# OPERATOR'S MANUAL

**Dickey-John**

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SAFETY NOTICES

Safety notices are one of the primary ways to call attention to potential hazards.

This Safety Alert Symbol identifies important safety messages in this manual. When you see this symbol, carefully read the message that follows. Be alert to the possibility of personal injury or death.

WARNING
Use of the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION
Use of the word CAUTION with the Safety Alert Symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION
Use of the word CAUTION without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in equipment damage.

DISCLAIMER
DICKEY-john reserves the right to make engineering refinements or procedural changes that may not be reflected in this manual. Material included in this manual is for informational purposes and is subject to change without notice.
SYSTEM COMPONENTS

The DICKEY-john IntelliAg Planter Drill Control system is a 4 channel control system for row crop planters to control planting, liquid, and granular applications. The IntelliAg is designed to ISO 11783 CAN communication standards providing the capability of communicating with other manufacturer’s ISO 11783-compatible equipment.

IntelliAg is compatible with all DICKEY-john sensors.

The DICKEY-john IntelliAg system can be used with:

- Sprayers
- Fertilizer spreaders
- Anhydrous applicators
- Planters
- Air seeders (strip till/seeding)

FEATURES

- Controls hydraulic valves (pulse-width modulated and servo)
- Variable rate applications
- Logs “as applied” data
- Monitors up to 196 rows of seeding
- Monitors inputs such as hopper level, air pressure, and shaft speed
- Retains information in the event of a power failure
- Full screen alarms identify abnormal or failed operation on all enabled system component/controls

VIRTUAL TERMINAL (VT)

A 5”, 10”, or 12” Virtual Terminal is the main user interface with the IntelliAg system components to monitor and control product application.

Figure 1
IntelliAg 12” Virtual Terminal
NOTE: Examples shown throughout this manual depict display screens of the 12” Virtual Terminal display.

CAB HARNESS CONNECTION TO 12” VT

The AI-120 terminal connects to the tractor cab harness via an adapter harness. A GPS receiver is required to provide implement position via CAN or RS232 communication. A row control switch module/clutch folding switch module provides quick access of turning sections on and off when manual override is required. Ignition wire connects to switched power source.

A DICKEY-john shutoff output module WSMB and harness are required for interfacing with shutoff modules (Tru Count solenoid modules are not supplied by DICKEY-john). Harnessing structure illustrated below.

**Figure 2**

12” VT Cab Harness Connections to Virtual Terminal
CAB HARNESS CONNECTION TO 10” VT

The following diagram illustrates cab harness layout and connections for DICKEY-john 10” Virtual Terminal.

Figure 3

_Cab Harness Connections to 10” Virtual Terminal_

NOTE: This wire must be connected to switched +12VDC.
CAB HARNESS CONNECTION TO 5” VT

The following diagram illustrates cab harness layout and connections for DICKEY-john 5” Virtual Terminal.

**Figure 4**

*Cab Harness Connection to 5” Virtual Terminal*

---

**NOTE:** The ignition lead must be connected to switched +12VDC for the system to power on and off properly.
OPERATION

PRE-DEFINED CONSTANTS

The IntelliAg system is loaded with pre-defined constants. Any constants that require modification must be changed by an authorized user, such as the dealer or distributor from where the system was purchased.

WORK MODE

When the Master Switch is in the ON position, the Virtual Terminal (VT) is in Operate mode. In this mode, all enabled system components and control channels are operational, as well as all monitoring functions and system accumulators.

In Work Mode the following functions can be performed:

- Perform a fill disk
- Increase and decrease rates
- Change materials
- Access Diagnostics screen
- Access/view Information screen
- Access/view Alarm Log and Detail screens
- Access/view Summary screen

MAIN WORK SCREEN

The Main Work screen is divided into 4 areas (Figure 5):

1. Enabled system applications
2. Main Work Screen area that displays application control status
3. IntelliAg functions
4. Row Indicators that monitor seed rate

Figure 5
Main Work Screen
OPERATION

START

1. Lower the implement to operating position engaging the implement switch, if present and enabled.
2. With the hydraulic system engaged and the tractor at its normal operating RPM, set the master switch to the On position. All enabled control channels will begin controlling at the current ground speed. All accumulators will begin recording data.

WARNING

When the implement is down and the master switch is in the On position, the machine is fully operational. All necessary precautions must be taken to ensure user safety. Failure to practice all necessary caution may result in serious injury or death.

STOP

1. Set the master switch to the Off position. All control channels will cease operation and all data accumulation will halt.
2. Operation will immediately stop when the ground speed is 0 or raise implement to disengage implement lift, if enabled.

Figure 6

Main Work Screen Functions
FILL DISK FOR CONTROL CHANNELS

Fill disk fills the seed meters after a variety change or after power up on air-actuated planters with seed to allow instant seed flow when the control is turned on.

Press the button to rotate the seed meters 1 time, then stop.

1. From the Main Work screen, press the Planter Fill Disk button.
2. Raise the implement.
3. With brakes locked and transmission in the park position, start the engine.
4. Engage hydraulics and run engine at normal speed until hydraulic fluid is at operating temperature.

CAUTION

Implement will begin to operate after pressing the Start button. Ensure that all persons and objects are away from the implement to avoid personal injury.

5. Press the Start button. The seed meters will turn for 1 revolution, then stop.
6. Pressing the Stop button will also terminate the test.

Figure 7

Fill Disk Screen for Control Channels
ROW FILL (SPLIT AIR REGULATION)

Row Fill is used with a control channel designated as Split Air Regulation. Press the **Row Fill** button to fill all row units quickly when the planter is completely empty. Airflow is diverted to supply seed to the meter only.

1. At the Main Work screen, press the **Planter Fill Disk** button.
2. At the Planter Fill Disk screen, press the **Row Fill** button to start supplying seed to the meter. The system will automatically fully open the air path to the seed meters.
3. Wait until all meters are filled. Upon exiting the screen the split air will continue to operate normally.

**IMPORTANT:** Ensure the fan is on before starting the Row Fill operation.

4. Perform a Planter Fill Disk after leaving the Row Fill screen.

*Figure 8*

*Row Fill Screen for Split Air Regulation*
CHANGING MATERIALS

Quickly assign a different material to single or multiple channels at the Main Work screen. Only those materials assigned to the channel type appear for selection. Monitor only materials can have only one active at a time.

To Assign Materials to Channels:

1. At the Main Work screen, press the Ctrl Setup button.
2. At the Control Setup screen, press the drop down box and select the desired material for an active control channel.
3. Press the Work Screen button to return to the Main Work screen.

Figure 9
Assign Materials
CONTROL CHANNEL ADJUSTMENT

Control channels can be adjusted at the Main Work screen by selecting to highlight the channel. A channel can be adjusted as follows:

- Active channel can be set to ON or OFF by selecting the On/Off Channel button.
- Target rates adjusted by using the Inc/Dec buttons and the Reset Target button.

INCREMENT

Increases the active channel’s target rate by the amount specified in the Inc/Dec % or rate table setup for that material. Increment can be pressed several times to increase the target rate by the specified amount for every actuation, until the maximum rate value or preset value is reached. The active channel/material is displayed in the button text.

DECREMENT

Decreases the active channel’s target rate by the amount specified in the Inc/Dec% or rate table setup for that material. Decrement can be pressed several times to reduce the target rate by the specified amount for every actuation, until the minimum rate value or preset value is reached. The active channel/material is displayed in the button text.

INC/DEC RESET TO TARGET

Returns the active channel to the original material target rate. This button is only available for channels that are active and have had the target rate adjusted using the Increment or Decrement buttons in inc/dec % mode. The active channel/material displays in the button text.

CONTROL ON/OFF CHANNEL

The active channel can be turned either ON and OFF by pressing this button. Channels that are set to OFF will not operate when the master/control switch is set to the ON position. Turning a channel OFF is not the same as disabling a channel in Channel Setup mode. The active channel displays in the button text. If the button text is OFF, this is the action that occurs when the button is pressed.

OPERATE SCREEN SYMBOLS

TARGET RATE

The Target Application Rate displays when Master Switch is off. The actual applied rate appears during Operate mode.

INCREASE/DECREASE % RATE

The Increase/Decrease rate is the percentage change being applied each time the Material Increase/Decrease button is pressed during Operate mode.
TARGET PRESET RATE
The Preset Rate is the applied rate that was entered at the Material Configuration setup screen and increases or decreases when the Material Increase/Decrease button is pressed during Operate mode.

IMPLEMENT LIFT SWITCH
When an implement lift switch is installed, the Main Work screen will identify if the implement is in the up or down position. Using an implement lift switch automatically turns the control channels on and off without turning the master switch off. The Implement Lift Indicator must be in the Down position for the control channels to operate. The Implement Lift Switch box on the Ground Speed Configuration screen must be enabled if an implement lift switch is used.

Refer to the Implement Lift Sensor instructions for installation location.

TASK CONTROLLER
The Task Controller icon appears on the Main Work screen when Task Controller is active and controlling the application rate. Return to Task Controller to stop a task.

ROW INDICATORS
Row Indicators in bar graph format on the bottom of the Work screen indicate seed rate for each row. The size of the bar graphic is set on the Work Configuration screen by pressing the Work Screen button.

The following symbols illuminate in the bar graph area:

Row Indicator Symbols

AUTOPilot STEERING NAVIGATION
Autopilot Steering Navigation can be engaged and disengaged from the Main Work screen and displays swath # (AB0), cross-track error (0.00 IN), age of correction (0.0 SEC), heading direction (360 degrees), and % swath complete.
ACCUMULATORS

Some Data Item values can be reset to zero from the Main Work screen. An accumulator displays (e.g., Area 1 Field, Seed Count, etc.) on the active screen and can be reset to zero by placing a check mark in the box next to the data item. Only accumulators on the currently-displayed screen can be reset. Accumulators are reset independently and can only be reset when the master switch is OFF. Once an accumulator has reached its maximum value, it will roll over to 0.0.

POPULATION ROW SCAN

Pop Row Scan displays all active seed rows population in seeds per acre (or seeds/Ha) for each detected seed sensor. The value to the left side displays the current row number being scanned. The value on the right is the population data. The scans continue sequentially in four-second intervals unless the rotary knob is used to select a particular row number for continuous view. This Data Item displays on an entire row of the Work screen.

SINGULATION AVERAGE POPULATION

Singulation Average displays the average percent seed singulation of the rows that are configured for population. Singulation refers to the portion of seeds planted individually rather than in groups.

MATERIAL NAME

Active Material Name for a control channel created at the Control Channel screen.

POPULATION MAX ROW

Pop Max Row displays the seeding row with the maximum population in seeds per acre (or seeds/Ha). The value to the left side displays the current row number. The value on the right is the population data. This Data Item displays on an entire row of the work screen.

POPULATION MIN ROW

Pop Min Row displays the seeding row with the minimum population in seeds per acre (or seeds/Ha). The value to the left side displays the current row number. The value on the right is the population data. This Data Item displays on an entire row of the work screen.
ADDITIONAL OPERATING FUNCTIONS

IMPORTANT: Precharge Time, Delay Time, Flush Enable, and Manual Speed are features that only function if configured in User Level 2 Setup mode.

PRECHARGE FEATURE

The Precharge feature is typically used in applications that have significant distance between the storage bulk tank and the implement row unit where seed placement takes several seconds due to the travel time of the seed/fertilizer from the bulk tank to the ground. When the precharge feature is activated, material will dispense at the rate at which the precharge ground speed is set.

Precharge Features:

- operates until the precharge time lapses or the precharge ground speed is exceeded.
- if ground speed reduces to 0, precharge aborts.
- alarm displays any time the preset feature is established or changed and the master/control switch is turned on.
- applicable to planter control channels; not monitor only.

_TIP: The master/control switch must be turned ON to activate precharge._

To Precharge the System:

1. Turn the master/control switch on.
2. Precharge automatically initiates when the master/control switch is turned on and the ground speed is less than the precharge ground speed but greater than 0.
   - The rate instrument populates with the word “CHARGE” and the countdown timer.
   - Timer displays how much precharge time is left before it aborts.

Figure 11

_Precharge Feature_
NOTE: Delay Time functionality may work differently than described above if the system has been purchased direct from the original equipment manufacturer. Refer to the manufacturer’s operator manual for further instruction.

DELAY TIME FEATURE

With an Implement Lift Switch
Delay Time determines the length of time before the control channel will start after the master switch has been turned ON and the implement switch is in a lowered position.

- The system will immediately shutdown the channel when the implement lift switch is in the raised position.
- The system will delay the channel shutdown if the master switch is turned OFF and the implement is in the down position.

Without an Implement Lift Switch
When the Delay Time feature is utilized without an implement lift switch:

- The control channel will delay after the master switch (Control On button) is turned ON.
- A delay will also occur and then shutdown the control channel when the master switch (Control Off button) is turned OFF.
**DISPENSING MATERIAL WITH FLUSH ENABLE**

The Flush Enable feature is typically used to begin dispensing material at a higher rate when the tractor is below shutoff speed, i.e. during startup or turn around conditions. Material will dispense at the rate set at the ground speed setup screen.

Flush enable is applicable to granular seeding, fertilizer, or liquid control channels.

**Operating the Flush Enable function:**

1. Ensure the master switch is turned ON below shutoff speed.
2. Press and hold the **Flush Enable** button to dispense material.
3. Release the **Flush Enable** button to stop dispensing material. Once speed is above shutoff speed, flush is aborted and ground speed based control will take over.

**Figure 13**

*Flush Enable (Main Work Screen)*
MANUAL SPEED MODE

Manual speed mode is typically used when a ground speed sensor failure has occurred. This sets the system to operate using a constant, internally generated ground speed when the master switch is ON at the speed that has been programmed. This value can be set to any speed within the delivery capabilities of the system.

- No ground speed sensor is required when using the Manual setting.
- No area accumulation occurs when speed source is set to manual.

To Operate in Manual Speed Mode:

1. If ground speed is set to Manual mode, the manual ground speed entered at the Speed Set screen displays on the Main Work screen with an "M" indicator.
2. Press the Control On button or turn the physical master switch on to begin operation at manual speed.

NOTE: Ground speed source must be set to Manual and the desired manual ground speed entered at the Speed Set screen.

SWITCHING BETWEEN INTELLIAG AND TASK CONTROLLER APPLICATION RATES

The Material Rate button resets a system to IntelliAg rates that has been running a task under Task Controller map control. An SD Card graphic icon on the IntelliAg Work screen indicates this condition. The Material Rate button appears on the IntelliAg Work screen to select current rates or to reload IntelliAg rates.

The Material Rate button only appears if a task is stopped in Task Controller and:

- ground speed is greater than 0
- the implement lift switch is down (operate mode)
- the master switch in ON for 5 seconds
If a Task Controller alarm occurs:

- Press the **TC Rate** button to continue to run a task at the Task Controller rate
- Press the **Material Rate** button to reset the system to IntelliAg rates

**Figure 16**

**Task Controller Alarm**

- Description: Control rates no longer set by Task Controller
  - Press "TC RATE" to keep the last target rate from the Task Controller
  - Press "MAT RATE" to use the target rate from the material setup

**Figure 15**

**Material Rate Screen**

- Press the **TC Rate** button to continue to run a task at the Task Controller rate
- Press the **Material Rate** button to reset the system to IntelliAg rate
The Summary screen provides an overview of setup screens for active control channels.

- Channel Setup
- Material Setup
- Row Monitor
- Module Configuration Setup
- Speed Set
- Hopper, Pressure, RPM Setup
- Down Pressure

To View the Summary Screen:

1. At the Main Work screen, press the **Summary** button to access the Summary screen.
2. Select the desired channel to view.
3. Change materials for a control channel by pressing the channel or material input box.
   - Row, module, speed set, accessory and down pressure screens are informational only.

*Figure 17*  
**Summary Screen**
SYSTEM INFORMATION/DIAGNOSTICS

The master switch must be set to the OFF position to view System Information and Diagnostics screens.

DIAGNOSTICS

The Diagnostics screen provides various information from feedback sensors, valve output, and system voltages of the WSMT module. The control valve can be manually opened on this screen when necessary.

Each channel has its own Diagnostics screen. None of the items on the screen can be edited. The system may be active while viewing the Diagnostic screen.

At the Main Work screen, press the **Diagnostics** button to access the Diagnostics screen.

*Figure 18*

**Diagnostics Screen**

<table>
<thead>
<tr>
<th>CHANNEL # 2 CORN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CH SETPOINT</td>
<td>0.0000</td>
</tr>
<tr>
<td>CH TARGET</td>
<td>40.5</td>
</tr>
<tr>
<td>CH ACTUAL RATE</td>
<td>0.00</td>
</tr>
<tr>
<td>CH RPM</td>
<td>0.000</td>
</tr>
<tr>
<td>CH PWM</td>
<td>0</td>
</tr>
<tr>
<td>CH PULSE COUNT</td>
<td>0</td>
</tr>
<tr>
<td>CH FREQ FILT</td>
<td>0</td>
</tr>
<tr>
<td>FREQ REL GSPD</td>
<td>0</td>
</tr>
<tr>
<td>FREQ DIG GSPD</td>
<td>0</td>
</tr>
<tr>
<td>FREQ AIR PRESS</td>
<td>#1 302</td>
</tr>
<tr>
<td>IO IMP LIFT</td>
<td>0</td>
</tr>
<tr>
<td>APP ID</td>
<td>1.51</td>
</tr>
<tr>
<td>SOL PWR VOLT</td>
<td>14.68</td>
</tr>
<tr>
<td>ECU PWR VOLT</td>
<td>14.62</td>
</tr>
<tr>
<td>SNSR PWR VOLT</td>
<td>8.06</td>
</tr>
<tr>
<td>GND VOLT</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**CH SETPOINT**

The Channel Setpoint value is calculated by the system. It displays the expected feedback frequency of the application rate sensor or flow meter used for that channel's feedback.

**CH TARGET**

The Channel Target value is the current channel's rate as entered into the Target Rate constant on the Channel Configuration screen.

**CH ACTUAL RATE**

The Channel Actual Rate value is the current channel's actual controlled rate with the system active.
CH RPM/GPM
The Channel RPM/GPM value is the current RPM/GPM. The sensor constant and gear ratio parameters entered on the Channel Configuration screen allow the RPM/GPM to be calculated.

CH PWM
The Channel PWM value is the current pulse width modulation (PWM) output drive signal to the solenoid valve. The higher the number, the further the valve opens.

CH PULSE COUNT
The Channel Pulse Count value is the accumulated pulse count detected from the channel feedback sensor. This value may be reset by the operator by pressing the Reset Channel Pulse Count button.

CH FREQ FILT
The Channel Frequency’s Filtered value is the filtered frequency output from the channel feedback sensor.

FREQ REL GSPD
The Frequency Reluctance Ground Speed value is the reluctance sensor output signal in hertz (hz). This value is present when ground speed is provided by a reluctance sensor connected to the actuator harness.

FREQ DIG GSPD
The Frequency Digital Ground Speed value is the digital sensor output signal in hertz (hz). This value is present when ground speed is provided by a radar sensor or other digital speed sensor connected to the actuator harness.

FREQ PRESS 1
The Frequency Pressure value is the output frequency signal of the air pressure sensor in hertz (hz). This value will typically fall between 200 hz and 1100 hz.

IO HOPPER 1
The IO Hopper 1 value is the current state of the hopper sensor.

NOTE: In some instances, FREQ REL GSPD and FREQ DIG GSPD read the same values simultaneously depending upon the sensor used. This is normal and does not impact operation.
NOTE: If the values are reversed and the value displays a “1” when the implement is raised, the wiring for the implement switch will need to be reversed so that an accurate readout is achieved.

**IO IMP LIFT**

<table>
<thead>
<tr>
<th>SENSOR LOGIC LEVEL</th>
<th>VALUE</th>
<th>HOPPER</th>
<th>STATUS</th>
<th>ALARM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active High</td>
<td>0</td>
<td>Full</td>
<td>Blocked</td>
<td>No alarm</td>
</tr>
<tr>
<td>Active High</td>
<td>1</td>
<td>Empty</td>
<td>Not Blocked</td>
<td>Alarm</td>
</tr>
<tr>
<td>Active Low</td>
<td>0</td>
<td>Empty</td>
<td>Not Blocked</td>
<td>Alarm</td>
</tr>
<tr>
<td>Active Low</td>
<td>1</td>
<td>Full</td>
<td>Blocked</td>
<td>No Alarm</td>
</tr>
</tbody>
</table>

The IO Implement Lift value displays the current state of the implement status switch. This value will be “1” when the implement is down. The value will be “0” when the implement is raised.

**APP ID**

Hardware identification only. Not applicable to the end user.

**SOL PWR VOLT**

The Solenoid Power Volt value displays the detected solenoid power voltage. This voltage level is the high current voltage leg of the system which is used to power high current solenoids and valve actuators. This value will generally be equal or nearly equal to the tractor battery voltage.

**ECU PWR VOLT**

The Electrical Control Unit (ECU) Power Volt value is the detected ECU voltage. This voltage level is the low current voltage leg of the system and is used to power modules and sensors. This value will generally be equal or nearly equal to the tractor battery voltage.

**SNSR PWR VOLT**

The Sensor Power Volt value is the detected output voltage to the seed sensor on the Working Set Master (WSMT) module. This value is typically +8 VDC.

**GND VOLT**

If the system is properly grounded, this value is typically 2.50V on software versions older than 2.7. Software versions newer than 2.7 and WSMT software is 0V.
DIAGNOSTICS MANUAL VALVE POSITION

Manual opening of a selected channel’s valve is used for calibration or troubleshooting purposes in the case of system failure.

Press the Diagnostics button to access the Diagnostics screen.

1. The Diagnostics screen will show Channel 1 as a default.
   - If a channel other than Channel 1 needs to be selected, press the Next Channel button until the appropriate channel displays. The Next Channel button only displays when more than one channel is configured.

MANUAL OPEN OF CHANNEL

1. Press the Enable Manual Valve button to run the current selected channel. This allows for manual open and close of valve position.

   IMPORTANT: The Enable feature will only operate on the Diagnostics screen.

2. If the Disable Manual Valve button is displayed, the selected channel has already been enabled for manual valve position operation.

3. Set the Master Switch to the ON position.

4. Press the Increment button to open the channel’s valve. The Channel Pulse Width Modulation (PWM) data item displays the current PWM signal that is being output to the valve.

5. The Increment button must be pressed repeatedly to increase the PWM signal to the valve. Each press will increase the signal by 2 hertz (hz). The Channel Pulse Count and Channel Frequency Filter values will display the current output of the feedback sensor.

6. Press the Decrement button to decrease the PWM signal and close the valve. The Decrement button must be pressed repeatedly to decrease the PWM signal to the valve. Each press will decrease the signal by 2 hertz (hz).

7. The active channel is displayed in the button text.

8. Turn the master switch off to shutdown control channel.

INFORMATION SCREEN

The Information screen displays the module software versions connected to the system and is typically used for troubleshooting. No information on the screen can be edited.

Each module connected is identified by module type, module position, and serial number. Module position cannot be altered on this screen and can only be established on the Module Configuration screen.

1. At the Diagnostics screen, press the Information button to access the Information screen.
Figure 19
Information Screen

<table>
<thead>
<tr>
<th>MOD POS</th>
<th>APP</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>APP</td>
<td>07.05.15 08.04.16</td>
</tr>
<tr>
<td></td>
<td>WSMT-PDCGP</td>
<td>01.06.07 04.09.14</td>
</tr>
<tr>
<td>S/N</td>
<td>P/N</td>
<td>X11033-0977M</td>
</tr>
<tr>
<td>2</td>
<td>APP</td>
<td>02.00.12 08.03.11</td>
</tr>
<tr>
<td>3</td>
<td>APP</td>
<td>02.00.07 01.24.15</td>
</tr>
<tr>
<td>4</td>
<td>APP</td>
<td>02.00.08 01.11.10</td>
</tr>
</tbody>
</table>

Software Version

MOD POS 1 APP 07.05.15 08.04.16
WSMT-PDCGP BOOT 01.06.07 04.09.14
S/N 10052 P/N X11033-0977M
MOD POS 2 APP 02.00.12 08.03.11
WSMB2-18R BOOT 01.00.11 01.14.09
S/N 10
MOD POS 3 APP 02.00.07 01.24.15
WSMB-POM BOOT 02.00.06 10.31.08
S/N 11131
MOD POS 4 APP 02.00.08 01.11.10
WSMB-CFM BOOT 00.00.00 00.00.00
S/N 10047
ALARMS

ACKNOWLEDGING ALARM CONDITIONS

Various alarm conditions may be presented to the operator whenever the system encounters an abnormal condition or detects a specific alarm. Alarms are typically in a full screen display describing the alarm and, dependent upon the alarm type, may give the operator instructions on how to fix the alarm. Each alarm type has an associated alarm number that can be cross-referenced in the TROUBLESHOOTING AND ALARMS section.

Some alarms (such as the Master Switch alarm) require a specific action by the operator before the alarm condition will cease. In these cases, instructions are indicated on the alarm display.

Other alarms can be acknowledged by pressing the Alarm Cancel button or ESC key. Detailed information about the alarm can be accessed by pressing the Alarm Detail button.

ALARM LOG

The Alarm Log screen provides a list of specific alarms that have been issued during system operation. Information displayed on the Alarm Log screen is informational only and cannot be edited.

Each time specific alarm conditions are detected, it is logged and communicated to the WSMT.

To View Alarm Log:

1. Press the Alarm Log button to access the Alarm Log screen.  
   – The number of the alarm, along with the alarm description displays.  
   – Up to 20 alarms may be recalled.  
   – Each alarm occurrence can have up to 5 instances of the alarm tagged with a date and time stamp.

2. Press the Previous and Next buttons to scroll through all alarm occurrences.  
   – The down arrow in the lower left screen bottom signifies that more alarms are present.

3. To view specific alarm details, press the Previous and Next button to move an arrow next to the alarm number.

4. Press the Alarm Detail button to view all occurrences of that alarm condition.
ALARM DETAIL

1. To view specific alarm details, press the Alarm Detail button.
   - The time and date of the selected alarm displays for each occurred instance.
   - The Alarm Log will save up to 5 instances of the selected alarm.
TROUBLESHOOTING & ALARM CODES

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 button or ESC key. In addition, detailed descriptions of the current alarm can be viewed by pressing the Alarm Detail button. Some of the alarm conditions display instructions on correcting the situation.

Figure 22
Alarm and Alarm Number

IntelliAG

Alarms are presented in a full screen display that will describe the alarm and, depending on the alarm, may give instructions on how to correct the alarm. Each alarm type has an associated alarm number, causes, and remedies 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.

For troubleshooting assistance, please contact your Great Plains dealer.
<table>
<thead>
<tr>
<th>ALARM #</th>
<th>ALARM</th>
<th>PROBABLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Software Task Stack Overflow Alarm</td>
<td>1. Internal system software error.</td>
<td>1. Cycle system power OFF/ON. If condition persists, contact your Great Plains dealer.</td>
</tr>
<tr>
<td>2</td>
<td>Software System Stack Overflow Alarm</td>
<td>1. Internal system software error.</td>
<td>1. Cycle system power OFF/ON. If condition persists, contact your Great Plains dealer.</td>
</tr>
<tr>
<td>3</td>
<td>VT Out of Memory Alarm</td>
<td>THE ECU MEMORY REQUIREMENTS ARE GREATER THAN THE VIRTUAL TERMINAL CAN HANDLE.</td>
<td>1. Remove any unnecessary ECU’s 2. Contact your Great Plains dealer for updated hardware.</td>
</tr>
<tr>
<td>4</td>
<td>Software Version Does Not Support this Configuration Alarm</td>
<td>1. Occurs if new software is loaded and does not support the configuration of the hardware it is loaded on.</td>
<td>1. Record software and model information listed below. 2. Contact dealer for software update.</td>
</tr>
<tr>
<td></td>
<td>202 Ground Speed Failure Alarm</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>203 Continuous Test Failure Alarm</td>
<td>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.</td>
<td>1. Enter an appropriate Test Speed. 2. Verify or enter appropriate Disk Hi and/or Disk Low values.</td>
</tr>
<tr>
<td></td>
<td>204 5 Revolution Test Failure Alarm</td>
<td>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.</td>
<td>1. Enter an appropriate test speed. 2. Verify or enter appropriate Disk Hi and/or Disk Low values.</td>
</tr>
<tr>
<td></td>
<td>205 Channel Failure Alarm</td>
<td>1. Defective control valve. 2. Defective feedback sensor. 3. Defective module harness or module harness fuse. 4. Defective module.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>206 Channel Unable to Control Alarm</td>
<td>1. Incorrect channel settings. 2. Incorrect feedback sensor installation. 3. Defective feedback sensor.</td>
<td>1. Verify correct setup constants on the Channel Configuration screen on the Controller. Perform a valve calibration. 2. Verify correct installation of the feedback sensor. 3. Inspect feedback sensor for damage or replace.</td>
</tr>
<tr>
<td></td>
<td>207 Channel Unstable Alarm</td>
<td>1. Incorrect channel settings. 2. Incorrect feedback sensor installation. 3. Defective feedback sensor.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>208 Channel Saturation Exceeded Alarm</td>
<td>1. Excessive speed. 2. Incorrect channel settings. Desired rate too high for implement. 3. Target rate too high</td>
<td>1. Reduce speed. 2. Verify correct setup constants on the Channel Configuration screen. Perform a valve calibration and a Calibration constant. 3. Reduce target rate.</td>
</tr>
<tr>
<td>ALARM #</td>
<td>ALARM</td>
<td>PROBABLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 209     | Channel High Limit Exceeded Alarm                     | CONTROL LIMITED BY HIGH LIMIT. UNDER APPLICATION IS OCCURRING.                 | 1. Check and/or reduce speed.  
2. Verify 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. |
|         |                                                       | NOTE: System will not run faster than High Limit Value.                         |                                                                                  |
| 210     | 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. |
|         |                                                       | 1. Seed meter drive malfunction.  
2. Rows are not assigned to channel and channels are turned off. |                                                                                  |
| 211     | All Rows Failed Alarm                                | SEED RATE HAS FALLEN BELOW THE ROW FAIL RATE SETTING ON THE SEED MONITOR SETUP SCREEN. | 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. 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. |
2. Inspect seed sensor for damage. Replace if necessary.  
3. Inspect module for damage. Replace if necessary. |
2. Inspect seed sensor for damage. Replace if necessary.  
3. Inspect module for damage. Replace if necessary.  
4. Fill with seed. |
2. Inspect pressure sensor for damage. Replace if necessary.  
3. Inspect module for damage. Replace if necessary. |
2. Inspect pressure sensor for damage. Replace if necessary.  
3. Inspect module and/or module harness for damage. Replace if necessary. |
<table>
<thead>
<tr>
<th>ALARM #</th>
<th>ALARM</th>
<th>PROBABLE CAUSE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>217</td>
<td>Member module Detection Alarm</td>
<td>NUMBER OF MEMBER MODULES DOES NOT MATCH THE SYSTEM CONFIGURATION.</td>
<td>1. Verify correct module configuration setup on the Module Configuration screen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Too few modules connect to system.</td>
<td>2. Verify correct module configuration setup on the Module Configuration screen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Too many modules connected to system.</td>
<td>3. Identify missing module in the Module Configuration list. Inspect CAN/module harness of the missing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Defective CAN/module harness.</td>
<td>module for damage. Repair or replace harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Blown module harness fuse.</td>
<td>4. Inspect module harness fuse of the identified module. Replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Defective module.</td>
<td>5. Identify missing module in the Module Configuration list. Inspect missing module for damage or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. New module has been added to system.</td>
<td>replace.</td>
</tr>
<tr>
<td>218</td>
<td>Pressure Sensor Detection Alarm</td>
<td>NUMBER OF PRESSURE SENSORS CONNECTED DOES NOT AGREE WITH THE NUMBER OF SENSORS</td>
<td>1. Inspect pressure sensor for damage or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CONFIGURED ON THE PRESSURE SENSOR CONFIGURATION SCREEN.</td>
<td>2. Inspect module and/or module harness for damage. Replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Defective Sensor.</td>
<td>3. Verify correct PDC setting for each module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Defective module or damaged module harness.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Additional pressure sensor detected.</td>
<td></td>
</tr>
<tr>
<td>219</td>
<td>Row Sensor Detection Alarm</td>
<td>NUMBER OF SEED SENSORS CONNECTED DOES NOT AGREE WITH THE NUMBER OF SENSORS</td>
<td>1. Inspect seed sensor for damage or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CONFIGURED ON THE SEED SENSOR CONFIGURATION SCREEN.</td>
<td>2. Inspect module and/or module harness for damage. Replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Defective seed sensor.</td>
<td>3. Verify correct ROWS setting for each module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Defective module or damaged module harness.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Additional seed sensor detected.</td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>Row Sensors Installed Incorrectly Alarm</td>
<td>ROWS ARE NOT DETECTED SEQUENTIALLY ON A MODULE.</td>
<td>1. Verify seed sensors are connected sequentially on all modules as instructed in installation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Incorrect seed row connections.</td>
<td>2. Inspect seed sensor for damage or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Defective seed sensor.</td>
<td>3. Inspect module and/or module harness for damage. Replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Defective module or damaged module harness.</td>
<td></td>
</tr>
<tr>
<td>221</td>
<td>Channel Invalid State Alarm</td>
<td>1. Internal system software error.</td>
<td>1. Cycle system power Off/On. If condition persists, contact your Great Plains dealer.</td>
</tr>
<tr>
<td>222</td>
<td>Channel Setup Height Error Alarm</td>
<td>1. Implement hydraulic system malfunction.</td>
<td>1. Verify implement hydraulic system operation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Defective control valve.</td>
<td>2. Inspect control valve for damage. Replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Incorrect feedback sensor installation.</td>
<td>3. Verify correct installation of the feedback sensor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Defective feedback sensor.</td>
<td>4. Inspect feedback sensor for damage or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Limit Max Output set too low.</td>
<td>5. Set Limit Max Output to a higher PWM% on the Valve Calibration screen. Perform a new valve</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>calibration.</td>
</tr>
<tr>
<td>ALARM #</td>
<td>ALARM</td>
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<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 223     | 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.  
2. Verify correct installation of the feedback sensor.  
3. Inspect feedback sensor for damage or replace. |
| 224     | No 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  
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.  
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. Replace if necessary.  
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 hopper sensor.  
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. |
| 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. |
<table>
<thead>
<tr>
<th>ALARM #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>231</td>
<td>Seeding Detected on a Tramlined Row Alarm</td>
<td>Occurs if a tramlined row does not shut off the row unit and seeds continue to be detected. (Only possible if system supports tramlining). 1. Output to row mapping is assigned incorrectly. 2. Seed sensor malfunction.</td>
<td>1. Check output row mapping. 2. Check seed sensor to ensure no false triggering. 3. Inspect and verify Tramline output is shutting off seeds correctly.</td>
</tr>
<tr>
<td>232</td>
<td>RPM Sensor Low Limit Exceeded With Control Channel Shutdown Alarm</td>
<td>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</td>
<td>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.</td>
</tr>
<tr>
<td>233</td>
<td>Channel Activation Alarm</td>
<td>CHANNEL DELAY OR PRECHARGE IS ENABLED. DURING THIS THE CONTROL WILL RUN WITHOUT GROUND SPEED OR WITHOUT THE IMPLEMENT DOWN.</td>
<td>1. Acknowledge alarm to activate control channels. 2. Acknowledge alarm and disable Delay or Precharge to stop control.</td>
</tr>
<tr>
<td>235</td>
<td>New Member Module Detected Alarm</td>
<td>1. New member module has been found.</td>
<td>1. Assign sensors to the new module at the Module Configuration Setup screen and its position.</td>
</tr>
<tr>
<td>236</td>
<td>Intermittent Member Module Detected Alarm</td>
<td>1. A member module that had previously failed communication has come online.</td>
<td>1. Inspect harness connections to this module.</td>
</tr>
<tr>
<td>237</td>
<td>Product Level Low Alarm</td>
<td>1. Calculated product level has dropped below alarm level.</td>
<td>1. Fill product bin and reset level.</td>
</tr>
<tr>
<td>240</td>
<td>Seeding Detected on a Control Off Row Alarm</td>
<td>1. Channel turned off and seed continues to be detected.</td>
<td>1. Check seed dispensing unit for proper shut off.</td>
</tr>
<tr>
<td>241</td>
<td>Control Not Active With Implement Lowered and Speed</td>
<td>1. Control will not operate while on a setup screen.</td>
<td>1. Navigate to the Work Screen to activate the control. 2. Raise implement and stop forward speed to clear alarm.</td>
</tr>
<tr>
<td>246</td>
<td>Master Switch Softkey Press Alarm</td>
<td>1. Warning of action associated with keypress.</td>
<td>1. Press Control Start key to activate control.</td>
</tr>
<tr>
<td>249</td>
<td>Control Channel Activation Alarm</td>
<td>1. Controls will run without ground speed or without implement lowered. Channel Manual Mode or Precharge is enabled. During this the control will run without ground speed or without the implement down.</td>
<td>1. Acknowledge alarm to activate control channels. 2. Acknowledge alarm and disable manual or precharge to stop control.</td>
</tr>
<tr>
<td>251</td>
<td>New Hardware Detected Alarm</td>
<td>1. New hardware detected that requires system to be rebooted to acknowledge hardware.</td>
<td>1. Cycle system power to complete hardware install.</td>
</tr>
<tr>
<td>255</td>
<td>Channel Invalid Material Alarm</td>
<td>1. There is no material defined with a type that matches the selected control channel type.</td>
<td>1. Create a material with the channel type.</td>
</tr>
<tr>
<td>ALARM #</td>
<td>ALARM</td>
<td>PROBABLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>260</td>
<td>Control Channel Failure Alarm</td>
<td>1. Control channel is not responding.</td>
<td>1. Cycle Master Switch or implement switch to restart the control channel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Verify drive is connected and engaged.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Check feedback sensor for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Check harness for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Check module for damage.</td>
</tr>
<tr>
<td>261</td>
<td>Control Channel Unable to Control Alarm</td>
<td>1. Control Channel cannot control to the specified rate.</td>
<td>1. Inspect control channel setup.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Perform new valve calibration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Check feedback sensor for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Check control valve for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Check harness for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6. Check module for damage.</td>
</tr>
<tr>
<td>262</td>
<td>RPM Control Channel is off Alarm</td>
<td>1. RPM Channels are off. System may not operate properly.</td>
<td>1. Acknowledge alarm to leave RPM control channels off.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Press “CHAN ON” to turn all RPM channels on.</td>
</tr>
<tr>
<td>264</td>
<td>Ground speed Calibration Configuration Alarm</td>
<td>Current ground speed calibration exceeds the max number of ground speed pulses of 50000 that can be entered as a ground speed constant.</td>
<td>1. Probable that the marked off course limits were exceeded. Verify course length of 400 ft (100m).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Ground speed sensor has too high resolution of pulses. Check speed sensor for damage.</td>
</tr>
<tr>
<td>602</td>
<td>8 Volt Supply Failure Alarm</td>
<td>8V SUPPLY VOLTAGE IS BELOW 7.2V OR HIGHER THAN 16V.</td>
<td>1. Inspect module harness for damage. Repair or replace harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Inspect seed or hopper sensors connected to the identified module for damage. Replace sensors if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Replace identified module.</td>
</tr>
<tr>
<td>603</td>
<td>Member Module Communication Failed Alarm</td>
<td>COMMUNICATION WITH AN ACTIVE MODULE HAS FAILED</td>
<td>1. Identify missing module in the Module Configuration list. Inspect CAN/module harness of the missing module for damage. Repair or replace harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Inspect module harness fuse, replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Identify missing module in the Module Configuration list. Inspect missing module for damage or replace.</td>
</tr>
<tr>
<td>604</td>
<td>ECU Voltage Out of Range Alarm</td>
<td>ECU VOLTAGE IS BELOW 11V OR HIGHER THAN 16V.</td>
<td>1. Inspect CAN/module harness of the identified module for damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Inspect identified module for damage or replace.</td>
</tr>
<tr>
<td>605</td>
<td>Solenoid Voltage Out of Range Alarm</td>
<td>SOLENOID VOLTAGE IS BELOW 11V OR HIGHER THAN 16V.</td>
<td>1. Inspect CAN/module harness of the identified module for damage.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>2. Inspect module harness fuse or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Inspect identified module for damage or replace.</td>
</tr>
<tr>
<td>606</td>
<td>Ground Offset Voltage Out of Range Alarm</td>
<td>1. Damaged/shorted Actuator Harness.</td>
<td>1. Inspect Actuator Harness for damage around the WPM and Servo valve connections. Repair or replace harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Inspect PWM or Servo valve drivers for damage and replace if necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Inspect identified module for damage and replace if necessary.</td>
</tr>
<tr>
<td>ALARM #</td>
<td>ALARM</td>
<td>PROBABLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>607</td>
<td>Task Controller Task Stopped Alarm</td>
<td>1. Control rates no longer set by Task Controller.</td>
<td>1. Press TC RATE to keep the last target rate from the Task Controller.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Press MAT RATE to use the target rate from the material setup.</td>
</tr>
<tr>
<td>608</td>
<td>Task Controller Data Logging Error</td>
<td>1. Task Controller is setting target rates without logging the data.</td>
<td>1. Restart Task Controller task.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Cycle power to entire system.</td>
</tr>
</tbody>
</table>
Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from their customer for any DICKEY-john product.

**DICKEY-john® WARRANTY**

DICKEY-john warrants to the original purchaser for use that, if any part of the product proves to be defective in material or workmanship within one year from date of original installation, and is returned to DICKEY-john within 30 days after such defect is discovered, DICKEY-john will (at our option) either replace or repair said part. This warranty does not apply to damage resulting from misuse, neglect, accident, or improper installation or maintenance; any expenses or liability for repairs made by outside parties without DICKEY-john’s written consent; damage to any associated equipment; or lost profits or special damages. Said part will not be considered defective if it substantially fulfills the performance expectations. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE, AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. DICKEY-john neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part and will not be liable for consequential damages. Purchaser accepts these terms and warranty limitations unless the product is returned within fifteen days for full refund of purchase price.

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**Headquarters:**
5200 Dickey-john Road, Auburn, IL USA 62615

**Europe:**
DICKEY-john Europe S.A.S, 165, boulevard de Valmy, 92706 – Colombes – France
TEL: 33 (0) 1 41 19 21 80, FAX: 33 (0) 1 47 86 00 07 WEB: www.dickey-john.com

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