

Generation 4 Displays

21-1 Software



Software Update

Package	Version
Generation 4 OS	10.19.1893-81
Generation 4 OS Help	10.6.99-12
AMS Applications	10.19.1893-81

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

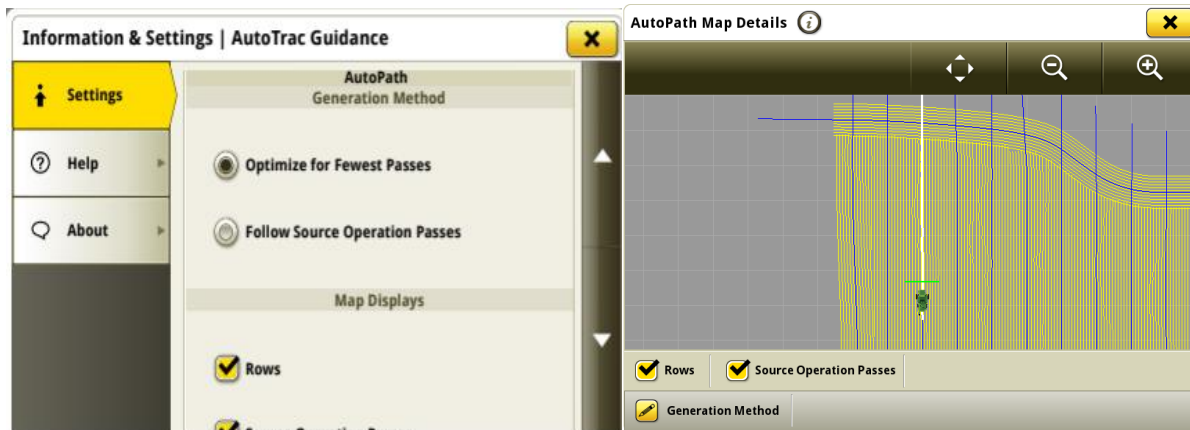
Software for the controllers listed below can be updated using the Generation 4 display.

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

New Features and Improvements

AutoPath™

- New setting called Generation Method is now available with AutoPath™ lines. This will allow the operator to choose to either Optimize for Fewest Passes or to Follow Source Operation Passes. In previous software versions, this was defaulted to optimize for fewest passes and could not be changed. The operator can select the generation method either in AutoTrac™ Advanced Settings or through the AutoPath™ map details page by selecting the Generation Method Edit button.



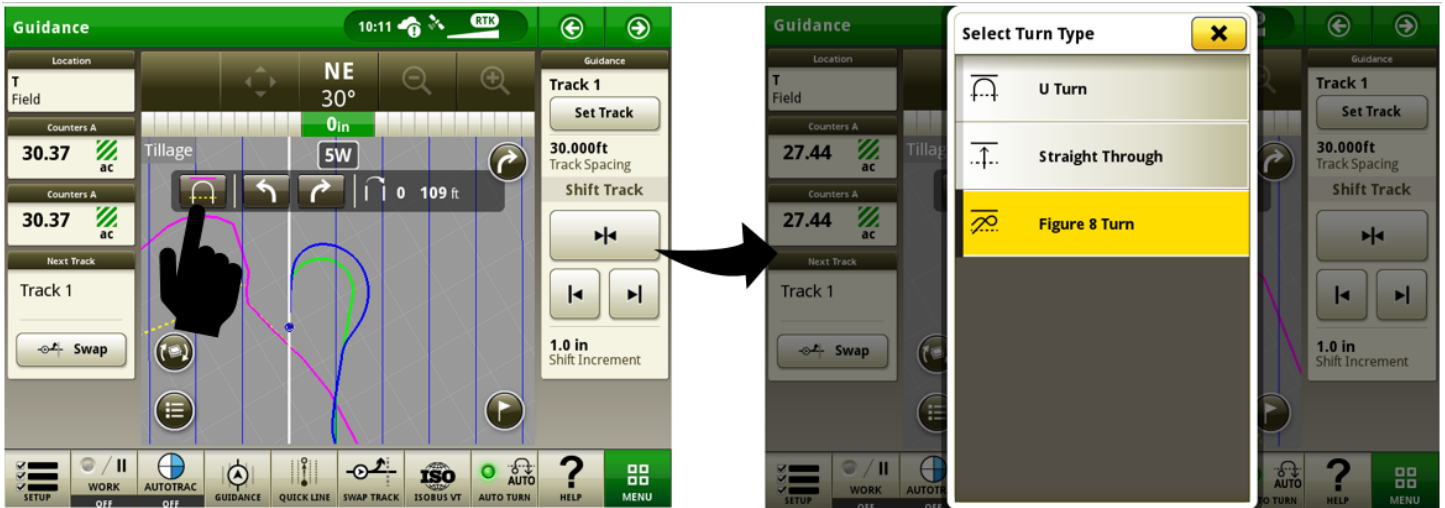
Optimize for Fewest Passes will provide full coverage across the field while using the fewest possible passes.

Follow Source Operation Passes will create only new passes that align with the Source Operation passes. This will confine compaction to these passes but may result in overlap in coverage.

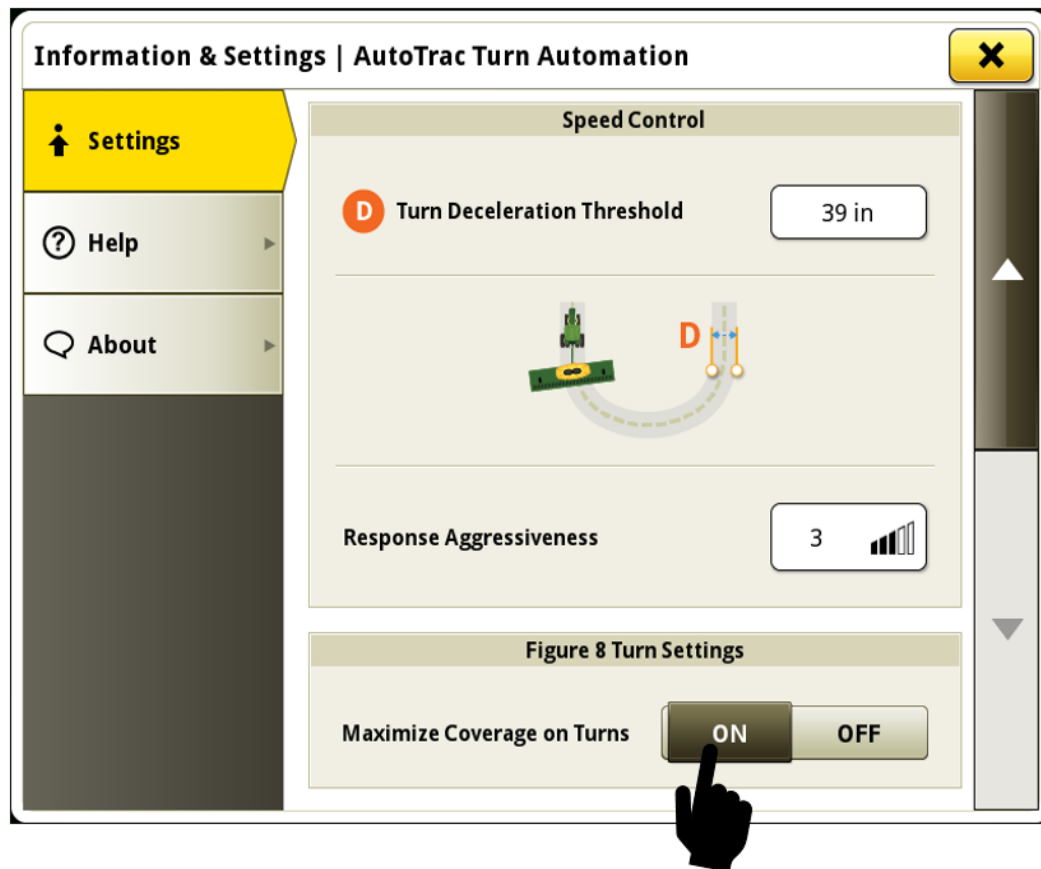
Note: If the Current Operation working width is Narrower than Source operation working width; the operator will not be able to select the Follow Source Operation. An example of this might be a 16R30/40ft planter used as the source operation followed by a 12R30/30ft harvester.

Turn Automation –

- Autotrac™ Turn Automation is now compatible with AB Curve track and Autopath™
- Figure 8 Turn type is now available with Autotrac™ Turn Automation. When selected, Figure 8 turns are generated when guidance tracks are at angle of 45° or less to the exterior or headland boundary. The machine automatically switches to a U-type turn if the angle is greater than 45°.



- New setting to maximize coverage on Figure 8 turns is now available under Autotrac™ Turn Automation settings. When enabled, the enter iTEC™ sequence is placed where coverage begins and the exit iTEC™ sequence is placed where coverage is projected to end. When disabled, the start and the end of the turn are referenced as iTEC™ sequence points.



AutoTrac™ Implement Guidance –

- Autotrac™ Implement Guidance is now compatible with Autotrac™ Controller 250, Autotrac™ Controller 300 and Autotrac™ Universal 300

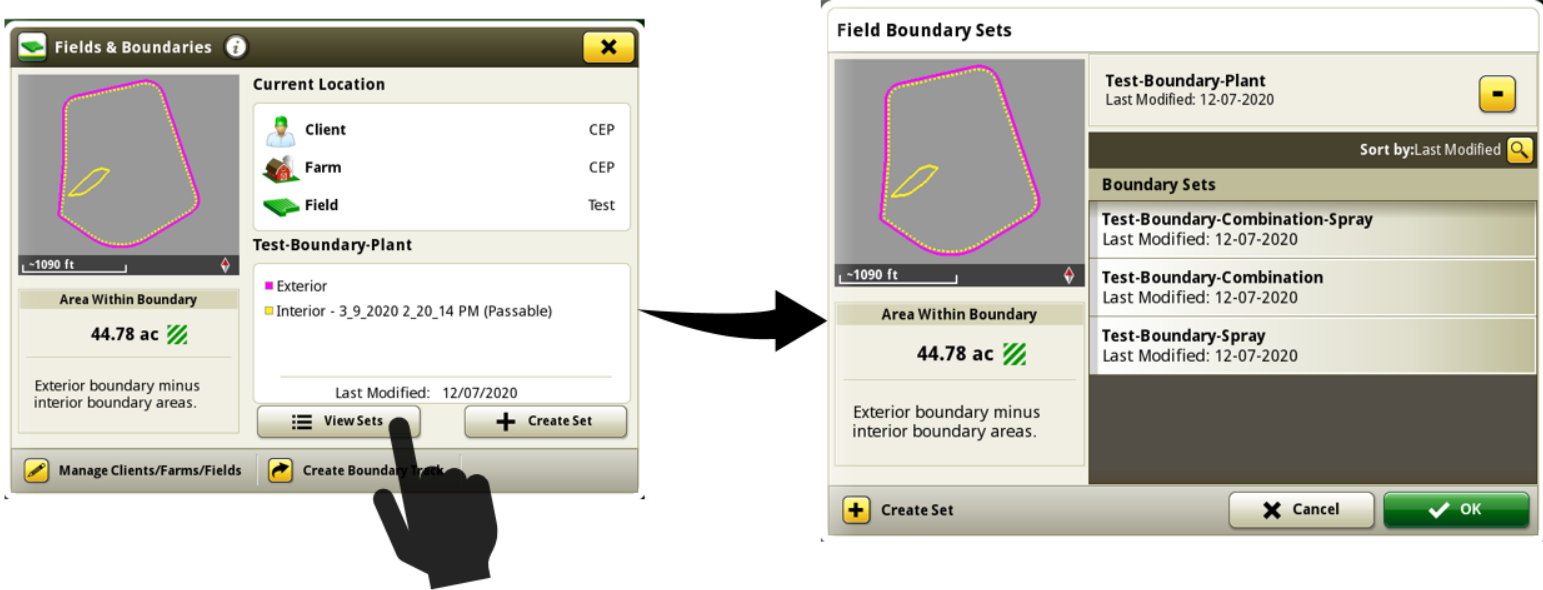
Universal Display Compatibility –

- Additional machine-based recording triggers are now available within the virtual (non-detected) CCD tractor machine profile with 4640 Universal Display. 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 CCD Bus for displays to use.

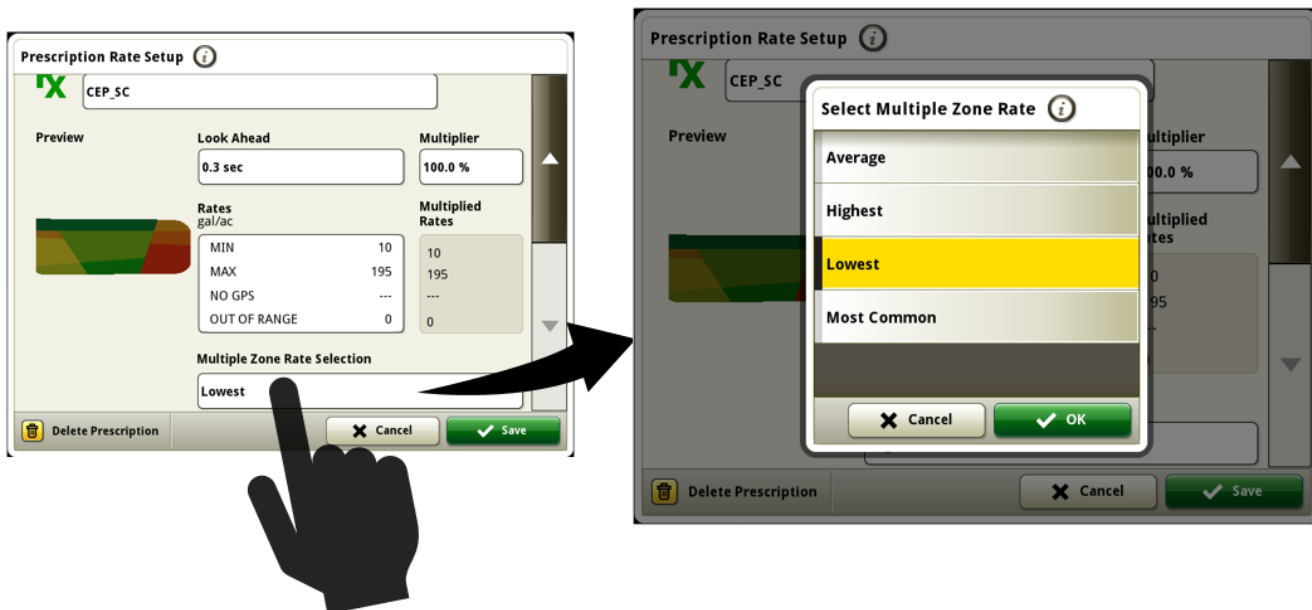
Field & Boundary Sets –

- Multiple boundary sets can now be created for the same field. This allows operators to define custom boundaries for different operations performed in the same field. The desired active boundary set can be selected from the list of all available sets associated to the active field. A boundary set must contain an exterior boundary and can also contain interior boundaries. The selected boundary set will remain active for the field until changed by the operator.



Work Setup –

- A new setting has been added to the prescription setup page. This Multiple Zone Rate Selection setting allows an operator to customize how the Generation 4 display commands target rates when a metered section or sections are within multiple prescription zones.

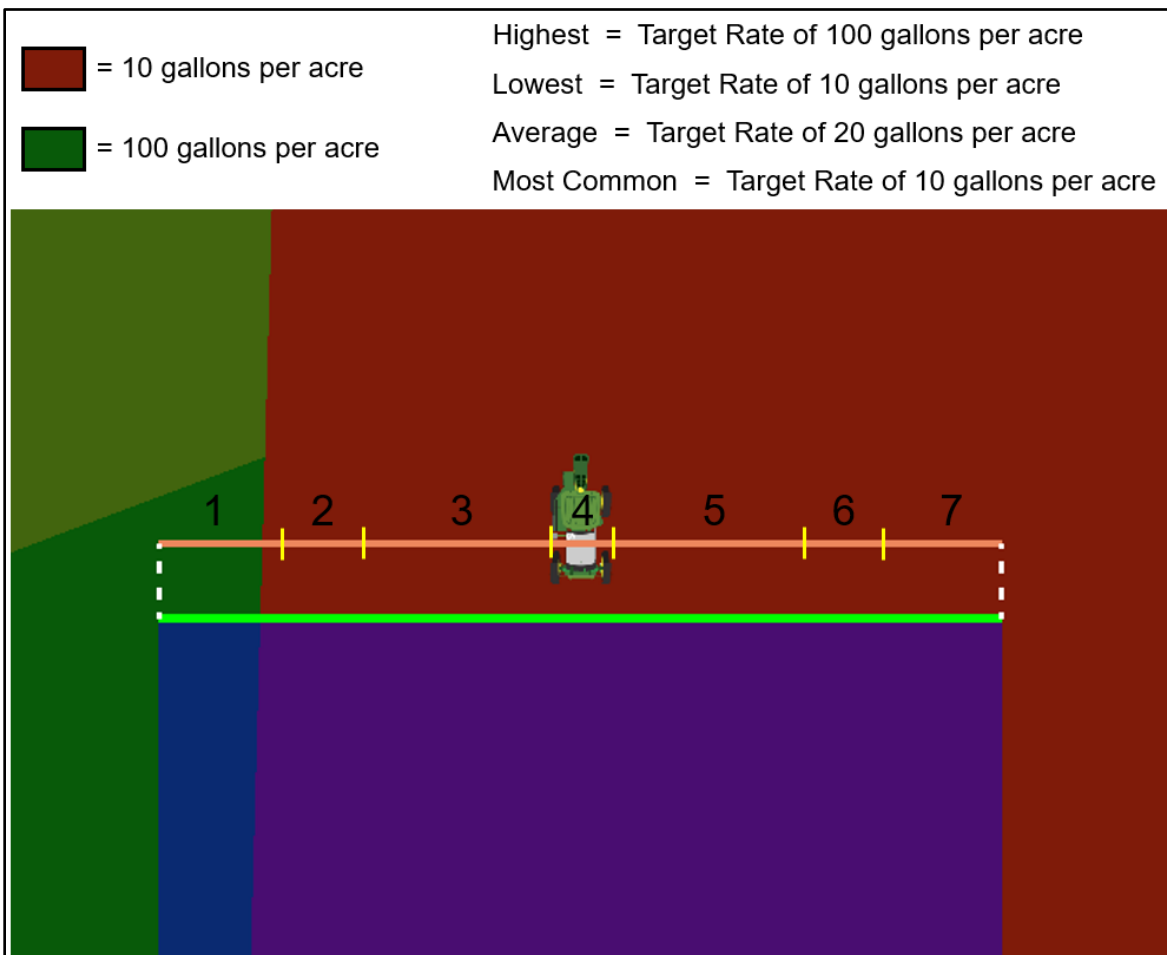


The available settings are defined as:

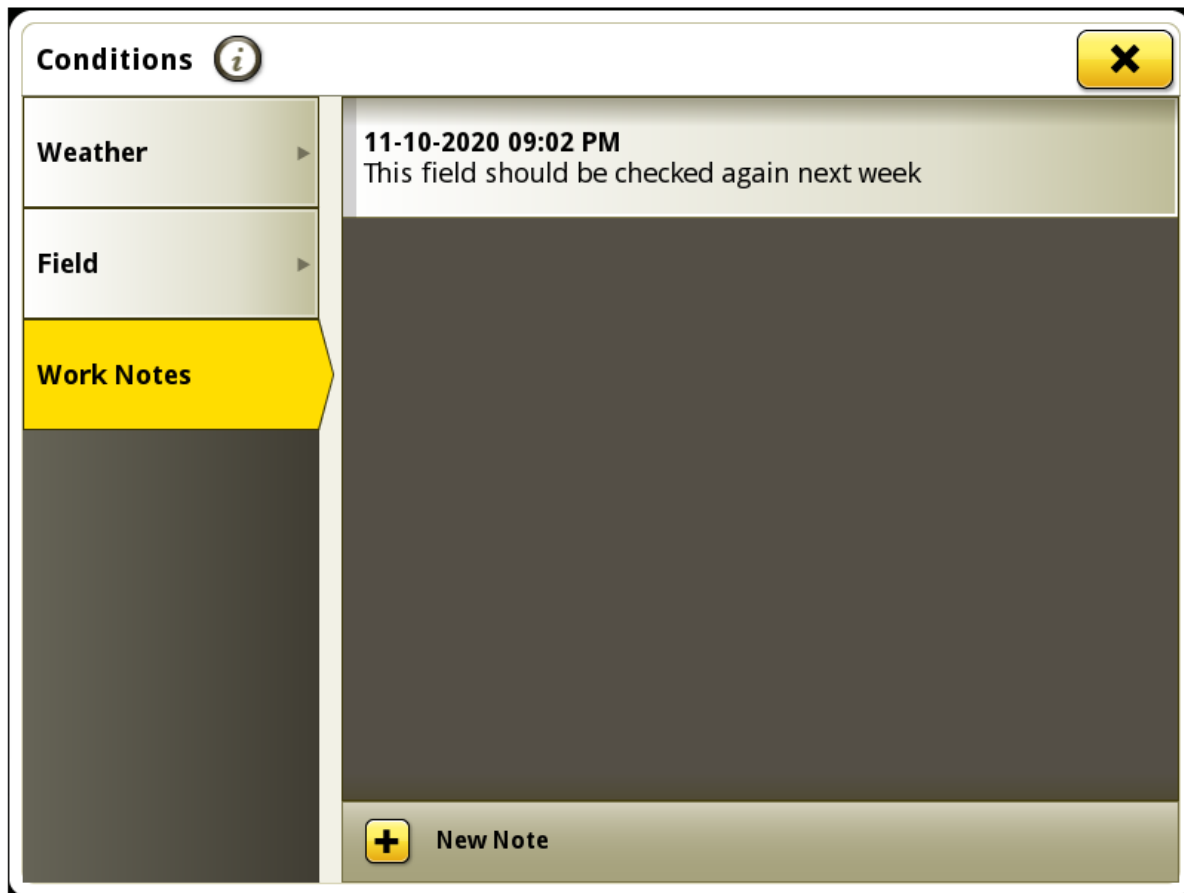
- Highest - Uses the highest prescription rate among all the rates that fall within a given meter's coverage area.
- Lowest - Uses the lowest non-zero prescription rate among all the rates that fall within a given meter's coverage area.
- Average - Uses a weighted, non-zero, mean prescription rate derived from all the rates that fall within a given meter's coverage area.
- Most Common - Uses the non-zero prescription rate that spans the greatest share of a given meter's coverage area.

By default, the multiple zone rate selection is set to Highest. The multiple zone rate selection can be configured for each unique operation. The selection for a given operation persists indefinitely unless it is manually changed, or a factory reset is performed. After a factory reset, the display sets all operations to Highest, the default selection.

Below is an example to further illustrate how this multiple zone rate selection impacts the target rate command. In this scenario there are seven sections and one metering device (solution pump) for the entire width of the sprayer. The resulting target rates sent to the meter with the different multiple zone rate selections are shown given the machine's position on the prescription map.

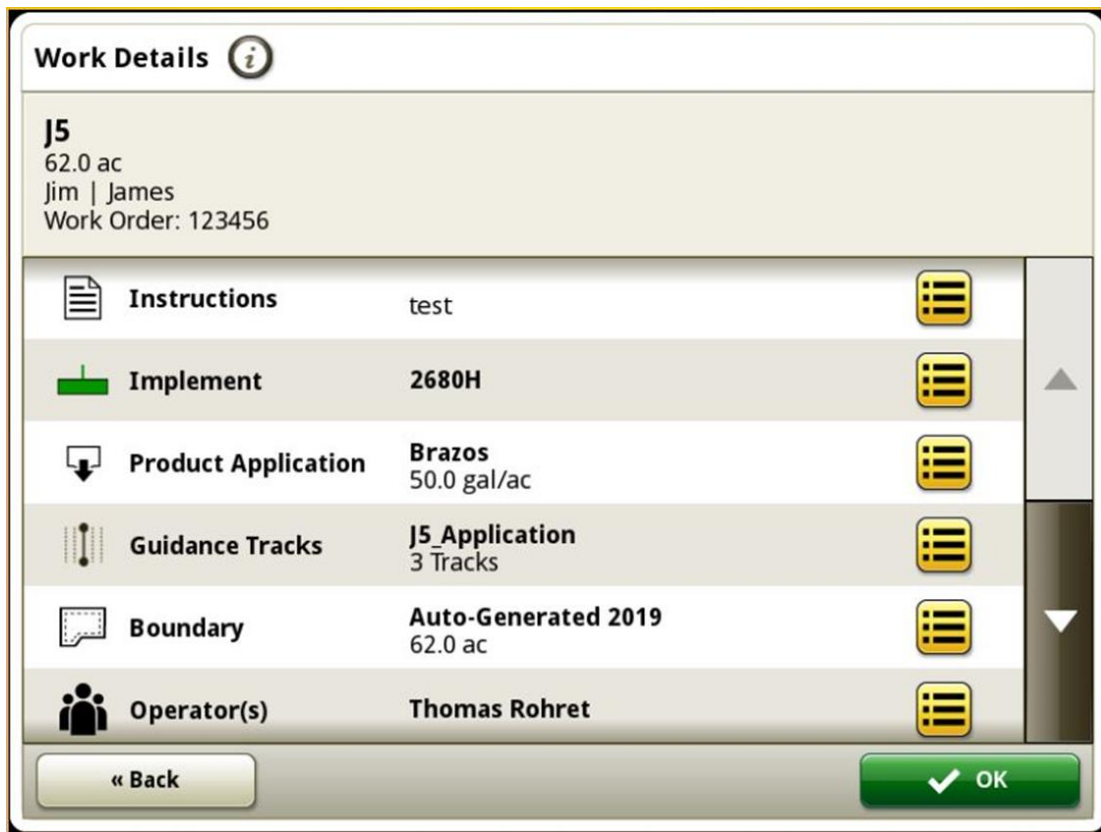


- Operator defined work notes can now be created within the Work Setup application. In the Details section, select Conditions, then select the Work Notes tab. On the Work Notes tab, an operator can view existing notes for the field or create a new note. Any entered notes are associated only to the active field and work. If new work is started in a field, the Work Notes tab will be empty. To view notes from previous work on the Generation 4 display, operators can resume that work using the Work History. Work Notes can be transferred between Generation 4 displays and to the Operations Center.



Integrated Work Planner –

- Planned work can be sent to equipment via a setup file directly from Work Planner. The setup file will include all planned details including prescriptions. Once imported to the Generation 4 Display the operator can select planned work, eliminating operator selection steps saving time. This will also result in more accurate documentation as the number of errors caused by manually typing can be eliminated.



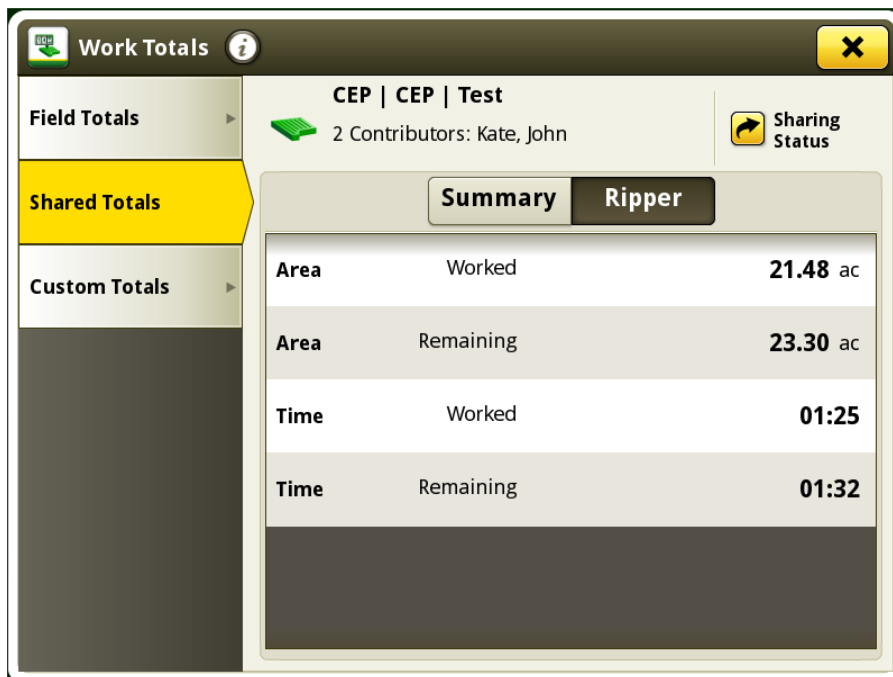
Additionally, when equipment enters a boundary, if there is any planned work for the field the operator will be prompted to start it. Operators can choose to accept the planned work as their setup configuration by simply selecting “OK”.

Note Regarding Integrated Work Planner:

- *Compatible with all Generation 4 Displays.*
- *Generation 4 Display version 20-3 / 21-1 is required.*
- *Active JDLink™ Connect Subscription required for wireless data transfer.*
- *Work can be downloaded to a USB and imported manually*
- *This solution is foundational to our plans to continue to automate the work our equipment performs. There will be continued enhancements to make this even a more complete and automated solution.*
- *See January 12, 2021 Operations Center Release Notes for further information*

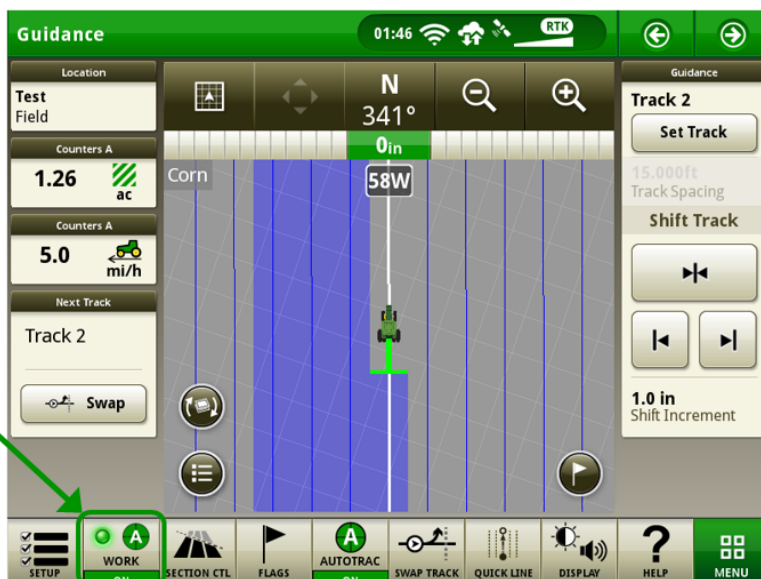
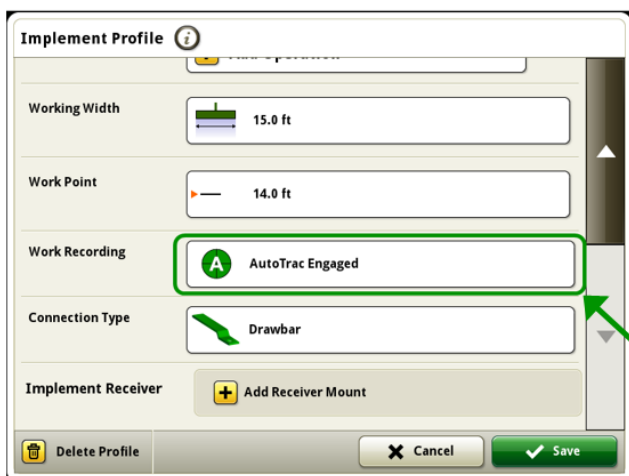
Work Totals –

- A new tab called Shared Totals is now available within the Work Totals application to allow operators to see combined field totals from multiple machines in a sharing workgroup. All displays in a workgroup must have 21-1 software installed to contribute their field totals to the groups shared totals. Data in the shared totals tab will increment at a similar rate as the field totals tab while the machine performs work. Larger incremental increases will occur as each workgroup members shared totals are received (shared totals will be received approximately every 30 seconds from each of the other members in a workgroup). Shared Totals may also be viewable as a run page module.



Equipment Manager –

- A new work recording trigger can be configured to start work recording when AutoTrac™ guidance is engaged.



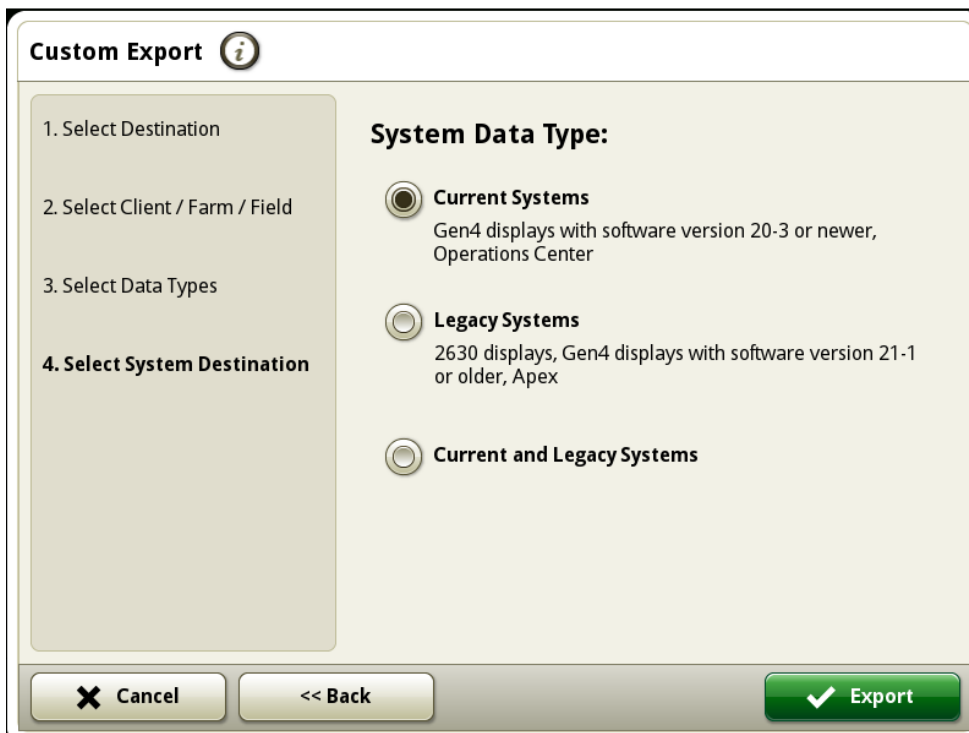
- Product applicator machine profiles can now support an AEF certified ISOBUS control unit.

File Manager –

- Operators can now select specific items from within setup data to import or export.

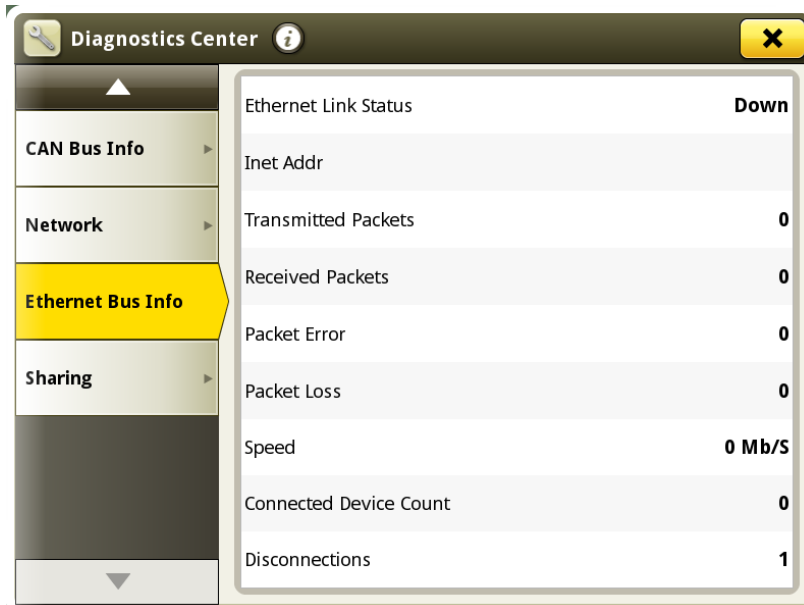


- Operators will now be asked to select the destination system when exporting data from Generation 4 displays. This allows the display to continue supporting export to data formats used by older displays and software versions, while also providing an option to optimize efficiency of exports for specific system formats if those are the only ones needed.



Diagnostics Center –

- Ethernet Bus information has been added to the Diagnostics Center information to help assist with diagnosing ethernet connected control units.



Resolved Issues

The following issues are fixed in software update 10.19.1893-81:

General (May Apply to Multiple Field Operations)

- RTK Base Station assignments do not save
- Display crashes after selecting or editing a Work Plan with a virtual implement and rate controller
- Display crashes when a machine with a MTG is operating in an area with poor cellular coverage
- The ability to change StarFire™ receiver mounting direction is not available if a Reichhart® guidance controller is installed.
- Guidance lines generated by AutoPath™ were missing a row for secondary source operation
- AutoTrac™ Advanced Settings defaulted to an unexpected value after a key cycle
- AutoTrac™ status started in 1 pie after a key cycle
- AutoTrac™ Implement Guidance tracking performance is reduced if using Adaptive Curves
- Display freezes or becomes unresponsive while using In-Field Data Sharing

Product Application

- Self-Propelled Sprayers encounter a “!” and “Restart” symbol on a black screen during operation or startup

The following issues are fixed in software update 10.19.1893-70:

General (May Apply to Multiple Field Operations)

- Display reboots unexpectedly during operation
- “Operations Center organization must be found” error may occur due to delayed Data Sync and In-Field Data Sharing performance in low signal strength conditions
- Recording triggers unavailable for 6000, 6010, 6020, 7000, and 7010 series tractors

Product Application

- If ‘Water’ is deleted as a product in a tank mix, it cannot be added as a carrier

Cotton Harvesting

- Lint Yield value inconsistent between the Original GreenStar™ Monitor application and Work Monitor with Generation 4 4640 display.

Harvester

- Work recording suddenly stops on S600 combines with Generation 4 Universal display
- S600 combine header width defaults to an incorrect value with Generation 4 Universal display
- Autotrac™ RowSense™ status changes unexpectedly with key cycle while header is still connected

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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