharing and Data Sync from functioning with "Operations Center organization must be found" error
- Original GreenStar™ Monitor application was missing translations for some display supported languages
- Dark green line may appear on map as an extended drawbar or hitch when an implement profile was used without an operation defined
- Diagnostic trouble code (DTC) notification may continue to sound with no DTC's present

Planting/Seeding

- Display could become slow or unresponsive while using Planting or Seeding applications

Product Application

- Manure Constituent Sensing could fail to connect with partner tanker after warm boot

Cotton Harvesting

- Send Times tab was unavailable when using Harvest Identification, Cotton Pro without a cellular connection

Forage Harvesting

- Area counter values incorrectly increment on armrest display when Generation 4 4640 display is connected in dual display configuration

Additional Information and Training Resources

Operators Manual

A copy of the Generation 4 display operators manual is available within the Help Center application on the display with Generation 4 OS software version 10.16.1400-85 and newer. This content is updated with software updates as needed. Always read the latest operators manual prior to operation. To obtain a copy of the operator's manual, see your dealer or visit techpubs.deere.com.

Onscreen Help

Onscreen help supplements the information found in the Operator's Manual. The onscreen help can be referenced by opening the Help Center application on the display or by pressing the Information icon at the top of any page to view relevant help information for that page. Generation 4 Display Onscreen Help is also available for reference at displaysimulator.deere.com.

Training Simulators

To learn more about the Generation 4 Displays, there is an online training simulator available at displaysimulator.deere.com

Release Notice

These are Generation 4 OS and AMS Applications software update release notes for the Generation 4 Displays.   Release notes can be found on www.stellarsupport.com Note: Your use of the software is governed by the End User License Agreement included with the software.

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