

OWNER'S MANUAL

Model 477 FOR JOHN DEERE SELF-PROPELLED FORAGE WINDROWERS

HARVEST
TEC *Equipment and Products
for Quality Hay.*

010-0477
REV 7-07

The Harvest Tec model 477 Acre Meter is designed to be installed on John Deere model 4890, 4895, 4990, and 4995 self-propelled windrowers. The meter will monitor:

Rate of cutting in Acres/Hr

Acres cut by: field, last field, day, yesterday, and season.

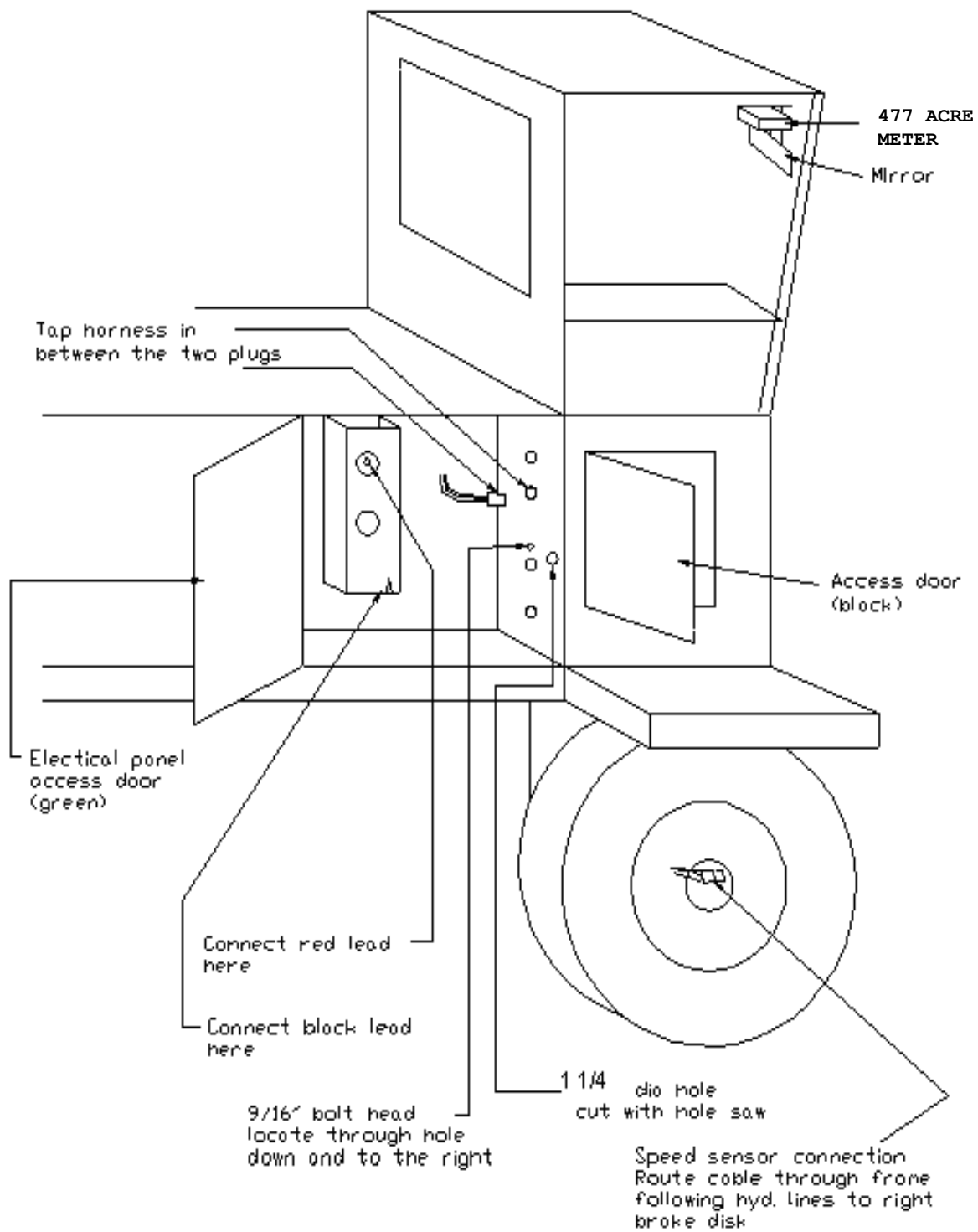
The 477 will take signals off of the windrower for speed base on the tachometer input sensor located on the right-hand drive wheel of the windrower. With accurate input by the operator for width of cut and tire size, the 477 will calculate the acre values listed. The sensor wire plug located by the brake disc will be tapped to provide the speed input.

The meter will be activated, only when the head is engaged and in the down position. The meter will be de-activated when the head is lifted, so that running time in the non-cutting mode will not be counted. Lifting the head a small amount for operation in rough fields will not de-activate the meter. Signal input for head engage and head raise and lower are all tapped at the plug linking armrest functions to machine devices, located at the back of the cab. Follow these instructions for setup and operation to assure proper function of the 477 meter.

INSTALLATION INSTRUCTIONS:

1. Locate the meter in the cab, directly above the interior rear view mirror as pictured in figure 1. Note that the fit is tight against the cab's ceiling so it is important to position the meter correctly. Hold the meter in place and mark the position for a 3/8" hole to accept the meter's mounting stud. To drill the hole, remove the headliner and unbolt the mirror bracket for drilling. Bolt the meter in place with the 5/16" nuts provided.
2. Open the electrical panel access door on the front right side of the engine compartment. The meter harness will tap power and signals for head engage, raise and lower at this point. Drill a 1 1/4" hole in the back of the cab wall to run the harness to the meter. Use the 1 1/4" grommet provided to seal the hole into the cab and protect the harness.
3. Run the harness connection with the 9 pin round connector to the back of the meter. Secure the wire on the right cab post with the padded clips provided.
4. Connect the positive and negative power leads to the power terminals of the windrower. In the electrical access panel, the positive terminals are under a black guard. The positive wire (red) should be connected to the top terminal so that the meter will power up with the ignition switch. The negative wire (black) should be grounded to the grounding terminal just below it.

Figure 1



5. Disconnect the 14 pin round connector coming from the armrest into the electrical panel. Connect the meters 14-pin connector between the male and female connector of the machine. Make sure all connections are tight.
6. Run the remaining lead to the speed sensor by the machines right-hand brake disc located right inside the right drive wheel. There is a wire disconnect attached to the speed sensor. Disconnect the wire and plug in the male and female connections on the meters harness. Make sure to use the tie wraps provided to keep this wiring assembly away from all moving parts.
7. The meter is now ready to use. Follow the start-up check procedure below to assure that installation has been completed successfully:
 - a. Power the windrower up and check the screen display. It should display:

RATE IS ?? A/HR

- b. Engage the head.
- c. Lower the head and move forward. The screen should come up with a rate in acres per hour.
- d. Raise the head and the screen should again display "RATE" ???

If this check out procedure is okay, the meter is now ready for setup and use.

SET-UP INSTRUCTIONS:

1. Setting the cutting width:

PUSH THE SELECT KEY ONCE
The display will read the set cut width

SET CUT WIDTH __

USE THE LEFT AND RIGHT ARROW KEYS TO SET YOUR CUTTING WIDTH.

2. Setting the tire size:

PUSH THE SELECT KEY ONE MORE TIME
The screen will read the set tire radius

SET TIRE SIZE __

USE THE LEFT AND RIGHT ARROW KEYS TO SET THE RADIUS OF YOUR TIRE.

To determine the radius of the tire on your windrower, follow these steps:

1. Make sure that your tire is properly inflated. Make a mark on the tire and a corresponding mark on the ground lining up with the mark on the tire. Drive the windrower forward until the mark on the tire has completed one rotation (this should be done over a surface similar to a hay field). Make another mark on the ground lining up with the mark on the tire. Measure the distance between the marks.
2. **Divide this distance by 6.28 and enter this as the tire size value.**
3. For model 4895 after serial number E04895X 164201
Model 4990 after serial number E004990X 163101
Adjust the tire radius according to the following table

TIRE RADIUS	ENTER
22	21
23	22
24	23
25	23
26	24
27	25
28	26
29	27
30	28
31	29
32	30

**AFTER THE CORRECT CUTTING WIDTH AND TIRE SIZE HAVE BEEN ENTERED, THE 477 METER IS READY TO USE.

Model 477 Acre Meter Operating Instructions

What each button shows in normal operations screens

Left Arrow

Field XX Acres
L Field XX Acres
Day XX Acres
Yesterday XX Acres
Year XX Acres

Select

Set Cut Width XX
Set Tire Size XX

Right Arrow

Field XX Acres
Day XX Acres
Year XX Acres

To check Field, Day, or Year Acres.

- Push right or left arrow until desired display shows. After viewing push right or left arrow until you are back to the main screen
- **(DO NOT PUSH SELECT WHILE CHECKING ANY OF THESE SCREENS. BY DOING SO YOU COULD RESET THAT VALUE)**

To Reset Field, Day or Year Acres

To reset Field Acres

- Push right or left arrow until (Field XX Acres) shows.
- Push select button once. (?Reset Field Acres?) shows.
 - o This is asking do you really want to do this
- Push select button again (! Reset Field Acres !) shows
 - o This is telling you it will reset with the next push
- On the third push the box resets the field acres and dumps this info into the L Field screen.

To reset Day Acres

- Push right or left arrow until (Day XX Acres) shows.
- Push select button once. (?Reset Day Acres?) shows.
 - o This is asking do you really want to do this
- Push select button again (! Reset Day Acres !) shows
 - o This is telling you it will reset with the next push
- On the third push the box resets the Day acres and dumps this info into the Yesterday screen.

To reset Year Acres

- Push right or left arrow until (Year XX Acres) shows.
- Push select button once. (?Reset Year Acres?) shows.
 - o This is asking do you really want to do this
- Push select button again (! Reset Year Acres !) shows
 - o This is telling you it will reset with the next push
- On the third push the box resets the Year acres.

To Reset L Field or Yesterday Acres

You will notice that you will not be able to reset the L Field or Yesterday Acres like you can Field, Day, or Year. Use the following procedure to reset

To reset (L Field XX Acres)

- Push right or left arrow until (Field XX Acres) shows. **Not L Field**
 - o There will be a series of six resets to accomplish this
- Push select button once. (?Reset Field Acres?) shows.
 - o This is asking do you really want to do this
- Push select button a second time (! Reset Field Acres !) shows
 - o This is telling you it will reset Field Acres with the next push
- Push select button a third time and (Field 0 Acres) show
- Push select button a fourth time. (?Reset Field Acres?) shows.
 - o This is asking do you really want to do this
- Push select button a fifth time (! Reset Field Acres !) shows
 - o This is telling you it will reset Field Acres with the next push
- Now you will notice that L Field is at 0 Acres when you scroll through the left hand arrow menu.

To reset (Yesterday XX Acres)

- Push right or left arrow until (Day XX Acres) shows. **Not Yesterday**
 - o There will be a series of six resets to accomplish this
- Push select button once. (?Reset Day Acres?) shows.
 - o This is asking do you really want to do this
- Push select button a second time (! Reset Day Acres !) shows
 - o This is telling you it will reset Day Acres with the next push
- Push select button a third time and (Day 0 Acres) show
- Push select button a fourth time. (?Reset Day Acres?) shows.
 - o This is asking do you really want to do this
- Push select button a fifth time (! Reset Day Acres !) shows
 - o This is telling you it will reset Day Acres with the next push
- Now you will now notice that L Field is at 0 Acres when you scroll through the left hand arrow menu.

Thing to remember.

- When looking at your Field, L Field, Day, Yesterday, Year Acres harvested **do not push the select button**. It could reset your total and make you think that your totals are not working. To get back to the main operating screen just push right or left arrow until you get back to main screen.
- The Acre meter uses a scrolling menu index. To get back to the main operating screen you will have to scroll through the other menu choices. Do this by pushing either the right or left arrow.

Remember that the left arrow will allow you to scroll through all acre totals. The right arrow will only give you Field, Day, and Year totals

Common questions about the 477:

1. The meter does not go back to “??” when the head is raised.

The 477 acre meter is designed to start counting when it sees a signal that head has been lowered. The meter will not stop counting or display “??” until it sees an up signal for more than three seconds or three to four bumps of the head up switch. This is a common occurrence at the end of the field when turning around. Raising the head fully should correct this problem.

2. Meter does not go back to “??” when not moving forward.

The 477 acre meter uses the same magnetic speed sensor that is used on the machine to calculate acres. This sensor is located on the right hand wheel of the machine. The sensor works by counting the revolution of the wheel through holes in the brake disc. If the machine stops and the sensor is half on or half off one of the holes, it may still give a signal. Make sure the sensor is securely fastened to the machine. Raising the head all the way or disengaging the head when not moving will correct the problem.

3. Unit loses all inputs or memory or locks up.

If the 477 acre meter has an extreme power spike, (i.e. jump start, short in power, overcharging of battery) it can cause the meter to reset itself. Keep track of the conditions that cause this failure. If this becomes a common occurrence your meter may need to be serviced.

Wiring Keys:

14 Pin plugs for armrest harness tap

<u>PIN NUMBER</u>	<u>WIRE COLOR</u>	<u>FUNCTION</u>
1	Green	Jumper
2	Blue	Tap-head engage
3	Orange	Tap-head up
4	Yellow	Tap-head down
5	White	Jumper
6	Brown	Jumper
7	Open	
8	Open	
9	Open	
10	Violet	Jumper
11	Pink	Jumper
12	Tan	Jumper
13	Light blue	Jumper
14	gray	Jumper

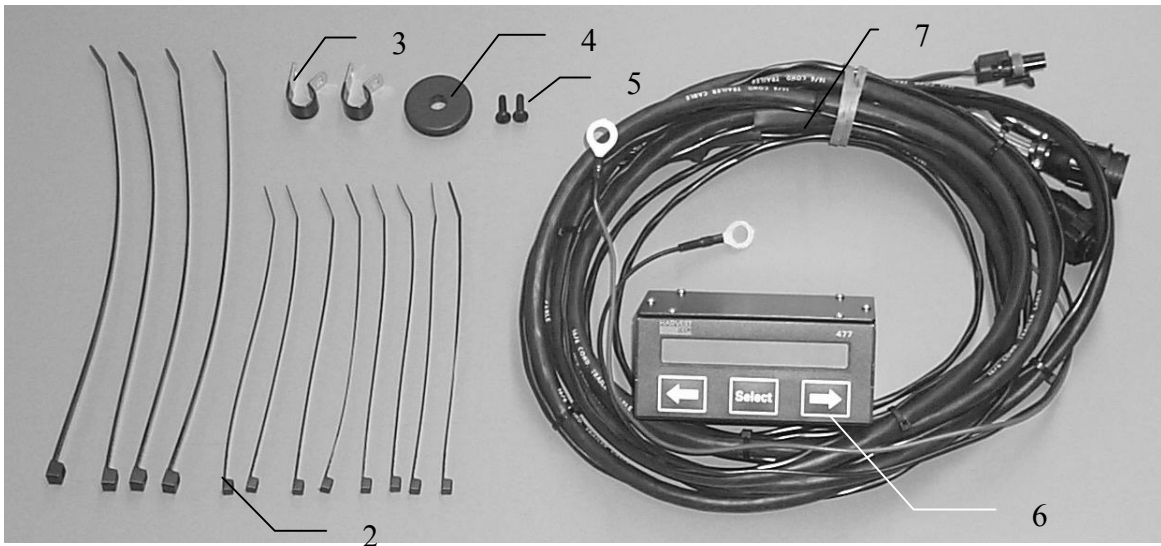
9 Pin connector to 477

<u>PIN NUMBER</u>	<u>WIRE COLOR</u>	<u>FUNCTION</u>
1	Red	Power-positive
2	Black	Power-negative
3	Blue	Head engage
4	Orange	Head up
5	Yellow	Head down
6	Brown	Speed sensor-positive
7	Blue	Speed sensor-negative
8	Shield	
9	Open	

2 pin tag for speed sensor

<u>PIN NUMBER</u>	<u>WIRE COLOR</u>	<u>FUNCTION</u>
A	Brown	Positive
B	Blue	Negative

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<u>Ref</u>	<u>Description</u>	<u>Part #</u>
1	Cable ties-12"	
2	Cable ties8"	
3	Jiffy clips	008-9014
4	Grommets	008-0840
5	Black bolts	
6	Control box	006-4220
7	Wiring harness	006-4221

NOTES:

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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