Planter SeedStar™ 4 Monitor

(Serial No. 775101 -)

JOHN DEERE

OPERATOR'S MANUAL

SeedStar™ 4 Monitor

OMA137925 ISSUE J5 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Seeding Group
Worldwide Edition
PRINTED IN U.S.A.

Introduction

Foreword

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your product correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your product may also be available in other languages. See www.techpubs.deere.com (Ag&Turf/JDPS), www.johndeeretechinfo.com (C&F), or your John Deere dealer to order.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your product and should remain with the product when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the product or implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (PIN) in the Specification or Product Numbers section. Accurately record all the numbers to help in tracing the product should it be stolen. PIN information is helpful when ordering parts. File the identification numbers in a secure place off the product.

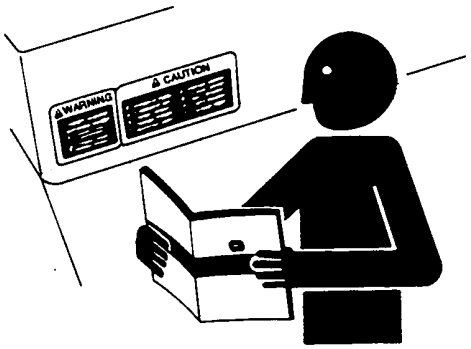
WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received at time of purchase.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied.

If you are not the original owner of this product, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

DX,IFC5E-19-08SEP25

John Deere Is at Your Service



TS201—UN—15APR13

Customer satisfaction is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts, and service:

• Maintenance and service parts to support your equipment.

• Trained service technicians and the necessary diagnostic and repair tools to service your equipment.

• **John Deere replacement parts, repair services, and information for maintenance or repair are available. For more information, please visit deere.com or deere.ca.**

DX,IFC,JDS-19-30SEP25

Trademarks

Trademarks	
John Deere	Trademark of Deere & Company
SeedStar™	Trademark of Deere & Company
RowCommand™	Trademark of Deere & Company
ExactRate™	Trademark of Deere & Company
ExactShot™	Trademark of Deere & Company
GreenStar™	Trademark of Deere & Company
MaxEmerge™	Trademark of Deere & Company
ExactEmerge™	Trademark of Deere & Company
BrushBelt™	Trademark of Deere & Company
StellarSupport™	Trademark of Deere & Company
CommandCenter™	Trademark of Deere & Company

Trademarks	
CCS™	Trademark of Deere & Company
Apple®	Trademark of Apple Inc.
Google Play™	Trademark of Google Inc.
Service ADVISOR™	Trademark of Deere & Company

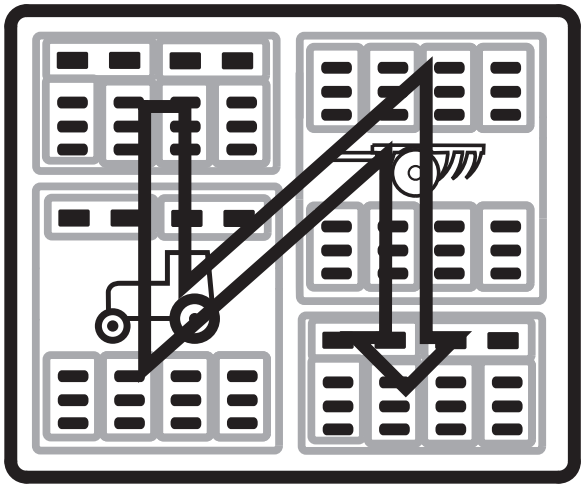
ouo6074,1680550366823-19-23AUG23

A Message to Our Customers

We appreciate the confidence placed in us by the purchase of this machine. To ensure that the machine performs at the highest level, countless hours were spent designing and testing, before this machine was produced. To achieve the maximum performance, it is imperative that this machine is operated in accordance with the procedures outlined in this manual.

Information in this manual is divided into sections. The section names are identified in the table of contents and at the top of each page. Each section has a unique number and page count. Specific information within each section is organized into topics identified with bold headings.

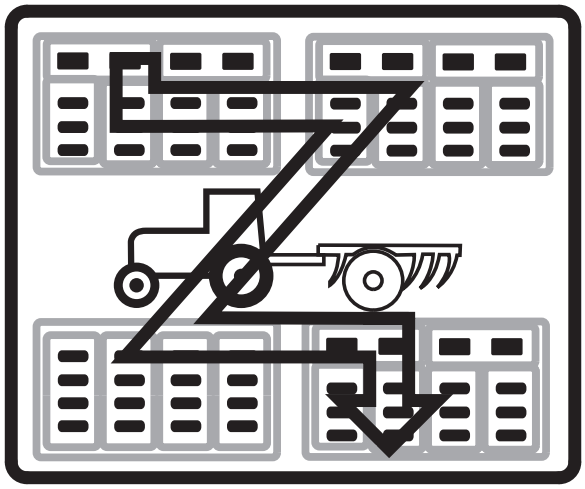
The topic headings are listed in the table of contents with the section number and page number where the topic begins. Topics and information related to each topic are also referenced in the index along with the section and page number.



A100767—UN—07JUN18

Content Flow

The topic content flows down the left-hand side, then down the right-hand side, and repeats on the next page. Images precede the related text in the flow.



A100768—UN—07JUN18

Content Flow with Page Wide Interuption

Images and tables that span the width of a page separate the flow both before and after the image or table.

To learn where to look for information, review this manual often.

Thanks again for purchasing this machine.

OUO6074,000106B-19-06JUN23

Contents

Continued on next page

Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Recognize Safety Information

T81389—UN—28JUN13

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-03OCT22

Understand Signal Words

TS187—19—30SEP88

DANGER; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

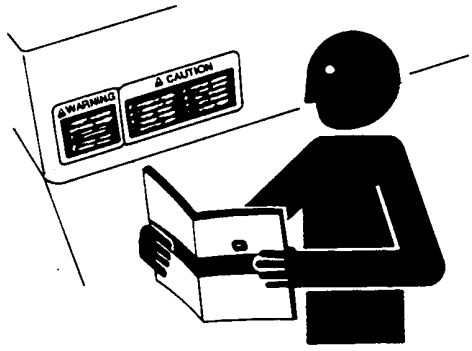
WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

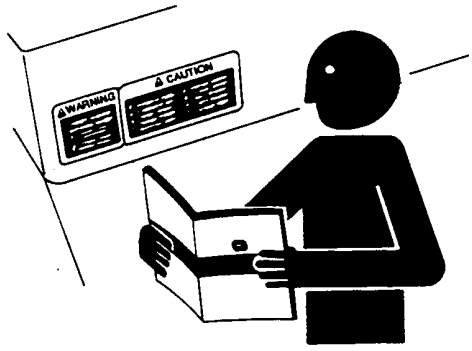
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ-19-01AUG22

Replace Safety Signs



TS201—UN—15APR13

Replace missing or damaged safety signs. Use this operator’s manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

DX,SIGNS-19-18AUG09

Live With Safety

TS231—19—07OCT88

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

DX,LIVE-19-25SEP92

Operator Ability

- Machine owners must make sure that operators are responsible, trained, have read the operating instructions and warnings, and know how to operate the machine properly and safely.
- Age, physical ability, and mental capacity can be factors in machine-related injuries. Operators must be mentally and physically capable of accessing the operator station and/or controls, and operating the machine properly and safely.
- Never allow a child or an untrained person to operate the machine. Instruct all operators not to give children a ride on the machine or an attachment.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.

DX,ABILITY-19-07DEC18

Prevent Machine Runaway

TS177—UN—11JAN89

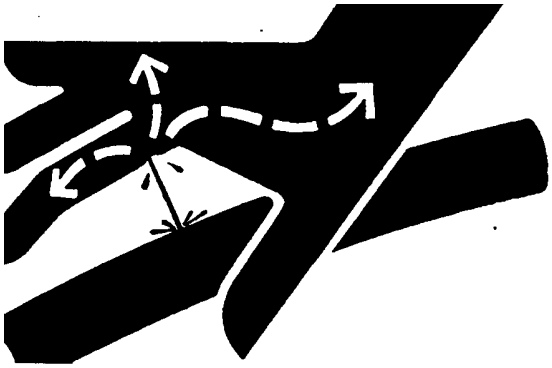
Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

DX,BYPAS1-19-29SEP98

Avoid High-Pressure Fluids



X9811—UN—23AUG88

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID-19-12OCT11

Prevent Battery Explosions

TS204—UN—15APR13

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

DX,SPARKS-19-03MAR93

Welding Near Electronic Control Units

TS953—UN—15MAY90

IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After welding, reverse Steps 1—5.

DX,WW,ECU02-19-14AUG09

Keep Electronic Control Unit Connectors Clean

IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure.
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04-19-11JUN09

Read Operator's Manuals for ISOBUS Controllers

In addition to GreenStar Applications, this display can be used as a display device for any ISOBUS Controller that meets ISO 11783 standard. The display includes capability to control ISOBUS implements. When used in this manner, information and control functions placed on the display are provided by the ISOBUS Controller and are the responsibility of the ISOBUS Controller manufacturer.

Some of these functions could pose hazard to either the operator or a bystander. Read the Operator's Manual provided by the ISOBUS Controller manufacturer and observe all safety messages in manual and on ISOBUS Controller product before use.

NOTE: ISOBUS refers to the ISO Standard 11783.

DX,WW,ISOBUS(T)-19-04APR22

Service Accumulator Systems Safely

TS281—UN—15APR13

Escaping fluid or gas from pressurized hydraulic accumulator systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.

DX,WW,ACCLA-19-15APR03

Prepare to Plant

A91608—UN—22JUN17
SeedStar Planter Application

A121728—UN—12JUN24
SeedStar Dry Application System

N118004—UN—22OCT15
Advanced Settings

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

All the operator interaction with the planter outside of the tractor cab is described in the planter Operator's Manual.

NOTE: For the system to communicate properly, tractors must be equipped with G5 or G5+ display. Older tractors must use the Universal G5 or G5+ display.

See your SeedStar Application Help for details when using the display or see the SeedStar Display Application section in this manual.

The following list consists of common items to consider before operation for most planter configurations. For the on-screen setup items, a navigation path is given (for the software version at the time this manual was published). To follow the navigation provided, first access the main page of the SeedStar application.

- Check the tractor compatibility, tire inflation, frame height, frame levelness, marker length, and other preparation items found in the planter Operator's Manual.
- Connect the hydraulics and harnesses.

IMPORTANT: Avoid damage due to dry gears. Verify the proper lubrication. See the implement Operator's Manual.

- If equipped, install the tractor power-generation system.
- Drawn planter with a 2-point hitch and Easy Fold frame control: The tractor must have the Tractor Implement-Automation feature activated to use Easy Fold. (See the Tractor Implement-Automation Overview.)
- Drawn planter with a 2-point hitch and Easy Fold frame control: The tractor hitch-height must have the upper limit set to 98%. (See the tractor Operator's Manual.)
- Name the implement profile and verify all the settings. Select the Equipment Manager application and the planter option.
- Calibrate the frame height sensor (beginning of season or after an error). Select Diagnostics and Calibrations.
- Calibrate the downforce sensor (beginning of season or with readings other than zero when the frame is raised). Select Diagnostics and Calibrations.
- Set up the advanced settings. Select the advanced settings and choose or adjust the settings.
- Select the crop, variety, seed disk (bowl), and rows enabled. Select Setup > Seed.
- Establish alarm limits for the seed population, seed singulation, seed spacing, and fertilizer pressure. Select Setup > Product Alarms.
- Establish the target margin and alarm limits for the margin, ground contact, and ride quality. Select Setup > Gauge Wheels.
- Set the target populations for this crop. Select the Target Population.
- Select whether the vacuum is automatically controlled or not. Select Vacuum > SCV Settings > either the Manual or Automated Vacuum Control > Next and follow the on-screen instruction.
- Select whether the frame control is automatically controlled or not. Select Frame Control > SCV Settings > either the Manual or Automated Frame Control > Next and follow the on-screen instruction.
- Set up the Section Control. See the Section Control application. Adjust the alarm settings in the Advanced Settings.
- Enter the field and fill the hoppers.
- Activate the vacuum and engage the electric power generation.
- Fill the seed disks (bowls). Select the Meter Fill.
- Verify that the vacuum level.
- Perform in-field checks and set the seed depth, row cleaners, closing wheels, and downforce. Also verify the actual seed population.

NOTE: The rear diagnostic port on the planter is only for diagnostics and programming.

- If needed, perform seed meter runoffs and make the necessary adjustments through the SeedStar application or the Mobile Runoff.

PC28229—UN—10AUG23

Liquid Fertilizer Application

See your Application Help for details when using the display or see the ExactRate or ExactShot Display Application section in this manual.

The following list consists of common items to consider before operation for most planter configurations..

- Verify the nozzle delivery configuration.
- Set the specific gravity for the product.
- Set the valve pulsing mode.
- Dosing Configuration: Select the correct nozzle tip and install the same tips on the planter.
- Dosing Configuration: Set the dose per seed and dose length.
- Set target rates and pressures.
- Verify the system is primed.
- Perform a flow meter calibration.
- Set the tank level and alarms.
- If needed, perform the liquid runoff procedure and make the necessary adjustments.

A121727—UN—12JUN24

SeedStar Dry Application System

See your Application Help for details when using the display or see the SeedStar Dry Application System.

The following list consists of common items to consider before operation for most configurations.

- Verify the fertilizer type.
- Set the meter displacement value (MDV).
- Select the auger size.
- Set the delivery rates.
- Set up the delivery sections.

OUO6074,0000FC9-19-12JUN24

Software Manager

PC15346—UN—11JUL13

Software Manager

Use the Software Manager to update software, activate features, and find software version details.

Navigate to Software Manager

1. Select the Menu.
2. Select the System tab.
3. Select the Software Manager application.

Software Packages

The G5 software and help files are organized into packages. Each package is listed individually on the Installations and Updates tab and the Version Information tab. Only update the tractor software using the Software Manager. An update for the G5 display is possible using a USB drive.

PC23900—UN—17MAR17

G5 Operating System

- To access the operating system and the basic applications for the display, select this icon.

PC23901—UN—17MAR17

Generation 4 Operating System Help

- To access the help files for applications, select this icon.

PC23902—UN—17MAR17

John Deere Precision Ag Technology Applications

- To access the software for the display, select this icon.

PC23903—UN—17MAR17

Machine Applications

- To access the Machine software, select this icon. A John Deere dealer or other service provider with Service ADVISOR is required to install a package.

PC23904—UN—17MAR17

Machine Applications Help

NOTE: Onscreen Help packages include each language that the display supports.

- To access the help files for the planter applications, select this icon. Service ADVISOR is not needed for this package.

OUO6074,0001007-19-20FEB25

Update Display Software

Determine Software Versions on the Display

Version numbers for all installed software packages are available in the Version Information tab in the Software Manager application.

Download Software Updates

PC15348—UN—11JUL13

USB FLASH Drive

Software updates are available for download from:

https://my.deere.com/software-downloads/software-manager/

The following items are available:

- The software release notes.
- The Software Manager application used to download software to a USB FLASH drive.
- The instructions for using the Software Manager application.

Once a USB FLASH drive has the latest software, take it to the tractor to install the update.

Install Software Updates

USB FLASH Drive

USB FLASH Drive Requirements
32 GB Minimum
FAT32 Format
Reformatted to purge existing content

1. Insert the USB FLASH drive into the upper USB port that is next to the accessory outlet.

PC23932—UN—21MAR17

A—Install Software Button

2. To view the Installations and Updates tab in the Software Manager, select the Install Software button (A) when the USB Drive Options page is displayed.
3. Only the software packages that are newer than what is installed are displayed. All packages are selected by default.
4. Select the Install button. If an update does not start, follow the on-screen messages to resolve conflicts.

CAUTION: To prevent injury, verify that the tractor park brake is engaged and maintain electrical power throughout the installation process.

During software installation, all applications are shut down and no system messages are displayed.

IMPORTANT: Do not remove the USB FLASH drive during software installation.

PC23933—UN—21MAR17

A—Progress Indicator
B—Install Successful

5. A progress indicator (A) displays the percentage of each package installation. A green check mark (B) is displayed when a package installs successfully.
6. A message displays when the software update is finished. Some software packages require a reboot to finish the installation. To restart the display, select the Reboot button.

NOTE: The return files contain software version information and are used to assist dealers or other service providers with supporting the display and the implement.

7. Remove the USB FLASH drive and take it back to the computer. To upload the return files, run the Software Manager Utility.

Online Updates

NOTE: Online updates are only available using tractors equipped with MTG.

1. On the Installation and Updates tab, select the Check for Updates Online. The display searches for available updates.
2. Only the software packages that are newer than what is installed are displayed. All packages are selected by default.
3. Select the Download button. If an update does not start, follow the on-screen messages to resolve conflicts.
4. A progress indicator (A) displays the percentage of each package download. A green check mark (B) is displayed when a package downloads successfully.
5. Select the Install button to begin installation of the downloaded software packages.

CAUTION: To prevent injury, verify that the tractor park brake is engaged and maintain electrical power throughout the installation process.

During software installation, all applications are shut down and no system messages are displayed.

6. A message displays when the software update is finished. Some software packages require a reboot to finish the installation. To restart the display, select the Reboot button.

Troubleshooting

If a software package fails to install, the system rolls back all the software to the version before the update started.

If the software update fails, record the error message. Remove the files from the USB FLASH drive and reload the software update to the USB FLASH drive. Repeat the software installation process.

If a software update continues to fail, see a John Deere dealer or other service provider.

OUO6074,0001008-19-23OCT25

Downforce Sensor Location (Active Pneumatic)

NOTE: Every row has a sensor on planters with the individual row hydraulic-downforce.

When using the active pneumatic downforce, the downforce sensors are factory installed on the following row units.

Active Pneumatic Downforce (Advanced Monitoring)	
Planter Model	**Row Unit**
1725 16-Row	3, 9, 14
1775NT 12-Row	2, 7, 11
1775NT 16-Row	3, 9, 14
1775NT 24-Row	3, 7, 13, 18, 22
1795 23-Row	Front Rank 3, 13, 21 Rear Rank 4, 20
1795 24-Row	Front Rank 4, 14, 22 Rear Rank 5, 21
1795 31-Row	Front Rank 3, 17, 29 Rear Rank 8, 24
1795 32-Row	Front Rank 4, 18, 30 Rear Rank 9, 25
1795 24-Row with 51 cm (20 in) spacing	3, 13, 22
DB35 24-Row	2, 13, 22
DB37 16-Row	1, 9, 15
DB41 24-Row	2, 14, 22
DB41 33-Row	1, 18, 32
DB44 24-Row	3, 13, 22
DB55 24-Row	2, 7, 13, 18, 22
DB60 24-Row	3, 7, 13, 18, 22
DB60 36-Row	3, 11, 19, 26, 34
DB60 47-Row	Front Rank 5, 25, 43 Rear Rank 14, 34
DB60 48-Row	Front Rank 5, 25, 43 Rear Rank 14, 34
DB62 36-Row	3, 11, 19, 26, 34
DB66 36-Row	3, 11, 19, 26, 34
DB74 32-Row	3, 7, 12, 17, 21, 26, 30
DB80 32-Row	3, 7, 12, 17, 21, 26, 30
DB80 48-Row	3, 10, 17, 25, 32, 39, 46
DB83 36-Row	3, 8, 13, 18, 24, 29, 34
DB83 48-Row	3, 10, 17, 25, 32, 39, 46
DB88 48-Row	3, 10, 17, 25, 32, 39, 46
DB90 36-Row	3, 8, 13, 19, 24, 29, 34
3119FT 18-Row	3, 9, 16
3119FT 19-Row	3, 10, 17
3123FT 20-Row	2, 10, 19
3123FT 23-Row	3, 12, 21
3127FT 24-Row	3, 7, 12, 18, 22
3127FT 27-Row	3, 7, 14, 20, 25
3131FT 28-Row	3, 8, 14, 21, 26
3131FT 31-Row	3, 9, 16, 23, 29

OUO6074,0000FCD-19-10MAY24

Item Locations in the SeedStar Application

Most items are also accessible from run page modules for these same features.

All navigation begins from the SeedStar application main page unless otherwise noted with the symbol *.

Topic	Item	Navigation to Item
Advanced Settings Help	Information and Settings Help	From a SeedStar App screen > select the Help Information or Advanced Settings > select Help tab > scroll to and select the Advanced Settings link > select a topic link for Help From a SeedStar App screen > select the Help Information or Advanced Settings > select Help tab > select SeedStar quick link > select SeedStar link > scroll to and select the Advanced Settings link > select a topic link for Help
Electric Power Generation	ON-OFF toggle	EPG
	Motor speed gauge	Diagnostics and Calibrations > EPG > Overview with the planter power generation system
	Hydraulic pressure gauge	
	Component status	
	System voltages	
	Main voltage gauge	Diagnostics and Calibrations > EPG > Overview with the tractor power generation system
	Gearbox temperature	
	Component status	
	System voltages	
Seed Meter Motor	Drive status	Status
	Rotate to fill the seed disk	Meter Fill
	Rotate to purge the brush	Brush Purge
Seed Meter	Crop selection	Setup > Work Setup > Crop and Variety input boxes *Menu > Work Setup application > Crop and Variety input boxes
	Seed disk (bowl) selection	Setup > Seed tab > Seed Disk input box
	Split row enable/disable	Setup > Seed tab > Number of rows enabled
Seed Motor Start and Stop (frame height)	Common or separate heights	Advanced Settings > Seed Motor > Edit Settings > Common Threshold checked or unchecked
	Set the position	Advanced Settings > Seed Motor > Edit Settings > input box or set current position
Fast Start	Automatically enable as planter lowers	Advanced Settings > Fast Start > check or uncheck Auto-Enable
	Override section control during Fast Start	Advanced Settings > Fast Start > check or uncheck Override
	Manually activate Fast Start	Shortcut key
Seed Meter Runoff	Meter, row, and planter runoff	Diagnostics and Calibrations > Procedures tab > Runoff
Basic Target Population	Choose the basic populations method	Advanced Settings > Population Setup unchecked
	Select another target	Target Population > radio button Population screen area (*or run page overview) > Population tab > radio buttons
	Change or enter a target population	Target Population > input box Population screen area (*or run page overview) > Population tab > Edit > input boxes
Advanced Target Population	Choose the advanced populations method	Advanced Settings > Population Setup checked
	Load seed varieties and assign varieties to rows	Setup > Work Setup > Crop input > Variety > Single, Dual, or Custom tab > seed variety selections > select, add, edit, or delete a variety > Assign variety to row > OK *Menu > Work Setup application > Variety > Single, Dual, or Custom

Topic	Item	Navigation to Item
		tab > seed variety selections > select, add, edit, or delete a variety > Assign variety to row > OK
	Select or enter target populations	Overview > Population tab > Population screen > radio buttons or edit Target Population > radio buttons or edit *Run page module or overview > Population tab > Population screen > radio buttons or edit
	Change crop varieties	Overview > Population tab > Population screen > variety assignments > configuration > variety selection or assignment Target Population > variety assignments > configuration > variety selection or assignment *Run page module or overview > Population tab > Population screen > variety assignments > configuration > variety selection or assignment
Frame Control	Folding, unfolding, and planting frame functions (planters that need frame control)	Frame Control > Transport or Plant
	Selective control valve (SCV) mapping	Frame Control > SCV Settings > Control Mode > Next > function selection
	Height sensor calibration	Diagnostics and Calibrations > Diagnostics > Height - Drives > Calibrate
	Height setting for seed meter start/stop	Advanced Settings > Seed Motor > Edit Settings
	Easy Fold Hitch-Height Settings	Frame Control > Transport > Easy Fold > Easy Fold Height Settings
	Easy Fold, Manual, or Automated Operation	Frame Control > Transport > Easy Fold > SCV Settings
	Frame Weight Distribution	Frame Control > Plant
Vacuum	Automation ON-OFF	*Vacuum (status icon) > SCV Settings > Manual or Automated
	Automation Mode	*Vacuum (status icon) > Radio Button (set-point or active)
	SCV mapping	Advanced Settings > SCV Assignments > Control Mode > Next > function selection
	Adjustment (with automation ON)	*Vacuum (level) > input box or **+/-**
	Adjustment increment (with automation ON)	Advanced Settings > Vacuum Automation > Increment Adjust > input box
	Adjustment (with automation OFF)	Tractor hydraulic flow (on-screen or manual valve)
	Active Vacuum Bias	Advanced Settings > Vacuum Automation > Active Vacuum Bias > Arrows (right/left)
	System status	*Vacuum (status icon) > Status
	Sensor setup	*Equipment Manager application > Sensor Setup > input box
Alarms	Seed Population	Setup > Product Alarms tab > input boxes
	Population Adjust	Setup > Product Alarms tab > input box
	Seed Singulation	Setup > Product Alarms tab > input box
	Seed Spacing	Setup > Product Alarms tab > input box
	Liquid Fertilizer	Setup > Product Alarms tab > input box
	Downforce Margin	Setup > Gauge Wheels tab > input boxes
	Ground Contact	Setup > Gauge Wheels tab > input box
	Ride Quality	Setup > Gauge Wheels tab > input box
	Section Control “Row Off”	Advanced Settings > Alarm Notification > Warning Enabled check box
Downforce	Access all downforce	Population screen area (*or run page overview) > Gauge Wheels tab > Margin, Contact, or Downforce screen area Setup > Gauge Wheels tab > Downforce Settings *Run page module > Status icon (available on some modules)
	Active or Setpoint ON-OFF toggle	See the Access all downforce item
	Pause timer	See Access all downforce item *Available on some run page modules
	Pause timer duration	Advanced Settings > Gauge Wheels > Pause Timer > input box

Topic	Item	Navigation to Item
	Downforce adjustment	See the Access all downforce item *Available on some run page modules
	Downforce adjustment increment	Advanced Settings > Gauge Wheels > Increment Adjust > input box
	System status	See the Access all downforce item
	Alarms	Setup > Gauge Wheels tab > input boxes See the Access all downforce item
Bar Graphs	Population	Population screen area (*or run page overview) > Population tab
	Downforce (setpoint and margin)	Population screen area (*or run page overview) > Downforce tab
	Seed Singulation	Population screen area (*or run page overview) > Singulation tab
	Seed Spacing	Population screen area (*or run page overview) > Spacing tab
	Ride Quality	Population screen area (*or run page overview) > Other tiles tab > Ride Quality tab
	Seed Meter and Belt Revolutions	Population screen area (*or run page overview) > Other tiles tab > RPM tab
	Seed Motor and Belt Motor Torque	Population screen area (*or run page overview) > Other tiles tab > Torque tab
Row Cleaners	Control screen	Population screen area (*or run page overview) > Other tiles tab > Row Cleaners tab *Run screen module
	Enable and disable	Advanced Settings > Row Cleaners > toggle ON-OFF
	Adjustment increments	Advanced Settings > Row Cleaners > Step Size input box
	Reset to defaults	Advanced Settings > Row Cleaners > Reset
Closing Wheels	Control screen	Population screen area (*or run page overview) > Other tiles tab > Closing Wheels tab *Run screen module
	Group enable and disable	Advanced Settings > Closing Wheels > toggle ON-OFF
Coulter Disks (Brazil production only)	Control screen	Population screen area (*or run page overview) > Other tiles tab > Coulter Disk tab *Run screen module
	Group enable and disable	Advanced Settings > Coulter Disk > toggle ON-OFF
Curve Compensation	Details screen	Population screen area (*or run page overview) > Other tiles tab > Curve Compensation tab *Run screen module
	Enable and disable	Toggle ON-OFF on the Curve Compensation screen

CR53390,0000157-19-19NOV24

SeedStar Overview

All the operator interaction with the implement outside of the tractor cab is described in the implement Operator's Manual.

For assistance with on-screen information, see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

SeedStar provides monitoring and control of the implement from the tractor cab.

The SeedStar system allows for:

- Seed population adjustment from the cab without stopping.
- Seed population variation at every row.
- A different population for each seed variety.
- A seed meter performance test from the display or a mobile device. To perform a Runoff procedure through a mobile device, download the Equipment Mobile application from the Apple App Store or the Google Play Store. To perform a Runoff procedure through a mobile display, see Mobile Display Runoff in this section.
- Compatibility with John Deere Operations center.

- Downforce adjustment and monitoring.
- Ride quality adjustment and monitoring.
- Seed spacing and singulation monitoring.
- Easy Adjust row cleaner control.
- Pneumatic closing wheel control.
- Control of the frame fold on select models.
- Dry fertilizer adjustments.

System Components:

- An electric motor on each seed meter controls the seed population and spacing.
- An electric motor on each ExactEmerge Brushbelt controls the seed population and spacing.
- An electric motor on each dry fertilizer section controls the fertilizer rate.
- Hydraulic actuators or pneumatic springs combined with sensors are on the depth gauge wheels for row unit downforce.
- Pneumatic springs are on the Easy Adjust row cleaners for row cleaner position and performance.
- Pneumatic springs are on the closing wheels for furrow closing force.
- In Brazil production only, pneumatic springs are on the coulters for depth control.
- Electric solenoids are in the pneumatic valve blocks to allow SeedStar control of pneumatic downforce, row cleaners, and closing wheels.
- Frame sensors are used for height and fold detection.
- Wheel motion sensors verify movement.
- Radar and GPS are used for measuring ground speed.
- Control units on the implement are for system control and data consolidation on the display.
- Display in the tractor cab is for operator interaction.

Hydraulic Requirements:

The tractor must have either a load-sensing hydraulic system or a closed-center hydraulic system with flow control. These types of hydraulic systems usually have large oil reservoirs with adequate cooling capacity. These hydraulic systems deliver regulated oil flow, not a continuous maximum.

NOTE: Tractors with open-center hydraulic systems are not compatible for the following reasons:

- *The hydraulic system does not regulate the oil flow.*
- *Excessive oil temperatures are generated.*
- *The hydraulic flow decreases for some functions as other functions are activated or adjusted.*

System Functionality:

- Control units on the implement frame send controller area network (CAN) signals from the system components. The information is processed and sent to the display in the tractor cab.
- Inputs from the operator determine how the implement systems respond to and monitor the CAN signals.

NOTE: A Universal G5 or G5+ display is only compatible with John Deere GPS receivers.

- The tractor radar or a GPS receiver determines the ground speed.
- Hydraulic and electric power systems must be active to operate the implement features.
- Signals from the radar or GPS receiver, a wheel motion sensor, a frame height sensor, and the electric power generation are required for the system to activate the seed meters.
- The motor speeds are controlled based on operator-entered data for the seed population, seed disks, seed meters, row spacing, frame position, and more.

System Performance:

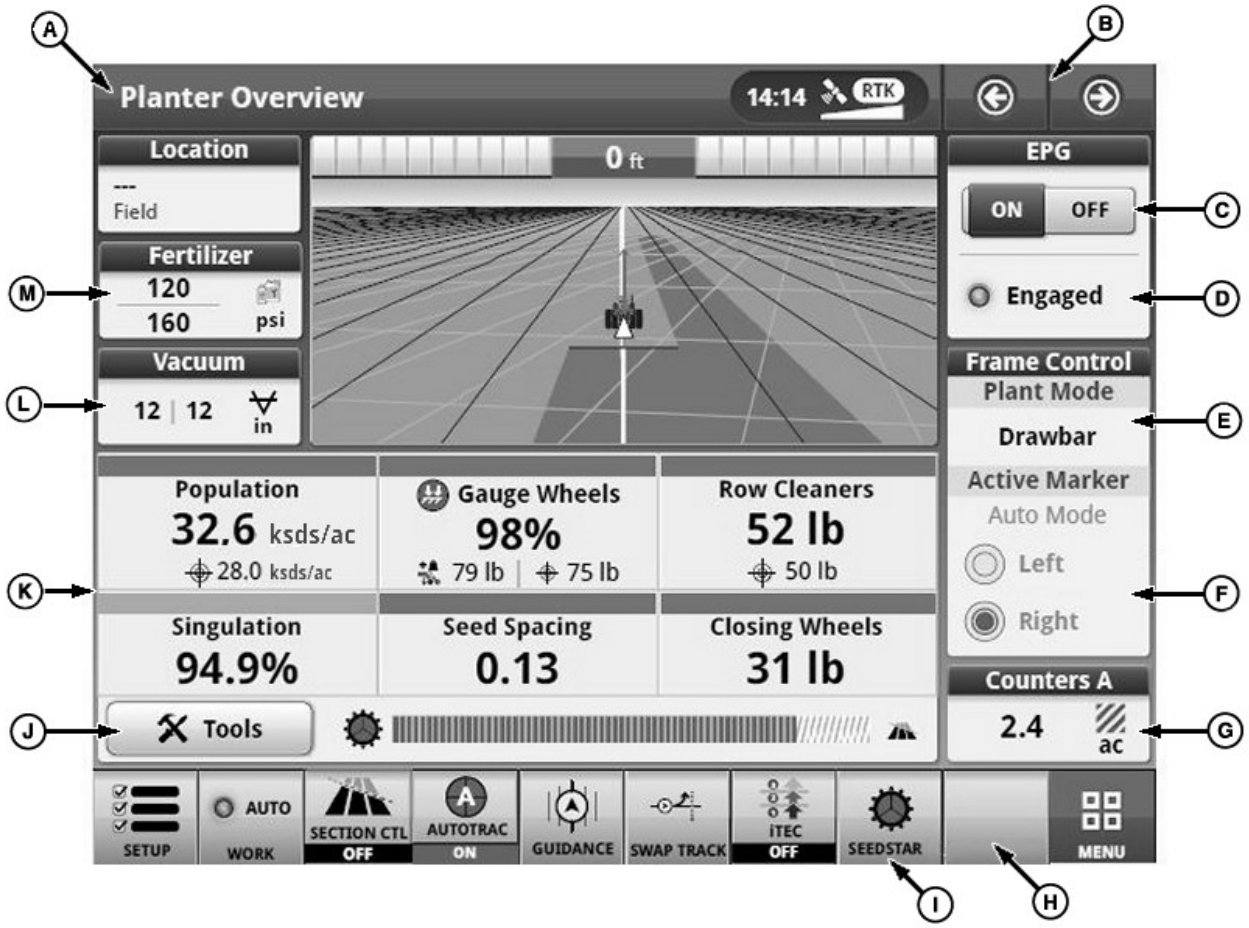
Low speeds affect the motor performance. The motor performance becomes marginal at speeds less than 3.2 km/h (2 mph) and stops at speeds below 1.9 km/h (1.2 mph). No monitor warnings are given at speeds below 1.6 km/h (1 mph).

NOTE: Extreme and sudden changes in speed cause a decrease in population and spacing accuracy.

To start from a stopped position, use the high idle and a low gear. To allow time for the system to adjust, gradually upshift and increase the speed from 3.2 km/h (2 mph) to the target speed. Use the Fast Start feature to improve the initial activation of the seed meter motor. Downshift instead of idling down to turn on the ends of the field. Attain 3.2 km/h (2 mph) before lowering the implement and gradually upshift to the target speed.

OUO6074,0000FCE-19-17DEC24

Run Page Overview



A98361—UN—22SEP23

Planter Overview Page

A—Page Name
B—Page Selector
C—EPG Toggle
D—EPG Status and Access
E—Frame Control Access
F—Marker Status and Control
G—Area Counter Status and Access
H—Unassigned Shortcut Key
I—SeedStar Shortcut Key
J—Quick Link Access
K—Feature Access Tiles
L—Vacuum Status and Access
M—Fertilizer Status and Access

Planter Overview is one of the default pages. To view other active pages, use the page selector (B).

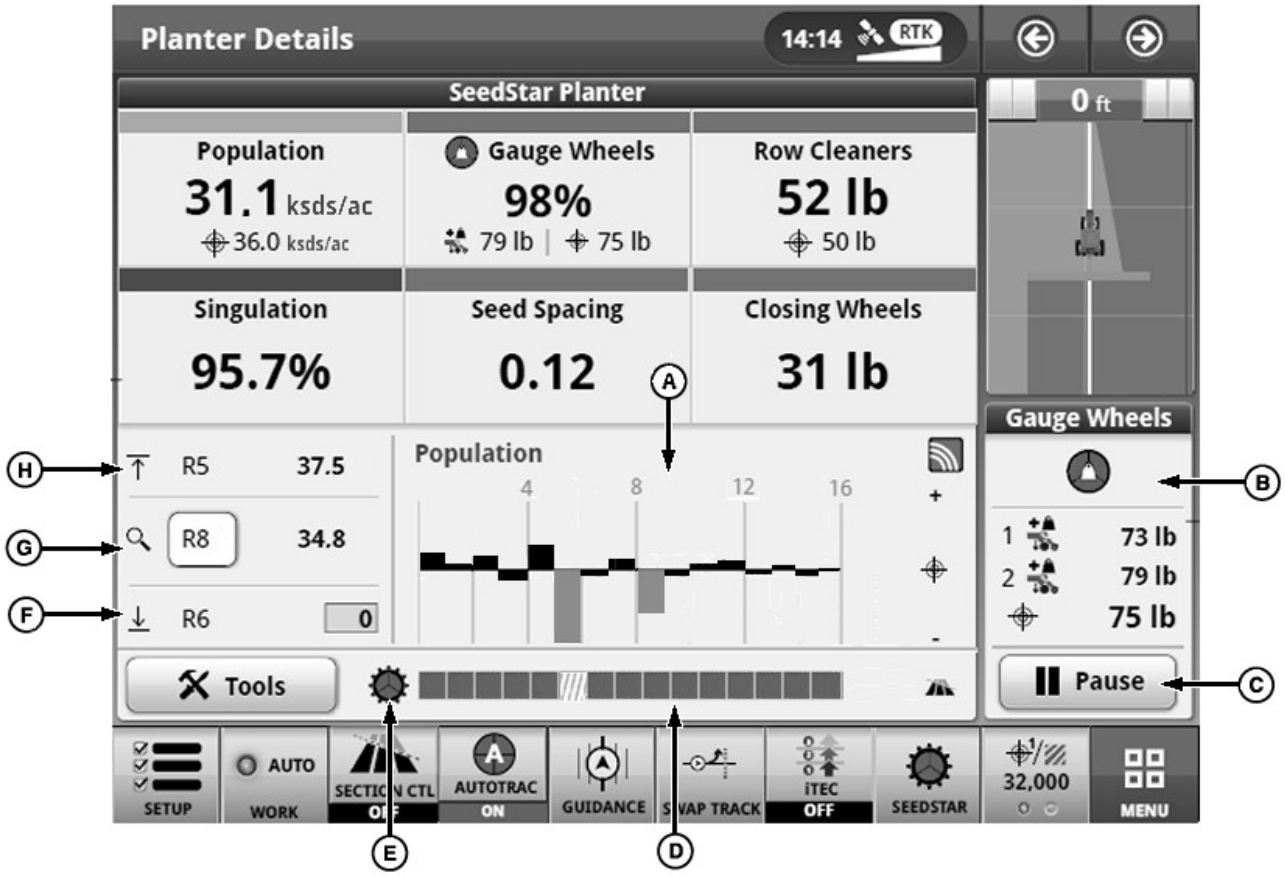
To enable and disable the power generation system, use the electric power generation (EPG) toggle (C). To open the EPG page, select the EPG status area (D).

To open the frame page, select the frame control (E) area. The marker status (F) is selectable to enable the next marker that activates.

To open a page with various types of counters, select the area counter (G).

The SeedStar shortcut key (I) opens the application and shows the status of the drives by changing color. Other shortcut keys are available (See How to Add Shortcut Keys.).

Select Tools (J) for a list of quick links that open commonly used pages. To open a detailed page for a specific feature, select a feature tile (K). To open a page with details about vacuum or fertilizer, select the vacuum (L) or fertilizer (M) area.



A98362—UN—22SEP23

Planter Details

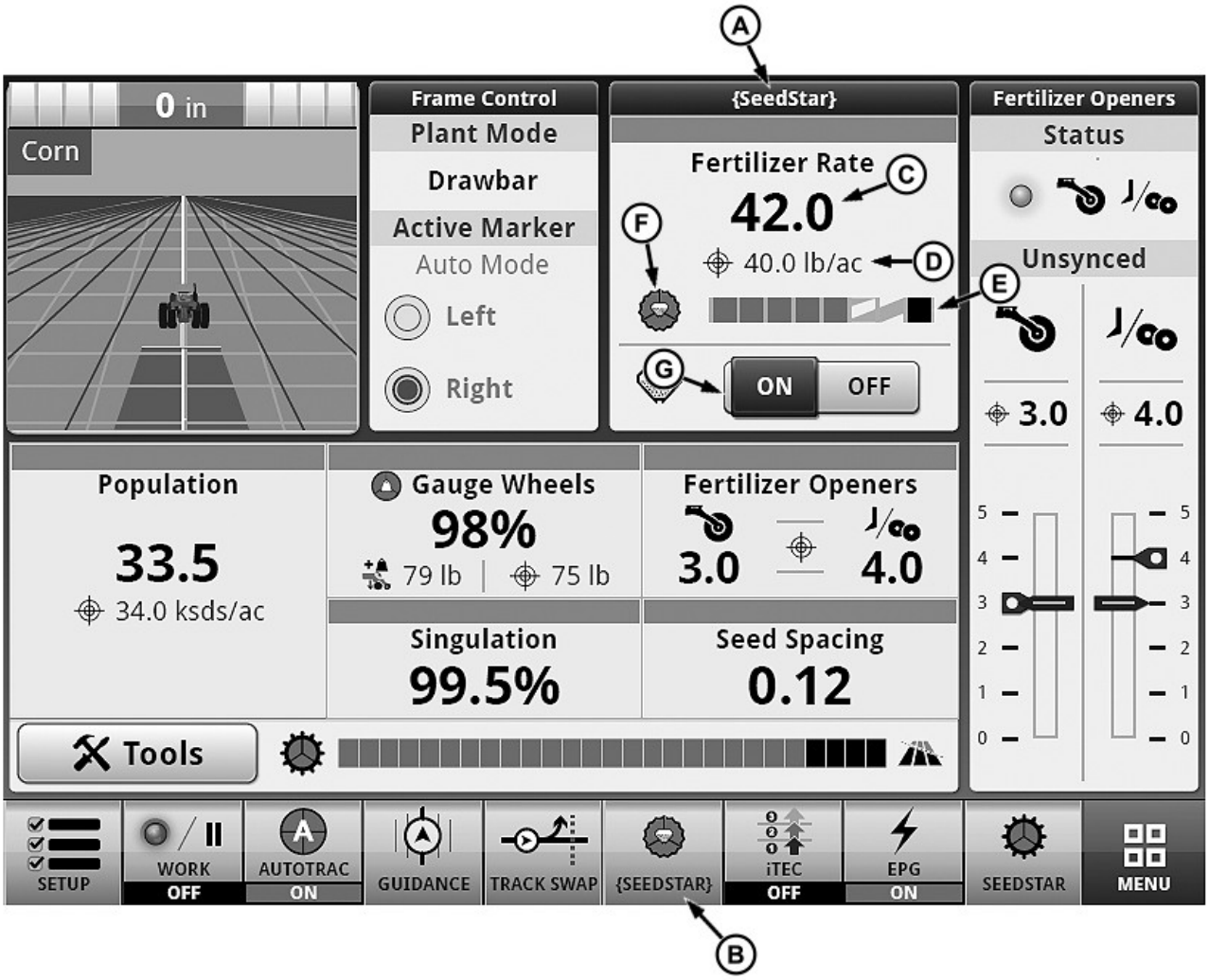
A—Population Graph
B—Downforce Status and Access
C—Pause, Downforce Adjustment
D—Section Command
E—Meter Drive Status
F—Population, Lowest Row
G—Population, Selected Row
H—Population, Highest Row

Planter Details is one of the default pages. The population graph (A) shows the variation of population, over or under the target, for each row. To zoom into specific planter sections and rows, select those areas in the population graph.

To open the downforce page, select the downforce status (B) area. To stop downforce adjustments, select the pause button (C). The pause feature is commonly used while crossing waterways and other areas where automatic adjustments are not needed.

Section Command (D) shows the status of all the sections. To open the section control page, select the Section Command screen area.

The seed meter status (E) shows the status of the electric drive system. The row with the lowest (F) population is displayed on the bottom. The population shown in the middle area is the row number that an operator enters (G). The row with the highest (H) population is displayed on the top.



A121729—UN—13JUN24

Dry Application System

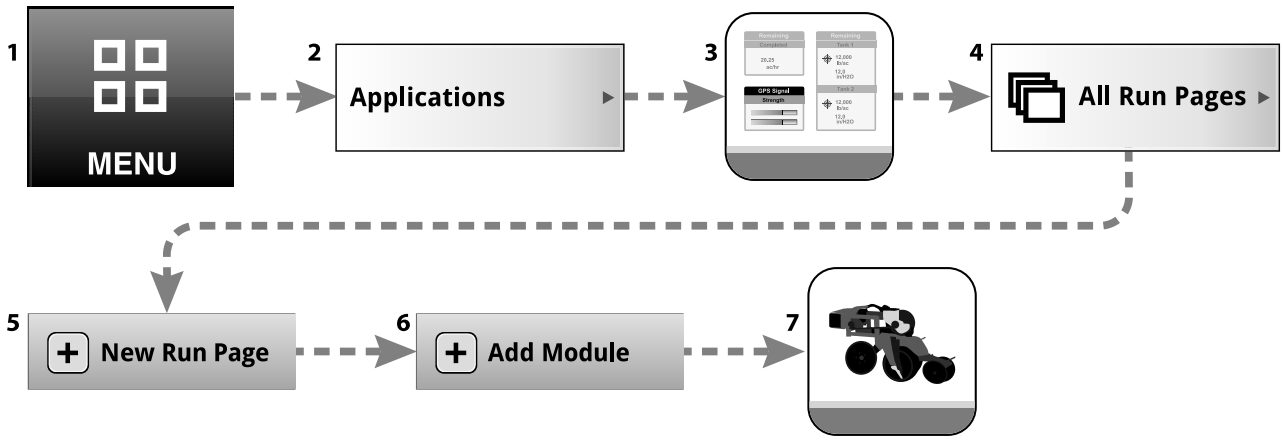
A—Dry Application Screen Area
B—Dry Application Shortcut Key
C—Current Rate Applied
D—Target Rate
E—Section Status
F—Main Drive Status
G—Dry System Status

The dry application screen area (A) shows details related to the system. To open the application, select the screen area or the shortcut key (B).

The screen area shows the current rate applied (C), the target rate (D), the section status (E), the main drive status (F), and the system status (G).

OUO6074,0001019-19-12JUN24

How to Create Run Pages



A98651—UN—14NOV17

1—Menu
2—Applications
3—Layout Manager
4—All Run Pages
5—New Run Page
6—Add Module
7—SeedStar Application

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

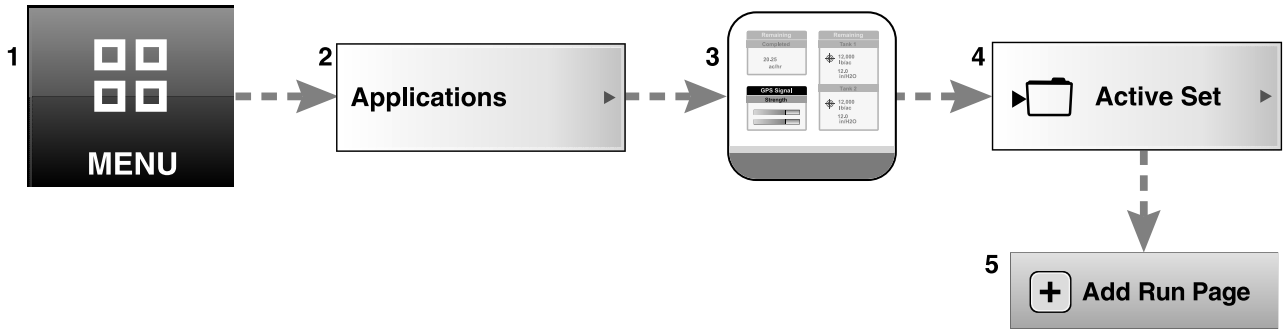
Select the 1. Menu > 2. Applications > 3. Layout Manager > 4. All Run Pages > 5. New Run Page > 6. Add Module > 7. SeedStar application.

Select and position modules for a new run page. Name the run page. Save the run page.

Select Help for additional information.

OUO6074,0001028-19-04JUN18

How to Add Run Pages



A98652—UN—14NOV17

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

1—Menu
2—Applications
3—Layout Manager
4—Active Set
5—Add Run Page

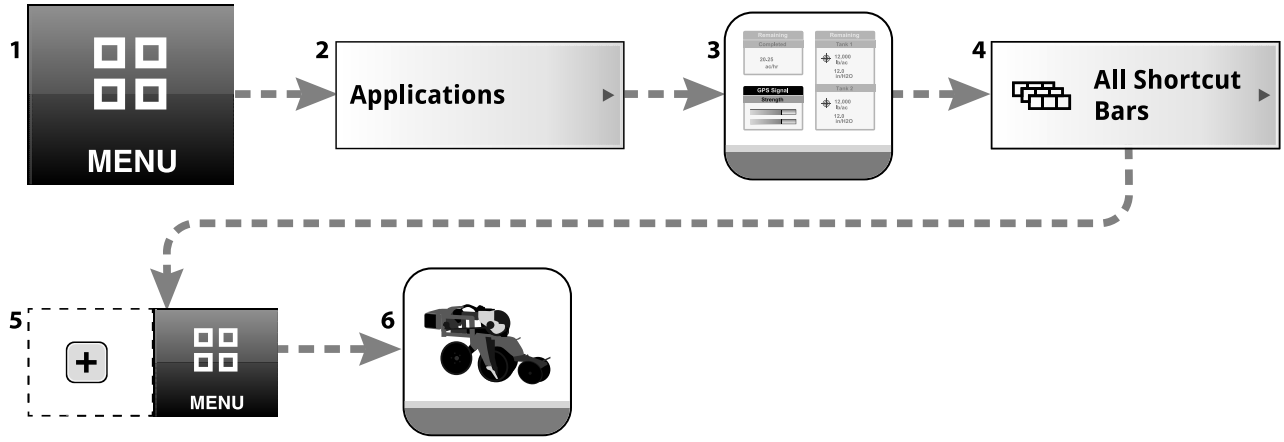
Select the 1. Menu > 2. Applications > 3. Layout Manager > 4. Active Set > 5. Add Run Page.

Select a run page to add to the active set.

Select Help for additional information.

OUO6074,0001023-19-04JUN18

How to Add Shortcut Keys



A98653—UN—14NOV17
Shortcut Key Path

1—Menu
2—Applications
3—Layout Manager

Select the 1. Menu > 2. Applications > 3. Layout Manager > 4. All Shortcut Bars > 5. Open Space > 6. SeedStar application.

A91609—UN—24AUG18
SeedStar

A94221—UN—11MAY17
Fast Start

A95559—UN—22SEP23
Target Population

A99747—UN—14JUN18
Transport

Select a shortcut key.

- The SeedStar shortcut opens the application.

4—All Shortcut Bars
5—Open Space
6—SeedStar Application

- The Fast Start shortcut provides quick activation of the feature.
- The Target Population shortcut provides quick access to the target population page.
- The Transport Mode shortcut allows ON and OFF control when the frame is in the transport position. Transport Mode is only available on planters without on-screen frame control when equipped with Individual Row Hydraulic Downforce.

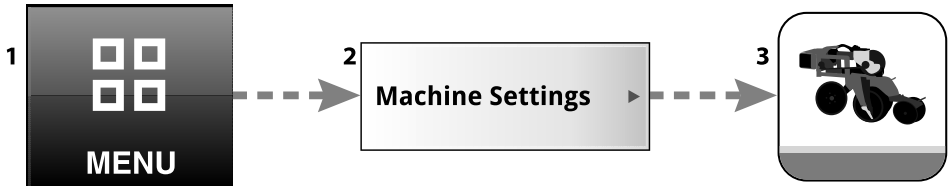
N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

Select Help for additional information.

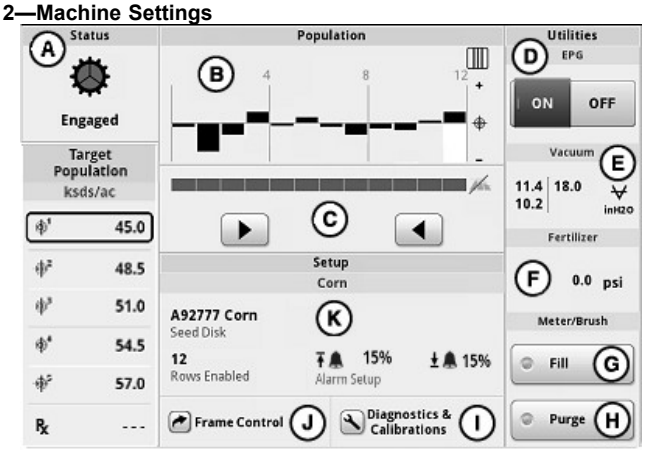
OUO6074,0001024-19-28JAN19

SeedStar Application Page Overview

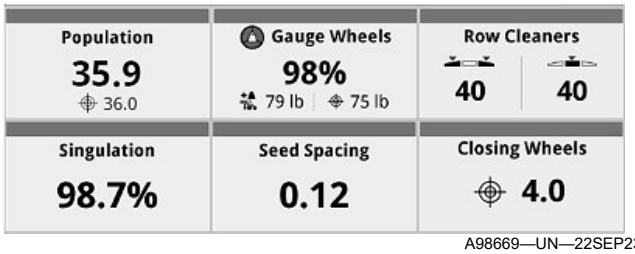


A98655—UN—14NOV17

1—Menu
2—Machine Settings



A98668—UN—22SEP23



A98669—UN—22SEP23

Planter Overview

N118166—UN—30MAY17

Help Information, G4 Displays

AX1398598—UN—31MAR25

Help Information, G5 Displays

A—Seed Meter Status
B—Population Graph
C—Section Control
D—Power Generation
E—Vacuum
F—Fertilizer
G—Meter Fill
H—BrushBelt Purge
I—Diagnostics and Calibrations

3—SeedStar Application

J—Frame Control
K—Crop Setup
L—Seed Target Population

Select the 1. Menu > 2. Machine Settings > 3. SeedStar application. A shortcut key is available.

Select the Help Information on-screen or see the SeedStar Planter section of this manual for detailed information.

The meter status (A) shows the status of the frame height, power generation, and ground speed. To access the status page, select the area.

The population graph (B) displays the active population for each meter and the curve compensation. To open the planter overview page with multiple feature access, select the graph.

The section control (C) displays the section status. To access section command, select the area.

To enable and disable the power generation system, select the electric power generation (EPG) (D) toggle.

To open a page with vacuum control, select the vacuum (E) area.

To adjust the fertilizer alarm, select the fertilizer (F) area.

To fill the seed meters, select the meter fill (G).

To purge the BrushBelt, select the purge (H).

To access diagnostics and calibrations (I), select the screen area.

To open the frame control (J) page, select the screen area.

To adjust seed meter settings and alarms, select the setup (K) area.

To adjust seed populations (L), select the screen area.

OUO6074,0001022-19-17APR23

Quick Start Overview

Also see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

Quick Start is an automated feature that enables when the planter is lowered while stationary. The seed meters engage when the planter wheel motion is detected. The drive motors operate based on a 1.61 km/h (1 mph) speed. The motors operate at the 1.6 km/h (1 mph) speed for 6 seconds or until the ground speed reaches 2.4 km/h (1.5 mph).

A skip is an area where seed is expected, but has not been planted.

The Quick Start feature reduces a skip when the planter starts from a stop. Quick Start reduces the skip to approximately 0.3—1.2 m (1—4 ft).

The control unit must detect the three following conditions before Quick Start activates:

- The actual radar or GPS speed must be less than the minimum ground speed.
- The electric power generation must be ON.
- The planter wheel motion must be detected.
- The planter frame height must indicate a lowered position.

1. Lower the planter while stationary. When the height sensor indicates a lowered position, a count down message appears on-screen and begins counting down.
2. Begin forward movement. The seed meter motors engage at the minimum speed when wheel motion is detected.
3. Gradually shift up to the target ground speed.

   The control unit checks for a minimum ground speed of 1.9 km/h (1.2 mph). If the minimum speed is not reached within 6 seconds, the system shuts down. If 2.4 km/h (1.5 mph) is reached at any point while the timer is active, Quick Start deactivates and normal operation resumes.

OUO6074,0000FCF-19-16OCT25

Fast Start Overview

A92118—UN—07MAY19

Fast Start Shortcut Key

Also see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

A skip is an area where seed is expected, but has not been planted.

The Fast Start feature reduces a skip when the planter starts from a stop. Fast Start immediately dispenses seed for up to 6 seconds after being activated. If no forward motion is detected after 6 seconds, Fast Start times-out and all seed delivery stops.

NOTE: Auto-enable for Fast Start is available in the Advanced Settings. Auto-enable engages the Fast Start as the planter is lowered.

When the Fast Start key is selected, the seed meters engage based on a 1.9 km/h (1.2 mph) ground speed. The meters continue to rotate until the actual ground speed reaches 2.4 km/h (1.5 mph), Fast Start deactivates, and normal operation resumes.

The control unit must detect the three following conditions before Fast Start activates:

- The planter wheel motion is zero.
- The electric power generation must be ON.
- The planter frame height must indicate a lowered position.
- The actual radar or GPS speed must be less than 2.4 km/h (1.5 mph).

1. Lower the planter while stationary.
2. Select the Fast Start shortcut key. A 6 second timer starts and the seed meters engage.
3. Begin forward movement and gradually shift up to the target ground speed.
4. The control unit checks for a minimum ground speed of 1.6 km/h (1 mph). If the minimum speed is not reached within 6 seconds, the system shuts down. If 2.4 km/h (1.5 mph) is reached at any point while the timer is active, Fast Start deactivates and normal operation resumes.

OUO6074,0000FD0-19-16OCT25

Frame Setup—Implement Profile

A98654—UN—14NOV17

1—Menu
2—Applications
3—Equipment Manager

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

Implement Profile settings are important for the accurate performance of John Deere Precision Ag Technology applications, such as mapping and section control. The planter controller sets most of the Implement Profile settings automatically. Access the implement profile and verify the settings.

Various planter systems and sensors are enabled and setup in the implement profile. Once all the profile settings are input and saved, all the settings load each time the planter is connected.

Select the 1. Menu > 2. Applications tab > 3. Equipment Manager application. Select the planter profile.

Select the Help Information onscreen or see the Implement Profile in the SeedStar Planter section of this manual for detailed information.

- Connection Type: Drawbar or 3-point
- Connection Pivot Point: Measuring and entering the pivot offset
- Hitch Offset
- Center of Rotation: Measuring and entering the rotation point of the planter
- GPS Receiver Location: Measuring and entering the receiver location
- Work Point: Measuring and entering the point where seed enters the soil
- Sensor Setup: Setting behaviour for one or two ranks.
- Working Width

OUO6074,000101A-19-13MAY24

Row Setup—Implement Profile

A98654—UN—14NOV17

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

1—Menu
2—Applications
3—Equipment Manager

Implement Profile settings are important for the accurate performance of John Deere Precision Ag Technology applications, such as mapping and section control. The planter controller sets most of the Implement Profile settings automatically. Access the implement profile and verify the settings.

Various planter systems and sensors are enabled and setup in the implement profile. Once all the profile settings are input and saved, all the settings load each time the planter is connected.

Select the 1. Menu > 2. Applications tab > 3. Equipment Manager application. Select the planter profile. Select the Help Information onscreen or see the Implement Profile in the SeedStar Planter section of this manual for detailed information.

- Row Width
- Row Configuration
- Row Spacing
- Number of Rows
- Mechanical Delay: Timing of the seed meter engagement in relation to Section Control

OUO6074,000101C-19-04JUN18

Sensor Setup—Implement Profile

A98654—UN—14NOV17

1—Menu
2—Applications
3—Equipment Manager

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

Implement Profile settings are important for the accurate performance of John Deere Precision Ag Technology applications, such as mapping and section control. The planter controller sets most of the Implement Profile settings automatically. Access the implement profile and verify the settings.

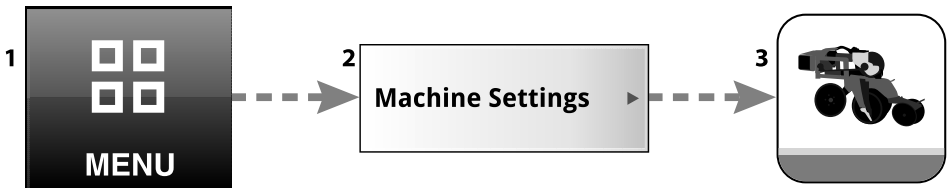
Various planter systems and sensors are enabled and setup in the implement profile. Once all the profile settings are input and saved, all the settings load each time the planter is connected.

Select the 1. Menu > 2. Applications tab > 3. Equipment Manager application. Select the planter profile. Select the Help Information onscreen or see the Implement Profile section of this manual for detailed information.

- Vacuum Setup
- Gauge wheel downforce sensor
- Fertilizer sensor
- Section Controls

OUO6074,000101D-19-04JUN18

Advanced Settings



A98655—UN—14NOV17

1—Menu
2—Machine Settings
3—SeedStar Application

N118004—UN—22OCT15

Advanced Settings

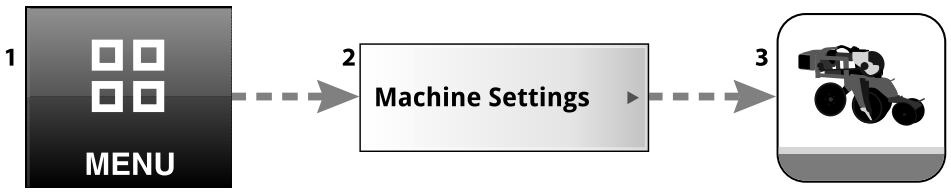
The Advanced Settings page is where seldom changed settings are saved for various systems on the planter.

Select the 1. Menu > 2. Machine Settings tab > 3. SeedStar application. Select the Advanced Settings. See the Information and Settings in the SeedStar Planter section of this manual for detailed information.

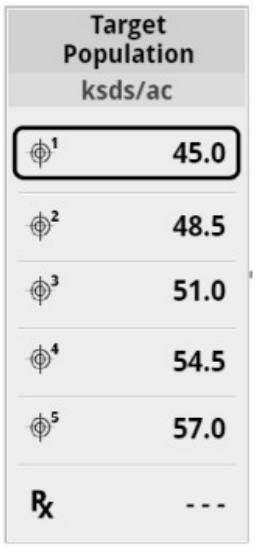
- Seed rate setup (Basic or Advanced)
- Fast start configuration
- Ground speed source
- Frame height settings
- Downforce: Manual adjustment increment and the pause timer length
- Row cleaner enable/disable, adjustment increment, up force visibility, or default reset
- Closing wheel group visibility and leak detection activation
- Coulter group visibility and leak detection activation (Brazil production only)
- Vacuum: Manual adjustment increment
- Selective control valve (SCV) assignment: Vacuum automation and frame control
- Section control alarm for rows commanded OFF
- Central commodity system agitator control and system enable/disable

OUO6074,000101B-19-16OCT25

Basic Target Population Setup



A98655—UN—14NOV17



A91612—UN—22SEP23

Basic Target Population

1—Menu
2—Machine Settings
3—SeedStar Application

Select the 1. Menu > 2. Machine Settings > 3. SeedStar application. A shortcut key is available.

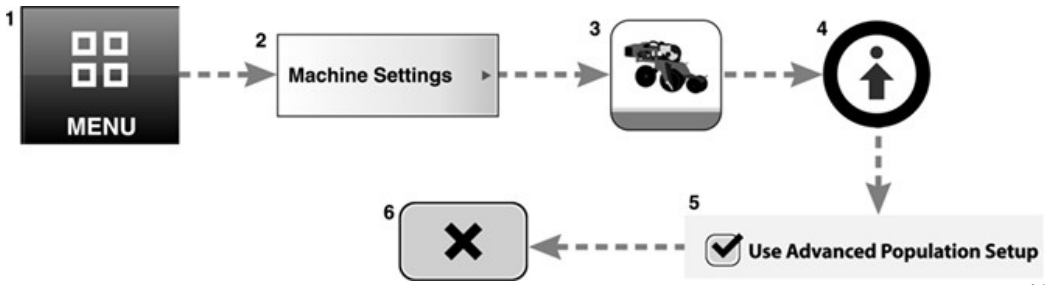
Select the target population area. Set target population selections for the entire implement.

If low limit alarms trigger consistently with wide rows and high population, input a population adjustment. Perform a field population check and compare it to the population reading on the monitor. Divide the field check population by the monitor population. Select the Setup area Seed tab and enter the result in the Population Adjust input box.

Select the Help Information on-screen or see the Target Population in the SeedStar Planter section of this manual for detailed information.

OUO6074,0001026-19-16OCT25

Advanced Target Population Setup

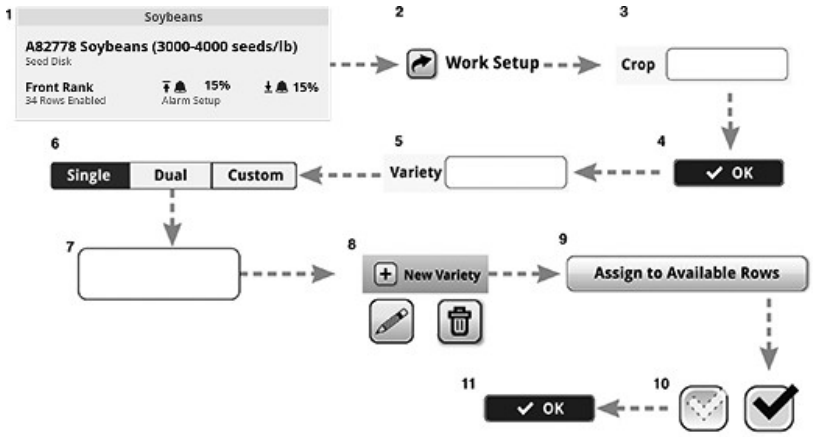


A102866—UN—08FEB19

1—Menu
2—Machine Settings
3—SeedStar Application
4—Advanced Settings
5—Use Advanced Population Setup
6—Close

IMPORTANT: Seed varieties and target populations must be entered before other features are active.

Enable Advanced Populations: Enabling the advanced population setup allows target populations for multiple seed varieties across the implement. Select the 1. Menu > 2. Machine Settings > 3. SeedStar application > 4. Advanced Settings > 5. Use Advanced Population Setup > 6. Close.

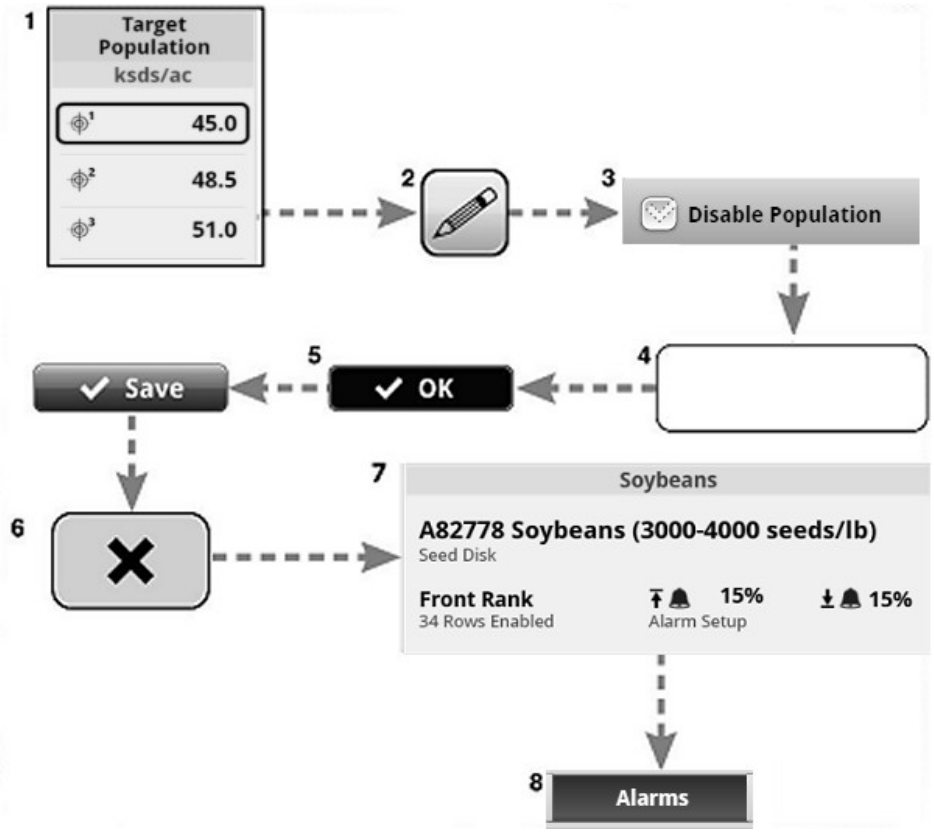


A102868—UN—22SEP23

1—Setup Area
2—Work Setup
3—Crop Type
4—OK
5—Variety
6—Single, Dual, or Custom
7—Variety Selection
8—Select, Add, Edit, Delete
9—Assign Available Rows
10—Select Assignments
11—OK

Choose a Crop Type: From the SeedStar application, select the 1. Setup area > 2. Work Setup > 3. Crop Type (enter the crop) > 4. OK.

Configure Seed Varieties and Assign Rows: Select the 5. Variety > 6. Single, Dual, or Custom tab > 7. variety selection > 8. select, add, edit, or delete a variety from the list > 9. select Assign variety to Available Rows > 10. select the row assignments > 11. select OK on each screen until the main screen appears.



A105003—UN—25SEP23

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

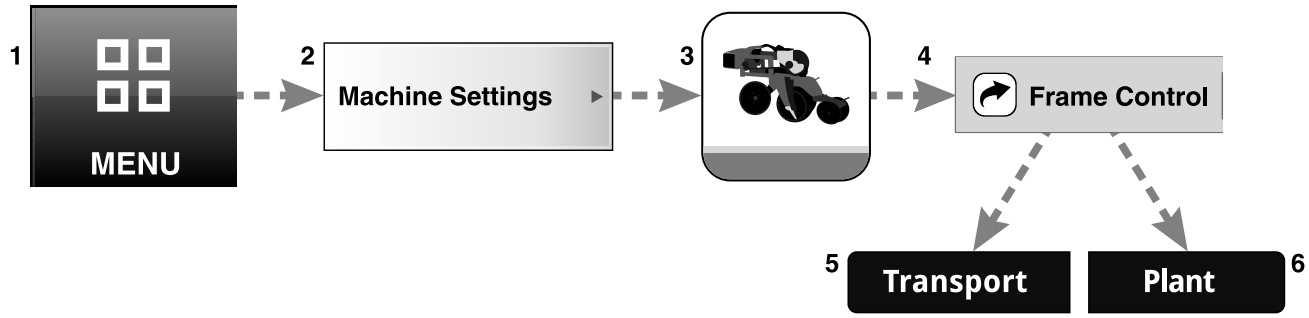
1—Target Populations
2—Edit
3—Disable Population (deselect)
4—Input Box
5—OK and Save
6—Close
7—Setup (area)
8—Product Alarms

Set the Target Populations and Alarms: Enter the SeedStar application again and select 1. Target Populations > 2. Edit > 3. Disable Population (deselect) > 4. Input box for each variety > 5. OK and Save > 6. Close > 7. Setup area > 8. Product Alarms tab (input alarm limits).

Select the Help Information on-screen or see the Target Population in the SeedStar Planter section of this manual for detailed information.

CR53390,0000159-19-12JUL19

Frame Control—Onscreen



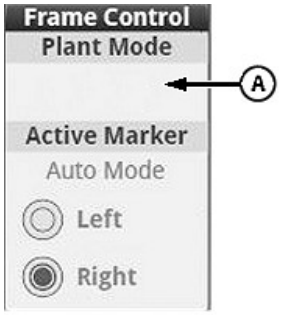
A98656—UN—14NOV17

1—Menu
2—Machine Settings
3—SeedStar Application
4—Frame Control
5—Transport
6—Plant

N118166—UN—30MAY17
Help Information, G4 Displays

AX1398598—UN—31MAR25
Help Information, G5 Displays

Select the 1. Menu > 2. > Machine Settings tab > 3. SeedStar application > 4. Frame Control > 5. Transport mode or 6. Plant mode.



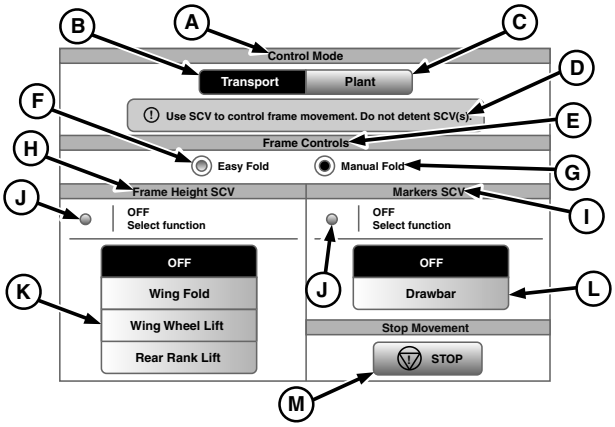
A98551—UN—07NOV17
Frame Control Module

A—Frame Control Module

Access the onscreen frame control either by following

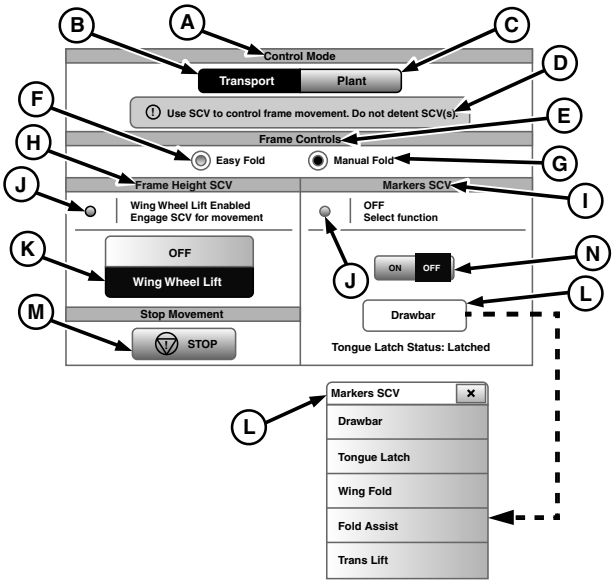
the onscreen navigation or select the Mode area of frame control module (A) on a run page.

Select the Help Information or see the Frame Control in the SeedStar Planter section in this manual for detailed information.



A98582—UN—09NOV17

Planter Transport-Manual Fold



A98583—UN—13NOV17

DB Planter Transport-Manual Fold

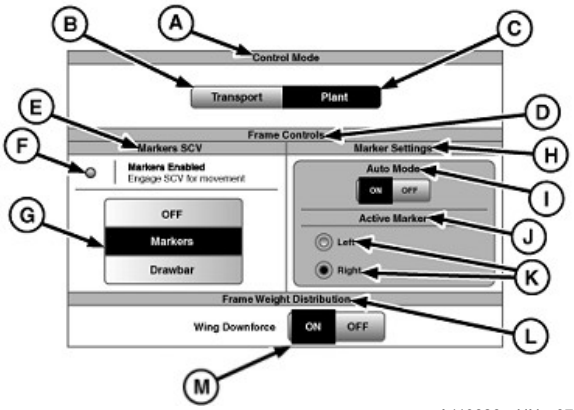
A—Control Mode
B—Transport Mode
C—Plant Mode
D—Do Not Detent SCV
E—Frame Controls
F—Easy Fold
G—Manual Fold
H—Frame Height SCV
I—Markers SCV
J—Status
K—Frame SCV Functions
L—Markers SCV Functions
M—Stop Movement
N—On-Off Toggle

Access Easy Fold (F) through Transport mode (B) and follow the onscreen commands.

Access Manual Fold (G) through Transport mode (B). Follow the step-by-step procedures outlined in the Help pages or in Frame Control | Transport (1775NT), (1795), (DB Planters) or (3100FT Planters) in the SeedStar planter section of this manual.

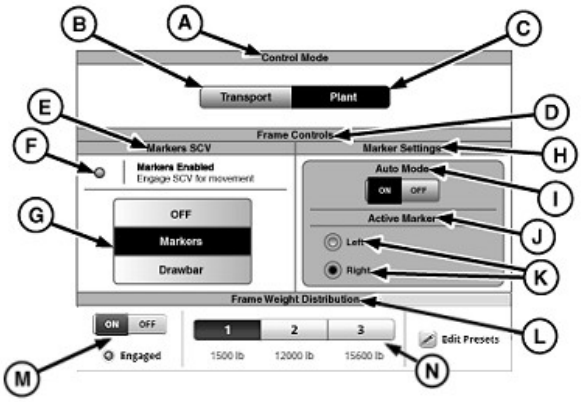
Select function (K) controlled by Frame Height selective control valve (SCV) (H) or function (L) controlled by Markers SCV (I).

When the Markers SCV function is selected on DB Planters, a separate list opens. The Trans Lift function, in the list, allows the wing wheels to raise and lower while folded and positions the frame in the road transport height. Turn a DB Planter function On or Off with toggle (N). View status (J) of any selected function.



A119826—UN—07NOV23

Plant Mode with Manual Frame Weight Distribution



A119827—UN—07NOV23

Plant Mode with Onscreen Frame Weight Distribution

A—Control Mode
B—Transport Mode
C—Plant Mode
D—Frame Controls
E—Markers SCV
F—Status
G—Markers SCV Functions
H—Markers Settings
I—Auto Mode
J—Active Marker
K—Left/Right

L—Frame Weight Distribution
M—Wing Downforce
N—Preset

Access the planting frame functions through Planter (C) mode.

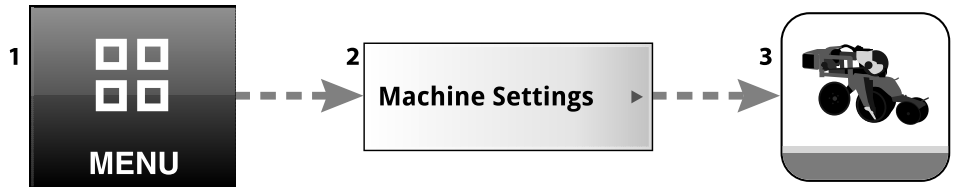
Select function (G) to control with Markers SCV (E).

Select the automatic or manual marker mode (I) with the toggle. View or select Active Marker (J).

If the planter is equipped with Frame Weight Distribution (L), toggle Wing Downforce (M) ON or OFF. If equipped with onscreen control, set and select preset (N) level.

OUO6074,0001020-19-09JAN25

Frame Height Sensor—Settings



A98655—UN—14NOV17

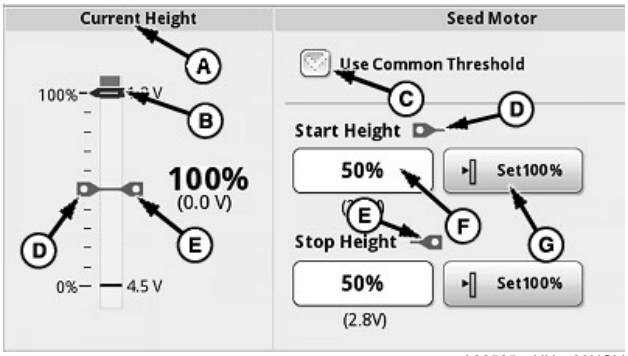
1—Menu
2—Machine Settings

The frame height sensor is on the planter main frame. The sensor determines when the seed meter motors engage and disengage.

Select the 1. Menu > 2. Machine Settings tab > 3. SeedStar application. Select the Advanced Settings and scroll to the Seed Motor settings.

N118004—UN—22OCT15

Advanced Settings



A98585—UN—09NOV17

Seed Motor—Frame Height Settings

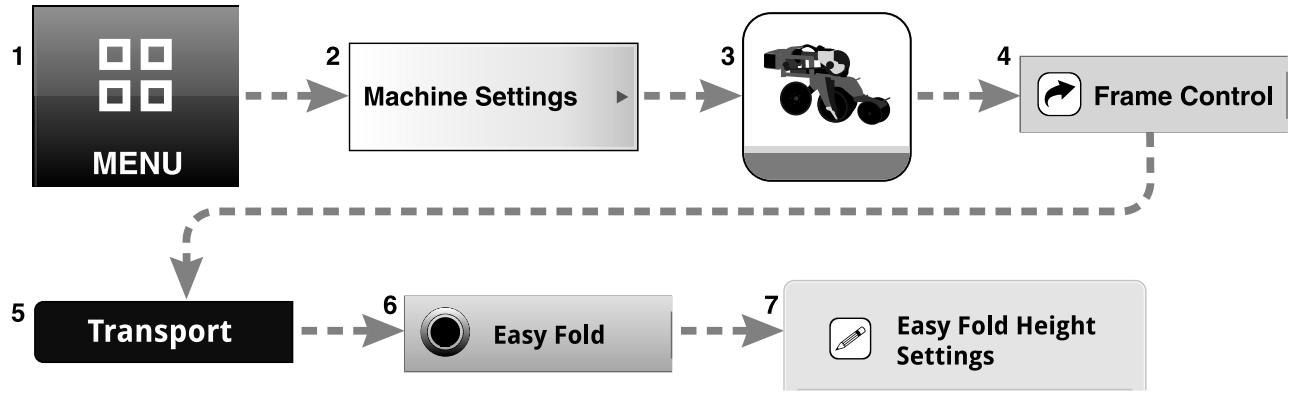
3—SeedStar Application

A—Current Height
B—Current Height Indicator
C—Common or Separate Selection
D—Start Height
E—Stop Height
F—Manual Height Input
G—Automatic Height Selection

When the Common Threshold (C) is selected, the start (D) and stop (E) height are identical. The automatic height selection (G) sets the point where the current height (A) is indicated (B). See the Information and Settings in the SeedStar Planter section of this manual for detailed information.

OUO6074,000101E-19-16OCT25

Frame Hitch Sensor—Settings (Easy Fold)

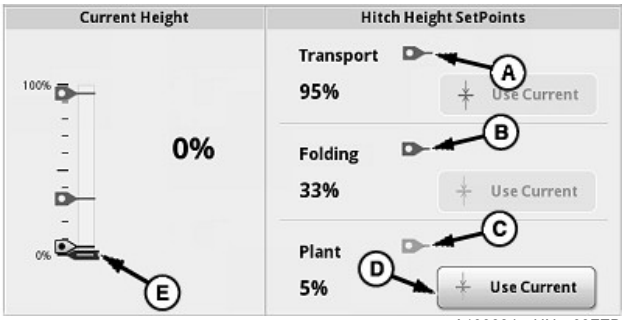


A98657—UN—14NOV17

1—Menu
2—Machine Settings
3—SeedStar Application
4—Frame Control
5—Transport
6—Easy Fold
7—Easy Fold Height Settings

NOTE: The Frame Control mode must be the Automated selective control valve (SCV) Control with Easy Fold.

Select the 1. Menu > 2. Machine Settings tab > 3. SeedStar application > 4. Frame Control > 5. Transport mode > 6. Easy Fold > 7. Easy Fold Height Settings.



A103684—UN—08FEB19

Hitch Height Settings

A—Transport
B—Folding
C—Plant
D—Use Current
E—Indicator

The sensor settings determine three stop points for the hitch height that coordinate with the fold cycle.

Stop Points:

- Transport (A) (96% maximum)
- Folding (B) (for wing-to-frame clearance)
- Plant (C)

To set a stop point, select the Use Current (D) when the hitch height indicator (E) is in the correct location. See the Onscreen Help or the Information and Settings in the SeedStar Planter section of this manual for detailed information.

2-Point Hitch Easy-Fold Requirements:

- Install and activate the Implement Automation feature on the tractor.
- Coordinate the SCV assignments and actual hydraulic connections (including the extend and retract function).
- Set the tractor upper hitch-limit to 98% (tractor setting).
- Set the tractor lower hitch-limit to 0% (tractor setting).
- Set the implement transport height to 96%.
- Set the implement fold and plant heights accurately.
- Engage the auto resume.

A97367—UN—21JUL17

Auto Resume (Implement Automation)

Tractor Implement-Automation Activation: is required to use Easy Fold on implements that connect to the tractor using a 2-point hitch.

Drawbar-connected implements do not use tractor implement automation.

Compatible Tractors:

- 8R and 9R (IT4 or newer tractors)

- 6R and 7R (FT4 tractors)

If the operator interrupts the 2-point hitch movement, the tractor Auto Resume must be selected to resume the Easy Fold control of the hitch.

OUO6074,0001021-19-16OCT25

Central Commodity System—Onscreen Control

A98654—UN—14NOV17

A92133—UN—06MAY19

On-Off Toggle

Select the 1. Menu > 2. Applications > 3. Equipment Manager application. Select the planter profile.

Verify the tank configuration on the planter.

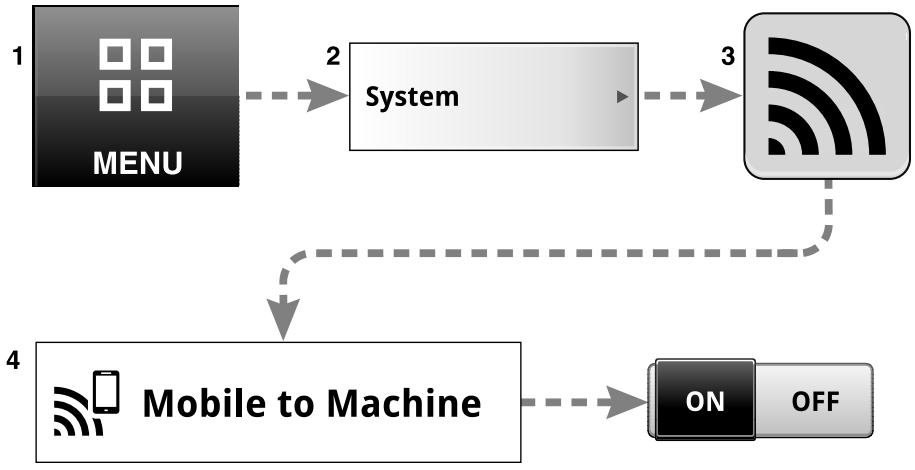
To operate the blower in any planter position, select the toggle ON to override the automatic shutoff switch. To return to normal operation, select the toggle OFF.

Enable the blower and agitators by checking boxes. Disable by unchecking boxes.

Select the Help Information onscreen or see the Implement Profile in the SeedStar Planter section of this manual for detailed information.

OUO6074,0001027-19-16OCT25

Mobile Device - Equipment Mobile and Mobile Runoff Overview



A100903—UN—15JUN18

Wireless Connection to Mobile Device Path

Set up the Mobile-to-Machine (planter or tractor) wireless connection: Select the 1. Menu > 2. System > 3. Wireless Settings > 4. Mobile-to-Machine ON. Enter a Network Name (example: Planter A), enter a password, and select a Network Channel. This information is used to make the connection with the mobile device.

A96767—UN—01JUN17

View the setup information and guidelines for a specific planter configuration.

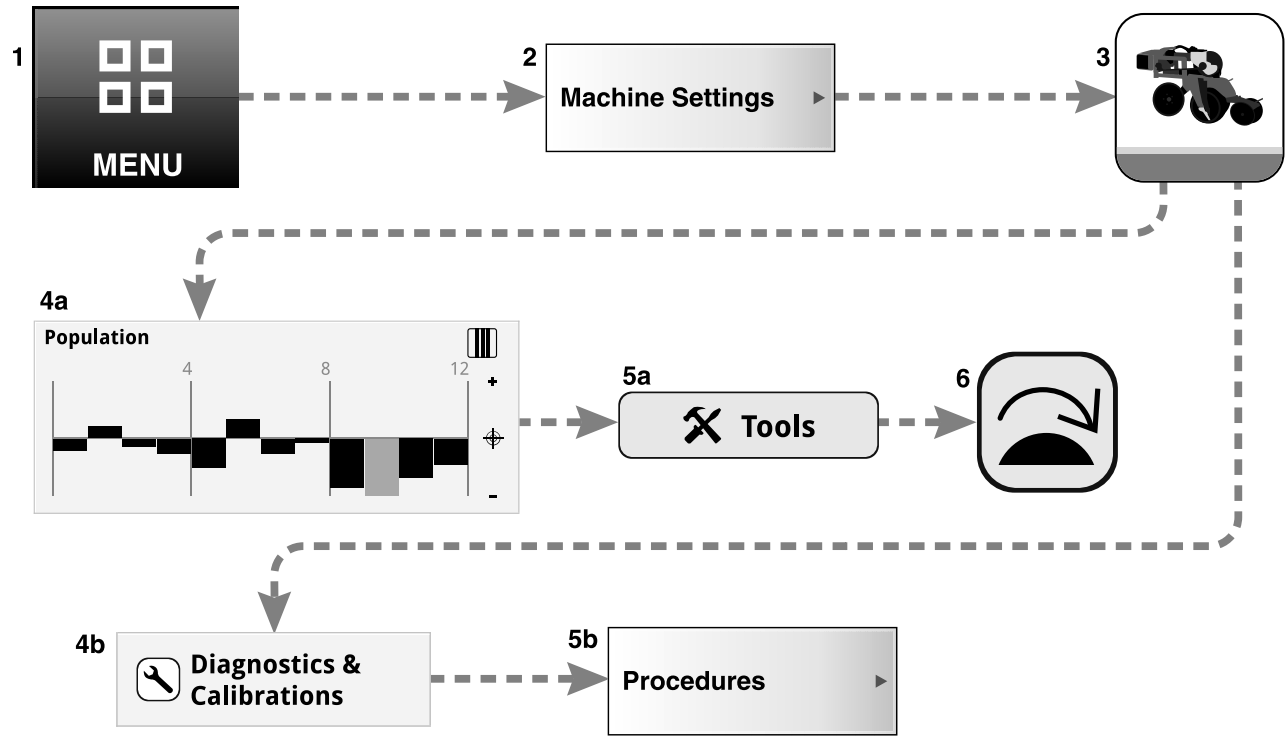
Optimize the planter from a mobile device. Download the Equipment Mobile application from the Apple App Store or the Google Play Store.

- Check the seed meter performance using Equipment Mobile tools.
- Determine the seed meter adjustments or diagnose an issue using a runoff procedure that runs the seed meters continuously while displaying the performance.
- Meter a fixed number of seeds using the Performance Check and receive a report of the results.

IMPORTANT: Avoid damage to components in the seed meters. Do not operate the BrushBelts when the seed bowls are removed. (See the Mobile Display Runoff in the SeedStar application or in the SeedStar Planter section.)

The runoff procedures are the same whether using the cab display or the mobile device, but some buttons are selected differently.

1. Open the Equipment Mobile application on your mobile device.
2. Select Tools and then Row Runoff or Meter Performance.



A98658—UN—14NOV17

A94265—UN—23JUN17

Meter

A94264—UN—23JUN17

Row

A93554—UN—22JUN17

Mobile Device

3. On the tractor display, select the 1. Menu > 2.

Machine Settings > 3. SeedStar application > 4a. Population screen > 5a. Tools > 6. Runoff procedure.

On the tractor display, select the 1. Menu > 2. Machine Settings > 3. SeedStar application > 4b. Diagnostics and Calibrations > 5b. Procedures tab > Runoff procedure.

4. Select Meter or Row.
5. Select the Mobile Device icon.
6. Verify connection with your mobile device and then follow the on-screen directions.

OUO6074,0000FDB-19-11MAR25

RowCommand Overview

A91613—UN—15MAY17

Also see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

The electric motors on each row unit are independently controlled through row-unit control units commanding the electric motors. The RowCommand system coordinates the electric motor control. Section command is used to manually select rows OFF and ON through the display or to automatically command the rows ON and OFF through mapping. Every row is considered a section with a maximum of 48 control sections. If a GPS signal is marginal, group the outer rows together for the best performance (grouping prevents unintentional row shutoff when the GPS signal drifts). (See the Information and Settings screen [in Advanced Settings] to group the rows.) (See the Section Control information in your GreenStar Operators Manual for the detailed Section Control setup.)

OUO6074,0000FD1-19-02MAY24

Electric Power Generation (EPG) Overview

A82413—UN—22APR14

A95612—UN—13JUL17

CAUTION: Avoid serious injury from an electrical shock. The planter is equipped with a 56 V electrical system which has a high-voltage electrical current. Always use extreme caution when servicing this planter.

The Planter Power Generation system is equipped with batteries. Avoid a short circuit or spark that results in an explosion. Use extreme caution when using tools, wires, or metal objects near the batteries. To prevent shorting out the batteries, wrap the metal tools with vinyl tape for protection. Remove all jewelry (watches, rings, bracelets, and similar items) before servicing the electrical system or batteries.

Also see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

The power generation is provided by an alternator that is either mounted on the planter or on the tractor. EPG systems with alternators powered by a hydraulic motor are called Planter Power Generation. EPG systems with alternators powered by a tractor PTO are called Tractor Power Generation. The planter power generation is powered with a hydraulic motor and the tractor power generation is powered with the PTO. (See your planter Operator's Manual for connection and maintenance.) To provide power for the planter systems, the alternator must be running and the EPG must be engaged through the display.

OUO6074,0000FD2-19-17APR23

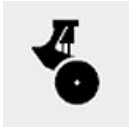
Downforce Overview

A94160—UN—11MAY17

Active Row-Downforce Icon

A94162—UN—11MAY17

Set-Point Row-Downforce Icon



A96863—UN—08JUN17

Closing Wheel Icon

Also see the SeedStar Application Help on the display or the SeedStar Planter section in this manual.

Row Downforce:

NOTE: A lower ride quality affects the MaxEmerge meter more than the ExactEmerge meter. Downforce, ground conditions, and ground speed relate closely to ride quality.

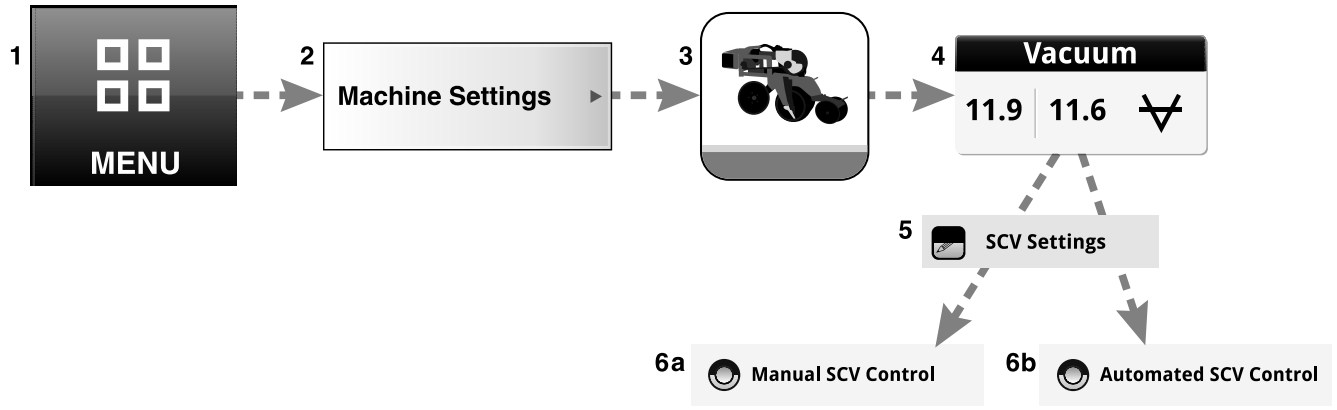
Downforce associated with SeedStar is applied to the row units using either pneumatic springs or hydraulic actuators. Downforce is referred to in two ways: active and set-point. An active downforce mode allows the system to adjust the force to maintain a target as soil and field conditions change. A set-point downforce mode remains at a force level until the operator changes the value. Active downforce used with the hydraulic actuators adjusts the level at each row. Active downforce used with the pneumatic springs adjusts the level across many rows at once. Sensors mounted in the furrow depth-adjustment handle measure the downforce for either mode. Use enough downforce to form a quality seed furrow and maintain a smooth ride for the row unit across the field. As a guideline, with the planter stationary and the row downforce applied, attempt to turn a gauge wheel by hand. If the wheel turns with some effort, the downforce is near the correct setting. A quality seed furrow maintains the shape of the furrow wall, but crumbles when prodded during a field check. Adjust a closing wheel to zero downforce and strap it suspended above the soil, then perform a field check. Graphs showing the downforce and ride quality are viewable on-screen.

Closing Wheel Downforce:

Closing wheel downforce and row downforce affect one another. Check both after a significant adjustment of one. Adjust the closing wheel force enough to press the soil around the seed without compaction or air pockets.

OUO6074,0000FD3-19-17APR23

Vacuum Automation Overview



A100894—UN—15JUN18

Vacuum Automation Path

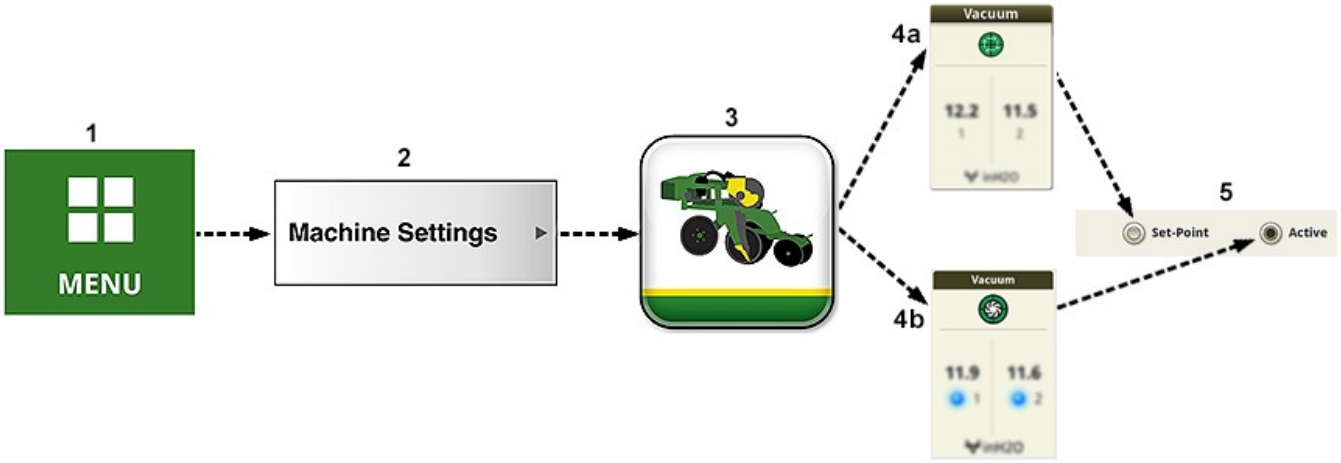
NOTE: If the vacuum hydraulic hoses are connected incorrectly, vacuum automation is disabled. (See the Hydraulic Connection Recommendations in the planter Operator's Manual.)

Set the initial flow control at 7 for the blower hydraulics. Automation engages at half the flow rate upon start-up.

When the selective control valves (SCVs) are mapped for each blower and the vacuum automation is turned on (Automated SCV Control), the system adjusts the hydraulic flow to control vacuum level.

Select 1. Menu > 2. Machine Settings tab > 3. SeedStar application > 4. Vacuum Level > 5. SCV Settings > 6b. Automated SCV Control.

Edit the SCV settings to match the actual vacuum hose connections to the tractor.



AX1382786—UN—31MAR25

Vacuum Status Path

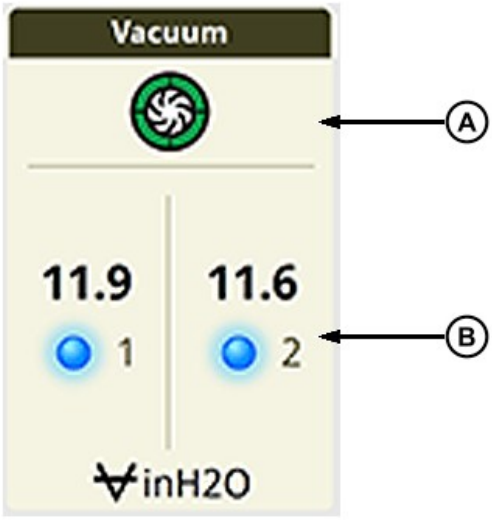
Select 1. Menu > 2. Machine Settings tab > 3. SeedStar application > 4a. Set-Point Status or 4b. Active Status > 5. Control Mode.

Set-Point: The hydraulic flow automatically adjusts to maintain the set vacuum level. Set and adjust the vacuum level from the vacuum module.

NOTE: Active control with ExactEmerge—Use only with corn or soybeans.

Active control with MaxEmerge 5e—Use only with corn.

Active: Set the initial vacuum level using set-point and change the target level from the vacuum module. The vacuum level automatically adjusts in varying conditions to maintain the target seed population. The hydraulic flow automatically adjusts the vacuum level to maintain seed population.

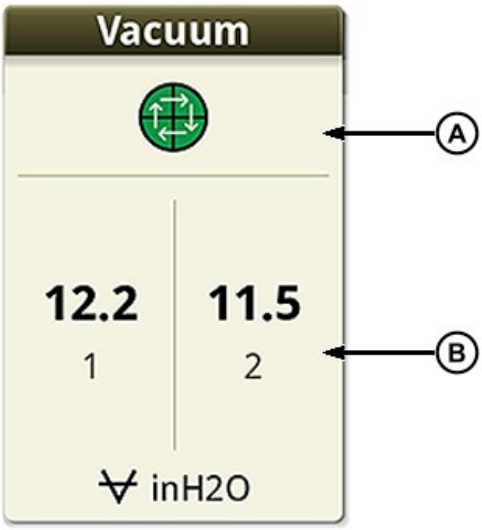


AX1382827—UN—14NOV24

Active

A—Status
B—Vacuum Indicator

The run screen module opens the vacuum control page when status (A) is selected or vacuum level adjust when vacuum indicator (B) is selected.



AX1382824—UN—14NOV24

Set-Point

OUO6074,0001002-19-18NOV24

Easy Fold Overview

A97367—UN—21JUL17

Implement Automation

NOTE: If the frame hydraulic hoses are connected incorrectly, Easy Fold is disabled. (See the Hydraulic Connection Recommendations in the planter Operator's Manual.)

Easy Fold is a John Deere application and only works with John Deere tractors. When the Easy Fold is enabled and the selective control valves (SCVs) are assigned for the frame controls, the system cycles through the proper fold sequence, and indicates when to activate an SCV. (See the Information and Settings in the Advanced Settings to assign the hydraulic functions.)

Tractor Hitch Height Settings: Set the upper limit to 98% and the lower limit to 0%. (See your tractor operator's manual.)

Easy Fold Height Settings: Set the planter-hitch transport height to 96%. (See Frame Hitch Sensor—Settings (Easy Fold) in the System Overview and Configuration section.) On-screen select Frame Control, Transport, Easy Fold, and Easy Fold Height Settings.

NOTE: Implement Automation is required with folding planters that connect to the tractor rockshaft. Automation is not required with a drawbar hitch connection.

Installation and activation of the Tractor Implement Automation is available through StellarSupport. Once activated, engage the implement automation by selecting the Auto symbol on the tractor functions.

Tractor Implement Automation: To install and activate automation on the tractor, follow these steps.

1. Go online to https://www.deere.com/en/stellarsupport/
2. Select Product Activation.
3. Select Tractor Automation.
4. Select the target tractor from the list.
5. Select the Activate button.
6. Select the Add Manufacturers menu.
7. Select the Tractor Implement Automation - John Deere.
8. Select the Continue button.
9. Select the Terms and Conditions Continue button.
10. Select the Finish button.
11. Select the activation code and then select the OK button.
12. On the tractor display, select the main Menu, System tab, and Software Manager application.
13. Select the Activations tab.
14. Select the Enter Code button.
15. On the Activation Successful screen, select Next.
16. Write down the Confirmation Code and then select OK.
17. Verify that the Tractor Implement Automation feature now appears in the Activations tab.

OUO6074,0001003-19-17APR23

Section Control Overview

A100858—UN—14JUN18

Section Control Path

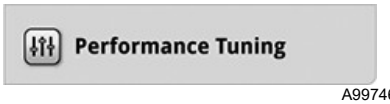
1—Menu
2—Machine Settings
3—Section Control Application

A91613—UN—15MAY17

Onscreen Display and Manual Control

Also see the Section Control onscreen Help for more information.

The electric motors on each row unit are independently controlled. The section control turns rows OFF and ON in response to the manual onscreen selections or the automatic mapping commands. Every row is considered a section with a maximum of 48 control sections. Workpoint settings are available in the Implement Profile ensuring each row is controlled precisely.



A99746—UN—14JUN18

Performance Tuning

NOTE: Enter and exit the headlands at a consistent speed for the best results.

To adjust the accuracy of seed overlaps or skips, modify the Performance Tuning.

1. Verify the mechanical delay before tuning (see the Advanced Settings in the planter application and the onscreen Help for that page).
2. Note the ground speed while entering and exiting a headland.
3. Dig to find the last seed planted at each row.
4. Measure the distance of overlap or skip and average the results.
5. Enter the speed and distance values into Performance Tuning.

After the performance tuning is complete, select the preferred skip and overlap settings.

A98654—UN—14NOV17

Equipment Manager Application Path

1—Menu
2—Applications

If a GPS signal is marginal, group the outer rows together for the best performance (grouping prevents unintentional row shutoff when the GPS signal drifts).

3—Equipment Manager Application

(To group the rows, see the Equipment Manager application for the planter.)

OUO6074,0001087-19-13MAY24

Settings Manager Overview

A100859—UN—14JUN18

Settings Manager Path

1—Menu
2—Machine Settings

NOTE: The settings are saved on the tractor CommandCenter.

To save settings, the planter must be actively planting.

The Settings Manager application retains (user

3—Settings Manager Application

selected) planter and tractor settings at the time the save is performed. Use different configuration names to save multiple settings.

To overwrite an existing configuration or create a new configuration, select Save Current Settings, choose the settings to save, and select Save. Previously saved data on overwritten files is not retrievable.

To Load (recall) an existing configuration, select the configuration, select OK, choose the settings to recall, and select OK.

To edit a configuration title, select the configuration, select Edit, change the title, and select OK.

To recall settings correctly, the planter must be attached to the same tractor with the same hitch configuration. When connecting to another tractor, either save a new configuration or overwrite a current configuration using the new tractor parameters.

OUO6074,0001004-19-17APR23

SeedStar Display Application

Access SeedStar

H113668—UN—22OCT15

Menu

N119118—UN—23SEP16

Machine Settings

A91608—UN—22JUN17

SeedStar

Access Application Through Display:

1. Menu
2. Machine Settings tab
3. Access SeedStar

N0LMWLO,0000004-19-17APR23

SeedStar Main Page

The SeedStar application is used to monitor the status and make adjustments to the seed meters, drive systems, and other systems linked to the SeedStar software. Calibrations, setup procedures, and diagnostics are also accessed through the application.

Items Accessible on SeedStar Main Page:

A91610—UN—15MAY17

Status of Drives

Status— displays statuses of the seed meter drives. Select to access the requirements for engagement of the drives.

NOTE: To view drive status from a run screen, use the SeedStar shortcut key. See Shortcut Keys at the end of this page for more information.

Target Population— displays the population targets. There are two modes for target population. Select the basic or advanced mode under Population Setup in Advanced Settings.

A91629—UN—25JUN20

SeedStar - Overview

SeedStar - Overview— displays the population performance for all the row units. Select to access multiple pages with performance details related to the seed meter and row unit features.

A92116—UN—05APR19

Curve Compensation

NOTE: To enable or disable Curve Compensation, see Diagnostics and Calibrations.

A91613—UN—15MAY17

Section Status

Section Status— displays the status of the planting sections. Select to control and adjust the sections.

A91617—UN—25SEP23

Setup

Setup— displays the seed meter configuration for the selected crop. Select to adjust the settings.

Utilities— contains other features and options that your implement has installed.

A92138—UN—15MAY17

Frame Control

Frame Control— allows you to control multiple frame functions.

A91619—UN—24AUG18

Diagnostics & Calibrations

Diagnostics & Calibrations— view diagnostic information for various implement systems or perform a sensor calibration.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

- Advanced or basic target population selection
- Selection for the Fast Start auto-enable as the implement is lowered
- Selection to override Section Control while using Fast Start
- Ground speed source selection
- Implement frame start and stop height settings
- Pause timer for the active downforce
- Selective control valve assignments for automated hydraulic functions
- Master On/Off for the Easy Adjust row cleaners
- Selection to enable leak detection in the closing wheel system
- Selection to enable leak detection in the coulter adjust system (Brazil production only)
- Selection to show or hide the up pressure for the Easy Adjust row cleaners
- The central commodity system (CCS) blower override and agitator control

A95658—UN—06MAY19

Settings Manager

Settings Manager— saves the values and settings at the moment Save is selected. Use different file names to save multiple configurations. The values saved do not include the crop type, seed disk (bowl), or advanced seed populations.

NOTE: The settings are saved on the tractor CommandCenter. If another tractor is connected, save new entries for the tractor settings.

Select the Settings Manager application to:

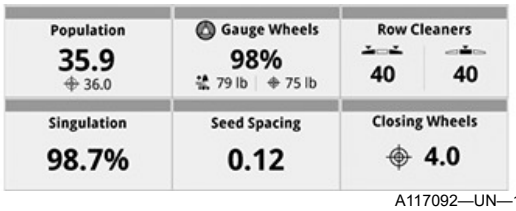
- Select a saved entry to enable those settings.
- Edit a saved entry.
- Save a new entry.

NOTE: Overwritten settings are not retrievable.

Run Page Modules

Modules for this application can be added to run pages using Layout Manager.

Example:



A117092—UN—15DEC22

Implement Overview

Implement Overview— view the row unit performance.

NOTE: Different modules can be available for your application.

Shortcut Keys

Shortcut keys for this application can be added to the shortcut bar using Layout Manager.

A91609—UN—24AUG18

SeedStar

SeedStar Application— quick access to implement applications.

NOTE: Different shortcut keys can be available for your application.

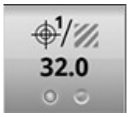
Quick Start— automated feature that is enabled when the planter is lowered while stationary. The seed meters engage when planter wheel motion is detected. The drive motors operate based on a 1 mph (1.6 km/h) speed. The motors operate at the 1 mph (1.6 km/h) speed for 6 seconds or until the ground speed reaches 1.5 mph (2.4 km/h).

NOTE: Quick Start is not a shortcut key, but messages appear on the screen when Quick Start is activated. The Fast Start shortcut key becomes available in messages when Quick Start is activated.

A94221—UN—11MAY17

Fast Start

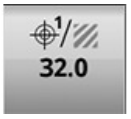
Fast Start— reduces a skip when the planter starts from a stop. Fast Start immediately dispenses seed for up to 6 seconds after being activated. If no forward motion is detected after 6 seconds, Fast Start times out and all seed delivery stops.



A117093—UN—15DEC22

Dual Target Population

Dual Target Population— allows you to toggle between two Target Populations without leaving the current page.



A117094—UN—15DEC22

Multiple Target Population

Multiple Target Population— allows you quick access to the Target Population selection overlay.

NOTE: The target population key automatically changes. The dual population key appears when only two populations are enabled.

ae77568,1670870631642-19-11APR23

Target Population

A117095—UN—15DEC22

Target Population

Target Population (Basic)— displays the target populations and highlights the selected population. Each target population is for the entire implement. Select the screen area to modify the populations or to select a different population.

A117096—UN—15DEC22

Target Population

Advanced Target Population Setup— displays the target population for each seed variety group. Select the screen area to modify the populations of each group or change the variety setup.

NOTE: The Advanced Population synchronizes a crop variety with a population.

To enable advanced target population setup, select Use Advanced Rate Setup under Population Setup in Advanced Settings.

ae77568,1670956042163-19-13DEC22

Target Populations | Seed Type (Basic)

Target Populations will be retained when the seed type is changed in Setup, but the target population is not dependent on the seed type itself. A specific seed type will not save its own target population. The seed type that you select appears in the title bar on this page. A population must be entered for the seed meters to engage. The population selections are also available from the run page and in the SeedStar - Overview.

NOTE: Perform in-field checks to verify the population. (See Check Seed Population in your implement Operator's Manual.)

Items Available on Target Populations | Seed Type Page:

A94261—UN—24AUG18

Radio Button

Radio Button— allows you to enable and disable a target population.

A92870—UN—22JUN17

Input Box

Input Box— allows you to edit a target population.

A91646—UN—11MAY17

Prescription Target Populations

Prescription Target Populations— allows you to select a prescription target population.

A93491—UN—22JUN17

MyPrescription

MyPrescription— allows you to edit your prescriptions in Work Setup.

Target Population Status:

A94259—UN—11MAY17

Target Selected

Target Population Selected— indicates that the population is enabled.

A94260—UN—11MAY17

Target Available

Target Population Available— indicates that the population is an available selection.

A94258—UN—11MAY17

Target Disabled

Target Population Disabled— indicates that the population is disabled because no population is entered or the population has been disabled.

Procedure to Modify:

A94261—UN—24AUG18

Radio Button

- Select the radio button next to a target population to enable the population.

A92870—UN—22JUN17

Input Box

- Select the Input Box to change a target population or to disable a target population.

NOTE: The alarm limits for target population are entered in Setup.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956070722-19-04APR23

Target Population (Basic)

Target Population is the input page for the population selected on the Target Populations | Seed Type page. The number of the population selected is shown in the title bar on this page.

Procedure to Modify:

1. Either disable the target population or enter the new target population.

A104271—UN—01MAY19

Disable Population

A104272—UN—01MAY19

Enable Population

   - Select to either remove or add this target population from the population selection list.

   NOTE: If the currently selected population is disabled, the first available population on the target population list becomes selected.

   - Enter the population for the target population selected.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save an entered value or select Cancel to close the page without saving.

NOTE: If the value entered is cleared, the OK button is disabled.

N118004—UN—22OCT15

Advanced Setting

Advanced Settings— access further adjustments and less common settings.

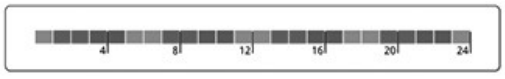
N0LMWLO,0000008-19-09MAY19

Advanced Population Group Setup

Advanced Population Group Setup stores your target population entries in a selection list. The seed variety layout is shown and selectable for editing. A seed variety and target population must be set up for the seed meters to engage. The population selections are also available from the run page, the shortcut key, and in the SeedStar - Overview.

NOTE: Perform in-field checks to verify the population. (See Check Seed Population in your implement Operator's Manual.)

Items Accessible on Advanced Population Group Setup Page:



A94257—UN—25JUN20

Population Group and Seed Variety Layout

Population Group - Seed Variety Layout— uses color codes to indicate the Group Population - Seed Variety differences per row. Select the screen area to edit the layout.

NOTE: Each seed variety entered has a different color code. A separate target population can be assigned for each group - variety.

NOTE: You can plant the same seed variety at different populations by entering the same variety more than once with a unique identifier in the variety name. Example: DM3270 A and DM3270 B

Radio Button— allows you to enable and disable target populations within the displayed variety layout.

A94261—UN—24AUG18

Radio Button

Edit Button— allows you to edit the target populations.

A92088—UN—23JUN17

Edit

Target Populations Status:

A94259—UN—11MAY17

Target Selected

Target Population Selected— indicates that the populations are enabled.

A94260—UN—11MAY17

Target Available

Target Population Available— indicates that the populations are an available selection.

A94258—UN—11MAY17

Target Disabled

Target Population Disabled— indicates that the population is disabled because no value is entered or the population has been disabled.

Procedure to Modify:

A94261—UN—24AUG18

Radio Button

- Select the radio button next to the target populations to enable them.

A92088—UN—23JUN17

Edit

- Select the Edit button to edit the population and alarm limit for each variety or to disable the population.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,0000009-19-17APR23

Target Population (Advanced)

Target Population allows you to change the population for each seed variety in the selected target population group. The number of the selected target population group appears in the title bar on this page.

NOTE: In order to use the same variety at different populations, you must give the variety different names.

Items Accessible on Target Population Page:

A92051—UN—11MAY17

Target Population

Target Population— is the target populations for each seed variety entered into the Work Setup.

Procedure to Modify:

A104271—UN—01MAY19

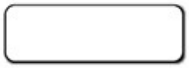
Disable Population

A104272—UN—01MAY19

Enable Population

1. Either enter a target population, disable a target, or enable a target.
   - Select Disable Population to either remove or add the selected target population from the list of populations on the Advanced Target Population Setup page.

NOTE: If a currently selected population is disabled, the uppermost population on the list is automatically selected.



A92870—UN—22JUN17

Input Box

- Select the target population input box to change a target population.

A92068—UN—16MAR18

Save

A92067—UN—16MAR18

Cancel

2. After editing, disabling, or enabling a target population, select Save to save the value or select Cancel to close the page without saving.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956106391-19-13DEC22

Setup

Setup provides a common location to configure items that are accessible from multiple areas in the application.

A92063—UN—11MAY17

Seed

Seed— change the seed disk or seed bowl selections and configure row options.

A102849—UN—03MAY19

Alarms

Alarms— change the alarm limits for basic and advanced seed populations. If equipped with liquid fertilizer, change the alarm limit for the system pressure.

A92065—UN—11MAY17

Gauge Wheels

Gauge Wheels— change the alarm limits for downforce and ride quality. Set the target margin.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,000000B-19-05AUG19

Setup | Seed

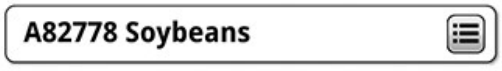
MaxEmerge 5e Meter Items

A92143—UN—11MAY17

Seed Disk

Setup | Seed is where seed disk and seed selections are made. If your implement is a split-row model, this page is where the wide or narrow rows are enabled for planting.

Items Accessible on Setup | Seed:



A92122—UN—22JUN17

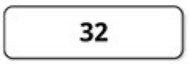
List Box

Seed Disk— select to view the available seed disks (bowls) for the selected crop type.

A91644—UN—11MAY17

Work Setup

Work Setup— access to choose the crop being planted.



A92135—UN—22JUN17

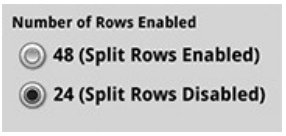
Holes Per Disk

Holes Per Disk— enter the number of holes that are in your custom seed disk.

A104286—UN—03MAY19

Population Adjust

Population Adjust— allows you to adjust the population factor in order to reflect accurate population readings on the bar graph. Population Adjust is changed only when planting high populations. Population Adjust does not change any drive speeds or documentation values.



A92129—UN—11MAY17

Number of Rows Enabled

Number of Rows Enabled— determines how many rows are monitored and controlled through the software.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

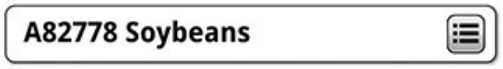
Procedure to Modify:

A91644—UN—11MAY17

Work Setup

1. Select Work Setup and choose the crop being planted. If you are using advanced target populations, the seed varieties are also entered in Work Setup.

NOTE: If the crop type chosen is unsupported by your implement configuration, the Custom Seed Disk is automatically selected from the seed disk (bowl) list.



A92122—UN—22JUN17

List Box

2. Select the list box.
3. View the available seed disks (bowls):

A92053—UN—11MAY17

Selected Crop

- Select to view the available seed disks (bowls) for the selected crop type.

A92054—UN—11MAY17

All

- Select to view all of the seed disks (bowls) that are compatible with the crop type selected in Work Setup.

NOTE: The seed disks (bowls) that are directly associated to the crop type have the name of the crop type next to the part number.

A92134—UN—11MAY17

Seed Disk (bowl) Selection

4. Select the seed disk (bowl) that you are using with this crop.

NOTE: See your implement Operator's Manual for the seed disk (bowl) recommendations and for the procedure to install the seed disks (bowls).

NOTE: If the disk (bowl) that you want is not in the list, select the Custom Seed Disk.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

5. Select OK to save your selection or select Cancel to close the page without saving.
6. The default population adjust factor is 1.00. If you are planting a crop with a high seed population and the bar graph is not providing accurate readings, change the population adjust factor. To determine the population adjust factor:
   a. Determine the target population and actual population.
   b. Subtract the actual population from the target population.
   c. Divide this number by the target number.
   d. Add 1.00 to this number.

A104286—UN—03MAY19

Input Box

   e. Enter this value into the Population Adjust input box using the number pad.

A92055—UN—20MAR18

OK

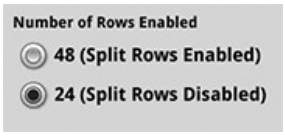
A92067—UN—16MAR18

Cancel

   f. Select OK to save your selection or select Cancel to close the page without saving.

IMPORTANT: If your planter is a split-row model and the hitch is offset when planting split rows, do not adjust the lateral offset value in the software. The offset value remains zero because the planter rows are recentered when the hitch is moved.

NOTE: The split rows are typically further from the tractor than standard rows. Adjust the Work Point when switching between narrow and wide row spacing.



A92129—UN—11MAY17

Number of Rows Enabled

7. Select the number of rows that you intend to use with this crop.

A92149—UN—11MAY17

Split Rows Enabled

- **Split Rows Enabled**— plant with the narrow row spacing.

A92150—UN—11MAY17

Split Rows Disabled

- **Split Rows Disabled**— plant with the wide row spacing.

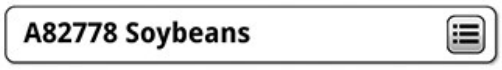
ExactEmerge Meter Items

A92142—UN—11MAY17

Seed Disk (bowl)

Setup | Seed is where seed disk (bowl) and seed selections are made. If your implement is a split-row model, this page is where the wide or narrow rows are enabled for planting.

Items Accessible on Setup | Seed:



A92122—UN—22JUN17

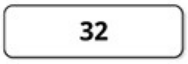
List Box

Seed Disk— select to view the available seed disks (bowls) for the selected crop type.

A91644—UN—11MAY17

Work Setup

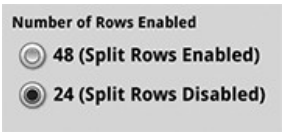
Work Setup— access to choose the crop being planted.



A92135—UN—22JUN17

Holes Per Disk

Holes Per Disk— enter the number of holes that are in your custom seed disk.



A92129—UN—11MAY17

Number of Rows Enabled

Number of Rows Enabled— determines how many rows are monitored and controlled through the software.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

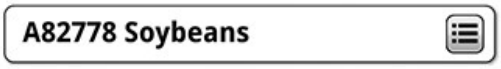
Procedure to Modify:

A91644—UN—11MAY17

Work Setup

1. Select Work Setup and choose the crop being planted. If you are using advanced target populations, the seed varieties are also entered in Work Setup.

NOTE: If the crop type chosen is unsupported by your implement configuration, the Custom Seed Disk is automatically selected from the seed disk (bowl) list.



A92122—UN—22JUN17

List Box

2. Select the list box.
3. View the available seed disks (bowls):

A92053—UN—11MAY17

Selected Crop

- Select to view the available seed disks (bowls) for the selected crop type.

A92054—UN—11MAY17

All

- Select to view all of the seed disks (bowls) that are

compatible with the crop type selected in Work Setup.

NOTE: The seed disks (bowls) that are directly associated to the crop type have the name of the crop type next to the part number.

A92134—UN—11MAY17

Seed Disk (Bowl) Select

4. Select the seed disk (bowl) that you are using with this crop.

NOTE: See your implement Operator's Manual for the seed disk (bowl) recommendations and for the procedure to install the seed disks (bowls).

NOTE: If the disk (bowl) that you want is not in the list, select the Custom Seed Disk.

A92055—UN—20MAR18

OK

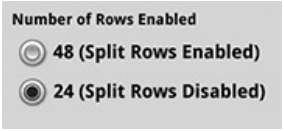
A92067—UN—16MAR18

Cancel

5. Select OK to save you selection or select Cancel to close the page without saving.

IMPORTANT: If your planter is a split-row model and the hitch is offset when planting split rows, do not adjust the lateral offset value in the software. The offset value remains zero because the planter rows are recentered when the hitch is moved.

NOTE: The split rows are typically further from the tractor than standard rows. Adjust the Work Point when switching between narrow and wide row spacing.



A92129—UN—11MAY17

Number of Rows Enabled

6. Select the number of rows that you intend to use with this crop.

A92149—UN—11MAY17

Split Rows Enabled

- **Split Rows Enabled**— plant with the narrow row spacing.

A92150—UN—11MAY17

Split Rows Disabled

- **Split Rows Disabled**— plant with the wide row spacing.

PR79369,00000B0-19-17APR23

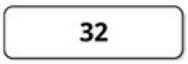
Setup | Holes Per Disk

A92062—UN—11MAY17

Custom Disk

Holes Per Disk is where you enter the number of holes that are in your custom seed disk.

Procedure to Modify:



A92135—UN—22JUN17

Holes Per Disk

1. Select the input box.
2. Enter the number of holes in the custom seed disk using the number pad.

   Default: 32

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

3. Select OK to save the value or select Cancel to exit the number pad without saving.

N0LMWLO,000000D-19-30SEP19

Setup | Gauge Wheels

Gauge Wheels allows you to set alarm limits related to the downforce applied to the row units. Find the proper adjustment by balancing the downforce and ground speed to obtain a quality seed furrow and consistent seed depth. Always verify the performance with a field check.

Items Accessible on Setup | Gauge Wheels:

Downforce Margin— alarms (upper screen area) are managed using the High Margin, Target Downforce Margin, and Low Margin settings. See the Downforce Margin page for an additional description.

High Margin— allows you to define an alarm at a percentage over the target downforce margin. Readings that exceed this limit trigger the alarm.

Target Downforce Margin— allows you to set a value that results in a quality seed furrow and a smooth ride for the row unit.

Low Margin— allows you to define an alarm at a percentage under the target downforce margin. Readings that fall below this limit trigger the alarm.

Ride Dynamics— alarms (lower screen area) are managed using the Ground Contact Low and Ride Quality Low settings.

IMPORTANT: Ground contact and ride quality affect seed depth. Avoid inconsistent plant emergence. Maintain enough downforce margin or reduce your ground speed to obtain a smooth ride.

NOTE: A lower ride quality affects the MaxEmerge seed tube more than the ExactEmerge BrushBelt.

Ground Contact Low— is the percentage of good ground contact that you want the row units to remain above.

Ride Quality Low— is the percentage of good ride quality that you want the row units to remain above.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,000000E-19-17APR23

Setup | Downforce Margin

IMPORTANT: Avoid poor seed emergence and poor plant growth. You must inspect the seed furrows in conjunction with setting the downforce. Do not set the force higher or lower than necessary.

Downforce Margin is additional force, beyond the primary downforce, that is applied to the row unit and measured at the gauge wheels. Set the downforce margin to maintain the proper seed furrow and improve the Ride Dynamics while moving through the field. Field conditions and speed affect the level of downforce and margin required.

NOTE: The primary downforce creates the seed furrow. The downforce margin maintains the furrow when speed and field conditions would otherwise decrease the planting performance.

Adjust the Target Downforce Margin as needed and set your High Margin and Low Margin alarms.

N0LMWLO,000000F-19-03MAY19

Setup | Ride Dynamics

NOTE: A lower ride quality affects the MaxEmerge seed tube more than the ExactEmerge BrushBelt . Downforce, ground conditions, and ground speed relate closely to ride quality.

Ride Dynamics is a measurement of the ride quality that the row units experience. Sensors within the row units monitor the ride dynamics. You set the alarm limits for the Ground Contact sensor and the Ride Quality sensor. Adjustments to the Downforce Margin affect the ground contact and ride quality.

N0LMWLO,0000010-19-17APR23

Setup | Target Downforce Margin

Target Downforce Margin allows you to set a target for the downforce margin that results in a quality seed furrow and a smooth ride for the row unit.

Modify When:

- The disk openers are not penetrating the soil.
- The walls of the seed furrow collapse before the seed is delivered.
- The walls of the seed furrow are overcompressed.

- The seed depth is inconsistent.
- The seed spacing is inconsistent.
- The ground contact is lower than expected.
- The ride quality is lower than expected.

Procedure to Modify:

IMPORTANT: Avoid unsatisfactory results. Perform a field check to verify that the actual seed placement matches your goal. (See the field check procedure and implement adjustments in the implement Operator's Manual.)

A92148—UN—15NOV17

Input Box

1. Select the input box and enter your target downforce margin into the number pad.

A92067—UN—16MAR18

Cancel

A92055—UN—20MAR18

OK

2. Select Cancel to close the page without saving or select OK to save your changes.

NOTE: If the target downforce margin is so high that the sidewalls of the seed furrow are compacted, slow down and reduce the target margin until a balance between Ride Dynamics and furrow quality is achieved.

Default: 45 kg (100 lb)

N0LMWLO,0000011-19-30SEP19

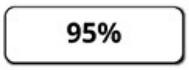
Setup | Ground Contact Low

Ground Contact Low is the lowest percentage of ground contact that is acceptable before an alarm is given. Perfect ground contact is 100%. When the downforce sensors detect zero downforce margin, the software assumes that the gauge wheels lost contact with the ground (0%).

Modify When:

- The ground contact percentage is lower than the alarm limit, but the seed placement is within your expectations.
- The ground contact percentage fluctuates more than you want and no alarm is given.

Procedure to Modify:



A92146—UN—22JUN17

Input Box

1. Select the input box and enter the percentage to remain above into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Default: 80%

N0LMWLO,0000012-19-08MAY19

Setup | Ride Quality Low

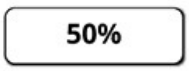
Ride Quality Low is the percentage of good ride quality that you want the row units to remain above. A vibration sensor is used to determine ride quality. Perfect ride quality is 100% (no vibration).

NOTE: There is always vibration during operation. Perform field checks to determine if the ride quality affects seed depth at your current settings. Adjust the downforce margin or ground speed as necessary.

Modify When:

- The ride quality percentage is lower than the alarm limit, but the seed placement is within your expectations.
- The ride quality percentage is lower than you want and no alarm is given.

Procedure to Modify:



A92147—UN—22JUN17

Input Box

1. Select the input box and enter the percentage to remain above into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Default: 50%

N0LMWLO,0000013-19-08MAY19

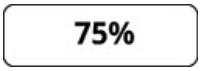
Setup | High Margin

High Margin allows you to define an alarm at a percentage over the target downforce margin. Readings that exceed this limit trigger the alarm.

Modify When:

- Nuisance alarms occur even though the ride dynamics and seed placement are within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:



A92144—UN—11MAY17

Input Box

1. Select the input box and enter the percentage value into the number pad. The high alarm percentage is a downforce value above the margin setting. If the target margin is 45.4 kg (100 lb), a 1% alarm is set for 45.8 kg (101 lb) and a 100% alarm is set for 91 kg (200 lb).

NOTE: The related downforce is displayed under the input box.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Maximum: 995%

Default: 125%

Default: 102 kg (225 lb)

Minimum: 5%

N0LMWLO,0000014-19-27APR21

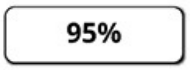
Setup | Low Margin

Low Margin allows you to define an alarm at a percentage under the target downforce margin. Readings that fall below this limit trigger the alarm.

Modify When:

- Nuisance alarms occur even though the ride dynamics and seed placement are within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:



A92146—UN—22JUN17

Input Box

1. Select the input box and enter the percentage value into the number pad.

NOTE: The low alarm value is the percentage under the target downforce margin. For example, 95% under 45 kg (100 lb) is 2 kg (5 lb), not 43 kg (95 lb). The related downforce is displayed under the input box.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

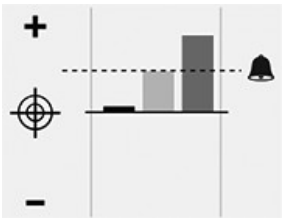
Default: 50%

Default: 23 kg (50 lb)

N0LMWLO,0000015-19-30SEP19

Setup | Alarms

Setup | Alarms allows you to define the alarm limits for various functions on the implement.



A92057—UN—08MAY19

Graph Example

You can change the values for when the bars in the graph change from black to amber. You cannot change the values for when the bars in the graph change from amber to red.

Items Accessible in Product Alarms:

Population High— allows you to define an alarm at a percentage over the target population. Population rates that exceed this percentage trigger the alarm.

Population Low— allows you to define an alarm at a percentage under the target population. Population rates that fall below this percentage trigger the alarm.

Singulation Low— allows you to define an alarm at the percentage of seed singulation that you want to exceed. When seed singulation falls below this percentage, the alarm is triggered. Singulation is the placement of single seeds in the seed furrow.

Seed Spacing CV— allows you to define an alarm that triggers when spacing inconsistency reaches an undesired level. The coefficient of variation (CV) is a value that represents the consistency of seed spacing based on sensor readings.

N118004—UN—22OCT15

Advanced Settings

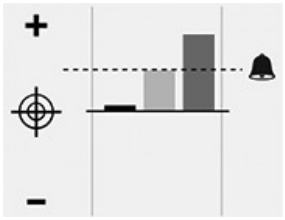
Advanced Settings— access further adjustments and less common settings.

Fertilizer High Pressure

Fertilizer High Pressure— allows you to define an alarm for the maximum pressure in the liquid fertilizer system.

PR79369,00000B1-19-25JUN20

Setup | Population High



A92057—UN—08MAY19

Alarm Limit

Population High allows you to define an alarm at a percentage over the target population. Populations that exceed this percentage trigger the alarm.

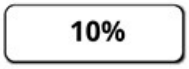
NOTE: When the Advanced Target Populations are used, the percentage applies to each group - variety.

Modify When:

- Nuisance alarms occur even though performance is within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:

IMPORTANT: Avoid unsatisfactory results. Perform a field check to verify that the actual population matches your target. (See the field check procedure and implement adjustments in the implement Operator's Manual.)



A92130—UN—22JUN17

Input Box

1. Select the input box and enter a percentage into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

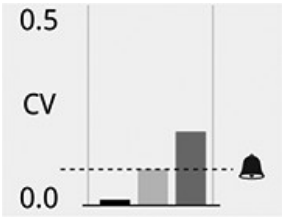
Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Default: 10%

N0LMWLO,0000017-19-10MAY19

Setup | Seed Spacing CV



A92060—UN—15NOV17

Alarm Limit

Seed Spacing CV allows you to define an alarm that triggers when spacing inconsistency reaches an undesired level. Higher values indicate decreased spacing consistency. A good range for the coefficient of variation (CV) is 0.10—0.30.

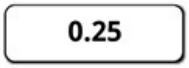
Modify When:

- Nuisance alarms occur even though performance is within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:

IMPORTANT: Avoid unsatisfactory results. Perform a field check to verify that the actual seed spacing matches your target. (See the field check procedure and implement adjustments in the implement Operator's Manual.)

NOTE: The CV varies due to many factors, such as the seed size, seed shape, meter setup, meter lubrication, planting conditions, downforce, and speed.



A93509—UN—22JUN17

Input Box

1. Select the input box and enter a coefficient value into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

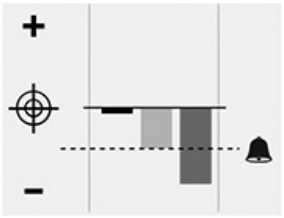
Maximum: 1.00 = poorest spacing

Default: 0.16

Minimum: 0 = best spacing

N0LMWLO,0000018-19-30SEP19

Setup | Population Low



A92058—UN—15NOV17

Alarm Limit

Population Low allows you to define an alarm at a percentage under the target population. Populations that fall below this percentage trigger the alarm.

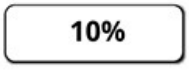
NOTE: When the Advanced Target Populations are used, the percentage applies to each group - variety.

Modify When:

- Nuisance alarms occur even though performance is within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:

IMPORTANT: Avoid unsatisfactory results. Perform a field check to verify that the actual population matches your target. (See the field check procedure and implement adjustments in the implement Operator's Manual.)



A92130—UN—22JUN17

Input Box

1. Select the input box and enter a percentage into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Default: 10%

N0LMWLO,0000019-19-10MAY19

Setup | Singulation Low

Singulation Low allows you to define an alarm at the percentage of seed singulation that you want to exceed. When seed singulation falls below this percentage, the alarm is triggered. Singulation is the placement of single seeds in the seed furrow.

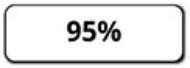
NOTE: Perfect singulation is 100% or one seed at a time. Singulation varies with the seed meter setup and lubrication. (See detailed seed meter information in the implement Operator's Manual.)

Modify When:

- Nuisance alarms occur even though performance is within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:

IMPORTANT: Avoid unsatisfactory results. Perform a field check to verify that the actual population matches your target. (See the field check procedure and implement adjustments in the implement Operator's Manual.)



A92146—UN—22JUN17

Input Box

1. Select the input box and enter a percentage into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

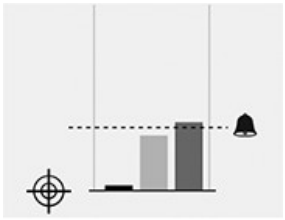
Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

Default: 92%

N0LMWLO,000001A-19-30SEP19

Setup | Fertilizer High Pressure



A92059—UN—11MAY17

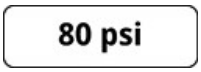
Alarm Limit

Fertilizer High Pressure allows you to define an alarm for the maximum pressure in the liquid fertilizer system.

Modify When:

- Nuisance alarms occur even though performance is within your expectations.
- Performance is outside of your expectations, but no alarm is given.

Procedure to Modify:



A93510—UN—24OCT17

Input Box

1. Select the input box and enter a high-pressure limit into the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select OK to save your selection or select Cancel to close the page without saving.

NOTE: The default is higher than the system capabilities. The high default prevents an alarm.

Default: 1380 kPa (13.8 bar) (200 psi)

N0LMWLO,0000319-19-25JUN20

Utilities

Utilities contains other features and options that the implement has installed.

NOTE: Some items below are only displayed if the machine is equipped with the associated option.

Items Accessible on Utilities Page:

A92133—UN—06MAY19

ON/OFF

Electric Power Generation (EPG)—Select the toggle button to turn the EPG system ON or OFF.

A91624—UN—11MAY17

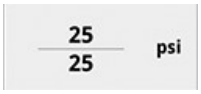
Vacuum

Vacuum (set-point automation or manual)—Displays the status of the vacuum system and the actual vacuum level for each sensor. Select to access vacuum utilities.

AX1382343—UN—11NOV24

Vacuum

Vacuum (active automation)—Displays the status of the vacuum system, the actual vacuum level for each sensor, and the status of each blower. Select to access vacuum utilities.



A91625—UN—11MAY17

Fertilizer

Fertilizer Items:

Fertilizer—Displays the current pressure in the fertilizer system. Select to configure the alarm limits.

A91626—UN—22JUN17

Fill

MaxEmerge 5e Meter Items:

Meter—Provides the ability to fill the seed disks while the implement is stationary.

CAUTION: To avoid injury from rotating components:

- **Keep all seed meter components in place during operation.**
- **Shut off all seed meters and drives before cleaning or inspection.**

A92082—UN—22JUN17

Accept

Accept—Select to acknowledge the CAUTION. The message will only reappear after a tractor power cycle.

ExactEmerge Meter/Brush Items:

A91626—UN—22JUN17

Fill

A91627—UN—22JUN17

Purge

Meter/Brush—Provides the ability to fill the seed bowls and BrushBelts or to purge the BrushBelts while the implement is stationary.

CAUTION: To avoid injury from rotating components:

- **Keep all seed meter components in place during operation.**
- **Shut off all seed meters and drives before cleaning or inspection.**

A92082—UN—22JUN17

Accept

Accept—Select to acknowledge the CAUTION. The message will only reappear after a tractor power cycle.

N0LMWLO,000001C-19-14NOV24

Utilities | Fertilizer

The Fertilizer page displays the current pressure detected and the current pressure limit for the alarm. Enter an alarm limit or access the diagnostics.

NOTE: If the current pressure exceeds the high alarm limit, the value is highlighted red.

Modify When:

- You prefer an alarm when the fertilizer system exceeds an upper limit.
- You change the fertilizer rate or another parameter that alters the operating pressure.
- The alarm value is too close to the operating pressure and causes false alarms.
- You prefer to disable the alarm.

Modify To:

- A value near and above the observed pressure when operating at your target rate, your target pressure, and your target speed.
- The upper operating range of the liquid fertilizer system.
- The safe upper limit of the system to avoid component damage.

Items on Fertilizer Page:

A91605—UN—23JUN17

Edit Alarm

Edit Alarm— edit the pressure limit. Enable or disable the alarm.

A91604—UN—23JUN17

Diagnostics

Diagnostics— view the sensor information.

A91603—UN—16MAY17

Pressure

Pressure— displays the current pressure detected by the liquid fertilizer sensors. Each sensor is displayed separately.

If the quantity of sensors observed does not match the configuration, access the Sensor Setup page in the Equipment Manager application.

Liquid System Parameters:

Minimum Operating Pressure: 103 kPa (1.0 bar) (15 psi)

Maximum Operating Pressure: 621 kPa (6.2 bar) (90 psi)

Do Not Exceed: 689 kPa (6.9 bar) (100 psi)

A91606—UN—11MAY17

High Alarm

High Alarm— displays the current value for the upper pressure limit. If the value is zero, the alarm is disabled.

NOTE: The default alarm setting is zero.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,000031A-19-25JUN20

Utilities | Meter Control

NOTE: Some items below are only displayed if machine is equipped with the associated option.

MaxEmerge 5e Meter Items:

CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

Procedure to Modify:

A92905—UN—22JUN17

Fill

Fill— initiates the rotation of the seed meters to prime the seed disks with seed. All of the Fill Requirements must be met for the meters to activate.

1. Verify that seed is in the row unit hoppers, seed disks are installed, and the seed meter is prepared according to the recommendations in your implement Operator's Manual.
2. Raise and park the implement.
3. Engage the vacuum and the electric power generation.

A91626—UN—22JUN17

Fill Button Ready

4. Select the Fill button. The Fill button changes from the ready state to the active state while the seed meters rotate.

A92906—UN—22JUN17

Fill Button Active

NOTE: The seed meters rotate for 3 seconds. Depending on the meter setup, 3 seconds might not fill the seed disks. Select Fill as many times as necessary. Two fill cycles are typically adequate.

ExactEmerge Meter Items:

⚠ CAUTION: To avoid injury from rotating components:

- **Keep all seed meter components in place during operation.**
- **Shut off all seed meters and drives before cleaning or inspection.**

Procedure to Modify:

A92905—UN—22JUN17

Meter/Brush Fill

Meter/Brush Fill— initiates the rotation of the seed meters and BrushBelts, which primes the seed bowls and belts with seed. All of the Fill Requirements must be met for the meters to activate.

1. Verify that seed is in the row unit hoppers, seed bowls are installed, and the seed meter is prepared according to the recommendations in your implement Operator's Manual.
2. Raise and park the implement.

A91626—UN—22JUN17

Fill Ready

3. Engage the vacuum and the electric power generation.

A92906—UN—22JUN17

Fill Active

4. Select the Fill button. The Fill button changes from the ready state to the active state while the seed meters and BrushBelts rotate. The Purge button changes to an inactive state.

NOTE: The seed meters and belts rotate for 3 seconds when you select the button. Depending on the meter setup, 3 seconds might not fill the seed bowls and belts. Select Fill as many times as necessary. Two fill cycles are typically adequate.

Procedure to Modify:

Purge— initiates the rotation of the BrushBelts, which expels all seed from the belt cartridges. All of the Purge Requirements must be met for the belts to activate.

IMPORTANT: Avoid damage to components in the seed meters. Do not operate the BrushBelts when the seed bowls are removed.

1. Verify that the seed bowls are installed.
2. Raise and park the implement.
3. Engage the electric power generation.

A91627—UN—22JUN17

Purge Ready

A92907—UN—22JUN17

Purge Active

4. Select the Purge button. The Purge button changes from the ready state to the active state while the BrushBelts rotate. The Fill button changes to an inactive state.

NOTE: The belt motors run for 1 second and turn the belts approximately two revolutions. Purging seed from the belts is recommended at the end of the day and before extended storage. During extended storage, relieve the belt tension. (See the implement Operator's Manual.)

N0LMWLO,000001E-19-17APR23

Utilities | Fill Prerequisites (Meter)

A92905—UN—22JUN17

Fill Prerequisites

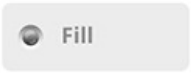
Fill Prerequisites show which prerequisites are met for meter activation and any errors that are detected.

Items Accessible on Fill Prerequisites Page:

A95599—UN—23JUN17

Close

Close— closes this page without continuing with the procedure.



A92904—UN—22JUN17

Fill Inactive

Fill Inactive— button appears until all the prerequisites are met.

A91626—UN—22JUN17

Fill Ready

Fill Ready— button appears when all the prerequisites are met.

A92906—UN—22JUN17

Fill Active

Fill Active— button appears when the meters are rotating.

Fill Requirements:

A92084—UN—09MAY19

Check Mark

Check Mark— indicates that the prerequisite is met.

A92083—UN—11MAY17

Exclamation Point

Exclamation Point— indicates that a prerequisite is not met or that there is an error.

- The implement must be raised.
- The implement must be stationary.
- Electric power generation (EPG) must be active (PTO engaged for the tractor power generation and hydraulics functional for the implement power generation).
- Active faults must not be present for row unit controllers or motor.

Procedure to Modify:

A95599—UN—23JUN17

Close

Close— closes this page without continuing with the procedure.

1. Verify that seed is in the row unit hoppers, seed disks are installed, and the seed meter is prepared according to the recommendations in your implement Operator's Manual.
2. Adjust the implement to meet all the requirements.

A92133—UN—06MAY19

ON/OFF

3. If the Electric Power Generation (EPG) prerequisite is not met, select the toggle button to turn on the EPG system.

NOTE: The toggle button does not appear when the prerequisite is met.

CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

A91626—UN—22JUN17

Fill Ready

4. Select the Fill button. The Fill button changes from the ready state to the active state while the seed meters rotate.

NOTE: The seed meters rotate for 3 seconds. Depending on the meter setup, 3 seconds might not complete the fill process. Select Fill as many times as necessary. Two fill cycles are typically adequate.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956191025-19-11APR23

Utilities | Fill Prerequisites (Meter/Brush)

A92905—UN—22JUN17

Fill Prerequisites

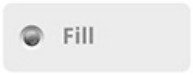
Fill Prerequisites show which prerequisites are met for meter activation and any errors that are detected.

Items Accessible on Fill Prerequisites Page:

A95599—UN—23JUN17

Close

Close— closes this page without continuing with the procedure.



A92904—UN—22JUN17

Fill Inactive

Fill Inactive— button appears until all the prerequisites are met.

A91626—UN—22JUN17

Fill Ready

Fill Ready— button appears when all the prerequisites are met.

A92906—UN—22JUN17

Fill Active

Fill Active— button appears when the meters are rotating.

Fill Prerequisites:

A92084—UN—09MAY19

Check Mark

Check Mark— indicates that the prerequisite is met.

A92083—UN—11MAY17

Exclamation Point

Exclamation Point— indicates that a prerequisite is not met or that there is an error.

- The implement must be raised.
- The implement must be stationary.
- Electric power generation (EPG) must be active (PTO engaged for the tractor power generation and hydraulics functional for the implement power generation).
- EPG must be enabled.
- The vacuum must be at the operating level.

A95599—UN—23JUN17

Close

Procedure to Modify:

Close— closes this page without continuing with the procedure.

IMPORTANT: Avoid damage to components in the seed meters. Do not operate the BrushBelts when the seed bowls are removed.

1. Verify that seed is in the row unit hoppers, seed bowls are installed, and the seed meter is prepared according to the recommendations in your implement Operator's Manual.
2. Adjust the implement to meet all the prerequisites.

A92133—UN—06MAY19

ON/OFF

3. If the Electric Power Generation (EPG) prerequisite is not met, select the toggle button to turn on the EPG system.

NOTE: The toggle button does not appear when the prerequisite is met.

CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

A91626—UN—22JUN17

Fill Ready

4. Select the Fill button. The Fill button changes from the ready state to the active state while the seed meters and BrushBelts rotate.

A92906—UN—22JUN17

Fill Active

NOTE: The seed meters and belts rotate for 3 seconds. Depending on the meter setup, 3 seconds might not complete the fill process. Select Fill as many times as necessary. Two fill cycles are typically adequate.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1680621086808-19-11APR23

Utilities | Purge Prerequisites

Purge Prerequisites show which prerequisites are met for BrushBelt activation and any errors that are detected.

Items Accessible on Purge Prerequisites Page:

A95599—UN—23JUN17

Close

Close— closes this page without continuing with the procedure.

A92903—UN—11MAY17

Purge Inactive

Purge Inactive— button appears until all the prerequisites are met.

A91627—UN—22JUN17

Purge Ready

Purge Ready— button appears when all the prerequisites are met.

A92907—UN—22JUN17

Purge Active

Purge Active— button appears when the meters are rotating.

Purge Prerequisites:

A92084—UN—09MAY19

Check Mark

Check Mark— indicates that the prerequisite is met.

A92083—UN—11MAY17

Exclamation Point

Exclamation Point— indicates that a prerequisite is not met or that there is an error.

- The implement must be raised.

- The implement must be stationary.
- Electric power generation (EPG) must be active (PTO engaged for the tractor power generation and hydraulics functional for the implement power generation).
- EPG must be enabled.
- The vacuum must be at the operating level.

Procedure to Modify:

A95599—UN—23JUN17

Close

Close— closes this page without continuing with the procedure.

IMPORTANT: Avoid damage to components in the seed meters. Do not operate the BrushBelts when the seed bowls are removed.

1. Verify that the seed bowls are installed in the seed meter.
2. Adjust the implement to meet all the prerequisites.

A92133—UN—06MAY19

ON/OFF

3. If the Electric Power Generation (EPG) prerequisite is not met, select the toggle button to turn on the EPG system.

NOTE: The toggle button does not appear when the prerequisite is met.

CAUTION: To avoid injury from rotating components:

- **Keep all seed meter components in place during operation.**
- **Shut off all seed meters and drives before cleaning or inspection.**

A91627—UN—22JUN17

Purge Ready

Select the Purge button. The Purge button changes from the ready state to the active state while the BrushBelts rotate.

A92907—UN—22JUN17

Purge Inactive

NOTE: Purging seed from the belts is recommended at the end of the day and before extended storage. During extended storage, relieve the belt tension. (See the implement Operator's Manual.)

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956219808-19-11APR23

Utilities | Vacuum

Vacuum provides visibility and control of the vacuum systems.

Items Accessible on Vacuum Page:

There are two operating modes with the vacuum system: manual mode and auto mode. Set-point automation and active automation are available in the auto mode.

Manual Mode:

When in manual mode, control the vacuum using the tractor hydraulic controls and (if equipped) implement valves.

A94177—UN—11MAY17

Manual Mode Engaged

Status—Displays status of the vacuum system. The blower performing at the lowest status appears. Select to view the detailed status for each blower or fill the seed disk. (See Utilities | Status | Vacuum.)

A95598—UN—11MAY17

SCV Settings

SCV Settings—Switch between Manual and

Automated SCV control and assign blowers to SCVs. (See Utilities | Edit SCV Assignments.)

A94179—UN—11MAY17

Actual

Actual—Screen area displays the current vacuum level for each vacuum blower on the implement.

A92113—UN—11MAY17

Auto Mode Engaged

Auto Mode—Set-Point Control (Vacuum Automation):

In automation set-point control, the implement software commands the tractor SCV flow associated to the vacuum blower. Set and adjust the vacuum target on this page. The vacuum maintains the setting input.

Status—Displays status of the vacuum system. The blower performing at the lowest status appears. Select to view the detailed status for each blower or fill the seed disk. (See Utilities | Status | Vacuum.)

AX1382248—UN—11NOV24

Radio Button Active

Control Mode—Screen area is used to enable set-point or active modes. Select the radio button for Set-Point.

A94178—UN—11MAY17

Use Common Target (selected)

A94181—UN—11MAY17

Use Common Target (unselected)

NOTE: Select Use Common Target to apply a single vacuum target to all blowers. Uncheck Use Common Target to apply separate vacuum targets to each blower.

Automation—Screen area is used to adjust SCV Settings. Map the SCVs to blowers prior to enabling the blowers for the first time or if the planter has moved to a different tractor.

Vacuum Pressures—Screen area shows the actual and target vacuum levels.

A95598—UN—11MAY17

SCV Settings

Procedure to Modify Set-Point Control (Vacuum Automation):

1. Verify that the vacuum blowers are connected and mapped to the correct selective control valves (SCV) on the tractor.
   - **SCV Settings**—Open the SCV assignments screens. (See Utilities | Edit SCV Assignments.)

AX1382248—UN—11NOV24

Radio Button Active

NOTE: Switching between manual vacuum and vacuum automation requires a power cycle to complete the switch.

   - **Radio Button**—Switches between manual and automated control modes.

A92067—UN—16MAR18

Cancel

   - Select Cancel to close a page without making changes.

A92895—UN—22JUN17

Next

   - Select Next to continue.

A92886—UN—11MAY17

Edit Settings

   - **Edit Settings**—Maps the SCV assignments to blowers. (See Utilities | Edit SCV Assignments.)

A92894—UN—22JUN17

Back

   - Select Back to return to a previous screen.

A92068—UN—16MAR18

Save

   - Select Save to keep adjustments.

A94179—UN—11MAY17

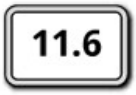
Actual

2. View the current vacuum level for the vacuum blowers. An up or down arrow appears next to the vacuum level when the automation is altering the level.

A94180—UN—11MAY17

Target

3. View or modify the target vacuum levels.



A94182—UN—22JUN17

Target Value

NOTE: A yellow outline appears around a value being modified.

A94168—UN—22JUN17

Increase

Increase Button—Increases the vacuum level by the increment entered in Advanced Settings each time the button is selected.

A94169—UN—22JUN17

Decrease

Decrease Button—Decreases the vacuum level by the increment entered in Advanced Settings each time the button is selected.

H115035—UN—14MAR16

Navigation Bar Adjustment Dial

Alternative Procedure to Modify:

Use the dial on the navigation bar to adjust the value.

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

AX1382267—UN—08NOV24

Auto Mode Engaged

Auto Mode—Active Control (Vacuum Automation):

NOTE: Active control with ExactEmerge—Use only with corn or soybeans.

Active control with MaxEmerge 5e—Use only with corn.

In active control, the implement software commands the tractor SCV flow associated to the vacuum blower. The software adjusts the vacuum level to maintain the seed population setting.

Set the initial vacuum targets in Set-Point control and update vacuum targets with the run page vacuum module. Use the Vacuum Bias in Advanced Settings to shift the seed singulation for either fewer skips or fewer multiples as needed.

Status—Displays status of the vacuum system. The blower performing at the lowest status appears. Select to view the detailed status for each blower or fill the seed disk. (See Utilities | Status | Vacuum.)

AX1382248—UN—11NOV24

Radio Button Active

Control Mode—Screen area is used to enable set-point or active mode. Select the radio button for Active.

Automation—Screen area is used to adjust SCV Settings. Map the SCVs to blowers prior to enabling the blowers for the first time or if the planter has moved to a different tractor.

Vacuum Pressures—Screen area shows the actual vacuum levels and the status of active adjustments.

A95598—UN—11MAY17

SCV Settings

Procedure to Modify Vacuum Automation:

1. Verify that the vacuum blowers are connected and mapped to the correct selective control valves (SCV) on the tractor.
   - **SCV Settings**—Opens the SCV assignments screens. (See Utilities | Edit SCV Assignments.)

AX1382248—UN—11NOV24

Radio Button Active

NOTE: Switching between manual vacuum and vacuum automation requires a power cycle to complete the switch.

- **Radio Button**—Switches between manual and automated control modes.

A92067—UN—16MAR18

Cancel

- Select Cancel to close a page without making changes.

A92895—UN—22JUN17

Next

- Select Next to continue.

A92886—UN—11MAY17

Edit Settings

- **Edit Settings**—Maps the SCV assignments to blowers. (See Utilities | Edit SCV Assignments.)

A92894—UN—22JUN17

Back

- Select Back to return to a previous screen.

A92068—UN—16MAR18

Save

- Select Save to keep adjustments.

A94179—UN—11MAY17

Actual

2. View the current vacuum level for the vacuum blowers. An up or down arrow appears next to the vacuum level when the automation is altering the level.
3. View the active control status and make adjustments if indicated.

AX1382278—UN—08NOV24

Ready

- Ready—Indicates that the blowers are running, seed disks are full, and awaiting planting to start.
- Ready Metrics Updating—Indicates that planting has started and awaiting the population and singulation readings to stabilize before making active vacuum adjustments.

AX1382279—UN—08NOV24

Working

- Working—Indicates that the seed population and singulation is being maintained.

AX1382280—UN—08NOV24

Adjustments Limited

- Adjustments Limited Due to Inconsistent Speed—Indicates that frequent ground speed variations are causing unstable seed singulation readings and active vacuum adjustments are paused.
- Adjustments Limited Due to Very Poor Singulation—Indicates that population and singulation readings are too inconsistent to make active vacuum adjustments.

AX1382281—UN—08NOV24

OFF

- OFF—Indicates that the vacuum hydraulics and blowers are inactive.

N0LMWLO,0000022-19-15NOV24

Utilities | Status | Vacuum

Vacuum shows the status and errors that are detected within the vacuum system.

Items Displayed on Vacuum Page:

Top Screen Area—Displays the status for the vacuum with the lowest performance.

A91626—UN—22JUN17

Fill

NOTE: When all vacuums are operating correctly, the Fill button appears. Use the Fill button to load all the seed disk cells with seed. (See Utilities | Meter Control.)

Manual Vacuum Mode:

A92133—UN—06MAY19

ON/OFF

Automation OFF— indicates that the manual vacuum mode is selected. Select the toggle button to turn vacuum automation ON.

A94183—UN—11MAY17

Sensor Error

Sensor Error—Indicates that you must troubleshoot the vacuum sensor or the sensor harness.

A94184—UN—11MAY17

Engage SCV

Engage SCV—Indicates that the hydraulics are not engaged for this vacuum blower.

A94185—UN—11MAY17

Engaged

Engaged—Indicates that the vacuum is functioning normally.

Auto Vacuum Mode:

Top Screen Area—Displays the status for the vacuum with the lowest performance.

A91626—UN—22JUN17

Fill

NOTE: When all vacuums are operating correctly, the Fill button appears. Use the Fill button to load all the seed disk cells with seed. (See Utilities | Meter Control.)

A91648—UN—11MAY17

ON/OFF

Automation ON—Indicates that the tractor is not compatible or the SCV is unavailable for automation.

A94186—UN—11MAY17

Error

Error—Indicates that the tractor is not compatible or the SCV is unavailable for automation.

A94187—UN—11MAY17

Sensor Error

Sensor Error—Indicates that you must troubleshoot the vacuum sensor or the sensor harness.

A94188—UN—11MAY17

Setup Error

Setup Error—Indicates that the SCV is not configured correctly.

A94189—UN—11MAY17

Engage SCV

Engage SCV—Indicates that hydraulic flow is not detected from the SCV.

A94190—UN—11MAY17

Fill Meters

Fill Meters—Indicates that the vacuum is operating correctly, but the seed disk is not filled with seed. Select the Fill button to fill the seed meters.

A94191—UN—11MAY17

Engaged—Set-Point

AX1382235—UN—08NOV24

Engaged—Active

Engaged—Indicates that the vacuum is functioning normally.

N0LMWLO,000031C-19-15NOV24

Utilities | Edit SCV Assignments

Edit Selective Control Valve (SCV) Assignments allows you to assign each implement function to a tractor SCV function.

NOTE: Each vacuum blower must have a dedicated SCV and all of the hoses must be connected correctly. (See the implement Operator's Manual.)

Items Accessible on Edit SCV Assignments Page:

A94194—UN—11MAY17

SCV Icon

SCV Icon— matches the color and symbol on the tractor.

Implement Function— is the name of the primary implement function associated with the hydraulic hoses on the implement.

NOTE: The SCV name only appears if it can be controlled by the software. Additional functions are often associated with each SCV. Other SCV do not need to be assigned.

H118284—UN—30JAN17

Scroll Up

Scroll Up— allows you to scroll up through the implement function list.

H118282—UN—30JAN17

Scroll Down

Scroll Down— allows you to scroll down through the implement function list.

Procedure to Modify:

A94193—UN—22JUN17

Input Box

1. Select the input box next to the SCV that you want to assign.
2. Select the implement function associated with the SCV.
3. Repeat the SCV assignments until they all match the implement-to-tractor hydraulic connections.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

4. Select OK to save your selection or select Cancel to close the page without saving.
5. If OK, follow the on-screen commands through the remaining pages.

N0LMWLO,0000024-19-30SEP19

Implement Calibrations, Diagnostics, and Procedures

Calibrations and Procedures application provides centralized access to maintenance procedures and calibrations for the machine.

NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.

Some items included are only displayed if machine is equipped with the associated options.

A93496—UN—24AUG18

Calibrations

Calibrations Tab

Gauge Wheel Sensor

Height Sensor

Hitch Height

Steerable Axle

A93498—UN—24AUG18

Diagnostics

Diagnostics Tab

Air Compressor System

Brush Motor Hardware/Software

Closing Wheels

Coulter Disk

Electric Power Generation (EPG)

Fertilizer

Gauge Wheel Downforce

Height-Drives

Hydraulic Pressure

Lifetime Totals

Machine Speeds

Meter

Meter Motor Hardware/Software

PDF System

Ride Quality

Row Cleaners

Row Unit Downforce

RUC Hardware/Software

RUC Row Addressing

Seed Sensors

System Voltages

Vacuum Pressure

A93497—UN—24AUG18

Procedures

Procedures Tab

Accumulator Test

Air Purge Test

Runoff and Qualification Procedures

Seed Sensor Test

Valve Flush Test

Valve Test

ae77568,1670956277424-19-19NOV24

Calibrations | Gauge Wheel Sensor

This procedure calibrates all gauge wheel sensors.

Perform Calibration When:

- Sensors do not read zero with the implement raised.

Items Accessible on Gauge Wheel Sensor Page:

N120226—UN—23FEB16

Begin Calibration

Begin Calibration— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	Beginning of season and as needed
Estimated Time Required	Less than 1 min

N0LMWLO,0000026-19-25JUN20

Calibrations | Gauge Wheel Sensor Procedure

Procedure Requirements:

Engine State	Running
Operating State	Wheel speed at zero Implement raised

Procedure Overview:

A93499—UN—07MAY19

DTC Alert

NOTE: If a diagnostic trouble code (DTC) causes the calibration to fail, the calibration window closes behind the DTC alert.

N120226—UN—23FEB16

Begin Calibration

1. Select to begin procedure.

2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to return to Gauge Wheel Sensor Calibration page without saving any value changes.

A92055—UN—20MAR18

OK

3. Confirm calibration by selecting OK to exit.

N0LMWLO,0000027-19-30SEP19

Calibrations | Height Sensor

This procedure calibrates the Height Sensor.

Perform Calibration When:

- Height sensor or controller was replaced.
- Height sensor alerts are displayed.
- Physical position of height sensor has changed.

Items Accessible on Height Sensor Page:

N120226—UN—23FEB16

Begin Calibration

Begin Calibration— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	Beginning of season and as needed
Estimated Time Required	5 min

N0LMWLO,0000028-19-25JUN20

Calibrations | Height Sensor Procedure

Procedure Requirements:

Engine State	Running
Operating State	Wheel speed at zero Implement raised

Procedure Overview:

A93499—UN—07MAY19

DTC Alert

NOTE: A diagnostic trouble code (DTC) alert can occur at any point during the calibration.

N120226—UN—23FEB16

Begin Calibration

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to return to Height Sensor Calibration page without saving any value changes.

A92886—UN—11MAY17

Edit Settings

- Select to edit Seed Motor threshold.

A92055—UN—20MAR18

OK

3. Confirm Calibration by selecting OK to exit. New values have been saved.

N0LMWLO,0000029-19-30SEP19

Calibrations | Hitch Height

This procedure calibrates the Hitch Height.

Perform Calibration When:

- The implement moves to a different tractor.
- Physical position of the hitch has changed.

N120226—UN—23FEB16

Begin Calibration

Items Accessible on Hitch Height Page:

Begin Calibration— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	Beginning of season and as needed
Estimated Time Required	5 min

N0LMWLO,000002A-19-25JUN20

Calibrations | Hitch Height Procedure

Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface Implement folded

Procedure Overview:

N120226—UN—23FEB16

Begin Calibration

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

   - Select anytime to return to Hitch Height Calibration page without saving any value changes.

A92055—UN—20MAR18

OK

3. Confirm Calibration by selecting OK to exit.

N0LMWLO,000002B-19-25JUN20

Diagnostics | Air Compressor System

Diagnostics | Air Compressor System allows you to view the readings from the air compressor sensors.

Diagnostics

Sensor Supply— is the power currently provided to the sensor from the tractor.

Maximum - 5.5 V

Wings - shows the down pressure readings for the row units on the wing frames.

Center - shows the down pressure readings for the row units on the center frame.

Up Pressure (all) - shows the up pressure readings for all the row units.

Voltage— is the voltage reading in response to air pressure detected.

Maximum - 4.9 V

Minimum - 0.08 V

Pressure Sensed— is the pressure detected in the row cleaner system, not the air tank.

N0LMWLO,000002D-19-03MAY19

Diagnostics | Brush Motor Hardware/ Software

Diagnostics | Brush Motor Hardware/Software displays the following information:

- Hardware part number
- Hardware serial number
- Software part number
- Software version number

ae77568,1680621596734-19-04APR23

Diagnostics | Closing Wheels

Diagnostics | Closing Wheels allows you to view the readings from the air pressure sensors.

Diagnostics

Sensor Supply— is the power currently provided to the sensor from the implement.

Maximum - 5.5 V

Group 1 - shows the downforce readings for the row units on group 1.

Group 2 - shows the downforce readings for the row units on group 2.

Voltage— is the voltage reading in response to air pressure detected.

Maximum - 4.9 V

Minimum - 0.08 V

Pressure Sensed— is the pressure detected in the closing wheel system, not the air tank.

N0LMWLO,000002E-19-03MAY19

Diagnostics | Coulter Disk (Brazil production only)

Diagnostics | Coulter Disk allows you to view the readings from the air pressure sensors.

Diagnostics

Sensor Supply— is the power currently provided to the sensor from the implement.

Maximum - 5.5 V

Group 1 - shows the downforce readings for the row units on group 1.

Group 2 - shows the downforce readings for the row units on group 2.

Voltage— is the voltage reading in response to air pressure detected.

Maximum - 4.9 V

Minimum - 0.08 V

Pressure Sensed— is the pressure detected in the coulter disks system, not the air tank.

CZ76372,000092D-19-04MAY22

Diagnostics | eDrive

Onscreen Help is not provided for technician mode.

N0LMWLO,000002F-19-08MAY19

Diagnostics | eDrive | Row

Onscreen Help is not provided for technician mode.

N0LMWLO,0000030-19-08MAY19

Diagnostics | EPG

Diagnostics | Electric Power Generation (EPG) displays the status of the power generation system and its components.

Items Accessible on Diagnostics | EPG Page:

A94279—UN—22JUN17

Left Arrow

A94280—UN—22JUN17

Right Arrow

EPG Screens— use the left and right buttons to scroll through the EPG screens.

A94276—UN—11MAY17

Overview Screen

Overview Screen— shows the status of the EPG components.

A94275—UN—11MAY17

EPG Hardware/Software

EPG Hardware/Software Screen— shows the specific identification numbers for the hardware and software on your implement.

A94278—UN—11MAY17

System Voltages Screen

System Voltages Screen— shows the measurable voltages of the EPG components.

A94277—UN—11MAY17

Sensors Screen

Sensors Screen— shows values associated with the EPG sensors.

Items Accessible on Overview Screen:

A94282—UN—11MAY17

Gauge

Gauges— visually display the range and current level of two important aspects of the EPG system.

A92871—UN—11MAY17

Gauge Indicator

Gauge Indicator— moves along the gauge to show the current reading.

Speed Gauge— displays the rpm of the hydraulic motor powering the EPG alternator.

Pressure Gauge— displays the hydraulic pressure for the EPG motor.

NOTE: The Speed and Pressure gauges appear with the Implement Power Generation system. The green area is the preferred level when the hydraulics are at the optimum level.

Main Bus Voltage Gauge— displays the voltage output from the EPG alternator.

NOTE: The Main Bus Voltage gauge appears with the Tractor Power Generation system. The green area is the preferred level when the alternator is operating at the optimum level.

Gearbox Temperature Gauge— displays the temperature of the EPG alternator gear case.

NOTE: The Gearbox Temperature gauge appears with the Tractor Power Generation system. If the indicator enters the red area, stop and inspect the gear case. (See lubrication recommendations in the implement Operator's Manual.)

Status Indicators— show you the status of the EPG requirements needed for engagement.

H114656—UN—05JAN17

Green

Active— indicates that the requirement is met.

H114655—UN—05JAN17

Gray

Inactive— indicates that the requirement is not met.

H114657—UN—05JAN17

Red

Error— indicates that you attempted to enable the power generation before the requirements were met.

A92133—UN—06MAY19

ON/OFF

Toggle ON/OFF— select to enable or disable the power when the power generation system is engaged.

A94281—UN—22JUN17

Clear Fault

Clear Fault— select after a fault occurs to clear the fault before attempting to enable the power generation again.

A117097—UN—15DEC22

Reading

Readings— display the range and current levels of voltage or amperage of various components.

Procedure to Modify:

IMPORTANT: If a service diagnostic trouble code (DTC) message appears, follow the instructions and select OK to continue to the EPG diagnostics page and clear the fault after the issue is resolved.

A92133—UN—06MAY19

ON/OFF

Select the toggle button to enable or disable the power generation when the EPG system is engaged.

A92067—UN—16MAR18

Cancel

A93508—UN—23JUN17

OK

Turn EPG OFF?— message appears if you attempt to disable the power generation while planting. Select Cancel to maintain the power or select OK to disable the power.

ae77568,1670956310791-19-11APR23

Diagnostics | Fertilizer

Diagnostics | Fertilizer allows you to view the readings from the liquid fertilizer sensor.

Diagnostics

Sensor Number— is the identifier for each sensor.

Supply Voltage— is the power currently provided to the sensor from the tractor.

Operating Range - 4.5—5.5 V

Input Voltage— is the voltage reading in response to pressure detected.

Maximum - 4.5 V

Minimum - 0.5 V

Pressure Sensed— is the pressure in the liquid fertilizer system.

Sensor Maximum - 1380 kPa (13.8 bar) (200 psi)

System Maximum - 690 kPa (13.8 bar) (100 psi)

Minimum - 0

N0LMWLO,0000032-19-02OCT19

Diagnostics | Frame Control

Diagnostics | Frame Control allows you to view the sensor readings and status of the sensors.

NOTE: The values are used to verify that a sensor is detecting a change. The values vary per machine and setup.

Sensor	Status
Height	Raised Lowered Error
Wing Fold	Folded Partial Unfolded Error
Split-Row Lift	Transport Plant Error
Hitch Position	Plant Folding Transport - - - (Undetermined) Error
Tongue Latch	Latched Not Latched Error
Tongue Unlatched	Unlatched Not Unlatched Error
Fold Assist Latch	Latched Not Latched Error
Fold Assist Unlatch	Unlatched Not Unlatched Error

N0LMWLO,0000033-19-09MAY19

Diagnostics | Gauge Wheel Downforce

Diagnostics | Gauge Wheel Downforce allows you to view the readings from the gauge wheel sensors on the row units.

Diagnostics

Sensor— is the sensor identifier.

Row Number— indicates the row unit location of a sensor.

Supply Voltage— is the power currently provided to the sensor from the tractor.

Maximum - 5.5 V

Input Voltage— is the voltage reading in response to force detected.

Maximum - 4.9 V

Minimum - 0.5 V

Applied Load— shows the force applied to the row unit for proper soil penetration and gauge wheel contact with the soil.

A92875—UN—11MAY17

Checked

Enabled— select to enable a row manually.

NOTE: If a row is set for zero population, it shows as disabled.

A92874—UN—11MAY17

Unchecked

Enabled— deselect to disable a row manually. You can disable the sensors on a row if the sensor fails (until you make the repairs).

ae77568,1671045690350-19-14DEC22

Diagnostics | Hydraulic Pressure

Diagnostics | Hydraulic Pressure allows you to view the readings from the sensor in the independent hydraulic downforce system.

Diagnostics

Sensor Supply Voltage— is the power currently provided to the sensor from the tractor.

Maximum - 5 V

Sensor Input Voltage— is the voltage reading in response to hydraulic pressure detected.

Maximum - 4.5 V

Minimum - 0.5 V

Sensor Pressure— is the hydraulic pressure detected.

N0LMWLO,0000035-19-30SEP19

Diagnostics | Machine Speeds

Diagnostics | Machine Speeds allows you to view the speed source and readings.

Items Displayed on Diagnostics | Machine Speeds Page:

- **Active Speed Source—** displays the selected speed setting and the current speed. Possible sources are automatic (ground speed or wheel speed), ground speed, wheel speed, or manual.
  - **Auto—** allows the software to choose the best speed source.
  - **Ground Speed—** is the speed source from the tractor radar.
  - **Wheel Speed—** is the speed source from the tractor wheel sensor.
  - **Manual Speed—** is a static value entered by the operator.
- **Tractor Wheel Speed—** is the speed detected at the tractor wheel.
- **Tractor Ground Speed—** is the speed value from the tractor radar.
- **Implement Wheel Speed—** is the wheel revolutions detected by the wheel motion sensor on one of the implement wheels.

N0LMWLO,0000036-19-09DEC19

Diagnostics | Meter

Diagnostics | Meter shows the drive status, which requirements are met for drive activation, and errors that are detected.

Items Accessible on Diagnostics | Meter Page:

Meter Drives Status Indicators:

A91611—UN—11MAY17

Engaged

Engaged— all the requirements are met. The seed meters are engaged.

A92115—UN—11MAY17

Error Detected

Error Detected— messages appear for conditions other than electronic power generation (EPG) activation, frame position, wheel motion, and speed.

A91628—UN—11MAY17

Not Ready

Not Ready— no status is recognized until the EPG is active. Engage the power generation system.

A92080—UN—11MAY17

Ready

Ready— electric power generation is active. The implement is not lowered and has not met the speed requirement.

A92120—UN—11MAY17

Ready

Ready— EPG is active and the implement is lowered. The speed requirement is not met.

A92119—UN—11MAY17

Ready

Ready— EPG is active and the speed requirement is met. The implement is not lowered.

A92121—UN—11MAY17

Commanded Off

Commanded Off— all sections are off using Section Control even though all drive requirements are met.

NOTE: Multiple gray areas are highlighted as conditions are met.

Meter Drives Requirements Status:

A92084—UN—09MAY19

Check Mark

Check Mark— indicates that the requirement is met.

A92083—UN—11MAY17

Exclamation Point

Exclamation Point— indicates that the requirement is not met or that there is an error.

NOTE: The meter status is updated as the requirements are met.

A117098—UN—15DEC22

Diagnostics

Diagnostics— directs to EPG Diagnostics when an EPG fault is present.

Meter Drives Requirements:

A91623—UN—06MAY19

ON/OFF

- The ground speed must be greater than 2.1 km/h (1.3 mph).
- The implement must be lowered. Verify that the height sensor is calibrated and that the height settings are established. See Seed Motor in Advanced Settings.
- EPG must be active.

Electric Power Generation (EPG)— toggle button gives you quick access to engage the EPG system.

NOTE: The toggle button does not appear when the EPG requirement is met or when the EPG is engaged.

- A Target Population must be entered and selected.
- Wheel motion must be detected.
- You must be within the field boundaries.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956464829-19-14DEC22

Diagnostics | Meter Motor Hardware/ Software

Diagnostics | Meter Motor Hardware/Software displays the following information:

- Hardware part number
- Hardware serial number
- Software part number
- Software version number

ae77568,1680621642843-19-04APR23

Diagnostics | Pneumatic Downforce

Diagnostics | Pneumatic Downforce (PDF) allows you to view the readings from the air pressure sensor.

Diagnostics

Sensor Number— is the identifier for each sensor.

Supply Voltage— is the power currently provided to the sensor from the tractor.

Operating Range - 4.5—5.5 V

Input Voltage— is the voltage reading in response to air pressure detected.

Maximum - 4.9 V

Maximum - 0.08 V

Downforce— is the actual force on the row units.

Pressure Sensed— is the pressure detected in the pneumatic system, not the air tank.

Operating Range - 101—1136 kPa (1.01—1136 bar) (14.7—164.7 psi)

N0LMWLO,0000038-19-30SEP19

Diagnostics | Ride Quality

Diagnostics | Ride Quality allows you to view the readings from the accelerometer sensors on the row units.

Diagnostics

Sensor— is the sensor identifier.

Row Number— indicates the row unit location of a sensor.

Ride Quality— is the degree of vibration detected at the row unit. Zero vibration is 100% ride quality.

A92875—UN—11MAY17

Checked

Enabled— select to enable a row manually.

A92874—UN—11MAY17

Unchecked

Enabled— deselect to disable a row manually. You can disable the sensors on a row if the sensor fails (until you make the repairs).

ae77568,1671045635807-19-11APR23

Diagnostics | Row Cleaners

Diagnostics | Row Cleaners allows you to view the readings from the air pressure sensors.

Diagnostics

Sensor Supply— is the power currently provided to the sensor from the tractor.

Maximum - 5.5 V

Wings - shows the downforce readings for the row units on the wing frames.

Center - shows the downforce readings for the row units on the center frame.

Upforce (all) - shows the upforce readings for all the row units.

Voltage— is the voltage reading in response to air pressure detected.

Maximum - 4.9 V

Minimum - 0.08 V

Pressure Sensed— is the pressure detected in the row cleaner system, not the air tank.

N0LMWLO,000003A-19-06MAY19

Diagnostics | Row Unit Downforce

Diagnostics | Row Unit Downforce allows you to view the readings from the sensors.

Diagnostics

Readings— shows the row with the highest reading and the row with the lowest reading. If the implement has two ranks of row units, the readings are shown for each rank.

Focus Row— shows the reading for the row that you select using the input box and number pad. The focus row is also highlighted on the bar graph.

A95562—UN—23JUN17

Supply

Supply— is the power currently provided to the sensors.

Supply Voltage— shows supply voltages for each row unit sensor in a bar graph.

A95563—UN—23JUN17

Input

Input— is the voltage reading in response to force detected.

Input Voltage— shows input voltages for each row unit sensor in a bar graph.

A95564—UN—23JUN17

Downforce

Downforce— shows the force applied to the row units.

Downforce— shows force applied to each row unit in a bar graph.

A95565—UN—23JUN17

Pressure

Pressure— is the hydraulic pressure applied to the row units.

Pressures— shows hydraulic pressure at each row unit in a bar graph.

N0LMWLO,000003B-19-06MAY19

Diagnostics | RUC Row Addressing

Diagnostics | Row Unit Controller (RUC) Row Addressing allows you to view the details about the row unit controllers.

Diagnostics

Left Side— displays the row units on the left-hand side of the implement.

Right Side— displays the row units on the right-hand side of the implement.

Row— is the row unit identifier.

Control Unit— shows the control unit identifier.

CAN Bus Address— shows the address of the control unit on the CAN bus.

Serial Number— shows the serial number of the control unit.

Address— is the current state of the controller on the CAN bus.

A92084—UN—09MAY19

OK

OK— indicates that all power and communication is normal.

A94256—UN—11MAY17

Error

Error— indicates that there is a fault in the wiring.

Verify that the Row Unit Control Unit terminals are clean, all circuits fully connect, and each circuit has the correct voltage.

1. Inspect the power and ground wires at the control unit.
2. Inspect the voltage on CAN Hi and CAN Lo.
3. Inspect the address wire connections.

N0LMWLO,000003C-19-30SEP19

Diagnostics | Seed Sensors

Diagnostics | Seed Sensors allows you to enable and disable seed sensors.

Diagnostics

Status— displays the overall status of the seed sensors.

A95566—UN—22JUN17

Enable All

Enable All— select to enable all the seed sensors.

A95567—UN—22JUN17

Disable All

Disable All— select to disable all the seed sensors.

A92875—UN—11MAY17

Checked

Enabled— select to enable specific seed sensors.

A92874—UN—11MAY17

Unchecked

Enabled— select to disable specific seed sensors.

N0LMWLO,000003D-19-09OCT19

Diagnostics | System Voltages

Diagnostics | System Voltages displays the voltage readings for various components. This page is dynamic and shows items specific to your implement.

N0LMWLO,000003E-19-06MAY19

Diagnostics | Vacuum

Diagnostics | Vacuum allows you to view the readings from the vacuum sensors.

Diagnostics

Sensor Number— is an indicator for each sensor.

Row Number— identifies the row unit where the sensor is located.

Supply Voltage— is the power provided to the sensor from the tractor.

Maximum - 5 V

Input Voltage— is the voltage reading in response to vacuum level.

Maximum - 4.5 V

Minimum - 0.5 V

Vacuum Sensed— is the vacuum level (inches of water) detected at the seed meter.

N0LMWLO,000003F-19-07MAY19

Procedures | Accumulator Test

NOTE: This procedure only applies to Gen 1 IRHD. The Gen 2 IRHD test is a manual procedure utilizing a mobile application. See the planter frame Operator's Manual for the Gen 2 IRHD test.

The objective of this procedure is to check for proper accumulator charge pressure.

Perform Gen 1 IRHD Procedure When:

- At the beginning of each season
- When an accumulator is replaced
- When an accumulator has erratic behavior

Items Accessible on Accumulator Test Page:

A93507—UN—24AUG18

Begin Procedure

Begin Procedure— begin Accumulator Test procedure.

N0LMWLO,0000040-19-05DEC24

Procedures | Accumulator Test | Procedure

Procedure Requirements

System	Gen 1 IRHD
Engine State	Running
Operating State	Hydraulic fluid > 49°C (120°F)

Procedure Overview

A93507—UN—24AUG18

Begin Procedure

NOTE: This procedure only applies to Gen 1 IRHD. The Gen 2 IRHD test is a manual procedure utilizing a mobile application. See the planter frame Operator's Manual for the Gen 2 IRHD test.

1. Select to Begin Procedure.
2. Follow messages on the screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to Cancel and return to Accumulator Test Procedure Details page.

A92055—UN—20MAR18

OK

3. Confirm procedure by selecting OK to exit.

If Calibration Fails:

N118122—UN—02MAY16

Retry

1. Select Retry button.
2. Verify that all requirements listed on the screen have been met.
3. If calibration fails twice, see a John Deere dealer or other service provider.

N0LMWLO,0000041-19-16OCT25

Procedures | Air Purge Test

The objective of this procedure is to remove air from the hydraulic circuits.

Perform Procedure When:

- A hydraulic hose has been disconnected.
- Hydraulic fluid temperature is low.
- Contamination occurs.
- IRHD valve driver faults.
- Row unit downforce pressure faults.

Items Accessible on Air Purge Test Page:

A93507—UN—24AUG18

Begin Procedure

Begin Procedure— begin Air Purge Test procedure.

N0LMWLO,0000042-19-30SEP19

Procedures | Air Purge Test | Procedure

Procedure Requirements

Engine State	Running
Operating State	Implement stationary Hydraulic pressure < 18 615 KPa (186 bar) (2700 psi) Hydraulic fluid > 49°C (120°F)

NOTE: To obtain low hydraulic pressure, turn off all SCVs and hydraulic functions.

Procedure Overview

A93507—UN—24AUG18

Begin Procedure

1. Select to Begin Procedure.
2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to Cancel and return to Air Purge Test Procedure Details page.

A92055—UN—20MAR18

OK

3. Confirm procedure by selecting OK to exit.

If Calibration Fails:

N118122—UN—02MAY16

Retry

1. Select Retry button.
2. Verify that all requirements listed on-screen have been met.
3. If calibration fails twice, see a John Deere dealer or other service provider.

N0LMWLO,0000043-19-16OCT25

Procedures | Runoff Procedures

Runoff Procedures allow you to rotate the seed meter components while the implement is stationary and observe the meter performance.

Items Accessible on Runoff Procedures Page:

A94266—UN—23JUN17

Overview

Overview— shows the options that are available.

A94265—UN—23JUN17

Meter

Meter Performance Test— is used to verify the performance of a seed meter when it meters the specific number of seeds that you indicate. Select Meter to perform the test.

A94264—UN—23JUN17

Row

Row Runoff— is used to run the meter (until you select stop) on a single row and view the performance results. Select Row to perform the runoff.

A103574—UN—03MAY19

Implement

Implement Runoff— is used to run the meters (until you select stop) on all of the rows and view the performance results. Select Implement to perform the runoff.

NOTE: Runoff is not available while planting.

ae77568,1670956707087-19-11APR23

Procedures | Meter Performance Test

Meter Performance Test allows you to enter parameters and view the results of a seed meter test.

Items Accessible on Meter Performance Test Page:

Row— is the row number for the meter test.

NOTE: The implement row spacing is shown to the right of the input box.

Target Population— is the seed population for the meter test.

Test Speed— is the simulated ground speed for the meter test.

Number of Seeds— is the duration of the meter test.

Start— begins the meter test.

Abort— ends the meter test while it is in progress and all of the parameters are within specification.

Stop— appears while the meter test is in progress if any parameter for the test is beyond the sensor capability.

A94268—UN—11MAY17

Progress Indicator

Test in Progress— appears on the screen when the seed meters are rotating during the test.

A93554—UN—22JUN17

Mobile Device Icon

Mobile Device Icon— transfers control of the procedure to your mobile device through the Equipment Mobile application.

A92067—UN—16MAR18

Cancel

Cancel— ends the attempt to connect to your mobile device.

A94270—UN—22JUN17

Disconnect

Disconnect— stops the mobile connection and returns control to the monitor.

Perform When:

- Beginning a new planting season.
- Adjustments have been made to the seed meter.
- You changed to a different seed.
- You see performance issues on your overview screen.

Procedure to Modify:

IMPORTANT: Avoid damage to the seed meter components. Do not operate the seed meters without a seed disk installed.

A117099—UN—15DEC22

Input Box

1. Select an input box to change each test parameter: the row number, the target population, the test speed, and the number of seeds to count.
2. Verify that there is enough seed in the row unit hopper for the test and that the seed is coated with the recommended amount of see meter lubricant.
3. Raise the implement.

NOTE: Place a clean container under the row unit to catch the seed (if desired).

4. Activate the electric power generation system.
5. Engage the vacuum and set it to the level that you want during the test.

CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

A93553—UN—06MAY19

Start

A93554—UN—22JUN17

Mobile Device Icon

6. Select Start to continue the test on the screen or select the Mobile Device Icon to continue the test through the Equipment Mobile application.

A94267—UN—22JUN17

Abort

A94269—UN—22JUN17

Stop

7. Select Abort or Stop at any time to end the procedure. Observe all the recorded values as the test progresses.

NOTE: The simulated distance remaining and the time remaining appear on the screen during the test.

8. Compare the results to your expectations. As needed, adjust the seed meter, adjust the vacuum level, or inspect and correct any mechanical problems. (See adjustment recommendations and basic maintenance procedures in the implement Operator's Manual.)

NOTE: Values outside of the limits that you set are highlighted in red. Values near your set limits are highlighted in amber.

ae77568,1670956735544-19-17APR23

Procedures | Row Runoff

Row Runoff allows you to enter parameters and view the results of an individual row runoff.

Items Accessible on Row Runoff Page:

Row— is the row number for the runoff.

NOTE: The implement row spacing is shown to the right of the input box.

Target Population— is the seed population for the runoff.

Test Speed— is the simulated ground speed for the runoff.

Start— begins the meter runoff.

Stop— appears while the meter runoff is in progress.

A94268—UN—11MAY17

Progress Indicator

Test in Progress— appears on the screen when the seed meters are rotating during the test.

A93554—UN—22JUN17

Mobile Device Icon

Mobile Device Icon— transfers control of the procedure to your mobile device through the Equipment Mobile application.

A92067—UN—16MAR18

Cancel

Cancel— ends the attempt to connect to your mobile device.

A94270—UN—22JUN17

Disconnect

Disconnect— stops the mobile connection and returns control to the monitor.

Perform When:

- Beginning a new planting season.
- Adjustments have been made to the seed meter.
- You changed to a different seed.
- You see performance issues on your overview screen.

Procedure to Modify:

IMPORTANT: Avoid damage to the seed meter components. Do not operate the seed meters without a seed disk installed.

A117099—UN—15DEC22

Input Box

1. Select an input box to change each runoff parameter: the row number, the target population, and the test speed.
2. Verify that there is enough seed in the row unit hopper for the runoff and that the seed is coated with the recommended amount of seed meter lubricant.
3. Raise the implement.

NOTE: Place a clean container under the row unit to catch the seed (if desired).

4. Activate the electric power generation system.
5. Engage the vacuum and set it to the level that you want during the runoff.

CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

A93553—UN—06MAY19

Start

A93554—UN—22JUN17

Mobile Device Icon

6. Select Start to continue the runoff on the screen or select the Mobile Device Icon to continue the runoff through the Equipment Mobile application.

A94269—UN—22JUN17

Stop

7. Select Stop at any time to end the procedure. Observe all the recorded values as the runoff progresses.

NOTE: The simulated distance remaining and the time remaining appear on the screen during the runoff.

8. Compare the results to your expectations. As needed, adjust the seed meter, adjust the vacuum level, or inspect and correct any mechanical problems. (For adjustment recommendations and basic maintenance procedures, see the implement Operator's Manual.)

NOTE: Values outside of the limits that you set are highlighted in red. Values near your set limits are highlighted in amber.

ae77568,1670956764839-19-17APR23

Procedures | Implement Runoff

Implement Runoff allows you to enter parameters and view the results of the entire implement.

Items Accessible on Implement Runoff Page:

Target Population— is the seed population for the runoff.

Test Speed— is the simulated ground speed for the runoff.

Start— begins the implement runoff.

Stop— appears while the implement runoff is in progress.

A94268—UN—11MAY17

Progress Indicator

Test in Progress— appears on the screen when the seed meters are rotating during the runoff.

Perform When:

- Beginning a new planting season.
- Adjustments have been made to the seed meters.
- You changed to a different seed.
- You see performance issues on your overview screen.

Procedure to Modify:

IMPORTANT: Avoid damage to the seed meter components. Do not operate the seed meters without a seed disk installed.

A117099—UN—15DEC22

Input Box

1. Select an input box to change the runoff parameters: the target population and the test speed.
2. Verify that there is enough seed in the row unit hopper for the runoff and that the seed is coated with the recommended amount of seed meter lubricant.
3. Raise the implement.

NOTE: Place a clean container under the row units to catch the seed (if desired).

4. Activate the electric power generation system.
5. Engage the vacuum and set it to the level that you want during the runoff.

⚠ CAUTION: To avoid injury from rotating components:

- Keep all seed meter components in place during operation.
- Shut off all seed meters and drives before cleaning or inspection.

A93553—UN—06MAY19

Start

6. Select Start to begin the runoff.

A94269—UN—22JUN17

Stop

7. Select Stop at any time to end the procedure. The SeedStar - Overview screen area appears and contains the tabs associated to the runoff: Population, Singulation, Spacing, RPM, and Torque. The screen behavior is the same as the Overview. Observe the bar graphs as the runoff progresses. Zoom to the details page for the runoff results.

NOTE: The simulated distance remaining and the time remaining appear on the screen during the runoff.

8. Compare the results to your expectations. As needed, adjust the seed meter (hub height, double eliminator, agitator, tine adjustment, worn part replacement), adjust the vacuum level, or inspect and correct any mechanical problems. (See adjustment recommendations and basic maintenance procedures in the implement Operator's Manual.)

NOTE: Values outside of the limits that you set are highlighted in red. Values near your set limits are highlighted in amber.

ae77568,1670956844034-19-17APR23

Procedures | Procedure Requirements

Procedure Requirements show which requirements are met for meter activation and any errors that are detected.

Procedure Requirements:

A92084—UN—09MAY19

Check Mark

Check Mark— indicates that the requirement is met.

A92083—UN—11MAY17

Exclamation Point

Exclamation Point— indicates that a requirement is not met or that there is an error.

- The implement must be raised.
- The implement must be stationary.
- Electric power generation (EPG) must be active.
- Active faults must not be present for row unit controllers or motors.
- Seed sensor must be enabled.

A92133—UN—06MAY19

ON/OFF

If the Electric Power Generation (EPG) requirement is not met, select the toggle button to turn on the EPG system.

NOTE: The toggle button does not appear when the requirement is met.

CAUTION: To avoid injury from rotating components:

- **Keep all seed meter components in place during operation.**
- **Shut off all seed meters and drives before cleaning or inspection.**

A93553—UN—06MAY19

Start

Start— begins the procedure and returns you to the runoff page.

MM95366,0000574-19-22SEP20

Procedures | Seed Sensor Test

The objective of this test is to determine whether or not your installed seed sensor circuits are functioning correctly.

Perform Procedure When:

- You suspect a seed sensor malfunction.

Items Accessible on Seed Sensor Test Page:

A93507—UN—24AUG18

Begin Procedure

Begin Procedure — begin Seed Sensor Test procedure.

N0LMWLO,0000049-19-09MAY19

Procedures | Seed Sensor Test | Procedure

Procedure Requirements

Engine State	Running
Operating State	Implement stationary Electric power generation (EPG) active

Procedure Overview

A93507—UN—24AUG18

Begin Procedure

1. Select to Begin Procedure.
2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to Cancel and return to Seed Sensor Test Procedure Details page.

A92055—UN—20MAR18

OK

3. Confirm procedure by selecting OK to exit.

If Calibration Fails:

N118122—UN—02MAY16

Retry

1. Select Retry button.
2. Verify that all requirements listed on the screen have been met.
3. If calibration fails twice, see a John Deere dealer or other service provider.

N0LMWLO,000004A-19-16OCT25

Procedures | Valve Flush Test

The objective of this test is to remove hydraulic contamination from the valve and actuator assembly.

Perform Procedure When:

- Contamination occurs.

Items Accessible on Seed Sensor Test Page:

A93507—UN—24AUG18

Begin Procedure

Begin Procedure— begin Valve Flush Test procedure.

N0LMWLO,000004B-19-09MAY19

Procedures | Valve Flush Test | Procedure

Procedure Requirements

Engine State	Running
Operating State	Implement stationary Hydraulic pressure < 9985 KPa (100 bar) (1448 psi)

NOTE: To obtain low hydraulic pressure, turn off all SCVs and hydraulic functions.

Procedure Overview

A93507—UN—24AUG18

Begin Procedure

1. Select to Begin Procedure.
2. Follow messages on-screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to Cancel and return to Valve Flush Test Procedure Details page.

A92055—UN—20MAR18

OK

3. Confirm procedure by selecting OK to exit.

N0LMWLO,000004C-19-01OCT19

Procedures | Valve Test

The objective of this test is to check the actuator control-valve functionality.

Perform Procedure When:

- You suspect an actuator control-valve malfunction.

Items Accessible on Valve Test Page:

A93507—UN—24AUG18

Begin Procedure

Begin Procedure— begin Valve Test procedure.

N0LMWLO,000004D-19-06MAY19

Procedures | Valve Test | Procedure

Procedure Requirements

Engine State	Running
Operating State	Hydraulic fluid > 49°C (120°F) Hydraulic pressure approximately 13 800—22 100 kPa (138—221 bar) (2000—3200 psi)

Procedure Overview

A93507—UN—24AUG18

Begin Procedure

1. Select to Begin Procedure.
2. Follow messages on the screen to complete procedure.

A92067—UN—16MAR18

Cancel

- Select anytime to Cancel and return to Valve Test Procedure Details page.

A92055—UN—20MAR18

OK

3. Confirm procedure by selecting OK to exit.

N118122—UN—02MAY16

Retry

If Calibration Fails:

1. Select Retry button.
2. Verify that all requirements listed on the screen have been met.
3. If calibration fails twice, see a John Deere dealer or other service provider.

N0LMWLO,000004E-19-16OCT25

Information and Settings | SeedStar

SeedStar is where various basic parameters are set that affect multiple components on the implement.

Items Accessible on Information and Settings | SeedStar:

A93500—UN—24AUG18

Settings

Settings Tab

Population Setup—Selected enables the advanced target population feature used for seed delivery. Unselected enables the basic target population features.

Fast Start—Auto selected enables fast start auto activation when the planter is lowered. Override selected ignores section control when fast start is active.

Speed—Accesses the mode selection options for tractor speed source.

Seed Motor—Accesses the frame height settings that start and stop the seed motors.

Gauge Wheels—Allows changes to the downforce adjustment increments used on the run screens and the Overview application pages. The pause timer interval is also entered here.

Vacuum Automation—Accesses the vacuum blower and control mode selection as well as setting the increment for vacuum adjustments on the run screens. Active Vacuum Bias allows altering the active vacuum adjustments resulting in greater or fewer seed meter skips or multiples.

Selective Control Valve (SCV) Assignments—Accesses the SCV configuration for operation mode, SCV function assignments, and other SCV control options.

Row Cleaners—Allows system enablement, default resets, incremental adjustment settings, or upforce enablement.

Closing Wheels—Allows turning groups ON or OFF and enabling leak detection alarms.

Coulter Disk (Brazil production only)—Allows turning groups ON or OFF and enabling leak detection alarms.

Central Commodity System (CCS)—Allows seed agitator and CCS blower enablement and override access for the automatic CCS shutoff. Choice of volume or percentage used for tank level displays.

Alarm Notification—Allows alarm enablement for rows commanded OFF by Section Control.

A93501—UN—24AUG18

Help

Help Tab

Help allows navigation and viewing of all the Help pages from one location.

A93502—UN—24AUG18

About

About Tab

View implement Software and Hardware Identification information, including Copyright Information, License Agreement, and Lifetime Hours Worked.

Hardware—View Implement Frame, SeedStar Controller, Row Cleaner Controller, and Electric Power Generation (EPG) Controller.

N0LMWLO,000004F-19-19NOV24

Information and Settings | Population Setup

Population setup allows you to choose the basic or advanced configuration for the target population pages related to seed delivery.

Select Basic to use one seed population for the entire implement. Select Advanced to use multiple populations across the implement based on your seed variety setup.

NOTE: Seed variety setup is entered using Edit Variety in the Work Setup application.

Items Accessible on Population Setup Page:

A103267—UN—03MAY19

Use Advanced Population Setup

Basic— uncheck this selection and enable Basic Target Populations.

A103266—UN—03MAY19

Use Advanced Population Setup

Advanced— select to enable Advanced Target Populations.

N0LMWLO,0000050-19-30SEP19

Information and Settings | Fast Start

Fast Start allows you to engage the meter drives for 6 seconds if the electric power generation (EPG) and the frame height requirements are met. The meter drives engage when the implement is stationary. Normal operation resumes when your ground speed meets the System Requirement.

NOTE: Messages appear on-screen when the feature is activated.

NOTE: Fast Start is disabled when the seed meters are engaged.

A103504—UN—06MAY19

Auto-Enable Fast Start on Implement Down

Manual Control— uncheck this selection and enable manual control of Fast Start. Engage Fast Start with the shortcut key.

A92118—UN—07MAY19

Fast Start Shortcut Key

NOTE: Shortcut keys for this application can be added to the shortcut bar using Layout Manager

Automatic Control— select to have Fast Start engage whenever the implement is lowered.

A103505—UN—06MAY19

Auto-Enable Fast Start on Implement Down

NOTE: When this option is selected, Quick Start is no longer available.

Override Section Control During Fast Start— allows you to select whether to have all the rows activate when Fast Start key is selected or only the rows commanded by Section Control.

A92879—UN—06MAY19

Override Section Control During Fast Start

- Uncheck this selection and allow Section Control to operate while Fast Start is engaged.

A92881—UN—06MAY19

Override Section Control During Fast Start

- Select to override Section Control when Fast Start is engaged.

N0LMWLO,0000051-19-01OCT19

Information and Settings | Speed

Speed allows you to select a speed source on the tractor. The speed value determines the seed motor behavior.

NOTE: The selections are disabled when the tractor is moving and the seed motors are engaged.

A92885—UN—11MAY17

Auto

Auto— the recommended selection to allow the software to choose the best source available.

NOTE: The Auto mode automatically switches to another source if there is a radar malfunction and a loss of GPS signal. Select a specific source if you want a notification when your selected source malfunctions.

A92884—UN—24AUG18

Ground Speed

Ground Speed— uses the tractor radar or GPS as the source. GPS has priority.

NOTE: This is the most accurate speed source, but is dependent upon the GPS signal strength and the radar accuracy.

A92885—UN—11MAY17

Wheel Speed

Wheel Speed— uses the tractor wheel-speed sensor as the source.

NOTE: Wheel speed can be used if the GPS and radar are unavailable. If wheel slip occurs, it creates a difference between the speed value and your actual speed, which causes an error in seed population.

A92886—UN—11MAY17

Edit Settings

Manual Speed— uses a fixed speed value that you enter into the input box.

NOTE: The implement responds based on this value regardless of your actual speed. Use of the Manual Speed can cause large errors in seed population. Manual Speed is primarily used for diagnostics or to continue planting when all other speed sources fail.

N0LMWLO,0000052-19-06MAY19

Information and Settings | Seed Motor

A92886—UN—11MAY17

Edit Settings

Seed Motor displays the implement height that starts and stops the seed meter motors. The displayed implement height is a percentage between a fully raised implement and a fully lowered implement. Select Edit Settings to change the start and stop positions.

NOTE: Implements with a momentary style sensor react directly from the sensor signal, not a setting entered here. The following adjustable thresholds are only related to multi-position style sensors.

If your implement has a momentary style height switch, leave the default setting at Common Threshold. No adjustment is necessary.

NOTE: The momentary style height switch is commonly used on integral implements. A multi-position style height sensor is commonly used on drawn implements.

Maximum: 100% - Fully raised

Default: 50% and Common Threshold selected

Minimum: 0% - Fully lowered

A92910—UN—06MAY19

Use Common Threshold

Common Threshold— select to use a common start and stop height.

A92911—UN—24AUG18

Use Common Threshold

Separate Thresholds— uncheck this selection and use separate start and stop heights.

N0LMWLO,0000053-19-01OCT19

Information and Settings | Common Threshold

Common Threshold allows you to configure the frame height sensor to start and stop the seed meter motors at the same point in the raise and lower cycle.

Status Indicators:

A92871—UN—11MAY17

Current Height

Current Height— indicates the current height and moves along the slide bar as the implement is raised and lowered.

A92872—UN—11MAY17

Start and Stop Set Height

Start and Stop Set Height— indicates the position where the seed meter motors start and stop.

Maximum: 100% - Fully raised

Minimum: 0% - Fully lowered

Modify When:

- Seeds are on the soil surface when raising or lowering the implement at the ends of the field: reduce the set point.
- Skips occur when raising or lowering the implement at the ends of the field: increase the set point.

Procedure to Modify:

1. Configure the implement for field operation.
2. Park in an area where the openers can penetrate the soil to represent the planting position.

A92862—UN—24AUG18

Calibration

3. Perform a sensor calibration if any adjustments have been made to the sensor or to the frame configuration. Select Calibration and follow the on-screen instructions.

A92871—UN—11MAY17

Current Height

4. Lower the implement to the plant position. Observe the current height indicator.
5. Raise the implement to the position that you want the seed meter motors to start and stop. The recommended position is when the seed furrow openers contact the soil.

A92079—UN—22JUN17

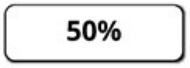
Set

A92872—UN—11MAY17

Start and Stop Height

6. Select Set to establish the start and stop height.

NOTE: The percentage shown on the Set button mirrors the current height.



A92147—UN—22JUN17

Set

7. To make small adjustments to the set point without changing the height of the implement, select the Start and Stop Height input box and enter a value.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

8. Select OK to save the settings or select Cancel to close without saving.

PR79369,000005B-19-30SEP19

Information and Settings | Separate Thresholds

Separate Thresholds allow you to configure the height sensor to start and stop the seed meter motors at different points in the raise and lower cycle. This method results in more precise seed delivery than the Common Threshold.

Status Indicators:

A92871—UN—11MAY17

Current Height

A92872—UN—11MAY17

Start Height

A92873—UN—11MAY17

Stop Height

Current Height— indicates the implement height and moves along the slide bar as the implement is raised and lowered.

Start Height— indicates the position where the seed meter motors start.

Stop Height— indicates the position where the seed meter motors stop.

Maximum: 100% - Fully raised

Default: Start Height 50%

Default: Stop Height 25%

Minimum: 0% - Fully lowered

Modify When:

- Seeds are on the soil surface when raising the implement at the ends of the field: reduce the Stop Height set point.
- Seeds are on the soil surface when lowering the implement at the ends of the field: reduce the Start Height set point.
- Skips occur when raising the implement at the ends of the field: increase the Stop Height set point.
- Skips occur when lowering the implement at the ends of the field: increase the Start Height set point.

Procedure to Modify:

1. Configure the implement for field operation.
2. Park in an area where the seed furrow openers can penetrate the soil to represent the planting position.

A92862—UN—24AUG18

Calibration

3. Perform a sensor calibration if any adjustments have been made to the sensor or to the implement configuration. Select Calibration and follow the on-screen instructions.

A92871—UN—11MAY17

Current Height

4. Lower the implement to the plant position. Observe the Current Height indicator.
5. Raise the implement to the position that you want the seed meter motors to turn off. The recommended position is just as the gauge wheels lose contact with the soil.

NOTE: Settings below 20% are not recommended.

A94220—UN—22JUN17

Set

A92873—UN—11MAY17

Stop Height

6. Select Set to establish the stop height.

NOTE: The percentage shown on the Set button mirrors the frame position.

A92871—UN—11MAY17

Current Height

7. Raise the implement to the full height. Observe the Current Height indicator.
8. Lower the frame to the position that you want the seed meter motors to activate. The recommended position is just as the seed furrow openers contact the soil.

A92079—UN—22JUN17

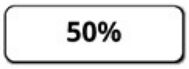
Set

A92872—UN—11MAY17

Start Height

9. Select Set to establish the start height.

NOTE: The percentage shown on the Set button mirrors the frame position.



A92147—UN—22JUN17

Input Box

10. To make small adjustments to the set point (without changing the height of the implement), select either the Start Height or Stop Height input box and enter a value for the implement position.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

11. Select OK to save the settings or select Cancel to close without saving.

N0LMWLO,0000054-19-30SEP19

Information and Settings | Gauge Wheels

Gauge Wheels allows you to configure the downforce increments for the adjustment buttons used on the run screens and the Overview application pages. The pause timer interval is also entered on this page.

Increment Adjust— is the amount that you want the force to change each time the plus or minus button is selected on the Gauge Wheel Downforce page or the run page module.

Procedure to Modify:

A92887—UN—22JUN17

Input Box

1. Select the input box and enter the increment amount.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select to Save the value or Cancel to close without saving.

Maximum: 222 N (50 lb)

Default: 89 N (20 lb)

Minimum: 4.5 N (1 lb)

Active Downforce (DF) Pause Timer— is the amount of time that the active downforce system refrains from making automatic adjustments when the Pause button is selected.

NOTE: The downforce pause timer is only available when active downforce is enabled.

Procedure to Modify:

A92888—UN—22JUN17

Input Box

1. Select the input box and enter the number of seconds to pause the downforce system when the Pause button is selected.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select to Save the value or Cancel to close without saving.

Maximum: 30 seconds

Default: 15 seconds

Minimum: 5 seconds

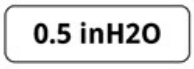
N0LMWLO,0000055-19-30SEP19

Information and Settings | Vacuum Automation

Vacuum Automation allows you to assign the tractor hydraulic controls to the vacuum blowers. You can also configure the increments for the adjustment buttons used on the run screens and the Overview application pages.

Target—The amount the target vacuum level changes each time the plus or minus button is selected on the Vacuum page or the run page module.

Procedure to Modify:



A92893—UN—22JUN17

Input Box

1. Select the input box and enter the increment amount.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select to Save the value or Cancel to close without saving.

AX1383481—UN—20NOV24

SCV Assignments

SCV Assignments—Displays the current implement functions and the SCV assigned to each function. Select SCV Assignments to adjust the assignments if they do not match your hydraulic connections.

Maximum: 6 mm (0.25 in) of H_2O

Default: 13 mm (0.5 in) of H_2O

Minimum: 13 mm (0.5 in) of H_2O

PR79369,0000060-19-20NOV24

Information and Settings | Row Cleaners

A92133—UN—06MAY19

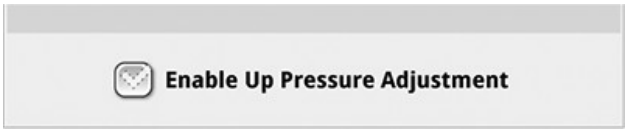
ON/OFF

Row Cleaners allows you to enable the system, reset the defaults, set incremental adjustments, or enable the upforce adjustment. Select ON to enable the Easy Adjust Row Cleaners or select OFF to disable.

A92896—UN—22JUN17

Reset to Default

Presets— are the factory defaults. Select to reset the row cleaners to factory defaults. Follow the on-screen messages.



A95689—UN—25JUN20

Enable Up Pressure Adjustment

Enable Up Pressure Adjustments— allows adjustment to the row cleaner flotation. Select to make the Up Pressure appear on the adjustment screen area and the feature tile.

Adjustment Step Size— is the amount that you want the position of the row cleaner to change each time the up or down arrows are selected on the Row Cleaner Position page or the run page module.

Procedure to Modify:

A92897—UN—25JUN20

Input Box

1. Select the input box and enter the increment amount.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Select to Save the value or Cancel to close without saving.

Maximum: 200 kPa (2 bar) (29 psi)

Default: 21 kPa (0.2 bar) (3 psi)

Minimum: 7 kPa (0.07 bar) (1 psi)

PR79369,0000061-19-25JUN20

Information and Settings | Closing Wheels

Closing Wheels allows you to turn groups ON and OFF or set the slow leak alarm.

NOTE: Closing wheel groups are determined by the pneumatic hose routing. Groups can be front and rear ranks on a split-row implement. Some groups are divided between the front and rear ranks on split-row implements. See a John Deere dealer or other service provider to change group configurations.

A92133—UN—06MAY19

ON/OFF

Group Activation— select the toggle button to enable or disable a group of closing wheels.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

Select OK to Save the change or Cancel to close without saving.

Alarm Notification— allows you to control an alarm based on low-pressure status. Multiple alarms could indicate a leak. Inspect for damaged, disconnected pneumatic hoses, or other leaks.

A95692—UN—24OCT17

Alarm Active

Alarm Active— select to receive an alarm when the low-pressure status changes to amber or red.

A95693—UN—24OCT17

Alarm Inactive

Alarm Inactive— uncheck this option to disable the alarm.

PR79369,0000062-19-16OCT25

Information and Settings | Coulter Disk (Brazil production only)

Coulter disks allows you to turn groups ON and OFF or set the slow leak alarm.

NOTE: Coulter disk groups are determined by the pneumatic hose routing. Groups can be front and rear ranks on a split-row implement. Some groups are divided between the front and rear ranks on split-row implements. See a John Deere dealer or other service provider to change group configurations.

A92133—UN—06MAY19

ON/OFF

Group Activation— select the toggle button to enable or disable a group of coulter disks.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

Select OK to Save the change or Cancel to close without saving.

Alarm Notification— allows you to control an alarm based on low-pressure status. Multiple alarms could indicate a leak. Inspect for damaged, disconnected pneumatic hoses, or other leaks.

A95692—UN—24OCT17

Alarm Active

Alarm Active— select to receive an alarm when the low-pressure status changes to amber or red.

A95693—UN—24OCT17

Alarm Inactive

Alarm Inactive— uncheck this option to disable the alarm.

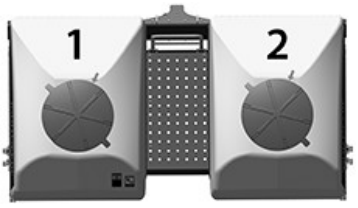
CZ76372,000092E-19-16OCT25

Information and Settings | Central Commodity System (CCS)

Central Commodity System allows you to enable and disable the seed agitators and CCS blower. You can also override the automatic CCS shutoff.

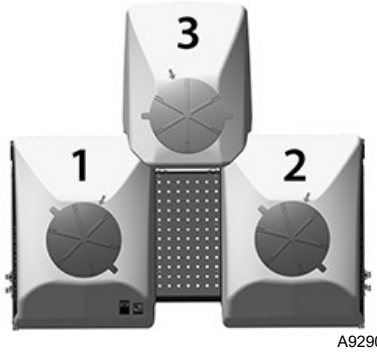
A92900—UN—11MAY17

Single Tank Configuration



A92899—UN—11MAY17

Dual Tank Configuration



A92901—UN—11MAY17

Triple Tank Configuration

Agitator Identification— the agitator numbers are different for the various tank configurations.

Procedure to Modify:

A92874—UN—11MAY17

Disabled

1. Identify your configuration.

A92875—UN—11MAY17

Enabled

2. Select the agitator or CCS blower that you want to enable or disable.

A92133—UN—06MAY19

ON/OFF

Override Switch— allows you to enable the agitators and blower regardless of the implement position. Select ON to override the automatic shutoff switch or select OFF to return to normal operation.

Default: Enabled

PR79369,0000063-19-17OCT25

Advanced Settings | About

View implement software and hardware identification information, including copyright information and license agreement.

Items Accessible on About Page:

Application Version— view the version installed.

A91608—UN—22JUN17

SeedStar

Version 1.1.8

Creator: John Deere

A93503—UN—24AUG18

Copyright Info

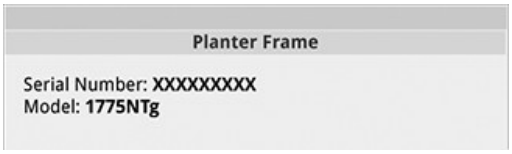
Copyright Info— select to view.

A93504—UN—24AUG18

License Agreement

License Agreement— select to view.

Hardware



A93512—UN—11MAY17

Implement Frame

Implement Frame:

Serial Number — of the connected implement.

Model — of the connected implement.

A93513—UN—11MAY17

Seedstar Controller

SeedStar Controller:

Hardware Part Number — of controllers on the implement frame.

Hardware Serial Number — of the controller.

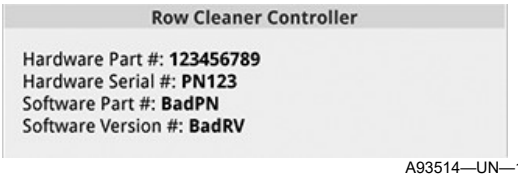
Software Part Number — installed on the controller.

Software Version Number — installed on the controller.

A93505—UN—11MAY17

RUC Software/Software

RUC Hardware/Software— select to view row unit controller (RUC) Hardware/Software information.



A93514—UN—11MAY17

Row Cleaner Controller

Row Cleaner Controller:

Hardware Part Number — of the controller.

Hardware Serial Number — of the controller.

Software Part Number — installed on the controller.

Software Version Number — installed on the controller.

A93515—UN—11MAY17

EPG Controller

EPG Controller:

Hardware Part Number — of the controller.

Hardware Serial Number — of the controller.

Software Part Number — installed on the controller.

Software Version Number — installed on the controller.

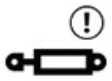
PR79369,000005A-19-25SEP23

Frame Control

Frame Control allows you to access and control various hydraulic frame functions through different on-screen control modes.

NOTE: Some items below are only displayed if the implement is equipped with the associated option.

Items Accessible on Frame Control Page:



A94237—UN—11MAY17

Confirm Neutral Status

IMPORTANT: Avoid unexpected machine movement. Before switching between Transport Mode and Plant Mode, place the levers for the tractor selective control valves (SCV) in the neutral position.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

Select OK to confirm that you have the SCV in neutral or select Cancel to abort switching to the other mode.

Control Mode— allows you to choose the frame control for either the Transport mode or the Plant mode.

NOTE: Leave the frame control in the Transport mode during transport. The transport mode disables the independent row hydraulic downforce, reduces the downforce to a minimal setting, and avoids trouble codes during transport.

Easy Fold Transport Items

A94232—UN—11MAY17

Transport

- **Transport**— select to display the frame control options for folding and unfolding.

A94247—UN—11MAY17

Plant

- Plant— select to display the available frame control functions for planting.

A92885—UN—11MAY17

Frame Controls

Frame Controls— allows you to select the frame functions that correspond to either the Transport mode or the Plant mode. While in the Transport mode, select Easy Fold or Manual Fold.

- Easy Fold— allows the software to select each fold or unfold function in the correct order. You engage the frame height SCV and Easy Fold progresses through the sequence automatically.
- Manual Fold— allows you to select each fold or unfold function. You engage the tractor controls to perform each implement function.

Manual Fold Transport Items

A94232—UN—11MAY17

Transport

- Transport— select to display the frame control functions for folding and unfolding.

A94247—UN—11MAY17

Plant

- Plant— select to display the frame control functions for planting.

Frame Controls— allows you to select the frame functions that correspond to either the Transport mode or the Plant mode.

PR79369,0000064-19-30SEP19

Frame Control | Plant

Frame Control | Plant allows you to control the frame functions used while planting. The Marker, Drawbar, and Frame Weight Distribution information only appears when these features are installed on the machine.

Items Accessible on Frame Control | Plant Page:

Markers SCV Screen Area

NOTE: If markers are not installed on the implement but a drawbar hitch is installed, the title of this screen area changes to Drawbar SCV.

IMPORTANT: Ensure that the frame responds as expected. Verify the hydraulic hose connections at the tractor. (See hydraulic connection recommendations in the implement Operator's Manual.)

Status Indicator— shows you the status of the selected function.

H114656—UN—05JAN17

Green

Enabled— indicates that the selected function is ready for you to control with the selective control valve (SCV) lever.

H114655—UN—05JAN17

Gray

OFF— indicates that no function is selected.

A94235—UN—11MAY17

OFF

OFF— select to disable all functions on the Markers SCV.

A94248—UN—11MAY17

Markers

Markers— select to enable the marker function.

A94249—UN—11MAY17

Drawbar

Drawbar— select to enable the drawbar function.

NOTE: The Marker and Drawbar information only appears when these features are installed on the machine.

Marker Settings Screen Area

Marker function is identical whether controlled through the frame SCV or an independent SCV.

NOTE: The markers are disabled when the frame is folded.

Auto Mode— indicates whether the markers alternate automatically or only alternate when you manually select a marker.

A92133—UN—06MAY19

ON/OFF

- ON/OFF toggle button. Select ON to enable the automatic marker alternation. Select OFF to disable the automatic alternation (manual control).

Active Marker— displays the status of the left-hand and right-hand marker. Select either marker to enable it for lowering

NOTE: Each marker is selectable in both the automatic mode and the manual mode.

A92885—UN—11MAY17

Active

- Active— indicates the marker that lowers when the SCV lever is pressed in the direction to lower a marker.

A94261—UN—24AUG18

Inactive

- Inactive— indicates the marker with the lowering function disabled.
- Both markers raise regardless of the status.

Frame Weight Distribution Screen Area

NOTE: The frame weight distribution is disabled when the frame is folded.

A92133—UN—06MAY19

ON/OFF

ON/OFF— Select ON on the toggle button to engage the system. Select OFF to disengage the system.

A119828—UN—07NOV23

With Onscreen Control

A92088—UN—23JUN17

Edit Presets

1, 2, 3— Select a preset weight distribution.

Edit Presets— Select the Edit Presest to change the weight option. The upper and lower limits are factory defaults.

NOTE: Frame Weight Distribution is connected to power beyond and is engaged anytime the toggle is ON and the tractor engine is running.

Procedure to Modify:

Use SCV I to raise and lower the implement frame. The implement raise and lower is not controlled from this page. If the marker function is tied to the frame function, the markers raise and lower with the frame.

Use SCV II to raise and lower the markers if the marker function is independently connected.

Use SCV II to raise and lower the implement drawbar. The drawbar function is always independently connected. The markers and drawbar share SCV II when both are installed.

1. Select a frame function to enable it for action.
2. Engage the SCV connected to the function.

PR79369,0000065-19-07NOV23

Frame Control | Transport (Easy Fold)

Frame Control | Transport (Easy Fold) allows the software to both select each fold or unfold function in the correct order and to coordinate the tractor selective control valves (SCVs). You engage a single SCV for frame height and then Easy Fold progresses through the sequence automatically.

IMPORTANT: Ensure that the frame responds as expected. Verify the hydraulic hose connections at the tractor. (See hydraulic connection recommendations in the implement Operator's Manual.)

Items Accessible on Frame Control | Transport (Easy Fold) Screen Area:

IMPORTANT: Avoid machine damage. Adjust your height settings before using Easy Fold for the first time and each time the implement is used on a different tractor.

NOTE: Easy Fold is a John Deere application and only works with compatible John Deere tractors. Implement Automation is required with folding implements that connect to the tractor rockshaft. Automation is not required with a drawbar hitch connection.

A94238—UN—11MAY17

Easy Fold Height Settings

Easy Fold Height Settings— allows you to set the correct positions for the tractor hitch heights used during the fold and unfold procedure.

A95598—UN—11MAY17

SCV Settings

SCV Settings— allows you to assign the SCVs that control the frame functions, so Easy Fold can command the tractor functions properly.

A94234—UN—22JUN17

Start Easy Fold

Start Easy Fold— enables the Easy Fold feature. The system waits for you to activate the frame height SCV lever.

Procedure to Modify:

1. Place all SCV levers in neutral.

A95699—UN—16NOV17

Auto Resume

2. Two-Point Connected Implements: Select the Auto Resume on your tractor to enable the hitch automation.

A94234—UN—22JUN17

Start Easy Fold

3. Confirm the tractor and implement status shown on-screen and then select Start to begin the Easy Fold procedure.

⚠ CAUTION: Verify that everyone is clear of the implement. Serious injury or death can result from contact with electric lines. Use care when moving or operating this implement near electric lines.

A92082—UN—22JUN17

Accept

Accept— select to acknowledge the CAUTION.

A92067—UN—16MAR18

Cancel

Cancel— select to stop frame movement at any time.

A94239—UN—11MAY17

Neutral SCV Indicator

4. Engage the frame height SCV lever. Use Extend to fold. Use Retract to unfold. Release the lever at any time to pause the procedure. Select Manual Fold at any time to manually control operations. Easy Fold returns to the initial page if restarted, but resumes at the current operation.

A94239—UN—11MAY17

Paused

NOTE: Paused appears whenever the SCV is in neutral or if the SCV detent is activated. Easy Fold disengages if the SCV is detented. Return the SCV lever to neutral and then re-engage the SCV to continue Easy Fold.

Implements Attached to the Tractor Rockshaft:

A94239—UN—11MAY17

Paused

Paused— appears if you manually adjust the tractor hitch while Easy Fold is active. The implement frame stops moving. After you manually adjust the hitch, press the Auto Resume to continue using Easy Fold.

A95699—UN—16NOV17

Auto Resume

NOTE: For more information about Auto Resume, see Tractor Implement Automation in the tractor Operator's Manual or tractor application Help.

H113801—UN—04JAN17

Progress Indicator

Progress Indicator— appears when the SCV is engaged and the frame is moving.

A92067—UN—16MAR18

Cancel

Cancel— select to cancel the Easy Fold operation at any time.

A94238—UN—11MAY17

Easy Fold Height Settings

Select at any time (when an SCV is not engaged) to adjust a setpoint of the tractor hitch height.

A92084—UN—09MAY19

Folding Complete

Folding Complete— appears when the fold process is complete.

NOTE: Leave the frame control in Transport mode during transport. The Transport mode disables the individual row hydraulic downforce, reduces the downforce to a minimal setting, and avoids trouble codes during transport.

PR79369,0000066-19-25JUN20

Frame Control | Easy Fold | Height Settings

Easy Fold Height Settings allows you to set the correct position for the tractor hitch heights used during the fold and unfold procedure.

Items Accessible on Frame Control | Easy Fold | Height Settings Page:

IMPORTANT: Avoid machine damage. Adjust your height settings before using Easy Fold for the first time and each time the implement is used on a different tractor.

Easy Fold Height Settings— allows you to set the correct position for the tractor hitch heights used during the fold and unfold procedure.

Status Indicators:

A92871—UN—11MAY17

Hitch Position

Current Hitch Position— indicates the tractor hitch height and moves along the slide bar as the hitch is raised and lowered.

A94251—UN—11MAY17

Transport Height (Blue)

Set Point— Transport: indicates where the tractor hitch is positioned when the implement is in the folded position and ready for transport.

A94252—UN—11MAY17

Folding Height (Green)

Set Point— Folding: indicates where the tractor hitch is positioned when the wings are near the implement hitch tube while folding and unfolding.

A94254—UN—11MAY17

Stop Height (Brown)

Set Point— Plant: indicates where the tractor hitch is positioned when the implement is in the plant position.

Maximum: 100% - Frame fully raised

Default: Transport Height 80%

Default: Folding Height 30%

Default: Plant Height 20%

Minimum: 0% - Frame fully lowered

Modify When:

- Ground conditions alter the frame positions.
- A different tractor is connected to the implement.
- Adjustments are made to the implement frame.
- You observe any misalignments while folding or operating.

Procedure to Modify:

1. Position the tractor hitch in each of these positions:
   - Transport position with the hitch level
   - Nearly folded position, so the wing components clear the hitch
   - Plant position with the hitch level

A94253—UN—22JUN17

Use Current

2. Select the Use Current button to establish each of the setpoints.

NOTE: The Use Current button is only active when the frame is in a proper position to accept a setpoint.

A95599—UN—23JUN17

Close

3. Select to close the page.

N0LMWLO,0000056-19-25JUN20

Frame Control | Transport (Manual Fold)

Frame Control | Transport (Manual Fold) allows selection of the fold or unfold functions. Engage the selective control valve (SCV) and the tractor hitch to coordinate the folding and unfolding sequence.

IMPORTANT: Ensure that the frame responds as expected. Verify the hydraulic hose connections at the tractor. (See hydraulic connection recommendations in the implement Operator's Manual.)

Items Accessible on Frame Control | Transport (Manual Fold) Screen Area:

Status Indicator—Shows the status of the selected function.

H114656—UN—05JAN17

Green

Enabled—Indicates that the selected function is ready for control using the SCV lever.

H114655—UN—05JAN17

Gray

Off—Indicates that no fold function is selected.

H114663—UN—05JAN17

Alert

IMPORTANT: Do not detent the tractor SCV to control frame movement.

A94236—UN—22JUN17

Stop

Stop Movement—Provides an alternative method to stop the frame movement besides returning the SCV lever to neutral.

Frame Height SCV—Displays the functions on the implement that are connected to the frame height SCV. The status is shown for the function selected.

Markers SCV—Displays the functions on the implement that are connected to the marker SCV. The status is shown for the function selected.

NOTE: Not all implements have a fold function connected to an SCV for markers.

Procedure to Modify:

Select your implement model for the specific fold procedure.

1775NT—Implement fold and unfold procedure.

1795—Implement fold and unfold procedure.

DB Models—Implement fold and unfold procedure.

3100FT Models—Implement fold and unfold procedure.

MM95366,0000575-19-09JAN25

Frame Control | Transport (1775NT)

Frame Control | Transport (1775NT) describes the procedure to manually control the implement functions for folding and unfolding.

CAUTION: Only transport the implement on a roadway if the seed hoppers and dry pesticide hoppers are less than half full and the liquid fertilizer or water tanks are empty. (See cleanout procedures in the implement Operator's Manual.)

Items Accessible on Frame Control |Transport Page:

A94236—UN—22JUN17

Stop

Stop Movement Screen Area

IMPORTANT: Avoid unexpected frame movement. Do not place selective control valve (SCV) in detent. Select Stop at any time to halt frame movement.

Height Control SCV Screen Area:

Status Indicator— shows you the status of the selected function.

H114656—UN—05JAN17

Green

Enabled— indicates that the selected function is ready for you to control with the SCV lever.

H114655—UN—05JAN17

Gray

OFF— indicates that you disabled the function.

H114655—UN—05JAN17

Gray

Function Timed Out— indicates that the function was automatically shutoff. An Enabled function reverts to OFF after 60 seconds.

A94235—UN—11MAY17

OFF

OFF— select to disable all frame fold functions on the frame height SCV.

A106361—UN—10AUG20

Wing Fold

Wing Fold— select to enable the wing fold or unfold function.

A94241—UN—11MAY17

Wing Wheel Lift

Wing Wheel Lift— select to enable the wing wheel lift function.

A106360—UN—10AUG20

Rear Rank Lift

Rear Rank Lift— select to enable the rear rank lift function.

Planters With Tracks:

A106366—UN—11AUG20

Track Transport Icon

Track Transport Icon— appears next to the wing wheel lift button when the frame height is in the proper range for the function.

NOTE: When in transport mode, this icon indicates that the Cylinder Walking feature is enabled.

A106367—UN—11AUG20

Fault Icon

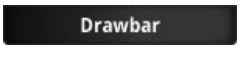
NOTE: The fault icon appears when there is a height sensor error.

Markers SCV Screen Area

A94235—UN—11MAY17

OFF

OFF— select to disable all frame fold functions on the markers SCV.



A106362—UN—10AUG20

Drawbar

Drawbar— select to enable the drawbar function.

NOTE: The Markers SCV screen area only appears if your implement is equipped with a drawbar-type hitch. The drawbar and independent markers share an SCV that is separate from the frame height SCV.

Procedure to Modify:

CAUTION: Verify that everyone is clear of the machinery before folding. Serious injury or death can result from contact with electric lines. Use care when moving or operating this implement near electric lines.

Perform the Fold and Unfold procedures as follows. To raise and lower the implement with the frame folded (for service or seed fill), see Raise and Lower While Folded further down this page.

FOLD:

1. Prepare to fold in an area with firm, level ground that is away from obstructions.
2. Lower the implement and maintain the SCV lever in the engaged position for a few seconds to rephase the lift hydraulics.
3. Raise the implement.
4. Place the tractor transmission in neutral.

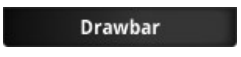
A94232—UN—11MAY17

Transport

5. Select the Transport mode.
6. Raise the implement hitch until it is level with the ground.

NOTE: Use this method each time the hitch is adjusted.

- Equipped with a Two-Point Hitch: Adjust the tractor hitch height.



A106362—UN—10AUG20

Drawbar

- Equipped with a Drawbar Hitch: Enable the drawbar function. Select Drawbar and engage the marker SCV.

A106361—UN—10AUG20

Wing Fold

7. Enable the fold function. Select Wing Fold.
8. Engage the frame height SCV and fold the wings until the wing latches are near the implement hitch.

NOTE: If the wing wheels push soil, drive the tractor forward to coordinate the hitch movement.

9. To avoid interference, observe and adjust the hitch position while completing the fold process.
10. Raise the hitch until it engages the wing latches.

A106364—UN—10AUG20

Wing Wheel Lift

11. Enable the wing wheel lift function. Select Wing Wheel Lift.
12. Engage the frame height SCV I until the wing wheels are raised. Adjust the hitch height as the frame raises so the hitch remains level.

NOTE: If equipped with wheels, the main frame raises to the transport height while the wing wheels raise. If equipped with tracks, the main frame automatically stops before the cylinder has reached full stroke to enable the Cylinder Walking feature. To raise to the implement's maximum transport height and reach the cylinder's full stroke, select Wing Wheel Lift again and engage the SCV. Cylinder walking is then disabled.

A94235—UN—11MAY17

OFF

13. Disable the fold function. Select OFF. If equipped with a drawbar hitch, disable the drawbar function as well.
14. Install the service locks on the center-frame wheel cylinders. If equipped with a drawbar hitch, install the service lock on the drawbar cylinder. (For more information, see the implement Operator's Manual.)
15. Follow all recommendations outlined in the implement and tractor Operator's Manuals during transport.

NOTE: Leave the frame control in Transport mode during transport. Transport mode disables the individual row hydraulic downforce, reduces the downforce to a minimal setting, and avoids diagnostic trouble codes during transport.

UNFOLD:

1. Prepare to unfold in an area with firm, level ground that is away from obstructions.
2. Raise the implement.

A106362—UN—10AUG20

Drawbar

3. If equipped with a drawbar hitch, enable the drawbar function. Select Drawbar.
4. Engage the marker SCV to raise the drawbar cylinder off the service locks.
5. Remove the service locks from the center-frame wheel cylinders. If equipped with a drawbar hitch, remove the service lock from the drawbar cylinder. (For more information, see the implement Operator's Manual.)
6. Place the tractor transmission in neutral.
7. Adjust the implement hitch to a level position.

NOTE: Use this method each time the hitch is adjusted.

- Equipped with a Two-Point Hitch: Adjust the tractor hitch height.

A106362—UN—10AUG20

Drawbar

- Equipped with a Drawbar Hitch: Enable the drawbar function. Select Drawbar and engage the marker SCV.

A106364—UN—10AUG20

Wing Wheel Lift

8. Enable the wing wheel lift function. Select Wing Wheel Lift.
9. Engage the frame height SCV until the wing wheels are lowered. Adjust the hitch height as the frame lowers so the hitch remains level.

NOTE: The main frame lowers to the field position while the wing wheels lower.

10. Lower the hitch until the wing latches are higher than the hitch.

IMPORTANT: To avoid interference, observe and adjust the hitch position until the latches clear the frame.

A106361—UN—10AUG20

Wing Fold

11. Enable the fold function. Select Wing Fold.
12. Engage the frame height SCV and unfold the wings.

NOTE: If the wing wheels push soil, drive the tractor backward to coordinate the hitch movement.

A94235—UN—11MAY17

OFF

13. Disable the fold function. Select OFF. If equipped with a drawbar, disable the drawbar function as well.

A94247—UN—11MAY17

Plant

14. Select the Plant mode.
15. Follow all recommendations outlined in the implement and Tractor Operator's Manuals to verify the proper implement frame height, configuration, and setup.

Raise and Lower While Folded

Raise and Lower While Folded describes which frame operations allow you to raise and lower the frame while folded. Follow the same guidelines outlined for folding and unfolding, but use the following functions specifically.

Procedure to Modify:

Lower the Frame While Folded:

1. Select the Transport mode.
2. Select the Wing Wheel Lift function.
3. Use the SCV to lower the wing wheels.

NOTE: Maintain a level frame while lowering. Adjust the hitch height while lowering the frame.

4. Select the Plant mode.

IMPORTANT: Avoid damage to the row units. Adjust the hitch height while lowering the frame.

5. Use the SCV to lower the implement to the ground.

NOTE: The service locks must be removed to lower the frame to the ground.

Raise the Frame While Folded:

1. Select the Plant mode.

IMPORTANT: Avoid damage to the row units. Adjust the hitch height while raising the frame.

2. Use the SCV to raise the implement.
3. Select the Transport mode.
4. Use the SCV to raise the wing wheels.

NOTE: Maintain a level frame while raising. Adjust the hitch height while raising the frame.

MM95366,0000576-19-18NOV20

Frame Control | Transport (1795)

Frame Control | Transport (1795) describes the procedure to manually control the implement functions for folding and unfolding.

CAUTION: Only transport the implement on a roadway if the seed hoppers and dry pesticide hoppers are less than half full and the liquid fertilizer or water tanks are empty. (See cleanout procedures in the implement Operator's Manual.)

A94236—UN—22JUN17

Stop

Items Accessible on Frame Control | Transport Page:

Stop Movement Screen Area

IMPORTANT: Avoid unexpected frame movement. Do not place selective control valve (SCV) in detent. Select Stop at any time to halt most frame fold functions. If the SCV remains engaged while the rear rank (rockshaft) rows are lowering, the rows will continue to lower even though the Stop button is selected.

Frame Control SCV Screen Area:

Function Timed Out— indicates that the function was automatically shutoff. An Enabled function reverts to OFF after 60 seconds.

A94235—UN—11MAY17

OFF

OFF— select to disable all frame fold functions on the frame Control SCV.

A106361—UN—10AUG20

Wing Fold

Wing Fold— select to enable the wing fold or unfold function.

A106364—UN—10AUG20

Wing Wheel Lift

Wing Wheel Lift— select to enable the wing wheel lift function.

A121471—UN—11JUN24

Rear Rank

Rear Rank— select to enable the rear rank (rockshaft rows) function.

Auxilary SCV Screen Area

A94235—UN—11MAY17

OFF

OFF— select to disable all frame control functions on the auxilary SCV.

A106362—UN—10AUG20

Drawbar

Drawbar— select to enable the drawbar function.

NOTE: The Auxilary SCV screen area only appears if your implement is equipped with a drawbar-type hitch. The drawbar and independent markers share an SCV that is separate from the frame height SCV.

Procedure to Modify:

CAUTION: Verify that everyone is clear of the machinery before folding. Serious injury or death can result from contact with electric lines. Use care when moving or operating this implement near electric lines.

Perform the Fold and Unfold procedures as follows. To raise and lower the implement with the frame folded (for service or seed fill), see Raise and Lower While Folded further down this page.

FOLD:

IMPORTANT: Avoid damage. If you have the coulter and row cleaner combination on the front rank rows and those rows have short parallel arms, do not fold with the row cleaners in the raised (disengaged) position.

1. Prepare to fold in an area with firm, level ground that is away from obstructions.
2. Lower the implement and maintain the SCV lever in the engaged position for a few seconds to rephase the lift hydraulics.
3. Raise the implement.
4. Place the tractor transmission in neutral.

A94232—UN—11MAY17

Transport

5. Select the Transport mode.
6. Raise the implement hitch until it is level with the ground.

NOTE: Use this method each time the hitch is adjusted.

- Equipped with a Two-Point Hitch: Adjust the tractor hitch height.

A106362—UN—10AUG20

Drawbar

- Equipped with a Drawbar Hitch: Enable the drawbar function. Select Drawbar and engage the auxilary SCV.

A106361—UN—10AUG20

Wing Fold

7. Enable the fold function. Select Wing Fold.
8. Engage the frame control SCV and fold the wings until the wing latches are near the implement hitch.

NOTE: If the wing wheels push soil, drive the tractor forward to coordinate the hitch movement.

9. To avoid interference, observe and adjust the hitch position while completing the fold process.
10. Raise the hitch until it engages the wing latches.

A121471—UN—11JUN24

Rear Rank

11. Enable the rear rank function. Select Rear Rank.

12. Engage the frame control SCV and raise the rear rank (rockshaft rows).

A106364—UN—10AUG20

Wing Wheel Lift

13. Enable the wing wheel lift function. Select Wing Wheel Lift.
14. Engage the frame control SCV until the wing wheels are raised. Adjust the hitch height as the frame raises so the hitch remains level.

NOTE: The main frame raises to the transport height while the wing wheels raise.

A94235—UN—11MAY17

OFF

15. Disable the fold function. Select OFF. If equipped with a drawbar, disable the drawbar function as well.
16. Install the service locks on the center-frame wheel cylinders and the rockshaft cylinders. If equipped with a drawbar hitch, install the service lock on the drawbar cylinder. (For more information, see the implement Operator's Manual.)
17. Follow all recommendations outlined in the implement and Tractor Operator's Manuals during transport.

NOTE: Leave the frame control in Transport mode during transport. The Transport mode disables the individual row hydraulic downforce, reduces the downforce to a minimal setting, and avoids trouble codes during transport.

UNFOLD:

1. Prepare to unfold in an area with firm, level ground that is away from obstructions.
2. Raise the implement.

A121471—UN—11JUN24

Rear Rank

3. Enable the rear rank function. Select Rear Rank.
4. Engage the frame height SCV and raise the rear rank cylinder off the service locks.

A106364—UN—10AUG20

Wing Wheel Lift

5. Enable the wing wheel lift function. Select Wing Wheel Lift.
6. Engage the frame height SCV to raise the frame cylinder off the service locks.

A106362—UN—10AUG20

Drawbar

7. If equipped with a drawbar hitch, enable the drawbar function. Select Drawbar.
8. Engage the auxilary SCV to raise the drawbar cylinder off the service locks.
9. Remove the service locks from the center-frame wheel cylinders and the service lock pins the rockshaft cylinders. If equipped with a drawbar hitch, remove the service lock from the drawbar cylinder. (For more information, see the implement Operator's Manual.)
10. Place the tractor transmission in neutral.
11. Adjust the implement hitch to a level position.

NOTE: Use this method each time the hitch is adjusted.

- Equipped with a Two-Point Hitch: Adjust the tractor hitch height.

A106362—UN—10AUG20

Drawbar

- Equipped with a Drawbar Hitch: Enable the drawbar function. Select Drawbar and engage the auxilary SCV.

A106364—UN—10AUG20

Wing Wheel Lift

12. Enable the wing wheel lift function. Select Wing Wheel Lift.

A94236—UN—22JUN17

STOP

IMPORTANT: The Stop button does not halt the rockshafts from lowering if the SCV remains engaged.

13. Engage SCV I until the wing wheels are lowered. Adjust the hitch height as the frame lowers so the hitch remains level.

NOTE: The main frame lowers to the field position while the wing wheels lower.

14. Lower the hitch until the wing latches are higher than the hitch.

IMPORTANT: To avoid interference, observe and adjust the hitch position until the latches clear the hitch.

A106361—UN—10AUG20

Wing Fold

15. Enable the fold function. Select Wing Fold.
16. Engage the frame control SCV and unfold the wings.

NOTE: If the wing wheels push soil, drive the tractor backward to coordinate the hitch movement.

A94235—UN—11MAY17

OFF

17. Disable the fold function. Select OFF. If equipped with a drawbar, disable the drawbar function as well.

A94247—UN—11MAY17

Plant

18. Select the Plant mode.
19. Follow all recommendations outlined in the implement and implement Operator's Manuals to verify the proper implement frame height, configuration, and setup.

Raise and Lower While Folded

Raise and Lower While Folded describes which frame operations allow you to raise and lower the frame while folded. Follow the same guidelines outlined for folding and unfolding, but use the following functions specifically.

Procedure to Modify:

Lower the Frame While Folded:

1. Select the Transport mode.
2. Select the Rear Rank Lift function.

NOTE: The rear ranks do not need to be lowered to fill the bulk tanks.

3. Use the SCV to raise the rockshafts and then remove the service lock pins.
4. Use the SCV to lower the rockshafts.
5. Select the Wing Wheel Lift function.
6. Use the SCV to lower the wing wheels.

NOTE: Maintain a level frame while lowering. Adjust the hitch height while lowering the frame.

7. Select the Plant mode.

IMPORTANT: Avoid damage to the row units. Adjust the hitch height while lowering the frame.

8. Use the SCV to lower the implement to the ground.

NOTE: The service locks must be removed to lower the frame to the ground.

Raise the Frame While Folded:

1. Select the Plant mode.

IMPORTANT: Avoid damage to the row units. Adjust the hitch height while raising the frame.

2. Use the SCV to raise the implement.
3. Select the Transport mode.
4. Select the Rear Rank function.
5. Use the SCV to raise the rockshafts and then install the service lock pins.
6. Select the Wing Wheel Lift function.
7. Use the SCV to raise the wing wheels.

NOTE: Maintain a level frame while raising. Adjust the hitch height while raising the frame.

MM95366,0000577-19-12JUN24

Frame Control | Transport (DB Planters)

Frame Control | Transport (DB Planters) describes the procedure to manually control the implement functions for folding and unfolding.

CAUTION: Only transport the implement on a roadway if all hoppers and tanks are empty. (See cleanout procedures in the implement Operator's Manual.)

Items Accessible on Frame Control | Transport Page:

A94236—UN—22JUN17

STOP

Stop Movement Screen Area

IMPORTANT: Avoid unexpected frame movement. Do not place selective control valve (SCV) in detent. Select Stop at any time to halt frame movement.

Height Control SCV Screen Area:

Status Indicator— shows you the status of the selected function.

H114656—UN—05JAN17

Green

Enabled— indicates that the selected function is ready for you to control with the SCV lever.

H114655—UN—05JAN17

Gray

OFF— indicates that you selected the function OFF.

H114655—UN—05JAN17

Gray

Function Timed Out— indicates that the function was automatically shut off. An Enabled function reverts to OFF after 60 seconds.

A94235—UN—11MAY17

OFF

OFF— select to disable all frame fold functions on the frame height SCV.

A106364—UN—10AUG20

Wing Wheel Lift

Wing Wheel Lift— select to enable the wing wheel lift function.

NOTE: The Transport Lift function appears in the Markers SCV screen area when Wing Wheel Lift is selected.

Markers SCV Screen Area

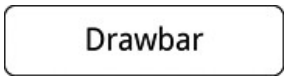
NOTE: Only one function appears at a time. Select the current function button to view a list of the other available functions.

A92133—UN—06MAY19

ON/OFF

ON/OFF— select the toggle button to enable or disable the selected frame fold function.

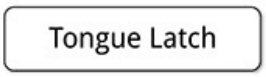
NOTE: An enabled (ON) function reverts to disabled (OFF) after 60 seconds of inactivity.



A94242—UN—06MAY19

Drawbar

Drawbar— select to enable the drawbar function.



A94243—UN—22JUN17

Tongue Latch

Tongue Latch— select to access the tongue latch function.

NOTE: The latch status is always shown with the current condition of the latch: Latched, Unlatched, or Moving.

A94245—UN—22JUN17

Wing Fold

Wing Fold— select to access the wing fold function.

A94244—UN—22JUN17

Fold Assist

Fold Assist— select to access the fold assist function.

NOTE: Fold Assist is only available when connected to an implement with that function.

A94246—UN—22JUN17

Transport Lift

Transport Lift— select to access the transport lift function.

NOTE: The Wing Wheel Lift function appears in the Height Control SCV screen area when Transport Lift is selected.

Procedure to Modify:

CAUTION: Verify that everyone is clear of the machinery before folding. Serious injury or death can result from contact with electric lines. Use care when moving or operating this implement near electric lines.

Perform the Fold and Unfold procedures as follows.

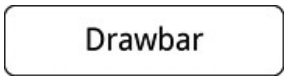
FOLD:

1. Prepare to fold in an area with firm, level ground that is away from obstructions.
2. Raise the implement and maintain the SCV lever in the engaged position for a few seconds to rephase the lift hydraulics.

A94232—UN—11MAY17

Transport

3. Select the Transport mode.



A94242—UN—06MAY19

Drawbar

4. Enable the drawbar function. Select Drawbar and toggle the function ON.
5. Engage the markers SCV until the hitch frame is level.
6. Place the tractor transmission in neutral.

A94243—UN—22JUN17

Tongue Latch

7. Enable the tongue latch function. Select Tongue Latch and toggle the function ON.
8. Engage the markers SCV until the latch status changes from Moving to Unlatched.

A94245—UN—22JUN17

Wing Fold

9. Enable the fold function. Select Wing Fold and toggle the function ON.
10. Engage the markers SCV and fold the wings until the wing latches are near the implement hitch.

NOTE: If the wing wheels push soil, drive the tractor forward to coordinate the hitch movement.

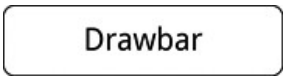
11. To avoid interference, observe and adjust the hitch position while completing the fold process. One latch can be partially engaged on the hitch to maintain alignment while the other latch aligns.

    Frames with Fold Assist:

A94244—UN—22JUN17

Fold Assist

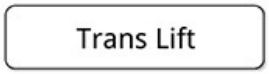
- Enable the fold assist function. Select Fold Assist and toggle the function ON.
- Engage the markers SCV until the fold assist cylinder engages the wing latches and is retracted.



A94242—UN—06MAY19

Drawbar

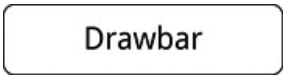
12. Enable the drawbar function. Select Drawbar and toggle the function ON.
13. Engage the markers SCV and raise the hitch until it engages the wing latches.
14. Install the transport collar. (For more information, see the implement Operator's Manual.)



A94246—UN—22JUN17

Transport Lift

15. Enable the transport lift function. Select Transport Lift and toggle the function ON.
16. Engage the markers SCV and raise the frame to the transport height.
17. Engage the frame height SCV until the wing wheels are retracted.



A94242—UN—06MAY19

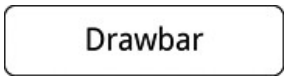
Drawbar

18. Enable the drawbar function. Select Drawbar and toggle the function ON.

19. Engage the SCV and raise the hitch until it is level.
20. Install the service locks on the center-frame wheel cylinders and the drawbar cylinder. (For more information, see the implement Operator's Manual.)

UNFOLD:

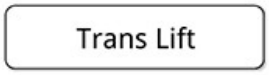
1. Prepare to unfold in an area with firm, level ground that is away from obstructions.



A94242—UN—06MAY19

Drawbar

2. Enable the drawbar function. Select Drawbar and toggle the function ON.
3. Engage the markers SCV and raise the hitch cylinder off the service lock.



A94246—UN—22JUN17

Transport Lift

4. Enable the transport lift function. Select Transport Lift and toggle the function ON.
5. Engage the markers SCV and raise the frame cylinders off the service locks.
6. Remove the service locks from the center-frame wheel cylinders and the drawbar cylinder. (For more information, see the implement Operator's Manual.)
7. Engage the markers SCV and lower the frame from the transport height.

A106364—UN—10AUG20

Wing Wheel Lift

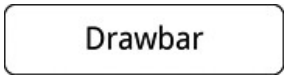
8. Enable the wing wheel lift function. Select Wing Wheel Lift.
9. Engage the frame height SCV until the wing wheels are lowered.
10. Remove the transport collar. (For more information, see the implement Operator's Manual.)

Frames with Fold Assist:

A94244—UN—22JUN17

Fold Assist

- Enable the drawbar function. Select Drawbar and toggle the function ON.
- Engage the markers SCV until the fold assist cylinder disengages the wing latches.



A94242—UN—06MAY19

Drawbar

11. Enable the drawbar function. Select Drawbar and toggle the function ON.
12. Engage the SCV and lower the hitch until it disengages the wing latches.

A94245—UN—22JUN17

Wing Fold

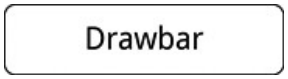
13. Enable the fold function. Select Wing Fold and toggle the function ON.
14. Engage the markers SCV and unfold the wings. Adjust the hitch height at any time to avoid component interference.

NOTE: If the wing wheels push soil, drive the tractor backward to coordinate the hitch movement.

A94243—UN—22JUN17

Tongue Latch

15. Enable the tongue latch function. Select Tongue Latch and toggle the function ON.
16. Engage the markers SCV until the latch status changes from Moving to Latched.



A94242—UN—06MAY19

Drawbar

17. Enable the drawbar function. Select Drawbar and toggle the function ON.
18. Engage the SCV and lower the front hitch.

A94247—UN—11MAY17

Plant

19. Select the Plant mode.
20. Follow all recommendations outlined in the implement and tractor Operator's Manuals to verify the proper implement frame height, configuration, and setup.

MM95366,0000578-19-06OCT20

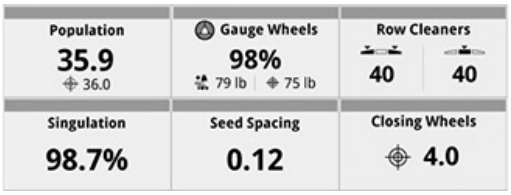
SeedStar - Overview

SeedStar - Overview provides access to all of the monitored aspects for the row units. The items accessible in the upper screen area vary according to machine configuration. The population details are always displayed on this main page.

NOTE: Some items below are only displayed if machine is equipped with the associated option.

NOTE: These features are mirrored on the run page.

Items Accessible on SeedStar - Overview Page:



A117092—UN—15DEC22

Feature Tiles

Feature Tiles— display the basic status of a feature. Each tile is selectable to access more information about the feature. When a tile is selected, the details for that feature appear in the upper screen area.

A93489—UN—11MAY17

Green

A93487—UN—11MAY17

Amber

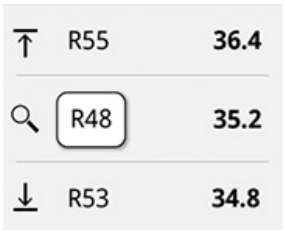
A93488—UN—11MAY17

Red

Feature Tile Status— appears as a color on the top of each tile. The status color is based on the feature parameters and range limits.

- **Green**— indicates that the value for that feature is within the specified range.
- **Amber**— indicates that the value for that feature is nearly out of range.
- **Red**— indicates that the value for that feature is out of range.

Row-Specific Screen Area:



A117100—UN—27APR23

Row-Specific Population

Select any segment in the screen area to view the details for the row number displayed.

High Population— (upper screen segment) displays the row number (R_) and population for the row with the highest population.

User Selected— (middle screen segment) displays the row number (R_) and population for the row that you enter into the input box.

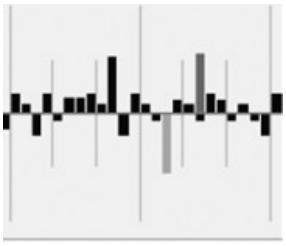
Low Population— (lower screen segment) displays the row number (R_) and population for the row with the lowest population.

NOTE: Population values approaching the alarm limit highlight in amber. Values outside the alarm limits highlight in red.

A91629—UN—25JUN20

Population

Population— screen area displays the seed population for all of the engaged rows. Select to view additional population details and to adjust the target populations.



A94196—UN—11MAY17

Bar Graph Status

Bar Graph Status— is indicated for every row using three different colored bars.

- **Black**— indicates that a reading is near your target.
- **Amber**— indicates the population reading has exceeded the population alarm limit set in **Alarms**.
- **Red**— indicates the row is planting at less than 50% of target population.

A95597—UN—22JUN17

Tools Button

Tools— provides access to a page of quick links that open frequently used and helpful features.

N118004—UN—22OCT15

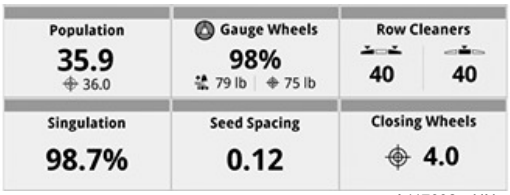
Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670956955985-19-05APR23

SeedStar | Overview | Overview Tiles

Feature Tiles display the basic status of a feature. Each tile is selectable to access more information about the feature.



A117092—UN—15DEC22

Feature Tiles

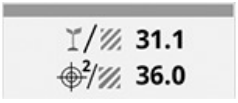
NOTE: Some items below are only displayed if machine is equipped with the associated option.

A117101—UN—15DEC22

Feature Tabs

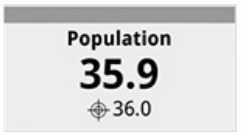
Items Accessible on Overview Tiles:

When a tile is selected, that feature appears in the upper screen area, along with a row of tabs. Select the tabs for access to the tile features and additional feature tabs.



A117102—UN—15DEC22

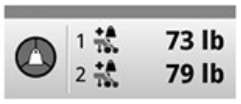
Population Tab



A117103—UN—15DEC22

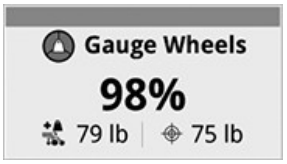
Population Tile

Population— tile and tab display either the target population or the prescription population and the actual population. Both populations are an average of all the engaged seed meters. Select to view additional population details from the seed sensors and to adjust the target populations.



A93493—UN—11MAY17

Gauge Wheels Tab

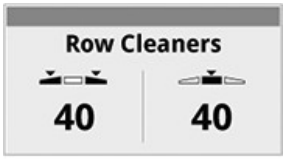


A91638—UN—11MAY17

Gauge Wheels Tile

Gauge Wheels— tab displays the downforce margin. The tile displays the percentage of ground contact, downforce margin, and the target margin. All values are an average. Select to view additional downforce details and to adjust the values.

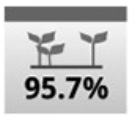
Row Cleaners



A91639—UN—15NOV17

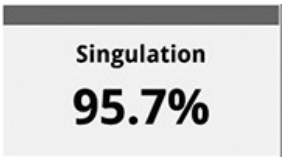
Row Cleaners Tile

Row Cleaners— tile displays the current pressure of the row cleaners. Select to access the row cleaner controls.



A93494—UN—11MAY17

Singulation Tab



A91636—UN—11MAY17

Singulation Tile

Singulation— tab and tile display the percentage of seed singulation detected by the seed sensors. Select to view additional singulation details.

A93495—UN—11MAY17

Seed Spacing Tab

A91641—UN—11MAY17

Seed Spacing Tile

Seed Spacing— tab and tile display the distance of seed spacing as detected by the seed sensors.

Closing Wheels

A91640—UN—15NOV17

Closing Wheels Tile

Closing Wheels— tile displays the target pressure of the closing wheels. Select to access the closing wheel controls.

Coulter Disks

PC28208—UN—04MAY22

Coulter Disk Tile

Coulter Disks (Brazil production only)— tile displays the target pressure of the coulter disks. Select to access the coulter disk controls.

ae77568,1670956998420-19-11APR23

SeedStar | Overview | Overview Tabs

Tabs give access to the tile features and additional features. When a tile is selected, that feature appears in the upper screen area, along with the row of tabs.

NOTE: These features are mirrored on the run page.

A117101—UN—15DEC22

Feature Tabs

Items Accessible on Tabs:

Feature Tabs— display the basic status of a feature. Each tab is selectable to access more information about the feature. When a tab is selected, that feature appears in the upper screen area.

A92999—UN—11MAY17

Tile Access Tab

Tile Access Tab— select at any time to display the feature tiles.

A93000—UN—11MAY17

Additional Features Tab

A92998—UN—25JUN20

Additional Feature Tiles

Additional Features Tab— select to display tiles for additional features.

A93481—UN—11MAY17

Ride Quality Tile

Ride Quality— tile displays the percentage of ride quality for the row units. The value is an average for all rows. Select to view additional ride quality details.

ExactEmerge Items:

A93484—UN—11MAY17

RPM Tile

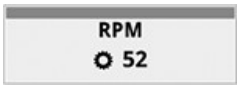
RPM— tile displays the revolutions per minute (RPM) of the seed meter and BrushBelt motors. The value is an average for all rows. Select to view additional rpm details.

A93485—UN—11MAY17

Torque Tile

Torque— tile displays the torque of the seed meter motors. Select to view the relative torque bar chart for meter motors and brush belt motors.

MaxEmerge 5e:



A94271—UN—11MAY17

RPM Tile

RPM— tile displays the revolutions per minute (RPM) of the seed meter motors. The value is an average for all rows. Select to view additional RPM details.

A94272—UN—11MAY17

Torque Tile

Torque— tile displays the torque of the seed meter motors. Select to view the relative torque bar chart for meter motors.

A95597—UN—22JUN17

Tools Button

Tools— provides access to a page of quick links that open frequently used and helpful features.

A93486—UN—11MAY17

Curve Compensation Tile

Curve Compensation— icon inside the tile changes to indicate the current implement path. Select to view additional details and to enable or disable the curve compensation.

Feature Status— the tops of each tile and tab change color based on the feature parameters and range limits.

A93489—UN—11MAY17

Green

- **Green**— indicates that the value for that feature is within the specified range.

A93487—UN—11MAY17

Amber

- **Amber**— indicates that the value for that feature is nearly out of range.

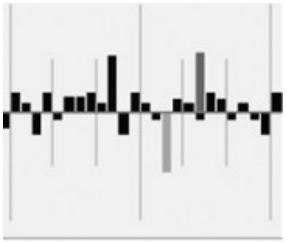
A93488—UN—11MAY17

Red

- **Red**— indicates that the value for that feature is out of range.

NOTE: Values are also highlighted with a red box when they are out of range. The row number associated with the value is displayed.

Bar Graph Status— is indicated for every row using three different bar colors.



A94196—UN—11MAY17

Bar Graph Status

- **Black**— indicates that a reading is near your target.
- **Amber**— indicates that a reading is approaching an alarm limit.
- **Red**— indicates that a reading has exceeded an alarm limit.

A104385—UN—09MAY19

Population

Population— screen area displays the seed population for all of the engaged rows. Select to view additional population details and to adjust the target rates.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

ae77568,1670957020314-19-11APR23

SeedStar | Overview | Population

Population displays the seed population for each row,

provides access to your target populations, and allows you to zoom to specific row details.

Items Accessible on Population Page:

Target Population Screen Area:

Target Population— appears differently depending on the target population mode that you selected under Population Setup in Advanced Settings.

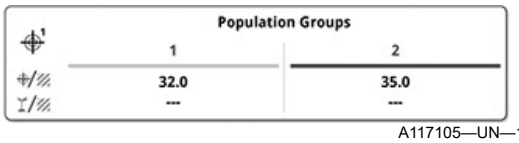
A117104—UN—15DEC22

Target Population (basic)

A103268—UN—09MAY19

Edit Population

Target Population (Basic)— screen area displays your target populations. Select a target population to enable that population for the entire implement. Select Edit Population to change your target population values.

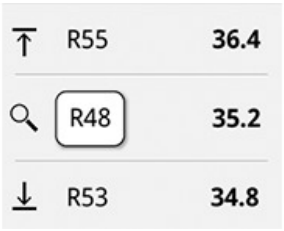


A117105—UN—15DEC22

Populations

Advanced Target Population— screen area displays your target rates and the actual rates for each seed variety that you have set up. Select the screen area to change your rates.

Row-Specific Screen Area:



A117100—UN—27APR23

Row-Specific Population

Select any segment in the screen area to view the details for the row number displayed.

High Population— (upper screen segment) displays the row number (R_) and population for the row with the highest population.

User Selected— (middle screen segment) displays the row number (R_) and population for the row that you enter into the input box.

Low Population— (lower screen segment) displays the row number (R_) and population for the row with the lowest population.

NOTE: Population values approaching an alarm limit highlight in amber. Values outside an alarm limit highlight in red.

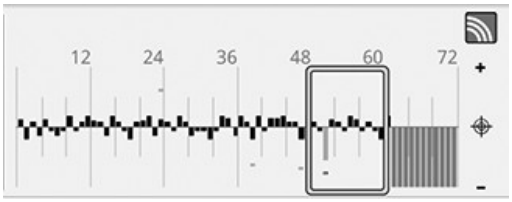
A91629—UN—25JUN20

Population Bar Graph

Population Bar Graph Screen Area:

Population— bars in the graph represent the population of each row unit. As the population varies, the bars vary in size either over (+) or under (-) the target population. Row numbers are displayed along the top to separate areas of the graph.

Bar Graph Zoom Feature:



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

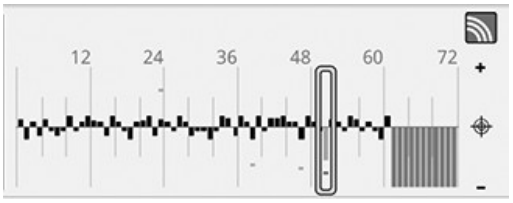
Adjustment Dial

Section Zoom— allows you to zoom into an area of the population graph between the displayed row numbers. Select an area of the graph. The rows in the selected area expand into the upper screen area. The selected area is outlined with a yellow box that is moveable with an adjustment dial on some displays.

A93574—UN—25JUN20

Expanded Area

Expanded Area— displays each row within the selected area.



A93573—UN—25JUN20

Population Graph with Selected Row

Row Zoom— select a row from the expanded area. A yellow box outlines the row selected on the population graph. Details of the selected row appear in the upper screen area.

Row 53	Target	Actual		Target	Actual
Population (ksds/ac)	36.0	35.8	DF Margin (lb)	70	70
Spacing (in)	6	6.5	Down Force (lb)		154
Spacing (CV)		0.17	Ground Contact		97%
Singulation (%)		99.2%	Ride Quality		92%
Multiples (%)		2.0			
Skips (%)		12.2			

A117106—UN—15DEC22

Selected Row Details

Row Details— displays specific values related to the selected row. Seed sensing is on the left-hand side. Downforce is on the right-hand side. Descriptions of these items can be found on the Alarms and Gauge Wheels setup pages.

NOTE: Population values approaching an alarm limit highlight in amber. Values outside an alarm limit highlight in red.

ae77568,1670957056158-19-11APR23

SeedStar | Overview | Gauge Wheels

Gauge Wheels displays the downforce margin and ground contact readings from the row unit sensors. Downforce control is accessible from this page.

Items Accessible on Gauge Wheels Page:

Downforce Margin, Downforce, and Ground Contact

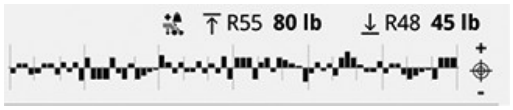
A93578—UN—11MAY17

Downforce Margin

Downforce Margin— displays the active downforce target margin. Select to adjust the margin settings.

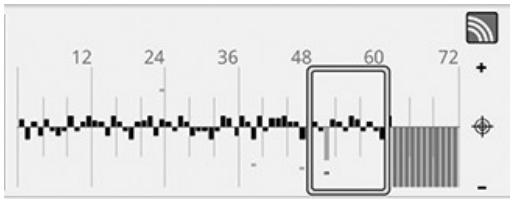
NOTE: Margin values are for reference (not adjustable) while in set-point mode.

Over the Graph— the row number (R_) and downforce margin are shown for the row with the highest value and the row with the lowest value.



A93577—UN—25JUN20

Downforce Graph



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

Bar Graph— displays the downforce margin for every row unit. Each bar represents the margin over (+) or under (-) the target. Select an area of the downforce margin graph to zoom to that area. The rows in the selected area expand into the upper screen area. The selected area is outlined with a yellow box that is moveable with the adjustment dial on.

NOTE: Select the tab to exit the zoom area at any time. Select a single row to zoom to a row-details page.

A94262—UN—11MAY17

Downforce Selected

A93580—UN—11MAY17

Ground Contact Selected

Downforce and Ground Contact:

Select the Downforce/Ground Contact toggle to switch between each. The graph for the option selected appears next to the toggle.

Downforce— displays the average force applied.

Ground Contact— displays the average (Avg) percentage of contact for all the rows and the row number (R_) with the lowest ground contact.

Bar Graph— displays a graph for the toggled selection. Each bar represents the percentage of contact over the target or the downforce applied. Select an area of the graph to zoom to that area. The rows in the selected area expand into the upper screen area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

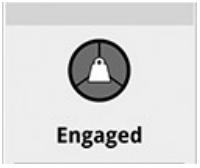
NOTE: Select the tab to exit the zoom area at any time. Select a single row to zoom to a row-details page.

PR79369,0000072-19-17APR23

SeedStar | Overview | Gauge Wheel Downforce

Gauge Wheel Downforce provides control of both the active and applied (set-point) downforce.

Items Accessible on Gauge Wheel Downforce Page:



A94167—UN—11MAY17

Status

Status— displays status of the downforce system.

A92890—UN—22JUN17

Pause

Pause— halts adjustments to the downforce when active mode is ON. Select to pause the system when crossing waterways or other areas that do not require an adjustment from the system. A message appears, indicating that the system is paused as a timer counts down to zero.

NOTE: The timer is adjustable on the Advanced Settings page.

A93594—UN—11MAY17

Inactive Pause

Inactive Pause— appears during set-point mode. The button is not selectable when inactive.

A93595—UN—22JUN17

Resume

Resume— allows adjustments to continue. Select to stop the pause timer before it reaches zero. A resume button is also available on the message that appears with the timer.

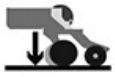
A92133—UN—06MAY19

ON/OFF

Active PDF— allows you to switch between active mode and set-point mode. Select the toggle button to turn the active downforce system ON or OFF.

- **Active Mode**— automatically adjusts the downforce to maintain your target margin.
- **Set-Point Mode**— allows you to set the applied downforce to a specific value.

NOTE: Ground contact, margin, and force are displayed once on single-rank implements and separately on dual-rank implements. In set-point mode, the applied force is individually adjustable for each rank.



A94164—UN—11MAY17

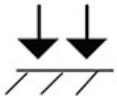
Ground Contact

Ground Contact— displays the average percent of contact for the rows.

A94165—UN—11MAY17

Margin

Margin— displays the average downforce margin for the rows. Select the input box or the buttons to adjust the margin (in active mode).



A94166—UN—11MAY17

Force

Force— displays the average downforce applied to the rows. Select the input box or the buttons to adjust the applied downforce (in set-point mode).

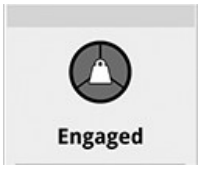
Margin Alarms— displays the alarm limits for the upper, lower, and target margin. Select the screen area under Margin Alarms to adjust the levels.

PR79369,0000073-19-17APR23

SeedStar | Overview | Status Gauge Wheel Downforce

Status of Gauge Wheel Downforce changes based on the planting condition and the downforce mode that is ON.

Active Mode:



A94167—UN—11MAY17

Status

Status— displays the active downforce status. Select the screen area under Status to see the meter requirements that must first be met before the active downforce engages.

A94160—UN—11MAY17

Engaged

- **Engaged**— indicates that all the requirements are met and the downforce is operating.

A94159—UN—11MAY17

Paused

- **Paused**— indicates that the system is engaged and holding at the current downforce until the timer expires or the resume button is selected.

A93598—UN—11MAY17

Ready

- **Ready**— indicates that the sensors are responding correctly, but other requirements are not met. The system is not engaged.

A93599—UN—11MAY17

Ready

- **Ready**— indicates that the sensors are responding correctly and the implement is lowered, but the speed requirement is not met. The system is not engaged.

A93600—UN—11MAY17

Ready

- **Ready**— indicates that the sensors are responding correctly and the ground speed requirement is met, but the implement is not lowered. The system is not engaged.

Set-Point Mode:

A94162—UN—11MAY17

Engaged

- **Engaged**— indicates that all the requirements are met and the downforce is operating.

A94161—UN—11MAY17

Ready

- **Ready**— indicates that the sensors are responding correctly, but other requirements are not met. The system is not engaged.

A94163—UN—11MAY17

Error

- **Error Detected**— indicates that a fault is detected on a sensor.

PR79369,0000074-19-17APR23

SeedStar | Overview | Downforce Adjustment

Downforce Adjustment allows you to change the downforce margin (in active mode) or the applied downforce (in set-point mode).

Procedure to Modify:

A92148—UN—15NOV17

Input Box

1. Select the input box.
2. Enter the force value using the number pad.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

3. Select OK to save your selection or select Cancel to close the page without saving.

Alternative Procedure to Modify:

A94168—UN—22JUN17

Increase

Increase Button— increases the force value by the amount entered in Advanced Settings each time the button is selected.

A94169—UN—22JUN17

Decrease

Decrease Button— decreases the force value by the amount entered in Advanced Settings each time the button is selected.

PR79369,0000075-19-17APR23

SeedStar | Overview | Row Cleaners

Row Cleaners provides control of the easy-adjust row cleaners.

NOTE: Avoid adversely affecting the downforce on the row units. Do not set the row cleaner down pressure too high. Perform an in-field check after row cleaner adjustments to verify that seed placement is not affected.

Items Accessible on Row Cleaners Page:

CAUTION: Avoid injury from row cleaner movement. Verify that everyone is clear of the row cleaners before turning them ON/OFF or before making adjustments.

N118004—UN—22OCT15

Advanced Settings

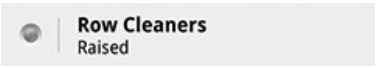
NOTE: See Row Cleaners in Advanced Settings to turn the row cleaners ON/OFF.

A94170—UN—11MAY17

Presets

Presets— allow quick adjustment to three positions. Select a preset that clears field residue to the degree that you prefer.

NOTE: Adjusting any pressure value automatically stores the change for the preset that is selected. See Row Cleaners in Advanced Settings to reset the values to default



A94171—UN—11MAY17

Row Cleaners

Row Cleaners— displays the current position and status of the row cleaners. Select the Row Cleaners screen area to view additional details about the Status.

A93587—UN—22JUN17

Raise/Lower Toggle

Raise/Lower— changes the position of the row cleaner between raised (inactive) and lowered (active). Select the toggle button to change the position.

NOTE: If row cleaners are not being used, raise the row cleaners and pin them in position. (For more information, see the implement Operator's Manual.)

IMPORTANT: Changing the up pressure and the down pressure by the same increment adjusts the rigidity while maintaining position. Changing down pressure and up pressure values separately has a combined effect on position and rigidity. See the Position page for some examples.

A106826—UN—25JUN20

Setting

Wings, Center, and Up Pressure Setting— displays the target pressure (top number) and actual pressure (bottom number) on the row cleaners. The row cleaners on the wings and center frame are independently adjustable unless you synchronize them. Select the screen area under Wings, Center, and Up Pressure to adjust the target pressure and to change the synchronization.

NOTE: An up arrow or down arrow appears next to the actual pressure when the system is altering the pressure. The status indicator changes color until the value reaches the acceptable range.

NOTE: Up Pressure only appears when you have Up Pressure Adjustment enabled in Advanced Settings.

PR79369,0000076-19-17APR23

SeedStar | Overview | Row Cleaners Status

H114655—UN—05JAN17

Gray

H114656—UN—05JAN17

Green

H113786—UN—30JAN17

Amber

H114657—UN—05JAN17

Red

A92084—UN—09MAY19

Check Mark

A92083—UN—11MAY17

Exclamation Point

Row Cleaners Status indicates the current status of the row cleaner system and any errors that are detected.

Status Indicator— shows the current state of the row cleaners.

- **Raised**— (Gray) indicates that the row cleaners are retracted to the full height and are not in operation.
- **Preset 1**— (Green) indicates that the row cleaners are operating at Preset 1.
- **Preset 2**— (Green) indicates that the row cleaners are operating at Preset 2.
- **Preset 3**— (Green) indicates that the row cleaners are operating at Preset 3.
- **Low Pressure**— (Amber) indicates that the pressure applied to the row cleaner is below (near) the preset.
- **High Pressure**— (Amber) indicates that the pressure applied to the row cleaner is above (near) the preset.
- **Low Pressure**— (Red) indicates that the pressure applied to the row cleaner is much lower than the preset.
- **High Pressure**— (Red) indicates that the pressure applied to the row cleaner is much higher than the preset.
- **Error**— (Red) indicates that an error is detected. Select the Row Cleaner screen area to see the error message.
- **Tank Pressure**— (Red) indicates that the tank pressure is too low to operate the row cleaners.
- **Check Mark**— indicates a normal state for the up and down pressure applied to the row cleaners, the air compressor tank-pressure, and the sensors.
- **Exclamation Point**— indicates an error within the row cleaner system. A message appears indicating the source of the error.

A91621—UN—11MAY17

Diagnostics & Calibrations

Diagnostics and Calibrations— select to view row cleaner diagnostic information.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,000031D-19-17APR23

SeedStar | Overview | Row Cleaner | Setting

Row Cleaner | Setting allows you to adjust the target value for the row cleaner preset currently selected on the Row Cleaners page.

Items Accessible on Row Cleaner | Setting Page:

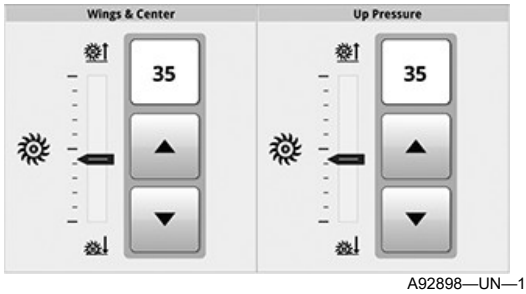
CAUTION: Avoid injury from row cleaner movement. Verify that everyone is clear of the row cleaners before making adjustments.

The slide bar provides a visual representation of the pressure setting shown in the input box, not the position of the row cleaners. The row cleaners on the wings and center frame adjustments are shown separately unless you synchronize them.

NOTE: Up Pressure only appears when you have Up Pressure Adjustment enabled in Advanced Settings.

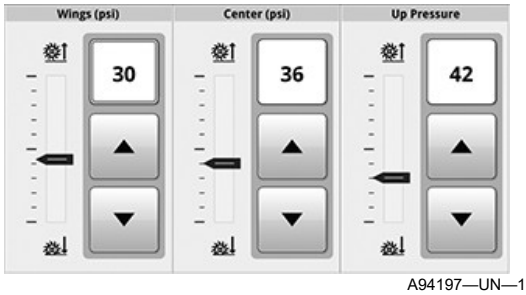
A92871—UN—11MAY17

Actual Pressure



A92898—UN—11MAY17

Synchronized Wings and Center



A94197—UN—11MAY17

Unsynchronized Wings and Center

Actual Pressure— is the visual indicator for the actual pressure on the row cleaner, not the row cleaner position.

A94173—UN—11MAY17

Synchronize Wings and Center Frame

Synchronize— displays and adjusts the down pressure on the wing and center frame row cleaners to the same value. Select to synchronize.

A94174—UN—11MAY17

Unsynchronize Wings and Center Frame

Unsynchronize— displays and adjusts the wing and center row cleaners separately. Select to unsynchronize.

Procedure to Modify:

Select an up or down arrow button to adjust the value. Both the slide bar and the value in the box change by the increment entered in Advanced Settings.

Alternative Procedure to Modify:

A94192—UN—22JUN17

Input Field

1. Select the box (showing the pressure setting) so the yellow outline appears around the box.
2. Use the dial on the navigation bar to adjust the value.

H115035—UN—14MAR16

Navigation Bar Adjustment Dial

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

PR79369,0000078-19-17APR23

Row Cleaners Position

Row Cleaners Position shows various position setting examples and how the row cleaners respond.

Height Adjustments:

A95573—UN—11MAY17

Response— *Higher Position*

Description

Low down pressure compared to the up pressure =

lighter residue engagement. The row cleaners are in a higher position.

Setting		
Wings	Center	Up Pressure
20	25	35

A95574—UN—11MAY17

Response— *Medium Position*

Description

Down pressure similar to the up pressure = medium residue engagement. The row cleaners are in a mid-level position.

Setting		
Wings	Center	Up Pressure
30	35	35

A95575—UN—11MAY17

Response— *Lower Position*

Description

High down pressure compared to the up pressure = heavier residue engagement. The row cleaners are in a lower position.

Setting		
Wings	Center	Up Pressure
50	55	35

Floatation Adjustments:

A95579—UN—11MAY17

Response— *More Floatation*

Description

Down pressure similar to up pressure = a mid-level position. Having all low values = lower rigidity (more floatation).

Setting		
Wings	Center	Up Pressure
20	25	25

A95571—UN—11MAY17

Response— *Medium Floatation*

Description

Down pressure similar to up pressure = a mid-level position. Having all medium values = medium rigidity (some floatation).

Setting		
Wings	Center	Up Pressure
30	35	35

A95572—UN—11MAY17

Response— *Less Floatation*

Description

Down pressure similar to up pressure = a mid-level position. Having all high values = higher rigidity (less floatation).

Setting		
Wings	Center	Up Pressure
50	55	55

Combined Adjustments:

A95576—UN—11MAY17

Response— *Less Floatation*

Description

All low-pressure settings = more flotation. High down pressure compared to up pressure = heavy engagement.

Setting		
Wings	Center	Up Pressure
20	25	10

A95578—UN—11MAY17

Response— *Low Position with Floatation*

Description

All high-pressure settings = less floatation. High down

pressure compared to up pressure = heavy engagement.

Setting		
Wings	**Center**	**Up Pressure**
50	55	40

A95577—UN—11MAY17

Response— *High Position with Floatation*

Description

All low-pressure settings = more floatation. Low down pressure compared to up pressure = light engagement.

Setting		
Wings	**Center**	**Up Pressure**
10	15	30

A95572—UN—11MAY17

Response— *High Position Less Floatation*

Description

All high-pressure settings = less floatation. Low down pressure compared to up pressure = light engagement.

Setting		
Wings	**Center**	**Up Pressure**
40	45	55

PR79369,0000079-19-01OCT19

SeedStar | Overview | Singulation

Singulation allows you to view the frequency of multiple seeds and skipped seeds detected by the seed sensor.

Items Accessible on Singulation Page:

A93582—UN—11MAY17

Multiples

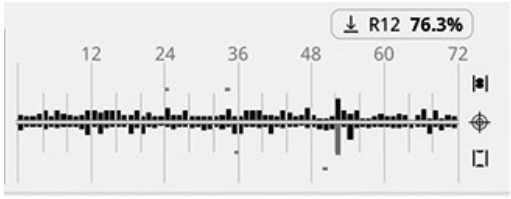
Multiples— displays the overall average (Avg) number of multiple seeds released at once from the meters. It also displays the row number (R_) for the row with the highest percentage of multiples.

A93583—UN—11MAY17

Skips

Skips— displays the overall average (Avg) number of skipped seeds from the meters. It also displays the row number (R_) for the row with the highest percentage of skips.

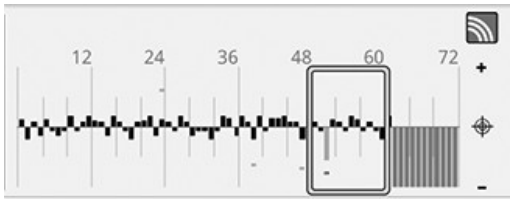
NOTE: Values approaching an alarm limit highlight in amber. Values outside an alarm limit highlight in red.



A93581—UN—25JUN20

Singulation Graph

Singulation— displays the row number (R_) (over the bar graph) for the row with the lowest overall singulation.



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

Bar Graph— displays the singulation for every row unit. Each bar over the target line represents an increase in the percentage of multiples. Each bar under the target line represents an increase in the percentage of skips. Select an area of the graph to zoom in to that area. The rows in the selected area expand into the upper screen area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

NOTE: Select the tab to exit the zoom area at any time.

PR79369,000007A-19-17APR23

SeedStar | Overview | Spacing

Spacing allows you to view the consistency of the seed spacing as detected by the seed sensor.

Items Accessible on Spacing Page:

A93582—UN—11MAY17

Multiples

Multiples— displays the overall average (Avg) number of multiple seeds released at once from the meters. It also displays the row number (R_) for the row with the highest percentage of multiples.

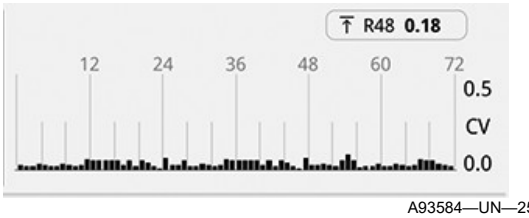
A93583—UN—11MAY17

Skips

Skips— displays the overall average (Avg) number of skipped seeds from the meters. It also displays the row number (R_) for the row with the highest percentage of skips.

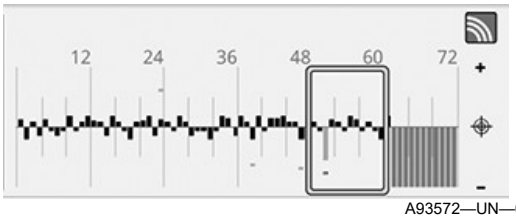
NOTE: Values outside the alarm limits highlight in red. Values near the alarm limits highlight in amber.

Seed Spacing— displays the row number (R_) (over the bar graph) for the row with the poorest spacing consistency.



A93584—UN—25JUN20

CV Graph



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

Bar Graph— displays the seed spacing consistency for every row unit. Each bar over the zero line represents the amount of decrease in consistent spacing. Zero is perfect seed spacing. Select an area of the graph to zoom in to that area. The rows in the selected area expand into the upper screen area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

NOTE: Coefficient of variation (CV) is the measure of seed spacing. A description of the CV can be found on the Alarms.

NOTE: Select the tab to exit the zoom area at any time.

PR79369,000007B-19-17APR23

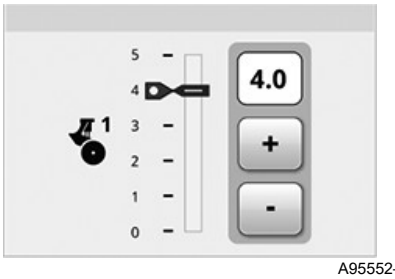
SeedStar | Overview | Closing Wheels

Closing Wheels provides control of the pneumatically controlled closing wheels.

NOTE: Avoid adversely affecting the downforce on the row units. Verify the downforce application on your row units after adjusting the closing wheel force.

Items Accessible on Closing Wheels Page:

Status Indicators— indicates the current Status of the closing wheel system and any errors that are detected.



A95552—UN—15NOV17

Down Pressure

Down Pressure— the slide bar provides a visual representation of the set-position shown in the box above the positive and negative buttons. The buttons and the input box allow you to adjust the pressure.

A95554—UN—11MAY17

Synchronize Groups

Synchronize— allows you to adjust both closing wheel groups using a single input.

NOTE: The closing wheel groups are shown separately unless you synchronize them.

A95553—UN—11MAY17

Unsynchronize Groups

Unsynchronize— allows you to adjust each closing wheel group independently.

A92871—UN—11MAY17

Current Pressure

Current Pressure— shows the current pressure of the closing wheel setting.

Minimum - position 0 applies approximately 9 kg (20 lb) of force with rubber closing wheels and 27 kg (60 lb) of force with cast iron closing wheels.

NOTE: Position 0 maintains a minimum air pressure in the pneumatic springs.

Intermediate - positions 1 through 4 mimic the 4 positions of mechanical closing wheels.

Maximum - position 5 applies 32 kg (75 lb) of additional downforce beyond the capability of mechanical closing-wheel position 4.

A95560—UN—11MAY17

New Target

New Target Position— indicates that the air pressure is adjusting to reach a new target position.

NOTE: The Status indicator flashes while the system is adjusting the air pressure. See Closing Wheels in Advanced Settings to set up the leak detection feature.

A95561—UN—11MAY17

Obtained Target

Obtained Target Position— indicates that the target position and current position match.

N118004—UN—22OCT15

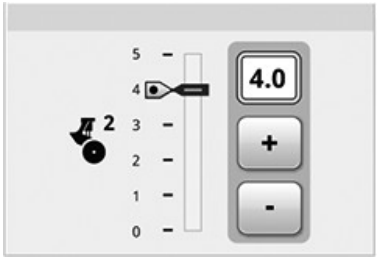
Advanced Settings

NOTE: See Closing Wheels in Advanced Settings to turn the Groups on-off.

Modify When:

- Soil conditions change. Light, loose soil requires less pressure to close the seed furrow.
- You change the seed depth. Shallow seed placement requires less pressure to close the seed furrow.

Procedure to Modify:



A95551—UN—16NOV17

Closing Wheels

Select a positive or negative button to adjust the value. Both the slide bar indicator and the value in the box change by the increment entered in Advanced Settings.

NOTE: Closing-wheel down pressure can affect seed placement and depth. Do not use more force than necessary to close the seed furrow, especially in light soils.

Alternate Procedure to Modify:

1. Select the box (showing the set-position) so the yellow outline appears around the box.

H115035—UN—14MAR16

Navigation Bar Adjustment Dial

2. Use the dial on the navigation bar or armrest dial to adjust the value.

- Turn the dial clockwise to increase the value.

- Turn the dial counterclockwise to decrease the value.

PR79369,000007C-19-17APR23

SeedStar | Overview | Coulter Disk (Brazil production only)

Coulter Disk provides control of the pneumatically controlled coulter disks.

Items Accessible on Coulter Disk Page:

Status Indicators— indicates the current Status of the coulter disk system and any errors that are detected.

PC28209—UN—05MAY22

Down Pressure

Down Pressure— the slide bar provides a visual representation of the set-position shown in the box above the positive and negative buttons. The buttons and the input box allow you to adjust the pressure.

A95554—UN—11MAY17

Synchronize Groups

Synchronize— allows you to adjust both coulter disk groups using a single input.

NOTE: The closing wheel groups are shown separately unless you synchronize them.

A95553—UN—11MAY17

Unsynchronize Groups

Unsynchronize— allows you to adjust each coulter disk group independently.

A92871—UN—11MAY17

Current Pressure

Current Pressure— shows the current pressure of the coulter disk setting.

A95560—UN—11MAY17

New Target

New Target Position— indicates that the air pressure is adjusting to reach a new target position.

NOTE: The Status indicator flashes while the system is adjusting the air pressure. See Coulter Disk in Advanced Settings to set up the leak detection feature.

A95561—UN—11MAY17

Obtained Target

Obtained Target Position— indicates that the target position and current position match.

N118004—UN—22OCT15

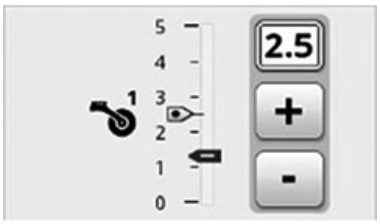
Advanced Settings

NOTE: See Coulter Disk in Advanced Settings to turn the Groups on-off.

Modify When:

- Soil conditions change. Light, loose soil requires less pressure to reach optimum coulter depth.
- You change the seed depth. Shallow seed placement requires less pressure to reach optimum coulter depth.

Procedure to Modify:



PC28209—UN—05MAY22

Coulter Disks

Select a positive or negative button to adjust the value. Both the slide bar indicator and the value in the box change by the increment entered in Advanced Settings.

Alternate Procedure to Modify:

1. Select the box (showing the set-position) so the yellow outline appears around the box.

H115035—UN—14MAR16

Navigation Bar Adjustment Dial

2. Use the dial on the navigation bar or armrest dial to adjust the value.

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

CZ76372,000092F-19-17APR23

SeedStar | Overview | Closing Wheels Status

H114656—UN—05JAN17

Green

H113786—UN—30JAN17

Amber

H114657—UN—05JAN17

Red

H114655—UN—05JAN17

Gray

Closing Wheel Status indicates the current status of the closing wheel system and any errors that are detected.

Status Indicator— shows the current state of the row cleaners. The status indicators flash while the system is adjusting the air pressure.

- Green— indicates that the parameters are within a normal range.

  Example: Air pressure is within 15% of the target.
- Amber— indicates that the parameters are near a normal range.

  Example: Air pressure is within 15 to 25% of the target.
- Red— indicates that the parameters are out of range.

  Example: Air pressure is more than 25% from the target.
- Gray— indicates that the implement is raised and the closing wheel force is disabled (gray indicator).
- Status Message— accompanies the status indicator.
- OK— indicates that the requirements are met (green indicator).
- Adjusting— indicates that the system is making an adjustment to reach a new setting or to compensate for a pressure change (green, amber, or red indicator).
- Pressure Low or High— indicates that the closing wheel pressure is more than 15% from the target (amber indicator).
- Pressure Low or High— indicates that the closing wheel pressure is more than 25% from the target (red indicator).
- Tank Pressure— indicates that the tank pressure is too low (red indicator).
- Error— indicates that a sensor reading is out of range (red indicator).

A92084—UN—09MAY19

Check Mark

Normal States — show a check mark to indicate that the air compressor tank-pressure, group pressure, and the sensors are in normal states.

H114663—UN—05JAN17

Exclamation Point

Error States— show an exclamation point to indicate an error within the closing wheel system. A message appears indicating the source of the error.

Error State Message— accompanies the error state.

Low or High Group Pressure— indicates that the system did not reach the expected target before the adjustment timed out.

A95694—UN—24AUG18

Retry

Retry— select to re-activate the attempt to reach the target pressure.

Sensor/Actuator Error— indicates the need to diagnose failures of the system components.

Low Tank Pressure— indicates that the air tank is not maintaining enough pressure to keep up with adjustments. Search for system leaks.

A91619—UN—24AUG18

Diagnostics

Closing Wheel Diagnostics— select to view closing wheel diagnostic information.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,000031E-19-17APR23

SeedStar | Overview | Coulter Disk Status (Brazil production only)

H114656—UN—05JAN17

Green

H113786—UN—30JAN17

Amber

H114657—UN—05JAN17

Red

H114655—UN—05JAN17

Gray

Coulter Disk Status indicates the current status of the coulter disk system and any errors that are detected.

Status Indicator— shows the current state of the row cleaners. The status indicators flash while the system is adjusting the air pressure.

- Green— indicates that the parameters are within a normal range.

  Example: Air pressure is within 15% of the target.
- Amber— indicates that the parameters are near a normal range.

  Example: Air pressure is within 15 to 25% of the target.
- Red— indicates that the parameters are out of range.

  Example: Air pressure is more than 25% from the target.
- Gray— indicates that the implement is raised and the coulter disk force is disabled (gray indicator).
- Status Message— accompanies the status indicator.
- OK— indicates that the requirements are met (green indicator).
- Adjusting— indicates that the system is making an adjustment to reach a new setting or to compensate for a pressure change (green, amber, or red indicator).
- Pressure Low or High— indicates that the coulter disk pressure is more than 15% from the target (amber indicator).
- Pressure Low or High— indicates that the coulter disk pressure is more than 25% from the target (red indicator).
- Tank Pressure— indicates that the tank pressure is too low (red indicator).
- Error— indicates that a sensor reading is out of range (red indicator).

A92084—UN—09MAY19

Check Mark

Normal States — show a check mark to indicate that the air compressor tank-pressure, group pressure, and the sensors are in normal states.

H114663—UN—05JAN17

Exclamation Point

Error States— show an exclamation point to indicate an error within the coulter disk system. A message appears indicating the source of the error.

Error State Message— accompanies the error state.

Low or High Group Pressure— indicates that the system did not reach the expected target before the adjustment timed out.

A95694—UN—24AUG18

Retry

Retry— select to re-activate the attempt to reach the target pressure.

Sensor/Actuator Error— indicates the need to diagnose failures of the system components.

Low Tank Pressure— indicates that the air tank is not maintaining enough pressure to keep up with adjustments. Search for system leaks.

A91619—UN—24AUG18

Diagnostics

Coulter Disk Diagnostics— select to view coulter disk diagnostic information.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

CZ76372,0000930-19-17APR23

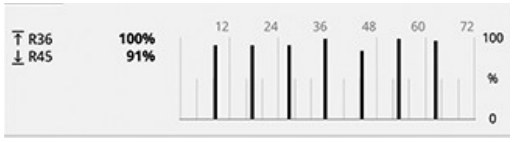
SeedStar | Overview | Ride Quality

Ride Quality allows you to view the degree of vibration affecting the row unit as detected by the sensors on the row units.

NOTE: A lower ride quality affects the MaxEmerge meter more than the ExactEmerge meter. Downforce, ground conditions, and ground speed relate closely to ride quality.

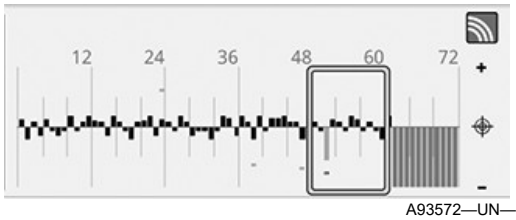
Items Accessible on Ride Quality Page:

Ride Quality— displays the row number (R_) with the highest ride quality and the row number (R_) with the lowest ride quality.



A93585—UN—25JUN20

Ride Quality Graph



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

Bar Graph— displays the percentage of ride quality for the rows with sensors. Perfect (smooth) ride quality is indicated as 100%. Select an area of the graph to zoom in to that area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

NOTE: Select the tab to exit the zoom area at any time.

PR79369,000007E-19-17APR23

SeedStar | Overview | RPM

RPM allows you to view the speeds of the seed meter motors.

ExactEmerge Meter Items:

RPM allows you to view the speeds of the BrushBelt motors.

Items Accessible on RPM Page:

Meter Motor RPM— displays the meter motor speed for the row number (R_) with the highest speed and the row number (R_) with the lowest speed.

A93590—UN—25JUN20

Meter Motor-Speed Graph

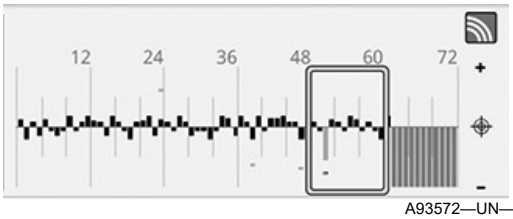
ExactEmerge Meter Items:

BrushBelt Motor RPM— displays the BrushBelt motor speed for the row number (R_) with the highest speed and the row number (R_) with the lowest speed.

Bar Graph— displays the motor speeds for every row unit. The target line is calculated from your seed population and meter settings. Each bar represents the motor speeds that are over or under the target. Select an area of the graph to zoom in to that area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

A94175—UN—25JUN20

BrushBelt Motor-Speed Graph



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

ExactEmerge Meter Items:

NOTE: Select the tab to exit the zoom area at any time.

PR79369,000007F-19-17APR23

SeedStar | Overview | Torque

Torque allows you to view the motor resistance experienced by the seed meter motors.

ExactEmerge Torque Items:

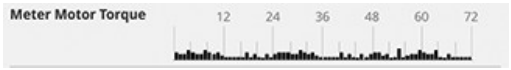
Torque allows you to view the motor resistance experienced by the BrushBelt motors.

Items Accessible on Torque Page:

Meter Motor Torque— is the amount of resistance the motor experiences while turning the seed meter.

ExactEmerge BrushBelt Motor Torque Items:

BrushBelt Motor Torque— is the amount of resistance the motor experiences while turning the BrushBelt.



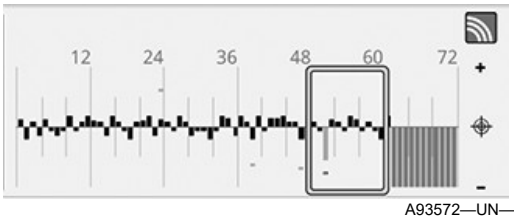
A93591—UN—25JUN20

Meter Motor Torque Graph

Bar Graph— displays the motor torque for every row unit. Watch for an unusually high bar on a row unit that might indicate a problem. Select an area of the graph to zoom in to that area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

A94176—UN—25JUN20

BrushBelt Motor Torque



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

ExactEmerge BrushBelt Motor Torque Items:

NOTE: Select the tab to exit the zoom area at any time.

PR79369,0000080-19-17APR23

SeedStar | Overview | Tools

Tools provides access to quick links that open frequently used and helpful features.

Items Accessible on Tools Page:

A94228—UN—23JUN17

Jump To

Seed and Alarm Setup— select for quick access to the following items:

- Your seed disk selection
- Your seed type selection
- Access to Work Setup
- The split-row configuration
- Your population high and low alarms
- The singulation low alarm
- The seed spacing alarm
- The high-pressure alarm for liquid fertilizer
- The high margin alarm, low margin alarm, and the target margin for downforce
- The ground contact and ride quality low alarms
- Access to the downforce settings

A94228—UN—23JUN17

Jump To

Setup— select for quick access to the following items:

- Setup for basic or advanced target population
- Fast Start settings
- The tractor speed source selection
- Frame height adjustments for seed meter activation

- Downforce adjustment increments and pause timer
- Vacuum adjustment increments and hydraulic assignments
- Pneumatic row cleaner activation and adjustment increment
- Pneumatic closing wheel activation and adjustment increment
- Pneumatic coulter disk activation and adjustment increment (Brazil production only)
- Central commodity system override and agitator control

A94228—UN—23JUN17

Jump To

Frame Control— select for quick access to the following items:

- Manual fold and unfold procedures
- Easy fold and unfold procedures
- Planting frame functions

A94229—UN—22JUN17

Runoff Procedure

Runoff Procedures— select for quick access to the following items:

- Single meter performance test
- Row runoff
- Implement runoff

A91619—UN—24AUG18

Diagnostics

Implement Diagnostics and Calibrations— select for quick access to the following items:

- The high pressure alarm for liquid fertilizer
- Height sensor calibration
- Hitch height calibration
- Curve compensation diagnostics
- Closing wheel diagnostics
- Coulter disk diagnostics (Brazil production only)
- Electric power generation diagnostics
- Fertilizer pressure sensor diagnostics
- Downforce sensor diagnostics
- Hydraulic system diagnostics
- Speed source diagnostics
- Seed meter diagnostics
- Pneumatic downforce diagnostics
- Ride quality sensor diagnostics
- Row cleaner diagnostics
- Row unit downforce diagnostics
- Electronic control unit diagnostic addresses
- Seed sensor diagnostics
- System voltage diagnostics
- Vacuum sensor diagnostics
- Gen 1 IRHD accumulator test
- Hydraulic air purge test
- Seed sensor test
- Hydraulic valve flush test
- Hydraulic valve test

A91619—UN—24AUG18

Diagnostics

Diagnostics Center— select for quick access to the Diagnostic Center application.

A94230—UN—22JUN17

Fast Start

Fast Start— select for quick access to the Fast Start settings.

MM95366,0000579-19-02MAY24

SeedStar | Overview | Curve Compensation

Curve Compensation displays the current speed of each row unit. When curve compensation is engaged and the implement is turning, the degree of turn (yaw rate) and variation in row unit speed can be observed. The seed meter speeds automatically adjust to maintain an accurate target population for each row.

Items Accessible on Curve Compensation Page:

A91623—UN—06MAY19

ON/OFF

Curve Compensation— displays the status of the compensation. Use the toggle button to enable or

disable Curve Compensation. The curve compensation icon indicates the current state of the feature.

A92127—UN—05APR19

Left Turn

Left Turn— icon appears when compensation is ON during a left turn.

A92116—UN—05APR19

Right Turn

Right Turn— icon appears when compensation is ON during a right turn.

A92128—UN—05APR19

Straight

Straight— icon appears when compensation is ON while traveling straight.

No Icon— appears when compensation is OFF. All of the meters mirror the tractor speed regardless of a turn.

A92944—UN—24AUG18

Yaw Rate

Yaw Rate— displays the current direction and degree of turn that the implement is experiencing.

NOTE: Yaw rate is not active when curve compensation is turned off.

Row Unit Speed— displays the two rows with the fastest and slowest speed, the tractor speed, and each row unit speed in a bar graph.

A92945—UN—24AUG18

Slowest Row

Slowest Row— shows the row number (R_) of the slowest row unit and the current speed.

A92947—UN—24AUG18

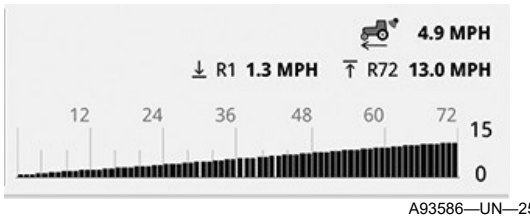
Fastest Row

Fastest Row— shows the row number (R_) of the fastest row unit and the current speed.

A92882—UN—24AUG18

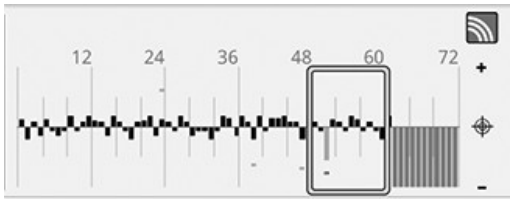
Tractor Speed

Tractor Speed— is provided from the source selected in Advanced Settings.



A93586—UN—25JUN20

Row Unit Speed Graph



A93572—UN—02MAY19

Population Graph with Selected Area

H115035—UN—14MAR16

Adjustment Dial

Bar Graph— displays the speed of each row unit. The height of each bar in the graph increases as the speed of a row unit increases. Select an area of the graph to zoom in to that area. The selected area is outlined with a yellow box that is moveable with the adjustment dial.

NOTE: Select the tab to exit the zoom area at any time.

PR79369,0000082-19-17APR23

Cylinder Walking

A106366—UN—11AUG20

Cylinder Walking Icon

Cylinder Walking is available when equipped with tracks and allows the tracks to maintain road contact even on crowned roads. Cylinder walking helps distribute wear evenly across all four tracks. This allows for transport speeds of up to 32 km/h (20 mph) for 2 hours at half-full implement capacity.

NOTE: If a machine equipped with tracks is in transport mode and this icon is not visible, the cylinder walking feature is not enabled.

MM95366,000057A-19-18NOV20

Section Status

Section Status allows you to view the status of your meter sections and to turn them ON and OFF. Multiple workpoint settings are available in the Implement Profile ensuring each row is controlled precisely.

Items Accessible on Section Status:

A91613—UN—15MAY17

Section Status

Section Status— consists of two selectable areas. Select the top area, containing the status indicators, to access the Section Control application. Select the buttons in the bottom area to manually command sections ON and OFF.

NOTE: If a GPS signal is marginal, group the outer rows together for the best performance. See Section Control in the Equipment Manager application.

A91614—UN—22JUN17

Right Arrow

Right Arrow— select to command sections OFF, starting from the left-hand section.

A91615—UN—22JUN17

Left Arrow

Left Arrow— select to command sections OFF, starting from the right-hand section.

NOTE: Additional left and right arrows appear on the far right or left when a section is manually shut OFF. Select these arrow buttons to turn the sections back ON.

A91616—UN—22JUN17

Enable All

Enable All— select to command all sections ON.

A91616—UN—22JUN17

Enable All

NOTE: The Enable All button is disabled when all sections are ON.

A95583—UN—11MAY17

Section Control On

Section Control ON— indicates that the Section Control application is in command of the sections.

A95584—UN—11MAY17

Section Control OFF

Section Control OFF— indicates that the Section Control application is disabled.

A95585—UN—11MAY17

Manual Control

Manual Control— indicates that the Section Control application is not available or is not activated.

Section Statuses:

A94212—UN—11MAY17

Active

Active— The green sections indicate that the meters in the section are delivering seed.

A94214—UN—11MAY17

Off (Manual)

Off (Manual)— The black sections indicate that you manually commanded the section OFF.

A94213—UN—11MAY17

Off (Auto)

Off (Auto)— The green and white sections indicate that the Section Control commanded the section OFF.

A94211—UN—11MAY17

Active

Enabled— The blank sections indicate that the meters in the section are enabled, but not delivering seed.

A94215—UN—11MAY17

Disabled

Disabled— The gray sections indicate that the meters in the section are disabled.

PR79369,0000083-19-02MAY24

Implement Profile

Implement Profile settings are important for the accurate performance of John Deere applications, such as mapping and Section Control. The implement controller sets most of the Implement Profile settings automatically. Once all the profile settings are input and saved, all the settings load each time the implement is connected.

Items Accessible on Implement Profile Page:

A106818—UN—21MAY21

Profile Name

Profile Name—Is set automatically based on the implement that is auto-detected. View the type of machine, the model number, the serial number, and when the profile was last modified.

H118284—UN—30JAN17

Scroll Up

Scroll Up—Scrolls up through the list.

H118282—UN—30JAN17

Scroll Down

Scroll Down—Scrolls down through the list.

A92068—UN—16MAR18

Save

Save—Saves all inputs.

A92067—UN—16MAR18

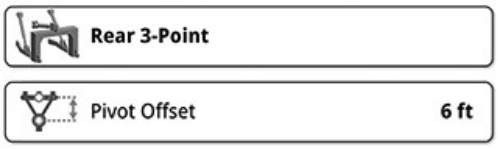
Cancel

Cancel—Ignores all inputs.

A94288—UN—23JUN17

Reset Profile

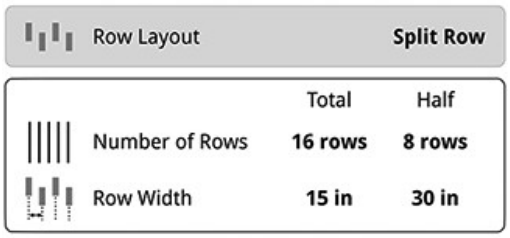
Reset Profile—Returns all the inputs to the factory defaults originally stored on the implement control unit.



A106819—UN—21MAY21

Connection Type

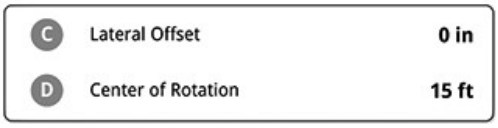
Connection Type—Is for setting the style of hitch that connects the implement to the tractor. The connection type also determines how the tractor and implement appear to move on the screen.



A106820—UN—21MAY21

Working Width

Working Width—Is for setting the overall width of the implement and the style of row unit configuration on the implement.



A106821—UN—21MAY21

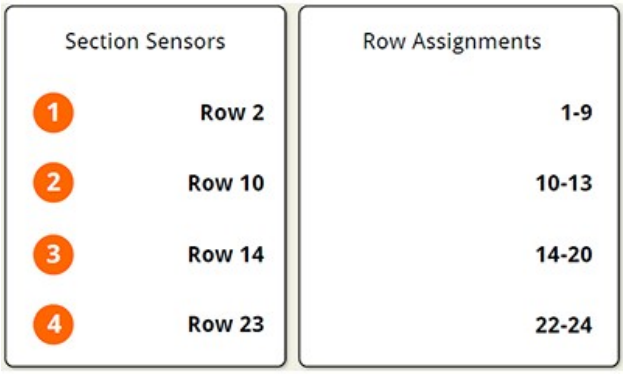
Dimensions

Dimensions—Is for setting the center of implement rotation and hitch offset.

A106822—UN—21MAY21

Work Point

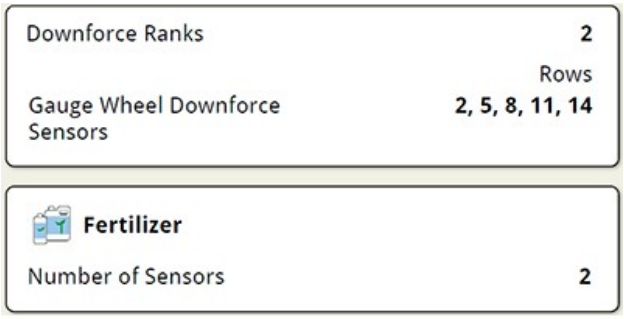
Work Point—Is for setting the distance from the hitch connection (drawbar pin or rockshaft) to the point of seed delivery.



AX1400787—UN—14APR25

Vacuum Setup

Vacuum Setup—Is for assigning rows to each blower section and for assigning which row senses the vacuum level in each blower section.



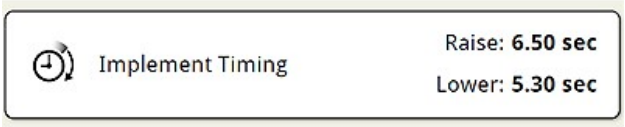
AX1400790—UN—14APR25

Sensor Setup

Sensor Setup—Is for setting the number of ranks on the planter, the quantity and location of downforce sensors, and quantity of fertilizer sensors.

AX1401526—UN—21APR25

Mechanical Delay—Seed Placement



AX1401528—UN—21APR25

Mechanical Delay—Implement Timing

Mechanical Delay Seed placement—Is for setting the seed travel time from the point of seed release from the seed (bowl) disk to the soil.

Mechanical Delay Implement Timing—Is for setting the time to fully raise and lower the planter.

A95698—UN—03MAY19

Section Control

Section Control—Select if a GPS signal is marginal. When enabled, the outer row unit sections are grouped together to avoid unintentional shutoffs as the GPS signal drifts.

Modify When:

Modify the Work Point when switching between wide and narrow row spacing if your implement is a split-row configuration. Other settings only need adjustment if the planter configuration is altered.

Procedure to Modify:

IMPORTANT: Perform this procedure at the beginning of the season or whenever the machine or implement configuration has changed. Verifying the accuracy of the values ensures proper implement function and can resolve issues with other features, such as section control. Once the dimensions are measured and entered, section control can be set and fine-tuned.

H113668—UN—22OCT15

Menu

1. Select the Menu button.

A106813—UN—21MAY21

Applications

2. Select the Applications tab.

A106814—UN—21MAY21

Equipment Manager

3. Access the Equipment Manager application.
4. See the individual procedures in this section for each profile.
5. If needed, add or modify the implement receiver settings. For more information, see Equipment Manager.
6. After measuring and changing values as needed, determine how the inputs are processed by selecting one of the following:

A92068—UN—16MAR18

Save

- Select Save to confirm all changes to the implement profile.

A92067—UN—16MAR18

Cancel

- Select Cancel to ignore recent changes to the profile and exit Implement Profile.

A94288—UN—23JUN17

Reset Profile

- Select Reset Profile to clear all of your inputs and return to factory defaults.

N0LMWLO,0000557-19-05MAY22

Implement Profile—Connection Type

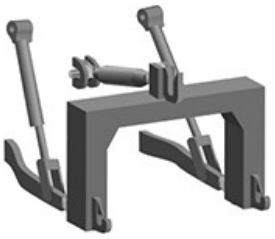
Connection Type allows selection of the style of hitch that connects the implement to the tractor.

Items Accessible within Connection Type:

A95543—UN—11MAY17

Drawbar

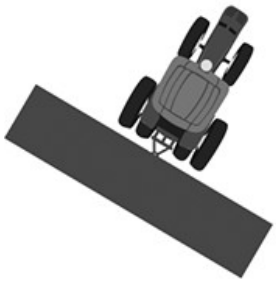
Drawbar—Is used when the implement is connected to the tractor drawbar.



A95544—UN—11MAY17

Rear 3-Point

Rear 3-Point—Is used when the implement is connected to the tractor hitch. There are two types of connections used with the rear 3-point: non-pivoting and pivoting.



A94285—UN—11MAY17

Non-Pivoting

Non-Pivoting—Is when the implement has a solid connection to the hitch. Non-pivoting is typically used with a fully integral implement or with some integral implements equipped with lift-assist wheels.

A94286—UN—11MAY17

Pivoting

Pivoting—Is when the implement has a pivot point behind the hitch connection. Pivoting is typically used with a semi-integral drawn implement.

Procedure to Modify:

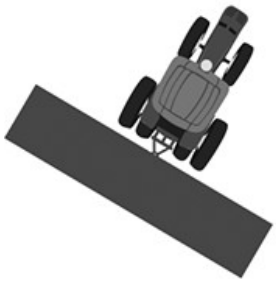
1. At any time: Select Save to confirm changes, select Cancel to ignore recent changes, or select Reset Profile to remove all inputs.
2. Select the input box and choose a connection type from the list.
3. If Rear 3-Point is selected, select the second input box that appears to input the type of Rear 3-Point Hitch in use.

PR79369,0000085-19-01OCT19

Connection Type—Rear 3-Point Hitch

Rear 3-Point Hitch allows selection of the style of 3-point on the implement.

Items Accessible on Rear 3-Point Hitch Page:



A94285—UN—11MAY17

Non-Pivoting

Non-Pivoting—Is when the implement has a solid connection to the hitch.

A94286—UN—11MAY17

Pivoting

Pivoting—Is when the implement has a pivot point behind the hitch connection.

Procedure to Modify:

A94261—UN—24AUG18

Radio Button

1. Select the radio button next to the hitch type that matches the implement configuration.

NOTE: If Pivoting hitch is selected, a Pivot Offset must be entered.

A92067—UN—16MAR18

Cancel

A92055—UN—20MAR18

OK

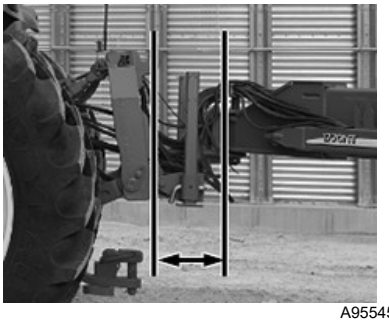
2. Select Cancel to close the page without saving, or select OK to save the selected hitch type.

PR79369,0000086-19-09MAY19

Connection Type | Pivot Offset

A94287—UN—11MAY17

Pivot Offset



A95545—UN—11MAY17

Pivot Offset

Connection Type | Pivot Offset is where the measurement for the hitch pivot offset is entered.

Pivot Offset—Is the distance from the hitch connection to the pivot point on the implement hitch.

Procedure to Modify:

1. Enter the field and drive in a straight line for a short distance with the implement lowered as if planting.

IMPORTANT: Measure along or parallel to the centerline of the tractor and implement.

2. Measure the distance from the hitch connection to the pivot point on the implement.

A92067—UN—16MAR18

Cancel

A92055—UN—20MAR18

OK

3. Enter the measurement using the number pad and

then select OK to save the entry or Cancel to close the page without saving.

PR79369,0000087-19-06MAY19

Implement Profile—Working Width

Working Width is the overall width of the implement and the style of row unit configuration on the implement.

Items Accessible within Working Width:

Row Layout—Is how the row units are configured.

A94289—UN—11MAY17

Single Row

- Single Row configurations plant with all the rows.

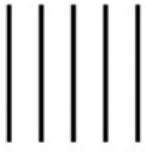
A94294—UN—11MAY17

Split Row Width

- Split-Row configurations can plant with all the rows (narrow spacing) or with every other row (wide spacing).

NOTE: When the hitch is moved while switching between narrow and wide spacing on a split-row implement, do not change the Lateral Offset Dimension. The rows are recentered when the hitch is moved.

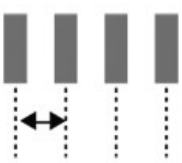
The split rows are typically further from the tractor than standard rows. Adjust the Work Point when switching between narrow and wide row spacing.



A94290—UN—11MAY17

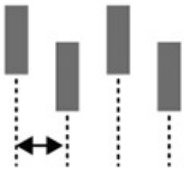
Number of Rows

Number of Rows—Shows the total number of rows on the implement. If the implement has a split-row layout, it also shows the number of rows used when Split Rows are Disabled (half the rows).



A94291—UN—11MAY17

Single Row Width



A94293—UN—11MAY17

Split Row Width

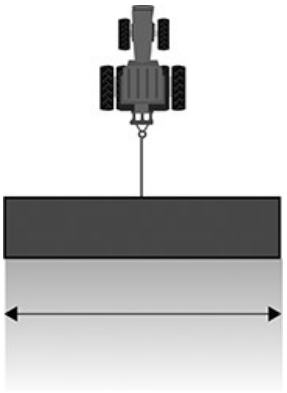
Row Width—Shows the row width between every row (total rows). If the implement has a split-row layout, it also shows the row width used when Split Rows are Disabled (half the rows).

Procedure to Modify:

1. Select the Row Layout input box and choose (from the list) the row layout that matches the implement configuration.
2. Select the Number of Rows / Row Width input box to enter the Working Width of the implement.

PR79369,0000088-19-27APR21

Working Width

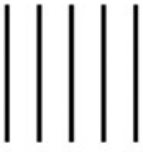


A94292—UN—11MAY17

Working Width

Working Width—Is used to establish the width of the area planted.

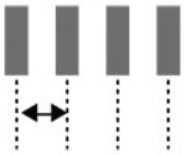
Items Accessible on Working Width Page:



A94290—UN—11MAY17

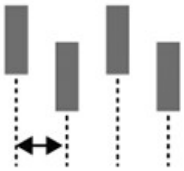
Number of Rows

Number of Rows—Is the total number of rows on the implement regardless of the configuration.



A94291—UN—11MAY17

Single Row Width



A94293—UN—11MAY17

Split Row Width

Row Width—Is the distance between each row regardless of the row alignment.

Procedure to Modify:

1. Select the Number of Rows input box to enter the value.
2. Select the Row Width input box to enter the value.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

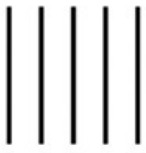
Cancel

3. Select OK to save the entry or Cancel to close the page without saving.

N0LMWLO,000031F-19-25JUN20

Working Width | Number of Rows

Working Width | Number of Rows is where the number of row units on the implement is entered.



A94290—UN—11MAY17

Number of Rows

Number of Rows—Is the total number of rows on the implement regardless of the configuration.

Procedure to Modify:

1. Count every row unit on the implement.

A92055—UN—20MAR18

OK

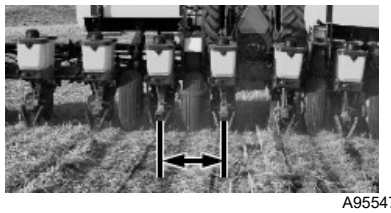
A92067—UN—16MAR18

Cancel

2. Enter the value using the number pad and then select OK to save the entry or Cancel to close the page without saving.

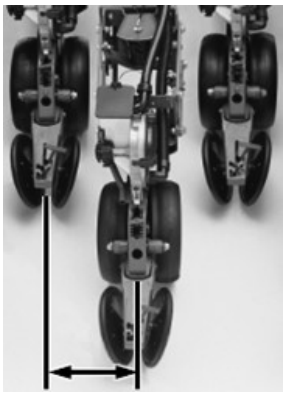
N0LMWLO,0000320-19-25JUN20

Working Width | Row Width



A95547—UN—11MAY17

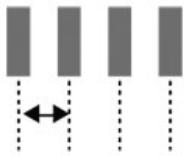
Single Row Width



A95546—UN—11MAY17

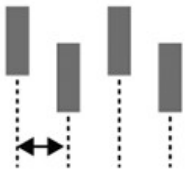
Split Row Width

Working Width | Row Width is where the distance between the row units is entered.



A94291—UN—11MAY17

Single Row Width



A94293—UN—11MAY17

Split Row Width

Row Width—Is the distance between each row regardless of the row alignment.

Procedure to Modify:

IMPORTANT: Measure perpendicular to the path of the implement, not at an angle.

1. Measure from the center of one row unit to the center of the next row unit.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

2. Enter the measurement using the number pad and then select OK to save the entry or Cancel to close the page without saving.

N0LMWLO,0000322-19-25JUN20

Implement Profile—Dimensions

Dimensions allow the machine controllers to track the implement and adjust the response of the seed meters as you move through the field.

Items Accessible within Dimensions:

Lateral Offset—Is how both the implement and tractor centerlines are aligned.

Center of Rotation—Is determined by the distance from the hitch pivot to the implement wheel axles.

Modify Lateral Offset When:

This value remains zero even when the hitch is moved on a split-row model. The rows are recentered when the hitch is offset.

Procedure to Modify:

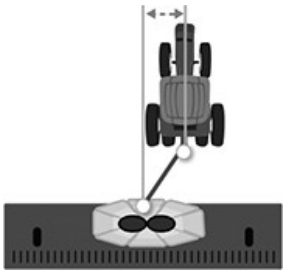
Select the input box to enter the Dimensions.

PR79369,000008C-19-27APR21

Dimensions

Dimensions allow the machine controllers to track the implement and adjust the response of the seed meters while moving through the field.

Items Accessible on Dimensions Page:



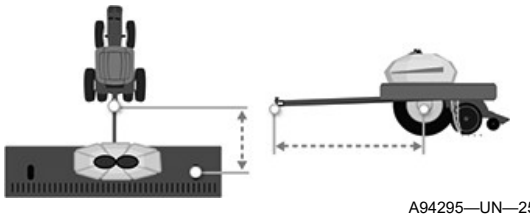
A94296—UN—11MAY17

Lateral Offset

NOTE: When the hitch is moved while switching between narrow and wide spacing on a split-row implement, do not change the Lateral Offset Dimension. The rows are recentered when the hitch is moved.

The split rows are typically further from the tractor than standard rows. Adjust the Work Point when switching between narrow and wide row spacing.

Lateral Offset—Is how both the implement and tractor centerlines are aligned.



A94295—UN—25JUN20

Center of Rotation

Center of Rotation—Is determined by the distance from the hitch pivot to the implement wheel axles.

Procedure to Modify:

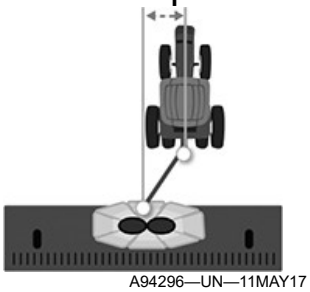
1. Lower the implement while unfolded and in the planting orientation.

NOTE: When the hitch is moved while switching between narrow and wide spacing on a split-row implement, the Lateral Offset remains zero.

2. Select the Lateral Offset input box to enter the direction and amount of offset.
3. Select the Center of Rotation input box to enter the rotation distance.

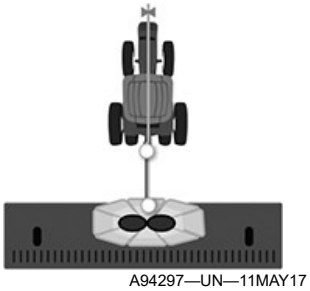
PR79369,000008D-19-27APR21

Dimensions | Lateral Offset



A94296—UN—11MAY17

Left Offset



A94297—UN—11MAY17

Center Offset

IMPORTANT: If the planter is a split-row model and the hitch is offset when planting split rows, do not adjust the lateral offset value in the software. The offset value remains zero because the planter rows are recentered when the hitch is moved.

NOTE: The split rows are typically further from the tractor than standard rows. Adjust the Work Point when switching between narrow and wide row spacing.

Lateral Offset allows selection of the direction of offset and the distance of the offset.

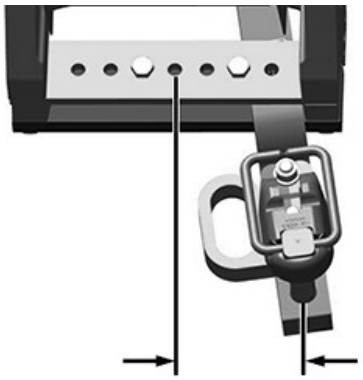
Procedure to Modify:

1. Adjust the hitch to match the correct implement orientation. (For more information, see the implement Operator's Manual.)

A94261—UN—24AUG18

Radio Button

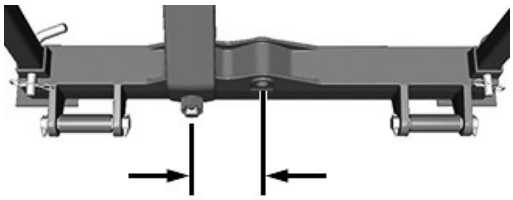
2. Select the radio button that matches the orientation of the implement.
3. For a left or right offset, measure the offset as follows:



A95542—UN—11MAY17

Drawbar Hitch

- **Drawbar Hitch**—Is measured from the tractor centerline to the drawbar pin.



A95541—UN—11MAY17

2-Point Hitch

- **2-Point Hitch**—Is measured from the center of the implement hitch to the center of the 2-point hitch.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

4. Enter the value using the number pad and then select OK to save the entry or Cancel to close the page without saving.

PR79369,000008E-19-07MAY21

Implement Profile | Work Point

Work Point allows the implement controller to know the position of the seed delivery and adjust the response of the seed meters while moving through the field.

Modify When:

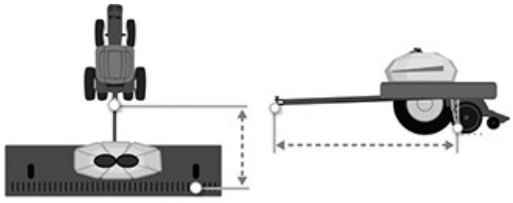
Switching between wide and narrow row spacing if the implement has two ranks or staggered row units.

Procedure to Modify:

1. Measure the distance from the drawbar pin or planter hitch pivot to the point where seed is dropped.
2. Select the input box to enter the Work Point dimension.

PR79369,000008F-19-06MAY19

Work Point



A94298—UN—06MAY19

Work Point

Work Point allows the implement controller to know the position of the seed delivery and adjust the response of the seed meters as you move through the field.

Section Control disengages the seed meters based on the work point. On implements with two ranks or staggered row units, you can set the work point to the front rank, the rear rank, or between the ranks.

NOTE: If you set the work point to the front or rear rows on two-rank implements, change the dimension when you switch between wide and narrow row spacing.

Procedure to Modify:

1. Lower the implement while unfolded and in the planting orientation.

IMPORTANT: Measure along the centerline of the implement, not at an angle.

2. Measure the distance from the hitch connection (drawbar pin or rockshaft) to the point of seed delivery.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

3. Enter the value using the number pad and then

select OK to save your entry or Cancel to close the page without saving.

PR79369,00000AD-19-05MAY22

Implement Profile | Sections

Sections allows you to assign row units to RowCommand sections. The software commands the row sections ON and OFF to avoid planting across previously planted areas.

Items Accessible within Sections:

Sections— is the quantity of sections configured.

Minimum - 1 section

Maximum - 48 row units total

Start Row— is the row number of the left-most row in a section.

End Row— is the row number of the right-most row in a section.

A92895—UN—22JUN17

Next

Next— advances to the next screen.

A92894—UN—22JUN17

Back

Back— returns to the previous screen.

A92067—UN—16MAR18

Cancel

Cancel— disregards any changes and closes the screen.

A92055—UN—20MAR18

OK

OK— saves all changes and closes the screen.

Modify When:

- You want to increase or decrease the number of rows controlled by each command section.

Procedure to Modify:

1. Select the Sections screen area.

IMPORTANT: Coordinate the Population Groups with RowCommand Sections. Do not divide a RowCommand section between two Population Groups.

NOTE: For the best performance, group the outer rows together if a GPS signal is marginal (grouping prevents unintentional row shutoff when the GPS signal drifts.

2. Select the Number of Sections input box and enter the number of sections using the number pad.
3. Select Next.

NOTE: The Start Rows default to the next row in a sequence. Default rows are not selectable for setup.

4. Select the End Row input box and enter a row number using the number pad.
5. Select Next to input the end row for each of the sections.
6. After all of the sections are set up, continue to the final screen and confirm the setup by selecting OK or return to the Sections screens by selecting Back.

PR79369,0000094-19-16OCT25

Implement Profile—Sensor Setup

Sensor Setup allows you to input the location and quantity of sensors on the implement. Select the one or two rank implement option for accurate sensor response.

Items Accessible within Sensor Setup:

Downforce Ranks—Is for selecting the number of planting ranks on the implement.

Gauge Wheel Downforce Sensors—Is for selecting the rows equipped with downforce sensors.

Fertilizer Sensors—Is for selecting the number of fertilizer sensors installed.

A92895—UN—22JUN17

Next

Next—Advances to the next screen.

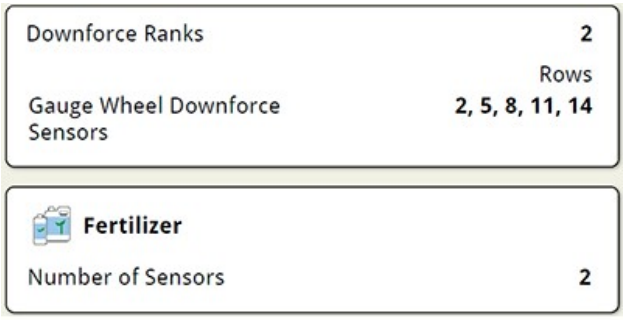
A92894—UN—22JUN17

Back

Back—Returns to the previous screen.

Modify When:

These settings are factory set and only need adjustment if the implement is reconfigured.



AX1400790—UN—14APR25

Sensor Setup

Procedure to Modify Sensor Setup:

1. Select the downforce screen area and select the number of ranks on the implement.
2. Enter the quantity of downforce sensors in the input box using the number pad.
3. Select Next.
4. Select the input box for each sensor and enter the row unit numbers equipped with a downforce sensor using the number pad.
5. Select the fertilizer screen area and select the number of fertilizer sensors on the implement.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

6. Select OK to save the change or Cancel to disregard the change.

PR79369,0000091-19-02MAY24

Mechanical Delay—Seed Placement

A94299—UN—24AUG18

On Delay

A94300—UN—24AUG18

OFF Delay

Mechanical Delay allows for adjustments controlling when the seed meters turn on and off in response to Section Control.

AX1401526—UN—21APR25

Mechanical Delay—Seed Placement

Items Accessible on Mechanical Delay Page:

These delays are used to calculate the response of Section Control.

Mechanical Delay Seed Placement—Is for setting the seed travel time from the point of seed release from the seed (bowl) disk to the soil.

A94299—UN—24AUG18

On Delay

Mechanical Delay On—Is the travel time of the initial seed released after the planter is lowered and the seed meter is commanded ON.

A94300—UN—24AUG18

OFF Delay

Mechanical Delay Off—Is the travel time of the final seed released after the planter is raised and the seed meter is commanded OFF.

Minimum Delay: 0.10 seconds

Default: Varies by implement and seed meter configuration

Maximum Delay: 15 seconds

A99030—UN—20MAR18

Performance Tuning

Performance Tuning—Icon opens the Section Control application. Performance tuning is used to correct skips and overlaps where rows cross, such as on headlands. Permormance tuning uses distance and speed to adjust mechanical delay settings.

Procedure to Modify Seed Placement:

IMPORTANT: The delay times are factory set. The accuracy of the times entered directly affect Section Control accuracy.

1. Follow the performance tuning setup. If additional adjustment is needed, change the mechanical delay as follows.
2. Unfold and raise the planter.
3. Activate all functions in preparation to plant.
4. Stand near a row unit where seed drop is visible.

NOTE: Use the Row Runoff procedure from the Diagnostics and Calibrations page to engage the seed meter.

5. Start a stopwatch and engage the seed meter at the same time, then stop the stopwatch when the first seed exits the row unit.

A94299—UN—24AUG18

On Delay

6. Select the Mechanical Delay On input box and enter the time recorded using the number pad.
7. Reset the stopwatch and engage the seed meter.
8. Start the stopwatch and disengage the seed meter at the same time. Stop the stopwatch at the moment the last seed exits the row unit.

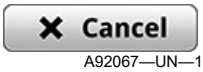
A94300—UN—24AUG18

Off Delay

9. Select the Mechanical Delay Off input box and enter the time recorded using the number pad.

A92055—UN—20MAR18

OK



A92067—UN—16MAR18

Cancel

10. Select OK to save the change or Cancel to disregard the change.

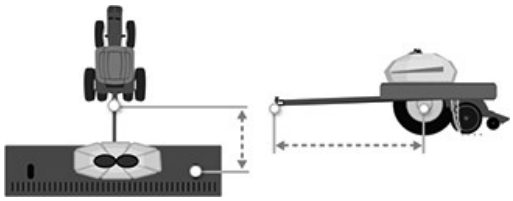
PR79369,00000AE-19-25JUN20

Dimensions | Center of Rotation

Dimensions | Center of Rotation is the lateral distance from the drawbar pivot point to the rear wheels.

Procedure to Modify:

IMPORTANT: Measure along the implement centerline, not at an angle.



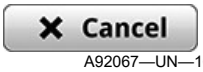
A94295—UN—25JUN20

Center of Rotation

1. Measure the distance from where the implement hitch pivots near the tractor to the implement wheel axles.

A92055—UN—20MAR18

OK



A92067—UN—16MAR18

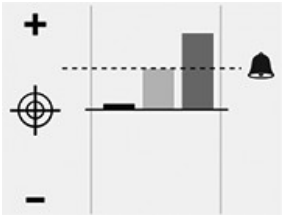
Cancel

2. Enter the value using the number pad and then select OK to save the entry or Cancel to close the page without saving.

PR79369,00000AF-19-25JUN20

Setup | Alarms

Setup | Alarms allows you to define the alarm limits for various functions on the implement.



A92057—UN—08MAY19

Graph Example

You can change the values for when the bars in the graph change from black to amber. You cannot change the values for when the bars in the graph change from amber to red.

Items Accessible on Setup | Alarms:

Population High— allows you to define an alarm at a percentage over the target population. Population rates that exceed this percentage trigger the alarm.

Population Low— allows you to define an alarm at a percentage under the target population. Population rates that fall below this percentage trigger the alarm.

Singulation Low— allows you to define an alarm at the percentage of seed singulation that you want to exceed. When seed singulation falls below this percentage, the alarm is triggered. Singulation is the placement of single seeds in the seed furrow.

Seed Spacing CV— allows you to define an alarm that triggers when spacing inconsistency reaches an undesired level. The coefficient of variation (CV) is a value that represents the consistency of seed spacing based on sensor readings.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

Fertilizer High Pressure— allows you to define an alarm for the maximum pressure in the liquid fertilizer system.

N0LMWLO,0000323-19-25JUN20

Diagnostics | RUC Hardware/Software

View row unit controller (RUC) Hardware/Software information.

Procedure to Access RUC/Software Page:

N118004—UN—22OCT15

Advanced Settings

1. Select the Advanced Settings button.

A93502—UN—24AUG18

About Tab

2. Select the About tab.

A93505—UN—11MAY17

RUC Hardware/Software

3. Scroll to select RUC Hardware/Software information.

NOTE: Sample information is shown.

Row		Rx Messages
1	Hardware Part Number— of controllers on the implement frame. Hardware Serial Number— of the controller. Software Part Number— installed on the controller. Software Version Number— installed on the controller.	43
2	Hardware Part Number— of controllers on the implement frame. Hardware Serial Number— of the controller. Software Part Number— installed on the controller. Software Version Number— installed on the controller.	26
3	Hardware Part Number— of the controller. Hardware Serial Number— of the controller. Software Part Number— installed on the controller. Software Version Number— installed on the controller.	29
4	Hardware Part Number— of the controller. Hardware Serial Number— of the controller. Software Part Number— installed on the controller. Software Version Number— installed on the controller.	17

A95599—UN—23JUN17

Close

4. Select to close.

PR79369,000005D-19-02OCT19

Diagnostics | Lifetime Totals

View implement lifetime seeding totals.

NOTE: These totals are accumulated over the lifetime of the implement. Lifetime Seeding Hours cannot be reset.

Items Accessible on Lifetime Totals Page:

A103575—UN—25SEP23

Lifetime Seeding Hours

Lifetime Seeding Hours:

Time Worked — total number of hours with at least one row seeding.

Area Worked — total number of acres the implement has seeded.

Hour Count — total number of hours with the key on.

PR79369,000005E-19-02MAY24

Diagnostics | Height Drives

Diagnostics | Height Drives allow you to configure the height-drives sensor to start and stop at different points in the raise and lower cycle.

Status Indicators:

A92871—UN—11MAY17

Current Height

Current Height— indicates the implement height and moves along the slide bar as the implement is raised and lowered.

A92872—UN—11MAY17

Start Height (Blue)

Start Height— indicates the position where the seed meter motors start.

A92873—UN—11MAY17

Stop Height (Green)

Stop Height— indicates the position where the seed meter motors stop.

- Minimum: 0% - Fully lowered
- Default: Start Height 50%
- Default: Stop Height 25%
- Maximum: 100% - Fully raised

Modify When:

- Seeds are on the soil surface when raising the implement at the ends of the field: reduce the Stop Height set point.
- Seeds are on the soil surface when lowering the implement at the ends of the field: reduce the Start Height set point.
- Skips occur when raising the implement at the ends of the field: increase the Stop Height set point.
- Skips occur when lowering the implement at the ends of the field: increase the Start Height set point.

Procedure to Modify:

1. Configure the implement for field operation.
2. Park in an area where the seed furrow openers can penetrate the soil to represent the planting position.

A92862—UN—24AUG18

Calibration

3. Perform a sensor calibration if any adjustments have been made to the sensor or to the implement configuration. Select Calibration and follow the on-screen instructions.

A92871—UN—11MAY17

Current Height

4. Lower the implement to the plant position. Obseve the Current Height indicator.
5. Raise the implement to the position that you want the seed meter motors to turn off. The recommend position is just as the gauge wheels lose contact with the soil.

NOTE: Settings below 20% are not recommended.

A94220—UN—22JUN17

Set

6. Select Set to establish the stop height.

A92873—UN—11MAY17

Stop Height

NOTE: The percentage shown on the Set button mirrors the frame position.

A92871—UN—11MAY17

Current Height

7. Raise the implement to the full height. Observe the Current Height indicator.
8. Lower the frame to the position that you want the seed meter motors to activate. The recommend position is just as the seed furrow openers contact the soil.

A92079—UN—22JUN17

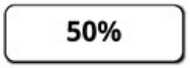
Set

9. Select Set to establish the start height.

A92872—UN—11MAY17

Start Height

NOTE: The percentage shown on the Set button mirrors the frame position.



A92147—UN—22JUN17

Input Box

10. To make small adjustment to the set point without changing the height of the implement, select either the Start Height or Stop Height input box and enter a value for the implement position.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

11. Select OK to save the settings or select Cancel to close without saving.

PR79369,000005F-19-25JUN20

Information and Settings | Alarm Notification

A92875—UN—11MAY17

Enabled

A92874—UN—11MAY17

Disabled

Alarm Notification allows you to enable or disable the alarm that indicates rows are commanded OFF by Section Control. If enabled, the alarm notifies you when planting into coverage and you are not viewing a page with a population chart. The alarm is enabled by default. Select to enable/disable Alarm Notification.

N0LMWLO,0000321-19-25JUN20

Information and Settings | Edit SCV Settings

Edit SCV Settings allows you to configure the tractor selective control valves (SCV) for specific implement functions. Proper configuration allows for ease of operation and proper seed placement.

SCV Control Mode Selection:

- Select automated when using a 30 series or newer John Deere tractor.
- Select manual when using an older John Deere tractor or a non-John Deere tractor.

Automated SCV Control Options:

30 Series or Newer John Deere Tractors with Power Beyond		
When to Use	**Detent Time**	**Function**
All seeding operations (preferred method)	Min — 10 s Default — 20 s Max — 180 s	Power Beyond maintains the downforce after the detent time expires. The SCV functions are available for opener control.
This mode is **NOT RECOMMENDED**. Power beyond is not functioning properly.	Continuous	Tractor hydraulic pump stays at a high standby pressure.

30 Series or Newer John Deere Tractors without Power Beyond		
When to Use	**Detent Time**	**Function**
Tractor is not equipped with power beyond.	Continuous	Downforce is maintained, but the tractor hydraulic pump stays at a high standby pressure.

Adjust Timer When:

- Increase timer if the openers are not fully raised or lowered.
- Decrease timer if cycle does not end before the next function is needed.

Manual SCV Control Options:

Older John Deere Tractors and non-John Deere Tractors with Power Beyond		
When to Use	**Detent Time (Timer must be configured in tractor settings)**	**Function (must be configured in tractor settings)**
All seeding operation (preferred method)	20 seconds	Power beyond maintains downforce after the detent time expires. The SCV functions are available for opener control. Float must be engaged using the on-screen function.
DO NOT OPERATE in this configuration.	Continuous	**DO NOT OPERATE** in this configuration.

Older John Deere Tractors and non-John Deere Tractors without Power Beyond		
When to Use	**Detent Time (Timer must be configured in tractor settings)**	**Function (must be configured in tractor settings)**
Tractor is not equipped with power beyond.	Continuous	Downforce is maintained, but the tractor hydraulic pump stays at a high standby pressure.
DO NOT OPERATE in this configuration.	Timed	**DO NOT OPERATE** in this configuration.

Extend and Retract Pressure Adjustment:

- Increase extend pressure if power beyond does not maintain down pressure following transition from SCV to power beyond.
- Decrease extend pressure to allow power beyond to take over downforce control faster.
- Increase retract pressure if power beyond is deactivated when seeding through ditches or over terraces.
- Decrease retract pressure if raise response is too slow.
- Maintain a minimum difference of 2068 kPa (20.6 bar) (300 psi) between extend and retract pressures.

Items Accessible on Edit SCV Settings Page:

Automated Mode Items

A92886—UN—11MAY17

Edit Settings

Edit Settings— allows you to assign implement functions to a specific SCV.

Procedure to Modify:

A95598—UN—11MAY17

SCV Settings

1. Select to begin the setup.
2. Select SCV control mode.

H116293—UN—30JAN17

Next

3. Select Next button.

A92886—UN—11MAY17

Edit Settings

4. Select Edit Settings to assign implement function to an SCV.
5. Select SCV control mode settings.

H116293—UN—30JAN17

Next

6. Select Next button.

A99109—UN—24AUG18

Save

7. Select Save button.
8. To restart the display, follow the on-screen instructions.

PR79369,00000A9-19-25JUN20

Information and Settings | Edit SCV Assignments

Edit Selective Control Valve (SCV) Assignments allows you to assign functions to a specific SCV. SCV assignments must be made so that the implement downforce system correctly controls the tractor hydraulics. The hydraulic hoses must be connected to the corresponding SCV to achieve the desired results.

Modify When:

A99782—UN—04SEP18

Edit SCV Settings

1. Select the desired SCV.
2. Select the implement function being controlled.

A92055—UN—20MAR18

OK

A92067—UN—16MAR18

Cancel

3. Select OK to save your selection or select Cancel to close the page without saving.

PR79369,00000AA-19-30JUL19

ExactRate Fertilizer Display Application

The following information contains the Onscreen Help for each application specific to this machine. This information is also available on the display. The section titles of the Operator's Manual match the names of the applications found on the display. To find a feature described in the Operator's Manual on the display, locate the section title at the top of the page. Access the application with the same name on the display.

For information on how to navigate to the desired application on the display, refer to the Access information at the beginning of each section.

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AZ06166,000073D-19-17OCT25

Onscreen Help Navigation

There are three ways to access Onscreen Help through the Generation 4 CommandCenter display:

Access Contextual Help

N118166—UN—30MAY17

Help Information, G4 Displays

AX1398598—UN—31MAR25

Help Information, G5 Displays

The help icon is found in the title bar of most pages of the on-screen display. Select the help icon for quick access to information about the functions currently being displayed on-screen.

Access Help Center

T8T8742—UN—20JAN20

Help

Books in the Help Center are organized according to applications found in the display menu. In addition to specific application help, there are books in the list with information about the display, machine, and implements. These books contain additional content not found in application books and cannot be accessed using contextual help.

To access the Help Center, select Help from the shortcut bar at the bottom of the run page.

Alternative Procedure to Access Help Center

H113668—UN—22OCT15

Menu

1. Select Menu from the shortcut bar at the bottom of the run page.

T8T8741—UN—20JAN20

Applications

2. Select the Applications tab.

T8T8740—UN—20JAN20

Help

3. Select Help.

Searching Help Center

Use the search bar to search the Help Center for words or phrases.

H128813—UN—05FEB20

Search Bar

Search Bar— Select to enter text in the search bar.

H128815—UN—05FEB20

Search

Search— Select to search for help pages containing the search bar text.

H128814—UN—05FEB20

Clear

Clear— Delete the text in the search bar.

Browsing Help Center

H128817—UN—05FEB20

Back Button

H128818—UN—05FEB20

Forward Button

Navigate forward and back to previously viewed pages. These buttons work similar to a web browser.

H128816—UN—05FEB20

Help Contents

Select the Help Contents button to open a complete list of books in the Help Center and browse for more information.

AZ06166,0000739-19-17OCT25

Alerts and Messages

Display software contains many different alerts and messages designed to notify you of safety warnings, service warnings, hazardous or dangerous conditions, and general messages.

T8T8743—UN—21JAN20

Example Alert

Alert— a display window that is normally triggered by a diagnostic trouble code (DTC) and communicates the DTC information to you.

N148316—UN—21JAN20

Information Alert

Information Alert— a condition has been detected that may degrade performance of certain functions. The machine or equipment can continue to operate without damage. You should monitor the condition and consider taking the recommended action.

N148317—UN—21JAN20

Service Alert

Service Alert— a condition exists that requires operator action to avoid damage, a potential hazard, or significant performance reduction. The machine or equipment may be damaged or significant performance reduction may occur if action is not taken. You should operate in a different manner or service the equipment.

N148318—UN—21JAN20

Stop Alert

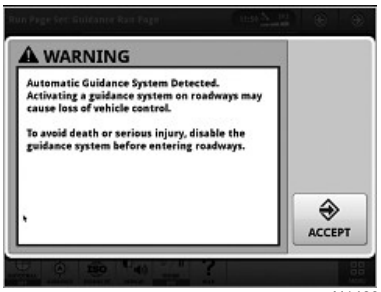
Stop Alert— a serious or hazardous condition exists that requires operator action. The machine or equipment is being damaged. Primary function cannot be continued or must stop due to a legal requirement. You should stop the engine or system immediately. If the engine is off, do not start the engine.

N148319—UN—21JAN20

Example Message

Message— a user interface element that communicates information to you and prompts you for a response. It may display as a small or full-screen window.

- Example: Are you sure you want to exit the new track creation sequence?



N148320—UN—21JAN20

Example Safety Warning

Safety Warning— a user interface element that communicates a warning to you and requires you to accept the warning before continuing. It may display as a small or full screen window.

- Example: Activating a guidance system on roadways may cause loss of vehicle control.

N148321—UN—21JAN20

Example Window Shade Message

Window Shade Message— a user interface element that drops down from the top of the screen to communicate a message to you. It usually goes away after a few seconds so that it does not block the user interface.

- Example: Communication to ISOBUS device lost. If you did not disconnect the device on purpose, check harness connection.

AZ06166,000073A-19-12JUN24

ExactRate Application

Access ExactRate

Access Application Through Display:

H113668—UN—22OCT15

Menu

1. Select Menu.

N119118—UN—23SEP16

Machine Settings

2. Select Machine Settings tab.

N140703—UN—03JUN19

ExactRate

3. Select the Access ExactRate application.

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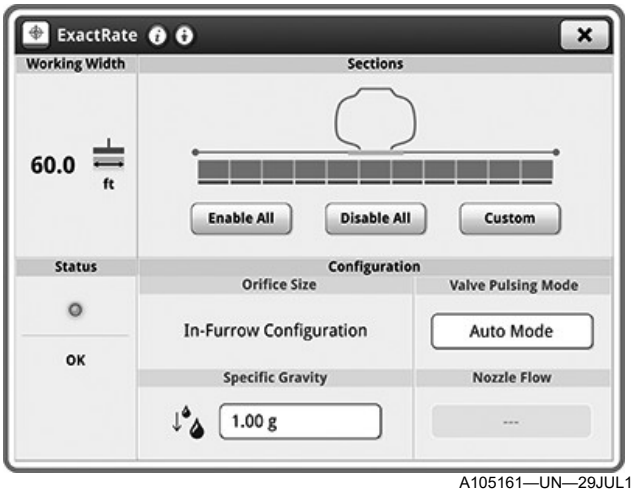
MM95366,000037B-19-17OCT25

ExactRate



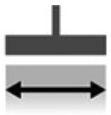
A105161—UN—29JUL19

ExactRate Main Page

The ExactRate application shows the current working width, valve-body status, section status, and valve-body configuration. The valve-body and delivery section configurations are accessible from this page.

NOTE: Main page shown is for example only. Your main page may differ depending on options or connected equipment.

Items Accessible on ExactRate Main Page:



A98923—UN—15MAR18

Working Width

Working Width— shows the current width of product application. The width adjusts as sections are commanded ON and OFF. Select to access working width details.

A105162—UN—29JUL19

Sections

Sections— display the Status of each section.

Default: Each row is a section when operating with Section Control.

A104091—UN—10APR19

Enable All

Enable All— select to enable all sections.

A104092—UN—10APR19

Disable All

Disable All— select to disable all sections.

A104093—UN—10APR19

Custom

Custom— provides manual control of specific sections. Select to command sections manually ON and OFF.

H114656—UN—05JAN17

Status

Status— indicates whether a fault is detected or everything is OK. Select to open a detailed status page.

Configuration— indicates the delivery method, specific gravity, valve pulsing mode, and nozzle flow.

Orifice Size— indicates the delivery method. Each method has its own orifice size.

A104096—UN—10APR19

Specific Gravity

Specific Gravity— allows the system to compensate and maintain the target rate when the solution is lighter or heavier than water. Select to enter the specific gravity of the solution.

Valve Pulsing Mode— allows you to adjust how the valve regulates flow at each row.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

- Section setup.
- Turn compensation activation.
- Valve-body lighting control.
- Flow Detection Sensitivity.

Run Page Modules

Modules for this application can be added to the run pages using Layout Manager.

A104822—UN—18JUN19

Master Apply

NOTE: Additional modules are available. See Available Run Modules for descriptions of each.

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PR79369,000064A-19-17OCT25

Specific Gravity

Use the table to identify the specific gravity for the weight of your solution. Specific gravity allows the system to compensate and maintain the target rate when the solution is lighter or heavier than water.

Solution Weight kg/L (lb/gal)	Example	Specific Gravity
0.84 (7)		0.84
0.96 (8)		0.96
1 (8.34)	Water	1.00
1.08 (9)		1.08
1.2 (10)		1.20
1.28 (10.65)	28% Nitrogen Solution	1.28
1.32 (11)	7-27-7 Fertilizer	1.32
1.33 (11.06)	32% Nitrogen Solution	1.33
1.37 (11.4)	10-34-0 Fertilizer	1.37
1.38 (11.5)	12-0-0-26 Fertilizer	1.38
1.39 (11.6)	11-37-0 Fertilizer	1.39
1.44 (12)		1.44
1.5 (12.5)		1.50
1.56 (13)		1.56
1.62 (13.5)		1.62
1.68 (14)		1.68

Fertilizer weights vary depending on such things as raw materials and impurities in the solution. The specific gravity values in the chart are approximate. To calculate the specific gravity of your solution, perform the following calculation.

Weigh a specific volume of fertilizer solution. Weigh an identical volume of water. Divide the fertilizer weight by the water weight.

$$\frac{\text{Fertilizer Weight}}{\text{Water Weight}} = \text{Specific Gravity}$$

Modify When:

Enter the corresponding specific gravity whenever you switch solutions.

Procedure to Modify:

A104096—UN—10APR19

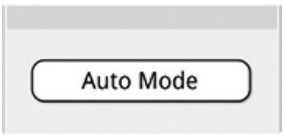
Specific Gravity

Select the input box and use the number pad to enter the corresponding value from the chart.

Default Range: 0.84 to 1.96

MM95366,000037D-19-26JUN19

Valve Pulsing Mode



A98925—UN—19MAR18

Valve Pulsing Mode

Valve Pulsing Mode allows you to select the desired pulsing mode for the application. Valve Pulsing Mode allows you to adjust how the target rate flow behaves at each row. Valve pulsing also enables the machine to apply an even rate when turn compensation is active.

Select the Valve Pulsing Mode button to change the mode.

A99056—UN—15MAR18

OFF

(Pulsing) OFF— commands the valve to be fully open. Overapplication is likely in this mode as the system can only reduce the flow by driving the system pressure to the minimum.

A99054—UN—15MAR18

Auto Mode

Auto Mode— actively manages system pressure and nozzle duty cycle to achieve the largest flow rate range. Turn compensation is only active in this mode.

A99055—UN—15MAR18

Fixed Mode

Fixed Mode— actively manages system pressure but not nozzle duty cycle. Duty cycle is defined by the operator. Too much or too little application may occur in this mode if the target flow rate cannot be achieved by only varying the pressure.

NOTE: Flow rate is not adjusted at each row while turning.

MM95366,000037E-19-20SEP19

Available Run Page Modules

Modules for this application can be added to the run pages using Layout Manager.

ExactRate Run Page Modules:

N140703—UN—03JUN19

ExactRate

The ExactRate modules are available by selecting the ExactRate application in the Layout Manager.

A99040—UN—16MAR18

Solution Pump ON/OFF

Solution Pump— controls the pump. Activates and deactivates the pump.

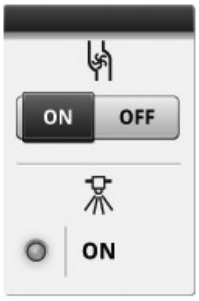
A104822—UN—18JUN19

Master Apply ON/OFF

Master Apply— provides master control of the valves in the valve bodies. Activates and deactivates all of the valves in the enabled sections.

NOTE: Master Apply cannot be enabled/disabled by the user. The planter system toggles the master ON/OFF status based upon planting state.

NOTE: EPG must be turned ON.



A104817—UN—17JUN19

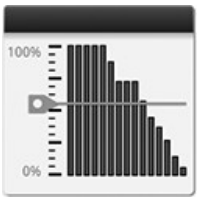
Controls ON/OFF

Controls— select to provide control of the pump (top) and the valve bodies (bottom). Activate or deactivate the pump or all of the valves in the enabled sections.

A98962—UN—16MAR18

Section Control

Section Control— provides control of the valve body sections. Enable All allows control of all the valve bodies using the master control ON/OFF. Disable All makes all the sections disabled. Custom opens the Sections | Custom page to enable or disable specific sections.



A98978—UN—15MAR18

Section Flow Percentage

Section Flow Percentage— shows the Section flow percentage. This percentage does not represent product rate.

NOTE: The bars are a representative of the Section flow percentage. The bar count is equal to the total number of sections configured in the system.

- The gray line indicates the average of all the sections.
- The left-most bar is section one.
- Valves associated to the section that are fully open have bars at 100%.

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PR79369,000064B-19-17OCT25

ExactRate | Status

The ExactRate | Status displays the status of the sections and messages about the rows associated to the sections.

Items Accessible on ExactRate Status Page:

A105163—UN—29JUL19

Status

Status— indicates the status of each section and row.

Row Status— select to access more information for row status.

H114657—UN—05JAN17

Faults Detected

Faults Detected— indicates either an electrical fault, flow error (high or low), or a fault within a valve body.

H114656—UN—05JAN17

OK

OK— indicates that no faults are present.

NOTE: The OK status is related to faults and flow errors, not product flow or rate.

A94279—UN—22JUN17

Scroll Left

Section Scroll Left— changes the status list to display the next section.

A98947—UN—15MAR18

Section Number

Section Selection— shows the status of the section selected. Select to choose a section from a list.

A94280—UN—22JUN17

Scroll Right

Section Scroll Right— changes the status list to display the next section.

A92875—UN—11MAY17

Checked

Indicate Faulted Turrets— briefly lights actively faulted turrets for visual inspection from the cab.

A92874—UN—11MAY17

Unchecked

Indicate Faulted Turrets— default state of indicate faulted turret process.

Procedure to Modify:

1. Select the scroll buttons until you reach the section that you want to view.
2. To view the Row | Status page, select a row number within that section.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

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MM95366,0000380-19-17OCT25

Section Status

N118004—UN—22OCT15

Advanced Settings

Each section can be a single row or multiple rows. To configure the sections, see Advanced Settings.

N119616—UN—14NOV16

Section Ready

Section Ready— indicates that the section is enabled and is ready to deliver product.

N125628—UN—14NOV16

Section OFF

Section OFF (Automatic)— indicates that Section Control commanded the section OFF.

A99027—UN—15MAR18

Section Active

Section Active— indicates that the section has been commanded to apply product.

N119617—UN—14NOV16

Row Applying

Row Applying— indicates that the section (green) is active and the row (blue) is applying product.

N122954—UN—14NOV16

Row Fault

Row Fault— indicates that the section (green) is active, but the row (red) has a fault or a flow error. The row is not applying at the target rate.

N122955—UN—14NOV16

Section Disabled

Section Disabled— indicates that the section is locked out of the system commands.

MM95366,0000381-19-29JUL19

Row | Status

The Row | Status displays the status of the sections and messages about the rows associated to the sections.

Items Accessible on Row | Status Page:

H114657—UN—05JAN17

Faults Detected

Faults Detected— indicates an electrical fault or a flow error within a valve body.

H114656—UN—05JAN17

OK

OK— indicates that there are no faults or flow error within the valve bodies.

H114662—UN—05JAN17

Check Mark

Check Mark— indicates a normal state for the valve body.

H114663—UN—05JAN17

Exclamation Point

Exclamation Point— indicates a fault condition within the valve body.

Fault Conditions:

— Subnet 1 sync line runtime fault detected

— Valve plug sensor high current detected

— Valve low current detected

— Valve is stuck open

— Valve solenoid sticking detected

A99030—UN—20MAR18

Diagnostic Readings

Diagnostic Readings— provides additional information about the selected valve body. Select to view hardware identification numbers, supply voltages, and more.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

MM95366,0000382-19-01OCT19

Sections | Custom

The Sections | Custom page allows you to enable and disable individual sections or all sections. These are virtual sections that make up the machine configuration. There is also a link to the section setup page.

Items Accessible on Sections | Custom Page:

A104879—UN—25JUN19

Section Status Preview

The yellow bounding box shows which sections are displayed for customization. To move the yellow bounding box, select a different section.

NOTE: The sections are numbered from left to right.

A104091—UN—10APR19

Enable All

Enable All— select to enable all sections.

A104092—UN—10APR19

Disable All

Disable All— select to disable all sections.

A98953—UN—16MAR18

Disabled

Disable— select to disable all the rows on the selected section.

A98954—UN—16MAR18

Enabled

Enable— select to enable all the rows on the selected section.

A91605—UN—23JUN17

Edit

Customize Sections— select to configure the number of sections and the number of rows per section.

N118004—UN—22OCT15

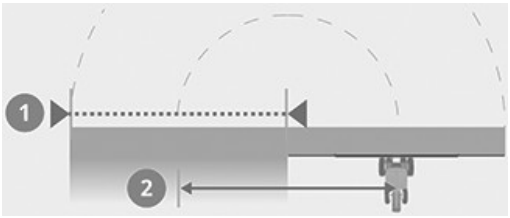
Advanced Settings

Advanced Settings— access further adjustments and less common settings.

PR79369,000064C-19-27APR21

Working Width

Working Width is automatically calculated by the ExactRate control unit based on the number of sections and section configuration.



A105532—UN—23AUG19

Working Width

Adjustments to Working Width (1) can require changes in Track Spacing (2) as a result.

Procedure to Modify:

If the working width displayed is not equal to the expected width, then verify that:

A99029—UN—16MAR18

Custom

- The correct number of Sections are enabled. Return to the main page and select Custom to change the setup.

N118004—UN—22OCT15

Advanced Settings

- The correct number of sections are configured in Advanced Settings. Select Advanced Settings, then Total Sections input.
- The Section Setup information is entered correctly in Advanced Settings. Select Advanced Settings, then Section Setup.

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MM95366,0000384-19-17OCT25

Information and Settings | ExactRate

The Information and Settings | ExactRate page allows you to adjust less common settings.

Items Accessible on Information and Settings | ExactRate:

A93500—UN—24AUG18

Settings

Settings Tab

System Plumbing— allows you to establish the number of ExactRate sections on the planter and the number of valve bodies in each section.

NOTE: The section setup only applies to the row configuration that uses fertilizer. Ignore the rows without fertilizer on split-row planters.

A105199—UN—29JUL19

Input Box

Total Sections— is the number of sections that the rows with fertilizer are divided into. To select the number of sections from a list, select the input box.

A104099—UN—10APR19

Section Configuration

Section Configuration— allows you to configure the number of rows in each section. Select to enter the setup page.

Total Width— is calculated using the inputs in Work Setup.

A92875—UN—11MAY17

Checked

Turn Compensation— allows the system to maintain the target rate at every row while turning. Select the checkbox to enable turn compensation.

Valve Body Lighting— allows you to illuminate the light on the valves and adjust the brightness.

Flow Detection— senses flow deviation within a valve body and displays a flow error message. Sensitivity is adjustable.

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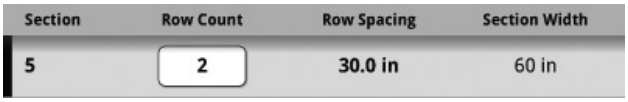
PR79369,000064D-19-17OCT25

Section Setup

The Section Setup allows you to configure the number of rows in each section.

Items Accessible on Section Setup page:



A104880—UN—25JUN19

Section Setup

Section— indicates each section number from left to right across the planter.

A99053—UN—16MAR18

Input Box

Row Count— allows you to enter the number of rows in a section. Select to input the number of rows.

Row Spacing— is the distance between each row based on the Work Setup.

Section Width— is automatically calculated based on the row spacing and number of rows in the section.

A92068—UN—16MAR18

Save

Save— saves the configuration.

A92067—UN—16MAR18

Cancel

Cancel— closes the page without saving changes.

A94288—UN—23JUN17

Reset

Reset— returns the configuration to the factory settings. Any previous changes are lost.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

MM95366,0000386-19-25JUN19

Boost Setup

Boost Setup allows specific rows to apply a rate that is higher or lower than the target.

Items Accessible on Boost Setup:

A92875—UN—11MAY17

Checked

Enabled— indicates that the boost rate is active. Select to change the status.

A92874—UN—11MAY17

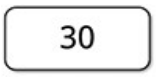
Unchecked

Disabled— indicates that the boost rate is inactive. Select to change the status.

A99048—UN—16MAR18

Input Box

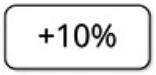
Row Start— indicates the beginning row number that the boost affects when enabled. Select to input the row number.



A99049—UN—16MAR18

Input Box

Row End— indicates the ending row number that the boost affects when enabled. Select to input the row number.



A99050—UN—16MAR18

Input Box

% Rate— indicates the percent over or under the target rate that is applied when the boost is enabled. Select to choose the percentage from a list.

NOTE: The percentages are in increments of five. Zero is not available. Disable the boost for zero effect.

MM95366,0000387-19-25JUN19

Valve Body Lighting

Valve Body Lighting allows you to illuminate the light on the valves and adjust the brightness. All the lights illuminate regardless of status.

NOTE: The power generation system must be engaged to illuminate the lights.

Items Accessible on Valve Body Lighting:

A92875—UN—11MAY17

Checked

Use Manual Lighting— select the checkbox to illuminate the lights.

A98970—UN—16MAR18

(Low, Medium, High)

Brightness— determines the level of illumination. Select low, medium, or high brightness.

PR79369,000064E-19-27APR21

Flow Detection

Flow Detection senses when there is a deviation from the target rate within a valve body. A flow error message is displayed when the application rate goes above or below the target rate.

Items Accessible on Flow Detection:

A92875—UN—11MAY17

Enable

Enable— select the checkbox to enable flow detection.

A98972—UN—16MAR18

Low, Medium, High

Sensitivity— select to change the sensitivity of the flow detection. For example, a sensitivity setting of low waits for a larger deviation above or below the target rate before a flow error is reported.

H116289—UN—27JAN17

Alarm

Alarm— the selected alarm type will trigger when a flow detection error is active. Select the radio button next to the alarm type you wish to receive.

PR79369,000064F-19-27APR21

Flow Detection Alarm

Flow Detection Alarm allows you to set the type of alarm that will trigger when a flow detection error is active.

Available Flow Detection Alarms:

Window Shade Message and Audible Beep— select if you want to receive both a window shade message and an audible beep whenever a flow detection error is active. This is the default setting.

Audible Beep Only— select if you only want to receive an audible beep.

Window Shade Message Only— select if you only want to receive a window shade message.

No Alarms— select if you do not want to receive any alarms when a flow detection error is active.

Procedure to Modify:

H116289—UN—27JAN17

Radio Button

Select the Radio Button next to the type of alarm you wish to receive.

PR79369,0000647-19-27APR21

Row | Readings

The Row | Readings displays hardware and software information for each row.

Items Displayed on Row | Readings Page:

Source Address— displays the network identifier for each of the electronic control units/functions.

Hardware Part Number— displays the part number of hardware.

Hardware Serial Number— displays the serial number of hardware.

Hardware Manufacture Date— displays the hardware date of manufacture.

Software Part Number— displays the machine software part number.

Software Version— displays the current software version number.

Supplied Voltage— displays the measured supply voltage for each row in units of volts.

Valve A Current— displays the current in units of milliamps for the solenoid valve A on the selected row.

Valve B Current— displays the current in units of milliamps for the solenoid valve B on the selected row.

Valve A PWM Value— displays the duty cycle value for the solenoid valve A on the selected row in a percentage.

Valve B PWM Value— displays the duty cycle value for the solenoid valve B on the selected row in a percentage.

Items Accessible on Nozzle Body | Readings Page:

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

N0LMWLO,0000094-19-07NOV19

Flow Detection | Diagnostics

Flow Detection | Diagnostics page displays information for liquid flow controller statuses, pressure sensor readings, and pressure sensor controls.

A104149—UN—17APR19

General

General— displays a status report from the flow detection modules.

A104148—UN—17APR19

Sensor Readings

Sensor Readings— displays readings from the pressure sensors for each row.

A104147—UN—17APR19

Sensor Control

Sensor Control— displays the status of the row flow pressure sensors and allows you to enable/disable each row.

PR79369,0000650-19-27APR21

Flow Detection | Diagnostics | General

Flow Detection | Diagnostics | General page displays a status report from the flow detection modules.

Items Displayed on Flow Detection | Diagnostics | General Page:

Flow Detection Modules— display the status of the flow detection modules. Modules that report issues have a selectable Status Indicator. Select the controller reporting issues to view the status of that controller.

Status— displays the number of the controller you have selected and more information on the status of the selected liquid flow controller that reported issues.

PR79369,0000651-19-27APR21

Flow Detection | Diagnostics | Sensor Readings

Flow Detection | Diagnostics | Sensor Readings page displays readings from the pressure sensors for each row.

Items Displayed on Flow Detection | Diagnostics | Sensor Readings Page:

Row— indicates which row the corresponding pressure sensor readings are for.

Supply (V)— displays the measured supply voltage for each row in units of volts.

Signal (V)— displays the measured signal voltage for each row in units of volts.

Pressure (kPa)— displays the current pressure measured for each row in units of kilopascals.

PR79369,0000652-19-27APR21

Flow Detection | Diagnostics | Sensor Control

Flow Detection | Diagnostics | Sensor Control page displays the status of the row flow pressure sensors and allows you to enable/disable each row.

Items Displayed on Flow Detection | Diagnostics | Sensor Control Page:

Row— indicates the row corresponding to each flow pressure sensor.

A104146—UN—17APR19

Status Indicator

Status— displays a status indicator button for each row that reports an issue. Select the status indicator to view the error or errors being reported by the selected sensor.

A92875—UN—11MAY17

Check Box

Enabled— displays a checkbox for each row to enable/disable the corresponding row.

NOTE: Once a sensor is disabled, it will remain in the disabled state until it has been enabled again.

A104151—UN—17APR19

Enable All

Enable All— allows you to enable all rows when you select the button.

A104152—UN—17APR19

Disable All

Disable All— allows you to disable all rows when you select the button.

PR79369,0000653-19-27APR21

Flow Detection | Status

Flow Detection | Status page displays the status for the selected controller/sensor.

Items Accessible on Flow Detection | Status Page:

A104146—UN—17APR19

Faults Detected

Faults Detected— indicates that one or more faults are present. Controllers/Sensors with faults are selectable. Press the status indicator to view additional details for the faulty controller/sensor.

H114656—UN—05JAN17

OK

OK— indicates that no faults are present.

PR79369,0000654-19-27APR21

Row | Row Flow Pressure Sensor

The Row | Row Flow Pressure Sensor page displays when the Faults Detected status indicator is selected on the Sensor Control tab. The reason or reasons causing the fault are listed onscreen.

Items Displayed on Row | Row Flow Pressure Sensor Page:

H114657—UN—05JAN17

Faults Detected

Faults Detected— indicates that the pressure sensor is reporting a fault.

H114663—UN—05JAN17

Exclamation Point

Exclamation Point— indicates a fault condition within the pressure sensor.

PR79369,0000655-19-27APR21

ExactRate Solution System | Diagnostics

ExactRate Solution System | Diagnostics displays information for the solution system switch and sensor readings.

Items Accessible on ExactRate Solution System | Diagnostics Page:

H127663—UN—08OCT19

Switch Readings

Switch Readings— displays readings of the various solution system digital inputs.

H127664—UN—08OCT19

Sensor Readings

Sensor Readings— displays readings from the solution system analog sensors.

N0LMWLO,0000095-19-24OCT25

ExactRate Solution System | Diagnostics | Switch Readings

ExactRate Solution System | Diagnostics | Switch Readings page displays information for the solution system digital inputs.

Items Accessible on ExactRate Solution System | Diagnostics | Switch Readings Page:

EPG Status— displayed as either on or off.

Boom Isolation Valve Status— displayed as either open or closed.

Boom Isolation Valve Command— displayed as either open or closed.

Flowmeter Power— displayed as either on or off.

Height Status— displayed as either down or up.

PR79369,0000656-19-17OCT25

ExactRate Solution System | Diagnostics | Sensor Readings

ExactRate Solution System | Diagnostics | Sensor Readings page displays information for the solution system analog sensors.

Items Accessible on ExactRate Solution System | Diagnostics | Sensor Readings Page:

Flow Rate— displays the value in units of gallons per minute (gal/min).

Flowmeter Frequency— displays the value in units of hertz (Hz).

Ground Speed— displays the value in units of miles per hour (mph).

Pump Speed— displays the value in units of revolutions per minute (rpm).

Pump Speed Frequency— displays the value in units of hertz (Hz).

Pump Commanded Current— displays the value in units of milliamps (mA).

Pump Actual Current— displays the value in units of milliamps (mA).

Boom Pressure Sensor Voltage— displays the value in units of volts (V).

Pressure— displays the value in units of pounds per square inch (psi).

Yaw Rate— displays the value in units of degrees per second (deg/sec).

PR79369,0000657-19-27APR21

Liquid System Application

Access Liquid System

Access Application Through Display:

H113668—UN—22OCT15

Menu

1. Select Menu.

N119118—UN—23SEP16

Machine Settings

2. Select Machine Settings tab.

A99009—UN—16MAR18

Liquid System

3. Select the Liquid System application.

MM95366,000038A-19-20SEP19

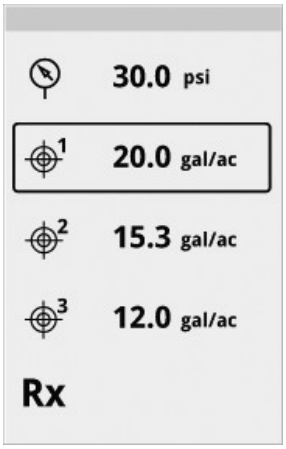
Liquid System

A107202—UN—09JUL20

Liquid System Main Page

The Liquid System application shows the target rate selections and system pressures.

Items Accessible on Liquid System Main Page:



A105841—UN—30SEP19

Target Rate

Target Rate— highlights the selected target rate and shows the other preset targets. Select to edit the presets.

A107203—UN—09JUL20

Minimum Pressure

Minimum Pressure— shows the pressure that is maintained in the system even if a slow ground speed commands a lower pressure.

NOTE: Minimum pressure is maintained unless all sections are commanded OFF or the solution pump is turned OFF. The value of the minimum pressure is not changeable by the operator.

A107204—UN—09JUL20

Apply OFF Pressure

Apply OFF Pressure— shows the target pump pressure when not spraying. Select to enter a pressure level.

NOTE: If product is not applied for 30 minutes, a pump timer shuts off the pump.

Maximum Setting: 380 kPa (3.8 bar) (50 psi)

Recommended Setting: Set slightly below the operating pressure. The operating pressure appears on the Tank Application run page module.

A99004—UN—16MAR18

Pressure Relief

Pressure Relief— releases boom pressure by opening row valves when toggled to ON. Pump must be OFF.

N118004—UN—22OCT15

Advanced Settings

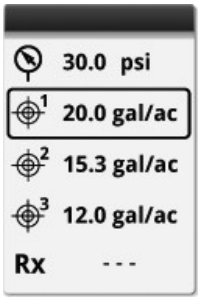
Advanced Settings— access further adjustments and less common settings.

- Liquid system response

Run Page Modules:

Modules for this application can be added to the run pages using Layout Manager.

Example:



A105842—UN—30SEP19

Target Rate

Target Rate— displays target rates that have been set up. The current rate is outlined. To change the rate selection, select the module.

NOTE: Additional modules are available. See Available Run Modules for descriptions of each.

PR79369,000065B-19-27APR21

Pressure Relief

Pressure Relief allows the release of pressure trapped between the pump and the valve bodies when the pump is OFF.

Procedure to Modify:

1. Turn electric power generator (EPG) on.
2. It is recommended to raise the planter. Raising the planter allows you to see fluid coming out of the valve bodies. If you do not want to raise the planter, it is not required in order to relieve the pressure.

A99040—UN—16MAR18

Solution Pump OFF

3. Turn off the solution pump from the tank system application or with the solution pump run page module.

A99057—UN—16MAR18

Pressure Relief ON

4. Turn on the pressure relief feature from the liquid system application.

The valve bodies open for 6 seconds to relieve the pressure. It is recommended to perform this procedure at least twice to ensure that all pressure is released.

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PR79369,000065C-19-27APR21

Available Run Page Modules

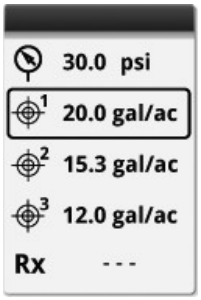
Modules for this application can be added to the run pages using Layout Manager.

Liquid System Run Page Modules:

A99009—UN—16MAR18

Liquid System

The Liquid System modules are available by selecting the Liquid System application in the Layout Manager.



A105842—UN—30SEP19

Target Rate

Target Rate— displays target rates that have been set

up. The current rate is outlined. To change the rate selection, select the module.

A105845—UN—30SEP19

OFF Pressure

Apply OFF Pressure— displays the pressure that the system maintains when the pump is ON and the master control is OFF. To set a pressure, select the module.

A99014—UN—16MAR18

Pressure Relief

Pressure Relief— activates a mode that releases the pressure between the pump and the valve bodies when the pump is shut OFF.

NOTE: The valve bodies open for 6 seconds to relieve the pressure.

MM95366,000038D-19-09OCT19

Information and Settings | Liquid System

The Information and Settings | Liquid System application allows you to set the response time of the liquid system.

Items Accessible on Information and Settings | Liquid System:

A93500—UN—24AUG18

Settings

Settings Tab

A99006—UN—16MAR18

Liquid System Response

Liquid System Response— determines how fast the system adjusts to maintain the target rate as the ground speed varies. Position 3 is typical for most application rates. To adjust the setting up and down, select the plus (+) and minus (-).

NOTE: The value is not seconds. The setting represents a rate of response.

Increase the Response Rate When:

- The response time is longer than 4 seconds.

Decrease the Response Rate When:

- The system erratically fluctuates the application rate near the target rate.

A99058—UN—20MAR18

Settings

NOTE: Watch the response time of the actual rate during changes in ground speed. The rates are visible on the Tank System run page module.

MM95366,000038E-19-20SEP19

Target Rate

Target Rate stores the preset target or prescription rates that you enter.

IMPORTANT: Incorrect application can result in crop damage or environment contamination.

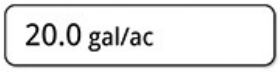
Items Accessible on Target Rate Page:

A94261—UN—24AUG18

Radio Button

Radio Button— allows you to enable and disable a target rate or a static pressure.

NOTE: Once the radio button is selected, the rate will immediately be applied before the overlay is exited.



A99059—UN—16MAR18

Input Box

Input Box— allows you to edit a target rate.

A99060—UN—16MAR18

Prescription Target Rates

Prescription Target Rates— select to allow the use of a prescription target rate.

NOTE: When using prescription target rates, it is recommended to have section control turned on. This will allow the system to apply at a rate of 0.0 gal/ac when the prescription calls for this rate.

If section control is turned off when the prescription target rate calls for 0.0 gal/ac, the system will continue to spray at the lowest attainable rate.

A99061—UN—16MAR18

Target Selected

Target Rate Status:

Target Rate Selected— indicates that the rate is enabled.

A99062—UN—16MAR18

Target Available

Target Rate Available— indicates that the rate is an available selection.

A99063—UN—16MAR18

Target Disabled

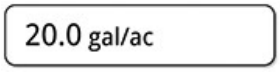
Target Rate Disabled— indicates that the rate is disabled because no rate is entered or the rate has been disabled.

Procedure to Modify:

A94261—UN—24AUG18

Radio Button

- Select the radio button next to the target rate shown to enable the rate.



A99059—UN—16MAR18

Input Box

- To change or disable a target rate, select the input box.

N118004—UN—22OCT15

Advanced Settings

Advanced Settings— access further adjustments and less common settings.

PR79369,000065D-19-27APR21

Tank System Application

Access Tank System

Access Application Through Display:

H113668—UN—22OCT15

Menu

1. Select Menu.

N119118—UN—23SEP16

Machine Settings

2. Select Machine Settings tab.

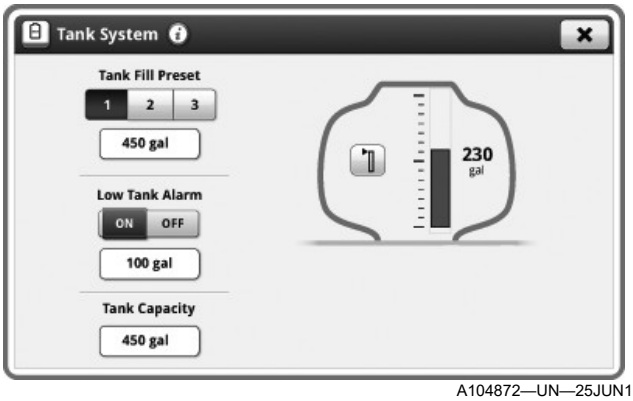
A99069—UN—20MAR18

Tank System

3. Select the Tank System application.

MM95366,0000390-19-20SEP19

Tank System



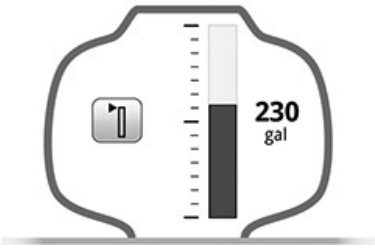
A104872—UN—25JUN19

Tank System Main Page

The Tank System application shows tank level information and provides an alarm setting.

NOTE: Main page shown is for example only. Your main page may differ depending on options or connected equipment.

Items Accessible on Tank System Main Page:



A99046—UN—21MAR18

Estimated Tank Level

Tank Level— shows the calculated tank level based on the preset fill level and the application rate.

NOTE: The accuracy of the displayed value is dependent upon the accuracy of the preset fill level. Verify the actual tank level using the gauge on the tank.

A99043—UN—21MAR18

Tank Fill Preset

Tank Fill Preset— allows you to choose between three preset values.

A99045—UN—21MAR18

Preset Level

- Input Box— shows the preset fill level. Select to enter a new value using a number pad.

A99044—UN—21MAR18

ON/OFF

Low Tank Alarm— allows you to enable and disable the low tank alarm. Select to toggle the alarm ON and OFF.

A99064—UN—21MAR18

Alarm Level

- Input Box— shows the tank level that triggers an alarm. Select to enter a new value using a number pad.

NOTE: Verify the actual tank level using the gauge on the tank.

A99045—UN—21MAR18

Tank Capacity

Tank Capacity— is the maximum fill level of the tank. Select to enter a value using a number pad.

Run Page Module

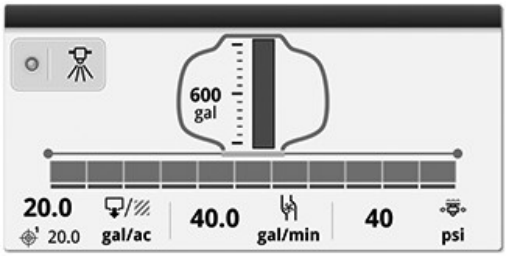
Modules for this application can be added to the run pages using Layout Manager.

NOTE: Additional modules are available. See Available Run Page Modules for descriptions of each.

MM95366,0000391-19-10SEP19

Tank System Run Page Modules

Tank System Run Page Module:



A99066—UN—20MAR18

Run Page Module

A module for this application can be added to the run pages using Layout Manager.

A99069—UN—20MAR18

Tank System

The Tank System module is available by selecting the Tank System application in the Layout Manager.

Items Accessible on the Run Page Module:

A98995—UN—20MAR18

System Control

System Control— shows the status of the liquid system and opens the control page for In-Furrow Application and Frame-Mounted Fertilizer Application. Select to Enable (green)/Disable (gray) the liquid system and to turn the pump ON and OFF.

A99065—UN—20MAR18

Tank System

Tank System— shows the calculated tank level and opens the Tank System application. Select to change the fill preset or to set the tank alarm.

A99067—UN—20MAR18

Section Control

Section Control— shows the status of each section and opens the Sections | Custom page where you can manually control and configure the sections.

A99058—UN—20MAR18

Application Rate

Application Rate— shows the current rate (top) and the target rate (bottom) and opens the Target Rate page. Select to change the target rate.

A103017—UN—03JUN19

Liquid System

Liquid System— shows the pump output rate and pressure. Select to open the Liquid System application and adjust the system pressures.

MM95366,0000392-19-20SEP19

Frame-Mounted Fertilizer-Opener Application

The Frame-Mounted Fertilizer-Opener Application provides ON/OFF control of the pump and delivery system.

Items Accessible on Frame-Mounted Fertilizer-Opener Application Page:

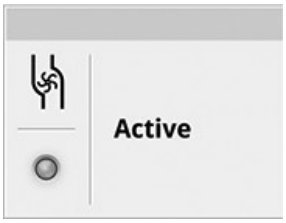
A99072—UN—20MAR18

ON/OFF

Solution Pump— shows the status of the pump and

provides control of the pump. To control the pump, select the ON/OFF toggle.

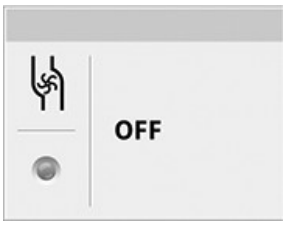
Pump Status:



A99074—UN—20MAR18

Active

Green— indicates that the pump is active and running.



A99077—UN—20MAR18

OFF

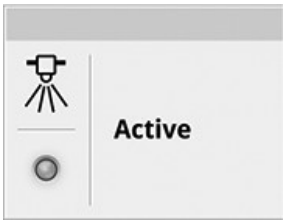
Gray— indicates that the pump is OFF.

System Status:

A99078—UN—20MAR18

Ready

Green (Ready)— indicates that the pump is running, the system control in ON, and the system is waiting for planting to begin.



A99079—UN—20MAR18

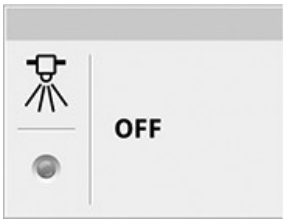
Active

Green (Active)— indicates that product is being applied.

A99075—UN—20MAR18

Unavailable

Gray (Unavailable)— indicates that the pump is not running.



A99076—UN—20MAR18

OFF

Gray (OFF)— indicates that the pump is running, but the system control is commanded OFF.

MM95366,0000393-19-20SEP19

In-Furrow Application

The In-Furrow Application provides ON/OFF control of the pump and delivery system.

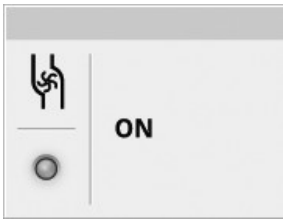
Items Accessible on In-Furrow Application Page:

A99072—UN—20MAR18

ON/OFF

Solution Pump— shows the status of the pump and provides control of the pump. To control the pump, select the ON/OFF toggle.

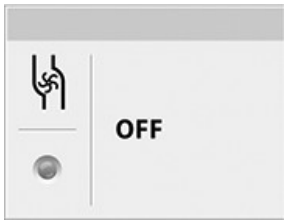
Pump Status:



A104818—UN—17JUN19

ON

- Green (ON)— indicates that the pump is active and running.

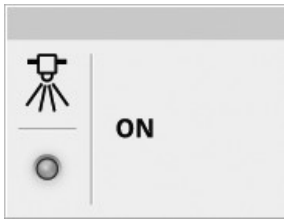


A99077—UN—20MAR18

OFF

- Gray (OFF)— indicates that the pump is OFF.

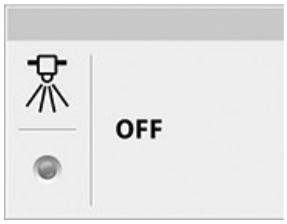
System Status:



A104819—UN—17JUN19

ON

- Green (ON)— indicates that the pump is running, the system control in ON, and the system is waiting for planting to begin.



A99076—UN—20MAR18

OFF

- Gray (OFF)— indicates that the pump is running, but the system control is commanded OFF.

MM95366,0000394-19-20SEP19

Rinse System Application

Access Rinse System

Access Application Through Display:

H113668—UN—22OCT15

Menu

1. Select Menu.

N119118—UN—23SEP16

Machine Settings

2. Select Machine Settings tab.

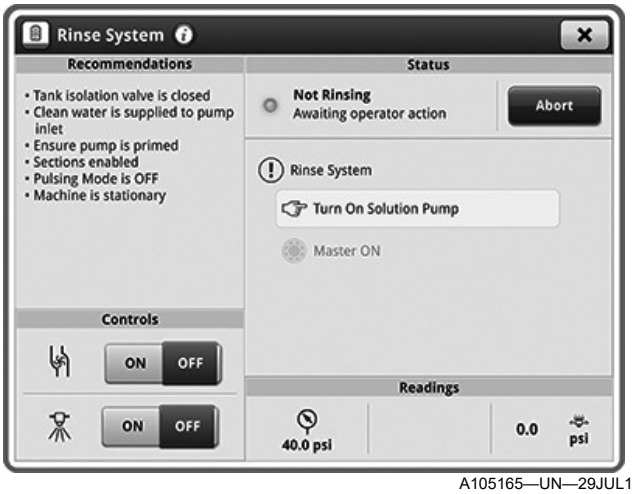
A99757—UN—19MAR18

Rinse System

3. Select the Rinse System application.

MM95366,0000395-19-20SEP19

Rinse System



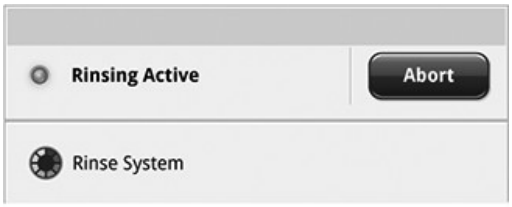
A105165—UN—29JUL19

Rinse System Main Page

The Rinse System application allows you to rinse the pump and delivery system components.

Items Accessible on Rinse System Main Page:

Recommendations— shows steps that aid in having a successful rinse procedure.



A99751—UN—20MAR18

Status

Status— shows the status of the rinse process during the procedure.

A99072—UN—20MAR18

ON/OFF

Controls— allows you to turn the pump and delivery system ON and OFF. When both are ON, the rinse cycle begins.

A99771—UN—19MAR18

Readings

Readings— shows the target pressure and the actual pressure. Select the target pressure to change the value.

Procedure to Modify:

1. Shut off the supply valve for the fertilizer tank. See the planter Operator's Manual for information.
2. Provide a supply of fresh water to the pump. See the planter Operator's Manual for information.
3. Open the ExactRate application, enable all the sections, and turn OFF the valve pulsing mode.
4. Open the Rinse System application.

NOTE: Messages related to the process appear on-screen throughout the procedure.

A99754—UN—19MAR18

ON/OFF

5. Select the toggle ON to start the pump.

A99755—UN—19MAR18

ON/OFF

6. To turn ON the Master Control, select the toggle. This step begins the rinse process.

A99037—UN—19MAR18

Abort

NOTE: Select Abort at any time to stop the rinse procedure.

7. After the rinse cycle is complete, open the ExactRate application. Next, disable all the sections, select the custom sections, and enable the valve bodies that are connected to aspirator fittings.

NOTE: Aspirator fittings are installed on the end of the supply hoses and pipes.

A99755—UN—19MAR18

ON/OFF

8. Select the toggle to turn ON the Master Control.

A99770—UN—19MAR18

ON/OFF

9. After the rinse cycle is complete, turn OFF the pump.

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MM95366,0000396-19-17OCT25

Status

Status indicates various conditions and messages about the rinse process.

The statuses and messages are as follows:

H113786—UN—30JAN17

Amber

Amber (Awaiting Operator Action)— indicates that the pump is OFF or the master control is OFF.

H114663—UN—05JAN17

Alert

Alert— indicates a part of the system that requires attention.

A99756—UN—19MAR18

Attention

Attention— suggests an action to resolve the issue.

H114662—UN—05JAN17

Confirmation

Confirmation— indicates that a required action is complete.

A99036—UN—19MAR18

Blue

Blue— indicates that the rinse is occurring.

H113801—UN—04JAN17

Progress Indicator

Progress Indicator— indicates that the rinse cycle is occurring.

MM95366,0000397-19-20SEP19

Calibrations and Procedures Application

Access Calibrations

Access Application Through Display:

H113668—UN—22OCT15

Menu

1. Select Menu.

N119118—UN—23SEP16

Machine Settings

2. Select Machine Settings tab.

A99081—UN—21MAR18

Calibrations & Procedures

3. Select the Calibrations application.

MM95366,0000399-19-20SEP19

Calibrations and Procedures Overview

Calibrations and Procedures application provides centralized access to maintenance procedures and calibrations for the machine.

NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.

Some items included are only displayed if machine is equipped with the associated options.

A93497—UN—24AUG18

Procedures

Procedure Tab

Nozzle Flow Check

A104147—UN—17APR19

Sensor Control

Sensor Control Tab

Row Flow Pressure Sensor Calibration

A104825—UN—19JUN19

Apply

Apply Calibration Tab

Flowmeter

Pressure Sensor

Solution Pump

Reset Calibrations

MM95366,000039A-19-01MAY20

Nozzle Flow Check

This procedure allows you to determine if the system performs properly at your planned ground speed, target rate, and valve pulse settings.

IMPORTANT: Product in the tank will be applied to the ground during this procedure. It is recommended to catch product if crop damage is a possibility or move to an area of less concern.

Perform When:

- Preparing to apply product for the first time in a season.
- Preparing to change product or significantly adjust your rate or ground speed.
- Determining if the planned rate, ground speed, and pressure have the expected results.

How to interpret test results:

Watch the status indicators for signs of a flow error.

Compare the application rate with the target rate.

N119102—UN—23FEB16

Begin Procedure

Items Accessible on Nozzle Flow Check Page:

Begin Procedure— begins procedure.

MM95366,000039B-19-10JUL20

Nozzle Flow Check Procedure

Procedure Requirements:

Machine State	Parked where it is acceptable to spray product or water onto ground Implement raised
Solution Tank State	Preferably contains clean water
Engine State	Running at high idle (recommended)
EPG Status	ON
Target Rate/Prescription Target Rate	Target rate selected **(cannot have prescription target rate selected)**

Items Accessible on Procedure | Nozzle Flow Check Page:

A105200—UN—29JUL19

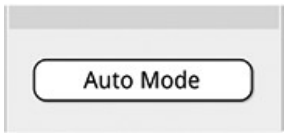
Test Speed

Test Speed— is your planned application speed.

A99086—UN—19MAR18

Active Target Rate

Active Target Rate— is your planned application rate.



A98925—UN—19MAR18

Valve Pulsing Auto Mode

Valve Pulsing— is the mode that the valve bodies are set to.

NOTE: AUTO pulsing mode is not available when in Target Pressure mode. When set to OFF, it means that the pulsing is turned off and the valve is fully opened and allowing unrestricted flow.

Items Displayed on Page:

H114656—UN—05JAN17

Status

Status Indicator— displays status of the test.

A99065—UN—20MAR18

Tank Volume

Tank Volume— displays the remaining tank volume or the value that you enter.

N119616—UN—14NOV16

Section Status

Section Status— displays the status of each section.

A99091—UN—19MAR18

Actual Application Rate

Actual Application Rate— displays the rate applied during the test.

A99092—UN—19MAR18

Solution Flow

Solution Flow— displays the current solution flow rate.

A99099—UN—19MAR18

Solution Pump Pressure

Solution Pump Pressure— displays the pressure measured at the pump.

Procedure to Perform:

IMPORTANT: Product in the tank will be applied to the ground during this procedure. It is recommended to catch product if crop damage is a possibility or move to an area of less concern.

1. Select an intended target rate.

*NOTE: A target rate must be selected. If prescription rate is selected, navigate to the **Work Setup** application and ensure that controller rate is selected. After changing to controller rate, navigate back to the nozzle flow check procedure and proceed with step 2.*

2. Verify the Valve Pulsing settings.

A99085—UN—19MAR18

Test Speed

3. Adjust the test speed to the planned ground speed. Select plus (+) to increase or minus (-) to decrease the level.
4. Verify that all of the sections are enabled. See Sections | Custom in the ExactRate application.

NOTE: The nozzle flow check only activates the enabled sections.

A99098—UN—20MAR18

ON/OFF

5. To begin the test, select ON for both the pump and the master control.
6. Observe the section status and pump output readings.
7. If the section status shows Flow Error, inspect the valve body and distribution system. If the pump output is not within parameters, adjust the ground speed or target rate.
8. To stop test, select OFF on the pump or the master control.

A98950—UN—20MAR18

Close

9. Select close to return to the previous page and end the procedure.

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MM95366,000039C-19-17OCT25

Apply Calibration | Solution Pump

This procedure calibrates the solution pump. Solution pump must be calibrated in order to achieve the desired application rate and maintain the desired solution pressure.

Perform Calibration When:

- Solution pump is replaced.
- Hydraulic motor assembly is replaced.
- Proportional valve is replaced.
- Control unit for application system is replaced.
- The system is unable to achieve a minimum pressure of 10 psi and below, whereas previously it was able to.

Items Accessible on Apply Calibration | Solution Pump Page:

N119105—UN—02MAY16

Calibrate

Calibrate— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	As needed
Estimated Time Required	Approximately 5 min

Readings Displayed on Page:

Pump— displays A and B readings for low and high pump operating speeds and electrical current drawn by the pump.

MM95366,000039E-19-14JUL20

Apply Calibration | Flowmeter

This procedure calibrates the flowmeter. The flowmeter must have the correct calibration number entered in order to provide the desired application rate.

Perform Calibration When:

- Flowmeter has been replaced.

Items Accessible on Apply Calibration | Flowmeter Page:

A99082—UN—20MAR18

Flowmeter

Flowmeter— edit flowmeter calibration number. Reference the calibration tag on the flowmeter for a calibration value. Calibration values are in pulses per gallon.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	As needed
Estimated Time Required	< 1 min

MM95366,000039F-19-01MAY20

Solution Pump Calibration Procedure

Procedure Requirements:

Engine State	Running at low idle
Wheel Speed	0 km/h (0 mph)
Operating State	Parked, not applying product
Hydraulic Fluid Temperature	60—88°C (140—190°F)
Solution System	• Contains enough solution to prevent pump cavitation. Minimum volume is 567.8 L (150 gal). • Solution pump is OFF. • System pressure is less than 34.4 kPa (0.34 bar) (5 psi).

Calibration Overview:

NOTE: Ensure that the pump is primed before starting the calibration.

N119105—UN—02MAY16

Calibrate

1. Select Calibrate to begin procedure.

A92895—UN—22JUN17

Next

NOTE: Next button is disabled when all requirements listed on-screen are not met.

2. Follow messages on-screen to complete procedure.

A92068—UN—16MAR18

Save

3. Confirm Calibration by selecting Save.

If Calibration Fails:

A104824—UN—19JUN19

Retry

1. Select Retry button.
2. Verify that all requirements listed on-screen have been met.
3. If calibration fails, ensure that load sense is plugged in. If load sense is plugged in, detent an unused SCV. If it passes within 2 attempts after this, ensure that the load sense orifice is installed on the tractor.
4. If calibration continues to fail, see a John Deere dealer or other service provider.

A99096—UN—20MAR18

Current Amperage Value

If Current Amperage Value is red, then current reading is outside the calibrated range.

MM95366,00003A0-19-17OCT25

Apply Calibration | Pressure Sensor

This procedure calibrates the pressure sensor(s) for the solution system.

NOTE: This procedure requires exposing the pressure sensor to atmosphere by removing it from the system.

Perform Calibration When:

- Pressure sensor reading does not return to zero when system is open to atmosphere.
- The pressure sensor has been replaced.

Items Accessible on Apply Calibration | Pressure Sensor Page:

N119105—UN—02MAY16

Calibrate

Calibrate— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	As needed
Estimated Time Required	Approximately 5 min

MM95366,00003A1-19-20SEP19

Pressure Sensor Calibration Procedure

Procedure Requirements:

Engine State	Engine OFF, key in RUN position
Wheel Speed	0 km/h (0 mph)
Operating State	Parked, not applying product
Solution System	Empty and open to atmosphere

Calibration Overview:

CAUTION: Do not drain solution onto the ground. Drain into a container. Drain solution in an area where people, animals, vegetation, water supply, and so on, cannot be contaminated.

N119105—UN—02MAY16

Calibrate

1. Select Calibrate to begin procedure.
2. Follow messages on-screen to complete procedure.

A92068—UN—16MAR18

Save

3. Confirm Calibration by selecting Save.

If Calibration Fails:

A104824—UN—19JUN19

Retry

1. Select Retry button.
2. Verify that all requirements listed on-screen have been met.
3. If calibration fails twice, see a John Deere dealer or other service provider.

A99769—UN—20MAR18

Current Voltage Value

If Current Voltage Value is red, then current reading is outside the calibrated range.

MM95366,00003A2-19-17OCT25

Apply Calibrations | Reset Calibrations

This procedure resets all applied calibration values to the factory defaults.

Perform When:

- Accurate calibration values cannot be established.
- Major spray system components are replaced.

Items Accessible on Apply Calibrations | Reset Calibrations Page:

A99083—UN—20MAR18

Reset

Reset— begin reset procedure.

Procedure to Reset Calibrations:

NOTE: This process cannot be undone. Once calibrations have been reset, you have to perform each calibration again.

A99083—UN—20MAR18

Reset

1. Select Reset button.
2. The following calibrations are reset:
   - Flowmeter
   - Pressure Sensor
   - Solution Pump

A92055—UN—20MAR18

OK

3. Select OK button to reset calibrations.

A92067—UN—16MAR18

Cancel

4. Select Cancel button to return to previous page.

MM95366,00003A3-19-01MAY20

Apply Calibration | Row Flow Pressure Sensor

This procedure calibrates the row flow pressure sensor for the flow detection system. Performing this procedure recalibrates all row flow pressure sensors.

NOTE: This procedure calibrates the row flow pressure sensor. Inspect sensor for blockage before beginning calibration. Ensure that there is no pressure on any sensor.

Perform Calibration When:

- Row flow pressure sensor reading does not return to zero.
- A row flow pressure sensor has been replaced.

Items Accessible on Apply Calibration | Pressure Sensor Page:

N119105—UN—02MAY16

Calibrate

Calibrate— begin calibration procedure.

Details Displayed on Page:

Last Calibration	Date and time
Recommended Interval	As needed
Estimated Time Required	> 1 min

PR79369,000065A-19-27APR21

Row Flow Pressure Sensor Calibration

Procedure Requirements:

Engine State	Engine OFF, key in RUN position
Wheel Speed	0 km/h (0 mph)
Operating State	Parked, not applying product
Master Apply State	OFF
Pump Status	OFF

Calibration Overview:

Perform Boom relief operation a few times to ensure that all trapped air in the system is removed.

CAUTION: Ensure that the pump is OFF and no residual pressure remains in plumbing before beginning calibration. Ensure that there is no pressure on any sensor.

N119105—UN—02MAY16

Calibrate

1. Select Calibrate to begin procedure.
2. To complete procedure, follow messages on-screen and meet calibration prerequisites.

A92895—UN—22JUN17

Next

3. Confirm Calibration by selecting Next.

H113801—UN—04JAN17

Calibrating

4. Calibrating prompt appears on-screen.

NOTE: Calibration takes approximately 10 seconds.

H114662—UN—05JAN17

Calibration Successful

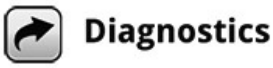
5. If all prerequisites were made and no issues are found, the screen prompts a successful calibration.

If Calibration Fails:

A104824—UN—19JUN19

Retry

1. Select Retry button.



A104150—UN—17APR19

Diagnostics

2. Select Diagnostics button to access Flow Detection Diagnostics. See Sensor Control tab to see the status of the row flow pressure sensors.
3. Verify that all requirements listed on-screen have been met.
4. If calibration fails twice, see a John Deere dealer or other service provider.

N0LMWLO,0000069-19-17OCT25

Implement Profiles

Implement Profile

Implement Profile settings are important for the accurate performance of John Deere AMS applications, such as mapping and section control. The implement controller sets most of the Implement Profile settings automatically. Once all the profile settings are input and saved, all the settings load each time the implement is connected.

Items Accessible on Implement Profile Page:

Profile Name— is set automatically based on the implement that is auto-detected. View the type of machine, the model number, the serial number, and when the profile was last modified.

H118284—UN—30JAN17

Scroll Up

Scroll Up— allows you to scroll up through the list.

H118282—UN—30JAN17

Scroll Down

Scroll Down— allows you to scroll down through the list.

A92068—UN—16MAR18

Save

Save— saves all inputs.

A92067—UN—16MAR18

Cancel

Cancel— ignores all inputs.

A94288—UN—23JUN17

Reset Profile

Reset Profile— returns all the inputs that you set to the factory defaults originally stored on the implement controller.

A105861—UN—08OCT19

Implement

Implement— select to go to the planter's profile page.

A105857—UN—08OCT19

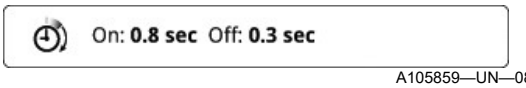
Section Width

Section Width— allows you to configure the number of rows in each section.

A105858—UN—08OCT19

Work Point

Work Point— allows the implement controller to know the position of the seed delivery.



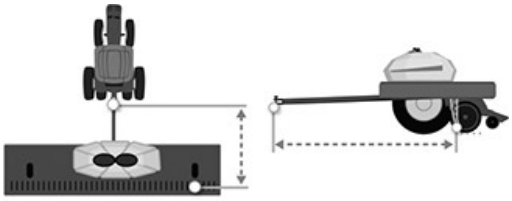
A105859—UN—08OCT19

Mechanical Delay

Mechanical Delay— allows you to adjust when the seed meters turn on and off in response to section control.

N0LMWLO,0000091-19-08OCT19

Work Point



A94298—UN—06MAY19

Work Point

Work Point allows the implement controller to know the position of the seed delivery and adjust the response of the seed meters while moving through the field.

Section Control disengages the seed meters based on the work point. On implements with two ranks or staggered row units, set the work point to the front rank, the rear rank, or between the ranks.

NOTE: If the work point is set to the front or rear rows on two-rank implements, change the dimension when switching between wide and narrow row spacing.

Modify When:

Switching between wide and narrow row spacing if the implement has two ranks or staggered row units.

Procedure to Modify:

1. Lower the implement while unfolded and in the planting orientation.

IMPORTANT: Measure along the centerline of the implement, not at an angle.

2. Measure the distance from the hitch connection (drawbar pin or rockshaft) to the point of seed delivery.
3. Select the input box to enter the Work Point dimension.

A92055—UN—20MAR18
OK

A92067—UN—16MAR18
Cancel

4. Enter the value using the number pad and then select OK to save the entry or Cancel to close the page without saving.

N0LMWLO,0000092-19-05MAY22

Mechanical Delay

A94299—UN—24AUG18
On Delay

A94300—UN—24AUG18
Off Delay

Mechanical Delay allows you to adjust when the seed meters turn ON and OFF in response to Section Control.

Items Accessible on Mechanical Delay Page:

Mechanical Delay— is the travel time of the seed from the point of seed release (from the row unit) to the soil. This delay is used to calculate the response of Section Control.

Mechanical Delay On— is the travel time of the initial seed released after the seed meter is commanded ON.

Mechanical Delay Off— is the travel time of the final seed released after the seed meter is commanded OFF.

Minimum Delays: 0.10 seconds

Defaults: vary per implement and seed meter configuration

Maximum Delays: 15 seconds

A99030—UN—20MAR18
Performance Tuning

Performance Tuning— select the icon to open the Section Control application. Performance tuning is used to correct skips and overlaps in product applied on the ground. It uses distance and speed to adjust mechanical delay settings.

Procedure to Modify:

IMPORTANT: The delay times are factory set. The accuracy of the times entered directly affects Section Control accuracy.

1. Raise the implement while unfolded and in the planting orientation.
2. Stand near a row unit so that you can observe where the seed exits.
3. Prepare to start your stopwatch when you engage the meter and stop the timing when the seed exits the row unit.
4. Perform a Row Runoff procedure from the SeedStar Diagnostics and Calibrations page and start your stopwatch at the moment you start the runoff. Stop your stopwatch at the moment the first seed appears.

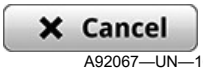
A94299—UN—24AUG18
On Delay

5. Select the Mechanical Delay On input box and enter the time recorded using the number pad.
6. Reset your stopwatch.
7. Start your stopwatch at the moment that you stop the runoff. Stop your stopwatch at the moment the last seed exits the row unit.

A94300—UN—24AUG18
Off Delay

8. Select the Mechanical Delay Off input box and enter the time recorded using the number pad.

A92055—UN—20MAR18
OK



A92067—UN—16MAR18
Cancel

9. Select OK to save the change or Cancel to disregard the change.

PR79369,0000659-19-16OCT25

Custom Application

Custom Application provides ON/OFF control of the pump and delivery system.

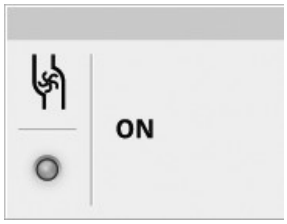
Items Accessible on Custom Application Page:

A99072—UN—20MAR18

ON/OFF

Solution Pump— shows the status of the pump and provides control of the pump. To control the pump, select the ON/OFF toggle.

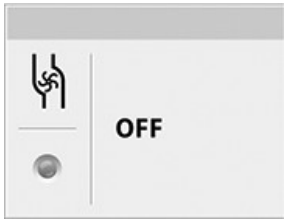
Pump Status:



A104818—UN—17JUN19

ON

- **Green (ON)**— indicates that the pump is active and running.

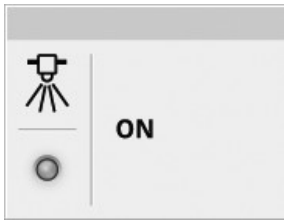


A99077—UN—20MAR18

OFF

- **Gray (OFF)**— indicates that the pump is OFF.

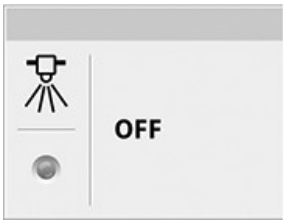
System Status:



A104819—UN—17JUN19

ON

- **Green (ON)**— indicates that product is being applied.



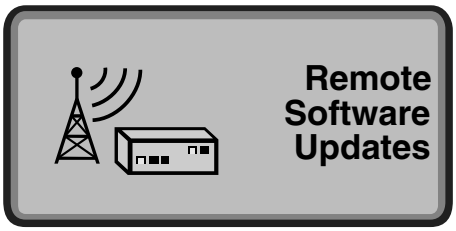
A99076—UN—20MAR18

OFF

- **Gray (OFF)**— indicates that the pump is running, but the system control is commanded OFF.

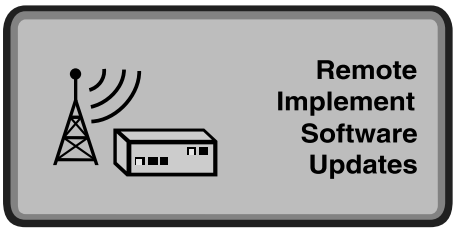
AZ06166,000072B-19-07NOV19

Service Advisor Remote Update



A83914—UN—22OCT14

Remote Software Updates Button



A83791—UN—22OCT14

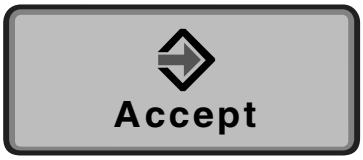
Remote Implement Software Updates Button

NOTE: An application update is recommended when updating the control unit. See the Software Manager application.

The service advisor remote (SAR) is used by dealers or other service provider to update software and reprogram control units from a remote location. Once a dealer or other service provider sends the software, a message appears on the screen that indicates an update is available. Select the Accept button to proceed with the updates. If the Cancel button is selected, select the Remote Implement Software Updates from the ISOBUS VT application menu.

NOTE: Follow the on-screen prompts.

1. To initiate the update, select the Download Software button.



A83913—UN—22OCT14

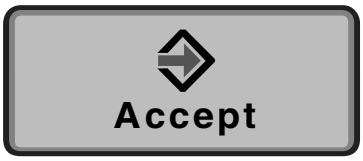
Accept Button

2. To continue with the software download, select the Accept button.

A83912—UN—22OCT14

Install Software Button

3. Select the Install Software button.



A83913—UN—22OCT14

Accept Button

4. To confirm the terms and conditions, select the Accept button.

NOTE: If there is a problem during the install process, the system tries to install a second time. If the second attempt fails, see a John Deere dealer or other service provider.

5. Follow the on-screen instructions.

OUO6074,0000FDA-19-23OCT25

Troubleshooting

SeedStar Troubleshooting

The SeedStar system is equipped with various self-tests, diagnostic screens, diagnostic tests, and Caution and Warning screens to help operator's, John Deere dealers, and other service providers locate the cause of a potential problem.

Familiarize yourself with the diagnostics available in the SeedStar application and perform the basic troubleshooting steps in this section before seeing a John Deere dealer or other service provider.

OUO6074,0000FD5-19-23OCT25

Troubleshooting the In-Cab Display

Symptom	Problem	Solution
The screen is not readable.	The contrast is incorrect.	Adjust the contrast.
	The screen backlight is set too low.	Increase the backlight adjustment.
An incorrect speed is displayed.	The radar calibration is incorrect.	Enter a correct radar calibration value or perform the recalibration procedure.
	The units of measure are incorrect.	Set the correct units.
	The speed reading is erratic.	Verify that the radar unit is tight.
No radar speed reading.	The radar is not calibrated.	Calibrate the radar.

OUO6074,0000FD6-19-13NOV24

Troubleshooting SeedStar

Symptom	Problem	Solution
No high or low population reading.	The seed sensors are dirty.	Clean the sensors.
	No radar speed.	Connect and calibrate the radar or other speed source.
	The seed sensors are turned off.	Enable the monitoring on all rows.
	A faulty wire harness connection.	Inspect the wiring harness connections.
Wrong population reading.	The sensors are dirty.	Clean the sensors.
	The seed sensor is not installed correctly for ExactEmerge use.	Disassemble the brush belt assembly. Reinstall the seed sensor into the tab correctly.
	The row spacing is incorrect.	Enter the correct row spacing.
	The ground speed is incorrect.	Calibrate the radar
	Windy or dusty conditions interfere with the radar.	Change to a speed source other than radar.
	The units of measure are incorrect.	Enter the correct units.

Symptom	Problem	Solution
Row failure warning.	The meter hopper is empty.	Fill the CCS tank or row unit hopper.
		Inspect the CCS delivery hose for a blockage.
	A harness problem.	Inspect the harness and connections.
	Rough field conditions knock seeds off the seed disk (bowl).	Adjust the row unit downforce or slow down.
	The seed sensors are dirty.	Clean the sensors.
Intermittent row failure warning or fluctuating population.	Intermittent signal from the wheel motion sensor.	Adjust the sensor gap and tighten the mounting bracket.
Seeds are on top of the ground while planting.	The seeds stick in the BrushBelt and release late.	Add more seed meter lubricant to the seed and blend it well for full seed coverage.
No vacuum reading.	A faulty wire connection.	Check the wiring harness and repair.
	The vacuum blower is not running.	Engage the vacuum blower.
	The vacuum hose is on the wrong fitting.	Install the vacuum hose to the P2 fitting on the sensor.
	An incorrect configuration.	Enter the correct number of vacuum sensors.
	The vacuum hose is pinched or contains contamination.	**IMPORTANT: Do not blow compressed air in the hose while the hose is connected to the sensor.**
		Reroute the hose and remove contamination.
Wrong vacuum reading.	Restriction in the vacuum sensor hoses.	Disconnect the hose from the sensor. Use compressed air to clean out the inside of the restricted hose. Reattach the hose to the sensor.
	A faulty vacuum sensor.	Replace the sensor.
The area reading is wrong.	The planter dimensions are entered incorrectly.	Enter the correct planter dimensions.
	The radar calibration is wrong.	Calibrate the radar.
The SeedStar icon does not appear on the screen.	Incorrect electrical connections.	Check the fuses on the tractor. Check the connections on back of the harness connectors.

Symptom	Problem	Solution
No liquid fertilizer values.	There is no pressure in the system.	Drive the planter forward and verify that the pump is primed and functioning.
	The sensors are configured incorrectly.	Enter the correct number of fertilizer sensors.
	A single sensor is connected to the Sensor 2 harness.	If only one liquid sensor is used, it must be connect to the harness labeled Left Fert.
	A faulty wire connection.	Check the wiring harness and repair.
Wrong liquid fertilizer reading.	A faulty liquid fertilizer sensor.	Replace the sensor.
	The sensor is plugged.	Remove the sensor and flush it with warm water. Do not insert a hard object into the sensor while cleaning.
The seed singulation percentage is low.	The meter settings do not match the meter setup.	Verify the settings and actual setup.
	Rough field conditions knock seeds off the seed disk (bowl).	Adjust the row unit downforce or slow down.
	The alarm is set too high.	Reduce the alarm limit.
The coefficient of variation (CV) percentage is high.	Rough field conditions knock seeds off the seed disk (bowl).	Adjust the row unit downforce or slow down.
	The meter settings do not match the meter setup.	Verify the settings and actual setup.
	The alarm is set too low.	Increase the alarm limit.
Seed skips are high.	There is residue buildup or debris inside the BrushBelt cartridge.	Remove the cartridge and remove the debris.
The meter torque values are high.	Debris caught inside the seed meter.	Remove the debris and use clean seed.
	The meter hub is adjusted too tight.	Adjust the hub.
The BrushBelt motor shows high torque values.	There is residue buildup or debris inside the BrushBelt cartridge.	Remove the cartridge and remove the debris.
The individual row hydraulic downforce (IRHD) is not performing to requirements.	The performance graph is showing red bars.	Perform the IRHD valve test.
		Perform the IRHD valve flush test.
	The valves are not meeting performance requirements.	Perform the IRHD valve test.

Symptom	Problem	Solution
		Perform the IRHD valve flush test.
	After three valve flush tests, the IRHD is still not performing as needed.	See a John Deere dealer or other service provider for valve removal and cleaning.
	The IRHD is still not performing correctly after a valve cleaning.	See a John Deere dealer or other service provider to replace the valve.
	Air has been introduced into the hydraulic circuit when connecting and disconnecting hydraulic hoses.	Perform the IRHD air purge test.
	The downforce is showing erratic peaks.	Perform the IRHD accumulator test.
	The ride quality is degrading.	Perform the IRHD accumulator test.
	The IRHD accumulator has a suspected leak.	Perform the IRHD accumulator test.
	One or more accumulators fail the test.	See a John Deere dealer or other service provider to replace the accumulator.
The tractor power-generation system makes a rattling noise.	The alternator has a light load and the tractor has low RPMs.	At lower tractor RPMs and with a light alternator load, it is normal to hear a rattling noise.
	The bracket rubber grommets are not in contact with the lower support.	Loosen the mounting bolts. Use a prying device to lever the bracket down until the grommets are in contact with the lower support. Retighten the mounting bolts while applying leverage to the bracket.

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Troubleshooting Easy Fold

Symptom	Problem	Solution
Easy Fold does not operate.	The hitch height was calibrated while in the transport mode.	Perform the calibration while in the plant mode.
	The hydraulic hoses are connected wrong.	Follow the guidelines in the planter Operator's Manual.
	The selective control valves (SCVs) are not assigned.	(See the SCV Assignment procedure in this manual.)
		Connect to a 6R or 7R (FT4) tractor.

Symptom	Problem	Solution
Easy Fold does not operate or stops (planters connected to a 2-point hitch).	The implement automation has not been activated.	Activate the automation. (See a John Deere dealer or other service provider.)
	The planter is connected to an incompatible tractor.	Connect to a 8R or 9R (IT4 or newer) tractor.
	The tractor hitch-limits are too high.	Set the upper hitch limit at 98%.
		Set the lower hitch limit at 0%.
	The planter transport height is set too high.	Set the transport height at 96%.

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Troubleshooting the Pneumatic Downforce System

Symptom	Problem	Solution
The compressor does not run.	No hydraulic pressure or flow.	The tractor selective control valve must be in the detent position.
	The planter raised.	The planter must be lowered to the plant position.
	The height switch is not functioning.	Inspect and adjust the height switch.
		Verify the harness connections.
	The solenoid valve on the hydraulic motor is not functioning.	Verify the solenoid electrical connection.
		Check and repair the solenoid wiring harness.
		Check the continuity of the solenoid coil. Replace the coil.
	The pressure switch is faulty.	Remove all air pressure from the air storage tank. Unplug the pressure switch. Check the continuity across the switch wires. If there is no continuity, replace the switch.
The downforce does not increase or decrease.	A solenoid valve is stuck closed.	Actuate the manual override on the increase or decrease solenoid valve several times. Remove all air pressure from the system. Clean or replace the solenoid valves. Use the shop air and a tire pressure gauge for air pressure adjustments until the problem is solved.

Symptom	Problem	Solution
	There is an open circuit on the solenoid wires.	Check and repair the wiring harness.
	There is an open circuit within the solenoid.	Check the continuity of the solenoid coil. Replace the solenoid.
The circuit relief valve opens.	The increase solenoid valve is stuck open.	Actuate the manual override for the increase solenoid valve several times. Relieve all pressure from the system. Clean or replace the solenoid valve.
	A weak relief valve spring.	Replace the relief valve.
The relief valve for the tank circuit opens.	The pressure switch is stuck ON.	Turn the tractor key switch OFF. With pressure in the tank, unplug the pressure switch connector. Check the continuity across the switch wires. If there is continuity, replace the switch.
A pneumatic downforce solenoid-circuit error.	The meter master control unit (MMC) has detected an open circuit or short circuit in the pneumatic downforce increase or decrease solenoid.	Check the wiring harness and electrical connectors from the MMC to the pneumatic downforce solenoids. Check the continuity of the solenoid coils.
An incorrect downforce margin is displayed.	The gauge wheel arms are binding.	Grease the gauge wheel arms.
		Replace the worn parts.

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