

OPERATION MANUAL

Model 500A1

Moisture Sensor Kit for Large Square Balers




DECLARATION OF APPLICATION OF ESSENTIAL REQUIREMENTS OF THE DIRECTIVE 2006/42/ EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 17, MAY, 2006 AND OTHER RELEVANT EU DIRECTIVES: The Harvest Tec Hay Moisture Sensor Kit conforms with the Directive and other relevant EU directives.

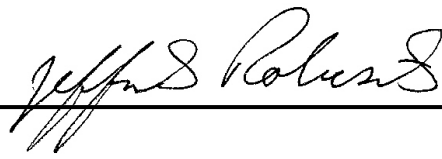
SERVICE DUTY OF THE PARTIALLY COMPLETED MACHINE: The Harvest Tec Hay Moisture Sensor Kit will only be put into service after installed on a hay baler that has been declared to conform with the Directive.

Noise from the Harvest Tec Moisture Sensor Kit does not exceed 70 dB (A).

Manufacturers Name Plate

<p>Harvest Tec Inc. Manufactured at and correspondence to: 2821 Harvey Street Hudson, WI 54016 USA</p>	
<p>Model</p>	
<p>Build Date</p>	
<p>Serial No.</p>	

PERSON AUTHORIZED TO PROVIDE INFORMATION ON THE MACHINE AND WHO MAKES THIS DECLARATION:



Jeffery S. Roberts, President, Harvest Tec, Inc.

Signed in Hudson, WI, USA on May 21, 2011

500A1 OPERATIONS MANUAL TABLE OF CONTENTS

	<u>PAGE</u>
SAFETY	4
OPERATION OF THE 500A1 MOISTURE SENSOR KIT	5
INTRODUCTION AND REQUIREMENTS	5
BALER MONITOR SETUP	6
SYSTEM SETUP	6-9
ADJUST THE MOISTURE ALARM	10
OPTION TO TURN OFF/ON ALL ALARMS OR BEEPS	11-12
PARTS BREAKDOWN	13
CONTROLS AND HARNESSSES	13
STARWHEEL SENSORS	14
COMMON QUESTIONS	15
TROUBLESHOOTING	16
WARRANTY	17

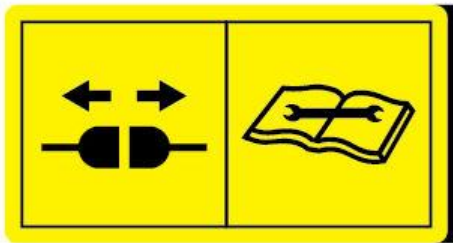
Safety

Carefully read all safety signs in this manual and on the moisture sensor kit before use. Keep signs clean and clear of obstruction to view. Replace missing or damaged safety signs. Replacement signs are available from your local authorized dealer. See your installation manual under the replacement parts section for the correct part numbers.

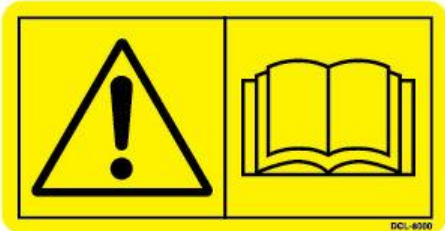
Keep your moisture sensor kit in proper working condition. Unauthorized modifications to the moisture sensor kit may impair the function and/or safety of the machine.

Carefully read and understand all safety signs before installing or servicing.

Safety Signs



Number 1
Disconnect power before servicing.
Part no. DCL-8003



Number 2
Read and understand the operator's manual
before using or working around the equipment.
Part no. DCL-8000

OPERATION OF 500A1 MOISTURE SENSOR KIT

Introduction and Requirements

Thank you for purchasing a 500A1 Moisture Sensor Kit and congratulations. The 500A1 Moisture Sensor Kit is designed to work with any AGCO 2150-2190 or Challenger LB33B-LB44B large square balers Model Year 2008 and newer. If you do not have the AGCO Bale Chute Scale option you will need the parts listed below:

AGCO part numbers:

700733748 Square Baler Module (SBM)

700733750 Wire Harness (only needed on 2008-2011 Balers)

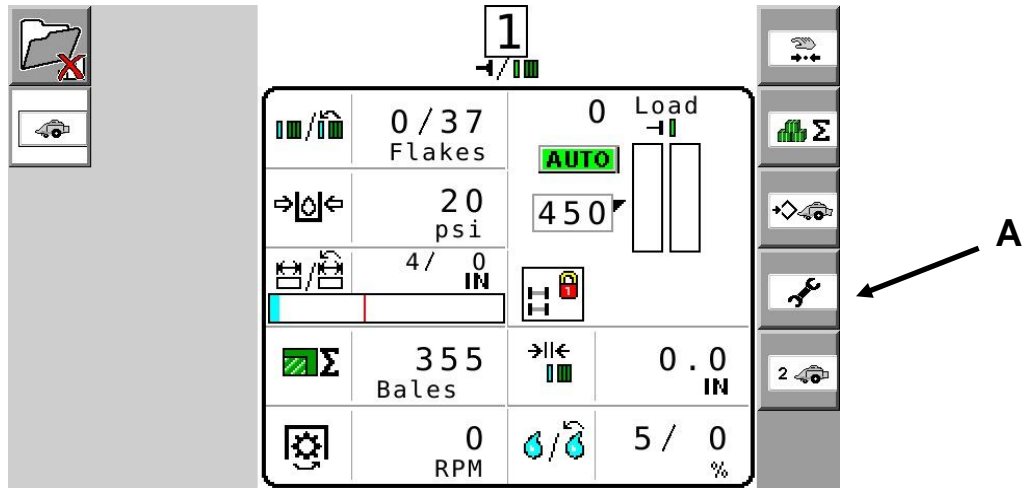
The Square Baler Module (SBM) and the Square Baler Controller (SBC) must run on version 3.0 or higher. Please consult the Baler Operation Manual for more information.

For instructions on **How to Mount the 500A1** to the Baler please refer to the 500A1 Installation Manual.

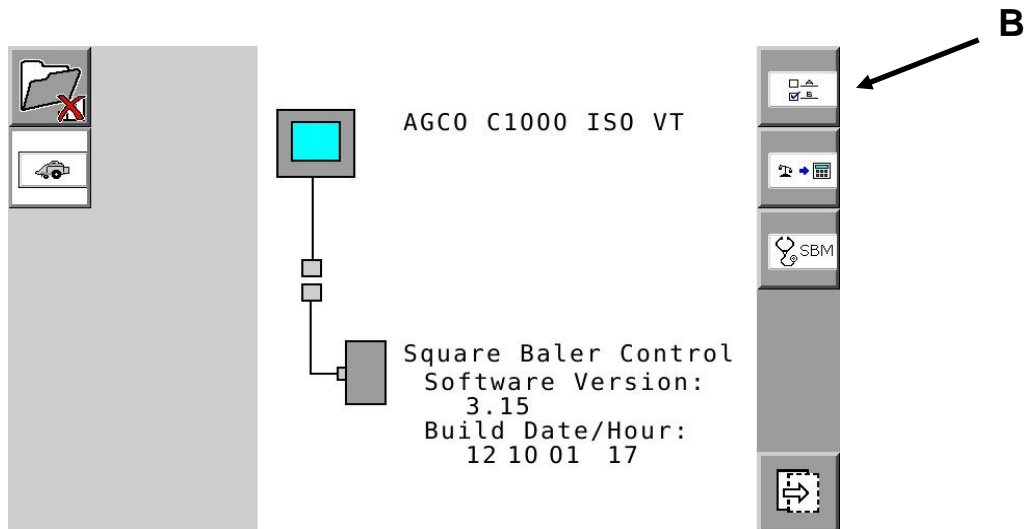
Baler Monitor Setup

System Setup

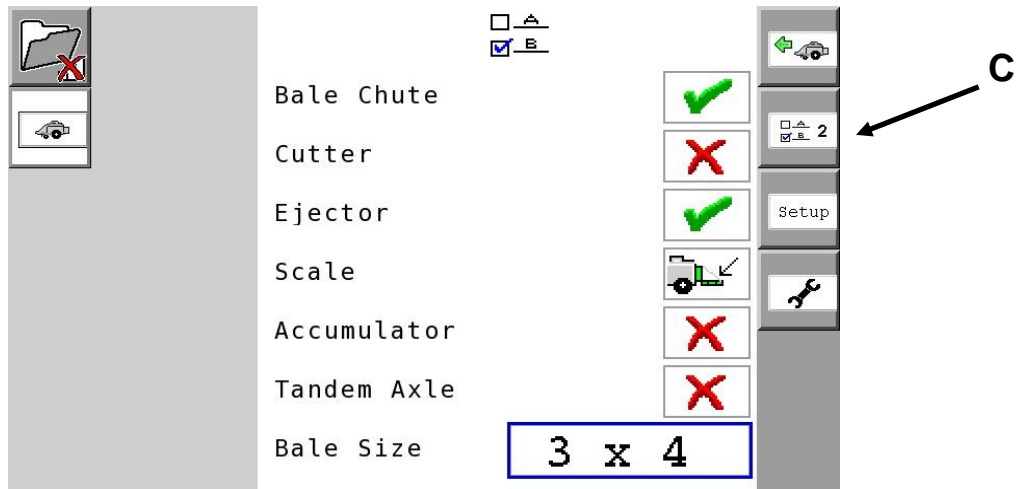
1. To view moisture from the 500A1 Moisture Sensor begin setup at the main baler screen. Select the **WRENCH** icon (arrow A) which is the fourth icon down on the right side of the screen-the right selection menu.



2. The service screen displayed below should appear. Press the **AB** icon (arrow B) located at the top right of the selection menu.



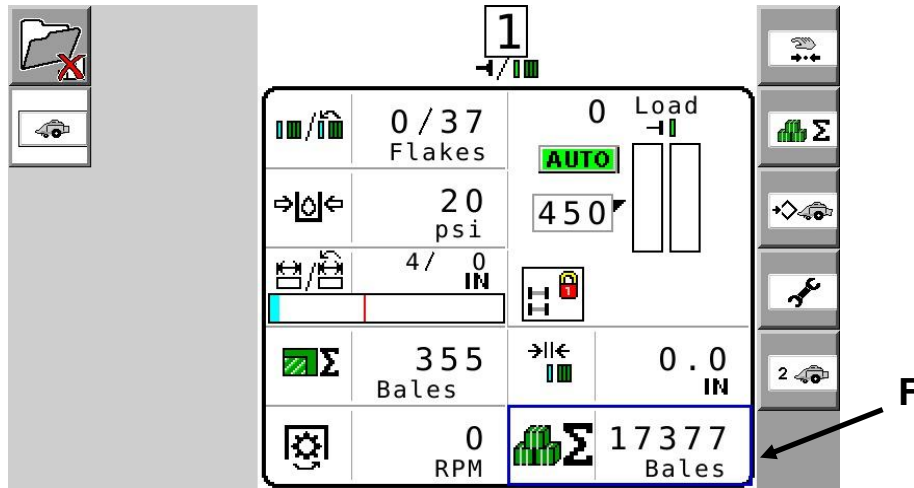
- The A B screen will appear. Next select the **A B 2** (arrow C) icon which is the second from the top on the far right selection menu.



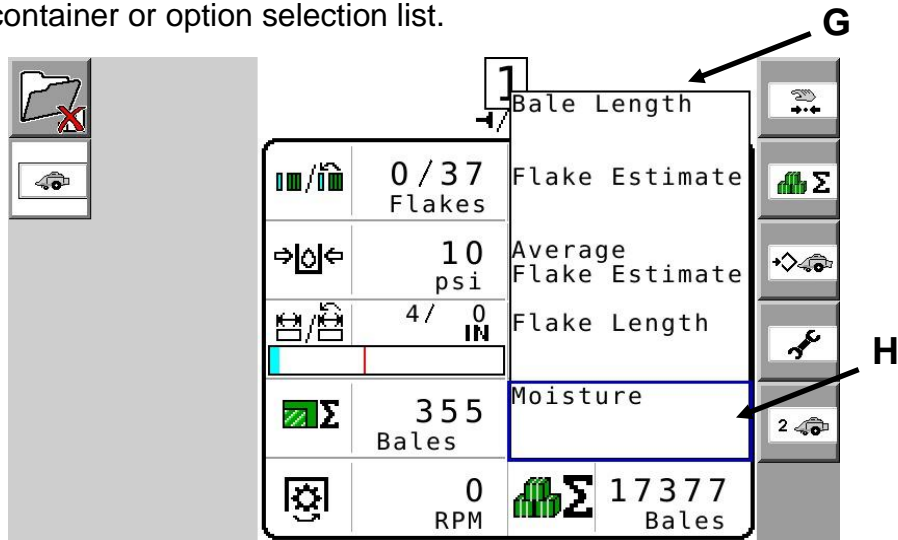
- The A B 2 screen will appear. The **Harvest Tec** On/Off selection icon can now be selected. To turn the Harvest Tec Moisture Sensor On (signified by a **green check mark**) or Off (signified by a **red X**) navigate to the box and select by pressing **On/Off** (arrow D). Once the Harvest Tec Moisture Sensor has been turned On/Off you can navigate back to the main baler work screen by pressing the **BALER** (arrow E) icon on the top right of the selection menu.



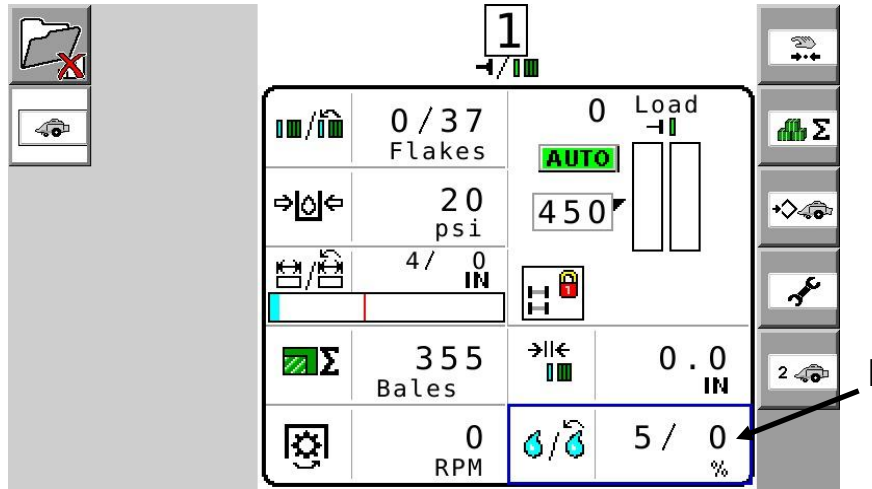
- The main baler work screen will appear. Select the **container or option** (arrow F) where you have positioned it on this screen to view and adjust moisture. *Note: This can be done on the primary or secondary baler work screen. The screen has been or can be customized for viewing containers or options as you would like and as guided in the baler manual.*



- Once the user has selected the menu option or container they would like to change, a **drop down list** (arrow G) will appear. The **Moisture option** (arrow H) should be at the bottom of the drop down container or option selection list.

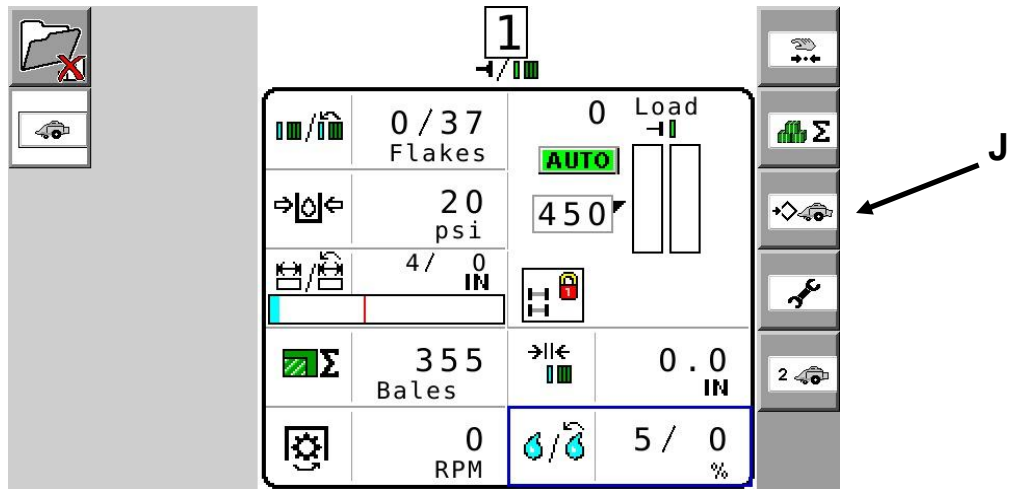


7. Select the desired moisture and it will appear on the baler work screen as pictured below. The two values indicated in the moisture option are as follows: **current moisture / last bale average moisture** (arrow I).

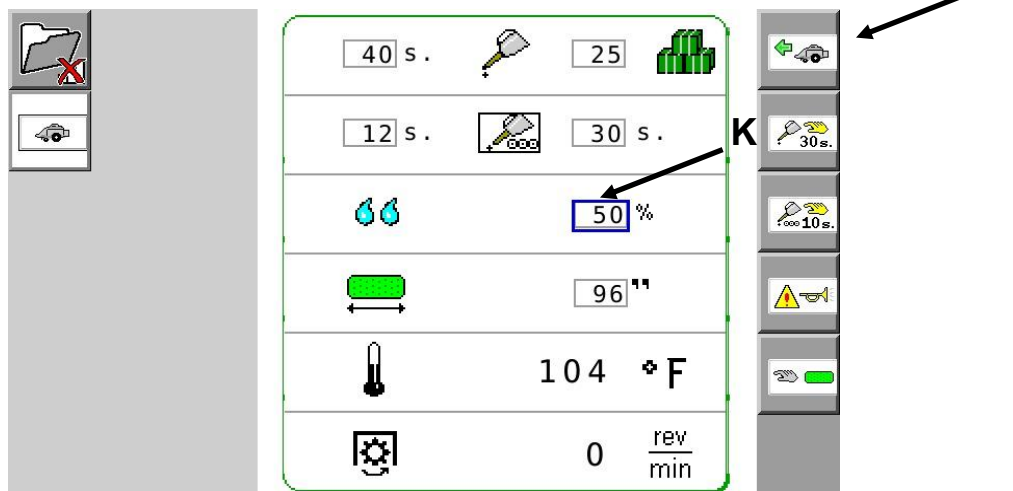


To Adjust the Moisture Alarm

1. From the main baler screen, select the third icon down the right selection menu that shows a **diamond beside a baler** (arrow J).

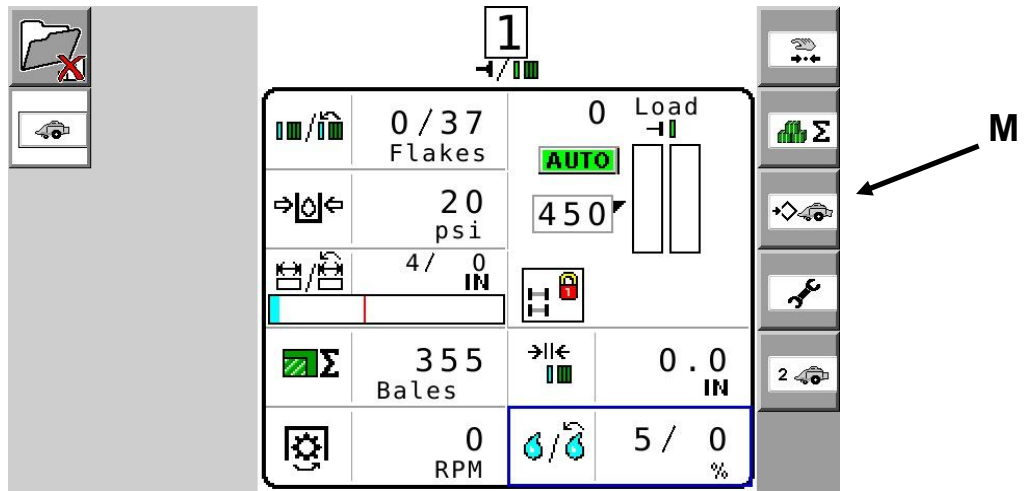


2. To adjust the moisture alarm set point select the **box option to the right of the moisture droplets** (arrow K) and adjust to the desired moisture limit. To return to the baler work screen, press the baler icon at the top right of the selection menu (arrow L).

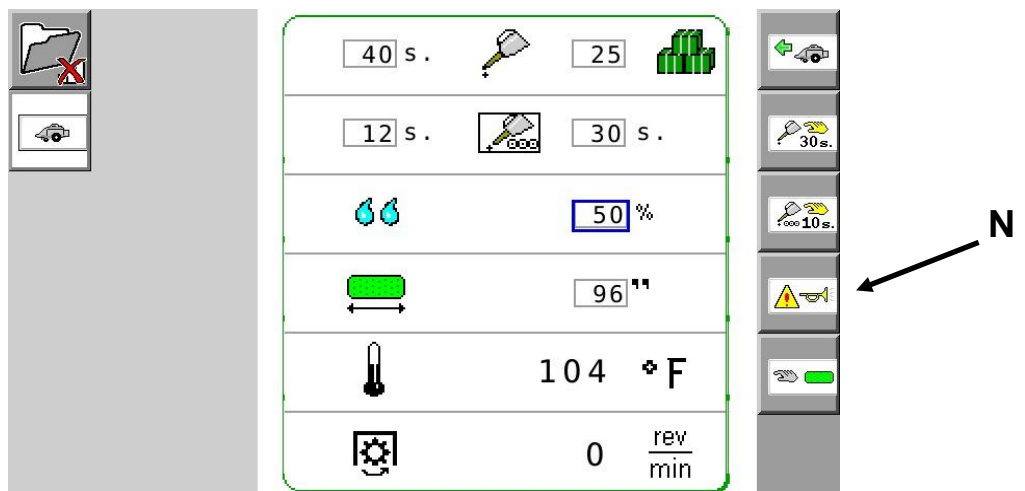


Option to turn Off/On all Alarms or Beeps

1. From the main baler work screen select the third icon down the right selection menu that shows a **diamond beside a baler** (arrow M).



2. Select the fourth icon down on the right selection menu showing a **bugle beside an alarm** icon (arrow N).



3. The alarm screen should now be displayed. All alarms can be silenced before they are ever heard. This can be done by selecting the **Peak Moisture** icon (arrow O) and turning the alarm On/Off. To return to the baler work screen, press the baler icon located at the top right of the selection menu.



Please refer to the baler service manual for software updates.

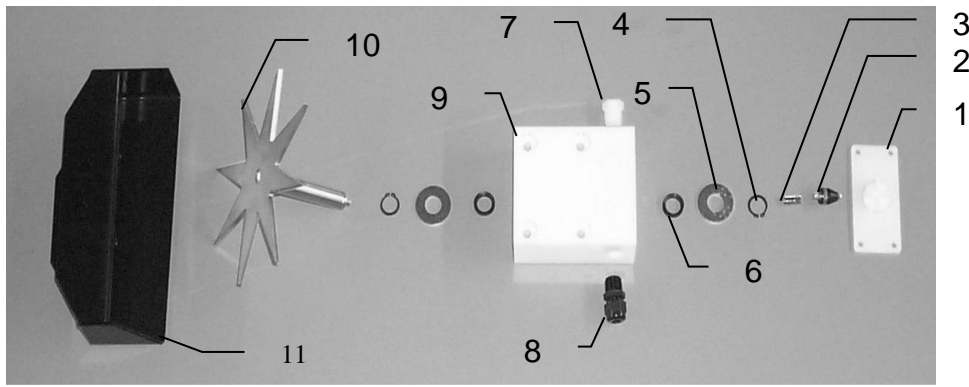
PARTS BREAKDOWN

Controls and Harnesses



<u>No.</u>	<u>Description</u>	<u>Part no.</u>	<u>Qty</u>	<u>No.</u>	<u>Description</u>	<u>Qty</u>
1	Star wheel spacer	001-6707E	2	11	5/16" nuts	22
2	Star wheels	006-4641	2	11	5/16" lock washers	14
3	Moisture harness	006-4640E2	1	11	5/16" flat washer	4
4	PIP cover	001-5650X	1	12	10/24 x 5/8" PHS	8
5	Precision Information Processor (PIP)	006-5671LS2	1	12	10/24 lock washers	8
6	Comm. harness	006-5650J	1	13	5/16" x 1/2" BHCS	8
7	Terminating resistor	006-5650JT	1	14	5/16" x 2-1/4" hex bolt	8
8	Wire clips	008-9018	9	15	5/16 x 1" hex bolt	4
9	Twine diverter	001-4645H	1	16	12" cable ties	5
10	Twine diverter	001-4644H	1			
NP	Terminating resistor	006-5650Z	1			

Star Wheels Sensors



<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>	<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>
1.	Block cover	006-4641B	2	9.	Star wheel block	006-4641A	2
2.	Electronic swivel	006-4642A	2	10.	Star wheel sensor	030-4641C	2
3.	Swivel insert	w/ Ref # 10	2	11.	Twine guard-left	001-4645	1
4.	Snap ring (per side)	006-4641K	2		Twine guard-right (prox)	001-4644	1
5.	Washer (per side)	w/006-4641K	2		Twine guard-left for Agco	001-4645H	1
6.	Dust seal (per side)	w/006-4641K	2		Twine guard-Right for Agco	001-4644H	1
7.	Plug fitting	003-F38	2	1-10	Star wheel assembly	030-4641	2
8.	Wiring grommet	008-0821A	2	12.	Spacer plate for Agco	001-6707E	2

COMMON QUESTIONS

How do I turn the system on/off? Turn the key in the tractor to the on position. The 500A1 starts when the baler VT is started. The moisture will display once crop has been fed into the baler.

The moisture content displays “0%” or “HIGH” all the time.

When the moisture content display does not change frequently while bailing, 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 star wheel wires and connections to see if there is a continuity or grounding problem.

Another possible cause could be dirt in the terminating resistor on the side of the PIP. Wipe clean and use dielectric grease. Or replace it.

If there is communication failure with the CAN (Controlled Area Network) the error message HARVEST TEC NOT DETECTED will display on the screen.

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.

Can the Harvest Tec 500A1 be updated for preservative or a tagger? Yes. Please ask your Dealer and/or your Harvest Tec representative for more details. Listed below are compatible attachments.

Add Preservative Application:

HT5A14518B	Standard	2150-2190
HT5A14519B	Cutter	2150-2190
HT5A14527B	Packer	2150-2190
HT5A14530B	2170 XD with Cutter	

Add Tagger

HT5A10850

Add Dye Spray Marker

HT5A10840

TROUBLE SHOOTING CHECKS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Moisture reading errors (high or zero)	Wire disconnected or bad connection between star wheels	Reconnect wire
	Low power supply to PIP	Check voltage at box (min of 12 volts required). See diagnostics section of manual.
	Wet hay over 75% moisture	
	Ground contact with one or both star wheels and baler mounted processor.	Reconnect
	Short in wire between star wheels and PIP.	Replace wire.
Moisture readings erratic	Test bales with hand tester to verify that cab monitor has more variation than hand tester.	
	Check all wiring connections for corrosion or poor contact.	Apply dielectric grease to all connections.
	Check power supply at tractor. Voltage should be constant between 12 and 14 volts.	Install voltage surge protection on tractor alternator.
Moisture alarm constantly sounding	Crop moisture too high.	Stop baling.
	Peak moisture set too low.	See section on moisture alarm adjustments.

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.

Revised 01/13

For questions regarding installation of hardware please contact:

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