



ISO Drive Manual for Planters



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This manual references a Dickey-john monitor. The procedures are the same for any ISO 11783 Virtual Terminal.

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Section 1: Getting Hooked to Tractor

Step 1. Locate ISO plug on back of tractor.

Note: If tractor does not have ISO plug, see dealer to obtain necessary equipment to run implement. (Figure 1)



Figure 1

Step 2. Locate hitch cable on front of implement. (Figure 2)



Figure 2

Step 3. Plug hitch cable into ISO plug on back of tractor. (Figure 3)

Note: Pin location and orientations.



Figure 3

Step 4. Lock hitch cable into ISO receptacle.

Note: Some screw on and others have locking lever on side.

Step 5. Turn on VT in tractor and wait for object pools to load into tractor ECU.

Note: This could take anywhere from two (2) minutes to fifteen (15) minutes depending on size of VT. Once initial upload has completed, this time should decrease significantly when powering up unless object pool has been emptied.

Step 6. Once data has uploaded, locate Dickey-john PDC icon and select. (Figure 4)

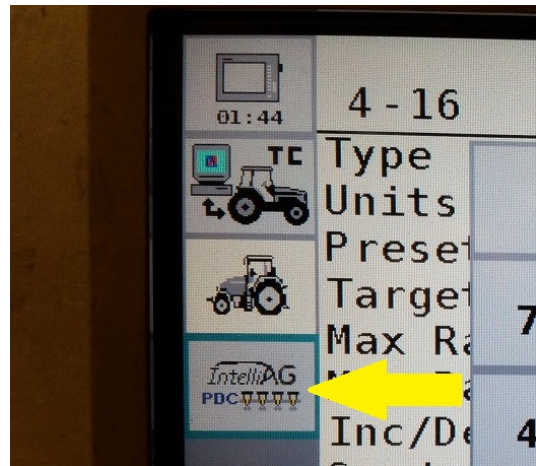


Figure 4

Note: If using Dickey-john IntelliAg, icon will be located on left side of monitor. On other VT, the icon will be located on page button. Once IntelliAg home page pulls up, you are now ready to start implement setup. (Figure 5)

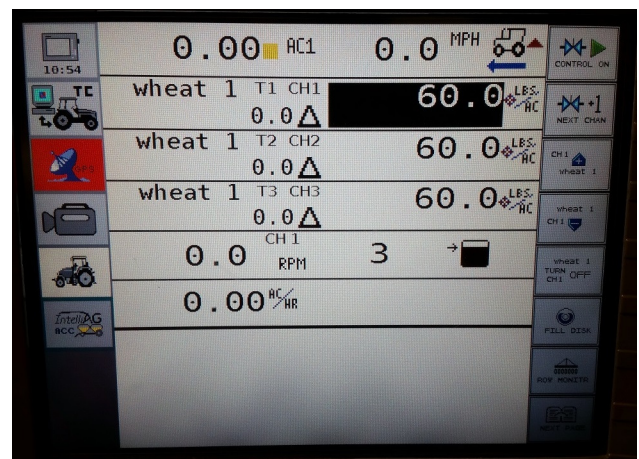


Figure 5

Section 2: Material Setup

Please note that your implement comes pre-loaded with standard materials in your material list. You can either use one from the list or start a new one.

Step 1. From main work screen.

Step 2. Select **Control Setup**. (Figure 6)

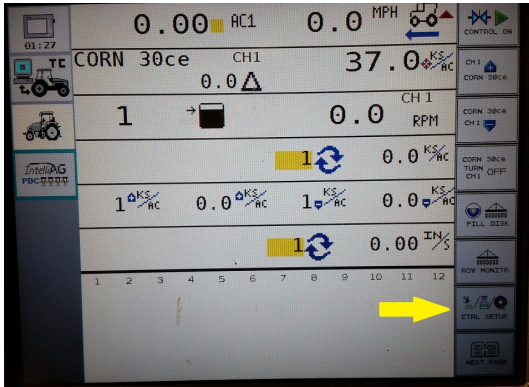


Figure 6

Step 3. Select **Material Setup** icon on side of VT or simply select material from the list shown in Figure 7.

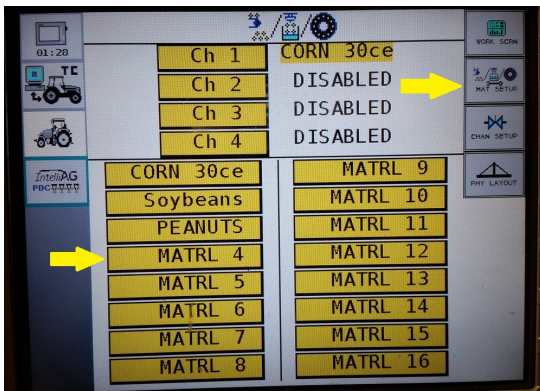


Figure 7

Step 4. Select Material Name and enter name. (Figure 8)

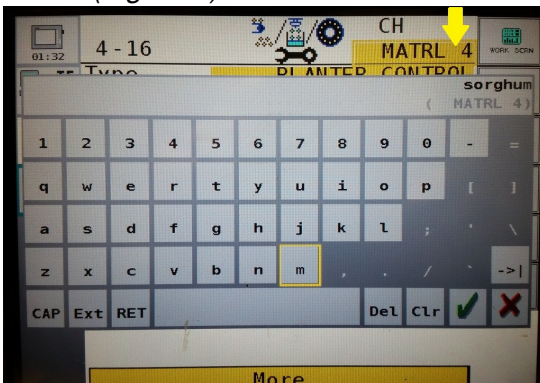


Figure 8

Step 5. Select type of control you wish to use.

Note: This will always be **Planter Control** unless setting a liquid channel or monitoring only for population.

(Figure 9)

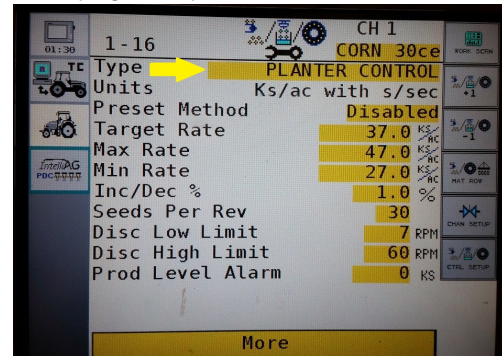


Figure 9

Step 6. Select Preset Method **Enabled** or **Disabled**.

Enabled as shown in Figure 10 allows you to set up to 10 preset rates, so every time you hit (+) or (-) as going through field it will go from one preset to another.

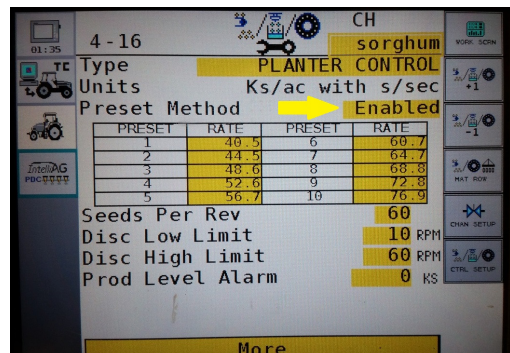


Figure 10

Disabled as shown in Figure 11 gives the operator a Target Rate, Max Rate, Min Rate, and Inc/Dec%. Being Disabled allows operator to set a target rate and increase and decrease rate while going through field using (+) or (-) button by the **Inc./Dec%**. The materials that come pre-loaded will be set on **disabled**.

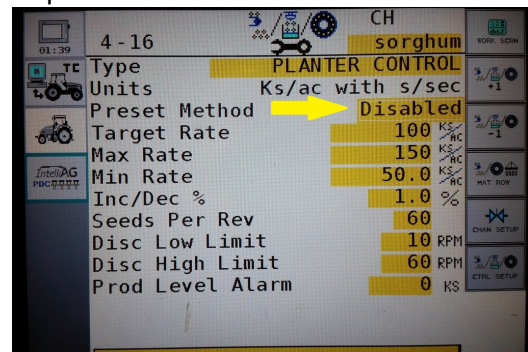


Figure 11

Section 2: Material Setup

Step 7. Select **Target Rate** and enter. This is the amount of material you wish to apply.

Note: This is in 1000's of seeds. If you want a rate of 75,000 seeds per acre you would enter 75.0 (Figure 12)

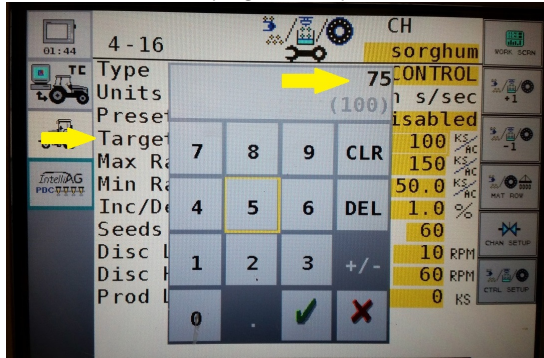


Figure 12

Step 8. Select **Max Rate** and enter. The Max Rate is setting the maximum it will let you adjust the rate while going through field using (+) button. (Figure 13)

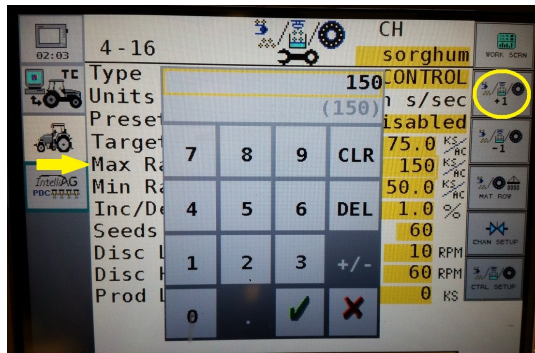


Figure 13

Step 9. Select **Min Rate** and enter. The Min Rate is setting the minimum it will allow you to adjust the rate while going through the field using (-) button. (Figure 14)

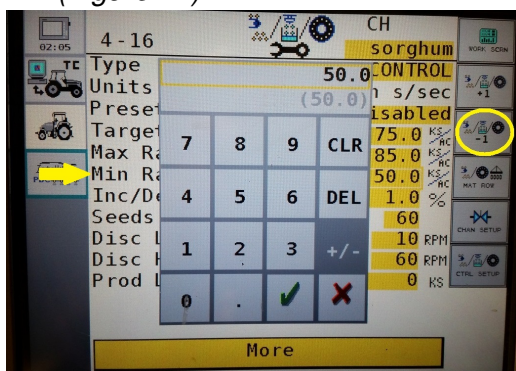


Figure 14

Step 10. Select **Inc/Dec%** and enter. (Figure 15) This is the % at which rate will adjust every time the (+) or (-) button is pushed while going through field.

Note: If Max Rate and Min Rate are set too close to Target Rate and too high of Inc/Dec% is selected, it will not adjust in field.

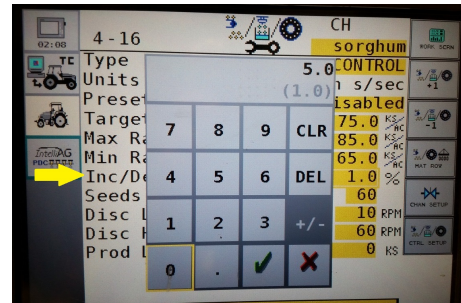


Figure 15

Step 11. Select **Seeds per Rev** and enter. (Figure 16) This is the number of cells on your seed plates you are running in the meters.

Note: In order for rate to be accurate the # of cells needs to be accurate. If unsure, operator should count cells on plates that are being used.

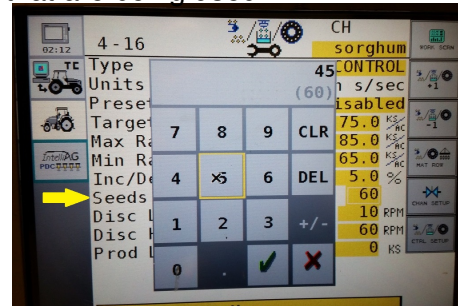


Figure 16

Step 12. Select **Disc Low Limit** and enter. (Figure 17) This is an alarm setting when meter shaft drops below setting. We recommend setting at 7 RPM. This is the minimum setting the meter will turn due to mechanical reasons.

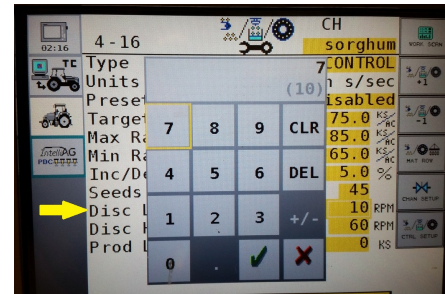


Figure 17

Section 2: Material Setup

Step 13. Select **Disc High Limit** and enter. (Figure 18) This is an alarm setting when meter shaft goes above setting. The factory default is 60 RPM; this could be set at 90 RPM.

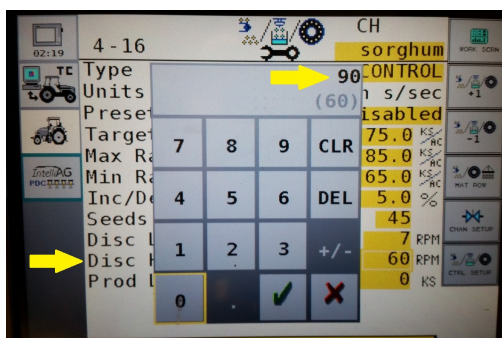


Figure 18

Step 14. Select **More** at bottom of page. This will take you to next page of data that may be set. (Figure 19)

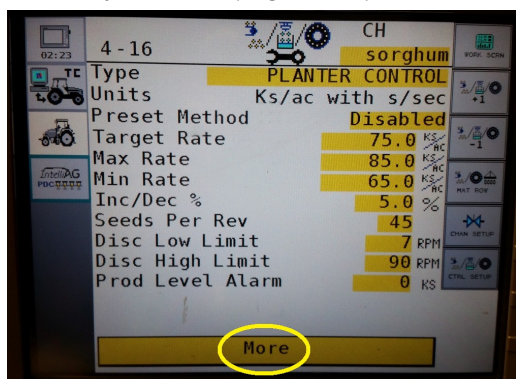


Figure 19

Step 15. Select **High Population Alarm**. This is the % above Target Rate you want alarm to sound.

Example: Target Rate of 100,000 seeds and high population alarm of 20% will alarm you if sensed rate goes above 120,000 seeds. (Figure 20)

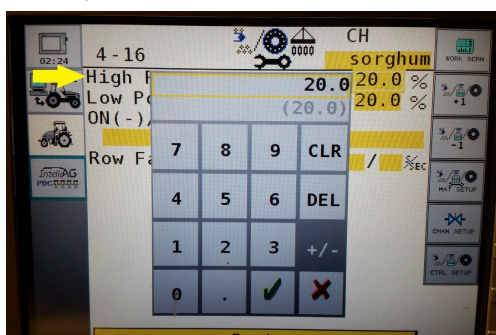


Figure 20

Step 16. Select **Low Population Alarm**. This works the same as High Population Alarm except it is the % below Target Rate. (Figure 21)

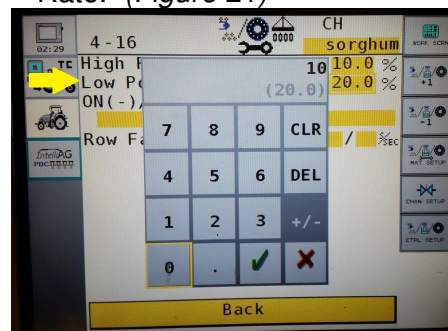


Figure 21

Step 17. Select **On/Off Pattern** and enter. In most cases, you will set to every row on. If you were using the opener lock-up kit, you would select **every 2nd row on**. This will automatically change how VT figures rate and acres. (Figure 22)

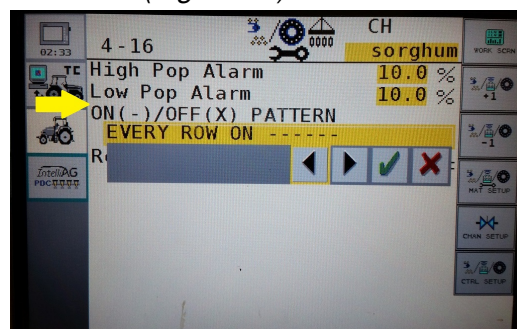


Figure 22

Step 18. Select **Row Fail Rate**. This sets the limit you want to show rows have failed. This is typically set at 2 seeds every 10 seconds. Anytime the row sensors do not sense at least 2 seeds every 10 seconds, it will show that row has failed. (Figure 23)

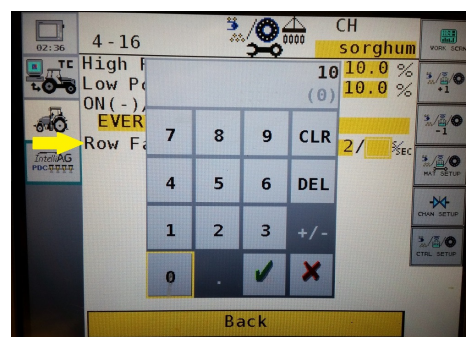


Figure 23

Section 2: Material Setup

Now that Material Setup has been completed, you now need to push main work screen button and continue onto Channel Setup. (Figure 24)

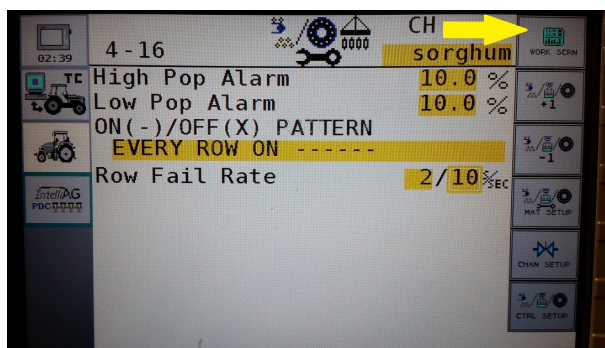


Figure 24

Section 3: Channel Setup

Please note that your planter has come pre-loaded from factory with information that pertains to your configuration. However, you will need to change some of the following, if your configuration is changed.

Example: If every other row locked up with opener lookup kit.

Step 1. From **Main Work Screen**.

Step 2. Select **Control Setup**. (Figure 25)

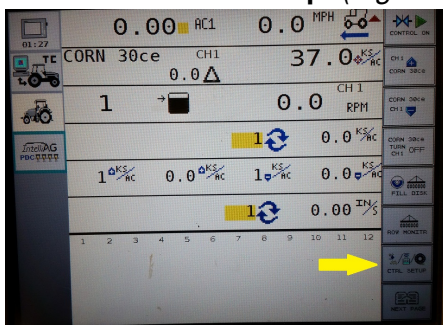


Figure 25

Step 3. Select Channel Setup from icons on side or simply select the channel you wish to setup. (Figure 26)

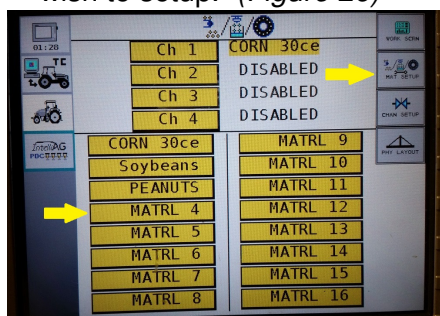


Figure 26

Step 4. Select Control Type. This will be Planter Control to run drive and row monitoring.

Note: If you select Liquid Flow Control (Figure 27) to set up a liquid channel, a liquid material must be setup first.

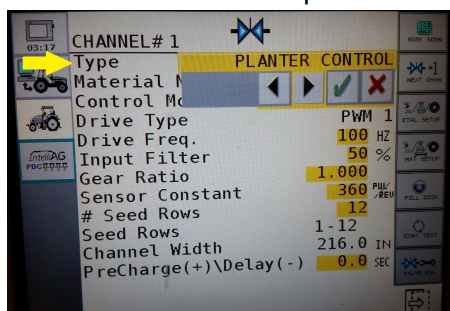


Figure 27

Step 5. Select **Material Name**. (Figure 28)

This is the name of the material that you will be applying.

Note: These are the names of previously set up materials. If you cannot find your material name, go back through **Material Setup** and setup your material.

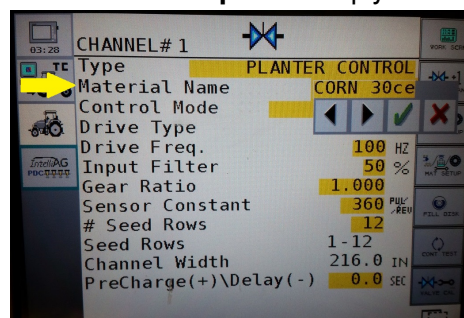


Figure 28

Step 6. Control Mode should always be **Auto**.

Step 7. Drive Freq will always be set at default of 100 Hz.

Step 8. **Input Filter** factory default 50% should not need to change.

Step 9. **Gear Ratio** factory default is 1.000 on all of our products. This will remain at 1.000 because we pick up meter RPM on the end of shaft. This also allows sprocket changes to be made without adjusting the rate.

Step 10. **Sensor Constant** factory default is 360 pulses/Rev. This is setting for all planters.

Step 11. Select # Seed Rows and enter. Since we use average row width on Twin Row planters (Figure 29), this number should be how many openers are on the unit.

Example: A 6 row x36 Twin Row would have 12 rows.

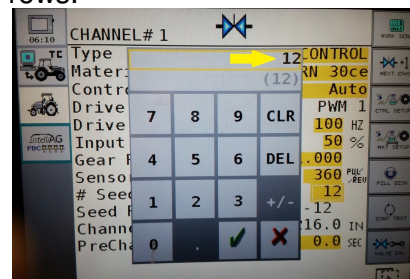


Figure 29

Section 3: Channel Setup

Channel Setup is now complete. Return to **Main Work Screen** and begin Row Setup procedure. (Figure 30)

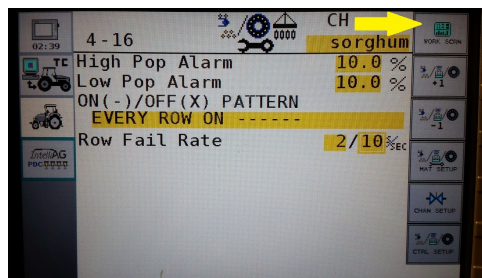


Figure 30

Section 4: Row Monitoring Setup

Please note that this implement has been setup and ran with proper information for configuration as shipped. The purpose for this section is to inform operator of procedure if configuration is changed.

Step 1. From **Main Work Screen**.

Step 2. Select **Row Monitor** from icons on right hand side of screen. (Figure 31)

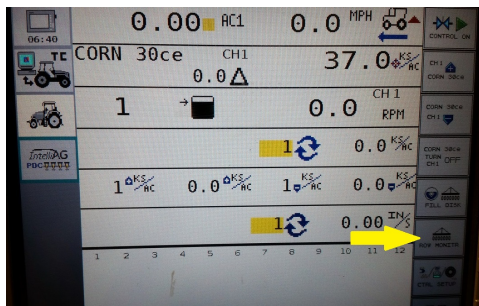


Figure 31

Step 3. Select **High Alarm Delay** and enter. This is the amount of time you want it to pause before it alarms you of a high population. The factory default is 10 seconds. (Figure 32)

Note: The amount above Target population when it starts to warn operator was setup on *Step 15 of Material Setup*.

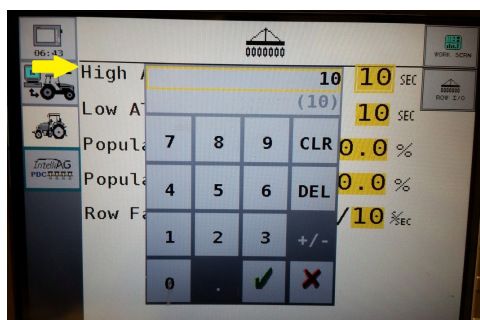


Figure 32

Step 4. Select **Low Alarm Delay** and enter. This is the amount of time you want VT to pause before you are warned of low population. The factory default is 10 seconds. (Figure 33)

Note: The amount below Target population when it starts to warn operator was setup on *Step 16 of Material Setup*.

Step 5. **Population Adjust**. This is factory set at 100% and should only be changed if actual population being applied is different than the sensed population. If sensed population is lower than actual applied population, a number above 100% would be entered.

Example: If monitored population is 100,000 seeds per acre but actual was 105,000 seeds per acre, you would enter a population adjust of 105%.

Step 6. **Population Filter** is used to stabilize the monitored population display. For a true population, value number should be set at 0.0%. This number as a range from 0.0% to 99%.

Step 7. **Row Fail Rate** is the amount of seeds it needs to sense per second before a row will fail. It should be set the same as *Step 18 of Material Setup*. The factory is set at 2 seeds every 10 seconds.

Step 8. Now that Row Monitoring setup is complete, we will now need to select **Row I/O** icon from right hand side of screen. (Figure 34)

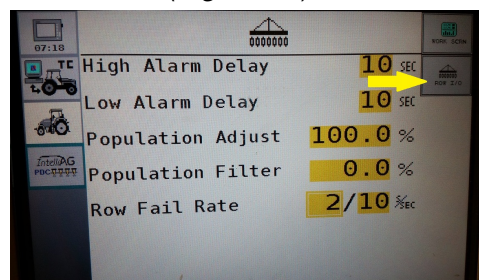


Figure 34

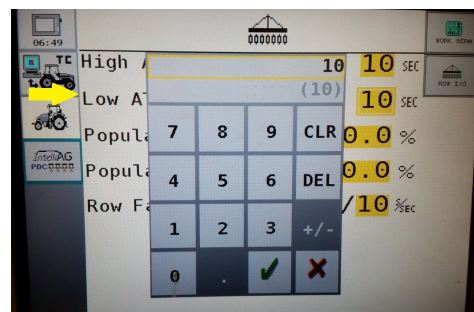


Figure 33

Section 4: Row Monitoring Setup

Step 9. We will then go to **Row Assign** to verify # of rows. (Figure 35)

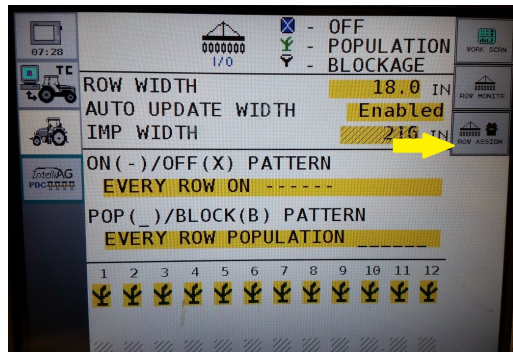


Figure 35

Step 10. Select **# of Rows** and enter the # of rows on implement. (Figure 36)

Note: We will be using average row spacing on Twin Row planters.

Example: A 6 row x 36" Twin Row planter would have 12 rows entered.

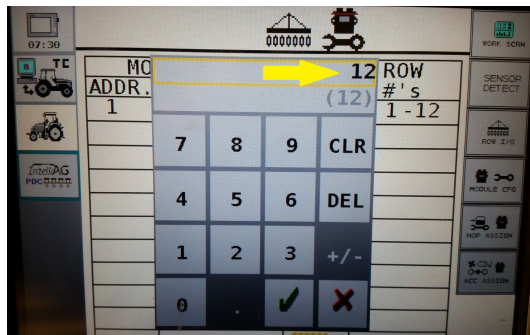


Figure 36

Step 11. Select **Row I/O** from icons on right hand side of VT. (Figure 37)

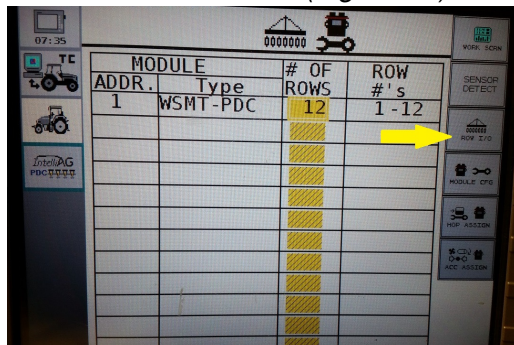


Figure 37

Step 12. Select **Row Width** and enter average row width of implement. (Figure 38)

Example: A 6 row x 36" Twin Row planter would have average row spacing of 18.0"

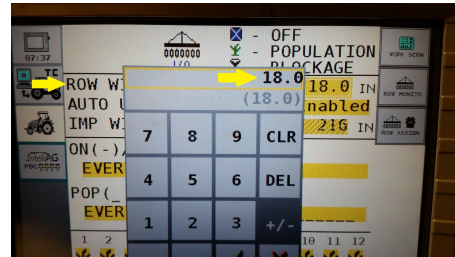


Figure 38

Step 13. **Auto update width** should be enabled. If enabled, the VT takes **# of rows** (as previously set in Step 10 of this section) and multiplies by **row width** giving you the implement width.

Note: If **auto update width** is disabled, the implement width will have to be manually entered.

Step 14. Select **ON/OFF** Pattern. Similar to Step 17 of Material Setup, except Step 17 was for control purposes and here it is for monitoring only. (Figure 39)

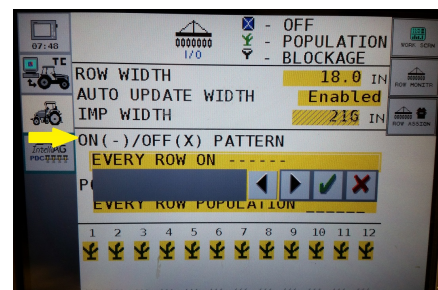


Figure 39

Step 15. Select **Population Pattern**. This should be every row population all the time. (Figure 40)

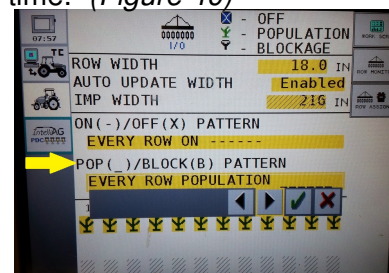


Figure 40

Section 4: Row Monitoring Setup

Step 16. At the bottom of screen, each row is identified with a number. Below the number is a box with a green plant. You can select the box under the number and turn individual rows off by selecting an X in the box. (Figure 41) This would shut the sensor off for that row. You would only need to do this if you have a sensor failure.

Note: If row is off, that row is not being monitored until it is turned back on.

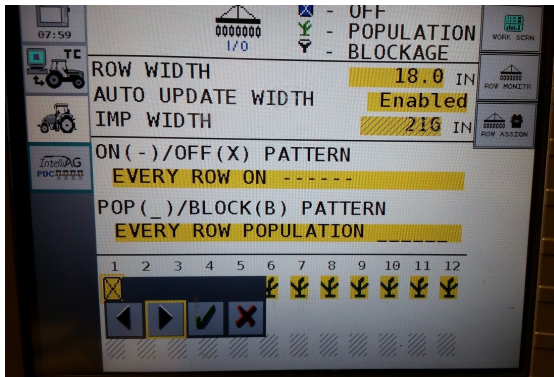


Figure 41

This completes the **Row Monitor Setup**. Return to **Main Work Screen** to begin the **Valve Calibration**. (Figure 42)

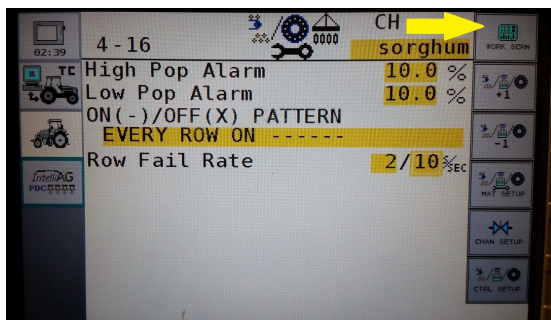


Figure 42

Section 5: Valve Calibration

Please note your implement was ran at the factory and a **Valve Calibration** was ran. However, to insure maximum performance from the drive, the **Valve Calibration** should be ran again with the tractor you will be using.

Step 1. From **Main Work Screen**.

Step 2. Select **Control Setup** from icons on right hand side of VT. (Figure 43)

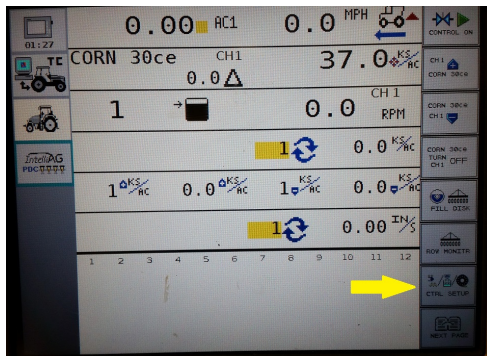


Figure 43

Step 3. Select **Channel Setup** from icons on right hand side of VT. (Figure 44)

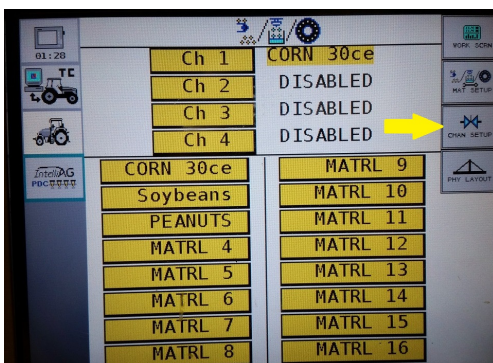


Figure 44

Step 4. Select **Valve CAL** from icons on right hand side of VT. (Figure 45)

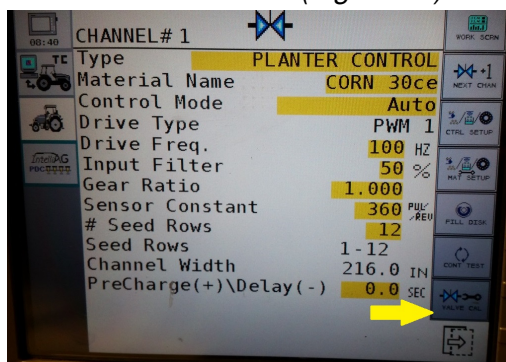


Figure 45

Step 5. Start tractor and engage hydraulic remote that operates hydraulic drive.

Step 6. Select **START** icon and then the **Control ON**. (Figure 46)

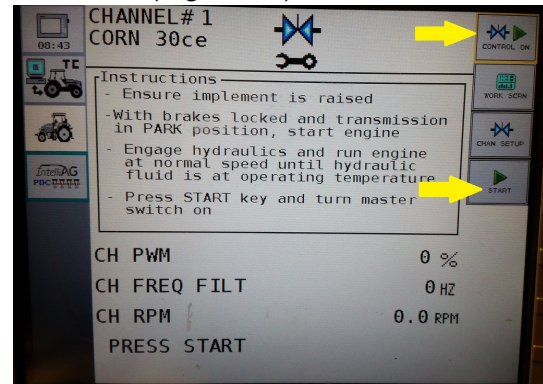


Figure 46

Note: If this is the first time running this, you will get a warning as shown in (Figure 47). Simply **CANCEL** warning and re-start by selecting **START** icon and then the **Control On** icon. Drive should now be running. Calibration will take a few minutes and then will stop.

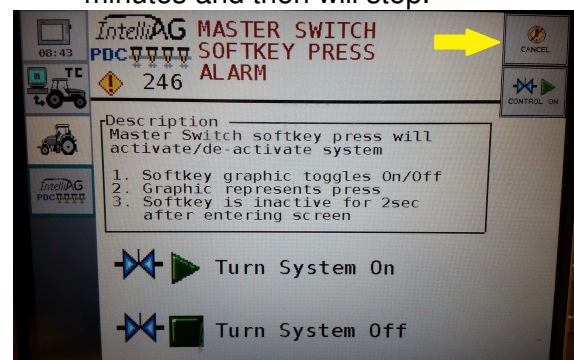


Figure 47

Step 7. Once calibration has complete, turn **Control OFF** and select **STOP** icon.

Valve calibration is now complete. Return to **Main Work Screen** and continue with Pre-Season Test. (Figure 48)

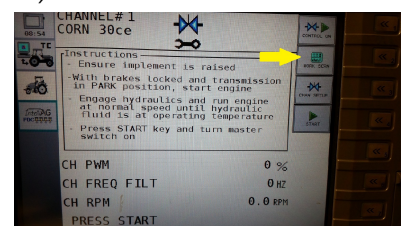


Figure 48

Section 6: Pre-Season Test

This test procedure is for running the planter in manual mode to ensure the drive is operating properly. Test should be performed prior to each planting season.

Step 1. From **Main Work Screen**.

Step 2. Select **Next Page**. (Figure 49)

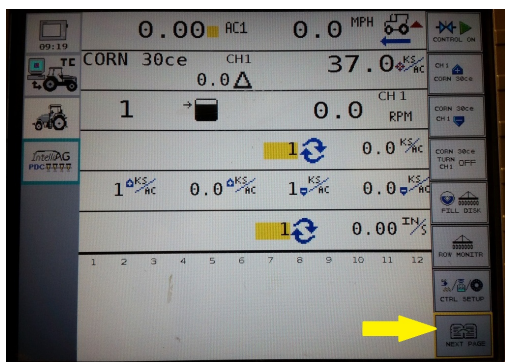


Figure 49

Step 3. Select **Speed Set**. (Figure 50)

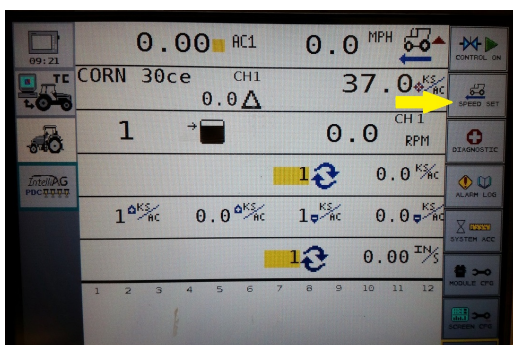


Figure 50

Step 4. Select **Source** and change to **Manual** as shown in Figure 51.

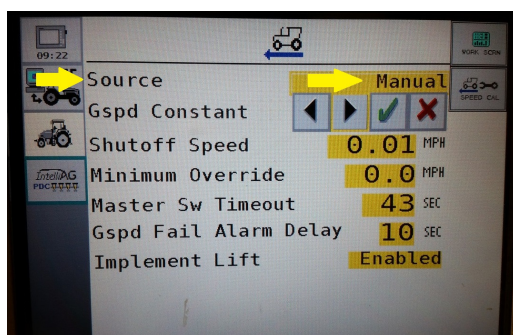


Figure 51

Step 5. Select **Implement Lift** and change to **Disabled** as shown in Figure 52.

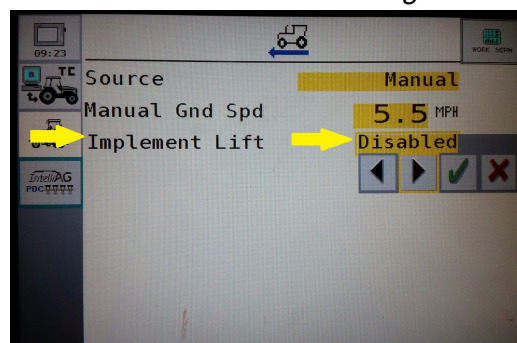


Figure 52

Step 6. Select **Main Work Screen** icon as shown in Figure 53.

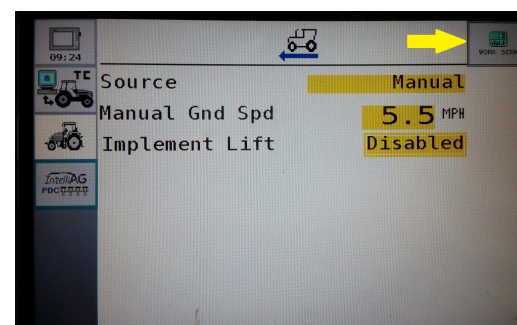


Figure 53

Step 7. Start tractor and turn on hydraulic remote that operates hydraulic drive.

Step 8. Turn **Control ON**. (Figure 54)

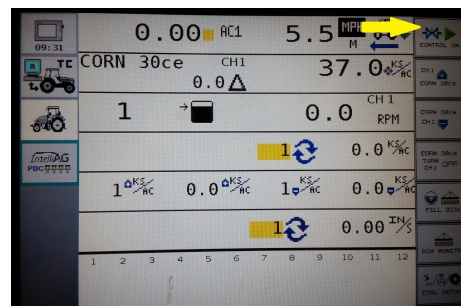


Figure 54

Step 9. Drive should now be running. If you do not get any warnings other than row failure and hopper level alarms, the drive is operating properly. If you do get other warnings, refer to *Alarm Codes and Diagnostics* Section of this manual. If you cannot resolve, call dealer or CrustBuster/Speed King service department.

Section 6: Pre-Season Test

Step 10. Once you verify the drive is operating correctly, turn **Control Off**. (Figure 55)

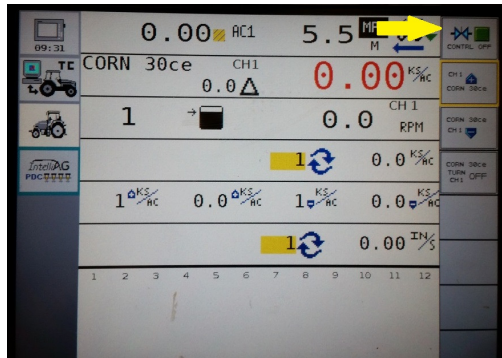


Figure 55

Step 11. Repeat Steps 1 thru 3 to return back to **Speed Set**.

Step 12. Select **Source** and change back to **Digital Frequency**. (Figure 56)

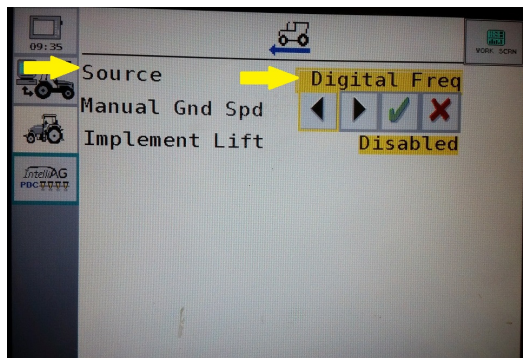


Figure 56

Step 13. Select **Implement Lift** and **Enable**. (Figure 57)

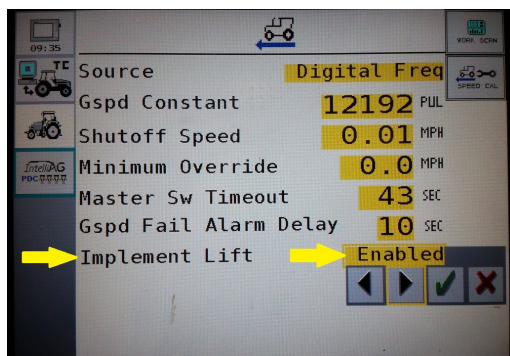


Figure 57

Note: If you fail to complete Steps 11 thru 13, the drive will run at test speed that was entered and will not speed up or slow down with the tractor.

Step 14. Before returning to **Main Work Screen**, select **Master SW Timeout** and change to 999 seconds if it is not. (Figure 58)

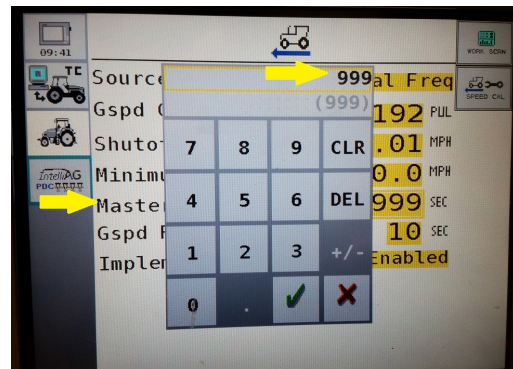


Figure 58

Pre-Season test is now complete. Return to **Main Work Screen** and continue with Section 7. (Figure 59)

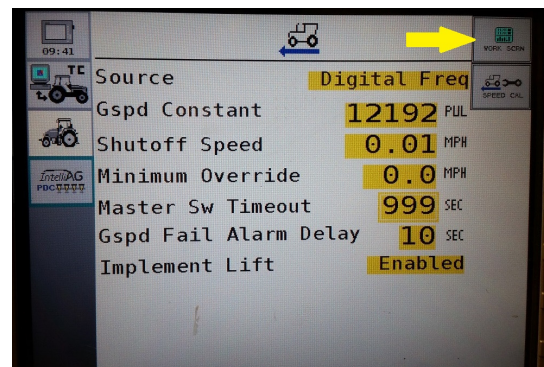


Figure 59

Section 7: Foot Pedal as a Lift Switch

All 2015 planters now come with a foot switch that takes the place of previous model's wisker switch. This switch is to shut off drive when turning at the end of the field.

Step 1. Locate wires coming from front of planter that run to cab of tractor. Make sure that the wire is routed to avoid getting caught in 3 point when raising and lowering planter.

Step 2. Connect foot pedal to wire that ran to cab (mentioned in Step 1). (Figure 60)

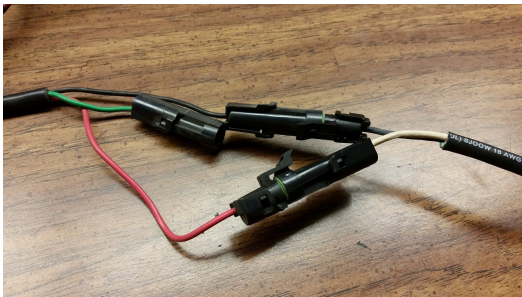


Figure 60

Note: There are three (3) wires coming from the planter - a red, black and green wire. The red and black are used but the green is not used.

Step 3. Locate foot pedal on the floor of the tractor as to not impede operation of tractor. Route the wire in cab out of operator's way.

Step 4. Foot pedal is now ready for use.

Step 5. The foot pedal works by pressing front of pedal or rocking forward to turn channel **ON**. (Figure 61)



Figure 61

When ON, the arrow next to tractor at the top right hand corner of screen should turn **green**. (Figure 62)

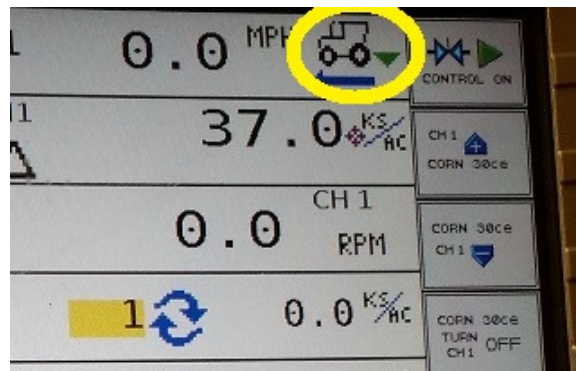


Figure 62

Step 6. To shut channel, simply rock pedal back towards operator. (Figure 61)
The arrow next to tractor on screen should turn **red** indicating implement is UP or channel is OFF.

Planter setup is now complete and ready to go to the field. It is now time to make the planter ready for infield operation by filling with seed.

Section 8: In Field Operation

This is a general overview of operating in field, although everyone has their own manner of operating equipment. The following steps are merely a guide to illustrate procedure for operating the hydraulic drive.

Step 1. Make planter ready for planting. (*Fill with seed, add talc, make sure appropriate seed plates are in meters, gates on top of meters are open, etc.*)

Step 2. Start tractor and engage fan hydraulics. Allow to run for a few minutes so oil has time to warm up.

Step 3. Engage hydraulics on hydraulic drive. Make sure they are selected for proper direction of operation.

Step 4. With fan running and hydraulic drive hydraulics on, locate **Fill Disc** icon on VT and select. (Figure 63)

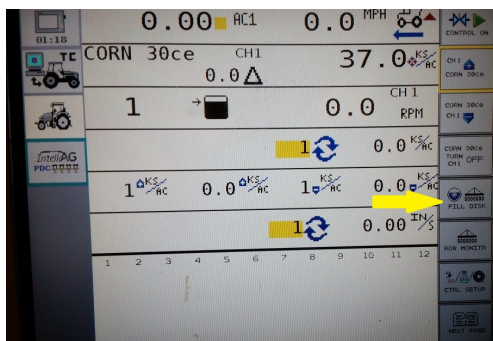


Figure 63

Follow procedure on screen and press start to fill disk with seed. Seed disk will turn one full revolution and then stop. Return back to **Main Work Screen**. (Figure 64)

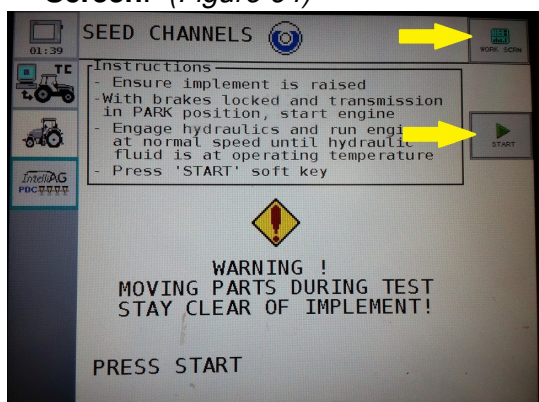


Figure 64

Step 5. Planter is now ready to operate.

Step 6. Turn **Control On**. (Figure 65)

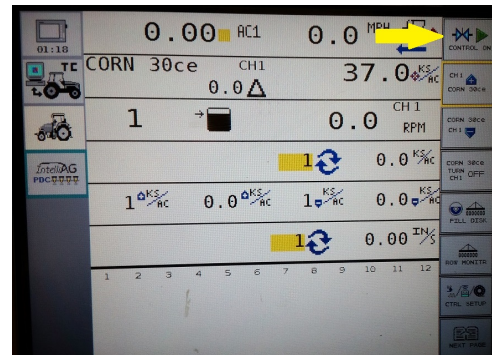


Figure 65

Step 7. Lower planter to in field level.

Step 8. Rock foot switch forward or turn on. Green indicator arrow should point down. (Figure 66)

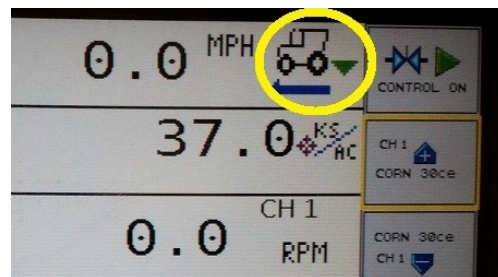


Figure 66

Step 9. Start moving tractor forward. The planter should now be operating.

Step 10. When you come to the end of field, rock foot switch back or turn OFF.

Step 11. Raise planter and turn planter.

Step 12. Lower planter and rock foot switch forward or turn ON.

Note: This was a basic overview of the planter operation in field. It is also not necessary to turn **Control Channel On** and **Off** at beginning and end of passes because the foot pedal does that. However, it is necessary to turn **Control Channel OFF** every time the operator leaves cab of tractor and then turn **Control Channel ON** after returning to cab of tractor.

Section 9: Speed Calibration Process

Please note:

In order for **Rate and/or Population** to be applied accurately, the implement speed and the tractor speed need to be the same. If they are not the same, a speed calibration needs to be performed on the DICKEY-john side.

Step 1. Begin from **Main Work Screen**.

Step 2. Push **Next Page**. (Figure 67)

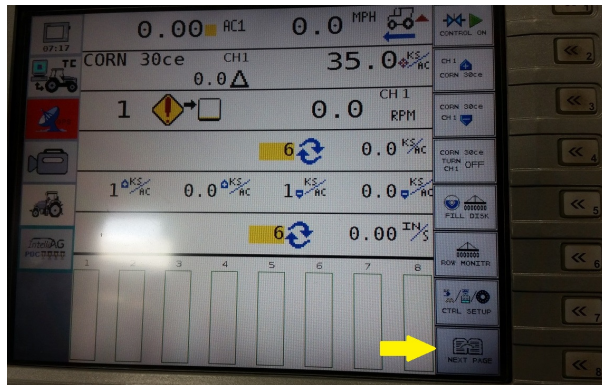


Figure 67

Step 3. Push **Speed Set**. (Figure 68)

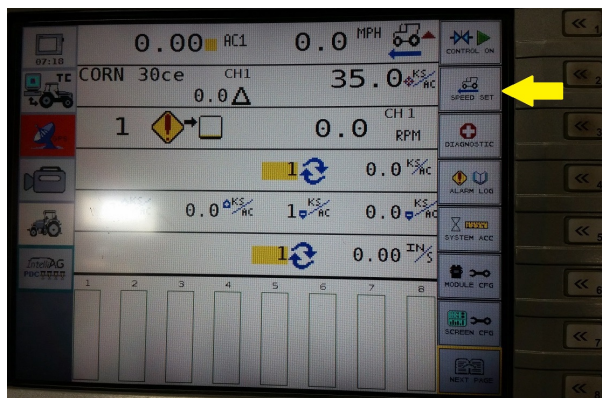


Figure 68

Step 4. Push **Speed Cal**. (Figure 69)

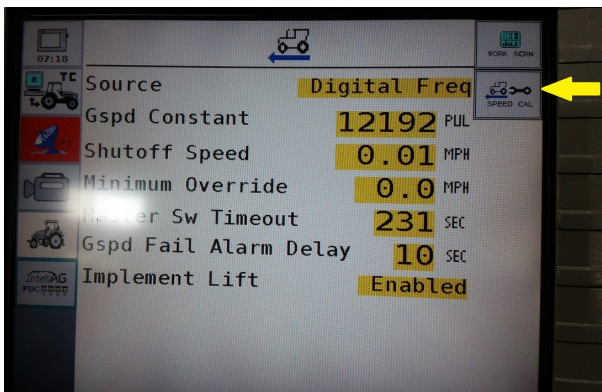


Figure 69

Step 5. Mark out a 400 ft course that tractor can safely travel down and maintain a steady speed through the full 400 ft.

Step 6. Get tractor up to steady speed once you reach beginning of course. Press **Start**. (Figure 70)

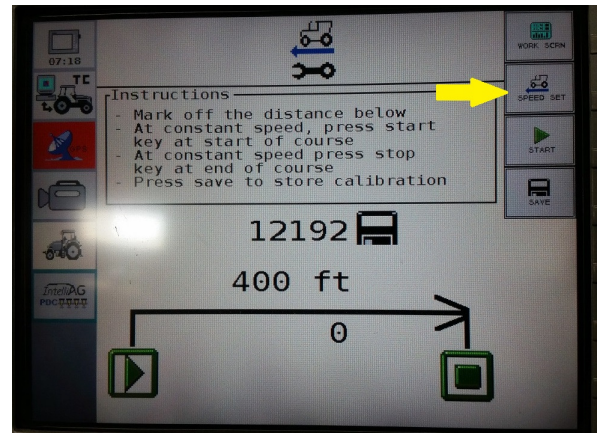


Figure 70

Step 7. Once tractor reaches end of 400 ft course, press **Stop**. (Figure 71)

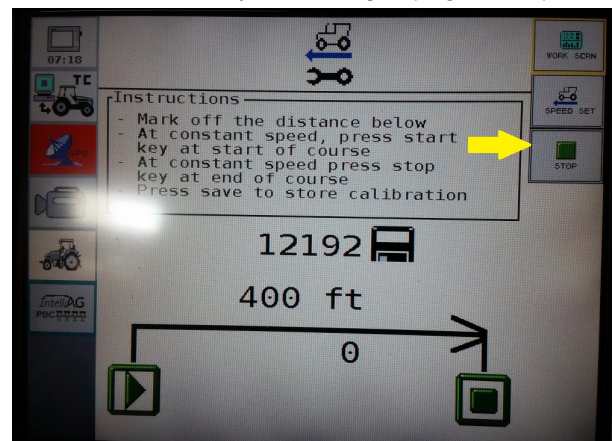


Figure 71

Step 8. Press **Save** once the new **Speed Cal** number comes up.

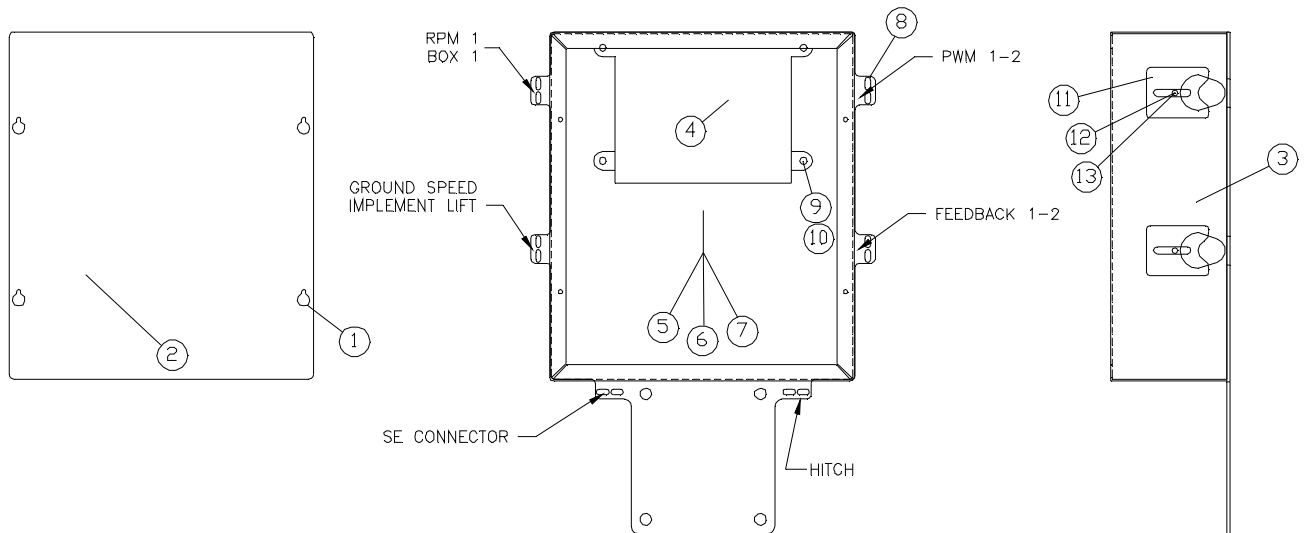
Note: It is recommended to repeat steps 6-8 as many times as is necessary to ensure accurate test. Also, accuracy will be dependent on where tractor is in relationship to start and stop points of course.

Step 9. Verify that implement and tractor speed match. If so, continue on to In Field Operation. If not, repeat **Speed CAL** procedure again.

Section 10: Replacement Parts and Locations

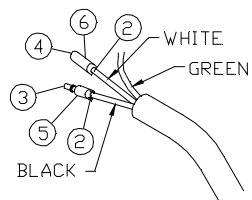
Description	CrustBuster #	DICKEY-john #
Application rate sensor 1" coupler -MTG hard	612812	457141810
Application Rate Sensor 360 x 1'	612804	464360178S1
Astro 4pin round	612390	203-01-01428
Extension 2 Pin Weather Pack - 15'	612846	467980470
Extension 3 Pin Weather Pack - 15'	612796	459680922
Harness 12 Row Twin	613067	467751802S1
Hitch Extension - 10'	612200	467980132
Hopper Level Sensor	608521	466820720S3
Hopper Level Extension - 10'	613430	466820712S1
Intelliag Cab Kit	614768	AI120CABKIT
Intelliag Cab Kit - 5"	612671	IACABKIT5
Mini CAN terminator	613455	467980126
Motor HD4180 Hydraulic w/Pulse Width Modulation Control	612820	467092200S1
Motor HD4180 Hydraulic w/Pulse Width Modulation Control	612820	467092200S1

Section 10: Replacement Parts and Locations



#879395 -Wire Box Assembly

Item	Part No.	Description
1	337881	Screw #10 x 1/2 Self-Tapping
2	275933	Cover
3	976076	Wire Box
4	612218	Master Control Module PL/DR
5	612234	WSMT Harness -SE Style
6	613497	2-Channel 1-2 PWM and 1-2 Feedback
7	613455	Can Terminator
8	571299	Wire Tie
9	02919900	Screw #10-24 x 1
10	333393	Lock Nut #10-24
11	275594	Mount Plate
12	01150200	HHCS 1/4 x 1/2
13	330522	Nylock Nut 1/4

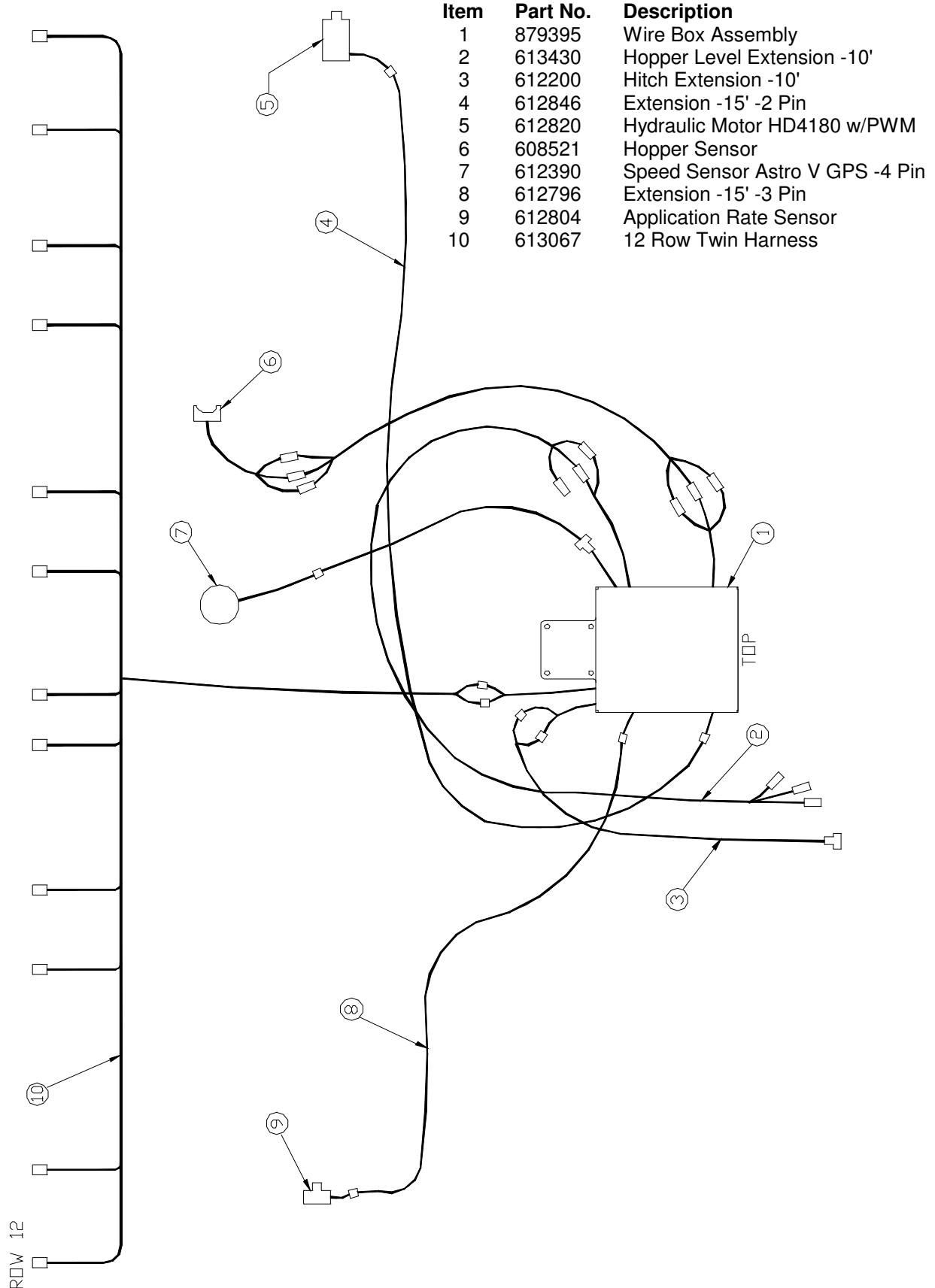


#880989 -Foot Switch Assembly

Item	Part No.	Description
1	615096	Foot Switch
2	03406600	Cable Seal -Green
3	03409000	Terminal -Female
4	03410800	Terminal -Male
5	-----	Single Pole Tower
6	-----	Single Pole Shroud

Section 10: Replacement Parts

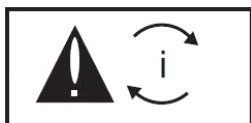
6036 and 6038 Drive Parts Locations



Section 11: Troubleshooting and Alarm Codes



Alarm Cancel softkey



Alarm Information softkey

Alarms are indicated on the Virtual Terminal with the following graphic, as well as with a continuous, audible alarm. The audible alarm is terminated by pressing the **Alarm Cancel** softkey or ESC key. In addition, detailed descriptions of the current alarm can be viewed by pressing the **Alarm Information** softkey. Some of the alarm conditions display instructions on correcting the situation.

IntelliAG



Alarms are presented in a full screen display that will describe the alarm and, depending upon the alarm, may give instructions on how to fix the alarm. Each alarm type has an associated alarm number that can be cross-referenced in this section. Some alarms (for instance a Master Switch alarm) will require a specific action before the alarm condition will cease. In these cases, the instructions to proceed are indicated in the alarm display.

The following table describes the possible alarm conditions, causes, and remedies.

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
1	Software Task Stack Overflow Alarm	1. Internal system software error	1. Cycle system power OFF/ON. If condition persists, contact DICKEY-john Technical Support (1-800-637-3302) or DICKEY-john Europe (011-33-141-192189)
2	Software Task Stack Overflow Alarm	1. Internal system software error	1. Cycle system power OFF/ON. If condition persists, contact DICKEY-john Technical Support (1-800-637-3302) or DICKEY-john Europe (011-33-141-192189)
3	VT Out of Memory Alarm	THE ECU MEMORY REQUIREMENTS ARE GREATER THAN THE VIRTUAL TERMINAL CAN HANDLE.	1. Remove any unnecessary ECU's 2. Contact DICKEY-john Technical Support (1-800-637-3302) or DICKEY-john Europe (011-33-141-192189) for updated hardware
200	Master Switch Timeout Alarm	1. Master Switch ON at power up. 2. Master Switch ON after leaving a setup screen 3. Shorted or damaged tractor harness 4. Defective Master Switch	1. Move Master Switch to the OFF position 2. Move Master Switch to the OFF position 3. Check for damage on the tractor harness at the Master Switch connector 4. Inspect Master Switch for damage or replace
201	Master Switch Assignment Alarm	1. External Master Switch is not assigned to the Auxiliary Input	1. Assign Master Switch to the Auxiliary Input. Refer to Auxiliary Input/Function Assignment 2. Decline use of Auxiliary Input Switch
202	Ground Speed Failure Alarm	ONLY ACTIVE IN PLANTER MONITOR MODE. SEEDS ARE DETECTED WHEN THERE IS NO GROUND SPEED. 1. Incorrect speed source setting or calibration 2. Defective speed sensor or harness 3. Defective module or virtual terminal	1. Verify correct speed source setting and speed calibration on the Ground Speed Calibration screen 2. Inspect speed sensor/harness for damage or replace speed sensor 3. Replace module or virtual terminal
203	Continuous Test Failure Alarm	CONTROL CONDITIONS EXCEED THE DISK RPM LIMITS. 1. Test speed setting is set too high or low 2. Disk Hi and/or Disk Low settings are incorrect	1. Enter an appropriate Test Speed 2. Verify or enter appropriate Disk Hi and/or Disk Low values
204	5 Revolution Test Failure Alarm	CONTROL CONDITIONS EXCEED THE DISK RPM LIMITS. 1. Test speed setting is set too high or low 2. Disk Hi and/or Disk Low settings are incorrect	1. Enter an appropriate Test Speed 2. Verify or enter appropriate Disk Hi and/or Disk Low values
205	Control Channel Failure Alarm	1. Defective control valve 2. Defective feedback sensor 3. Defective module harness or module harness fuse 4. Defective module	1. Inspect control valve for damage or replace 2. Inspect feedback sensor for damage or replace 3. Inspect module harness for damage. Replace harness fuse 4. Inspect module for damage or replace

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
206	Control Channel Unable to Control Alarm	1. Incorrect control channel settings 2. Incorrect feedback sensor installation 3. Defective feedback sensor	1. Verify correct setup constants on the Channel Configuration screen. Perform a valve calibration. 2. Verify correct installation of the feedback sensor 3. Inspect feedback sensor for damage or replace
207	Control Channel Unstable Alarm	1. Incorrect control channel settings 2. Incorrect feedback sensor installation 3. Defective feedback sensor	1. Verify correct setup constants on the Channel Configuration screen. Perform a valve calibration. 2. Verify correct installation of the feedback sensor 3. Inspect feedback sensor for damage or replace
208	Control Channel Saturation Exceeded Alarm	1. Excessive speed 2. Incorrect control channel settings. Desired rate too high for implement 3. Target rate too high	1. Reduce speed 2. Verify correct setup constants on the Channel Configuration screen. Perform a valve calibration and a spreader constant calibration. 3. Reduce target rate
209	Control Channel High Limit Exceeded Alarm	CONTROL LIMITED BY HIGH LIMIT. UNDER APPLICATION IS OCCURRING. NOTE: System will not run faster than High Limit Value	1. Check and/or reduce speed 2. Verify Control Channel setup (high RPM) 3. Perform new valve calibration 4. Check and/or reduce target rate 5. Inspect feedback sensor for damage 6. Inspect control valve for damage 7. Inspect harness/module for damage 8. Decrease target rate
210	Control Channel Low Limit Exceeded Alarm	CONTROL RATE LIMITED BY LOW LIMIT. OVER APPLICATION IS OCCURRING.	1. Increase speed 2. Verify correct setup constants (low RPM) 3. Perform valve calibration 4. Increase target rate
211	All Rows Failed Alarm	1. Seed meter drive malfunction 2. Rows are not assigned to channel and channels are turned off.	1. Check seeding drive(s) 2. Assign rows to channel.
212	Row Failure Alarm	SEED RATE HAS FALLEN BELOW THE ROW FAIL RATE SETTING ON THE SEED MONITOR SETUP SCREEN 1. Seed meter malfunction 2. Dirty or defective seed sensor 3. Damaged planter harness 4. Defective module harness or module 5. Out of seed	1. Verify proper planter operation 2. Inspect seed sensor for dirt or damage. Replace if necessary 3. Inspect planter harness for damage. Repair or replace 4. Inspect harness and module for damage. Replace if necessary 5. Fill with seed
213	High Population Limit Exceeded Alarm	SEED RATE HAS EXCEEDED THE HIGH ALARM SETTING ON THE SEED MONITOR SETUP SCREEN 1. Seed meter malfunction or incorrect setup 2. Defective seed sensor 3. Defective module	1. Verify proper planter options/setup 2. Inspect seed sensor for damage. Replace if necessary 3. Inspect module for damage. Replace if necessary

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
214	Low Population Limit Exceeded Alarm	SEED RATE HAS DROPPED BELOW THE LOW ALARM SETTING ON THE SEED MONITOR SETUP SCREEN 1. Seed meter malfunction or incorrect setup 2. Defective seed sensor 3. Defective module 4. Running out of seed	1. Verify proper planter operation/setup 2. Inspect seed sensor for damage. Replace if necessary 3. Inspect module for damage. Replace if necessary 4. Fill with seed
215	High Pressure Limit Exceeded Alarm	SENSED PRESSURE EXCEEDS THE HIGH ALARM SETTING ON THE PRESSURE SETUP SCREEN 1. Implement malfunction or incorrect setup 2. Defective pressure sensor 3. Defective module	1. Verify proper planter operation/setup 2. Inspect seed sensor for damage. Replace if necessary 3. Inspect module for damage. Replace if necessary
216	Low Pressure Limit Exceeded Alarm	SENSED PRESSURE BELOW THE LOW ALARM SETTING ON THE PRESSURE SETUP SCREEN 1. Implement malfunction or incorrect setup 2. Defective pressure sensor 3. Defective module harness or module	1. Verify proper planter operation/setup 2. Inspect seed sensor for damage. Replace if necessary 3. Inspect module and/or module harness for damage. Replace if necessary
217	Member module Detection Alarm	NUMBER OF MEMBER MODULES DOES NOT MATCH THE SYSTEM CONFIGURATION 1. Too few modules connect to system 2. Too many modules connected to system 3. Defective CAN/module harness 4. Blow module harness fuse 5. Defective module 6. New module has been added to system	1. Verify correct module configuration setup on the Module Configuration screen 2. Verify correct module configuration setup on the Module Configuration screen 3. Identify missing module in the Module Configuration list. Inspect CAN/module harness of the missing module for damage. Repair or replace harness. 4. Inspect module harness fuse of the identified module. Replace if necessary 5. Identify missing module in the Module Configuration list. Inspect missing module for damage or replace 6. Verify correct module configuration setup on the Module Configuration screen

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
218	Pressure Sensor Detection Alarm	NUMBER OF PRESSURE SENSORS CONNECTED DOES NOT AGREE WITH THE NUMBER OF SENSORS CONFIGURED ON THE PRESSURE SENSOR CONFIGURATION SCREEN 1. Defective sensor 2. Defective module or damaged module harness 3. Additional pressure sensor detected	1. Inspect pressure sensor for damage or replace 2. Inspect module and/or module harness for damage. Replace if necessary 3. Verify correct # ACC setting for each module
219	Row Sensor Detection Alarm	NUMBER OF SEED SENSOR CONNECTED DOES NOT AGREE WITH THE NUMBER OF SENSORS CONFIGURED ON THE SEED SENSOR CONFIGURATION SCREEN 1. Defective seed sensor 2. Defective module or damaged module harness 3. Additional seed sensor detected	1. Inspect seed sensor for damage or replace 2. Inspect module and/or module harness for damage. Replace if necessary 3. Verify correct # ROWS setting for each module
220	Row Sensors Installed Incorrectly Alarm	ROWS ARE NOT DETECTED SEQUENTIALLY ON A MODULE 1. Incorrect seed row connections 2. Defective seed sensor 3. Defective module or damaged module harness	1. Verify seed sensors are connected sequentially on all modules as instructed in installation 2. Inspect seed sensor for damage or replace 3. Inspect module and/or module harness for damage. Replace if necessary
221	Control Channel Invalid State Alarm	1. Internal system software error	1. Cycle system power Off/On. If condition persists, contact DICKY-john Technical Support (1-800-637-3302) or DICKY-john Europe (011-22-141-192189)
222	Control Channel Setup Height Error Alarm	1. Implement hydraulic system malfunction 2. Defective control valve 3. Incorrect feedback sensor installation 4. Defective feedback sensor 5. Limit Max Output set too low	1. Verify implement hydraulic system operation 2. Inspect control valve for damage. Replace if necessary 3. Verify correct installation of the feedback sensor 4. Inspect feedback sensor for damage or replace 5. Set Limit Max Output to a higher PWM% on the Valve Calibration screen. Perform a new valve calibration
223	Control Channel Max Feedback Unreachable Alarm	1. Limit Max Output set too low 2. Incorrect feedback sensor installation 3. Defective feedback sensor	1. Set Limit Max Output to a higher level on the Valve Calibration screen. Perform a new valve calibration 2. Verify correct installation of the feedback sensor 3. Inspect feedback sensor for damage or replace

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
224	No Control Channel Gain Steps Calculated Alarm	1. Implement hydraulic system malfunction 2. Defective control valve 3. Incorrect feedback sensor installation 4. Defective feedback sensor	1. Verify implement hydraulic system operation 2. Inspect control valve for damage. Replace if necessary 3. Verify correct installation of the feedback sensor 4. Inspect feedback sensor for damage or replace
225	Hopper Sensor Low Alarm	1. Incorrect logic level setting on the Hopper Setup screen 2. Dirty or defective hopper sensor 3. Defective module harness or module 4. Hopper empty	1. Verify correct logic level setting on the Hopper Setup screen 2. Clean/inspect hopper sensor. Replace if necessary 3. Inspect harness and module for damage. Replace if necessary 4. Fill hopper
226	RPM Sensor High Limit Exceeded Alarm	SENSED RPM EXCEEDS THE HIGH ALARM SETTING ON THE RPM SETUP SCREEN 1. Implement malfunction or incorrect setup 2. Defective RPM sensor 3. Defective module	1. Verify proper implement operation/setup 2. Inspect RPM sensor for damage. Replace if necessary 3. Inspect module for damage. Replace if necessary
227	RPM Sensor Low Limit Exceeded Alarm	SENSED RPM BELOW THE LOW ALARM SETTING ON THE RPM SETUP SCREEN 1. Implement malfunction or incorrect setup 2. Defective RPM sensor 3. Defective module harness or module	1. Verify proper implement operation/setup 2. Inspect RPM sensor for damage 3. Inspect module for damage. Replace if necessary
228	Hopper Sensor Detection Alarm	NUMBER OF HOPPER SENSORS CONNECTED DOES NOT AGREE WITH THE NUMBER OF SENSORS CONFIGURED ON THE HOPPER SENSOR CONFIGURATION SCREEN 1. Defective hopper sensor 2. Defective module or damaged module harness 3. Additional hopper sensors detected	1. Inspect hopper sensor for damage or replace 2. Inspect module and/or module harness for damage. Replace if necessary 3. Verify correct # HOPP setting for each module
229	Hopper Sensors Installed Incorrectly Alarm	HOPPER SENSORS ARE NOT INSTALLED SEQUENTIALLY ON A MODULE 1. Incorrect hopper sensor connections 2. Defective hopper sensor 3. Defective module or damaged module harness	1. Verify hopper sensors are connected sequentially on all modules as instructed in INSTALLATION 2. Inspect hopper sensor for damage or replace 3. Inspect module and/or module harness for damage. Replace if necessary

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
230	Pressure Sensors Installed Incorrectly Alarm	PRESSURE SENSORS ARE NOT INSTALLED SEQUENTIALLY ON A MODULE 1. Incorrect pressure sensor connections. 2. Defective pressure sensor 3. Defective module or damaged module harness	1. Verify pressure sensors are connected sequentially on all modules as instructed in INSTALLATION 2. Inspect pressure sensor for damage or replace 3. Inspect module and/or module harness for damage. Replace if necessary
232	RPM Sensor Low Limit Exceeded With Control Channel Shutdown Alarm	RPM HAS DROPPED BELOW THE DISABLE CONTROL ON LOW ALARM SETTING ON THE ACCESSORY SETUP SCREEN 1. Defective RPM sensor 2. Damaged module harness 3. Defective module 4. Low RPM	1. Inspect RPM sensor for damage. Replace if necessary 2. Inspect module harness for damage. Repair or replace 3. Inspect module for damage. Replace if necessary 4. Increase RPM
233	Control Channel Activation Alarm	CHANNEL DELAY OR PRECHARGE IS ENABLED. DURING THIS THE CONTROL WILL RUN WITHOUT GROUND SPEED OR WITHOUT THE IMPLEMENT DOWN	1. Acknowledge alarm to activate control channels. 2. Acknowledge alarm and disable Delay or Precharge to stop control
234	Control Channel Precharge Activation Timeout Alarm	CONTROL CHANNEL PRECHARGE TIME HAS EXPIRED WHILE THE SYSTEM IS STATIONARY. CONTROL CHANNEL HAS STOPPED. 1. Ground speed is at zero. 2. Ground speed is less than Precharge Speed after precharge time is expired	1. Acknowledge alarm and increase ground speed.
235	New Member Module Detected Alarm	1. New member module has been found	1. Assign sensors to the new module at the Module Configuration Setup screen and its position
236	Intermittent Member Module Detected Alarm	1. A member module that had previously failed communication has come online	1. Inspect harness connections to this module
237	Product Level Low Alarm	1. Calculated product level has dropped below alarm level	1. Fill product bin and reset level
240	Seeding Detected on a Control Off Row Alarm	1. Control Channel turned off and seed continues to be detected	1. Check seed dispensing unit for proper shut off
241	Control Not Active With Implement Lowered and Speed	1. Control will not operate while on a setup screen	1. Navigate to the Work Screen to activate the control 2. Raise implement and stop forward speed to clear alarm
246	Master Switch Softkey Press Alarm	1. Warning of action associated with keypress	1. Press Control Start key to activate control
602	8 Volt Supply Failure Alarm	8V SUPPLY VOLTAGE IS BELOW 7.2V OR HIGHER THAN 16V 1. Damaged module harness 2. Defective seed or hopper sensor 3. Defective module	1. Inspect module harness for damage. Repair or replace harness 2. Inspect seed or hopper sensors connected to the identified module for damage. Replace sensors if necessary 3. Replace identified module

Section 11: Troubleshooting and Alarm Codes

ALARM #	ALARM	PROBABLE CAUSE	CORRECTIVE ACTION
603	Member Module Communication Failed Alarm	COMMUNICATION WITH AN ACTIVE MODULE HAS FAILED 1. Damaged CAN or module harness 2. Blown module harness fuse 3. Defective module	1. Identify missing module in the Module Configuration list. Inspect CAN/module harness of the missing module for damage. Repair or replace harness 2. Inspect module harness fuse. Replace if necessary 3. Identify missing module in the Module Configuration list. Inspect missing module for damage or replace
604	ECU Voltage Out of Range Alarm	ECU VOLTAGE IS BELOW 11V OR HIGHER THAN 16V 1. Damaged CAN or module harness 2. Defective module	1. Inspect CAN/module harness of the identified module for damage. Repair or replace harness 2. Inspect identified module for damage or replace
605	Solenoid Voltage out of Range Alarm	SOLENOID VOLTAGE IS BELOW 11V OR HIGHER THAN 16V 1. Damaged CAN or module harness 2. Blown module harness fuse 3. Defective module	1. Inspect CAN/module harness of the identified module for damage. Repair or replace harness 2. Inspect module harness fuse or replace 3. Inspect identified module for damage or replace
606	Ground Offset Voltage Out of Range Alarm	1. Damaged/shorted Actuator Harness 2. Defective PWM valve driver or Servo valve driver 3. Defective module	1. Inspect Actuator Harness for damage around the WPM and Servo valve connections. Repair or replace harness 2. Inspect PWM or Servo valve drivers for damage and replace if necessary 3. Inspect identified module for damage and replace if necessary



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