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# John Deere 1770 CCS Scale System w/ Refuge Hopper

## 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
1	2	405891	WELD-BOTTOM LEG 24R (JD1770)
2	1	405991	WELD-MIDDLE BRKT (JD1770-03)
3	1	405887	WELD-LH REAR LEG (JD1770-01)
4	1	405888	WELD-RH REAR LEG (JD1770-06)
5	4	406040	PLATE-CT MOUNT ZP
6	2	830409	RING-SEALING 1/2" SPONGE
7	2	405895	SCR - 3/4-10 X 4.0 HHCS ZP GRD 5
8	4	405896	SCR - 5/8-11 X 2.0 HHCS ZP GRD 5
9	2	405921	NUT-3/4-10 TOP LOCK ZP
10	4	406070	NUT-5/8-11 TOP-LOCK FLANGE ZP
11	4	404577	PIN-CLEVIS 5/8 X 2.0 ZP
12	4	405897	PIN-COTTER 5/32 X 1.0 ZP
13	1	406011	WELD-LEG BRKT (JDR-02)
14	1	406026	WELD-MIDDLE BRKT (JDR-01)
15	2	405895	SCR-3/4-10 X 4.0 HHCS ZP GRD5
16	1	406025	BOLT-U 5/8-11 X 8.75W X 10.0L GRD 8 ZP
17	2	405921	NUT-3/4-10 TOP LOCK ZP
18	2	406070	NUT-5/8-11 TOP-LOCK FLANGE ZP
19	1	406081	PACK-ROBO SWIVEL MOUNT
20	2	404172	CELL-CT 50KTC-30(.1%)
21	2	400525	CELL - 2.125 DB
22	1	404254	ASSY-J-BOX 3PT/4PT MOBILE
23	1	141837	CABLE-30FT J-BOX
24	1	403335	CABLE-POWER 17FT 2-WIRE
25	1	403776	EZ400 1.902/BL-IND

KEY 1 IS COMPONENT OF PIN 405939 PACK-BOTTOM LEG 24R (JD1770-04)

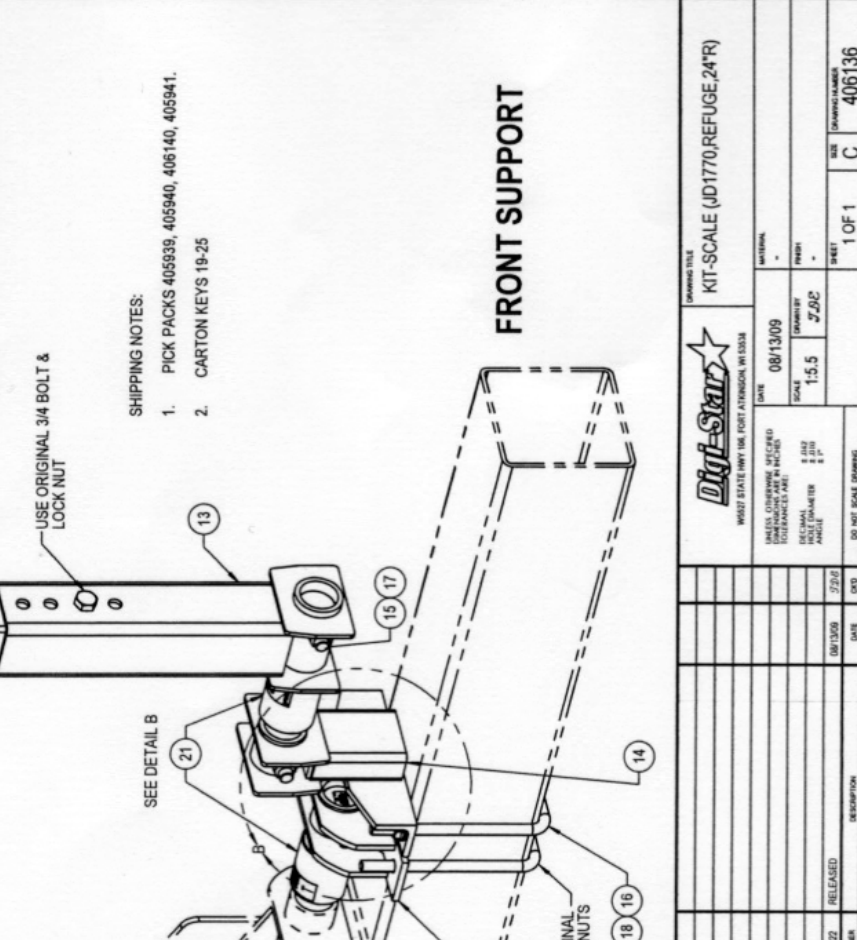
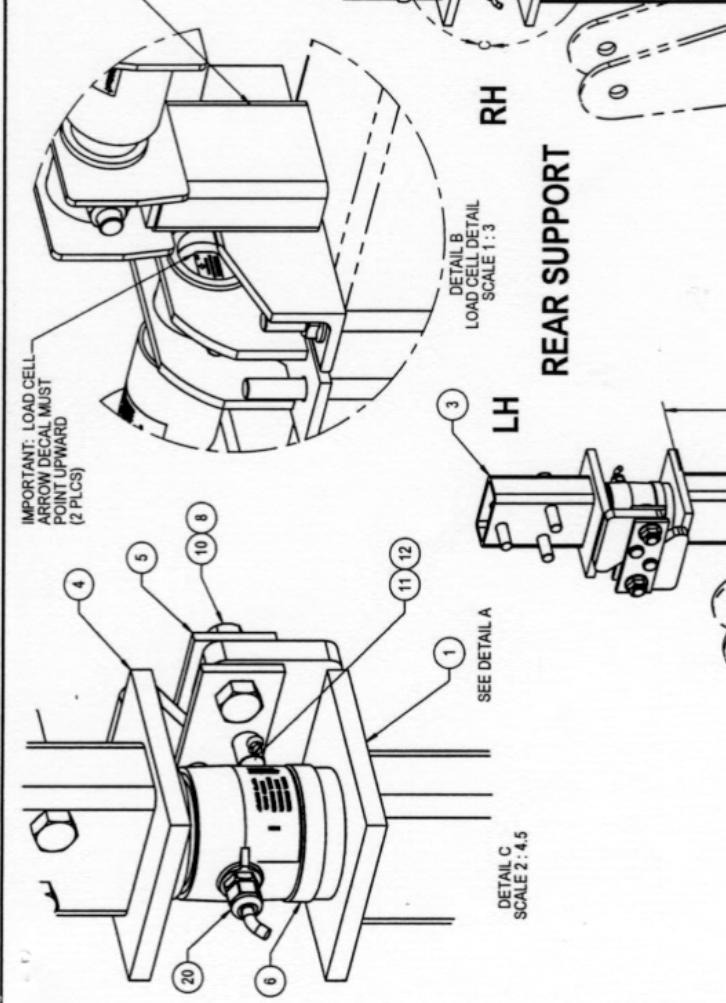
KEYS 2-6 ARE COMPONENTS OF PIN 405940 PACK-COMMON BRKT (JD1770)

KEYS 7-12 ARE COMPONENTS OF PIN 406140 PACK-HARDWARE (JD1770)

KEYS 13-18 ARE COMPONENTS OF PIN 405941 PACK-REFUGEBRKT/RHWD (JD1770)

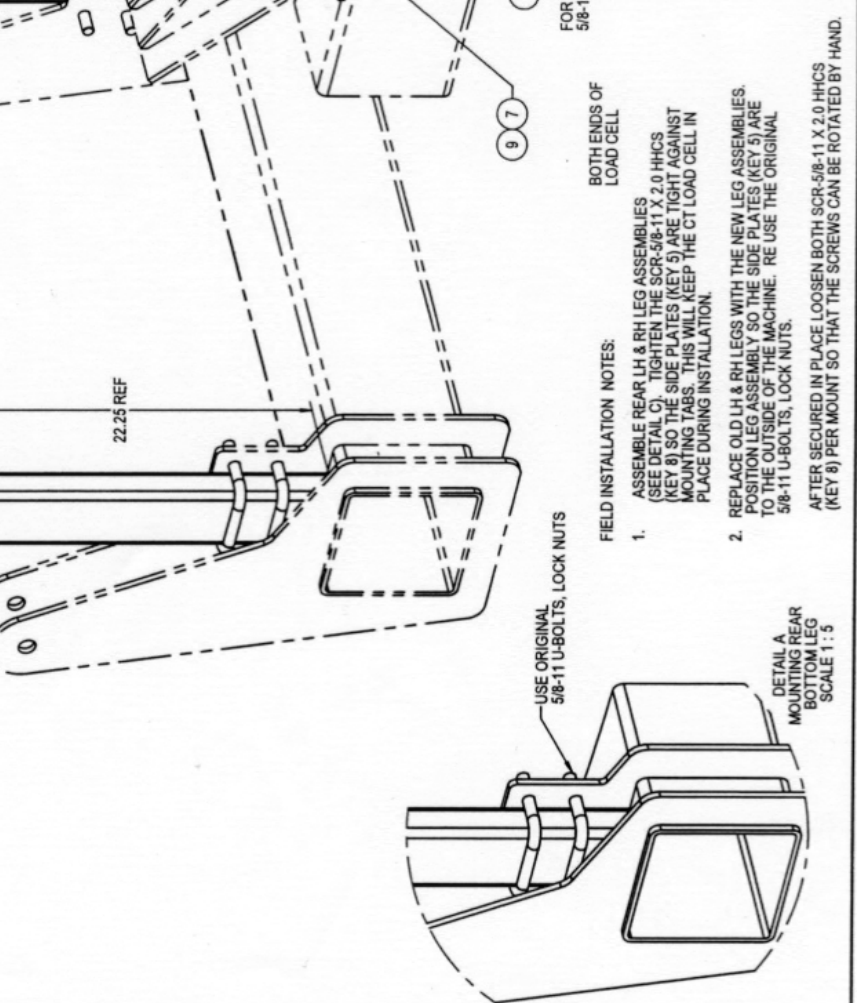
POSITION KEY 14 AS SHOWN IF PLANTER IS EQUIP WITH A FERTILIZER HOPPER. OTHERWISE ROTATE WHOLE ASSEMBLY 180°

REUSE ORIGINAL 5/8-11 BOLTS AND NUTS. (6 PLCS)



USE ORIGINAL 3/4 BOLT & LOCK NUT

FOR KEY 2 USE ORIGINAL 5/8-11 U-BOLT & AND NUTS



FIELD INSTALLATION NOTES:

- ASSEMBLE REAR LH & RH LEG ASSEMBLIES (SEE DETAIL C). TIGHTEN THE SCR-5/8-11 X 2.0 HHCS (KEY 8) SO THE SIDE PLATES (KEY 5) ARE TIGHT AGAINST MOUNTING TABS. THIS WILL KEEP THE CT LOAD CELL IN PLACE DURING INSTALLATION.
- REPLACE OLD LH & RH LEGS WITH THE NEW LEG ASSEMBLIES. POSITION LEG ASSEMBLY SO THE SIDE PLATES (KEY 5) ARE TO THE OUTSIDE OF THE MACHINE. RE USE THE ORIGINAL 5/8-11 U-BOLTS, LOCK NUTS.

AFTER SECURED IN PLACE LOOSEN BOTH SCR-5/8-11 X 2.0 HHCS (KEY 8) PER MOUNT SO THAT THE SCREWS CAN BE ROTATED BY HAND.

SHIPPING NOTES:

- PICK PACKS 405939, 405940, 406140, 405941.
- CARTON KEYS 19-25

# FRONT SUPPORT

**Digi-Star**  
WEST STATE TRAY THE FOOT ATTENTION IN US

DATE: 08/13/09  
 SCALE: 1:5.5  
 DRAWN BY: JJC  
 CHECKED BY: JJC

ISSUED: 08/13/09  
 RELEASED: 08/13/09  
 REV: A

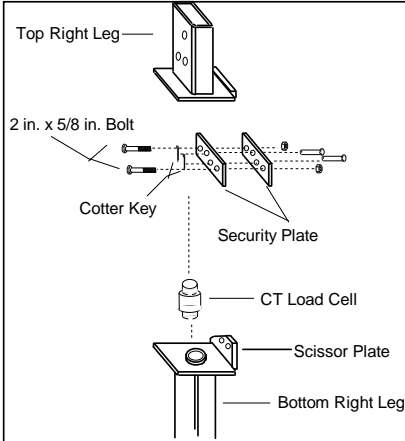
DESCRIPTION: KIT-SCALE (JD1770, REFUGE, 24"R)

1 OF 1

406136



1. Using a fork lift, lift the side of the hopper and remove the rear leg.  
**NOTE: It is easier to work on rear legs with the planter wings folded in.**



2. Assemble the new legs. Place the CT Load Cell between the top and bottom legs. Use the 5/8" x 2" bolts on the outside two holes of the security plates. On the center holes of the security plates, use the clevis pins to secure the plate. Tighten 5/8 in. bolts until the bolt is snug. Repeat step for other side.



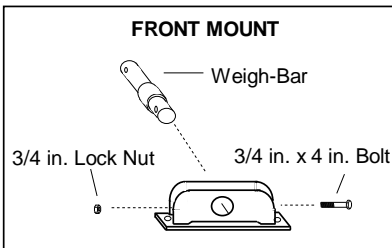
3. Replace the old leg with the new leg assembly. Install the new leg assembly with the scissor plates to the outside of the machine.

After installing the new leg, loosen the lock nut on the bolts that hold the security plates together, so the bolts themselves can be turned by hand.



4. Front Mount Assembly. Remove the bolts to the front load cell bracket and frame. Lift front leg up 3/4 in. and install the weigh bar into the sleeve of the front leg. Use the 3/4 in. x 4 in. bolts.

**NOTE: It is important that the load cell arrow, located on the end of the load cell, must be pointed up.**



5. Install the Front Mount Bracket by using the 3/4 in. x 4 in. bolts.

Let the hopper down and use the existing bolts to hold the end bracket to the frame. Make sure you have clearance between the main bracket and the frame. The holes are slotted on the end bracket. You may need to adjust the bracket before tightening bolts

### Load Cell Connection:

The indicator is designed to operate with strain gage load cells. The load cells are connected to the terminal board inside the indicator. Remove the four front screws, on the front panel of the indicator, to locate the terminal board. The indicator can be mounted on the railing between the two hoppers. Use parts H151618 and H136110 (two each) and bolt it to the indicator mounting bracket. This will allow you to swivel to the rear while filling and swivel to the front for planting.

### Power Cord:

Red and white wire positive, black wire is negative.

### Cab Mounting:

A junction box can be added to system if cables are too short to reach tractor cab.

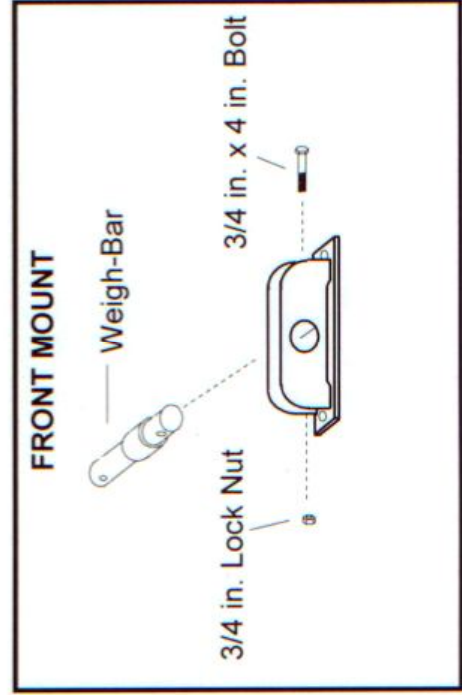
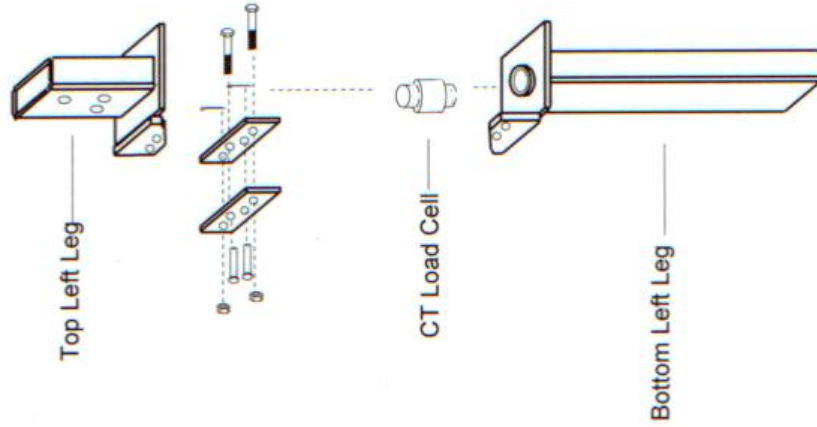
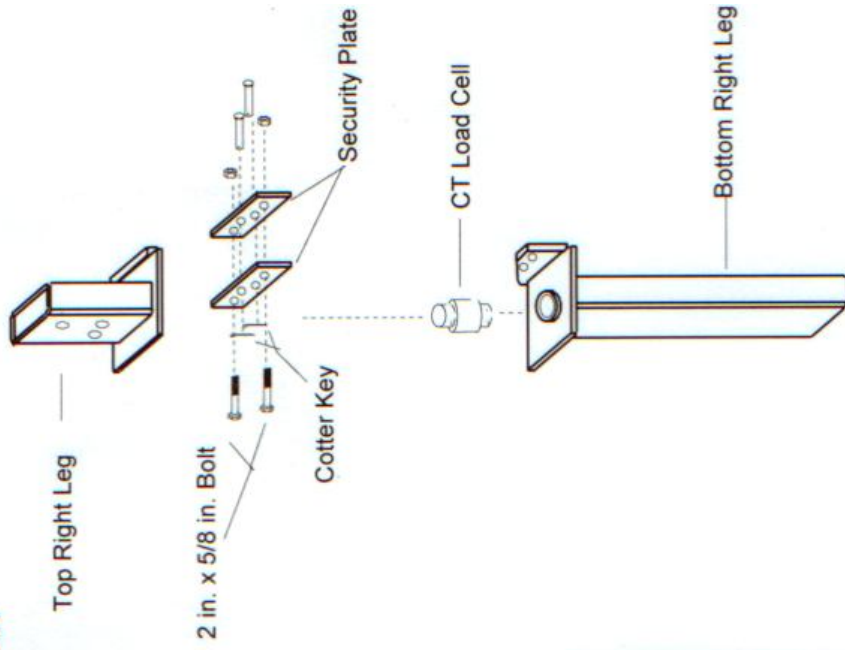
If you have any questions regarding the installation or the product, give us a call at (319)-462-2344, or Toll-Free +1-888-962-2344.



Above: the indicator can also be mounted to the railing. Then it can be turned to face backward while filling the hoppers, and turned forward for observation from the cab while planting.



## John Deere 1770 CCS Scale System



(Patent Pending)

## Refuge Hopper



Remove the refuge hopper leg and bolt in the new scale leg. Use the 5" x 3/4" bolts to hold weigh bar in place. Bolt the top bracket to the frame with the 18" x 9 1/2" U-bolt.

**Note: It is important that the load cell arrow, located on the end of the load cell, must be pointing upward.**

**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:

<b>Wire color</b>	<b>Wire Function</b>
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 a scale on a Central Fill System**

\*\*\* The example we are using is 2000 lbs of seed evenly filled in both hoppers. There is 25 lbs of seed left from the last fill.

1. Push the ‘Start’ button. The screen will show zero, and the arrow is now pointing to ‘Net’ on the screen. This is a temporary zero point to start loading the planter with seed. You will now fill 1000 lbs of seed into the left hopper.
2. Push the 'Stop' button, the readout now reads 1025 lbs of seed inventory.
3. Push the ‘Start’ button again. The screen will say zero again. Load another 1000 lbs of seed into the right side.
4. Now push ‘Stop,’ and the screen will read 2025 lbs of seed. The numbers will work lower as the seed is planted.