



360 GUIDE™

INSTALLATION INSTRUCTIONS
HAGIE MODELS WITH SMARTRAX



360YIELDCENTER.COM

FOR QUESTIONS PLEASE CONTACT OUR
PRODUCT SUPPORT TEAM AT 309-300-3120

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INSTALLATION INSTRUCTIONS

HAGIE MODELS WITH SMARTRAX



BEFORE YOU BEGIN...

PLEASE NOTE

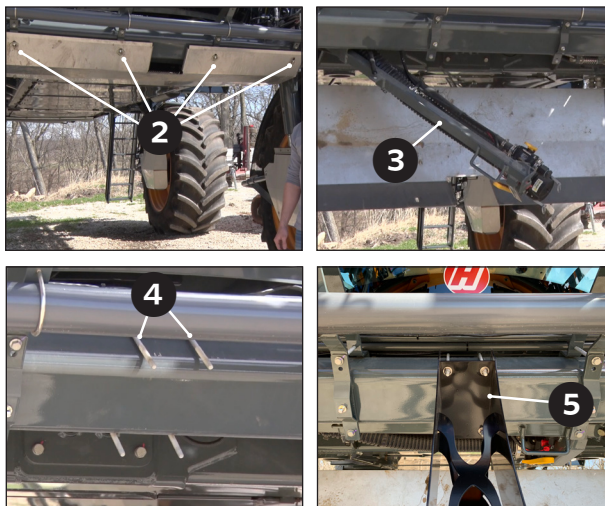


NOTE: If you have a high crop kit you may need to modify your existing shield to fit around the 360 GUIDE mount. The picture above is an example of a 2019 Hagie.

If you chose to cut a hole in your current shield, 360 Yield Center also offers a Hagie High Crop Patch Kit (Part #490321).

STEP 1

INSTALL MATING BRACKET



Open the shield by removing the front four clips **2** and allow it to hang.

Lower the fill port **3** to gain access to the back of the cross bar.

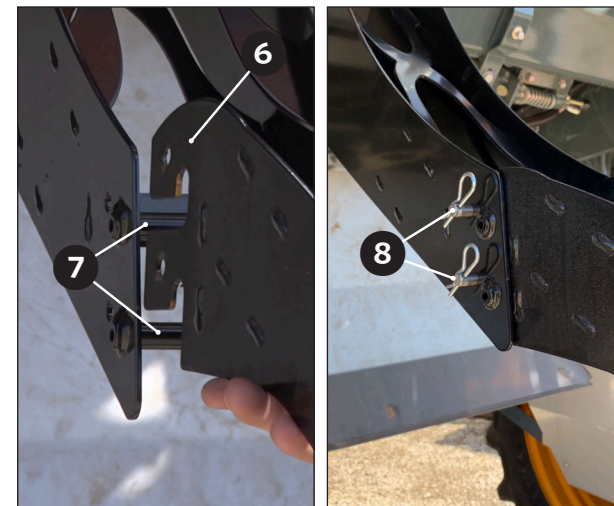
Install (2) 6x7 u-bolts **4** over the backside of the 6x6 tube on the front of the sprayer with the u-bolt legs pointing forward and down. Center the u-bolts. Return fill port to original position.

Align the holes in the flat surface on the mating bracket **5** with the u-bolt legs and slide the mating bracket over the u-bolt legs. Secure with (4) washers and nyloc nuts, (two on the top and two on the bottom).

Ensure that the bracket is centered on the machine and tighten with 9/16" socket.

STEP 2

ATTACH DROP EXTENSION



Install the drop extension **6** over the two 1/2" tubes **7** on the mating bracket. Secure using the two 3/8" pins and hairpin clips **8**.

NOTE: With tight tolerances and powder coating between the mating bracket and the drop extension, a rubber mallet may be needed to tap the pieces together.

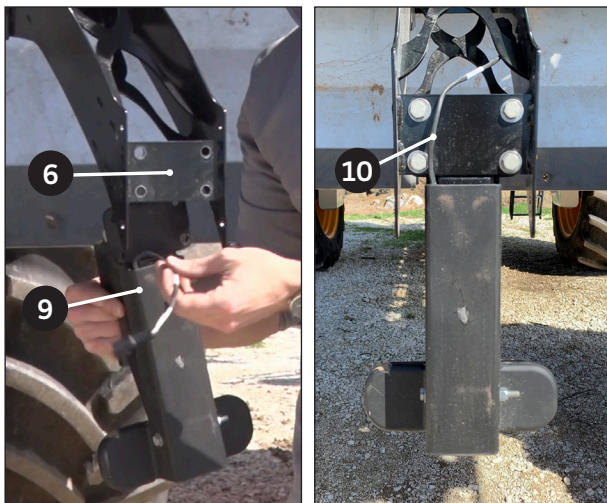
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STEP 3

MOUNT BREAKAWAY



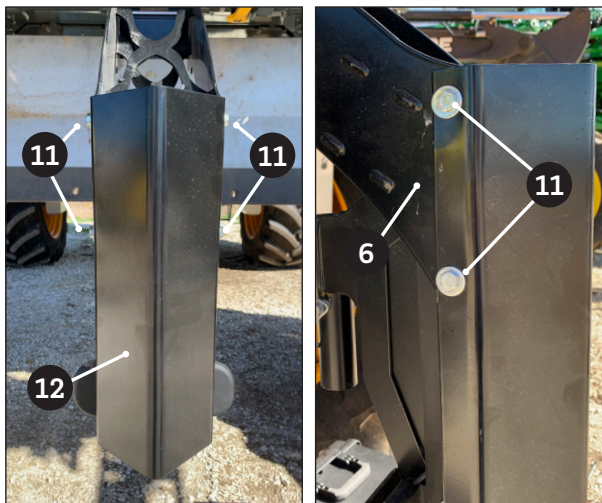
Mount steering breakaway **9** to the backside of the drop extension **6** using the 5/16" bolts, washers, and locknuts.

NOTE: Orient the breakaway in such a way that the riser breaks away in a rearward motion rather than a forward motion.

NOTE: Ensure the breakaway wiring **10** is routed across the front of the drop extension so that it does not become pinched between the breakaway and drop extension.

STEP 4

MOUNT SHIELD



Using the supplied 1/4" hardware **11** mount the front shield **12** to the drop extension **6** at the hole above and below the breakaway on each side of the shield.

Tighten with 7/16" socket and wrench.

STEP 5

INSTALL RISER



Starting from the bottom, insert the riser **13** into the breakaway sleeve **14**. Ensure the end with the 2" adjustment holes goes toward the top of the machine.

NOTE: In order to provide additional clearance when inserting the riser, it may be helpful to release the breakaway. Use caution when manually pulling apart the breakaway as the magnets are extremely strong.

Secure at the desired height using the supplied 3/8" pin with wire lock **15**.

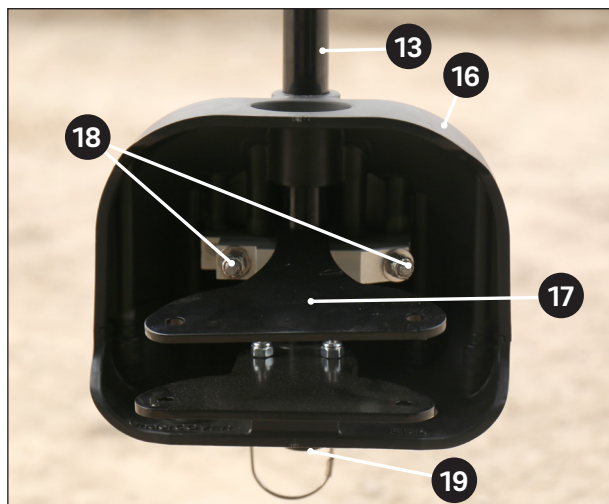
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STEP 6

INSTALL SENSOR GUARD



NOTE: A 360 UNDERCOVER snout is used as a sensor guard.

Begin to slide the sensor guard **16** onto the riser **13** starting from the bottom.

Before the riser goes into the aluminum clamp in the sensor guard, slide the upper sensor bracket **17** on the riser.

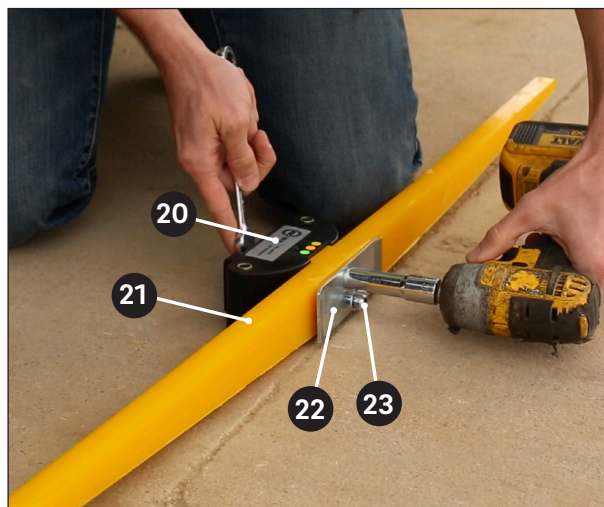
Continue to slide the sensor guard and the upper sensor bracket up the riser until you get at least one inch of the riser protruding from beneath the sensor guard.

Ensure the sensor guard is pointing straight forward and tighten the aluminum clamp bolts **18** using a 1/2" socket.

Insert and secure the clip **19** at the bottom of the riser.

STEP 7

ASSEMBLE STEERING SENSOR



Using a 1/2" socket and wrench remove the hardware and plate on the steering sensor **20**.

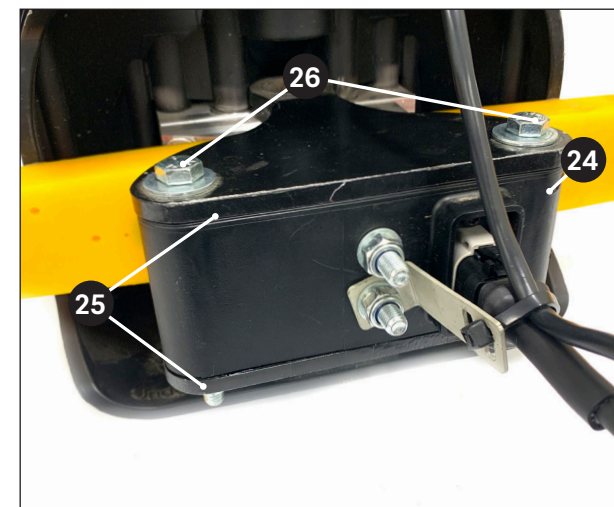
Slide the tactile wand **21** onto the spindles of the steering sensor ensuring that the "V" of the tactile wand is oriented to the bottom of the sensor. The rectangular offset of the tactile wand should be facing the steering sensor.

NOTE: The top of the steering sensor is the side with product labels.

Reinstall the plate **22** and hardware **23** to secure the tactile wand to the steering sensor. Install the provided ladder clip on the bottom sensor bolt on the back side of the sensor, adjacent to the sensor connector.

STEP 8

INSTALL SENSOR ASSEMBLY



Place the wand/sensor assembly **24** in between the upper and lower sensor brackets **25** attached to the sensor guard assembly so that the top of the sensor is facing up and the wand is facing the front of the sensor guard assembly.

Using the supplied 5/16" bolts, washers and lock nuts **26** bolt the upper and lower sensor brackets together, sliding the bolts through the holes in the rear of the sensor assembly.

Tighten with 1/2" socket and wrench.

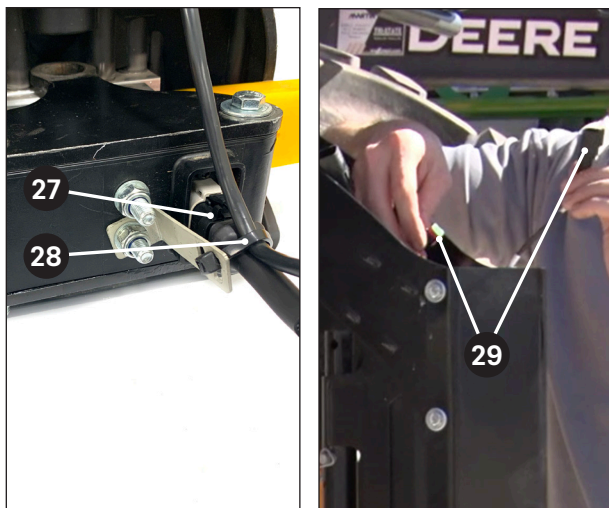
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STEP 9

INSTALL DETACH EXTENSION HARNESS (490291)



Feed the 6-pin plug end of the harness **27** through the hole in the top of the sensor guard assembly and plug it in to the rear of the tactile sensor.

Secure the harness plug and cable to the ladder clip **28**.

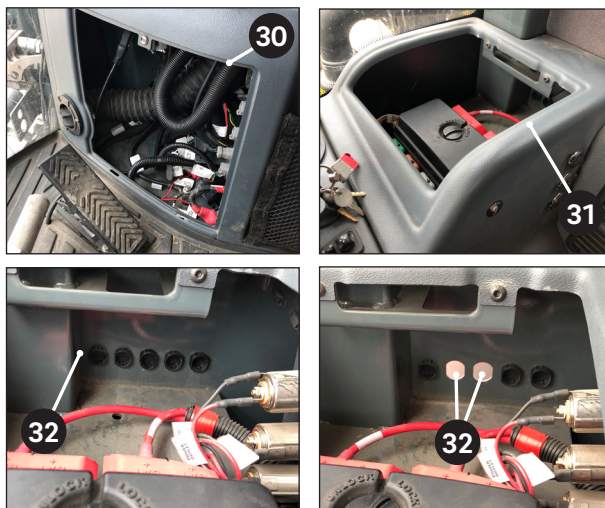
Using zip ties, securely attach the harness to the riser, moving up toward the breakaway and through the X braces in the drop extension.

NOTE: Be sure to leave enough slack in the harness to allow you to adjust the riser height if needed.

Plug 2-pin connector to existing breakaway harness **29** and coil any remaining cable within the X braces of the drop extension.

STEP 10

REMOVE DASH PANEL COVERS

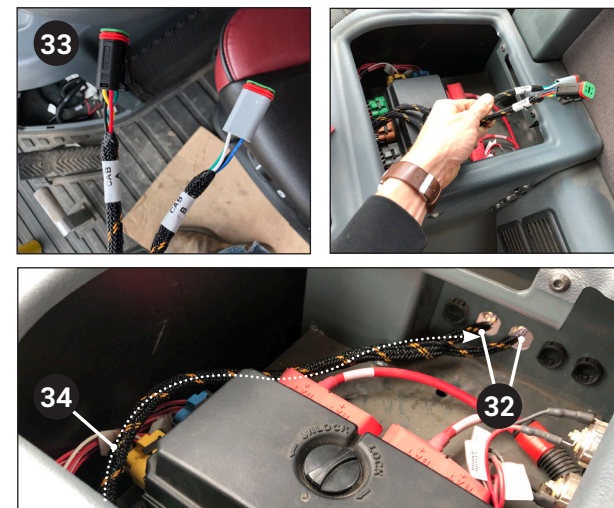


In the cab, remove the dash panel covers in the front right corner **30** and the back right corner **31**.

In the back right dash panel, remove any two of the access hole covers **32**.

STEP 11

ROUTE HARNESS 490232



Starting from the front right dash panel, feed the two 4-pin connectors **33** from harness 490232 labeled CAB A and CAB B from the front right dash panel up through the back right dash panel **34**. Each connector will feed through one of the open access holes **32**.

NOTE: The cupholder can be removed for extra access when feeding the harness through to the back.

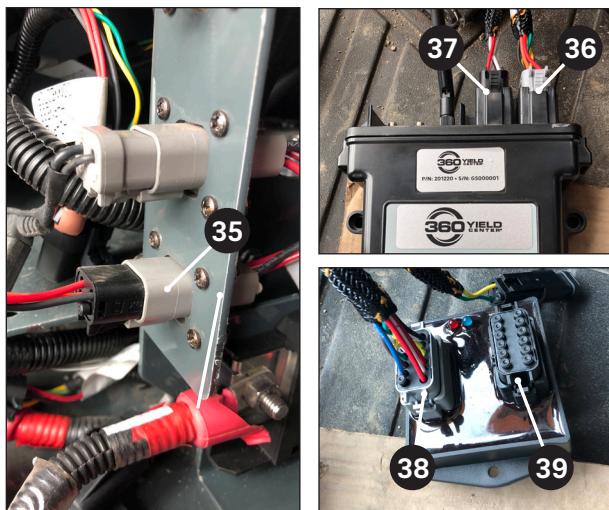
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STEP 12

CONNECT TO POWER, GATEWAY & CONTROLLER



In the front dash panel, plug the 4-pin black male connector into the 4-pin gray female connector **35**. This is the power source for the steering controller.

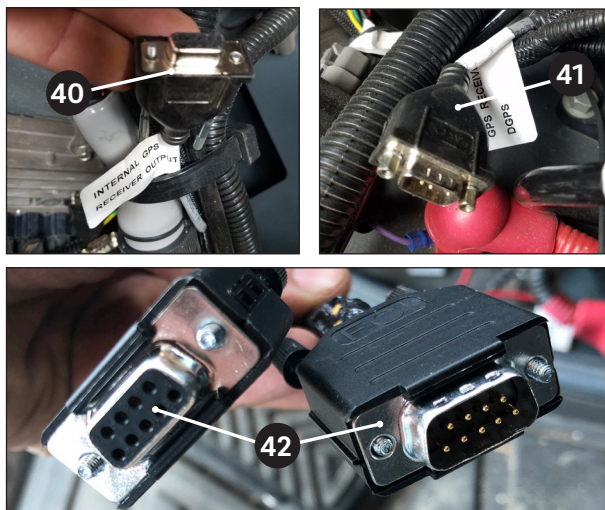
Locate the gray 12-pin plug and black 12-pin plug next to each other on harness 490232. Insert the gray 12-pin connector into the first gateway connector labeled A **36**. Insert the black 12-pin connector into the second gateway connector labeled B **37**. These are keyed and cannot be reversed.

Locate the single gray 12-pin plug farther down the harness. Plug this gray 12-pin connector into the gray connector on the controller **38**.

A spare black 12-pin plug was supplied with the harness. Install this sealing plug into the black 12-pin connector on the controller **39**. These are keyed and cannot be reversed.

STEP 13

PLUG IN TO GPS CONNECTIONS



Under the dash locate the GPS connections labeled INTERNAL GPS RECEIVER OUTPUT **40** and GPS RECEIVER DGPS **41**. Disconnect these from each another.

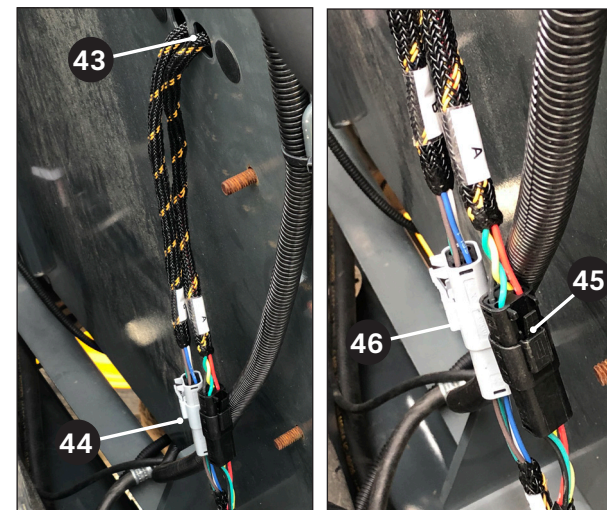
Plug the male and female connections from harness 490232 **42** into their respective serial connection counterparts (INTERNAL GPS RECEIVER OUTPUT and GPS RECEIVER DGPS).

Set the gateway and the controller under the dash.

Reinstall both dash panel covers.

STEP 14

CONNECT HARNESSES



Where harness 490232 was routed through the access holes (the back right corner of the cab) **43**, plug the 4-pin connectors from harness 490232 to their mating connectors on harness 490233 **44**. **The connectors are labeled either CAB A or CAB B and are color coded black and gray. Ensure they are matched appropriately: CAB A to CAB A (black to black) **45** and CAB B to CAB B (gray to gray) **46**.**

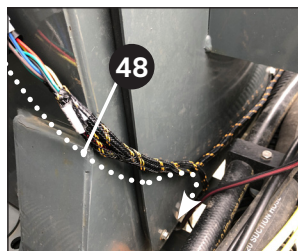
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STEP 15

ROUTE HARNESS TO UNDER SIDE OF SPRAYER



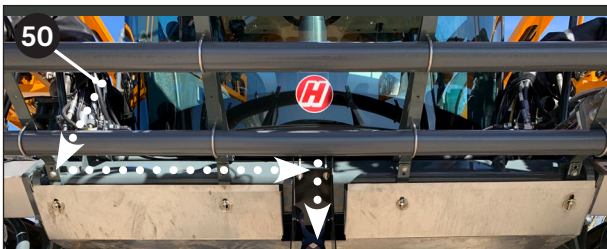
Under the belly of the sprayer, remove the three clips from the belly pan **47**.

Route the shorter section of harness 490233 with the 3-pin male connector under the bottom of the cab, between the bottom of the cab and the main frame rail into the first compartment that was previously opened **48**.

On the right corner of the compartment there is a bank of (6) 3-pin CAN connectors. Disconnect the blank plug and insert the 3-pin male from harness 490233 **49**.

STEP 16

ROUTE HARNESS TO SENSOR BRACKET



Route the longer section of harness 490233 with the 6-pin plug connector along the side and front of the cab to the sensor bracket **50**.

Plug the connector into the receptacle connector on the sensor bracket.

NEXT STEPS

360 GUIDE APP



INSTALLATION COMPLETE

Once the 360 GLIDE system has been installed connect to it via wifi on your iPad using the 360 GUIDE App.

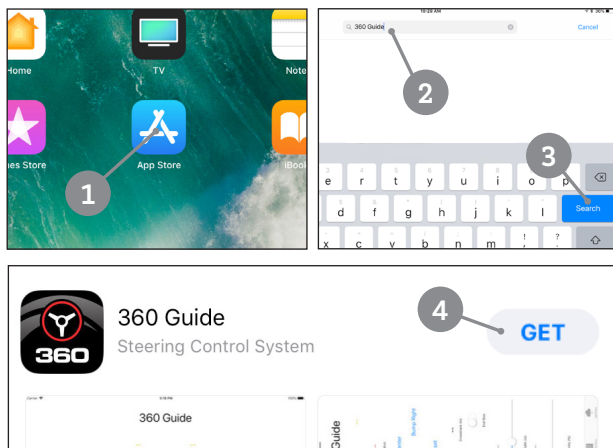
See pages 7-11 for instructions on setting up your 360 GUIDE App.

360 GUIDE APP

SET-UP AND USE



STEP 1 DOWNLOAD APP

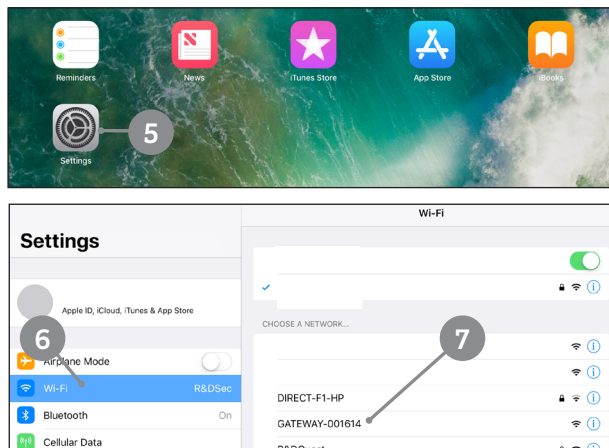


Select the App Store icon **1**.

In the search section enter "360 Guide" **2** and then choose "Search" **3**.

Select "Get" **4** to install the 360 Guide App on your iPad.

STEP 2 SETUP WIFI



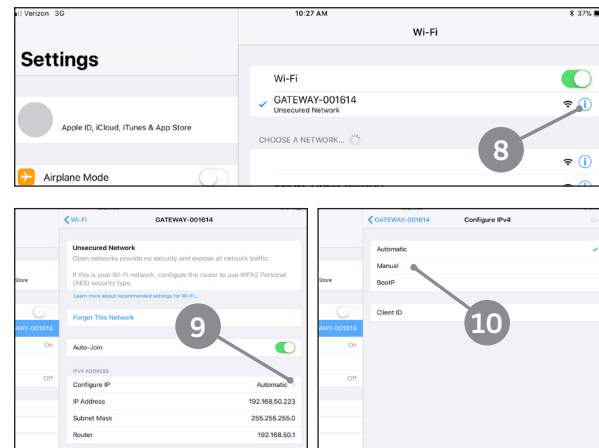
NOTE: Ensure the gateway control box is plugged in and powered on, indicated by the green LED.

Select the settings icon **5**.

In the left side of the Settings window, select the tab that reads "Wi-Fi" **6**.

In the "Choose a Network" section, select "GATEWAY-00XXXXX" **7**.

STEP 3 OPEN NETWORK SETTINGS



Once the GATEWAY-00XXXXX network is active, press the information icon **8** to the right of the network name to open the GATEWAY-00XXXXX settings page.

In the IPV4 Address section on the Configure IP line, select the small arrow **9** next to "Automatic".

In the Configure IPv4 window, automatic is checked by default. Change the setting by selecting "Manual" **10**.

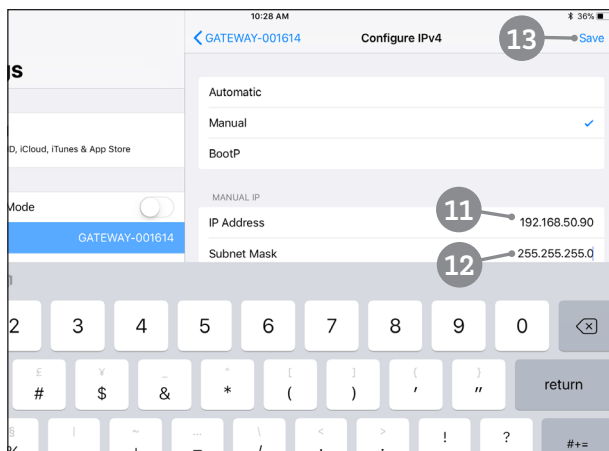
360 GUIDE APP

SET-UP AND USE



STEP 4

CONFIGURE NETWORK



Once the "Manual" option is checked, a "Manual IP" section will appear in the window.

Enter the following information in the IP Address ¹¹ and Subnet Masks ¹² lines respectively:

IP Address: **192.168.50.90**
Subnet Mask: **255.255.255.0**
NOTE: Leave "Router" empty.

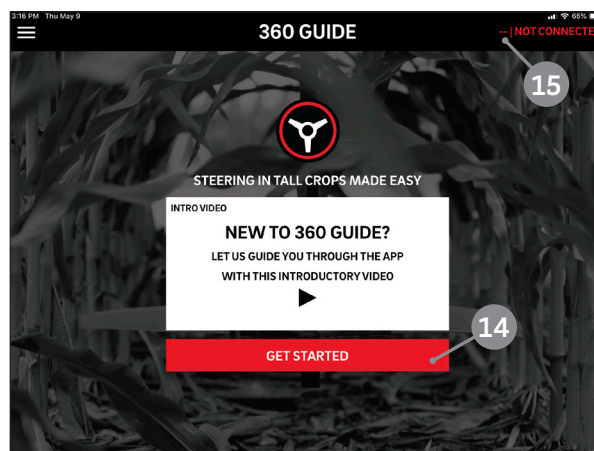
Select "Save" ¹³ in the top right corner.

NOTE: The iPad is now connected to your cellular data network (if applicable) AND the GATEWAY WiFi network. When an app update is performed, reconnect to the GATEWAY network by selecting the GATEWAY network option under "Choose a network".

With the entire system installed, WiFi configured, and the app downloaded you can now power on the steering system.

STEP 5

OPEN 360 GUIDE APP



Ensure the gateway control box is showing a green light and that the iPad is connected to the gateway Wi-Fi network.

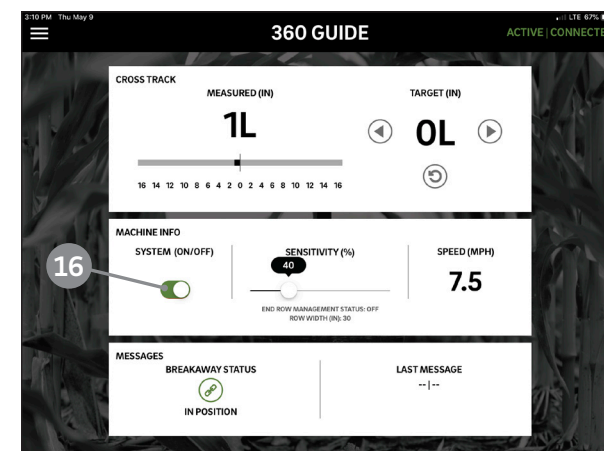
Open the 360 GUIDE App.

When opening the app for the first time a welcome screen will be displayed. Choose "Get Started" ¹⁴ to enter the app.

The top right corner of the app will show "--" ¹⁵ until the system is tuned on - This indicates that the GPS is not currently correcting based on the 360 GUIDE system.

STEP 6

ACTIVATE 360 GUIDE



Let's review some of the basic app functions.

The main page that is displayed is the OPERATIONS page.

Turn the "SYSTEM" toggle ¹⁶ on to activate the 360 GUIDE system. The toggle will illuminate green when on.

With the System toggle on, the 360 GUIDE system is manually engaged and will begin applying a correction to the GPS data until the toggle is switched off.

NOTE: With ONLY the System toggle on, the system will correct whether or not it is sensing a corn row. For additional intelligence, continue to STEP 7.

NOTE: If neither side of the sensor is in contact with the corn rows, measured crosstrack will show "SENSORS NOT CONTACTING"

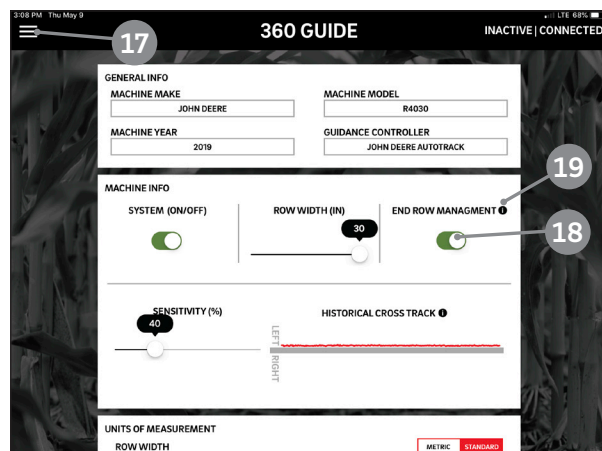
360 GUIDE APP

SET-UP AND USE



STEP 7

END ROW MANAGEMENT



The additional intelligence mentioned in the previous step is called "End Row Management". To activate End Row Management, navigate to the SETTINGS page using the Menu ¹⁷.

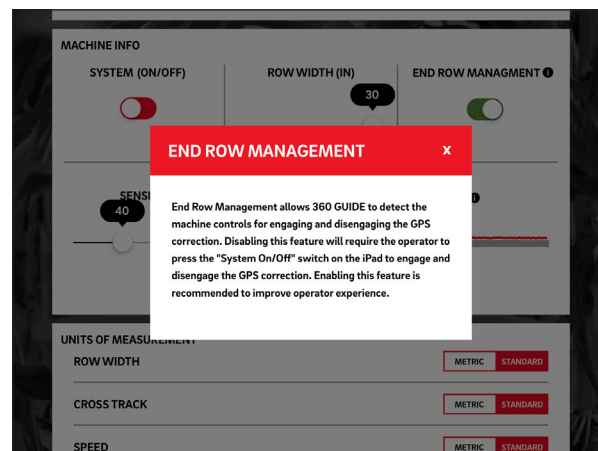
NOTE: To use this feature the "System" toggle must be left in the "on" position.

Turn the "END ROW MANAGEMENT" toggle ¹⁸ on to activate the End Row Management feature of the 360 GUIDE system. The toggle will illuminate green when on.

With the END ROW MANAGEMENT toggle on, the 360 GUIDE system will only engage when the sensors indicate incoming data. It will also sense when the steering wheel is moving and will recognize when the OEM auto-steer is on.

STEP 7 CONTINUED...

END ROW MANAGEMENT



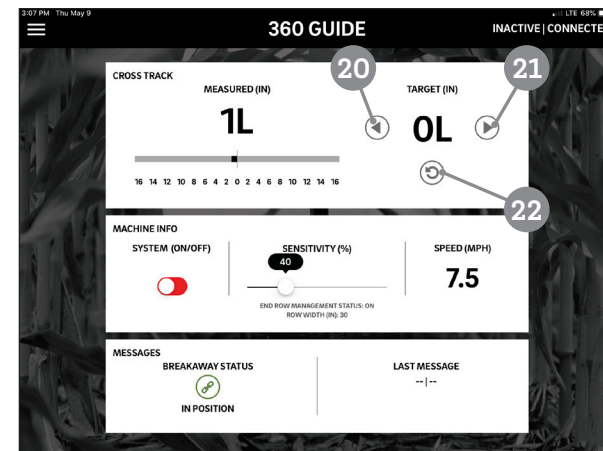
The system requires an inactive steering wheel and listens for **two presses** of the OEM auto-steer engagement button before it will engage 360 GUIDE steering. The 360 GUIDE system will automatically disengage when the steering wheel has been moved or if the sensors are not indicating incoming data.

This will allow you to use your OEM auto-steer to find the row and then with a second click of the auto-steer engagement button activates 360 GUIDE correction.

An overview description of the End Row Management function can be found in the app by tapping on the "i" icon ¹⁹ next to "END ROW MANAGEMENT".

STEP 8

OFFSET UTILIZATION



Navigate back to the OPERATIONS page using the menu.

To offset to the left or right, utilize the left arrow ²⁰ and right arrow ²¹ buttons in the "TARGET" section.

Every left or right bump will move the target by 1 inch. Bumping left will be indicated by "L" and bumping right will be indicated with "R".

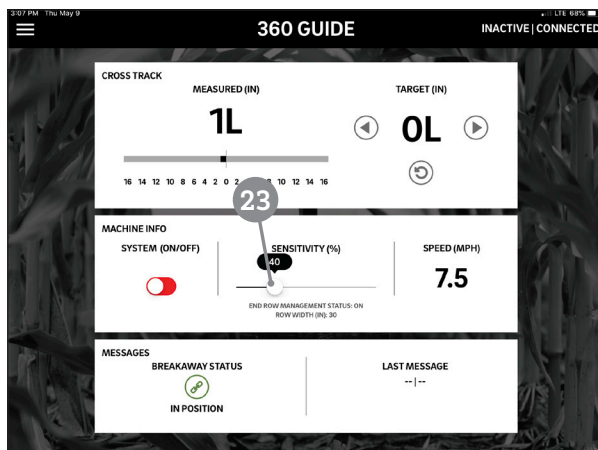
Press the "Reset" button ²² to reset to a target of zero.

360 GUIDE APP

SET-UP AND USE



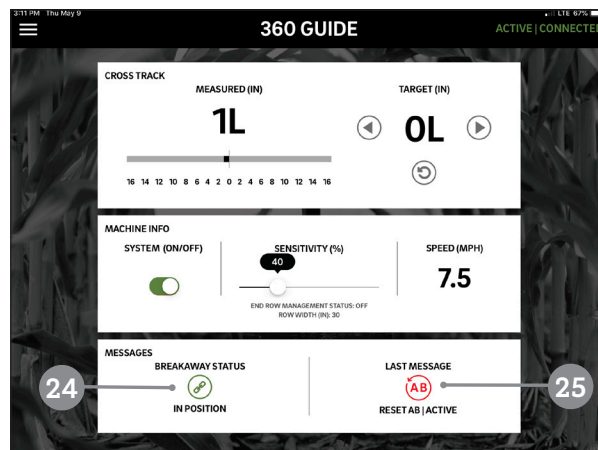
STEP 9 SENSITIVITY



Also on the OPERATION page is the sensitivity adjustment and system alerts (which will be covered in the next step).

The "SENSITIVITY" slider (23) can be adjusted between values of 20% and 100%. It is recommended to set the OEM sensitivity between 75 and 85. Then adjust the sensitivity slider in the 360 GUIDE app based off of your steering performance and preference. The "SENSITIVITY" slider can be found on the "OPERATIONS" screen.

STEP 10 SYSTEM ALERTS



If the steering sensor has been pushed back enough to disconnect the magnet connection at the breakaway there will be an alert in the "BREAKAWAY STATUS" (24) section of the operation page. When the breakaway re-engages, the alert will go away.

"LAST MESSAGE" (25) section:

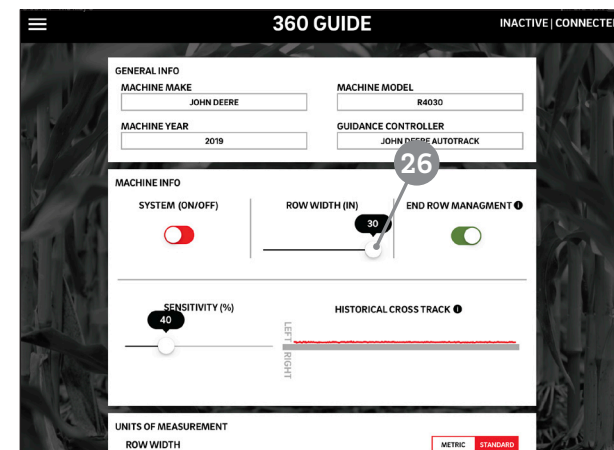
Reset A-B Line: the system feels that it is working too hard to keep the sensor in the center of the row. If the system is correcting more than 15", it is recommended to reset your GPS line.

No Sensor Data: the system has lost the stream of incoming cross track data.

No GPS Data: the system is no longer receiving incoming GPS data.

The message will show "Active" if the error is current or will show a time if the error was in the last two minutes. After two minutes the error will clear itself.

STEP 11 ROW WIDTH



Navigate to the SETTINGS page to adjust the Row Width setting.

The "ROW WIDTH" slider (26) should be set to match the row width to your specific crop spacing. The slider ranges from 20-30 inches. The "ROW WIDTH" slider is accessed on the "SETTINGS" screen.

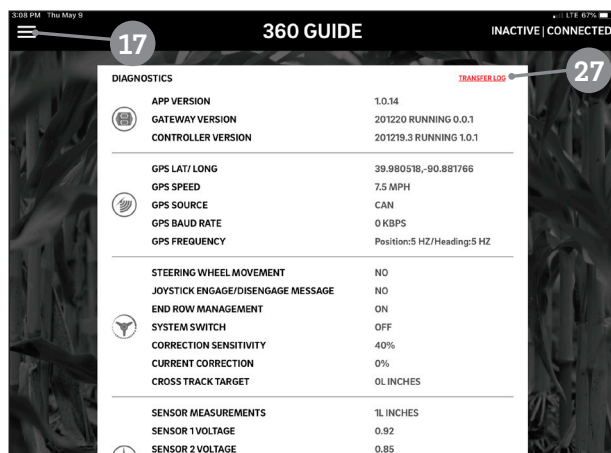
360 GUIDE APP

SET-UP AND USE



STEP 12

DIAGNOSTICS

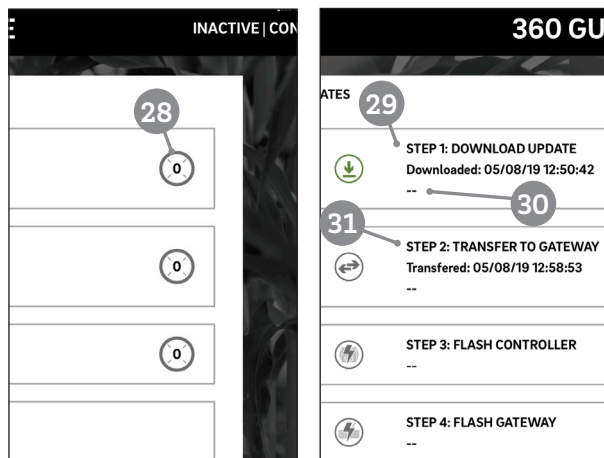


To view Diagnostics of the system select DIAGNOSTICS from the Menu ¹⁷.

If needed, the "TRANSFER LOG" link ²⁷ can be used to send diagnostic information about the system back to 360 Yield Center for further system diagnosis.

STEP 13

UPDATING THE CONTROLLER SOFTWARE



NOTE: Updates can be downloaded while in the field provided there is a strong LTE and GATEWAY WiFi connection.

Touch the menu button in the top left corn of the screen then select the UPDATES to open the "Updates" screen.

NOTE: Do not remove power during the update process.

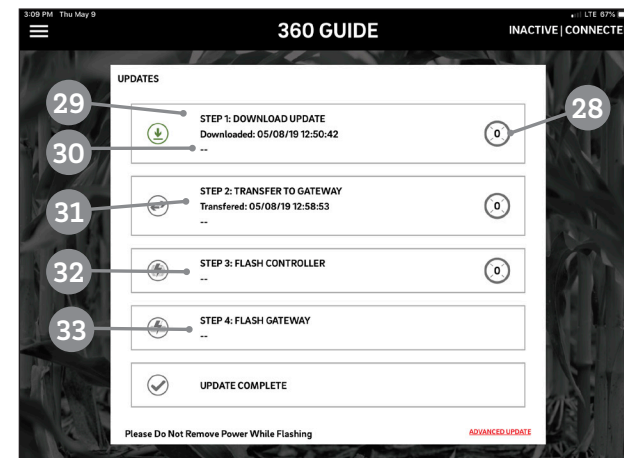
The percent complete status ²⁸ of each download step will be indicated to the right of each step.

Touch "STEP 1: DOWNLOAD UPDATE" ²⁹ on the top of the screen to start the download. When complete step 1 will show a status of "Download succeeded" ³⁰.

When the download is complete, touch "STEP 2: TRANSFER TO GATEWAY" ³¹. When complete step 2 will show a status of "Transfer succeeded".

STEP 13 CONTINUED...

UPDATING THE CONTROLLER SOFTWARE



When the transfer is complete touch "STEP 3: FLASH CONTROLLER" ³². When complete step 3 will show a status of "Controller flashed".

When the controller has been flashed, touch "STEP 4: FLASH GATEWAY" ³³. This process may take several minutes. When complete the gateway will need to reboot which may also take several minutes. The gateway will be ready to function when the indicator LED on the gateway control box has turned green.

Ensure you are connected to the GATEWAY WiFi network. If the network is not connected, select the GATEWAY network option under "Choose a network".

360 GUIDE APP SETUP & OVERVIEW COMPLETE