OWNER'S MANUAL

Model 239DM
Dye Sprayer Marking System
Accessory upgrade to CNH DIA Moisture kits 439618, 48189657, & 90420182

HARVEST TEC *Equipment and Products for Quality Hay.*™

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Harvest Tec 239DM Table of Contents

Introduction

Congratulations on purchasing a Harvest Tec Dye Sprayer Marking System. When attached to a DIA star wheel moisture sensor for Case/New Holland large square balers the 239DM allows you to visibly mark the wet areas on your bales. The system includes the tank, pump, plumbing, mounting hardware and necessary harnesses. There is a parts breakdown in the back of the manual to reference if replacement parts are needed. All replacement parts and dye will be ordered through your local CNH dealer.

Tools Needed

Standard wrench set	Hammer	Straight edge
Standard socket set	Tape measure	Metal drilling and cutting tools
Center punch	Marker	

Installation of Dye Sprayer Tank & Plumbing

Installation of Mounting Bracket & Tank – CASE & New Holland Large Squares

Locate the tank and mounting bracket assembly. Looking at Figure 1 decide where a desirable mounting location will be the most convenient and work the best for the user.

   a. Once tank location is decided, mark the mounting holes and drill out using 3/8" bit.
   b. Fasten the mounting bracket to the baler using the 5/16" hardware provided in the kit.

**Figure 1
Common New Holland and CASE IH baler
mounting position**

System Wiring

Setting up Tractor

1. Connect the red and black eye-loop connectors from 006-765IC Tractor Power/Communication harness **DIRECT** to tractor battery. Route 18 pin plug to drawbar of tractor and the other leg of the harness with the 12 Pin and 4 Pin connector into the cab of the tractor.
2. 006-6673 ISO Communication Module (ICM) mounts in the cab of the tractor and connect 006-765IC 12 pin header harness to it.
3. Connect 006-765CPH key power harness to 4 pin plug on 006-765IC harness near ICM. Securely fasten to key power outlet in cab of tractor
4. Secure wires with zip ties.

Setting up baler.

1. Route 006-765BN harness from draw bar of baler back toward Balers ECU
2. Remove 006-7303CMS star wheel harness plug from Baler ECU CAN 2 connection and attach 006-765BN to same connection of 006-7303CMS harness.
3. Remove 006-4640J resistor plug from the 006-7303CMS harness and attach 006-765VN to same connection of 006-7303CMS. Reattach 006-4640J to port on 006-765VN.

Figure 2

4. Locate the CAN Port 1 on the baler ECU. Remove 6 pin active terminator (X504) from CAN 1 (Figure 2) and attach active terminator to 006-765VN harness 6 pin plug
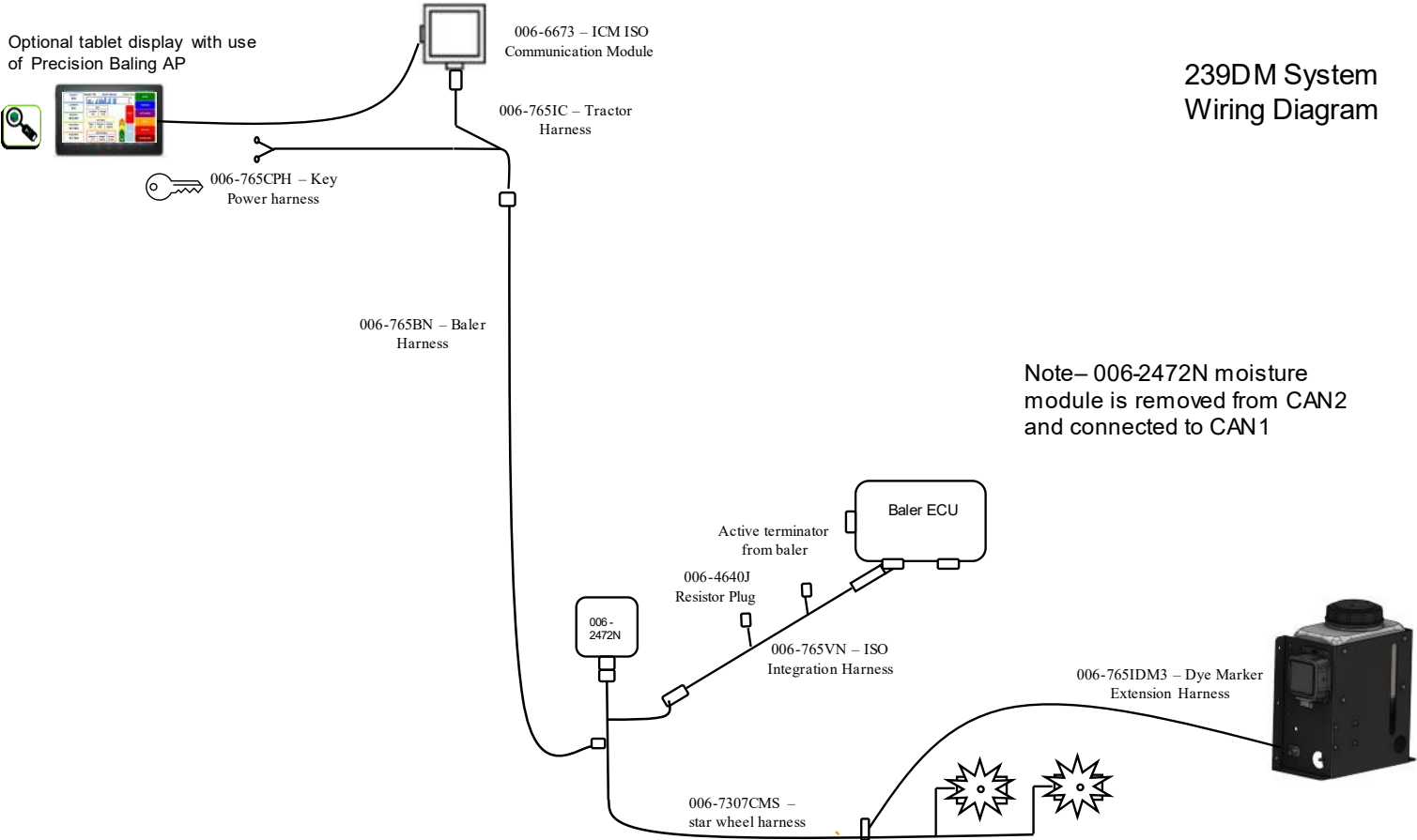5. Attach 006-765VN harness to Baler ECU CAN 1 plug

Setting up Dye Marker

1. Locate the wiring harness (006-765IDM3) supplied in the 239 dye Sprayer Marking Kit. Connect to triangle plug on the metal frame of the dye marker.
2. Route Dye Marking harness (006-765IDM3) to main star wheel harness (006-7303CMS) and attach it to triangle CAN plug found near star wheels. Secure with zip ties

System Wiring Diagram

Optional tablet display with use of Precision Baling AP

006-6673 – ICM ISO Communication Module

239DM System Wiring Diagram

006-765IC – Tractor Harness

006-765CPH – Key Power harness

006-765BN – Baler Harness

Note– 006-2472N moisture module is removed from CAN2 and connected to CAN1

Baler ECU

Active terminator from baler

006-4640J Resistor Plug

006-2472N

006-765VN – ISO Integration Harness

006-765IDM3 – Dye Marker Extension Harness

006-7307CMS – star wheel harness

Installation of Plumbing

To most effectively mark the wet spots in any bale, Harvest Tec recommends that the nozzles are mounted directly above or below the Star Wheels. To get the best spray pattern focused directly on the wet spot of the bale the nozzles will need to be approximately 1" above the bale that is being marked. A small notch may need to be cut to increase surface area of the bale being marked.

1. Once you have the tank and mounting bracket securely fastened to the baler, locate parts A, B, C, D & E pictured below in Figure 2. Assemble in the following order: (**A**) Elbow | (**B**) nozzle holder | (**C**) check valve | (**D**) reducing bushing | (**E**) tip as pictured below.

*****Note: All parts should be thread taped*****

2. Once the nozzle holders are fastened to the balers, route the 3/8" hose to the tips. Make sure to fasten the hose securely but avoid pinching the lines. *(Plumbing Diagram pictured in Figure 3)*
*****Keep from routing the hose in the way of moving parts on the baler*****

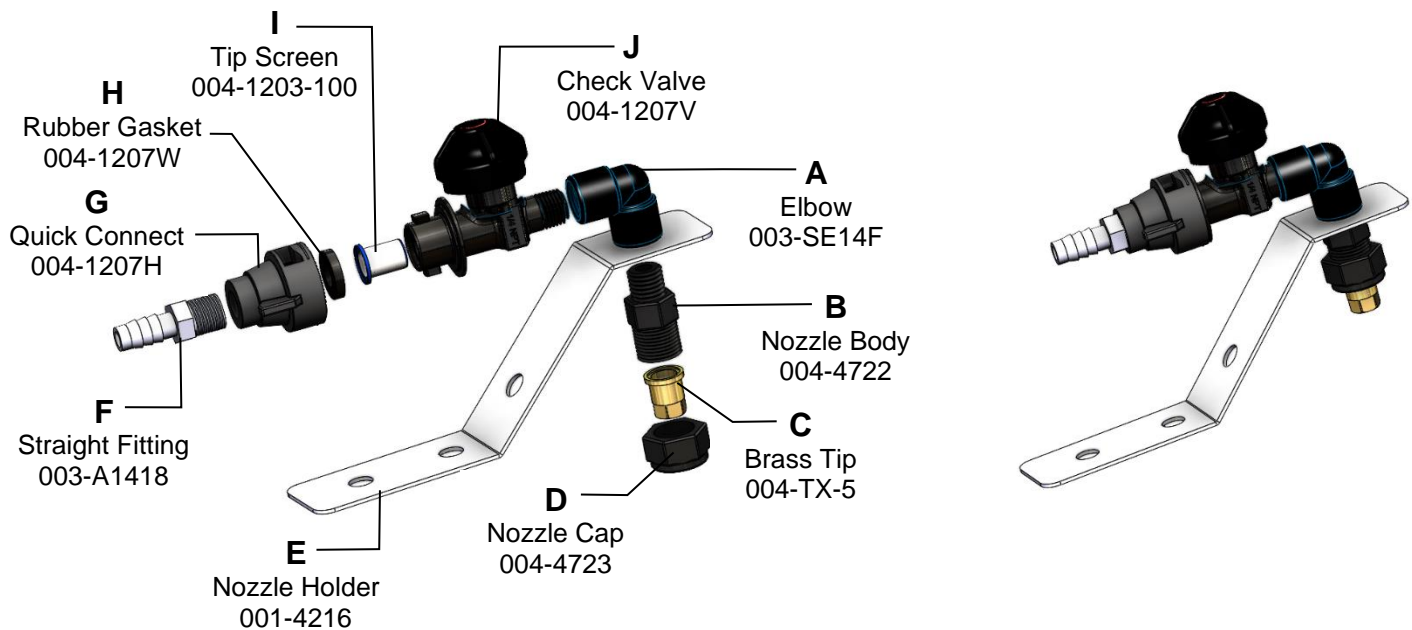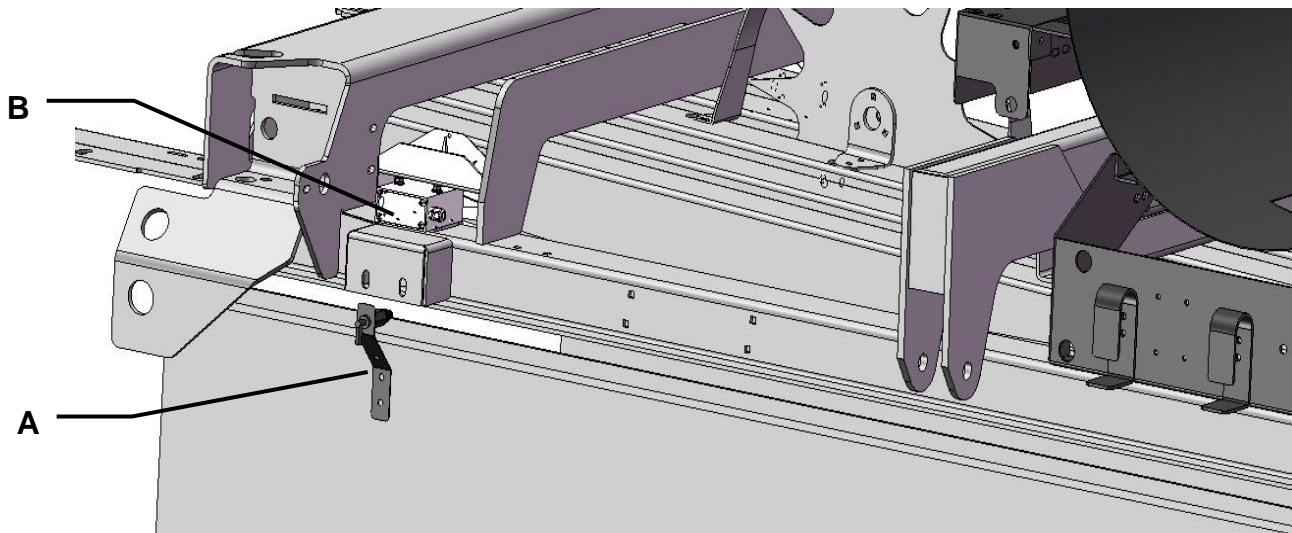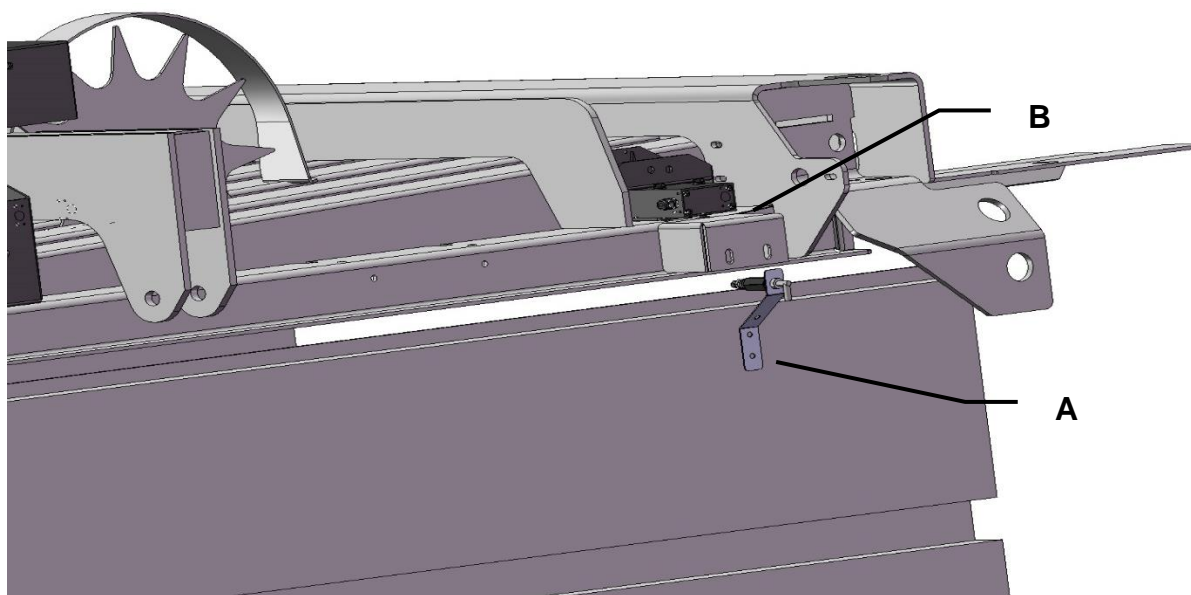3. Attach drain hose top hose barb fitting at bottom of tank. Run hose to a secure point and attach valve assembly.

I
Tip Screen
004-1203-100

H
Rubber Gasket
004-1207W

G
Quick Connect
004-1207H

F
Straight Fitting
003-A1418

J
Check Valve
004-1207V

A
Elbow
003-SE14F

B
Nozzle Body
004-4722

C
Brass Tip
004-TX-5

D
Nozzle Cap
004-4723

E
Nozzle Holder
001-4216

Figure 2

Installation of Plumbing (continued)

4. Install the tip and nozzle holder assemblies in the suggested locations pictured shown below. Use the 1/4" hardware provided to do so.
   a. Make sure that the tip assemblies (**A**) are mounted in line with the star wheels (**B**) so that the system is marking the wet spots of the bale.
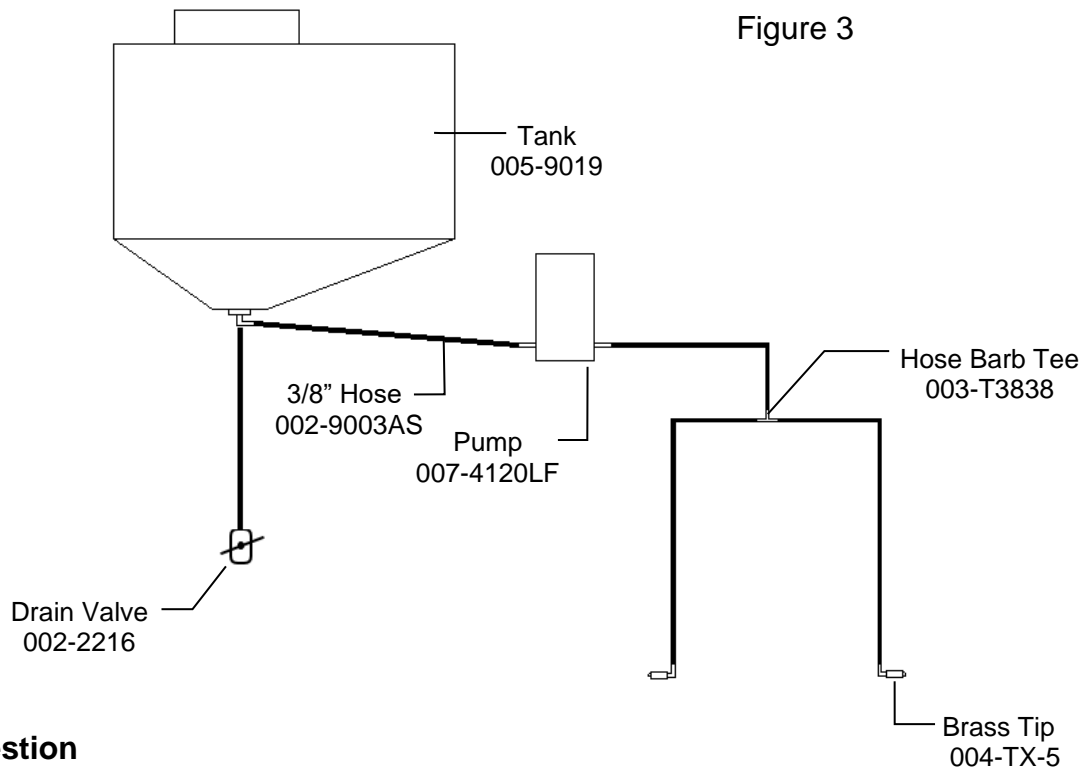

Example A

Example B

Installation of Plumbing (continued)

Plumbing Diagram

Figure 3

Tank
005-9019

3/8" Hose
002-9003AS

Pump
007-4120LF

Hose Barb Tee
003-T3838

Drain Valve
002-2216

Brass Tip
004-TX-5

Common Question

1. **Is the marking dye safe for livestock consumption?**
    The Dye Marker uses red-colored, food-grade dye and is safe for all livestock.

2. **How do I bleed the air out of the lines properly?**
    Remove the tips from the check valves that they're threaded into and press the prime button on the dye marker until the air is pushed out of the lines.

Troubleshooting

Problem	Possible Cause	Solution
The tips are not spraying Dye	1. The system is out of dye. 2. There is air in the lines, preventing a steady mist coming from the tips. 3. Damaged/pinched hose. 4. Tip is plugged. 5. Set point is set too high	1. Check the tank for solution. If the tank is empty, refill and bleed air from lines. 2. Remove the tips from the check valves and using the priming button bleed the air out of the lines. 3. Inspect all the hose making sure the lines are damaged or pinched. 4. Removed the tip from the bushing and inspect, clean is necessary. 5. Lower the set point level at which the user would like to have the bales marked at.

Baler Display Integration

Case LB334/434 & New Holland Big Baler Series (MY2020 and Prior) (continued)

The ISOBUS Monitor utilizes touch screen options to make selections. Selections are made by finding the desired selection and pressing the touch screen icon. All buttons are labeled and color coded.

When the moisture system is connected thru the baler CAN1 and powered on the first time it is necessary to load the object pools to the Virtual Terminal (VT).
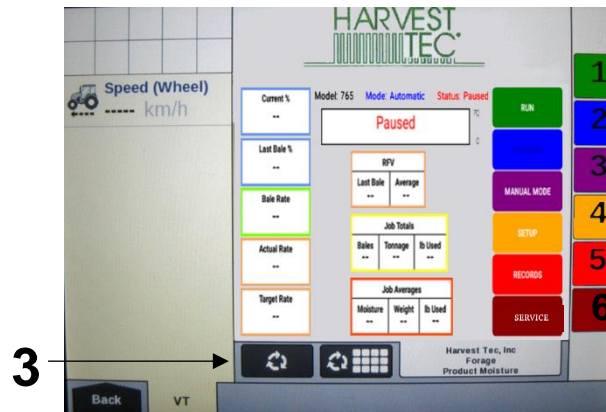
Case LB334/434 & New Holland Big Baler Series (MY2020 and Prior) (continued)

Icon (1) indicates that the object pools are in the process of loading and saving to the VT. Note that if the language selection of the VT is changed, the corresponding object pool must be reloaded to the VT. The object pool loading process takes approximately two minutes to complete.

Once the object pools have been loaded and Icon (1) disappears from the upper left corner of the display, press the NEXT IMPLEMENT button (2) and verify that the moisture system object pool appear on the Virtual Terminal.

After verifying that the moisture system object pool is loaded and the operating screens are displayed on the VT, press the NEXT IMPLEMENT button (3) to return to the baler work screen page.

Press the bottom button of the Menu Bar with the down arrow in corner (4) on the side of the screen to continue down the Menu Bar below the USER SETTING icon.
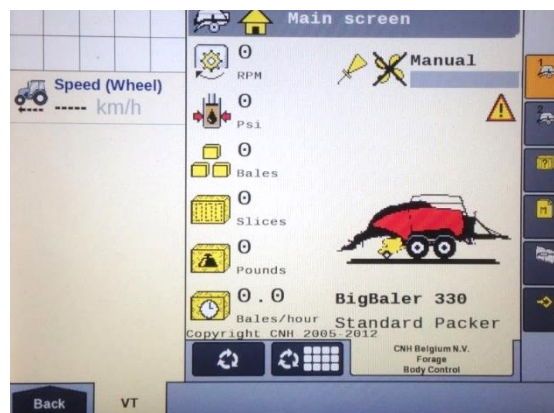
Case LB334/434 & New Holland Big Baler Series (MY2020 and Prior) (continued)

Scroll through the Menu bar until the INFORMATION icon (5) is visible. Press the INFORMATION button so the Information page appears. Verify that the controller software loaded to the baler is version 4.2.0.0 or higher. If not, contact the dealer to update firmware in Baler Control Module (BCM). If the controller software displays version 4.2.0.0 or higher proceed to configuring the baler for the moisture system by pressing the MACHINE SETUP button (6).
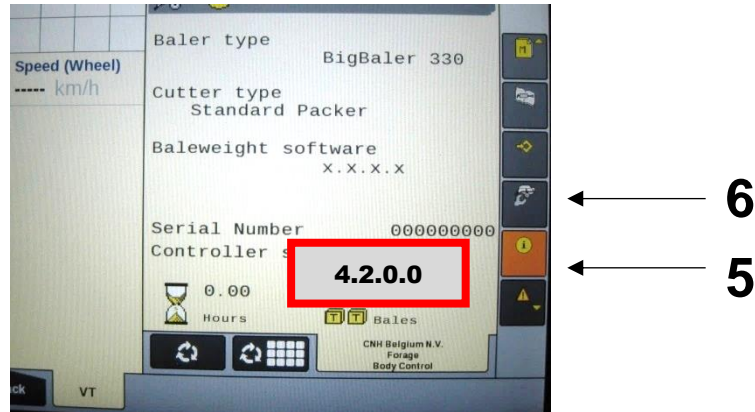
Once the MACHINE SETUP icon has been selected, the Machine Setup page will appear, and the icon will be backlit in orange. Press the MACHINE SETUP icon (7) again to go to the second page of the Machine Setup.

The second page of the Machine setup is identified by the three gray buttons in the Menu Bar. Press and hold the third gray button (8) for 10 seconds or until the display switches to displaying Dealer Mode.

Once Dealer Mode has been entered, select the down arrow in the Menu Bar (9) to scroll to the second Dealer Mode Screen where 'Moisture' is a selection.
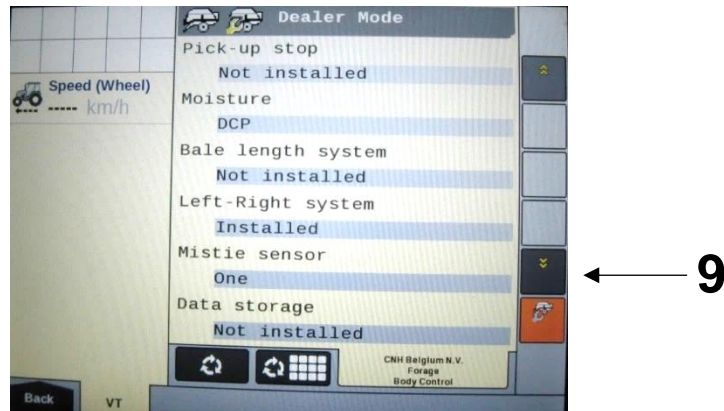
Once you have reached the second Dealer Mode screen, select the area under 'Moisture '(10). Note that the box below 'Moisture' will likely be the default "NOT INSTALLED".
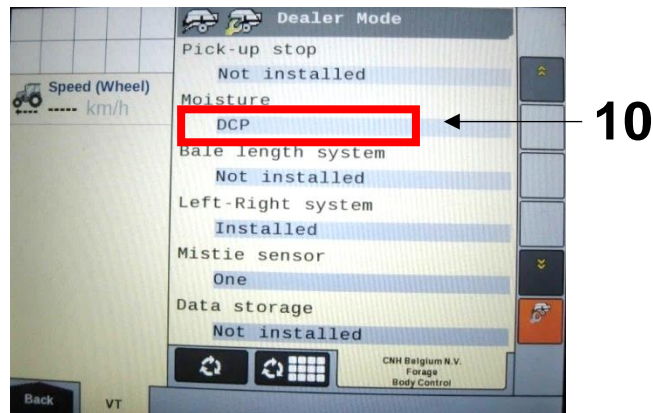

Select the proper configuration setting from the pop-up menu (11), based on the configuration of your moisture system. This configuration setting allows the baler to properly display the information it is receiving from the moisture system on the baler working screen. Select "**DCP**."
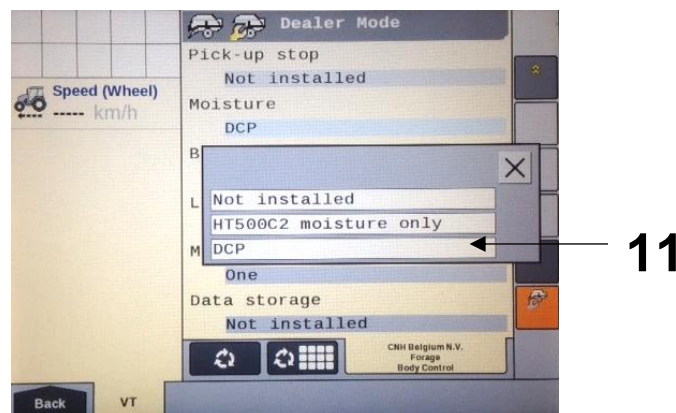
Case LB334/434 & New Holland Big Baler Series (MY2020 and Prior) (continued)

Once the configuration has been set press the MACHINE SETUP icon (12) to return to the Machine Setup Screen and the Menu Bar.
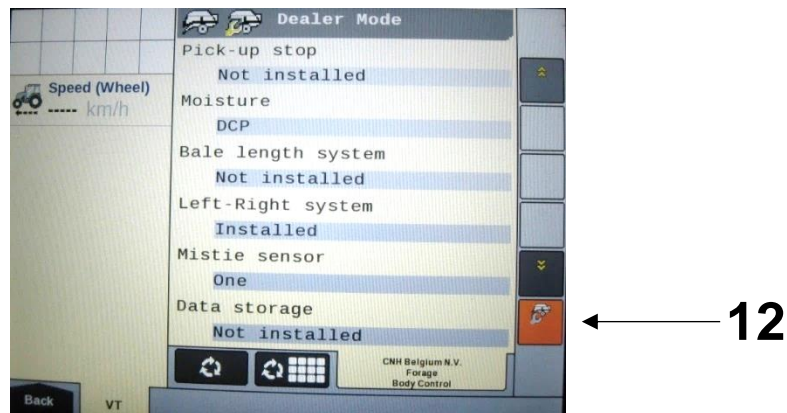
Press the arrow down button at the bottom of the Menu Bar (13) to scroll down thru the Menu Bar until you reach the SCREEN SETUP pages.

Select the icon for SCREEN SETUP 1 (14) so the Screen Setup 1 screen appears. Select how you would like to have the screen configured to show a combination of baler and moisture system information by selecting the boxes. When you select one of the boxes, a pop-up screen will appear that shows the selections available.

Selections related to the moisture system include "Moisture" and "Moisture Bale" and are highlighted by arrows above and in the next picture. Scroll to additional options in the popup window by pressing the down arrow on the side of the popup window (15).
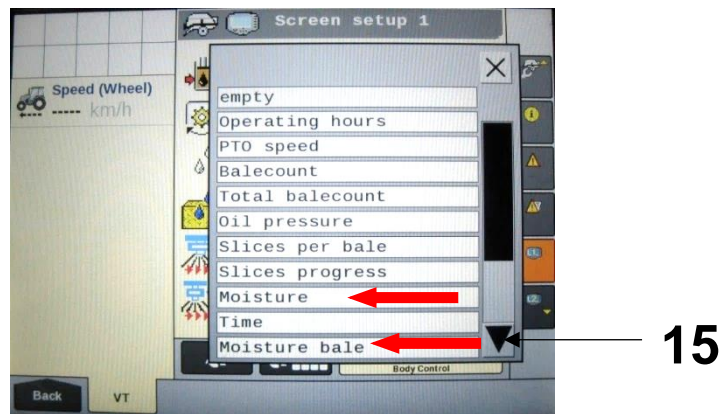
Once the Screen Setup pages have been configured, scroll back up to the top of the Menu Bar by pressing the top button in the Menu Bar with the up arrow (16).

Select the FIELD SETTING icon (17) and adjust the Moisture Alarm Settings in the Field Setting Screen. Note that the low moisture alarm must be set lower than the high moisture alarm. The moisture alarms can be turned off by setting the low setting <9% and the high setting >70%. When the alarms are turned off, they will say OFF next to the values.   Select the MAIN SCREEN 1 icon (18) from the Menu Bar.
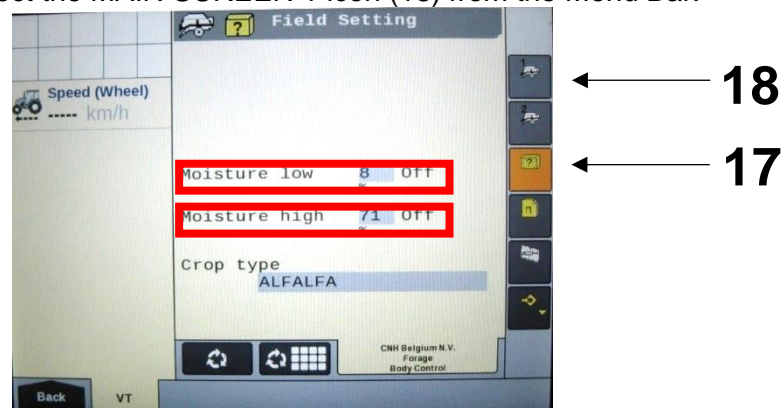
Case LB334/434 & New Holland Big Baler Series (MY2020 and Prior) (continued)

Verify that your MAIN SCREEN 1 and MAIN SCREEN 2 are configured as you would like them displaying the information you would like visible during operation. During operation, information for the moisture system that you have chosen to display will be displayed on the Baler Work Screen.

Cycle back and forth between the Baler Work Screen and the Moisture System Work Screen by pressing the NEXT IMPLEMENT button (19) during operation.

Harvest Tec Icons signified by arrows 19-22 are as follows**:**

(19)   Next Implement Button
(20)   Moisture Content %
(21)   Last Bale Average Moisture Content %
(22)   Moisture Status Icon

The status icon (22) indicates the system is connected to the baler. An "X" over the status icon indicates the system is:

     A) Not in an application mode
     B) Paused through
          a. Manual Pause
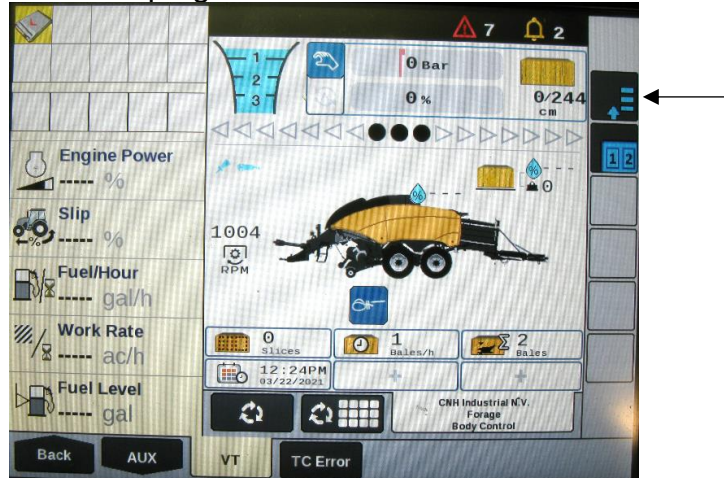   b. Baler End of Row (EOR) Pause (PTO speed < 600 rpm)
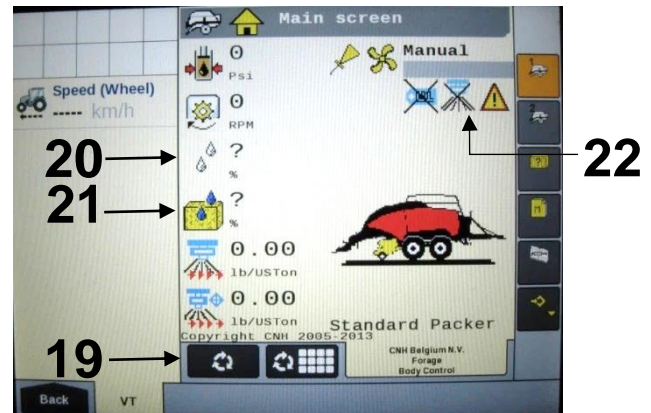
Baler Display Integration

Case LB436HD & MY2021 and later LB4 Series New Holland 340/1290HD & MY2021 and later Big Baler Series

Follow the steps below to setup the integration of the Moisture System into the baler display.

1. Select the baler Setup tab in the top right corner of the baler run screen.

2. Open the Diagnostics tab by pressing the (stethoscope icon) and select the System Information tab.
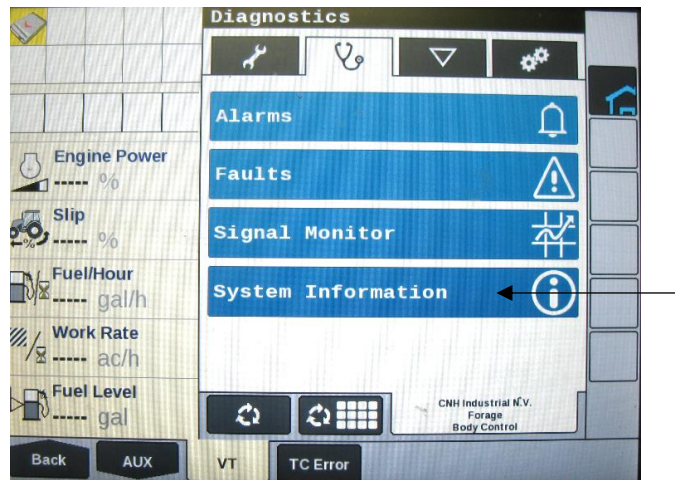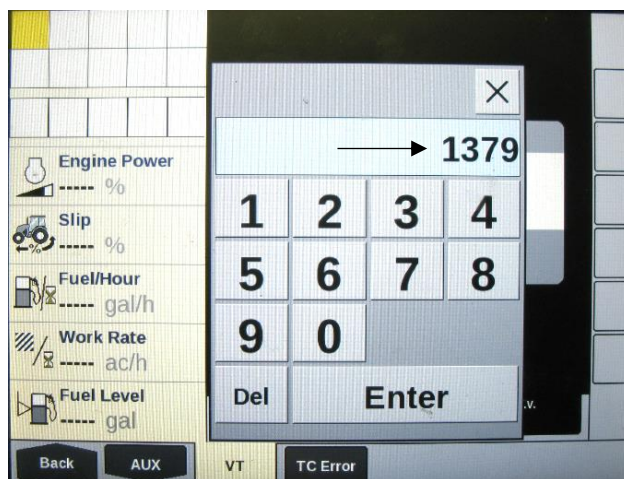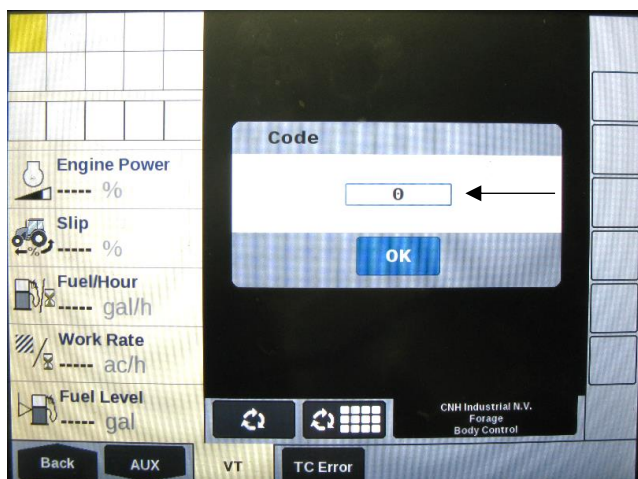
Case LB436HD & MY2021 and later LB4 Series New Holland 340/1290HD & MY2021 and later Big Baler Series (continued)

3. On the System Information page press and hold the first blank square box under the down arrow on the right side of the screen for 10 Seconds.
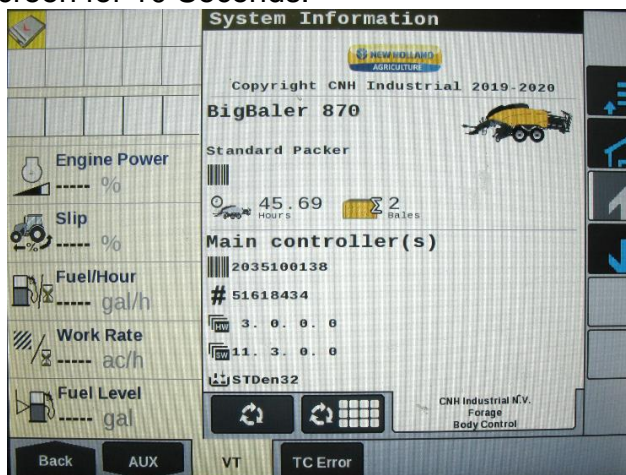
4. After 10 seconds the first screen below will appear prompting you for a code. Press the '0' and enter the Code 1379 when the numbers appear.


The screen below will appear alerting you 'Dealer Mode Activated'. Press OK and go back to the balers home screen.
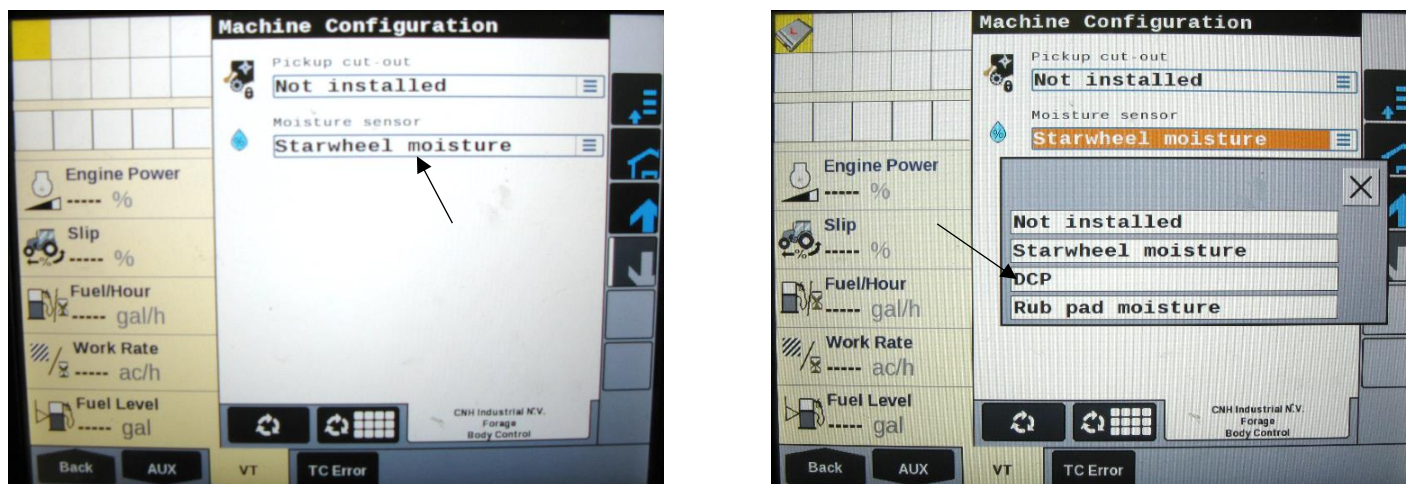
Case LB436HD & MY2021 and later LB4 Series New Holland 340/1290HD & MY2021 and later Big Baler Series (continued)

5. Select the baler Setup tab in the top right corner of the baler run screen. Then press Machine Configuration from the baler setup page (wrench icon at top).
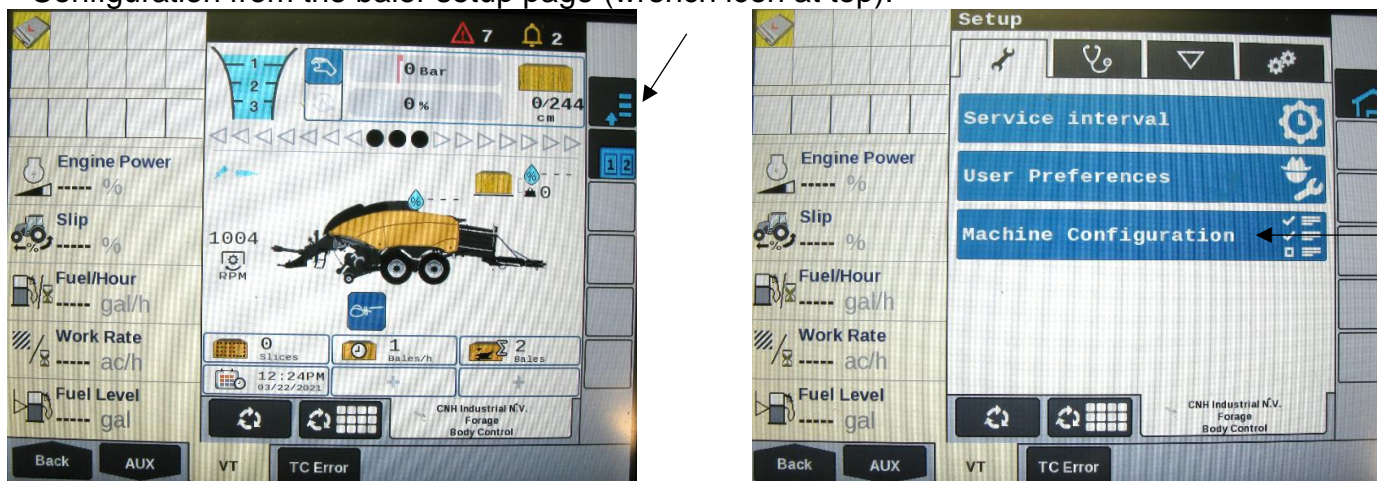
6. Select the Moisture Sensor line on the Machine Configuration screen. On the next screen that appears select **DCP** from the drop down

The moisture sensor selection will now read DCP on the Machine Configuration page.
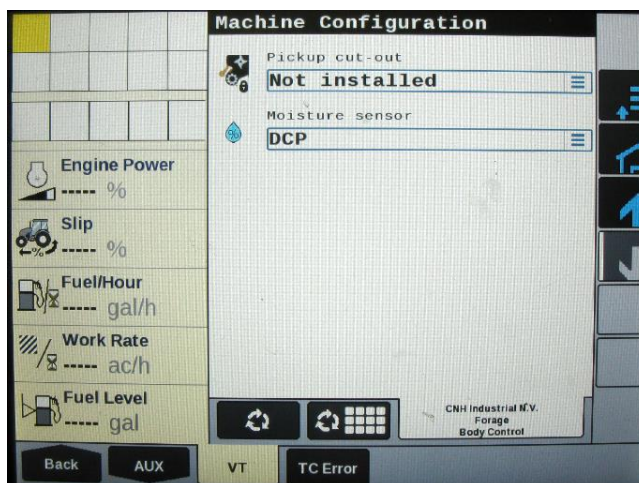
Case LB436HD & MY2021 and later LB4 Series New Holland 340/1290HD & MY2021 and later Big Baler Series (continued)
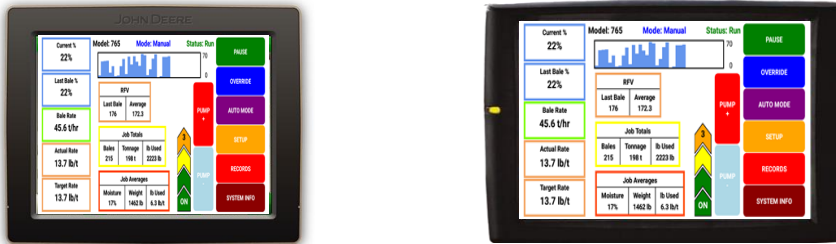

The current bale moisture content will now display above the baler next to the water droplet and the previous bale moisture will display next to the bale in above the are above the bale chute (below).

Previous Bale Moisture

Current Bale Moisture

Display Options

Optional Baler Tablet Integration

The 700 series is easily integrated into the CNH Baler VT. This allows the operator to monitor both real time baler settings and Harvest Tec system parameters on one screen to ensure the most precise application to every bale.

The 700 series also features the use of a separate display with an option tablet
.
Follow SCREEN MENUS section to set and operate the moisture system.

Optional Tablet Display

Precision Baling App
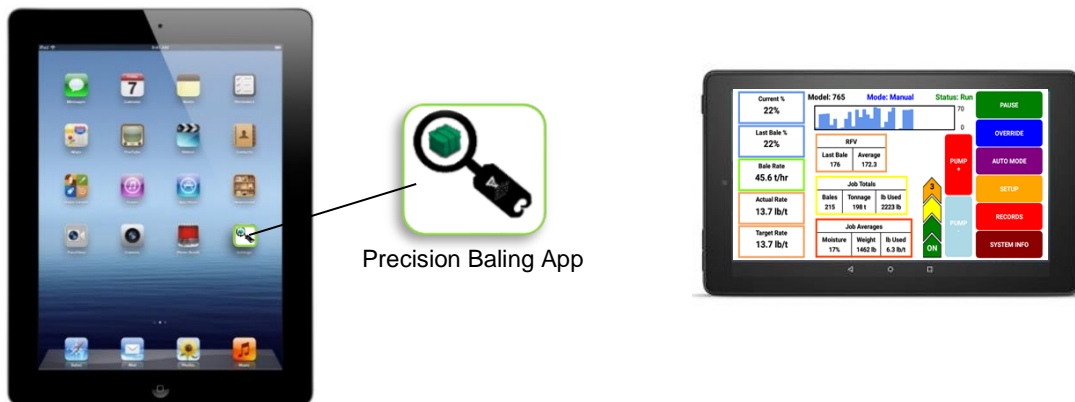
The iOS or Android Tablet displays offer the ability to communicate with the 700 series system via hard-wired connection to the ISO Communication Module (ICM). Through the free Precision Baling App, the operator can set real time baling parameters to monitor every bale. This provides a multi-use option while utilizing the improved app to select objects, enter data, and easily switch through operational screens. The Tablet Display offers easy integration by connecting a charging cable to the additional USB port on the ICM module. Once connected, the Harvest Tec applicator will display upon opening the app and powering up the system. Tablets can be used in addition to integrated baler VT display.

*Made for iPad® (3rd generation minimum) or Android Tablet (Does not work with Amazon Fire).
Required to be running the most current operating system or one version previous.
*iPad is a trademark of Apple Inc., registered in the U.S. and other countries.

Operation of Tablets

Turn On/Off Tablet using the Sleep/Wake button

iPad

Turn iPad ON: Hold down the Sleep/Wake button until Apple logo appears. iPad will take a moment to load.

You can lock iPad and put it to sleep when you are not using it. Locking iPad puts the display to sleep, saves the battery, and prevents anything from happening if you touch the screen.
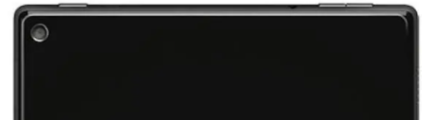

Sleep/Wake

Turn iPad OFF: Hold down the Sleep/Wake button for a few seconds until the slider appears onscreen, then drag the slider to the right.

Android

Turn Tablet ON: Hold down the Sleep/Wake button until logo appears. Tablet will take a moment to load.

Sleep/Wake

You can lock tablet and put it to sleep when you are not using it. Locking the android tablet puts the display to sleep, saves the battery, and prevents anything from happening if you touch the screen.
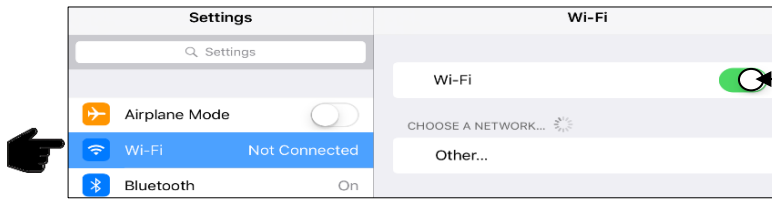

Turn Tablet OFF: Hold down the Sleep/Wake button for a few seconds until the onscreen appears, then drag the slider to the right.

<div align="center">

Amazon Fire Tablet Does Not Work for Applicator

</div>

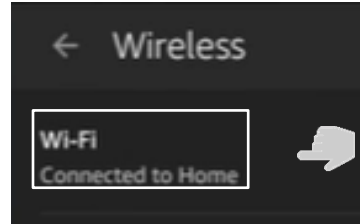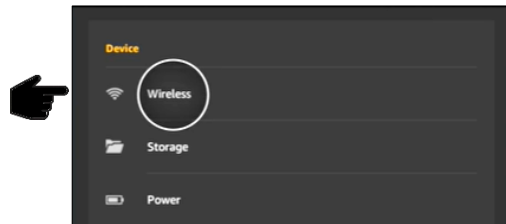**Downloading Harvest Tec Precision Baling App**

1. If tablet does not have Wi-Fi turned ON, select the Settings tab then select the Wi-Fi tab (below).

iPad

2. Turn Wi-Fi on by sliding button to the right. *Green bar indicates ON

Android

2. Connect Wi-Fi by clicking on network, should show 'connected'

4. Select an available network when detected.
5. Select app store icon (below) and open. *You will need a Wi-Fi connection available to download app*
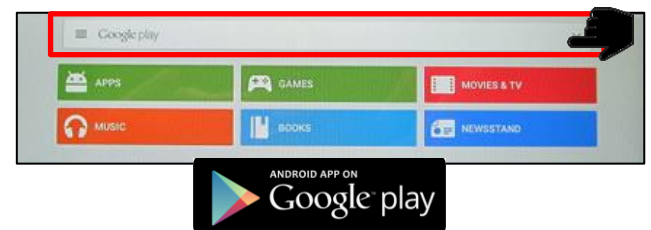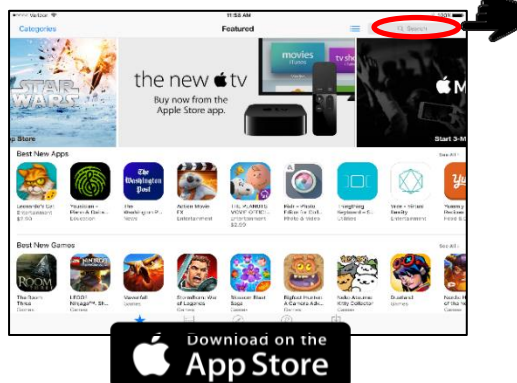
iPad

Android

Download the Precision Baling App in the app stores by searching for 'Harvest Tec' in the search bar:

The advertisements displayed on the screens will change.

The app will have the icon as shown:

Precision Baling App

ISO Communication Module

Once app is installed, operate the applicator by connecting the tablet lightning cable to the USB port.

ISO Communication

Blinking Green Light – Module is connected and ready to operate.

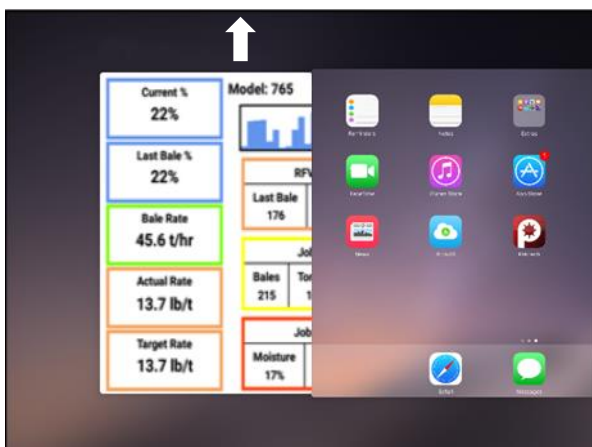**Recommended to use the original USB cable included with tablet*

Shutting Down the Precision Baling App

iPad

1. To shut down the Precision Baling App double click the home button. This will show the open apps that are running on your iPad.

2. Slide the app you want to shut down toward the top of the iPad, until the app is no longer visible.

Pressing the Home Button on the iPad WILL NOT stop application of the Moisture Dye Marker

Android

1. To shut down the Precision Baling App click the recent button. This will show the open apps that are running on your tablet.

   *Note: By pressing the home button to return to the home screen, the Precision Baling App **does not** shut down.

2. Slide the app you want to shut down toward the right of the tablet screen or click on the ' x ', until the app is no longer visible.


   <u>Pressing the Home Button on the tablet, WILL NOT stop application of the Moisture Dye Marker</u>

Operating the Harvest Tec 700 Series System (Designed for Automatic Preservative Application – not all features are utilized with the Moisture Dye Marker)

The 700 series display is broken down into four main categories:

- **Top**: Status Messages
- **Bottom Center**: Current Job Summary Information
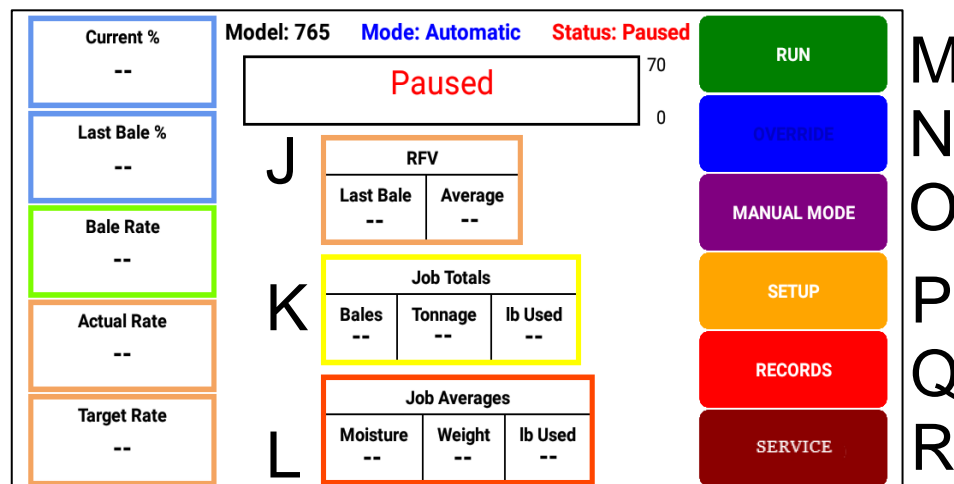- **Left Side**: Real Time Information
- **Right Side**: Operational Keys
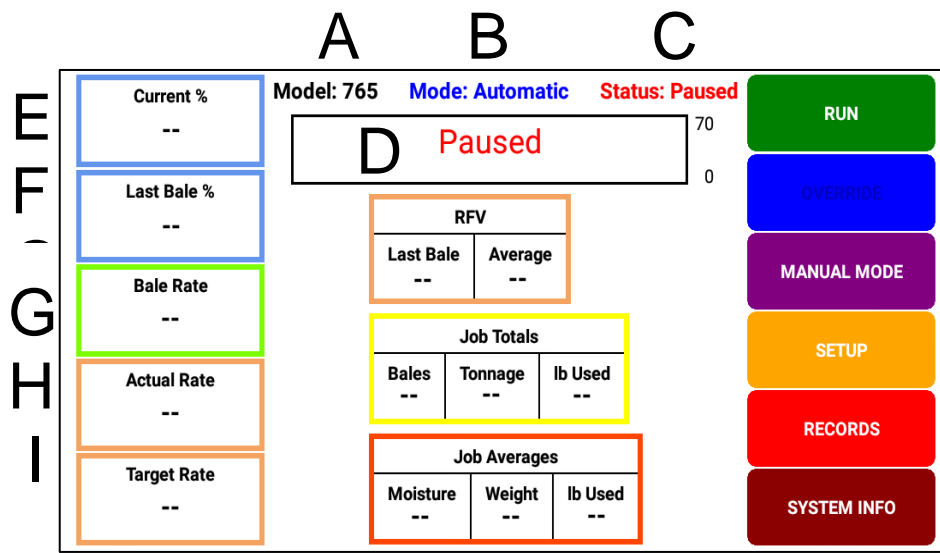
Status Message Descriptions

A) **Model:** Indicates what model system.

B) **Mode:** Confirms which mode has been selected.

C) **Status:** Confirms if system is running or paused. **Note: Upon startup the system is PAUSED.**

D) **Histogram:** Moisture graph of the last 90 seconds or shows if system is paused.

Real Time Information Boxes

E) **Current %**: This displays instantaneous moisture reading of hay coming into baler.

F) **Last Bale %**: This displays average of all moisture readings taken from last bale made.

G) **Bale Rate**: This displays the tons per hour going through baler. Based on weight and time to make a bale.

H) **Actual Rate**: Actual amount of preservative being applied.

I) **Target Rate**: Rate of preservative that the system is set to apply.

Operating the Harvest Tec 700 Series Applicator (continued)

Current %	Model: 765	Mode: Automatic	Status: Paused	RUN	M
--	Paused		70	OVERRIDE	N
Last Bale %			0	MANUAL MODE	O
--	J	RFV		SETUP	P
Bale Rate		Last Bale / Average		RECORDS	Q
--		-- / --		SERVICE	R
Actual Rate	K	Job Totals: Bales / Tonnage / lb Used			
--		-- / -- / --			
Target Rate	L	Job Averages: Moisture / Weight / lb Used			
--		-- / -- / --			

Current Job Summary Boxes

J) RFV
- **Last Bale**: Displays the RFV reading for the last bale made.
- **Average:** Displays the average of all RFV readings for the current job.

K) Job Totals
- **Bales:** Displays the total number of bales made for the current job.
- **Tonnage:** Displays total tonnage baled in job. Based on number of bales made multiplied by weight.
- **Lbs. Used:** Displays the total amount of preservative applied for job.

L) Job Averages
- **Moisture:** Displays average moisture of all bales made in job.
- **Weight:** Displays the average weight of all bales in job.
- **Lbs. Used:** Displays average amount of preservative applied to each bale in job.

Operational Keys

M) Run / Pause: Toggles between run mode to apply and pause mode to stop reading moisture.

N) Override: Only displays when in run mode while the applicator is applying preservative. Once in override, the applicator will apply at full rate. **Not applicable to Dye Marker System**

O) Manual Mode / Auto Mode: Toggles between auto mode and manual mode preservative application.
- **Auto Mode**: Turns Moisture Sensing ON. Preservative application function not applicable.
- **Manual Mode**: Turns Moisture Sensing ON. Preservative application function not applicable.

P) Setup: Allows for user inputs for values regarding moisture, baling rate, application rate, and relative feed value (RFV) if equipped.

Q) Records: Access to view current job, view job list, view a selected job, create a new job, or reopen and add to existing job.

R) Service: Displays software versions, sensor assignment, annual start-up pump test
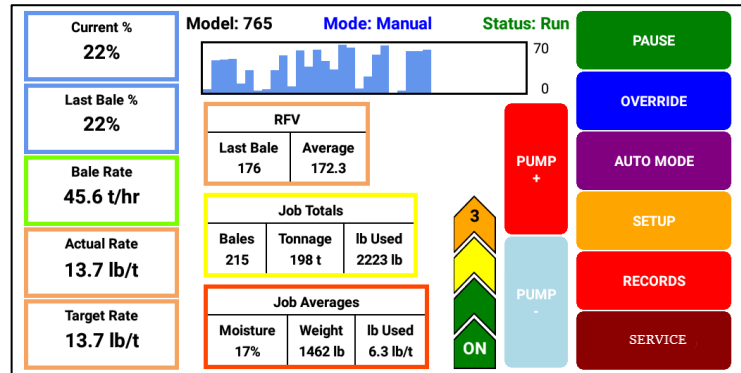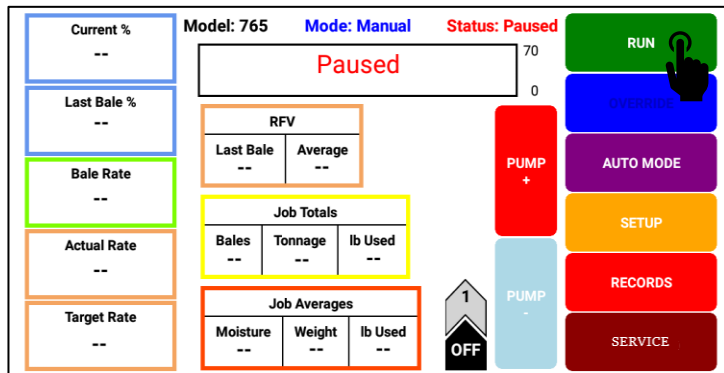
Screen Menus (screens shown in Precision Baling App using tablet display)

Use the screen shots below to navigate through the operation screens. *Note – not all functions utilized with operation of moisture dye marker.*

Automatic Mode
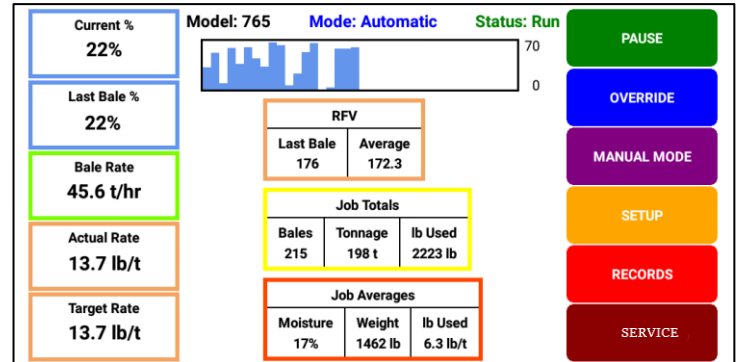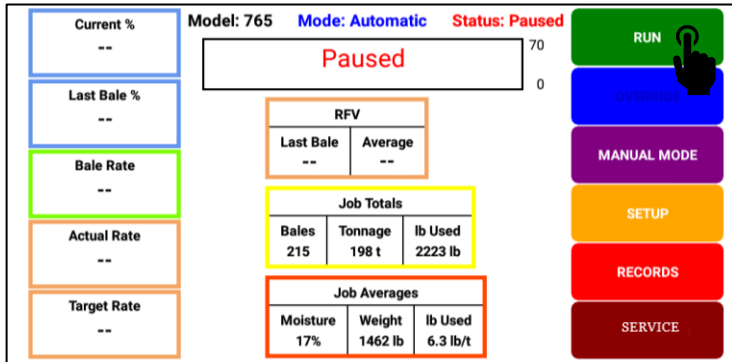
Manual Mode

Setup Mode

Adjusting Moisture Levels

Current %	Model: 765 Mode: Automatic Status: Paused	RUN
--	Paused 70 0	OVERRIDE
Last Bale % --	RFV	MANUAL MODE
Bale Rate --	Last Bale -- / Average --	SETUP
Actual Rate --	Job Totals — Bales -- / Tonnage -- / lb Used --	RECORDS
Target Rate --	Job Averages — Moisture -- / Weight -- / lb Used --	SERVICE

Moisture Setup

Current % 22%	Model: 765 Mode: Automatic Status: Paused	MOISTURE SETUP
Last Bale % 22%	Level 1: 16% 4.0 lb/t Sensor: Star Wheels	BALING RATE SETUP
Bale Rate 45.6 t/hr	Level 2: 19% 6.0 lb/t OEM:	APPLICATION SETUP
Actual Rate 13.7 lb/t	Level 3: 22% 10.0 lb/t	RFV SETUP
Target Rate 13.7 lb/t	Alarm: 27% / Moisture Dye Marking: ● Setpoint: 22%	BALE ID SETUP
		HOME

Select and change input boxes / sliders as needed

Adjusting Baling Rate

Current % --	Model: 765 Mode: Automatic Status: Paused	RUN
Last Bale % --	Paused 70 0	OVERRIDE
Bale Rate --	RFV — Last Bale -- / Average --	MANUAL MODE
Actual Rate --	Job Totals — Bales -- / Tonnage -- / lb Used --	SETUP
Target Rate --	Job Averages — Moisture -- / Weight -- / lb Used --	RECORDS / SERVICE

Bale Rate Setup

Current % 22%	Model: 765 Mode: Automatic Status: Paused	MOISTURE SETUP
Last Bale % 22%	Rate Sensor: ISO-Baler Bale Length: 96 in	BALING RATE SETUP
Bale Rate 45.6 t/hr	Avg Bale Weight: 1350 lb Bale Width: 34 in	APPLICATION SETUP
Actual Rate 13.7 lb/t	Avg Bale Time: 58 sec Bale Height: 47 in	RFV SETUP
Target Rate 13.7 lb/t	Bale Tie Sensor: ISO Bale Scale: ●	BALE ID SETUP
		HOME

Select and change input boxes / sliders as needed

Adjusting Application Rate

Current % --	Model: 765 Mode: Automatic Status: Paused	RUN
Last Bale % --	Paused 70 0	OVERRIDE
Bale Rate --	RFV — Last Bale -- / Average --	MANUAL MODE
Actual Rate --	Job Totals — Bales -- / Tonnage -- / lb Used --	SETUP
Target Rate --	Job Averages — Moisture -- / Weight -- / lb Used --	RECORDS / SERVICE

Application Rate Setup

Current % 22%	Model: 765 Mode: Automatic Status: Paused	MOISTURE SETUP
Last Bale % 22%	Level 1: 4.0 lb/t @ 16%	BALING RATE SETUP
Bale Rate 45.6 t/hr	Level 2: 6.0 lb/t @ 19%	APPLICATION SETUP
Actual Rate 13.7 lb/t	Level 3: 10.0 lb/t @ 22%	RFV SETUP
Target Rate 13.7 lb/t	Spray Nozzles: X-HIGH Units: English Hay Indicators: ● GPS Yield Mapping: ● Swath Width: 32.5 ft GPS Receiver: 16xHVS	BALE ID SETUP
		HOME

Select and change input boxes / sliders as needed

Job Records

View Job List

View Job List

Job #	Farm	Field	Crop	Started	Ended	Bales
4	Brown	SW corner	Alfalfa RU 1	10-Mar-20	10-Mar-20	187
26	Brown	Nw corner	Alfalfa NS 2	10-Mar-20	10-Mar-20	174
6	J.Smith	ravene	straw	10-Mar-20	11-Mar-20	87
9	Dairy Farms	grn pasture	alfalfa 2nd	11-Mar-20	12-Mar-20	320
10	Dooleys	14	Alfalfa NS 2	14-Mar-20	14-Mar-20	92
16	Billy Joe	coop	straw	15-Mar-20	15-Mar-20	114
17	Gustavus	the ridge	alfalfa 3rd	15-Mar-20	15-Mar-20	72
21	Test Site 2	Plot 45	56798-3	16-Mar-20	16-Mar-20	369
3	Smith	A34	alfalfa X1	16-Mar-20	16-Mar-20	221

Viewing Filters:

Farm: All   Field: All   Crop: All

EXPORT ALL JOBS   DELETE ALL JOBS   ADD TO THIS JOB

View Current Job List

View Current Job

Farm: Brown   Field: SW corner   Crop: Alfalfa RU 1   Created: 10-Mar-20

Bales		Moisture		Application		
Count	Tons	Average	High	Product	Avg RFV	TDN Calif. 90%
187	758	16%	24%	2919 lb	175	58.6

ID#	Avg MC	High MC	Prod Used	Bale Weight	RFV	TDN
1001	15%	17%	4.2 lb	1485 lb	176	57.2
1002	14%	19%	3.5 lb	1482 lb	179	58.1
1003	18%	25%	4.9 lb	1444 lb	182	58.3
1004	22%	24%	10.2 lb	1432 lb	190	59.9
1005	19%	23%	9.2 lb	1423 lb	180	59.4
1006	13%	15%	3.2 lb	1501 lb	174	56.1
1007	12%	15%	4.3 lb	1404 lb	176	57.2
1008	17%	19%	7.1 lb	1471 lb	179	58.1

View Selected Job List

View Selected Job

Farm: Brown   Field: SW corner   Crop: Alfalfa RU 1   Created: 10-Mar-20

Bales		Moisture		Application		
Count	Tons	Average	High	Product	Avg RFV	TDN Calif. 90%
187	758	16%	24%	2919 lb	175	58.6

ID#	Avg MC	High MC	Prod Used	Bale Weight	RFV	TDN
1001	15%	17%	4.2 lb	1485 lb	176	57.2
1002	14%	19%	3.5 lb	1482 lb	179	58.1
1003	18%	25%	4.9 lb	1444 lb	182	58.3
1004	22%	24%	10.2 lb	1432 lb	190	59.9
1005	19%	23%	9.2 lb	1423 lb	180	59.4
1006	13%	15%	3.2 lb	1501 lb	174	56.1
1007	12%	15%	4.3 lb	1404 lb	176	57.2
1008	17%	19%	7.1 lb	1471 lb	179	58.1

Create a New Job

Select Job Details to view job records

Press Create Job

Select and fill out blank input boxes as needed

Software Versions

Moisture System with Dye Marker Object Pool Setup (screens shown in Precision Baling App using tablet display)

Set the module in which moisture readings are displayed in SERVICE menu

Select SENSORS

Required - Update Moisture sensor selection to IDM (ISO Dye Module)

Set the baler sensors utilized from ISOBUS

Select Rate Sensor and choose Manual

Select Bale Tie Sensor and choose ISO.
If baler is equipped with roller chute scale turn ON to record bale weights in job record

Within BALING RATE SETUP customize Moisture Alarm set point

Turn ON Moisture Dye Marking. Customize moisture Setpoint for dye marker to spray when moisture is above threshold

Dye Marker can be manually primed from either this screen or button located on dye marker. *Note – prime dye marker upon each refill.*

System is now setup. From HOME screen you will need to select RUN to turn on the moisture sensor and moisture dye marker will automatically spray when bale is above preset moisture

## Filling Tank & First Time and Annual Startup

1. **Filling the Tank**
   A. Remove the tank lid from the 3 gallon tank. Make sure the tank is clean and completely empty. Mix the Dye (009-0800) with warm water inside the Dye bottle. Make sure that the bottle is shaken vigorously so that the dye completely dissolves. Once the solution is mixed, add it to the 3 gallon tank and fill the tank with water.

2. **First Time and Annual Startup**
   A. Once the tank has been filled the plumbing lines will need to be primed. With the system turned on and in a paused mode, hold the priming button until all the air is flushed out of the lines and there is a steady stream of liquid coming from each of the tips.
   NOTE: The system needs to be primed every time the system has run <u>out</u> of dye

   B. You can adjust the moisture content level at which you would like the system to mark the 'Wet Flakes' in the bale being made. This can be done by entering 'Setup' followed by moisture setup, then adjust Set Point.
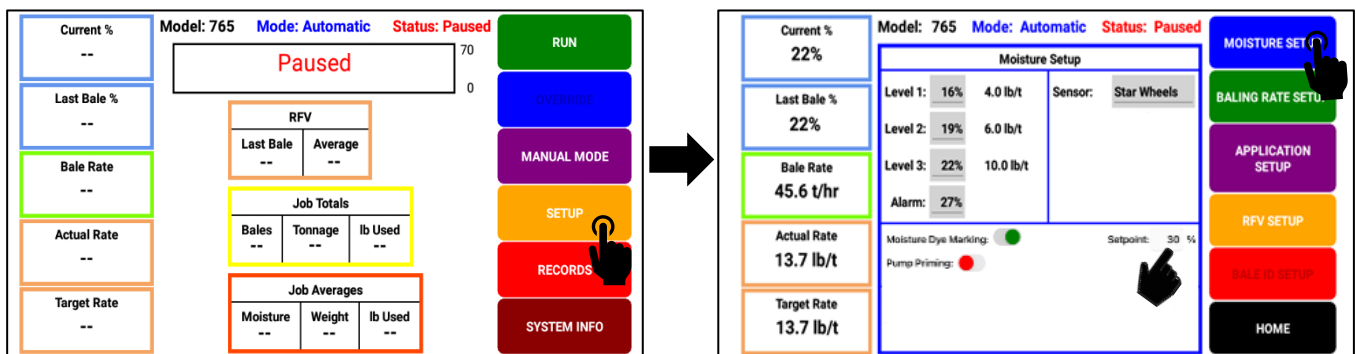
Operating Instructions Automatic Mode or Manual Mode

Auto & Manual mode will automatically mark bales with dye if the moisture dye marking system is turned on and moisture content sensed by the star wheels is above the moisture 'Set Point' level that was set by the operator.

1. The moisture sensed by the star wheels is indicated below. See page 9 for set-up instructions.
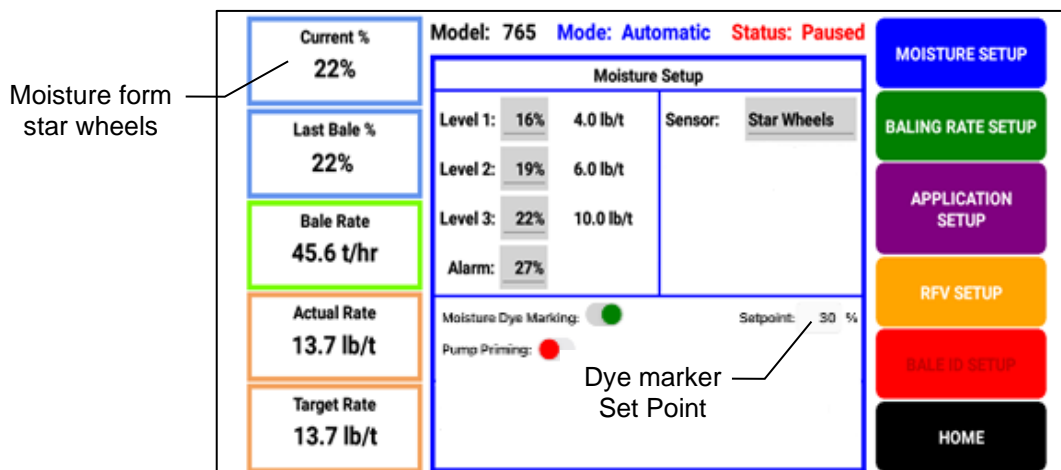
Maintenance

1. For **winter** storage, drain all of the liquid out of the lines and tank and pump.

Pin Outs

Integrated Control Module (ICM) on harness 006-765IC
(Deutsch Plug Number: DTM06-12SA)

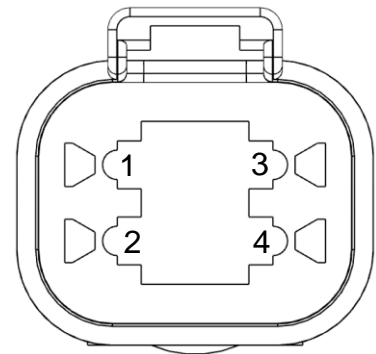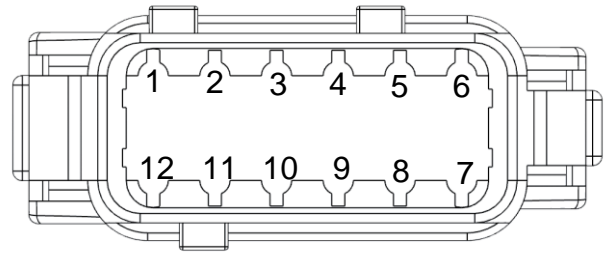|		
Pin 1	Red	+12V from ECU
Pin 2	Purple	Signal Wire
Pin 3	Red/White	+12V CAN X
Pin 4	Black/White	Ground CAN X
Pin 5	Orange	CAN X Hi
Pin 6	Blue	CAN X Lo
Pin 7	Green	ISO CAN Lo
Pin 8	Yellow	ISO CAN Hi
Pin 9	White	GPS Expansion 1
Pin 10	Gray	GPS Expansion 2
Pin 11	Brown	GPS Expansion 3
Pin 12	Black	Ground from ECU

ISOBUS Plug on harness 006-765IC
(Deutsch Plug Number: DT04-4P)

Pin 1	Red	+12V from ECU
Pin 2	Yellow	ISO CAN Hi
Pin 3	Green	ISO CAN Lo
Pin 4	Black	Ground from ECU

Power / Communication Harness 006-765IC at Baler Hitch
(Deutsch Plug Number: HDP24-24-18PN)

Pin 1	Not Used	----
Pin 2	Yellow	ISO CAN Hi
Pin 3	Green	ISO CAN Lo
Pin 4	Red	+12V Power to ECU
Pin 5	Black	Ground to ECU
Pin 6	Red	+12V From Battery
Pin 7	Not Used	----
Pin 8	Black	Ground From Battery
Pin 9	Not Used	----
Pin 10	Purple	Signal Wire
Pin 11	Red/White	+12V CAN X
Pin 12	Black/White	Ground CAN X
Pin 13	Orange	CAN X Hi
Pin 14	Blue	CAN X Lo
Pin 15	White	GPS Expansion 1
Pin 16	Gray	GPS Expansion 2
Pin 17	Brown	GPS Expansion 3
Pin 18	Not Used	----
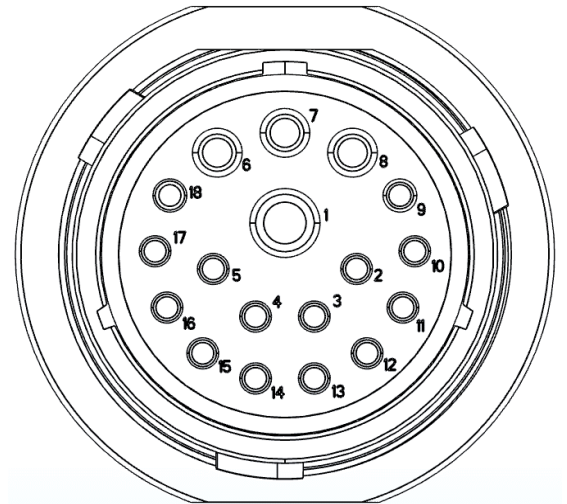
Power / Communication Harness 006-765BN at Baler Hitch
(Deutsch Plug Number: HDP26-24-18SN)

Pin 1	Not Used	----
Pin 2	Yellow	ISO CAN Hi
Pin 3	Green	ISO CAN Lo
Pin 4	Red	+12V Power to ECU
Pin 5	Black	Ground to ECU
Pin 6	Not Used	----
Pin 7	Not Used	----
Pin 8	Not Used	----
Pin 9	Not Used	----
Pin 10	Not Used	----
Pin 11	Not Used	----
Pin 12	Not Used	----
Pin 13	Not Used	----
Pin 14	Not Used	----
Pin 15	Not Used	----
Pin 16	Not Used	----
Pin 17	Not Used	----
Pin 18	Not Used	----
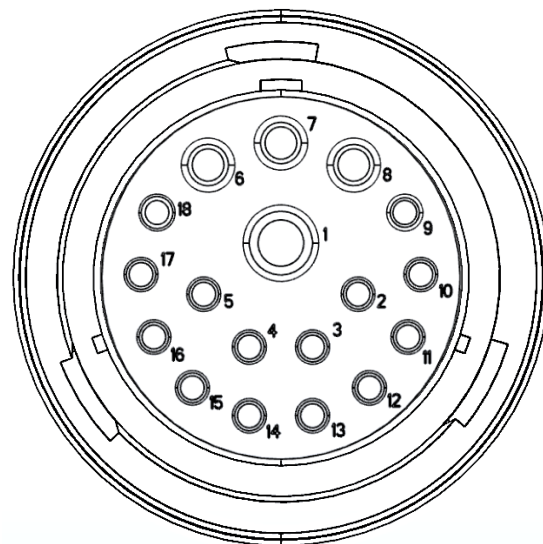
Power / Communication Harness 006-765BN at ECU Harness
(Deutsch Plug Number: DT04-4P)

Pin 1	Red	+12V from ECU
Pin 2	Yellow	ISO CAN Hi
Pin 3	Black	Ground from ECU
Pin 4	Green	ISO CAN Lo
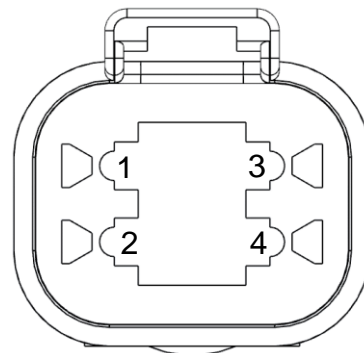
Integration Harness Plug on Baler 006-765VN
(Plug: APTIV 12052848 and 12124107)

Pin A	Not Used	----
Pin B	Red	TBC Power
Pin C	Not Used	----
Pin D	Gray	TBC Ground
Pin E	Orange	CAN Hi
Pin F	Blue	CAN Lo
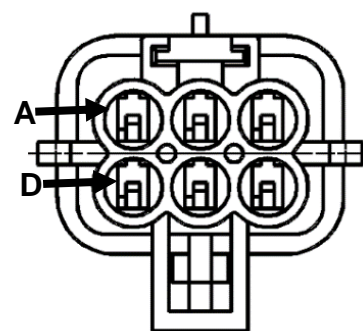
Integration Harness Plug on Baler 006-765VN
(Deutsch Plug Number: DT04-4P and DT06-4S)

Pin 1	Red	+12V from ECU
Pin 2	Yellow	ISO CAN Hi
Pin 3	Black	Ground from ECU
Pin 4	Green	ISO CAN Lo

34
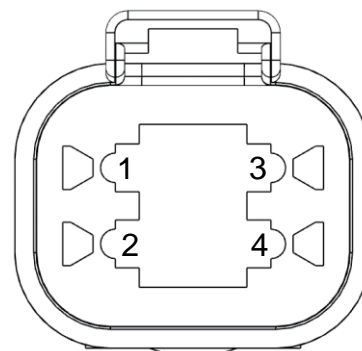
Key Switch Harness 006-765CPH at Tractor
(Deutsch Plug Number: DT06-4S)

Pin 1	Red	+12V from ECU
Pin 2	Not Used	----
Pin 3	Not Used	----
Pin 4	Black	ISO CAN Lo
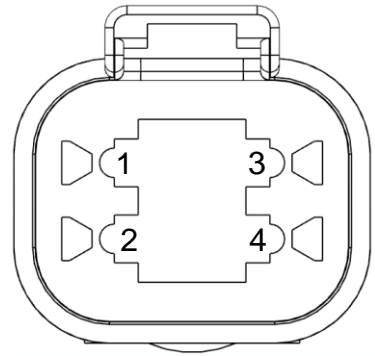
Pump Plug Harness 006-765IDM2
(Deutsch Plug Number: DT04-3P-L012)

Pin 1	Black/White	Ground to End of Bale Sensors
Pin 2	Red/White	+12V to Pump.
Pin 3	Blue	Prime Wire
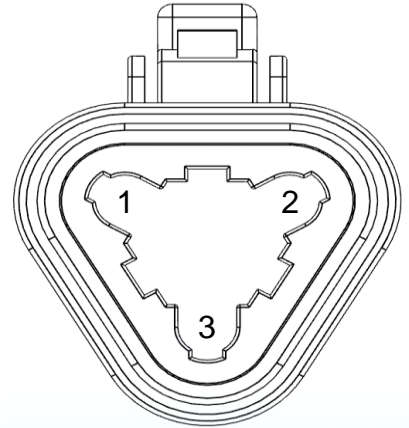
Extension Harness 006-765IDM3
(Deutsch Plug Number: DT06-3S and DT04-3P)

Pin 1	Black/White	Ground to End of Bale Sensors
Pin 2	Red/White	+12V to Pump.
Pin 3	Blue	Prime Wire

Integrated Moisture Module (IMM) on harness 006-7307CMS
(Deutsch Plug Number: DTM06-12SA)

Pin 1	+12V from ECU
Pin 2	-
Pin 3	-
Pin 4	Moisture 1
Pin 5	Moisture 2
Pin 6	-
Pin 7	ISO CAN Hi
Pin 8	ISO CAN Lo
Pin 9	+12 DSM
Pin 10	Ground DSM
Pin 11	Prime, DSM
Pin 12	Ground from ECU
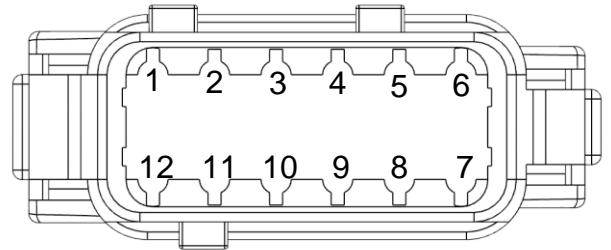
ISOBUS Plug on harness 006-7307CMS
(Deutsch Plug Number: DT04-4P and DT06-4S)

Pin 1   +12V from ECU
Pin 2   ISO CAN Hi
Pin 3   Ground from ECU
Pin 4   ISO CAN Lo
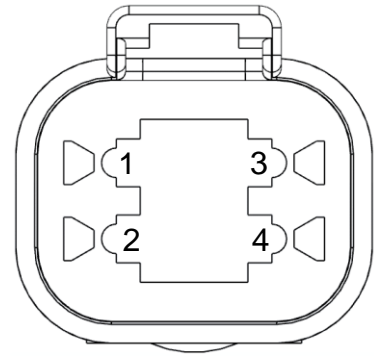
Prime Switch Plug on Harness 006-7307CMS
(Deutsch Plug Number: DT06-3S)
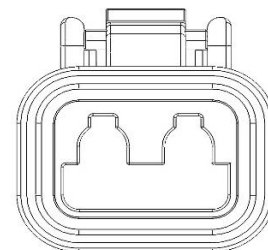
Pin 1   +12V to Pump
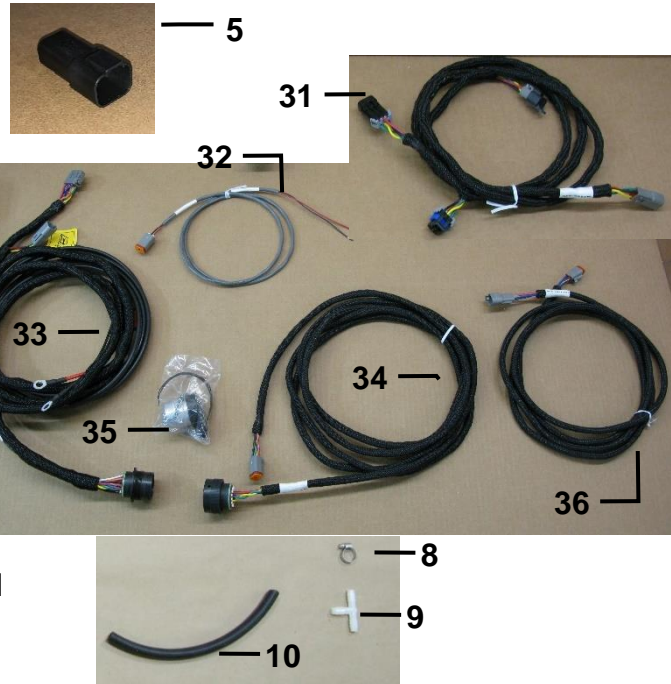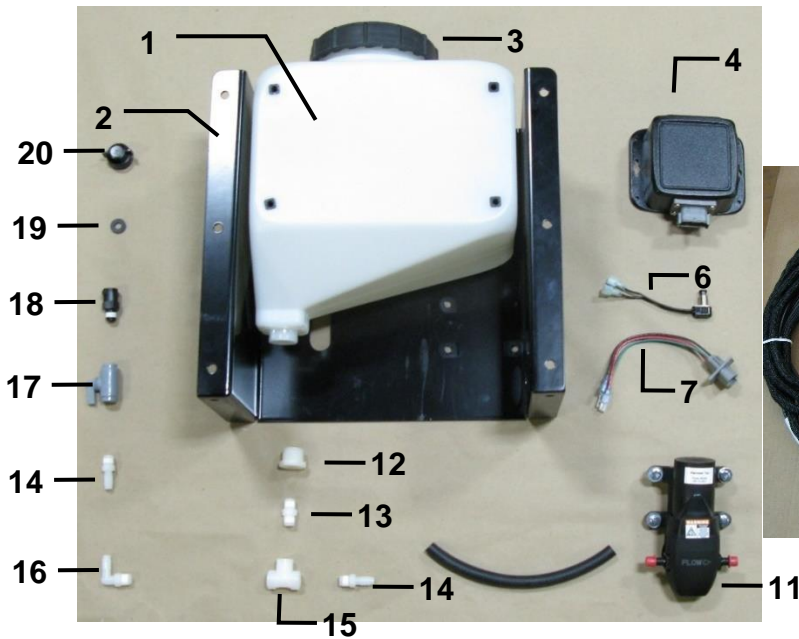Pin 2   Ground to Pump
Pin 3   Prime
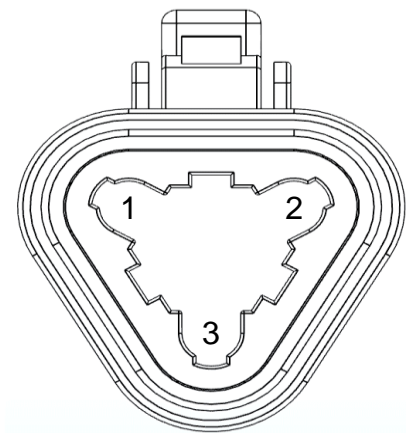
Moisture Plug on Harness 006-7307CMS
(Deutsch Plug Number: DT06-2S)

Pin 1   Moisture Signal
Pin 2   Moisture Signal

Parts Breakdown

Ref	Description	Part#	Qty	Ref	Description	Part#	Qty
1	Tank	005-9019	1	12	3/4x1/4" Reducer	003-RB3414	1
2	DSM Mounting Bracket	001-2500	1	13	1/4x1/4" Nipple	003-M1414	1
3	Tank Cap	005-9022C	1	14	1/4x3/8" Fitting	003-A1438	2
4	ICM (ISO Com Module)	006-6673	1	15	1/4" FPT Tee	003-TT14	1
5	Resistor Plug	006-4640J	1	16	1/4x3/8" Elbow	003-EL1438	1
6	Remote Push Switch	006-2850	1	17	SLV Bottle Valve	002-2216	1
7	DM Pump Switch	006-765IDM2	1	18	Male Quick Connect	004-4710	1
8	Hose Clamp	002-9002	10	19	Rubber Gasket	004-1207W	2
9	3/8" Barbed Tee	003-T3838	1	20	Shut-Off Cap	004-1207F	1
10	3/8" EDPM Hose	002-9003AS	26'	NP	Red Dye	009-0800	1
11	DSM Pump	007-4120LF	1	NP	Tank Cap Gasket	005-9022CG	1
31	Integration Harness	006-765VN	1	34	Baler Harness	006-765BN	1
32	Key Power Switch	006-765CPH	1	35	Dust Plug Kit	006-765DP	1
33	Tractor Harness	006-765IC	1	36	239DM ext harness	006-765IDM3	1
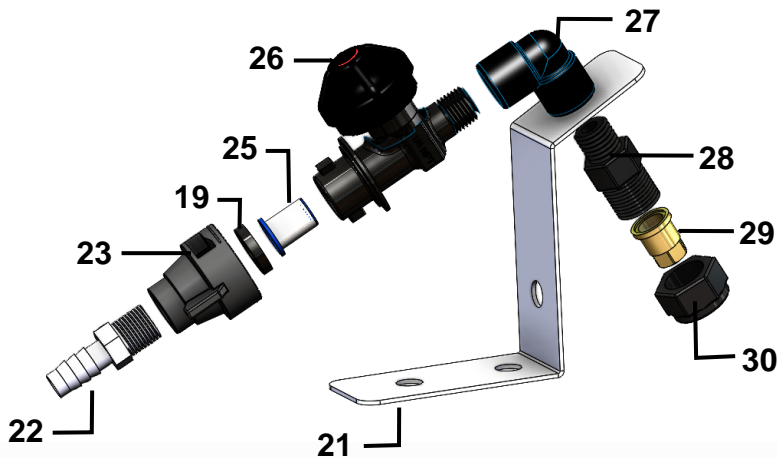
Ref	Description	Part#	Qty
21	Nozzle Holder	001-4216	2
22	Straight Fitting	003-A1438	2
23	Quick Connect	004-1207H	2
19	Rubber Gasket	004-1207W	2
25	Tip Screen	004-1203-100	2
26	Check Valve	004-1207V	2
27	Street Elbow	003-SE14F	2
28	Nozzle Body	004-4722	2
29	Brass Tip	004-TX-5	2
30	Nozzle Cap	004-4723	2

Harvest Tec LLC. Warranty and Liability Agreement

Harvest Tec, LLC. will repair or replace components that are found to be defective within 12 months from the date of manufacture. Under no circumstances does this warranty cover any components which in the opinion of Harvest Tec, LLC. have been subjected to negligent use, misuse, alteration, accident, or if repairs have been made with parts other than those manufactured and obtainable from Harvest Tec, LLC.

Our obligation under this warranty is limited to repairing or replacing free of charge to the original purchaser any part that in our judgment shows evidence of defective or improper workmanship, provided the part is returned to Harvest Tec, LLC. within 30 days of the failure. If it is determined that a non-Harvest Tec branded hay preservative has been used inside the Harvest Tec applicator system where the failure occurred, then Harvest Tec reserves the right to deny the warranty request at their discretion. Parts must be returned through the selling dealer and distributor, transportation charges prepaid.

This warranty shall not be interpreted to render Harvest Tec, LLC. liable for injury or damages of any kind, direct, consequential, or contingent, to persons or property. Furthermore, this warranty does not extend to loss of crop, losses caused by delays or any expense prospective profits or for any other reason. Harvest Tec, LLC. shall not be liable for any recovery greater in amount than the cost or repair of defects in workmanship.

There are no warranties, either expressed or implied, of merchantability or fitness for particular purpose intended or fitness for any other reason.

This warranty cannot guarantee that existing conditions beyond the control of Harvest Tec, LLC. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, LLC. reserves the right to make design changes, improve design, or change specifications, at any time without any contingent obligation to purchasers of machines and parts previously sold.

Revised 6/22

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