# Installation Manual

## *Model 600J*

### *Moisture Sensor Kit for John Deere Large Square Balers*

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

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**600J-15-INST**
**12/15**

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## Introduction

Thank you for purchasing a Harvest Tec Model 600J Moisture Monitoring System. This 600J system has been designed to plug directly into the baler's ISOBUS and display. If you would prefer to have a separate monitor, the Harvest Tec Touch Screen Display (030-5670A) will need to be purchased. The 600J Moisture Monitoring System offers these advantages:

1. Operation coordinated with baler operation
2. Less cab clutter providing better visibility
3. Ease of use with all information on one monitor
4. Records kept together
5. System is ready for future updates

The 600J Moisture Monitoring kit includes the following parts: Dual Channel Processor (DCP), Moisture Sensors, Harnesses and Miscellaneous Hardware. For your convenience a parts breakdown for the 600J Moisture Monitoring System is included in the back of this manual. Your local dealer can assist you answering any questions and ordering parts.

Right and Left sides are determined by facing in the direction of forward travel.

## System Requirements

**If you prefer not to use the baler's ISOBUS system, you will need the Harvest Tec Touch Screen Display PN: 030-5670A**

## Tools Needed:

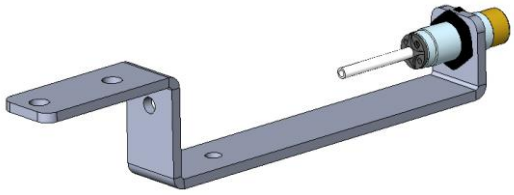
- Standard wrench set
- Electric drill and bits
- Side cutter
- Crescent wrench
- Standard screwdriver
- Standard nut driver set
- Standard socket set
- Hammer
- Metal cutting tools
- Hose cutter
- Center punch

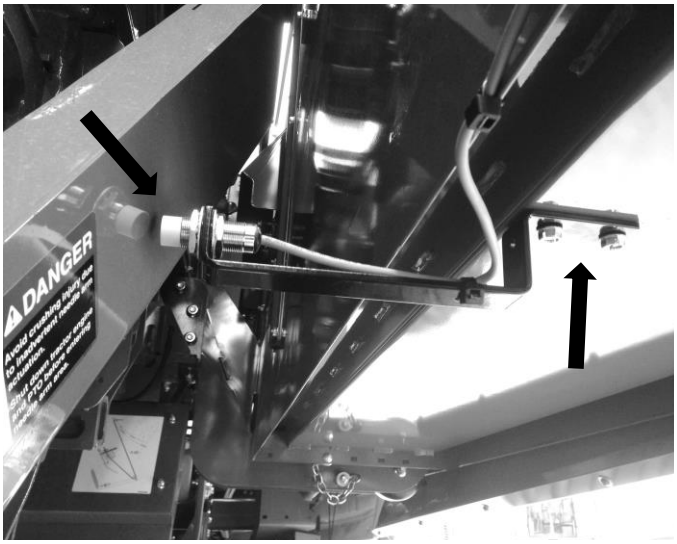
## Installation of Dual Channel Processor (DCP)

To mount the Dual Channel Processor (DCP) onto your John Deere L330 / L340 baler, the DCP location will be on the back of the right twine box. The location will vary slightly depending on placement of safety decals from factory, do not cover the safety decals. Mount the DCP on the back of right hand twine box using Figure 1 as a reference. DCP location is recommended 5” from inside edge and 5” from top of twine box.


Figure 1

## Installation of End of Bale Sensor



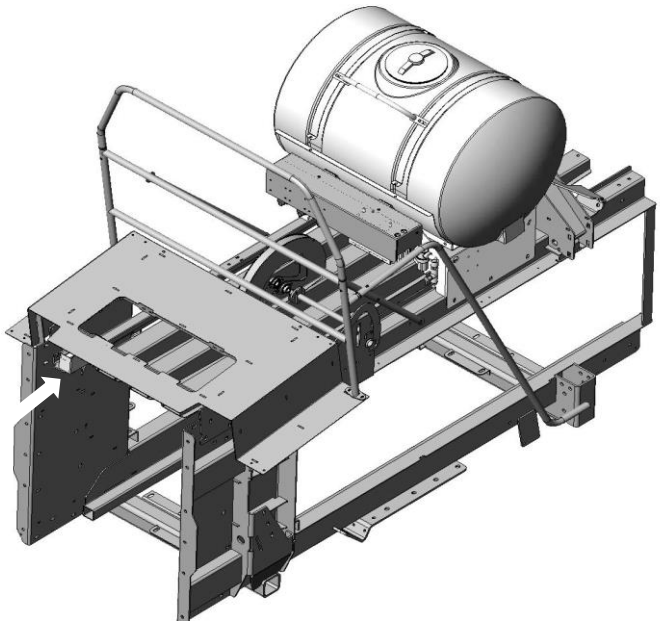



Mount the end of bale sensor bracket (001-4648J) as shown. Under the twine box mark and drill two 3/8” holes and attach the bracket using two 5/16” x 1” self-tapping screws, and 5/16” flange nuts. Position the bolts so the bolt heads are inside the twine box so they don’t interfere with the twine. Mount the sensor in hole location centered alongside the needle arm, keep the sensor 1/4" from the needle arm and tighten both nuts. Route the sensor wire along the bottom side of the twine box toward the twine box pivot point. Secure the wire to the twine box and around the pivot point to avoid damage to the wire. Once routed around the pivot point, connect the EOB sensor wire to the Dual Channel Processor (DCP).

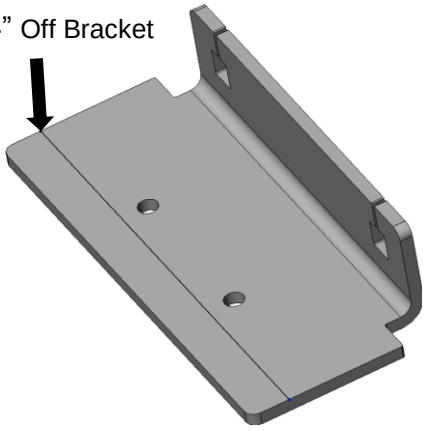
## Installation of Star Wheel Moisture Sensors

**Star Wheel Mounting** – remove any material from the bale chute. The star wheels are to be mounted on the transition bracket on both sides of the bale chute located after knotters shown above. Holes have been installed at the factory, however you need to remove the bracket and cut 3/4" off the bracket as indicated below to allow proper spacing for star wheel assembly. Once complete, touch up with spray paint to prevent rusting and place the carriage bolts that mount the transition bracket back in original bracket mounting holes (A) before mounting star wheel assembly (C). Insert the 5/16" by 3 1/4" Allen head bolts up through the transition bracket and use nuts to hold the bolts in place (B). Place the star wheel block over the nuts. Place twine guard on top of star wheel (D), the guard containing bale rate sensors will be placed on the right side. Note: Thicker part of star wheel block should be on baler side.

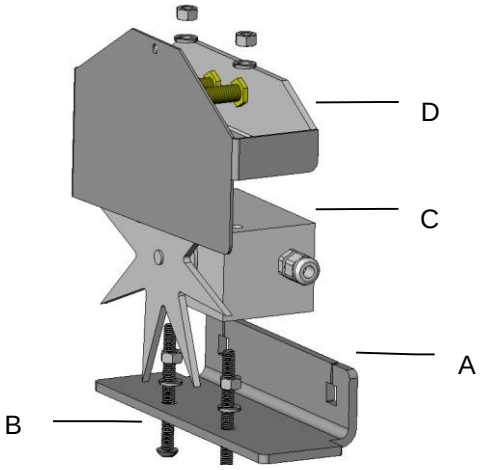
Transition Bracket Location



Cut 3/4" Off Bracket



Baler transition bracket

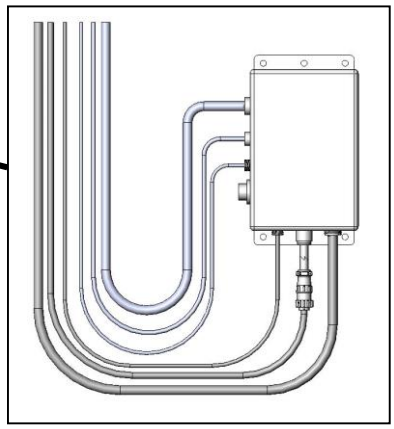



Star wheel assembly

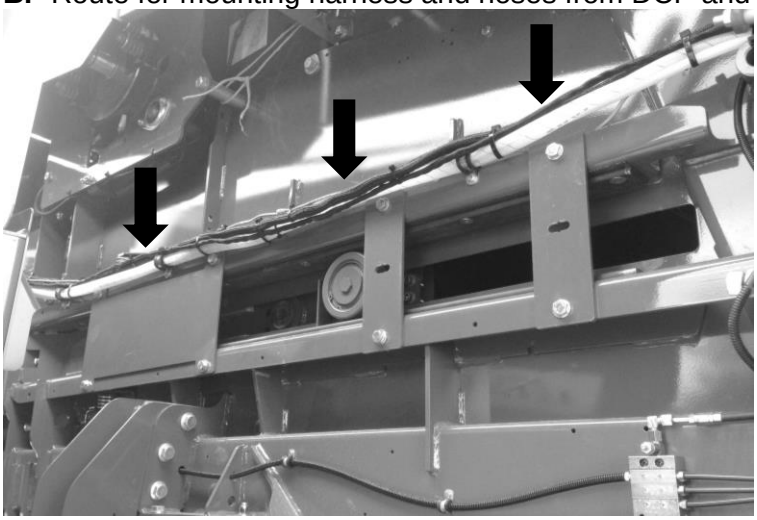
## John Deere L330 / L340 Balers Harness Routing and ISOBUS Connection

**A.** Main wiring harness and power cord connection to baler harness terminator connection

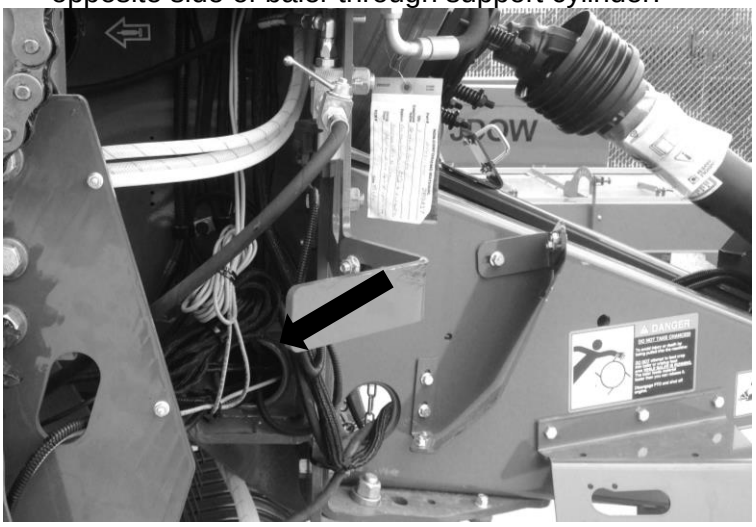

Route cords 006-6650LS2 along this path. Keep cords away from moving parts and hydraulic hoses. Secure with existing cable clamps or use cable ties. When all connections are made to DCP secure wires as shown below.



**B.** Route for mounting harness and hoses from DCP and Pumps

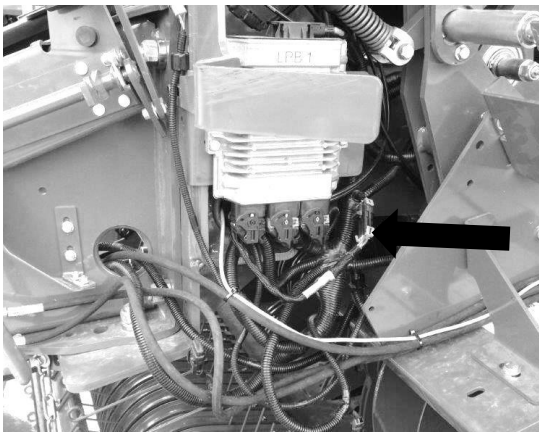


**C.** Route ISO Integration Harness (006-6650VAJ) to opposite side of baler through support cylinder.



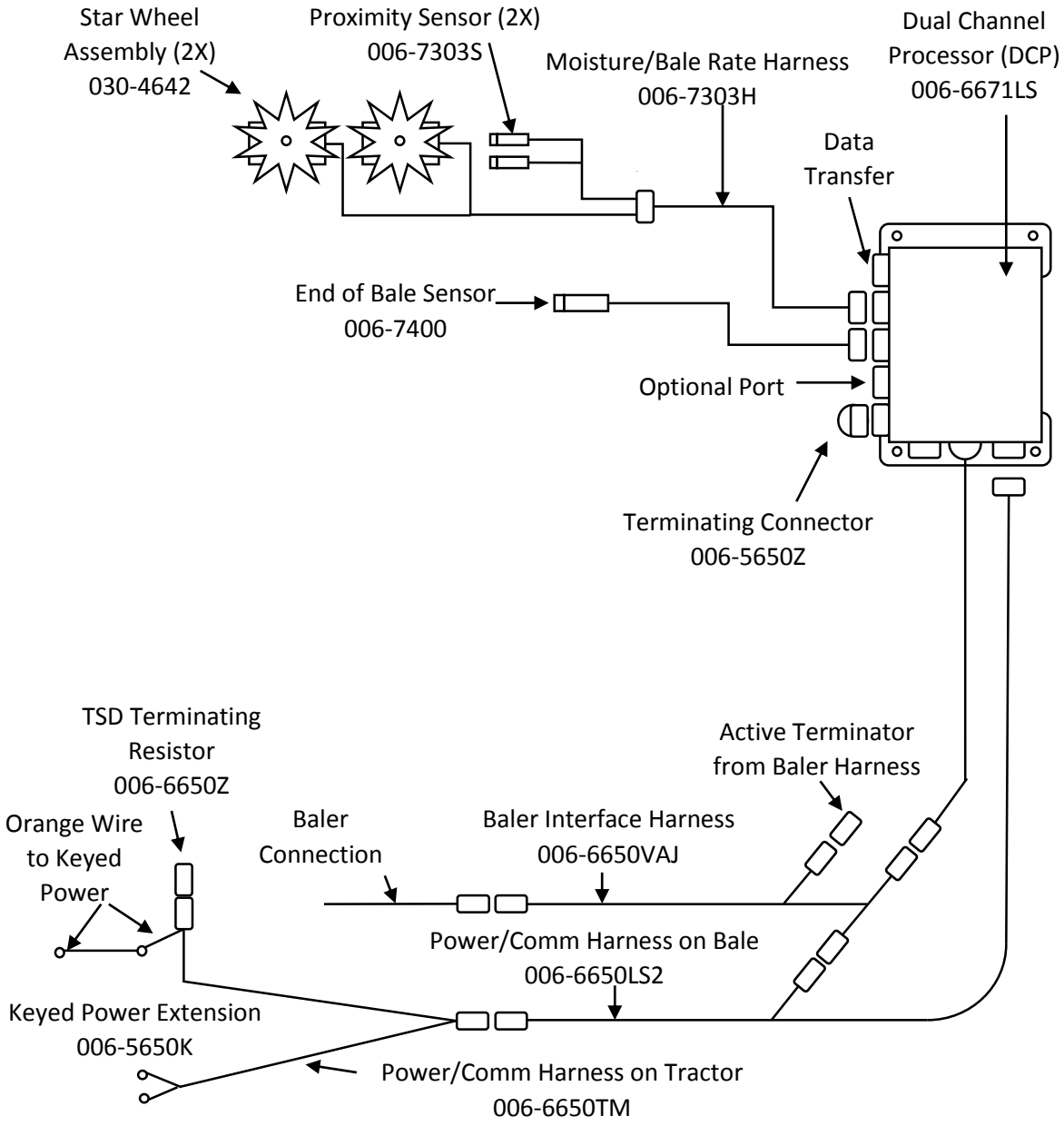
**D.** ISOBUS Connection

Locate harness 006-6650VAJ and connect to baler interface harness next to baler's processor (below) on front left side of baler. Remove baler terminating resistor and connect to short pigtail on 006-6650VAJ Harness.



## John Deere L330 / L340 Balers Harness/Wiring Installation for using ISOBUS Display

A. The **Baler Power/Communication Harness** (006-6650LS2) will attach to the open port of the Tractor **Harness** (006-6650TM) and run back to the **Dual Channel Processor** (DCP 006-6671LS).
B. Connect the large plug of the Baler Power/Communication Harness (006-6650LS2) to the bottom (shorter side) of the DCP.
C. Attach the **Baler Interface Harness** (006-6650VAJ) in between the short whip cable hardwired to the DCP and the main Power/Communication Harness. Make sure Active Terminator removed from the baler processor is attached to the Baler Interface Harness (006-6650VAJ).
    a. When using Bluetooth Receiver (030-6672A) or optional Touch Screen Display (030-5670A). Connect either option to Communication Harness (006-6650TM) in place of the ISO adapter (shown below) and connect the keyed power wire to a keyed power source on tractor.
D. Install the **Terminating Connector** (006-5650Z) to the port labeled **Modular Port** on the Pump Controller (006-5672).
E. Attach moisture and bale rate harness (006-7303H) to the DCP (006-6671LS).
F. Connect Keyed Power Extension harness (006-5650K) to a keyed power source.
G. Note: the Optional Port and the Data Transfer Port are not used in this application.



## Pin Outs

Power/Comm Harness 006-6650TM at Hitch

| | | |
|---|---|---|
| Pin 1 | Red | +12V Power to TSD |
| Pin 2 | Red | +12V Power to DCP |
| Pin 3 | Orange | Keyed Power |
| Pin 4 | Gray | Shield |
| Pin 5 | Green | HT Can Low |
| Pin 6 | Yellow | HT Can Hi |
| Pin 7 | Orange | Can1 Hi |
| Pin 8 | Black | Ground from TSD |
| Pin 9 | Black | Ground from DCP |
| Pin 10 | Blue | Can1 Low |


Power/Comm Harness 006-6650LS2 at Hitch

| | | |
|---|---|---|
| Pin 1 | Red | +12V Power to TSD |
| Pin 2 | Red | +12V Power to DCP |
| Pin 3 | Orange | Keyed Power |
| Pin 4 | Gray | Shield |
| Pin 5 | Green | HT Can Low |
| Pin 6 | Yellow | HT Can Hi |
| Pin 7 | Orange | Can1 Hi |
| Pin 8 | Black | Ground from TSD |
| Pin 9 | Black | Ground from DCP |
| Pin 10 | Blue | Can1 Low |


Display Plug on Harness 006-6650TM

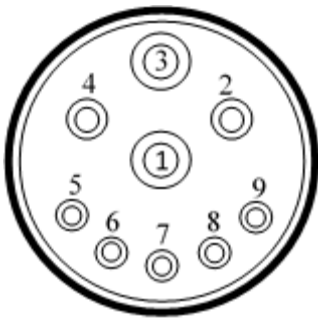
| | | |
|---|---|---|
| Pin 1 | Red | +12V Power from DCP |
| Pin 2 | Black | Ground from TSD |
| Pin 3 | Yellow | HT Can Low |
| Pin 4 | Gray | Shield |
| Pin 5 | Green | HT Can Hi |
| Pin 6 | Orange | Can1 Hi |
| Pin 7 | Blue | Can1 Low |


ISOBUS Plug Baler Side

| | | |
|---|---|---|
| Pin 1 | | N/A |
| Pin 2 | | N/A |
| Pin 3 | | 120 OHM with Pin 5 |
| Pin 4 | | N/A |
| Pin 5 | | 120 OHM with Pin 3 |
| Pin 6 | Orange | Can1 Hi |
| Pin 7 | Blue | Can1 Low |

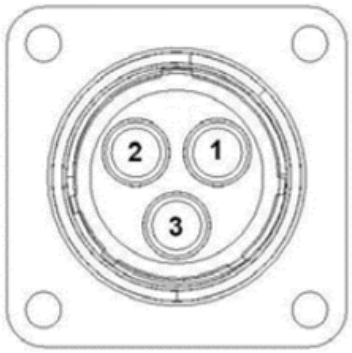

ISOBUS Plug Tractor Side

| | | |
|---|---|---|
| Pin 1 | | N/A |
| Pin 2 | | N/A |
| Pin 3 | | +12V Keyed Tractor Power |
| Pin 4 | | N/A |
| Pin 5 | | N/A |
| Pin 6 | | N/A |
| Pin 7 | | N/A |
| Pin 8 | Orange | Can1 Hi |
| Pin 9 | Blue | Can1 Low |



Main Power Connector on DCP

| | | |
|---|---|---|
| Pin 1 | Red | +12V Power from tractor |
| Pin 2 | Black | Ground from tractor |
| Pin 3 | Orange | Keyed power |

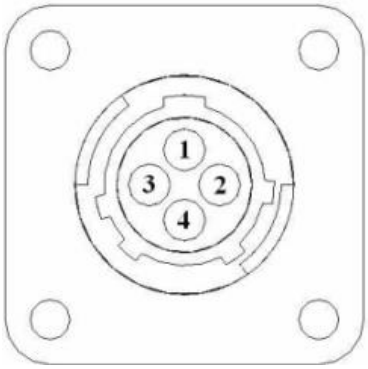



Star Wheel and Bale Rate Sensor connector on DCP

| | | |
|---|---|---|
| Pin 1 | Blue | +12V Power |
| Pin 2 | Orange | Ground |
| Pin 3 | Black | Signal for sensor 1 |
| Pin 4 | White | Signal for sensor 2 |
| Pin 5 | N/A | |
| Pin 6 | N/A | |
| Pin 7 | N/A | |
| Pin 8 | Violet | Star wheel input 1 |
| Pin 9 | Brown | Star wheel input 2 |

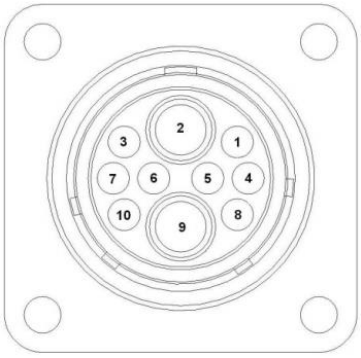

End of Bale sensor on DCP

| | | |
|---|---|---|
| Pin 1 | Brown | Sensor Power |
| Pin 2 | Blue | Sensor Ground |
| Pin 3 | N/A | |
| Pin 4 | Black | Signal from Sensor |



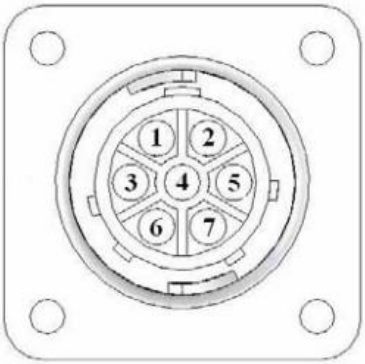

Pump Communication Plug on DCP

| | | |
|---|---|---|
| Pin 1 | Red | +12V Can |
| Pin 2 | Red | +12V Power |
| Pin 3 | Gray | Shield |
| Pin 4 | Green | Comm Channel OH |
| Pin 5 | Yellow | Comm Channel OL |
| Pin 6 | Blue | Comm Channel IH |
| Pin 7 | Orange | Comm Channel IL |
| Pin 8 | Black | Can Ground |
| Pin 9 | Black | Power Ground |
| Pin 10 | N/A | |



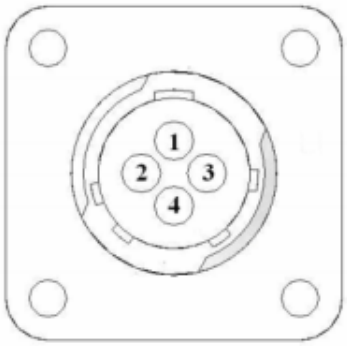

Pump Connection Colors

| | | |
|---|---|---|
| Pin 1 | Black with Orange Stripe | Pump 1 Ground |
| Pin 2 | Black with Green Stripe | Pump 2 Ground |
| Pin 3 | Black with Yellow Stripe | Pump 3 Ground |
| Pin 4 | N/A | |
| Pin 5 | Orange with Black Stripe | Pump 1 Positive |
| Pin 6 | Green with Black Stripe | Pump 2 Positive |
| Pin 7 | Yellow with Black Stripe | Pump 3 Positive |



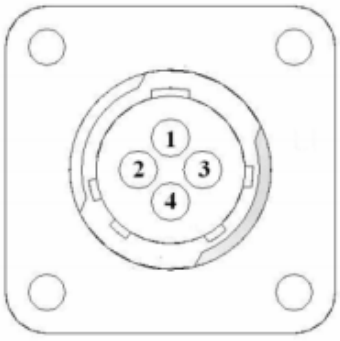
Flow Meter Connection on Pump Controller

| | | |
|---|---|---|
| Pin 1 | White | 5 - 12V (+) Supply |
| Pin 2 | Green | Ground |
| Pin 3 | Brown | Signal |
| Pin 4 | Black | Shield |



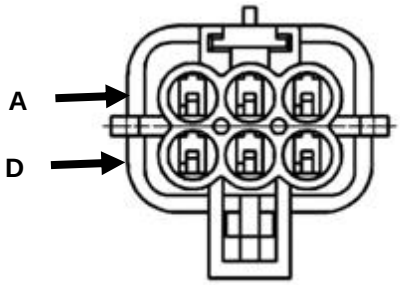

Connector for Crop Eyes on DCP

| | | |
|---|---|---|
| Pin 1 | Red | +12V Power |
| Pin 2 | Black | Ground |
| Pin 3 | White | Signal |
| Pin 4 | N/A | |




006-6650VAJ Harness to Baler Plug

| | | |
|---|---|---|
| Pin A | N/A | |
| Pin B | Red | TBC Power |
| Pin C | N/A | |
| Pin D | Gray | TBC Ground |
| Pin E | Orange | Can1 Hi |
| Pin F | Blue | Can1 Low |



## Common Questions

1. **How do I turn the system on/off?**
   Turn the key in the tractor to the ON position. The ISOBUS Monitor will turn on, and the baler, on 600J working screen tabs, will be viewable. Turn the system off by turning the tractor key OFF.

2. **How to get in the LBS/TON, MC%, and TONS/HR menus?**
   In the Main Menu press the SETUP MODE key. From this screen you can change your alarm settings and bale rate settings. See SETUP INSTRUCTIONS in the Operations Manual for a detailed explanation of this process.

3. **The moisture content displays "LO" or "HI" all the time.**
   When the moisture content display does not change frequently while baling, there is likely a faulty star wheel connection. One of the first places to check is inside the white star wheel block. Check to see if the electronic swivel is in the star wheel shaft and check to see that the star wheel shaft is not working out of the block. Also, check all star wheel wires and connectors to see if there is a continuity or grounding problem.

4. **Should the battery connections be removed before jump starting or charging a battery?**
   Yes. Anytime the tractor will have voltage going up rapidly the connections should be removed.

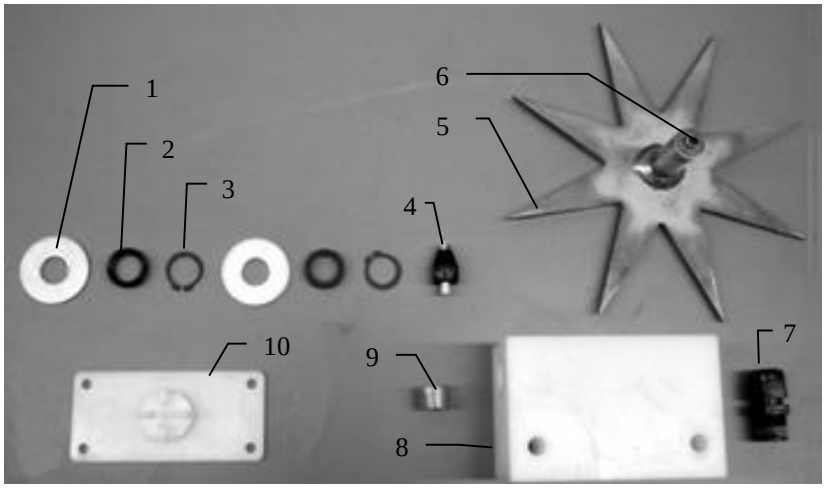
5. **Can the Harvest Tec 600J be updated for preservative or a tagger?**
   Yes. Consult your local dealer for part numbers and pricing.

Add Preservative Application:
500J4525B

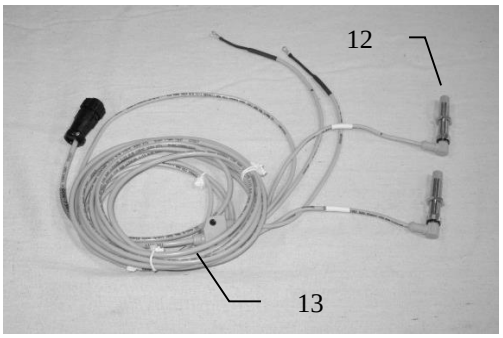
Add Tagger
030-0850

Add Moisture Dye Sprayer
030-0840

# Parts Breakdown for Star Wheel Moisture Sensors

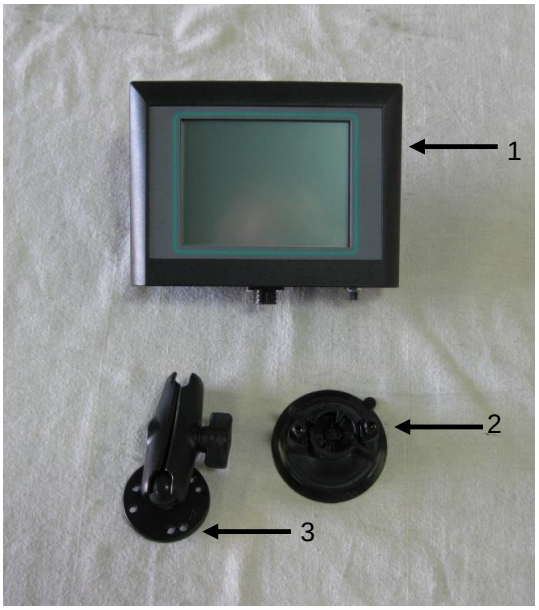



| Ref | Description | Part# | Qty | Ref | Description | Part# | Qty |
|---|---|---|---|---|---|---|---|
| 1 | Washer (per side) | 006-4642K | 2 | 8 | Star wheel block | 006-4641A | 2 |
| 2 | Dust seal (per side) | w/006-4642K | 1 | 9 | Plug fitting | 003-F38 | 2 |
| 3 | Snap ring (per side) | w/006-4642K | 2 | 10 | Block Cover | 006-4641B | 2 |
| 4 | Swivel | 006-4642A | 2 | **1-10** | **Star wheel assembly** | **030-4642** | **2** |
| 5 | Star wheel | 030-4641E | 2 | NP | Twine guard – right (prox) | 001-4644 | 1 |
| 6 | Insert | w/ Ref # 5 | 2 | NP | Twine guard - left | 001-4645 | 1 |
| 7 | Wiring grommet | 008-0821A | 2 | | | | |




| Ref | Description | Part# | Qty |
|---|---|---|---|
| 12 | Bale rate sensor | 006-7303S | 2 |
| 13 | Moisture and bale rate harness | 006-7303H | 1 |

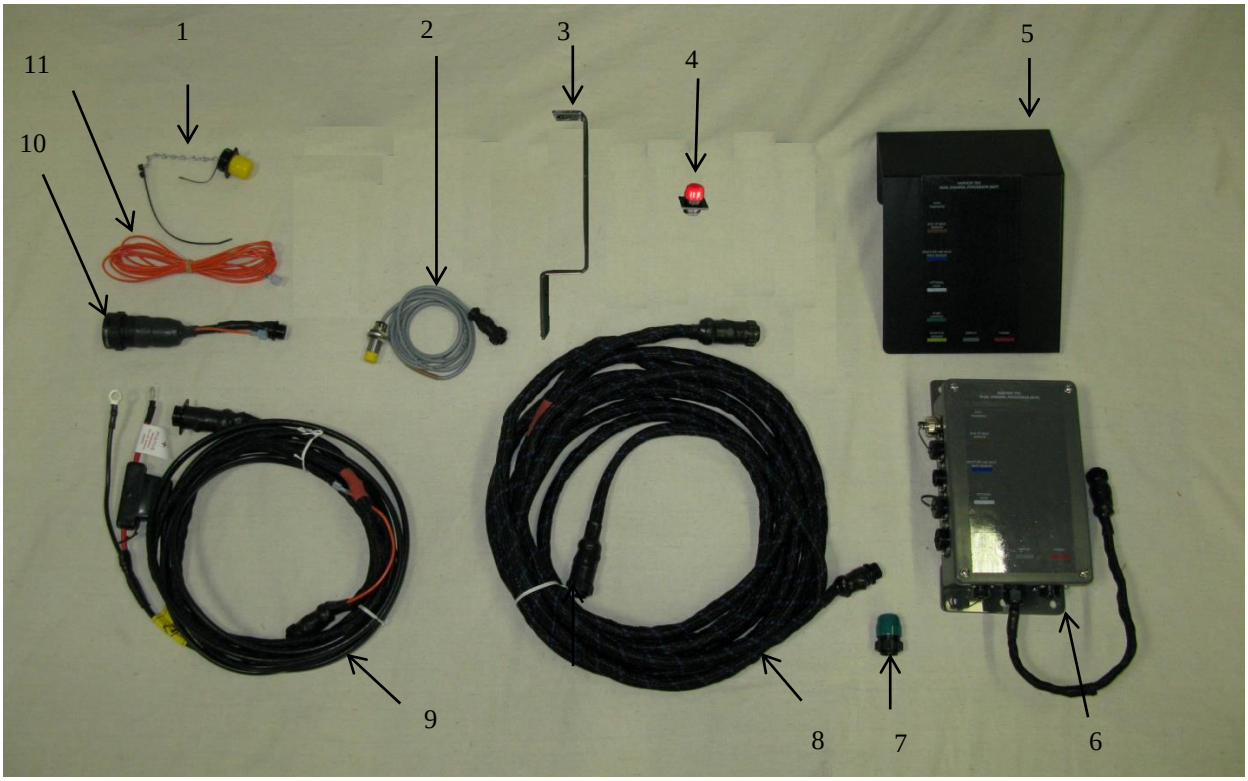
# Optional Touch Screen Display (TSD)




| | | |
|---|---|---|
| 1 | Touch Screen Display | 006-6670 |
| 2 | Suction Cup Mount | 001-2012SCM |
| 3 | RAM Mount | 001-2012H |
| | Complete Kit | 030-5670A |

# Parts Breakdown for 600J Series Control and Harnesses

## Dual Channel Processor (DCP)




| Ref | Description | Part Number | Qty |
|---|---|---|---|
| 1 | Dust Plugs | 006-5651PLUGS | 1 |
| 2 | End of Bale Sensor 600 Series | 006-7400 | 1 |
| 3 | End of Bale Sensor Bracket | 001-4948 | 1 |
| 4 | TSD Terminating Resistor (Red Cap) | 006-6650Z | 1 |
| 5 | DCP Shield Cover | 001-5650X | 1 |
| 6 | DCP Main Control LS 600 AUTO | 006-6671LS | 1 |
| 7 | Terminating Connector (Green Cap) | 006-5650Z | 1 |
| 8 | DCP Baler Harness 30 Ft | 006-6650LS2 | 1 |
| 9 | DCP Tractor Harness | 006-6650TM | 1 |
| 10 | ISOBUS Tractor Plug | 006-6670A | 1 |
| 11 | Key Switch Wire | 006-5650K | 1 |
| NP | Baler Integration Harness | 006-6650VAJ | 1 |

# WARRANTY AND LIABILITY AGREEMENT

Harvest Tec, Inc. 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, Inc. 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, Inc.

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, Inc. within 30 days of the failure. Parts must be returned through the selling dealer and distributor, transportation charges prepaid.

This warranty shall not be interpreted to render Harvest Tec, Inc. 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, Inc. 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, Inc. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, Inc. 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.

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