Quick Start Guide
Using the DICKEY-john AI-120 Monitor
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1.0 INTRODUCTION

The AccuShot™ liquid delivery system is designed to apply a specific amount of liquid product at a specific location relative to each seed in the furrow. The correct amount of liquid product can now be delivered where the seed needs it...giving each seed a better shot at germination.

Application Based

To reduce seed burn and improve stand counts, the Operator supplies initial setup information via a VT Display so AccuShot can determine how close to the seed to apply the liquid product. By concentrating the liquid product where the seed needs it, AccuShot reduces wasted product between the seeds at wider seed spacings.

Results

Improved plant vigor and less wasted liquid product both drive more profit to the Producer’s bottom line with AccuShot.

Other Manuals

The AccuShot Quick Start Guide is for use with the companion AccuShot Operator and Maintenance Manual.

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is a trademark of Great Plains, Inc.
This manual contains important information on how to safely, efficiently and correctly operate the **AccuShot System**. Following these instructions will help keep personnel safe, reduce downtime and increase the reliability and life of the equipment, its components and related systems.

- Review the Safety Information in the applicable tractor, planter and ancilliary equipment manual(s).
- Follow the instructions (in this manual) for each step thoroughly to ensure safe work conditions in and around the applicable tractor, planter and ancilliary equipment manual(s).
- It is important for all individuals working with chemicals to understand the potential risks, necessary safety precautions and proper response in the event of accidental contact.
- Review the applicable tractor, planter and ancilliary equipment manual(s) for chemical safety information.
- Review and understand procedures for obtaining and using Safety Data Sheets (SDS) and the required Personal Protective Equipment (PPE) for when working around hazardous chemicals and sharp edges and objects on applicable tractor, planter and ancillary equipment.
- Use the procedure in the appropriate Agricultural Equipment Manual for connecting, disconnecting and jump starting the machine’s battery.
- Please keep this manual and all enclosed documentation in an accessible location known to all operator personnel. Keep sparks and flames away from the battery. Battery gas can explode and cause serious injury. **Do not smoke in battery charging area.**

Make certain that all personnel have read this manual and thoroughly understand safe operating procedures.

If you do not understand the AccuShot equipment after reading this manual, please obtain the proper training before working with the AccuShot system to ensure your own safety and well as your co-worker’s safety.
3.0 SETUP

AccuShot System – Screen ICON Description

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon Descriptions - LH Side of Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="AccuShot" /></td>
<td>Touch this icon to activate the AccuShot system.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon Descriptions - RH Side of Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Alarm" /></td>
<td>The Alarm icon appears when there is an alarm in the system. Touch this icon to view and silence current alarms.</td>
</tr>
<tr>
<td><img src="image" alt="Home" /></td>
<td>Touch this icon to return to the Home Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Placement Settings" /></td>
<td>Touch this icon to open the Placement Settings Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Tip Calibration" /></td>
<td>Touch this icon to open the Tip Calibration Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Diagnostics" /></td>
<td>Touch this icon to open the Diagnostics Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Tank Volume" /></td>
<td>Touch this icon to open the Tank Volume Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Active Seed/Valve Sensor" /></td>
<td>Touch this icon to open the Active Seed/Valve Sensor Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Next Page" /></td>
<td>Touch this icon to “go to” the Next Page of icons.</td>
</tr>
<tr>
<td><img src="image" alt="Sensor Settings" /></td>
<td>Touch this icon to open the Sensor Settings Screen.</td>
</tr>
<tr>
<td><img src="image" alt="Pump Settings" /></td>
<td>Touch this icon to open the Pump Settings Screen.</td>
</tr>
</tbody>
</table>
3.0 Setup

HOME Screen

The HOME Screen is the main user interface that provides central control of the AccuShot system.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Home Icon" /></td>
<td>Touch the &lt;Home&gt; icon to view 3 Ground Speed, 4 System Pressure, 5 Tank Volume and 6 Rate values on the HOME Screen. Touch and toggle 1 &lt;Mode&gt; and 2 &lt;System Control&gt; functions to operate the AccuShot system.</td>
</tr>
</tbody>
</table>

1. Mode <Toggle> OFF | AUTO | MAN | ON operating functions.
2. System Control <Toggle> RUN | HOLD operating functions.
3. Ground Speed display box
4. System Pressure display box
5. Tank Volume display box
6. Rate display box
### PLACEMENT Settings

Use the **PLACEMENT SETTINGS** Screen to enter / edit the placement and location of the shot in relation to the location of the seed.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Seed Droplet Icon" /></td>
<td>Touch the &lt;Seed Droplet&gt; icon to set Population, number of Planter Rows, Planter Width, Application Rate, System Pressure, Target Speed, and shot Distance from the seed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Settings</th>
<th>Defaults</th>
<th>Units of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>32.0</td>
<td>Thousand (k) Seed per Acre</td>
</tr>
<tr>
<td>Number of Rows</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Planter Width</td>
<td>480</td>
<td>Inch</td>
</tr>
<tr>
<td>Application Rate</td>
<td>5.0</td>
<td>Gallon per Acre</td>
</tr>
<tr>
<td>Pressure Set Point</td>
<td>30.0</td>
<td>PSI</td>
</tr>
<tr>
<td>Target Speed</td>
<td>5.0</td>
<td>MPH</td>
</tr>
<tr>
<td>Dist. From Seed</td>
<td>1.0</td>
<td>Inch</td>
</tr>
<tr>
<td>Squirt Length</td>
<td>1.7</td>
<td>Inch</td>
</tr>
</tbody>
</table>

A warning will appear on the **PLACEMENT SETTINGS** Screen when Operator-entered values may not match or align with other settings. Read the warning and touch <Accept>, <Cancel> or <OK> to continue.
**Procedure for Setting Liquid Bypass for AccuShot**

When the add-on hydraulically-driven centrifugal pump must run at different operating points on the AccuShot system, a liquid product bypass line(s) is used to return some of the liquid back to the liquid product tank(s). This allows the pump to operate efficiently and reliably at its best efficiency point. If the pumped liquid product was returned through the suction line connections, turbulences at the pump suction would cause operational problems and even equipment damage.

AccuShot uses a Main Bypass Valve near the product pump and a Liquid Product Shutoff Valve on the lower backside of each liquid product tank to manage different operating points. A total of up to 5.5 GPM of hydraulic flow is needed to operate the AccuShot system.
3.0 Setup

**Initial Setup**

1. Fill liquid product tank(s).
2. Verify that the ④ Tank Supply Valve(s) is/are open.
3. Verify that the ⑤ Liquid Product Shutoff Valve(s), being used for Accu-Shot, is/are open on the back of the liquid product tank(s).
3.0 Setup

Close Main Bypass Valve

4. Close the main bypass valve (near the product pump) on the Planter.

Closing Main Bypass Valve

Open Boom Shutoff Valve

5. Open shutoff valve to booms on the liquid product line.

6. Start the Tractor.

7. Engage the Planter Hydraulics

Opening Boom Shutoff Valve
### Activate Pump

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Home Icon" /></td>
<td>On the HOME Screen: Touch the red &lt;Diagnostic&gt; icon on the right hand side of the HOME Screen.</td>
</tr>
</tbody>
</table>

8. Touch the red Key FOB Mode button on the DIAGNOSTIC Screen (the button will turn green and the function buttons will appear).

9. Start the liquid product pump by touching the ① pump <ON/OFF> button on the DIAGNOSTIC Screen or by pressing the button on the Key FOB.

---

**Activate Pump**

![Activate Pump Icon](image)
3.0 Setup

Pressure Relief Valve Adjustment

10. While viewing the out manual pressure gauge at the liquid product pump, adjust the in pressure relief valve to set the pressure at 70 PSI maximum.

   Rotate CCW to decrease pressure.

   Rotate CW to increase pressure.

11. Once pressure is set, use the locknut to lock the setting in place.

12. Open the main bypass valve (near the product pump) to the 10 o’clock position.
3.0 Setup

Pressure Gauge

13. While viewing the manual pressure gauge on planter, verify the pressure is 60 PSI. If not 60 PSI, do the following steps:

![Pressure Gauge Image]

a. Under 60 PSI
   
i. **Increase** hydraulic flow to the planter hydraulics until 60 PSI is reached on the manual pressure gauge on the planter.
   
   1. If hydraulics cannot get the pressure to 60 PSI, close main bypass valve till pressure reaches 60 PSI. (Some bypass is needed for better AccuShot operation.)

   ![Main Bypass Valve Image]

   2. If pressure does not reach 60 PSI with main bypass fully closed, tractor hydraulic supply is not sufficient. Contact your Planter dealer for further assistance.

b. Above 60 PSI
   
i. **Decrease** hydraulic flow to the planter hydraulics until 60 PSI is reached on the manual pressure gauge on the planter.
3.0 Setup

14. Shut off the product pump by touching the pump on/off button on the screen or Key FOB.

15. The bypass valve should be set at the correct pressure and flow after performing the above steps. Recheck pressure gauge on planter to verify.

**NOTICE** Minor hydraulic pump adjustment might be required when planting. See PUMP Settings - Factory Set on page 32.
DIAGNOSTICS SYSTEM Screen

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Diagnostics Icon" /></td>
<td>Touch the red Diagnostics icon to view the DIAGNOSTIC Screen.</td>
</tr>
</tbody>
</table>

Select and toggle any of the red buttons on the Diagnostics Screen. This screen allows Key FOB use, viewing System Info and running Valve Diagnostics. The selected button will turn green when activated. Make sure the <Mode> button on the HOME Screen reads OFF to use the Key FOB and view diagnostics.

**Procedure**

The Operator can perform the following functions on the DIAGNOSTIC Screen:

1. Enable Test Speed and/or Test Pressure for diagnostics and troubleshooting.
2. Activate Key FOB operation.
3. View System Info.
4. Running valve diagnostics.
3.0 Setup

Procedure

Touch to toggle any of the red buttons on the DIAGNOSTIC screen. The toggled button will turn green when activated.

When a Test Speed and/or Test Pressure procedure is enabled for troubleshooting and diagnostics, “TEST” will blink on the following two menu screens:

- **HOME** Screen in the center of the Speed and/or Pressure display boxes.
- **TIP CALIBRATION** Screen in the System Pressure box at the bottom of the screen.

Both Test Speed and Test Pressure values can be edited (one at a time) from the DIAGNOSTIC Screen, by touching inside the value display box to activate the keypad. Once a number is selected, touch the tick key to enter the chosen number.
### 3.0 Setup

**Activate the Key FOB Controls**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Diagnosics Icon" /></td>
<td>Touch the red &lt;Diagnosics&gt; icon.</td>
</tr>
</tbody>
</table>

**Procedure**

Touch the red <Keyfob Mode> button on the DIAGNOSTIC Screen to display the Key FOB function buttons.

Key FOB Mode Active will blink on the DIAGNOSTIC Screen and the red button will turn green.

![Key FOB Mode Active](image)
### 3.0 Setup

**Operate the Key FOB Controls**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pulse Nozzles Right to Left.</td>
</tr>
<tr>
<td>2</td>
<td>Turn Pump ON/OFF.</td>
</tr>
<tr>
<td>3</td>
<td>Pulse Nozzles Left to Right.</td>
</tr>
<tr>
<td>4</td>
<td>Repeat Current Nozzle Pulse.</td>
</tr>
</tbody>
</table>

**NOTE:** Button 4 has a dual function. During Tip Calibration, it is used to Start/Stop the Tip Calibration Catch Test.

### Procedure

Operator can also use the Key FOB or the AccuShot Diagnostic Screen in the Cab to clear any plugged rows, remove air from the system, and test row-by-row to ensure that all rows are still working properly.

The row number being tested can be edited from the Diagnostic Screen with Key FOB Controls activated.

Touch the inside of the “Now Testing Row” display box to enable the keypad. Touch / edit the row number being tested. Touch the key to enter the value.

**NOTICE** If the <Mode> is not set to OFF on the Home Screen, a warning will appear when enabling Key FOB Mode.
Purge Operation

The Operator can prime, purge the air or flush the AccuShot plumbing system from the DIAGNOSTIC Screen with the Key FOB Mode activated.

At the start of every planting day, an Operator should (at the very least) run the Purge All Valves operation to check the system for air or contamination.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Keyfob Mode" /></td>
<td>To perform the Purge Operation, the VT Display must be on the DIAGNOSTIC Screen with no active warnings. (Read / Review Section 3.4 in the AccuShot Operator and Maintenance Manual.)</td>
</tr>
<tr>
<td><img src="image2" alt="Keyfob Mode" /></td>
<td>Make sure the Key FOB Controls are activated and displays a green &lt;Keyfob Mode&gt; button.</td>
</tr>
</tbody>
</table>

**Procedure**

1. Touch the red <Purge All Valves> button to start purge operation.

   The red <Purge All Valves> button will turn green and all nozzle valves will open 100%, allowing a constant liquid flow from the product tank, through the plumbing system and discharging through the nozzle valves.

   Purge will end when touching the green <Purging Valves> button, pressing any of the top 4 Key FOB buttons or touching the Key FOB buttons on the DIAGNOSTIC Screen, or leaving the DIAGNOSTIC Screen.
3.0 Setup

Operate the System Info Screen

Touch the <System Info> button to display more information. The button will turn green when enabled. Operator can view System Voltage, Hour Meter, Pressure Sensor Voltage, Pump Duty Cycle, and GPS readouts.
3.0 Setup

Touch the **SW Versions** button to view the AccuShot Controller’s circuit board information.

Circuit Board Information
3.0 Setup

Valve Diagnostics

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>Touch the red &lt;Diagnostics&gt; icon on the HOME Screen.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Touch the &lt;Valve Diag&gt; button. The button will turn green. The Operator can see if all nozzle valves and seed sensors are connected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Icon</th>
<th>Indicator Color Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>Indicates seed sensor and nozzle valves are connected.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Indicates nozzle valve is connected while seed sensor is not being detected by controller.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Indicates seed sensor is connected while the nozzle valve is not being detected by controller.</td>
</tr>
</tbody>
</table>

See the AccuShot Operator and Maintenance Manual for more diagnostic help, if needed.

If the <Mode> is not set to OFF on the HOME Screen, a warning will appear when enabling Valve Diagnostics.
## TIP CALIBRATION Catch Test

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The TIP CALIBRATION Screen is used to compensate for different viscosities and fluid dynamics.</td>
</tr>
</tbody>
</table>

1. Touch the <Tip Calibration> icon on the HOME Screen.

2. Verify and edit Tip Calibration information as needed. Changing values on the TIP CALIBRATION Screen will also change the same values in the PLACEMENT SETTINGS Screen or vice versa.

**NOTICE** Verify that the Tip Size is correct.

Spray Tip size is verified by looking at the outside surface of the tip near the spray end.

### Procedure

3. Place the Calibration Pitcher directly underneath a spray nozzle on Row #1 of the Planter.

4. With the planter hydraulics engaged, touch the <START> button on the TIP CALIBRATION Screen or press button 4 on the Key FOB to begin the Tip Calibration Catch Test.
You can START and STOP testing as needed using the **Tip Calibration** Screen or Key FOB.
5. Once the test is complete and liquid product is captured:
   - Read the Calibration Pitcher at the bottom of the meniscus.

   **Meniscus**
   The Meniscus is the curve in the upper surface of a liquid close to the surface of the container or another object, caused by surface tension. The curve can be either convex or concave, depending on the liquid and the surface.

   **NOTICE** Reading the Calibration Pitcher at or above the meniscus will cause an inaccurate GPA measurement.

6. Touch the inside of the <CAPTURED Volume> box. A keypad will appear. Enter amount of fluid caught. Touch the key to enter the amount.
3.0 Setup

7. Once a CAPTURED Volume is entered, Touch

![Accept] or ![Decline]

- A new Product 1 Cal% will be calculated. Touch <Accept> to select new value or <Decline> to return to previous Product 1 Cac%.

8. Repeat Catch Test until the correct catch volume is caught.

*NOTICE* If the <Mode> is not set to OFF on the HOME Screen, a warning will appear when accessing the TIP CALIBRATION Screen.
3.0 Setup

**Tank Volume**

The **TANK VOLUME** Screen can also be accessed by touching the `<Tank>` volume box on the **HOME** Screen.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Tank Icon" /></td>
<td>Touch the <code>&lt;Tank&gt;</code> icon to view and set the Tank Volume and set the Warning Level.</td>
</tr>
</tbody>
</table>

![Inventory Screen](image)

Touching the `<Tank>` volume box on the **HOME** Screen opens the **TANK INVENTORY** Screen.

![Inventory Screen](image)
3.0 Setup

SENSOR SETTINGS - Factory Set

All settings are locked on this screen except the Flowmeter Cal. Locked screens are intended only for qualified Service Technician access and use.

The Flowmeter Cal value entered must match the Flowmeter (label) on the Planter. The Flowmeter Cal Value IS NOT locked and must be set by operator.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
</table>

The default Sensor Settings are set at the factory.

Touch the LOCK icon to open the on-screen keyboard.
3.0 Setup

Type in the password and touch the key to enter the password and UNLOCK the screen.

![Password screen with unlock icon]

### Defaults

1. Pressure Sensor Voltage Low = 0.5 VDC
2. Pressure Sensor Voltage High = 5.0 VDC
3. Pressure Sensor Low = 0.0 PSI
4. Pressure Sensor High = 100.0 PSI
5. Radar Cal = 60.0 Pulse per 400 ft.
6. Row Fail Rate = 1 Seeds per sec.
7. Flowmeter Cal = 1740 Pulse per 10 Gals.
3.0 Setup

**PUMP Settings - Factory Set**

All settings are locked on this screen. Locked screens are intended only for qualified Service Technician access and use.

**Procedure After UNLOCK**

Adjust Hydraulic pump settings by using the System Gain setting to tune a system where the pressure is oscillating or sluggish to respond.

- Select a **lower number** to stabilize an oscillating system.
- Select a **higher number** to speed up a sluggish system.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>The default <strong>Pump Settings</strong> are set at the factory.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Touch the <strong>LOCK</strong> icon to open the on-screen keyboard. Type in the password and touch the ✓ key to enter the password and <strong>UNLOCK</strong> the screen.</td>
</tr>
</tbody>
</table>
## 3.0 Setup

<table>
<thead>
<tr>
<th>Settings</th>
<th>Default</th>
<th>Units of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>N/A</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>System Gain</strong></td>
<td>4</td>
<td>N/A</td>
</tr>
<tr>
<td>Flow Meter Filter</td>
<td>5.0</td>
<td>Sec.</td>
</tr>
<tr>
<td>Pressure Sensor Filter</td>
<td>2.0</td>
<td>Sec.</td>
</tr>
<tr>
<td>Min Duty Cycle</td>
<td>20</td>
<td>N/A</td>
</tr>
<tr>
<td>Max Duty Cycle</td>
<td>55</td>
<td>N/A</td>
</tr>
</tbody>
</table>
4.0 FIELD OPERATION

AUTO Mode

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="HOME Screen" /></td>
<td>On the HOME Screen:</td>
</tr>
<tr>
<td><img src="image" alt="AUTO Icon" /></td>
<td>Press &lt;Mode&gt; button and toggle to AUTO. In &lt;Auto&gt; mode, the system automatically adjusts the pressure, and activates the nozzle valves when seeds are sensed. This mode should be used for normal field operation.</td>
</tr>
<tr>
<td><img src="image" alt="RUN Icon" /></td>
<td>Press &lt;System Control&gt; button and toggle to RUN. With the planter hydraulics engaged, the liquid product pump will turn on and raise the pressure to the pressure set point.</td>
</tr>
<tr>
<td><img src="image" alt="HOLD Icon" /></td>
<td>Touch and toggle &lt;System Control&gt; button to HOLD. Pump will shut OFF and nozzle valves will not pulse.</td>
</tr>
</tbody>
</table>

---

**Field Verify Seed and Shot Placement**

A field check should be completed at the initial trip to the field and again whenever the distance to the seed is changed. See Chapter 4.0 in the AccuShot Operator and Maintenance Guide for detail images of this procedure.

To perform the seed and shot placement check, complete the following steps:

1. On the AccuShot HOME Screen, touch and toggle <System Control> button to select HOLD.

2. At the back of the planter, using tie-down straps, secure up the closing wheels and shallow up the Side Gauge Wheel depth on the rows to be checked. (Recommend on a twin row to perform check procedures on rows next to each other. i.e. row 1 and 2).

3. Using the excess from the tie-down strap, or using a bungee strap, hold the seed firmer out of the furrow.
4. Once everything is out of the furrow and off the dirt and secured, return to the tractor cab. On the AccuShot **HOME** Screen, touch and toggle *<System Control>* button to select **RUN**. Resume planting for the desired test distance, using the same settings and speeds as normal planting.

5. Stop the tractor once test distance is reached. On the AccuShot **HOME** Screen, touch and toggle *<System Control>* button to select **HOLD**. Visually verify placement of shot relative to seed in the furrow.
6. When placement of the shot relative to the seed is correct, remove all straps and readjust the Side Gauge Wheel depth back to normal operating depth. (See the manufacturer’s specific planter manual for assistance.

**NOTICE**
Repeat field check periodically or when Rate and/or Distance to Seed is modified.

a. If placement needs adjustment, change Distance to the Seed value on the **PLACEMENT SETTINGS** Screen.

![Placement Settings Screen](image)

b. Repeat field test to verify correct placement of shot relative to seed.
4.0 Field Operation

MANUAL Mode

Manual Mode is used for troubleshooting or continuing to run when a pressure sensor has failed.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagnostic Icon]</td>
<td>Touch the red Diagnostic icon to view the DIAGNOSTIC Screen.</td>
</tr>
</tbody>
</table>

![Diagnostic Screen]

Touch to toggle the <Test Pressure> button to ENABLE the Test Pressure. Verify Test Pressure value is correct.

![Test Pressure Screen]
4.0 Field Operation

To edit the <Test Pressure> value if not correct, touch the pressure value box to enable the keypad.

Upon enabling a <Test Pressure>, “TEST” will blink in the System Pressure box on the HOME and TIP CALIBRATION Screens.
4.0 Field Operation

On the HOME Screen:

Touch and toggle <Mode> button to select **MAN**.

Touch and toggle <System Control> button to **RUN**.

Visually monitor the manual pressure gauge on the Planter.

Touch the “% DC” <Arrows> to **INCREASE** or **DECREASE** until the desired pressure is reached on the manual pressure gauge.

Touch and toggle <System Control> button to **HOLD**. Pump will shut **OFF** and nozzle valves will not pulse.

Pressure should be checked and readjusted once the planter is operating.
4.0 Field Operation

---

**ON Mode**

Use ON mode to apply a constant stream of product. Orifice inserts will be required to achieve the desired GPA. (Use orifice rate charts to size the orifices correctly, or contact your local dealer.) The system automatically adjusts to maintain the pressure set-point. This pressure Set Point can be changed on the Placement Settings Screen.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Notice Icon]</td>
<td>Install Orifice Plates when running in ON Mode only. Remove orifice plates if wanting to run in Auto or Manual Mode.</td>
</tr>
</tbody>
</table>

---

On the HOME Screen:

- Touch and toggle `<Mode>` button to select **ON**.
- Touch and toggle `<System Control>` button to select **RUN**.

---

NOTICE

Always insert Orifice Plate with number side facing the outlet. Material: Stainless Steel
4.0 Field Operation

Touch and toggle `<System Control>` button to HOLD. Pump will shut OFF and nozzle valves will not pulse.

Place `<System Control>` in HOLD Mode when picking up the planter on turns to prevent liquid product waste.

Pressure Set Point can be changed from the HOME Screen by touching inside the Pressure box to enable the keypad. Once a number is entered, touch the ✓ key to accept the value.
4.0 Field Operation

Active Seed / Valve Sensor Indicators

Use this screen to verify the nozzle valves and seed sensors are working correctly while the planter is operating.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Heart Icon" /></td>
<td>Touch the &lt;Heart&gt; icon to verify all rows are working in the Active Seed/Valve Sensor Screen. See troubleshooting for help with failed rows.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Icon</th>
<th>Key to Indicator Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Green Circle" /></td>
<td>Indicates seed sensor and nozzle valves are connected.</td>
</tr>
<tr>
<td><img src="image" alt="Yellow Circle" /></td>
<td>Indicates seed sensor is not being detected by the AccuShot controller, while the nozzle valve is operational.</td>
</tr>
<tr>
<td><img src="image" alt="Orange Circle" /></td>
<td>Indicates nozzle valve is not being detected by the AccuShot controller while the seed sensor is operational.</td>
</tr>
</tbody>
</table>
4.0 Field Operation

**OFF Mode**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>When the Mode is switched to OFF, the system shuts down (pump and nozzle valves), and all alarms are deactivated. Choose the OFF Mode when the liquid product system is not being used.</td>
</tr>
<tr>
<td><img src="image" alt="OFF" /></td>
<td>Touch and toggle <code>&lt;Mode&gt;</code> button to select <strong>OFF</strong>.</td>
</tr>
<tr>
<td><img src="image" alt="HOLD" /></td>
<td>System Control defaults to HOLD when the <code>&lt;Mode&gt;</code> button is toggled.</td>
</tr>
</tbody>
</table>
System Control - Run / Hold

Manual Mode is used for troubleshooting or continuing to run when a pressure sensor has failed.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Home Icon" /></td>
<td>On the HOME Screen:</td>
</tr>
<tr>
<td><img src="image" alt="Run Icon" /></td>
<td>With hydraulics engaged, touch and toggle &lt;System Control&gt; button to select <strong>RUN</strong>. The liquid product pump will turn on and raise the pressure to the pressure set point.</td>
</tr>
<tr>
<td><img src="image" alt="Off Icon" /></td>
<td>Touch and toggle &lt;System Control&gt; button to <strong>HOLD</strong>. Pump will shut <strong>OFF</strong> and nozzle valves will not pulse.</td>
</tr>
</tbody>
</table>

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