



DCY

# AutoTrac™ RowSense™

## OPERATOR'S MANUAL

### AutoTrac RowSense

OMPC21407 ISSUE B9 (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 Ag Management Solutions**



OMPC21407

# Introduction

## Foreword

READ THIS MANUAL carefully to learn how to operate the system correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your system and should remain with the system 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 machine will travel when going forward.

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 GreenStar hardware warranty is explained on the warranty certificate which you should have received from your dealer.

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 system be abused or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied.

KR43067,00000A2 -19-10NOV08-1/1

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*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.*

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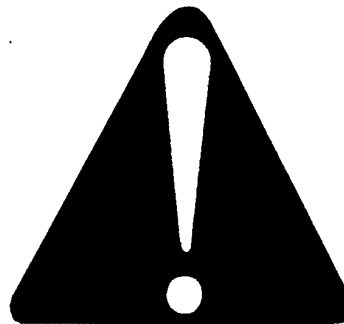


# Safety

## Recognize Safety Information

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.



T81389 —UN—07DEC88

DX,ALERT -19-29SEP98-1/1

## Understand Signal Words

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.



TS187 —19—30SEP88

DX,SIGNAL -19-03MAR93-1/1

## Follow Safety Instructions

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.

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.



TS201 —UN—23AUG88

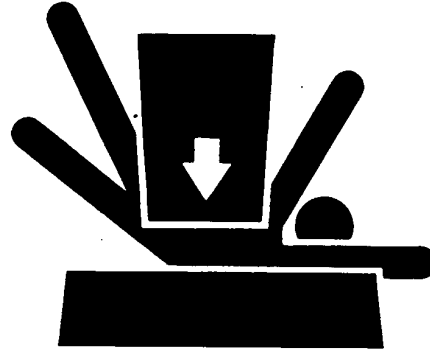
DX,READ -19-03MAR93-1/1

### Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



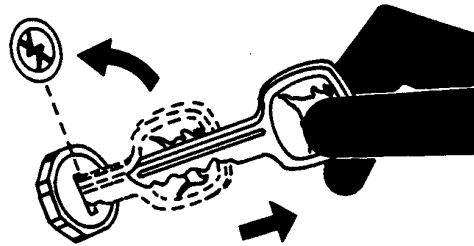
TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

### Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



TS230 —UN—24MAY89

DX,PARK -19-04JUN90-1/1

### Stay Clear of Harvesting Units

Cutterbar, auger, reel, and feed rolls cannot be completely shielded due to their function. Stay clear of these moving elements during operation. Always disengage main clutch, shut off engine, set parking and remove key before servicing or unclogging machine.



ES118704 —UN—21MAR95

RG53986,0000964 -19-03NOV08-1/1

### Install and Remove StarFire Receiver and Brackets Safely

When installing and removing the StarFire receiver, follow these guidelines to prevent potential injury from falling:

- Use an appropriate ladder or platform to easily access mounting location.
- Ensure sturdy and secure footholds and handholds.
- Avoid installing or removing receiver in wet or icy conditions.

The receiver mast used on implements is heavy and can be awkward to handle. If installing or removing a receiver mast on an implement, follow these guidelines:

- Use two people for mounting locations not accessible from the ground or a service platform.
- Use proper lifting techniques.
- Wear proper protective equipment.



PC10340 —UN—27SEP07

OOU6050,0000EED -19-31JAN08-1/1

### Operate Guidance Systems Safely

Do not use AutoTrac system on roadways.

- Always turn off (Deactivate and Disable) AutoTrac system before entering a roadway.
- Do not attempt to turn on (Activate) AutoTrac system while transporting on a roadway.

The AutoTrac system is intended to aid operator in performing field operations more efficiently. Operator is always responsible for machine path. To prevent injury to operator and bystanders:

- Remain alert and pay attention to surrounding environment.
- Take control of steering wheel when necessary to avoid field hazards, bystanders, equipment, or other obstacles.
- Stop operation if poor visibility conditions impair your ability to operate the machine or identify people or obstacles in machine path.

OOU6050,0000F2B -19-03APR08-1/1

### Read The Guidance Manual

**Before attempting to operate Parallel Tracking or AutoTrac, fully read the Guidance manual to understand components and procedures required for safe and proper operation.**

**The Guidance manual is for both Parallel Tracking and AutoTrac guidance systems applications.**

OOU6050,0000F2C -19-03APR08-1/1

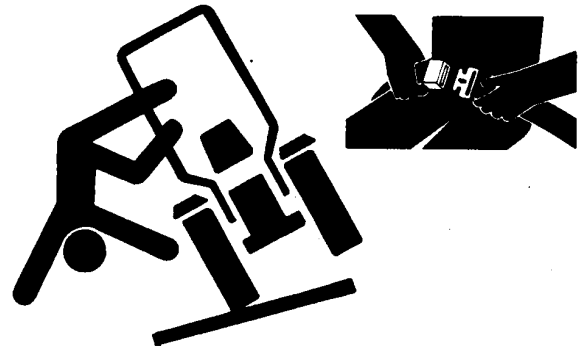
### Use Seat Belt Properly

Use a seat belt when you operate with a roll-over protective structure (ROPS) or cab to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if operating without a ROPS or cab.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.



TS205 —UN—23AUG88

DX,ROPS1 -19-29OCT07-1/1

# Resume Button

## Resume Button Setup

When an AutoTrac equipped combine is connected to a RowSense equipped corn head, activation buttons 2 and 3 on the multifunction control handle will be automatically activated to be used as the header lower and AutoTrac resume buttons for this system. (See Setting Up Row Entry in Enabling the System section for more details.)



*Resume Button on Combine*

KR43067,0000A4 -19-10NOV08-1/1

PC7925 —JUN—14OCT03

# AutoTrac RowSense

## Overview

AutoTrac RowSense is comprised of the following components

- Integrated AutoTrac installed and activated on combine, with upgraded AutoTrac RowSense software programmed into Steering System Unit (SSU), AutoTrac SF1 or SF2 activation.
  - For *50 and 60 series combines*, the Bridge Controller/Gateway software update must be installed.
  - *S-Series MY08 and W-, T-, and C-Series MY09 combines* must have a LYNX bus installed to be compatible with AutoTrac RowSense.
- AutoTrac Row Sense SF1 or SF2 activation
- One pair of Row Sensors mounted to approved Corn Head
- GS2 2600 display
- StarFire receiver with SF1, SF2, or RTK activation

AutoTrac RowSense works with all existing tracking patterns and most standard harvesting patterns. AutoTrac works in the following modes: Adaptive Curves, AB Curves, Circle Track, and Straight Track. AutoTrac RowSense is an enhancement to integrated AutoTrac on the GS2 display when harvesting corn. Row Sensors mounted to one of the rows detect cornstalks to know where row is. Signals provided by row sensors are integrated with existing AutoTrac signals to help keep combine on rows. When there is no signal coming from row sensors (e.g. driving through a waterway), normal GPS guidance will apply. Most other characteristics of AutoTrac remain unchanged. Row sensors are simply another position input for steering the combine. All tracking modes are set up the same way as they are with GPS based AutoTrac.

DT31797.0000233 -19-29JAN09-1/1

# Setup and Calibrate System

## Setup AutoTrac RowSense

*NOTE: Before using this product, the following steps must be completed in addition to setting up AutoTrac:*

1. On GS2 display, navigate to Original GreenStar Display >> SETUP >> AUTOTRAC
2. Select YES for Row Guidance Option Installed and Row Guidance Option Enabled.
3. Calibrate Row Guidance Sensors.
4. Ensure Row Guidance Offset value is correct (100 is the default value).

- |                                   |                                |
|-----------------------------------|--------------------------------|
| A—Steer Sensitivity (50-200)      | E—Row Guidance Offset (50-150) |
| B—AutoTrac Calibration            | F—Not Used                     |
| C—Row Guidance Option Installed   | G—Return                       |
| D—Row Guidance Sensor Calibration |                                |

Calibration Set Up

KR43067.0000FA -19-13NOV08-1/1

PC10466—UN—27APR08

## Row Sensor Calibration Procedure

This procedure is performed when system is installed or after system is repaired. Row sensors must be installed and positioned against at-rest stops.

1. Prepare for calibration

Verify row sensors are installed with springs holding them in at-rest position. Raise header to ensure row sensors are not contacting ground. Combine must not be moving.

- |                                   |                                |
|-----------------------------------|--------------------------------|
| A—Steer Sensitivity (50-200)      | E—Row Guidance Offset (50-150) |
| B—AutoTrac Calibration            | F—Not Used                     |
| C—Row Guidance Option Installed   | G—Return                       |
| D—Row Guidance Sensor Calibration |                                |

AutoTrac Setup

Continued on next page

KR43067.0000123 -19-17NOV08-1/2

PC10466—UN—27APR08

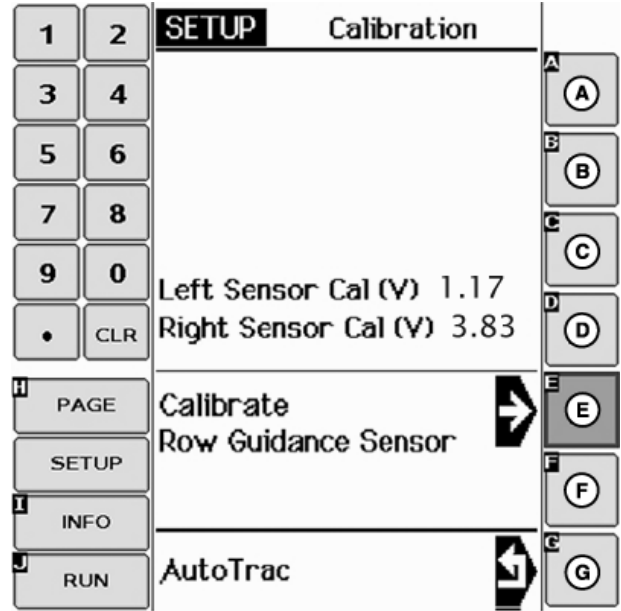
2. Press SETUP button on original GreenStar monitor. Press letter button pointed to by AutoTrac.
3. Calibrate sensor at-rest voltages.

Press Row Guidance Sensor calibration button (E) to store sensor at-rest voltages into SSU memory.

*NOTE: GSD screen will now display left sensor and right sensor voltages. Right sensor at-rest voltage should be greater than 2.5 volts. The left sensor at-rest voltage should be less than 2.5 volts.*

4. End of calibration, exit row sensor calibration mode.

- |                             |                                 |
|-----------------------------|---------------------------------|
| A—Not Used                  | E—Calibrate Row Guidance Sensor |
| B—Not Used                  | F—Not Used                      |
| C—Left Sensor Cal (V) 1.17  | G—Return                        |
| D—Right Sensor Cal (V) 3.83 |                                 |



Calibration Setup

KR43067,0000123 -19-17NOV08-2/2

PC10467—UN—03MAR08

### Row Guidance Offset Setup

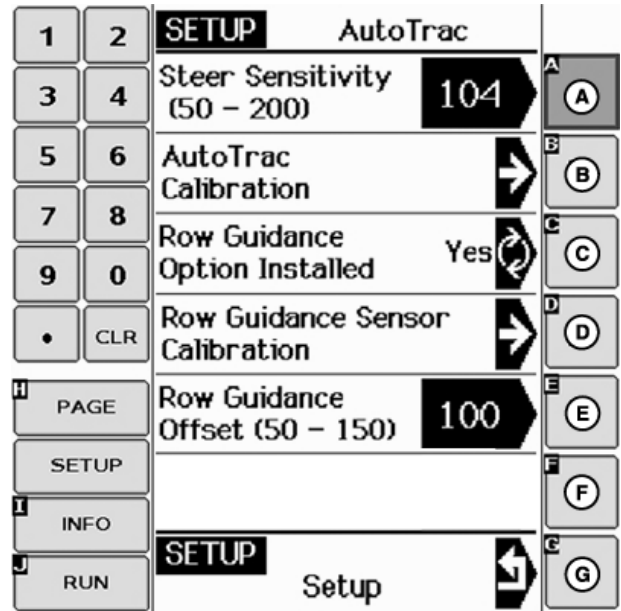
An offset can be added to row guidance to change alignment of stalks entering corn head.

Examples of when changing alignment is needed:

- Planted guess row is in middle of corn head, and rows have been pushed over by head. An offset can be applied to “split the difference” so all rows lean, but not as severely as without offset.
- Crop dividers with row sensors attached are not aligned with row. Until repairs can be made to physically align the sensors, an offset can be applied to help make up for misalignment.

Entering offset values less than 100 can cause combine to drive slightly left, and values greater than 100 can cause combine to drive slightly right. The default value is 100, with a range of 50 - 150.

1. Press SETUP button on original GREENSTAR monitor. Press letter button pointed to by AutoTrac.
2. Enter row guidance offset (50-150). Default value is 100.
3. End of setup.



Row Guidance Offset Setup

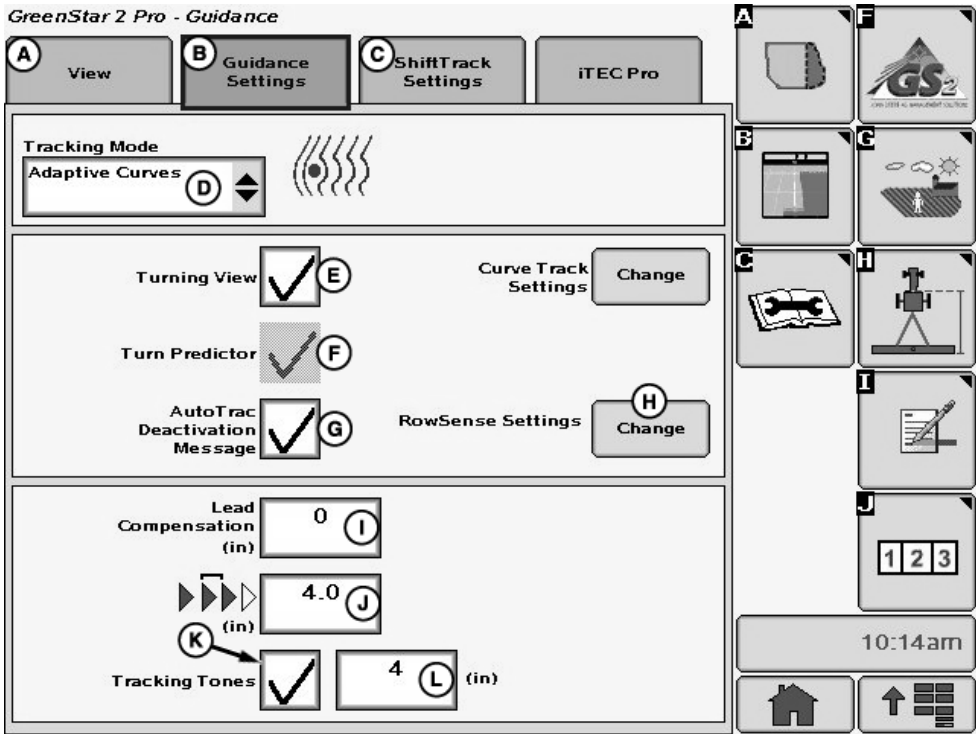
- |                                   |                                |
|-----------------------------------|--------------------------------|
| A—Steer Sensitivity (50-200)      | E—Row Guidance Offset (50-150) |
| B—AutoTrac Calibration            | F—Not Used                     |
| C—Row Guidance Option Installed   | G—Return                       |
| D—Row Guidance Sensor Calibration |                                |

KR43067,00000D6 -19-12NOV08-1/1

PC10466—UN—27APR08

# Enabling the System

## Enabling the System



A—View tab  
 B—Guidance Settings Tab  
 C—Shift Track Settings Tab

D—Tracking Mode Drop-down Menu  
 E—Turning View Check Box  
 F—Turn Predictor Check Box

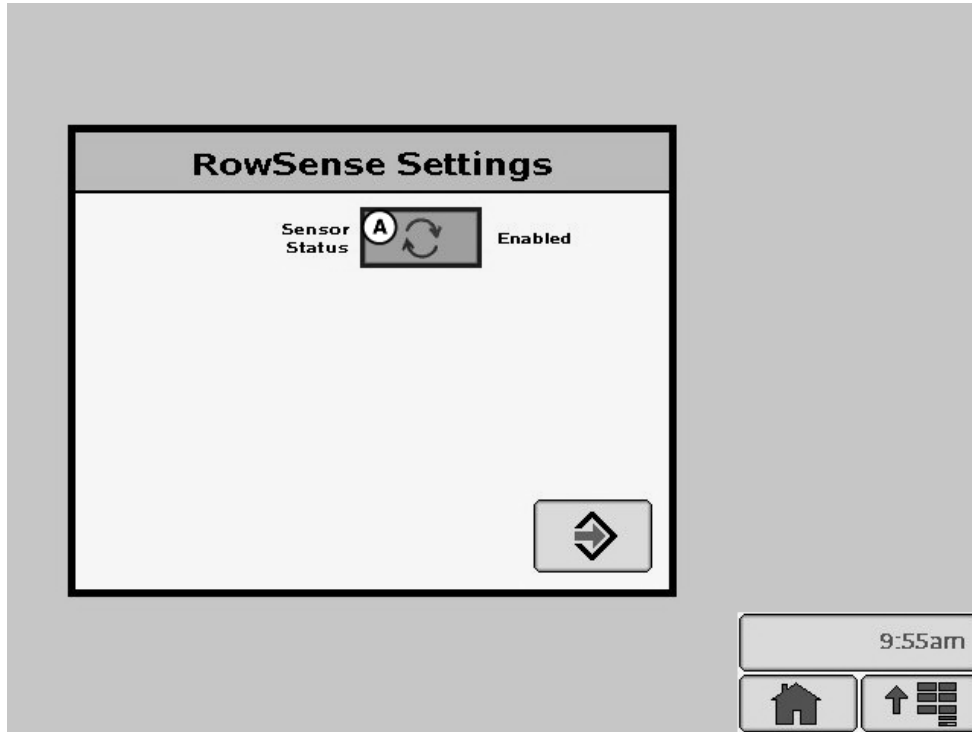
G—AutoTrac Deactivation Message Check Box  
 H—Change Settings Button  
 I—Lead Compensation Input Box

J—Shift Track Input Box  
 K—Tracking Tones Check Box  
 L—Tracking Tones Input Box

Continued on next page

KR43067,00000FB -19-13NOV08-1/3

PC:11454 —UN—13NOV08



A—Sensor Status Toggle Button

ROW GUIDANCE SETTINGS button brings up configuration screen with SENSOR STATUS

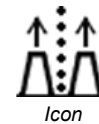
ENABLE/DISABLE button. Toggle SENSOR STATUS button to enable and disable system.

KR43067,00000FB -19-13NOV08-2/3

PC11455 —UN—13NOV08

The AutoTrac RowSense Icon will now be available on Guidance Page under VIEW tab.

PC10040 —UN—04FEB08



KR43067,00000FB -19-13NOV08-3/3

## Displays and Indicators

When using AutoTrac RowSense, you will see the following icons on screen. An icon will appear on map under GUIDANCE VIEW tab indicating row sensors are available (when SENSOR STATUS button is toggled to enable). Each icon indicates what is happening on combine at that moment.

Icon changes from white to colored (green) animated form when row sensors are controlling vehicle.

PC10042C —UN—04FEB08



*System Installed (Grey Background)*

PC10042 —UN—04FEB08



*System Active, Operating with both, row sensor and GPS (Green Background)*

PC10042A —UN—04FEB08



*Lost GPS, Operating with Row Sensor data only (Yellow Background)*

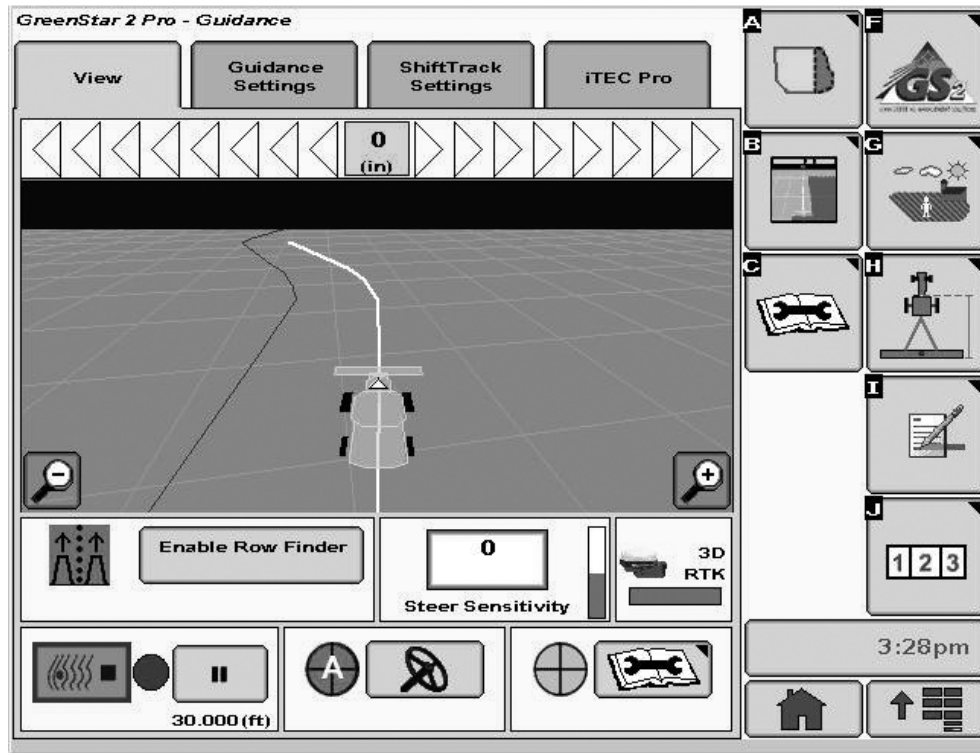
PC10042B —UN—04FEB08



*Lost Row Sensor Signal, Operating with GPS only (Orange Background)*

KR43067,00000D8 -19-12NOV08-1/1

## Engaging the Row Sensors



Row sensors guide combine whenever they can determine a row position. Operator will know row sensors are guiding combine by AutoTrac RowSense icon changing to green and showing motion.

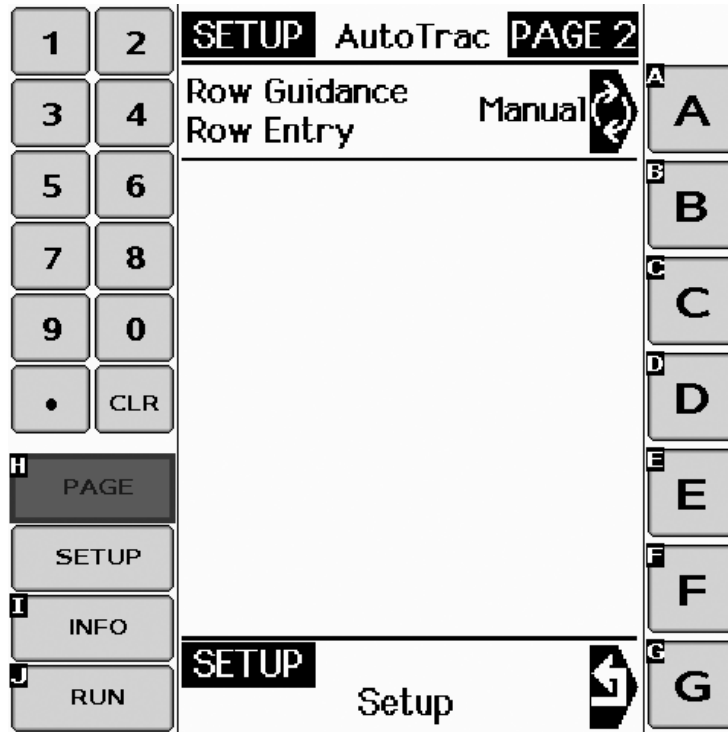
**Once initial path has been set (an AB line or initial recorded Curve Track Pass), then resume button can be pressed when combine is within half the track spacing and at acceptable angle to rows. Row sensors guide combine as soon as there is activity on row sensors.**

**Making a headland turn:** Headland turns are accomplished the same as with GPS based AutoTrac. Operator lines up with path they desire to follow. Pressing resume button will cause AutoTrac to drive to the guidance path. Row sensors then detect position of row and follow it. Line extension feature of Adaptive Curves, Circle Track, and AB Curves can be used to extend adjacent path projection into headlands.

DT31797,0000231 -19-29JAN09-1/1

PC11627 —UN—29JAN09

### Setting up Row Entry



A—Row Guidance/Row Entry  
B—Not Used

C—Not Used  
D—Not Used

E—Not Used  
F—Not Used

G—Return to Setup

**Default mode:**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Drive combine into row.</li> <li>2. Press resume button first time to lower head.</li> <li>3. Press resume button second time to engage guidance and row sensors.</li> </ol> | <ol style="list-style-type: none"> <li>1. Drive combine into row.</li> <li>2. Press resume button first time to lower head and engage guidance.</li> <li>3. Press resume button second time to engage row sensors.</li> </ol> |
|--|---|

**GPS mode:**

PC10467B—UN—14MAR08

KR43067.00000DA -19-12NOV08-1/1

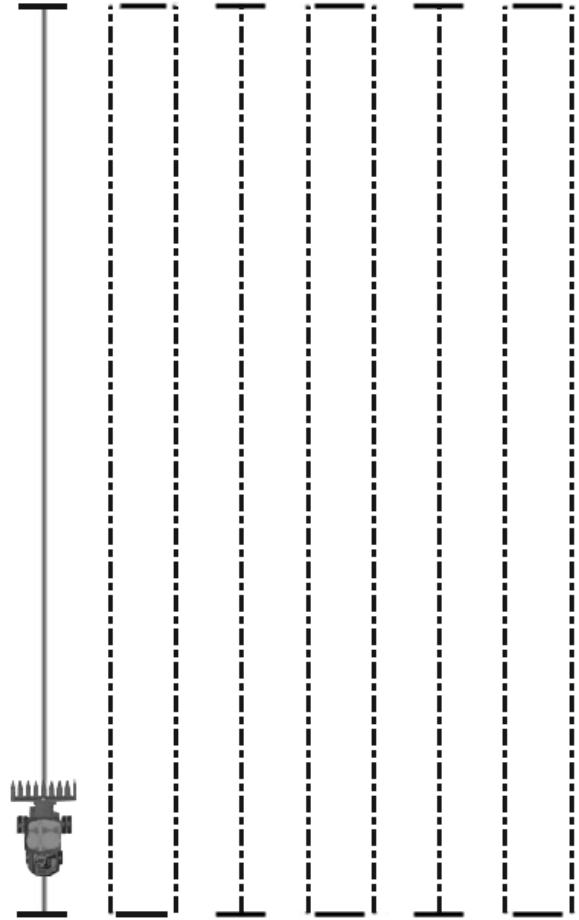
# Straight Track

## Straight Track

Straight Track should be used when rows are straight and do not vary by more than approximately 1 m (3-1/4 ft). Straight Track projects all lines off of first path.

If field is relatively straight and heading does not change, using straight track is recommended as this will allow row entry on adjacent paths. Performance with row entry will be improved when field is planted with AutoTrac. Performance will also be improved during periods of row dropout in waterways.

When in Straight Track, GPS line will automatically re-center. This ensures GPS path is properly aligned with corn rows. **This feature is not available in adaptive curves.**



*Straight Track*

Continued on next page

KR43067,00000AD -19-10NOV08-1/4

PC10390—JUN—07JAN08

## Straight Track

MENU >> GREENSTAR2 PRO softkey >> GUIDANCE softkey >> GUIDANCE SETTINGS tab

PC8663 —UN—05AUG05



MENU button

Select STRAIGHT TRACK from TRACKING MODE drop-down menu. Select VIEW tab.

PC8661 —UN—02NOV05

*NOTE: Pause recording when not harvesting.*



GREENSTAR2 PRO softkey

Before starting

1. Ensure an SF1, SF2, or RTK signal is present by viewing receiver icon on View page.
2. Verify track spacing is correct. If track spacing is not correct, change track spacing under GUIDANCE tab.

Select SET TRACK 0.

PC8673 —UN—14OCT07

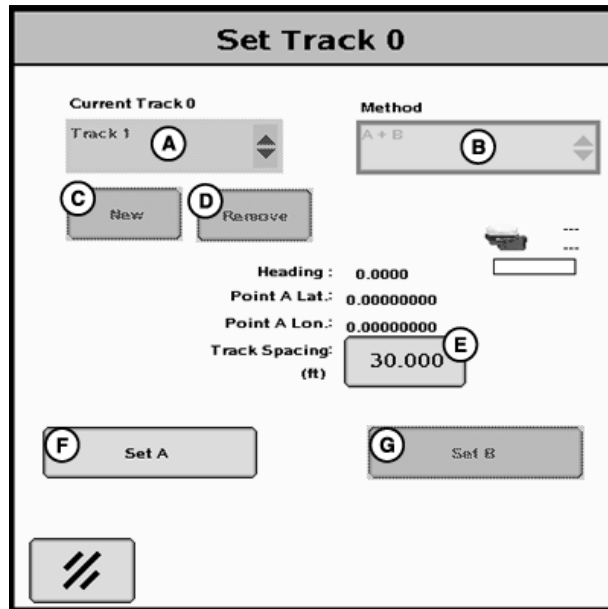


GUIDANCE softkey

KR43067.00000AD -19-10NOV08-2/4

1. Select track name from CURRENT TRACK 0 drop-down menu. If no name exists, create new one by selecting NEW button.
2. Select track method (A + B) from METHOD drop-down menu.
3. Drive to start of track and select SET A button.
4. Drive to end of track and select SET B button.  
A line that projects across field will be created.
5. Press resume button to run AutoTrac RowSense.

- |                                  |                        |
|----------------------------------|------------------------|
| A—Current Track 0 Drop-down Menu | E—Track Spacing Button |
| B—Method Drop-down Menu          | F—Set A Button         |
| C—New Button                     | G—Set B Button         |
| D—Remove Button                  |                        |



Set Track 0

PC10708 —UN—24OCT07

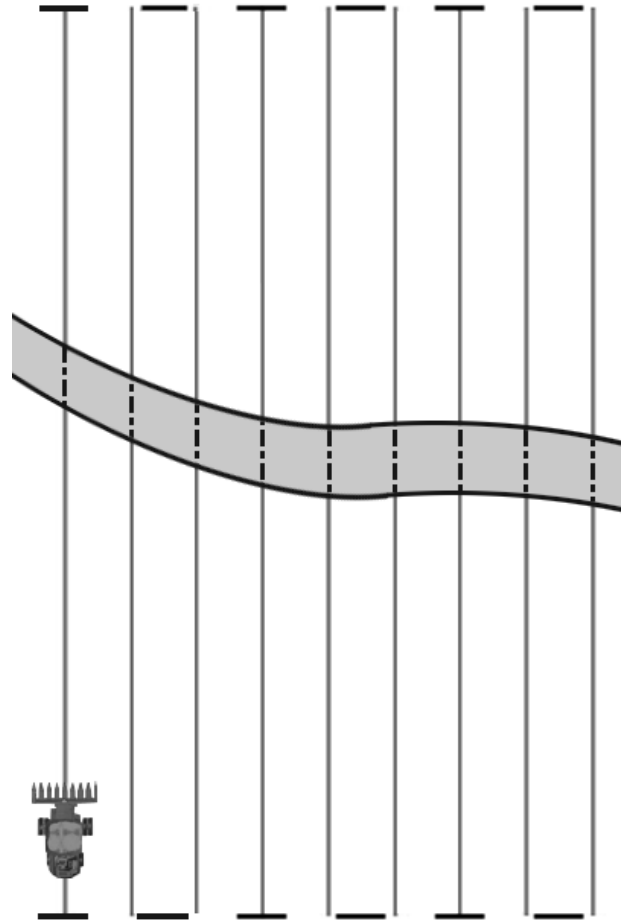
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KR43067.00000AD -19-10NOV08-3/4

## Straight Track

**Row Dropout**—There will not be a corn row in waterway. Since Straight track and AB curves recenters the track, there's a greater chance it will find correct row on other side of waterway.

*NOTE: If both GPS and Row Sensor data signals are lost, system will not engage until GPS signal is restored.*



Waterway

PC10391 —JUN—08JAN08

KR43067,00000AD -19-10NOV08-4/4

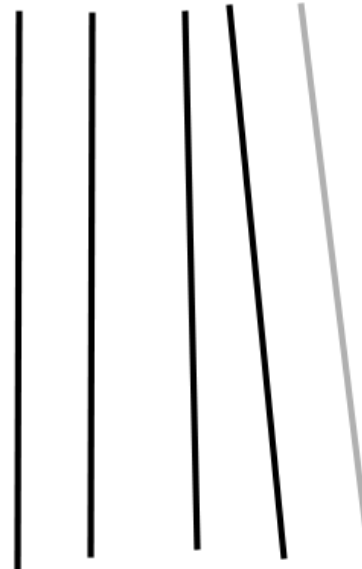
# Adaptive Curves

## Adaptive Curves



*Path changes while going through field*

PC10399 —UN—04FEB08



*Heading changes through field*

PC10400 —UN—04FEB08

Adaptive curves can be used in all fields, but is highly recommended when path changes while going through field, heading changes significantly, or curve is U-shaped. Adaptive Curves has an added feature making RowFinder able to be selected with a toggle button. Row sensors can be used to steer combine whenever they are engaged on a row. Curve Track Recording must be ON. This will establish first pass, and allow straight line extensions to occur.

Adaptive Curves only get projected to adjacent pass, but have the advantage of handling different curve shapes, and potential guess row errors don't get accumulated throughout field.

If multiple combines are in field, Adaptive Curves does not allow skipping a pass. Adaptive Curves in this scenario may only work if track spacing of other combine(s) is added to its own. For instance, if a 12 row head is following an 8 row head on 30 inch rows while harvesting together in same field, each would need a track spacing of 20 rows (50 feet).

Use of adaptive curves is recommended when path will frequently change throughout field. Adaptive Curves only projects next path over.



*Curves are U-shaped*

PC11000 —UN—04FEB08

KR43067.00000AE -19-10NOV08-1/1

## Set Up Adaptive Curves

MENU >> GREENSTAR2 PRO softkey >> GUIDANCE softkey >> GUIDANCE SETTINGS tab

Select ADAPTIVE CURVES from TRACKING MODE drop-down menu. Select VIEW tab.

Before starting

1. Ensure an SF1, SF2, or RTK signal is present by viewing receiver icon on View page.
2. Verify track spacing is correct. If track spacing is not correct, change track spacing under GUIDANCE tab.
1. Select record button to begin recording path.
2. Drive path through field. After driving through first path, a projection of only the next path will be created.
3. Press resume button to run AutoTrac RowSense.

When in AutoTrac mode, recording shuts off when steering wheel is turned. When in documentation mode, recording shuts off when header is raised.

**AutoTrac mode**— If operator wants improved row entry for adjacent pass only, tie Adaptive recording to AutoTrac. This is only recommended if field is relatively straight with no extreme curves and AutoTrac is rarely deactivated (due to manual steering or loss of GPS).

**Documentation mode**— Tie Adaptive Curves to Documentation. This allows operator to grab steering wheel during operation and continue to record path they are on. Line extensions are available on next pass, but they will not be very useful in row entry since there is a delay in picking up the head on end rows. Performance will be marginal in periods of row dropout.

PC8663 —UN—05AUG05



MENU button

PC8661 —UN—02NOV05



GREENSTAR2 PRO softkey

PC8673 —UN—14OCT07

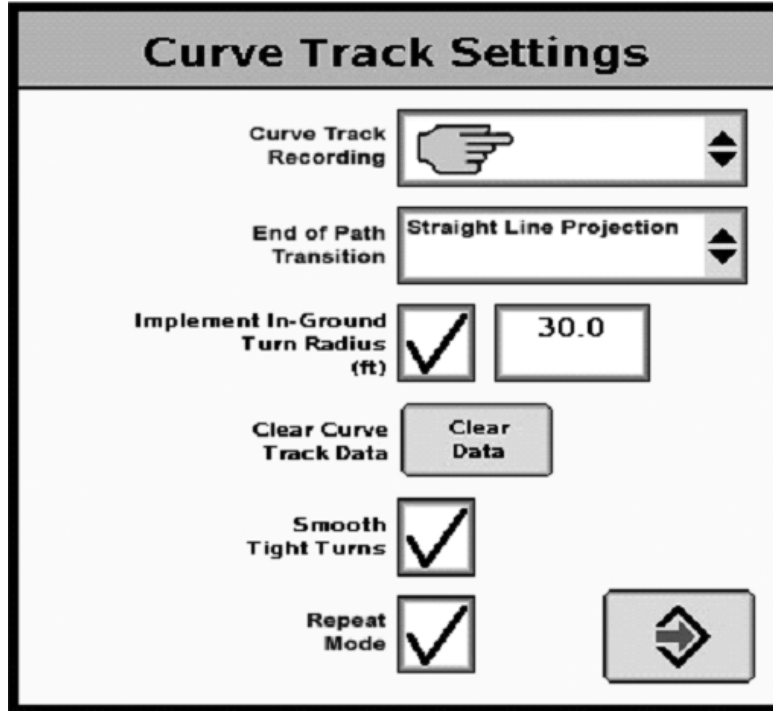


GUIDANCE softkey

**Manual Recording**— Operator can tie Adaptive recording to Manual recording. This mode would not allow for line extensions unless operator continually pushed stop button on end row. If operator forgets to turn off recording, it can lead to issues such as incorrect curvature projection. Example: If operator pulls out of the row to unload and doesn't press pause, the path will be recorded. When operator drives down adjacent path, combine will be pulled slightly off row since projected line is off.

Continued on next page

KR43067,00000AF -19-10NOV08-1/2



PC10043E—UN—24MAR08

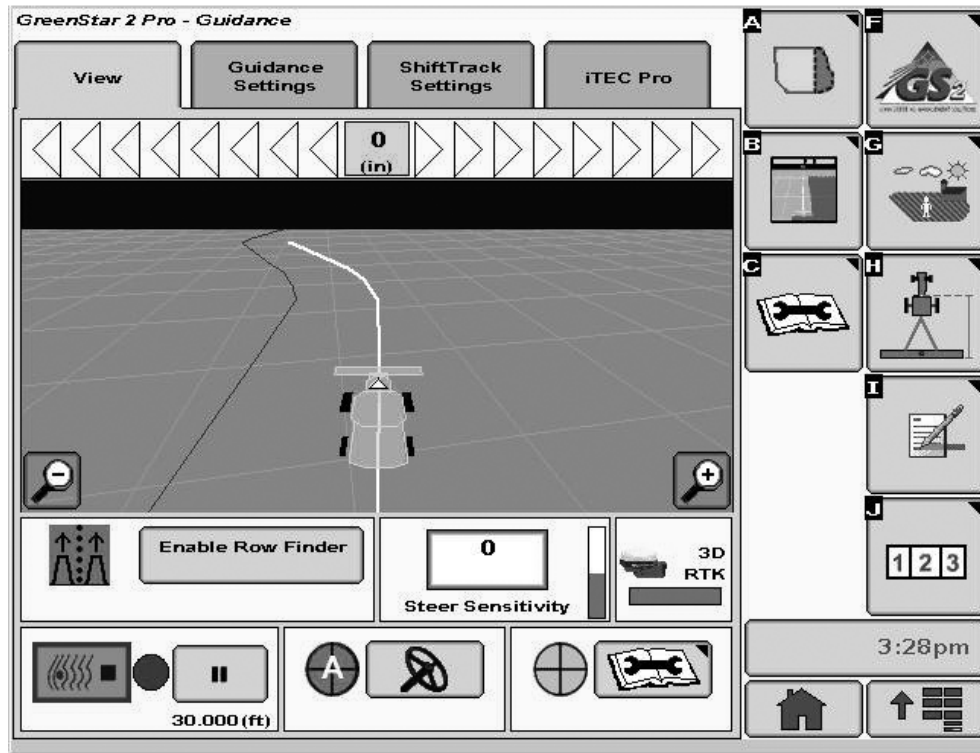
Press: Menu button >> GS2 Pro button >> Guidance softkey >> Guidance Settings tab >>Curve Track Settings button >> Curve Track Recording drop-down menu"

- AutoTrac
- Documetation
- Manual

Adaptive Curve modes listed can be changed on screen shown above by using drop-down menu to choose desired mode.

KR43067.00000AF -19-10NOV08-2/2

## RowFinder



RowFinder can be used when operating in adaptive curves and finding a row that is two or more passes away. When approaching headland in Adaptive Curve mode, select ENABLE ROWFINDER button. This will record vehicle position and heading.

*NOTE: Recorded position and heading will be discarded if AutoTrac is not disengaged within 3 minutes of first selecting the ENABLE ROWFINDER button*

At end of row, ensure recording is turned off. Display will project parallel rows.

Proceed in headland toward desired row. Enter row and select DISABLE ROWFINDER button. This will change system back to Adaptive Curves Mode.

Before harvesting is started ensure recording is turned on. **Press resume button.** AutoTrac will then guide combine down row and a new first path will be recorded.

DT31797.0000232 -19-29JAN09-1/1

PC11627 —UN—29JAN09

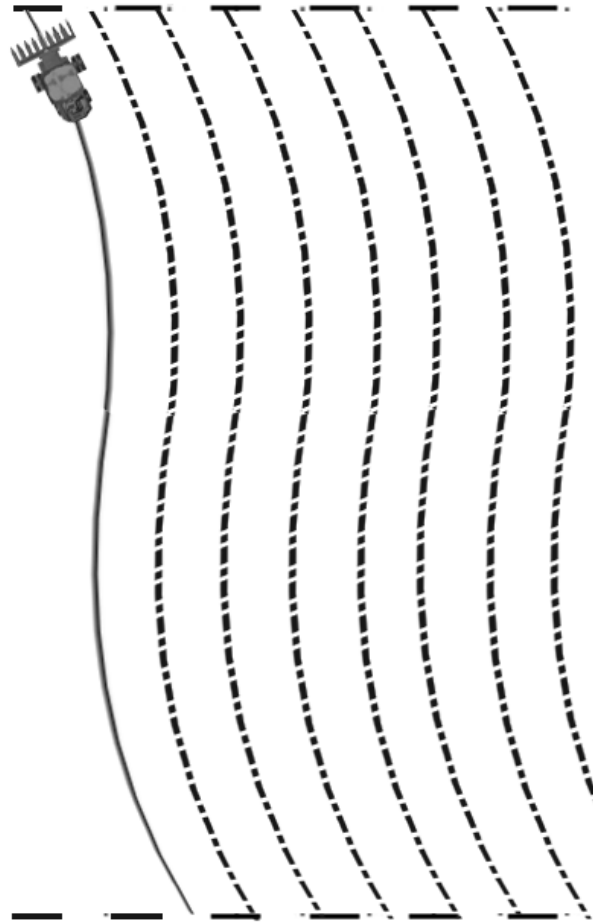
# AB Curves

## AB Curves

Use of AB Curves is recommended when there is a continuous curve throughout field. This allows for row entry on adjacent paths. Performance will be improved if field is planted with AutoTrac. AB Curves will also have improved performance through periods of row dropout.

AB Curves have the advantage of projecting a curved track across a field as parallel lines, but shape of the curve is same on each pass.

When in AB Curves, the GPS curve will be automatically re-centered. This ensures GPS path is properly aligned with corn rows. **This feature is not available in adaptive curves.**



PC10393—UN—08JAN08

*AB Curves projects all lines off of first pass*

Continued on next page

KR43067,00000A3 -19-10NOV08-1/3

## AB Curves

MENU >> GREENSTAR2 PRO softkey >> GUIDANCE softkey >> GUIDANCE SETTINGS tab

PC8663 —UN—05AUG05



MENU button

*NOTE: Please pause recording when not harvesting.*

1. Select AB CURVES from TRACKING MODE drop-down menu. Select VIEW tab.
2. Ensure an SF1, SF2, or RTK signal is present by viewing receiver icon on the VIEW tab.
3. Select AB CURVES button.
4. Verify track spacing is correct. If track spacing is not correct, change track spacing under GUIDANCE tab.

PC8661 —UN—02NOV05



GREENSTAR2 PRO softkey

PC8673 —UN—14OCT07



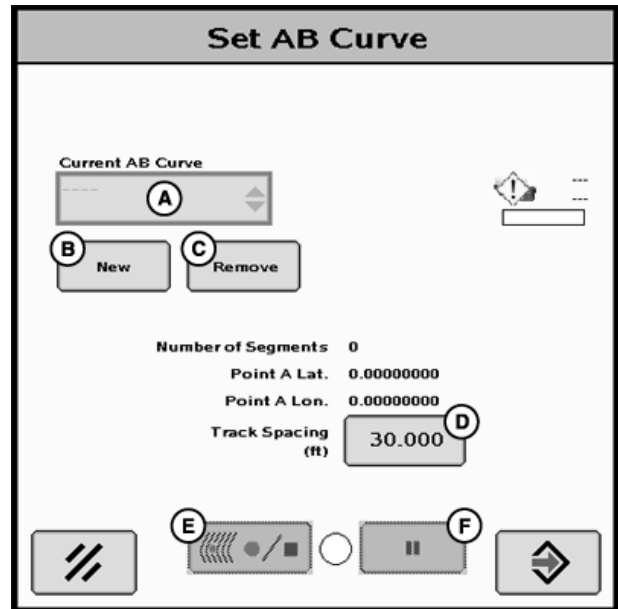
GUIDANCE softkey

KR43067,00000A3 -19-10NOV08-2/3

5. Select an AB Curve name from CURRENT AB CURVE drop-down menu. If no name exists, create new one by selecting NEW button.
6. Select record button at beginning of first pass.
7. Select accept button at end of first pass. Curves will be projected across field.
8. Press resume button to run AutoTrac RowSense.

**A—Current AB Curve Drop-down Menu**  
**B—New Button**  
**C—Remove Button**

**D—Track Spacing Button**  
**E—Record/Stop Button**  
**F—Pause Button**



PC110709 —UN—25OCT07

KR43067,00000A3 -19-10NOV08-3/3

# Circle Track

## Set up Circle Track

Use of Circle Track is recommended when crop is planted in a center pivot field.

If rows to be harvested are in circles, Circle Track should be used. This allows input from GPS curvature to be applied to row sensors.

MENU >> GREENSTAR2 PRO softkey >> GUIDANCE softkey >> GUIDANCE SETTINGS tab

1. Select CIRCLE TRACK from TRACKING MODE drop-down menu. Select VIEW tab.
2. Ensure SF1, SF2, or RTK signal is present by viewing receiver icon on VIEW tab.
3. Select SET CIRCLE button.
4. Verify track spacing is correct. If track spacing is not correct, change track spacing under GUIDANCE tab.



PC8663 —UN—05AUG05



MENU button

PC8661 —UN—02NOV05



GREENSTAR2 PRO softkey

PC8673 —UN—14OCT07



GUIDANCE softkey

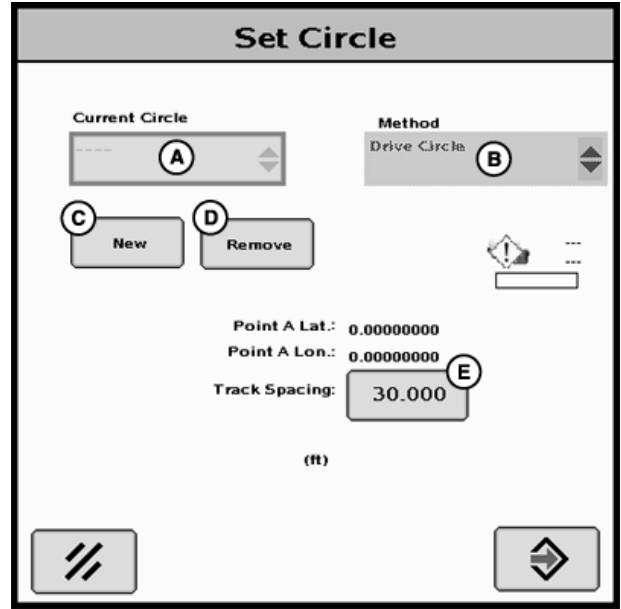
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KR43067,00000B1 -19-11NOV08-1/2

PC10853 —UN—31JAN08

5. Select circle name from CURRENT CIRCLE drop-down menu. If no name exists, create new one by selecting NEW button.
6. Select drive method from METHOD drop-down menu.
7. Select record button while driving first pass.
8. Select accept button after driving first circle. A circle will be projected in field.
9. Press resume button to run AutoTrac RowSense.

**A**—Current Circle Drop-down Menu  
**B**—Method Drop-down Menu  
**C**—New Button  
**D**—Remove Button  
**E**—Track Spacing Button



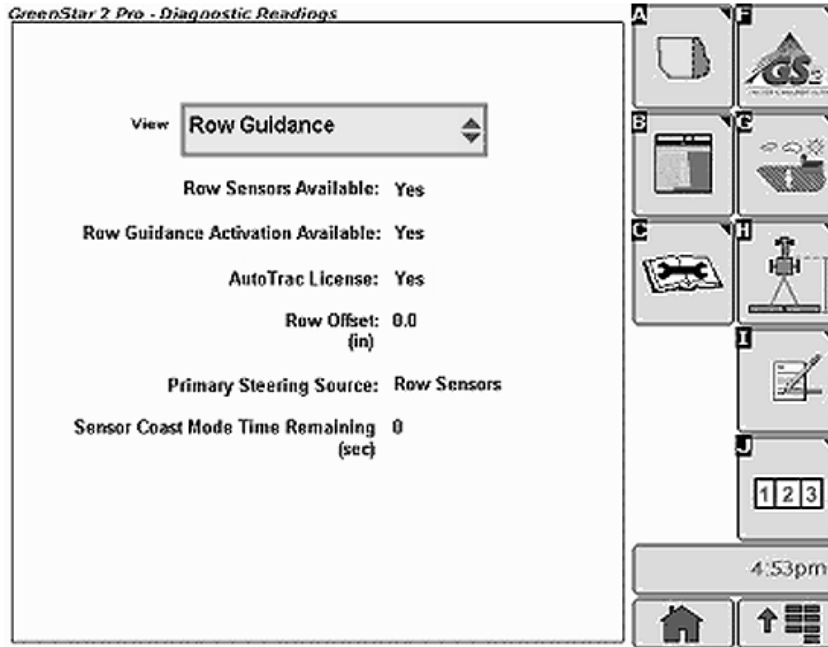
PC10710 —UN—25OCT07

KR43067,00000B1 -19-11NOV08-2/2

# Diagnostics

## Diagnostic Screens

*NOTE: Possible diagnostic answers given with brief explanation.*



PC11443 —UN—31OCT08

Row sensors available:

- A — Yes
- B — No

Row guidance activation available:

- A — Yes (if SF1 row guidance activation is available)
- B — Yes (if SF2 row guidance activation is available)
- C — No (if no row guidance activation available)

AutoTrac license:

- A — Yes (SF1)
- B — Yes (SF2)
- C — No

Row offset:

- Current row offset value, distance measured in (in.) or (mm).

Primary steering source:

- A — None
- B — GPS
- C — Row sensors

Sensor coast mode time remaining:

- Countdown timer when GPS signal is lost, displayed in seconds.

KR43067,00000BE -19-11NOV08-1/1

# Cleaning Row Sensors

## Cleaning Row Sensors

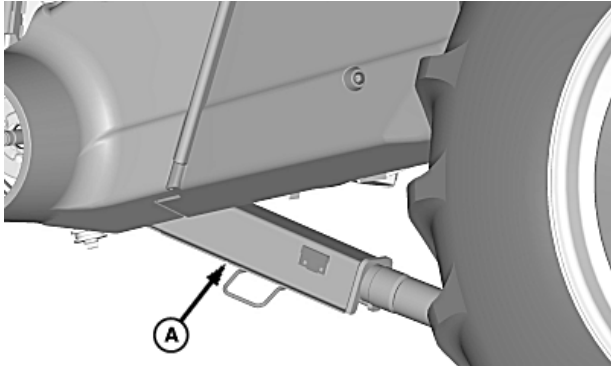
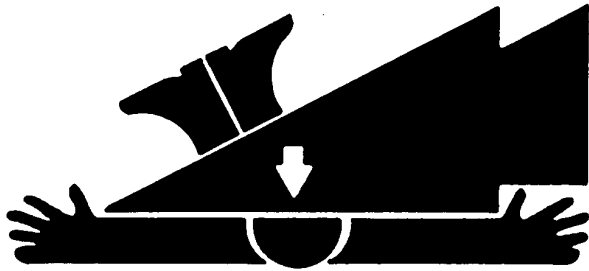
**⚠ CAUTION:** Shut OFF engine, set parking brake and remove key.

Raise header and lower safety stop (A) onto hydraulic cylinder rod.

Row Sensors should be checked daily to see if cleaning is necessary. If material has accumulated on sensors it may prevent free movement and affect performance. To clean row sensors, remove debris from sensors and surrounding area. Check that sensors move freely without obstruction.

Annually check for excessive wear of sensor bushings and shafts. Replace as necessary.

**A—Safety Stop**



TS696 —UN—21SEP89

H90891 —UN—26FEB08

KR43067,00000B3 -19-11NOV08-1/1

# Specifications

## Declaration of Conformity

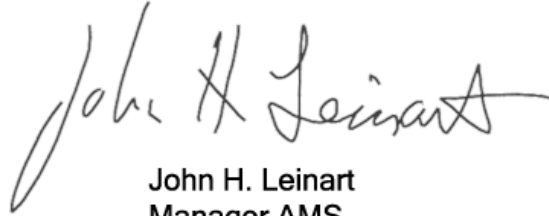
John Deere Ag Management Solutions  
4140 NW 114th Street  
Urbandale, IA 50322



The following GREENSTAR System Components comply with the EU electromagnetic compatibility provisions in directive 2004/108/EC. These components were assessed using the acceptance criteria defined in the harmonized standard ISO 14982:1998.

- Original GreenStar Display
- Mobile Processor
- GreenStar Display 2100 & 2600
- Display Control
- StarFire iTC Receiver
- RTK Radio
- AutoTrac Universal Steering Kit
- GS2 Rate Controller
- iTC Power Module
- AutoTrac RowSense

26 September 2007



John H. Leinart  
Manager AMS

PC7072B—UN—05OCT07

OQO6050,0001042 -19-16DEC08-1/1

## Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account:

If electrical and electronic appliances are subsequently installed on the machine and connected to the onboard system, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Personal Computer
- GPS (Global Positioning System) receiver

Subsequently installed electrical/electronic components must comply with all relevant EMC directives and be CE marked.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

OQO6050,0001043 -19-16DEC08-1/1

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# John Deere Service Literature Available

## Technical Information

Technical information can be purchased from John Deere. Some of this information is available in electronic media, such as CD-ROM disks, and in printed form. There are many ways to order. Contact your John Deere dealer. Call **1-800-522-7448** to order using a credit card. Search online from <http://www.JohnDeere.com>. Please have available the model number, serial number, and name of the product.

Available information includes:

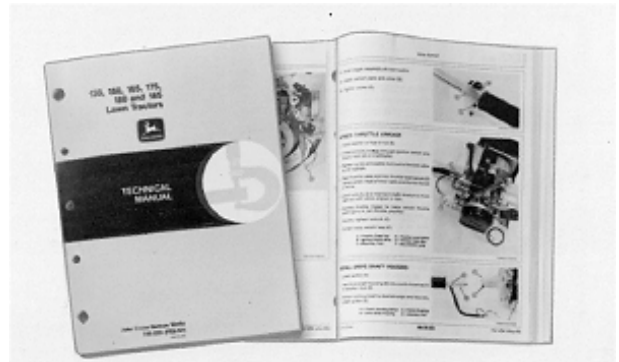
- **PARTS CATALOGS** list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.
- **OPERATOR'S MANUALS** providing safety, operating, maintenance, and service information. These manuals and safety signs on your machine may also be available in other languages.
- **OPERATOR'S VIDEO TAPES** showing highlights of safety, operating, maintenance, and service information. These tapes may be available in multiple languages and formats.
- **TECHNICAL MANUALS** outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in separate component technical manuals
- **FUNDAMENTAL MANUALS** detailing basic information regardless of manufacturer:
  - Agricultural Primer series covers technology in farming and ranching, featuring subjects like computers, the Internet, and precision farming.
  - Farm Business Management series examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
  - Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
  - Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.



TS189 —UN—17JAN89



TS191 —UN—02DEC88



TS224 —UN—17JAN89



TS1663 —UN—10OCT97

DX,SERVLIT -19-31,JUL03-1/1



# John Deere Service Keeps You On The Job

## John Deere Is At Your Service

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.



## CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

- Machine model and product identification number
- Date of purchase

-Nature of problem

2. Discuss problem with dealer service manager.
3. If unable to resolve, explain problem to dealership manager and request assistance.
4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance. Or contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at [www.deere.com/en\\_US/ag/contactus/](http://www.deere.com/en_US/ag/contactus/).

DX,IBC,2 -19-01MAR06-1/1

TS201 -UN-23AUG88





