



16027 Hwy 64 East – Anamosa, Iowa 52205

Phone: 319-462-2344 or 888-962-2344

Email: scaletec@scale-tec.com

**John Deere 1590/750 20 foot Grain Drill
Scale System
Instruction Booklet**

This product application is covered by U.S. Patents;

PATENTS: 6,732,667—7,059,258—7,273,017—7,357,087—7,448,335—7,523,710

PATENT PENDING: 12/427,915

KEY	QTY	PART NO	DESCRIPTION
25	1	405878	PAINT-JD GREEN AEROSOL
26	2	400373	CELL-1.5 DB-14FT
27	4	400400	CELL-1.5 DB-16FT
28	1	404256	ASSY-JBOX 6PT MOBILE
29	1	141837	CABLE-30FT J-BOX
30	1	406072	CABLE-POWER 6FT 2-WIRE
31	1	403776	EZ400 1,800ZBL-JND

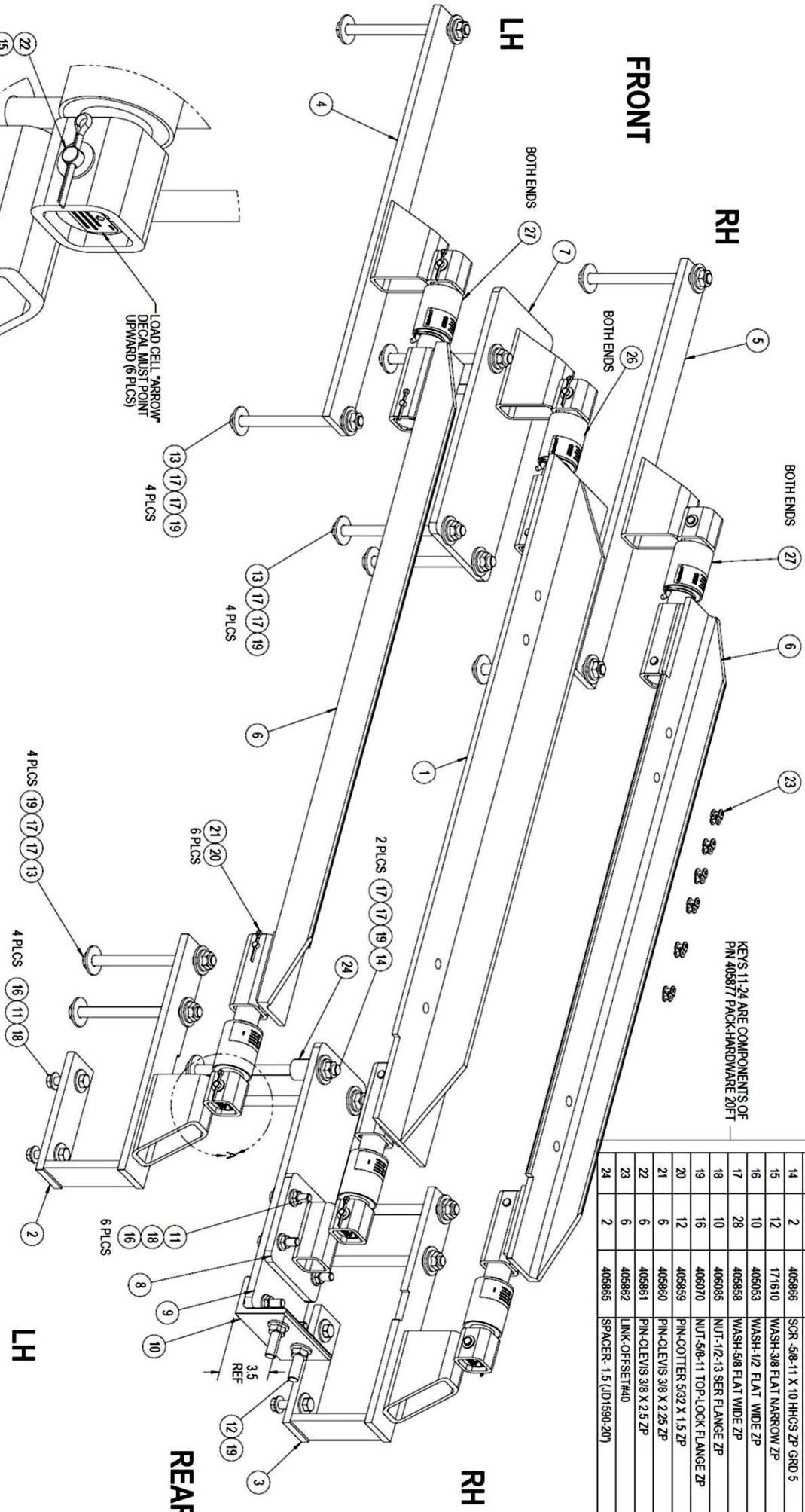
KEYS 2,5 ARE COMPONENTS OF
PIN 405879 PACK-FRT & REAR
BRKT (JD1590-15FT)

KEY 6 ARE COMPONENTS OF
PIN 405880 PACK-MID SIDE
BRKT (JD1590-15FT)

KEYS 7,10 ARE COMPONENTS OF
PIN 405853 PACK-REAR & FRT
MIDDLE (JD1590-20FT)

KEYS 11,24 ARE COMPONENTS OF
PIN 405877 PACK-HARDWARE 20FT

KEY	QTY	PART NO	DESCRIPTION
1	1	405874	WELD-MIDDLE SUPPT (JD750MB20)
2	1	405760	WELD-REAR BRKT LH (JD750-15)
3	1	405761	WELD-REAR BRKT RH (JD750-15)
4	1	405762	WELD-FRONT BRKT LH (JD750-15)
5	1	405763	WELD-FRONT BRKT RH (JD750-15)
6	2	405764	WELD-MIDDLE BRKT (JD750-15)
7	1	405851	WELD-FRONT MIDDLE SUPPT (JD1590-20)
8	1	405846	WELD-REAR MIDDLE SUPPT (JD1590-20)
9	1	405848	PLATE-8 HOLE INMT REAR (JD1590-20)
10	1	405847	ANGLE-4 HOLE X 6" (JD1590-20)
11	10	405854	SCR -1/2-13 X 2-1/4 HHCS ZP GRD 5
12	2	405864	SCR -5/8-11 X 2-1/2 HHCS ZP GRD 5
13	12	405863	SCR -5/8-11 X 8-1/2 HHCS ZP GRD 5
14	2	405865	SCR -5/8-11 X 10 HHCS ZP GRD 5
15	12	171610	WASH-3/8 FLAT NARROW ZP
16	10	405053	WASH-1/2 FLAT WIDE ZP
17	28	405858	WASH-5/8 FLAT WIDE ZP
18	10	405085	NUT-1/2-13 SER FLANGE ZP
19	16	406070	NUT-5/8-11 TOP-LOCK FLANGE ZP
20	12	405859	PIN-COTTER 5/62 X 1.5 ZP
21	6	405860	PIN-CL-EVIS 3/8 X 2.25 ZP
22	6	405861	PIN-CL-EVIS 3/8 X 2.5 ZP
23	6	405862	LINK-OFFSET#40
24	2	405865	SPACER- 1.5 (JD1590-20)



DRY-SHIRT
WEST STATE HWY 106 NORTH ATKINSON, WI 53538

DATE: 07/13/09
SCALE: 1/4.5
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 07/13/09
RELEASED: [Signature]
REV: A
NO. 09-022
NUMBER

QUANTITY CHANGES: INCREASING TO BE APPROVED BY THE CUSTOMER
REVISIONS: AS NOTED
SCALE: 1/4.5
NO. OF SHEETS: 3 OF 3
DO NOT SCALE DRAWING

DATE: 07/13/09
SCALE: 1/4.5
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 07/13/09
RELEASED: [Signature]
REV: A
NO. 09-022
NUMBER

DRY-SHIRT
KIT-SCALE SYSTEM (JD1590/50-20FT)

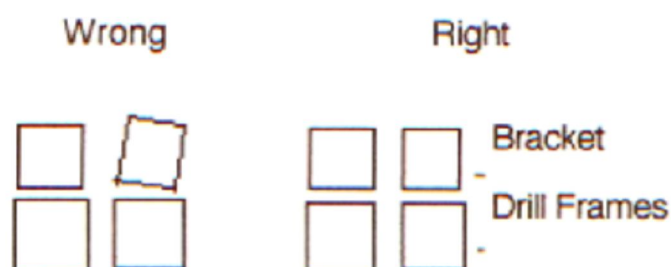
DATE: 07/13/09
SCALE: 1/4.5
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 07/13/09
RELEASED: [Signature]
REV: A
NO. 09-022
NUMBER

1 OF 1
C
405882

John Deere Grain Drill Scale Installation 20 Foot Drill Digistar

1. Remove the cat walk and drive chain off of both the 10 foot seed bins.
2. On the left side of the seed bin loosen the four bolts that hold the seed bin to the frame. DO NOT remove bolts. Then go the the right side and loosen the same bolts.
3. Remove the bolts on the middle of the two seed boxes. You will have to cut an access hole to be able to get at the back bolts.
4. Lift the middle on both boxes about 2-3" and install the middle bracket. Do not tighten the bolts.
5. Install the front and back weigh bars with the 2¹/₄" clevis pins. **Make sure the weighbars' arrow sticker is pointed up** (located on the end of weigh-bar). Two of the weigh-bars are marked with short cords for the center of the drill.
6. Next install the rear bracket, let the seed bin down to about 1". (See Picture1) Use the 2 1/2" x 3/8" clevis pin to hold the weigh-bar in place, make sure the pin is in the middle of the 1/2" hole.
7. Install the front bracket (see photo2). Install the 2 1/2" x 3/8" clevis pin the same as the rear bracket. **Leave ALL of the bolts loose.**
8. On the left side remove the bolts that hold the seed bin to the frame.
9. Lift the seed bin up about 2 1/2" on the left side.
10. Install the middle bracket under the seed bin (do not tighten bolts yet). See the diagram on the John Deere Grain Drill Scale Kit.
11. Install the front and back weigh-bar with the 2¹/₄" x 3/8" pins (make sure the weigh-bar arrow sticker is pointed up).
12. Let the seed bin down to about 1" and slide the rear bracket on. Use the 5/8" x 8" bolts in the front 2 holes. Use the 2 1/2" x 3/8" clevis pin to hold the weigh-bar in place. Make sure the pin is in the middle of the 1/2" hole. (Note: the rear step grip is installed between the rear bracket and the step bracket already on the grain drill. Do not tighten the bolts).

13. Install the front bracket with the bolts left from the rear bracket. Use the 2 1/2" x 3/8" clevis to hold the weigh-bar in place. Make sure the pin is in the middle of the 1/2" hole.
14. Make sure the middle, front, and rear brackets are straight with each other.
15. Remove the bolts on the right side that hold the seed bin to the frame.
16. Repeat steps 9 to 14 on the Right side of the drill.
17. When you have both sides done you want all the brackets to stand straight. You don't want one side leaning to the side. Tighten the bolts on all brackets at this time and in the following order:
 - 1st: Tighten the middle bracket
 - 2nd: Tighten the rear bracket
 - 3rd: Tighten the front bracket



18. Bolt the readout in the cab with the bracket or mount the bracket on a stand in the front of the lift cylinder.
19. Install power cord to a 12 volt negative ground battery (white or red is positive and black is negative).
Install the J-box on the seed bin in the middle of the drill.
20. Route the weigh-bar cords so that it will not be bound or pinched by anything (see Mount Junction Box instructions).
21. Lengthen the drive chain with chain links provided. **DO NOT TIGHTEN CHAIN.** Leave the chain loose enough so it is not pulling down on the seed bin.

Mount Junction Box

The junction box is water resistant, not water-proof. It should be mounted to avoid submersion during wet weather and to avoid physical abuse. Install the junction box on the middle of the drill.

Connect Electrical Cables

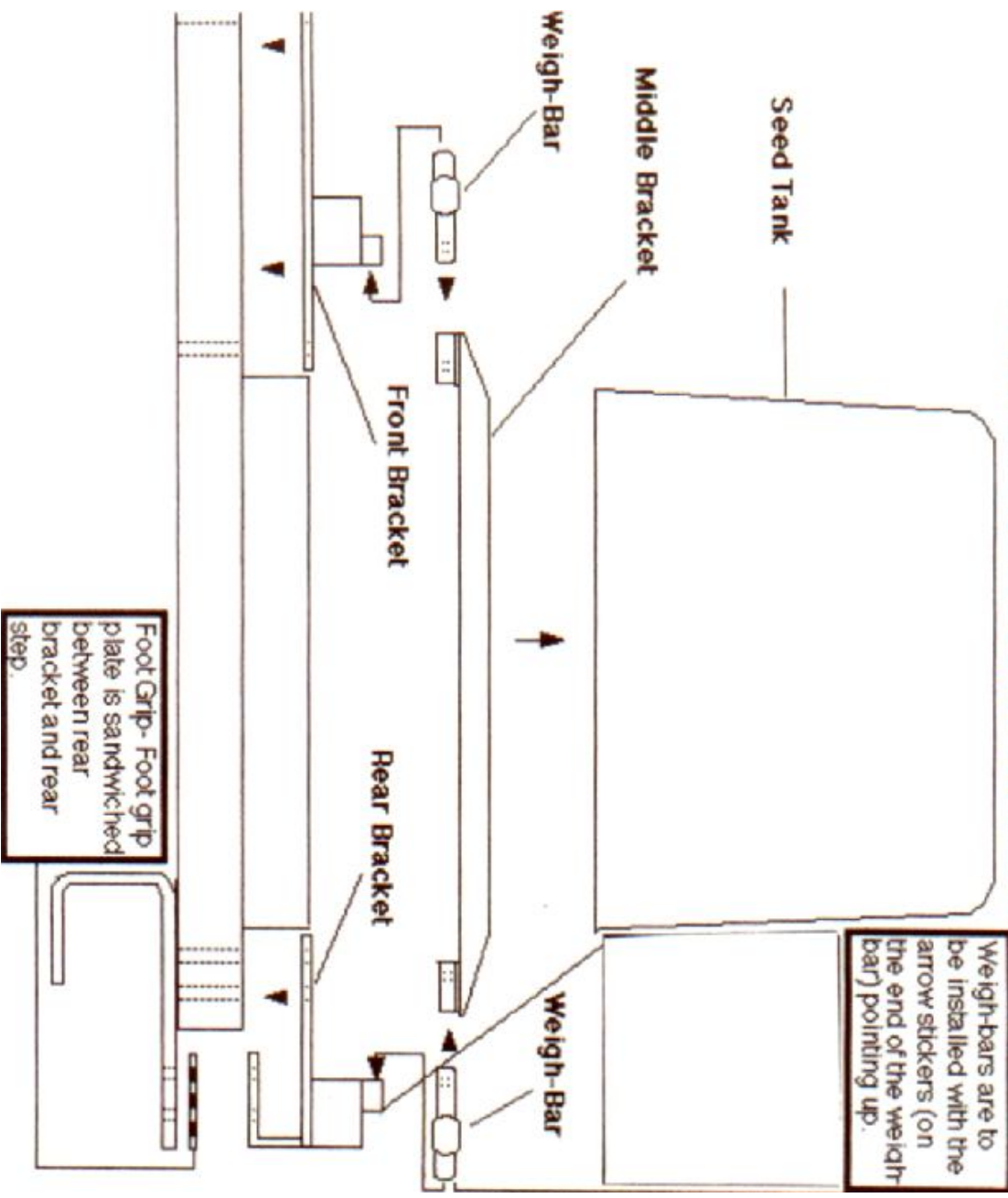
1. Attach each weigh bar cable to terminal block inside of junction box using labels on the printed circuit board as guides.
2. Care should be taken to insure that all cables not be pinched or rub anything between the scale and the junction box.
3. The junction box cable is connected to the bottom of the indicator. The power cord is connected to a 12VDS source and to the indicator. The red wire is positive (+) and the black wire is ground. Refer below or to the indicator manual for the purpose and connection of the power cord wires.

The 20 foot drill has four weigh-bars with longer cords; they are to be put on the outer brackets on the drill.

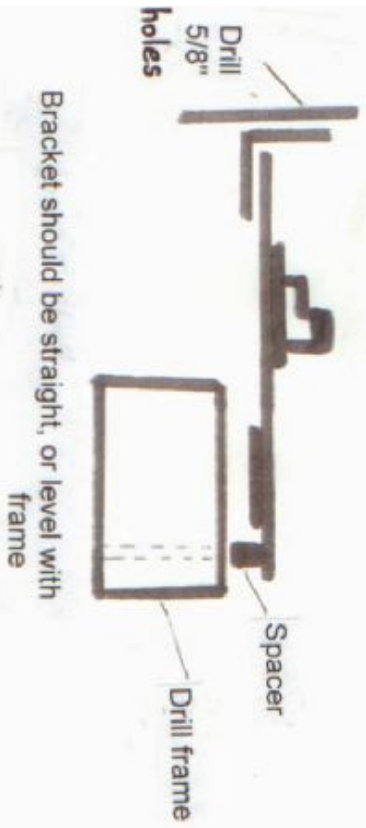
Scale-Tec's toll-free number is +1-888-962-2344.

See below for instructions on Power connections and Load Cell connections, and for instructions on scale usage, and for instructions for checking the scale installation.

JOHN DEERE GRAIN DRILL SCALE KIT



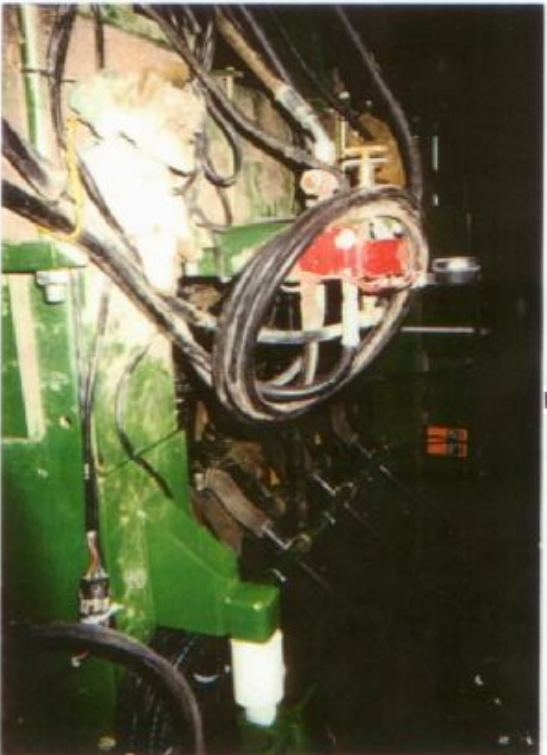
1



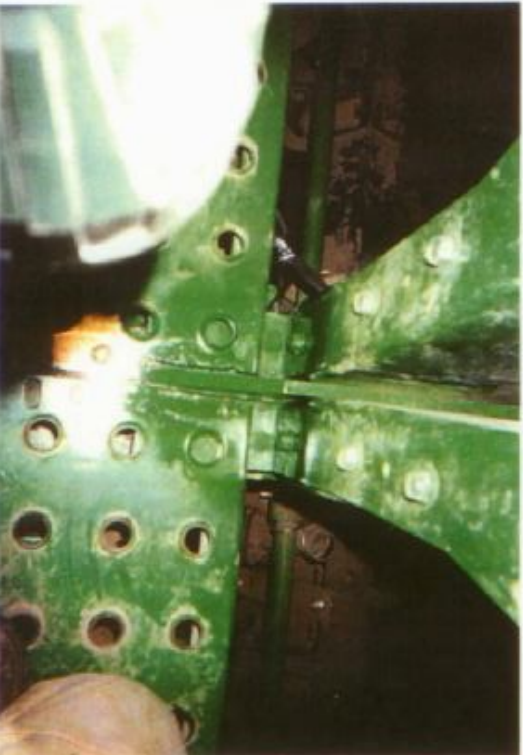
Access hole



2



Trimming the Catwalk



Power Connection:

The power cable should be connected directly to a vehicle battery or regulated power supply. The scale end of the power cable is attached to the J901 connector located on the bottom panel of the scale.

Connect the RED wire from the power cable to +12 VDC and the BLACK wire to GROUND. The indicator is fused internally at 4 amps.

Power Cable Connections:

Wire color	Wire Function
Red	<i>Battery (+12 VDC)</i>
Black	<i>GROUND</i>

Load Cell Connection:

The indicator is designed to operate with strain gage load cells. The indicator will normally be supplied with a “J-BOX” cable going between the scale and the load cell junction box. Extension kits are available from your dealer in various lengths.

To connect the load cells, attach the junction box cable to the J902 or J903 connector on the bottom panel of the scale.

How to use Drill Scale with a Digi-Star GT460 or GT400 Indicator

1. Turn indicator on.
2. Push the “ZERO” button to zero out the scale.
The arrow will be pointing towards “GROSS” on the display.
3. Fill the drill with seed. The GROSS weight is your inventory of seed in the drill.
4. To set population rate, stop in a level location with the drill row units up.
5. Check your acre counter.
6. Push the “START” button on the display.
The display will show zero.
An arrow will be pointing towards “TARE” on the display.
7. Drill 3 acres and stop in a level location with the drill row units up.
8. Divide the acres planted the amount of seed used.
This gives the pounds per acre of seed.
9. Press “STOP”, the indicator will go back to displaying the inventory of seed in the drill.
The arrow will be pointing towards “GROSS” on the display.

How to Check the Drill Scale after Installation

For the first test, lift the drill all of the way up on a level area. Next put 200-250 pounds of weight on the right side and then compare it to the left. Both sides should be within four to six pounds of each other.

-If the weight is not within the four to six pound range the problem could be that the drive chain is too tight or that the clutch is binding. Loosen the chain and check the weight again; if it weighs correctly the problem was that the chain was too tight.

-If your scale still doesn't weigh right you must remove the clutch arm, and check the weight on both sides. If this corrects it, then your clutch was the problem. Remember that the clutch arm needs to be on the back of the clutch to work properly.

The second test is to lift the drill up on a level area and zero the scale. Next lift the drill up and down two or three times, checking to see if the scale goes back to zero. Every time the drill is up the scale should read within four to six pounds of each other time. If the scale doesn't stay in this range, remove the clutch arm and repeat the test with the clutch disconnected. If this solves the weigh problems, then the clutch is binding, or it needs lubrication (remember- the clutch arm needs to be on the back side of the clutch to work properly.)

If you have any questions, don't hesitate to call Scale-Tec!

Our number is +1-319-462-2344, or toll-free +1-888-962-2344