MODEL 2550 SERIES II RAISED BED PLASTIC MULCH LAYER

OPERATING MANUAL

Rain-Flo Irrigation

929 Reading Road East Earl, Pa 17519 PH: 717-445-3000

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!! Safety First !!

⚠ No riders beyond the speed of 3 MPH. Make sure you read and understand all the precautions.

⚠ Keep people away when lifting and lowering the machine.

⚠ Be careful when turning around; machine is 8' long.

⚠ Do not crawl under the machine when lifted.

⚠ Cover discs are sharp; stay clear.

⚠ Do not adjust the machine when it is moving.

⚠ Do not stand on machine.

⚠ Do not sit on machine except designated seat.

⚠ Tractor operator is responsible for extra worker(s) around machine.

⚠ Rain-Flo Irrigation is not responsible for accidents if any should occur.

2550 Features

- 60 hp FWD tractor size minimum.
- Minimum row centers, 50" at 3'or 60" at 4' plastic.
- Adjustable plastic width from 3 ft. to 4 ft. wide plastic.
- Adjustable bed height from 3" to 7" high bed.
- Adjustable tension brake on plastic roll carriers.
- Adjustable row markers.
- Operator seat.
- Replaceable, reversible plow share blades.
- UHMW poly lined bed press.
- Bed press has adjustable side press plates, for more or less plastic coverage.
- Quality powder coated baked-on paint.

Options

- Automatic self steering Ro-trak for hill sides.
- Single or double drip applicator.
- Crowned bed press for level field.
- Center fillers, to help fill center of bed.
- 400 lb. ground driven dry fertilizer hopper.
- Fumigation tank mounts with gas knives.

Soil Preparation

- * To build a uniform firm bed with no hollow spots, soil has to be prepared properly.
- * All soils are different. Some (moist, sandy) soils make nicer square beds than others. You need to know what soil preparation works best with your soil.
- * Machine performs the best if plowed 6" to 8" deep.
- * Soil should be harrowed or roto-tilled until free of sod lumps.
- * Proper moisture in soil is important to form nice firm beds. For best results, soil should not be powder dry or in muddy condition.

Getting Started

Before laying plastic, you may want to try out the machine in making beds only, to get the feel of the machine.

Adjust 3-point top link on tractor to level the machine.

Let full weight of machine down and regulate amount of soil with length of top link.

It is not necessary to pull more soil than needed to fill the bed. Pulling too much soil may cause tractor slippage, therefor resulting side drifting.

To get a higher, firmer bed, grower may want to pre-bed (make beds without laying plastic) then come back to lay plastic mulch. This will also help removing shallow spots in bed. Disk blades can be removed when making beds only.

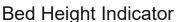


Bed Height Adjustment

Bed height is adjusted by lifting and lowering the bed press. Use label ruler behind pin indicator (top of pin) located on both sides of the machine to determine bed height(See below).

To adjust bed height, release the lock handles. Raising the bed is done by two people lifting the deck by hand, or by slowly driving forward with the 3-point hitch in down position; the soil will lift the bed press. To lower the bed, slowly lift 3-point hitch with the tractor to the desired height and lock the handles.

If your bed is not firm and has shallow spots in the center, add weight on the bed press, adjust the top link, and/or install the optional center of bed fillers.





Lock Handle Adjustment

Important: When bed height is adjusted, bed width (page 7) and trench openers (page 10) need to be adjusted accordingly.

3 Ft. Plastic	4 Ft. Plastic	
Bed Height Bed Width	Bed Height Bed Width	
4"20" 6"16" 8"12"	4"30" 6"26" 8"22"	

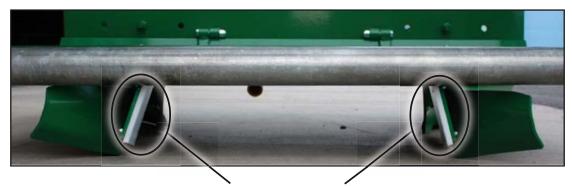
Bed Width Adjustment

The bed press has adjustable side plates (photo at bottom). These must be adjusted according to bed height by releasing the bolt and sliding the side plates in or out at the slot. *Make sure bolts are tight to keep them from slipping*. For setting, follow chart on machine or on page 6. It is important to maintain enough plastic at the edge for proper coverage.

NOTE; For straight beds, each side must be equally adjusted.



Adjustment Slot for Side Plates

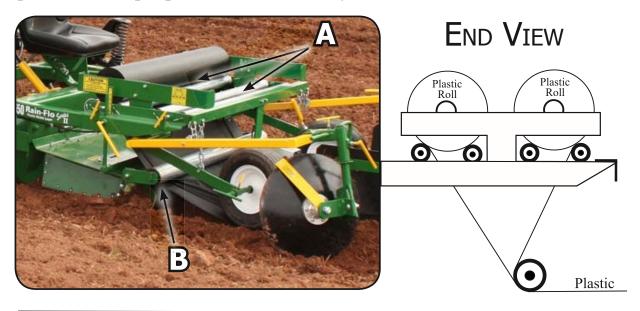


Adjustable Side Plates



Installing Plastic Rolls

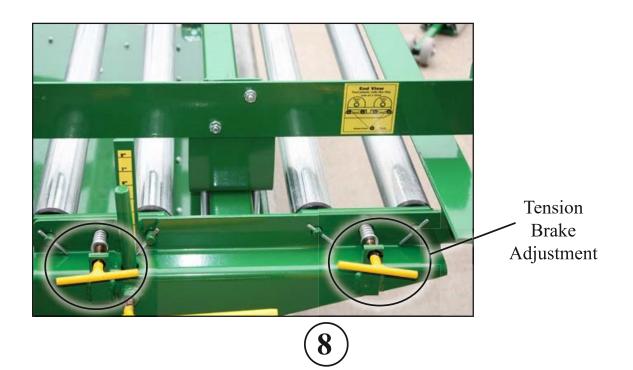
To install plastic rolls, place them on top of rollers (A). Pull end of plastic down in between rollers and underneath bottom roller (B). Secure plastic and drip tape at end of row. Only feed from one roll at a time.



Plastic Tension

Plastic rolls have a tension brake. Just a slight tension is needed.

Note; Setting brake tension too tight may affect the performance of the machine and can cause plastic to pull out from under press tires.



Press Wheel Adjustment

Press wheels need to run at the bottom of the trench and not on the side to stretch the plastic properly. To adjust, loosen T-handle and make in or out changes as needed.

Tilt the front of the press wheel on an inward angle to stretch the plastic.

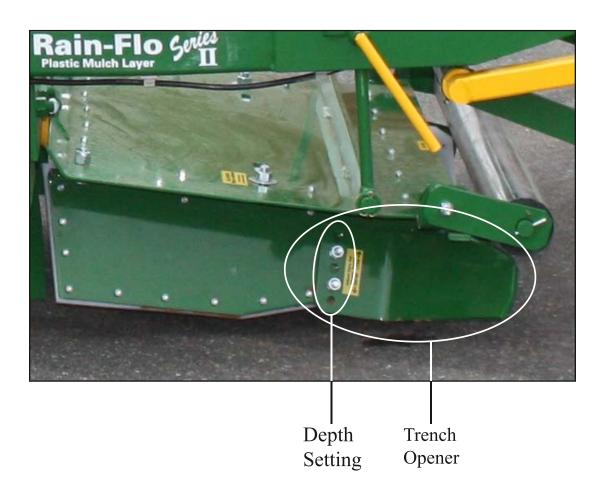
Use only high quality plastic to avoid straight line tear.

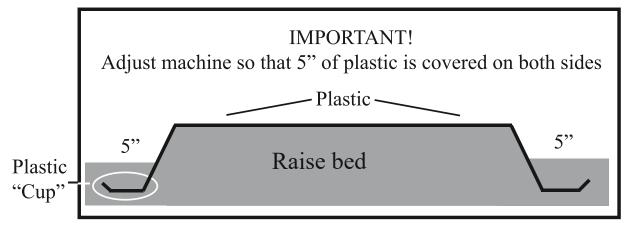


Adjustment Setting

Trench Opener Adjustment

Trench openers are to cut a trench along the sides of the bed. This will give a 'cup' at the edge of the bed to prevent the plastic from blowing off. If bed height is adjusted, the trench opener has to be adjusted accordingly.





Cover Disk Adjustments

Cover disks and dirt shields are marked right and left side (standing in back). Install shields as marked, with 'T' handle towards the center of the bed. Set disks on a 45 degree angle; make in or out adjustment as needed. For more or less coverage, tilt disk forward or backward as decal shows (pictured at bottom).

In some sandy soils the disk blades can be laid in a flatter position and turned at a 45 degree angle. However if it does not cover the plastic properly, the disks need to be set more upright or tilted back.





Tilt
Adjustment
For more or
Less soil.

Chisel Tooth Adjustment



Chisel teeth are to loosen more soil for the cover disks. Adjust so that tooth is approximately 1" to 2" below bed formers.

Adjust chisel shank in or out so they are in line with cover disks.



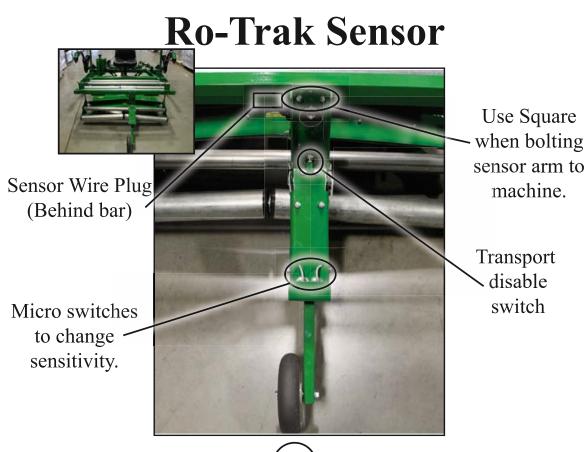
Notice the amount of soil chisel shank is loosening for cover disk.

AUTO RO-TRAK

- *Ro-trak has the most benefits on hillsides and contours.
- *Automatically steers to correct machine side drifting.
- *Ro-trak is activated by a sensor at back of machine.

Helpful Tips

- *When installing Hyd pump, lead hoses through 3-point A frame.
- *Inspect and make sensor square to machine.
- *Twelve-volts can be supplied by tractor or a separate battery.
- *Ro-trak requires only low RPM pto speed to function.
- *Hollow bed can effect Ro-trak performance.
- *If machine has been setting for a period of time, it may be necessary to manually move the valve spools to get oil through the system.
- *With pto pump running, use a Phillips screw driver and push the silver tip of the spool inward approximately 1/4" (Page 14.)
- *Manual Ro-trak is operated with tractor Hyd. and must be steered by tractor operator.



Maintenance

- 1. Periodically check oil level. Low oil level may cause air to come into the system and effect Ro-trak performance.
- 2. Change oil and filter every 200 hours or 3 years (ISO 46 Hyd. Oil).
- 3. Also check for any damaged hoses or electric wires.

Ro-Trak not functioning? Check for these problems.

- **1.** Is the PTO engaged?
- 2. Is a 12 volt battery properly connected?
- 3. Is the sensor at rear of machine plugged in?
- 4. Check oil level.
- **5.** Check for any damaged hoses or wires.
- **6.** Is sensor lifted 3" or more? (Sensor has a transport cut off switch).
- 7. Do the indicator lights on solenoid light-up?
- **8.** If indicator lights light-up and Ro-trak doesn't function, push in silver pins on solenoid spools (approximately ½" on either side).
- **9.** If indicator lights do not light up, undo plate on top of solenoid and check for loose wires.

Valve

Spools

- **10.** Steers only one way? Change bad steering switch in sensor.
- **11.** Call Rain-Flo at 717-445-3000.

Auto Ro-Trak

Hyd. Oil Level

Solenoid Valve

Indicator

Lights

Valve

Spools

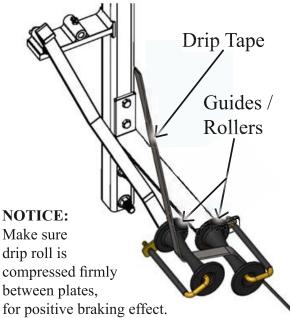


Drip Irrigation Roll Carrier



Slide drip roll onto roll carrier rod so that drip emitter will be turned up toward plastic (for less clogging).

Feed drip tape through the guide on the swing arm and through the second guide that's bolted on the drip roll carrier frame. (See sketch below.)



Drip Irr. Tape Placement



Feed drip line through the guides on the spool carrier and into the drip line down pipe.

To avoid damaging drip tape with the press pan, adjust top of down pipe about 1" to 2" below the plastic mulch.

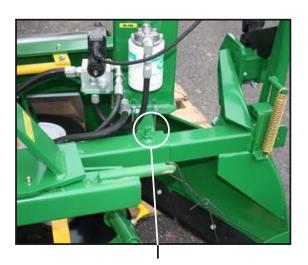
Turn drip emitters up toward the plastic for less clogging.

Drip Line Down Pipe

CHANGING THE PLASTIC WIDTH

The Model 2550 will lay 3' and 4' wide plastic.

- To make these adjustments, release the lock bolts at front end of bed shapers (No.1 photo). Remove bolts at back end of bed shaper (No.2 photo) and slide to appropriate setting. Make sure bolts are tight.
- Adjust bed press side plates; remove bolts from bed press side plates and move to appropriate setting (No. 3) photo.
- Adjust roll carrier; loosen bolts and slide bracket so plastic roll fits between bracket (No.4 photo). Adjust approximate 1½" wider than plastic width.



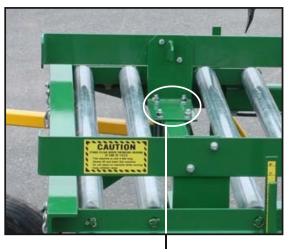
(No.1) Lock bolt



(No.2) Remove bolts on back side of bed former

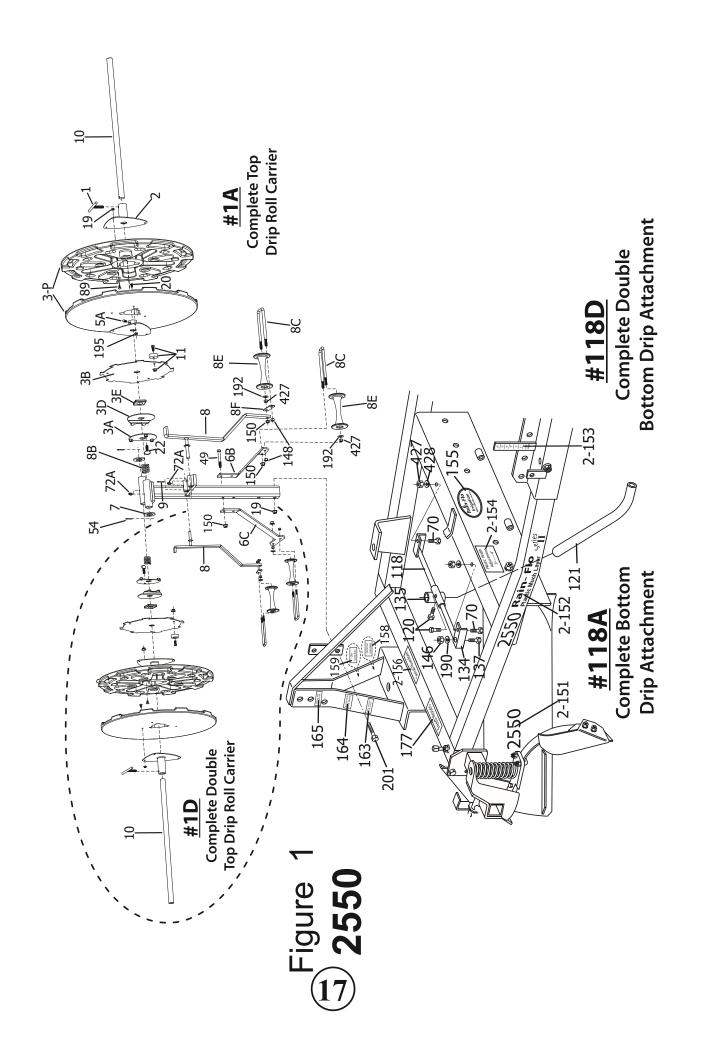


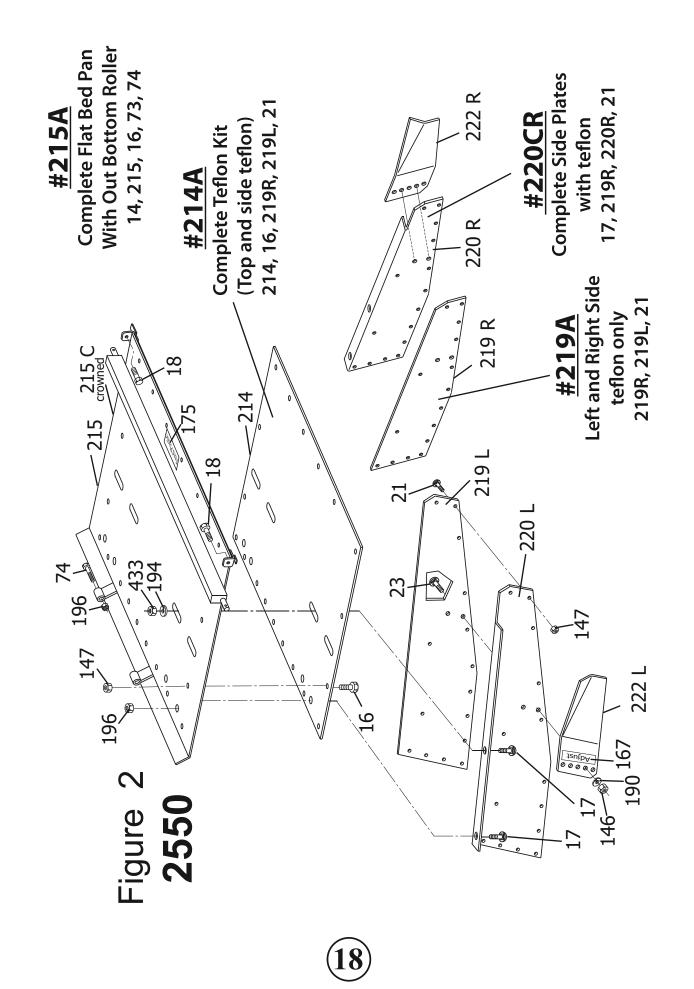
(No.3) Remove bolts from bed press side plates and move to appropriate setting. **NOTE**; For straight beds, each side must be equally adjusted.

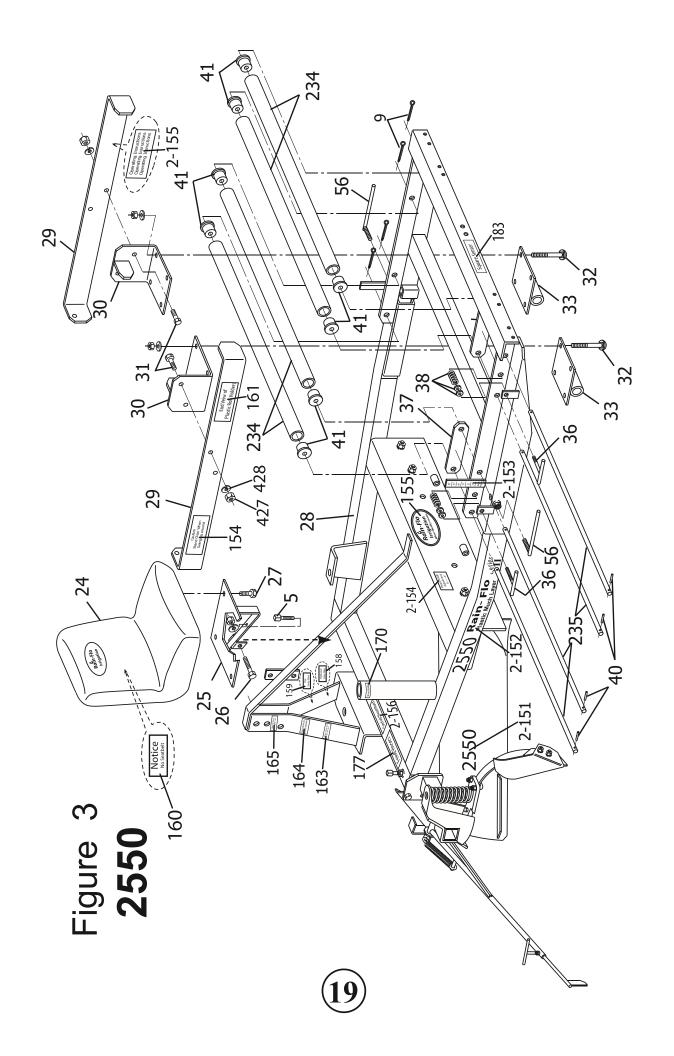


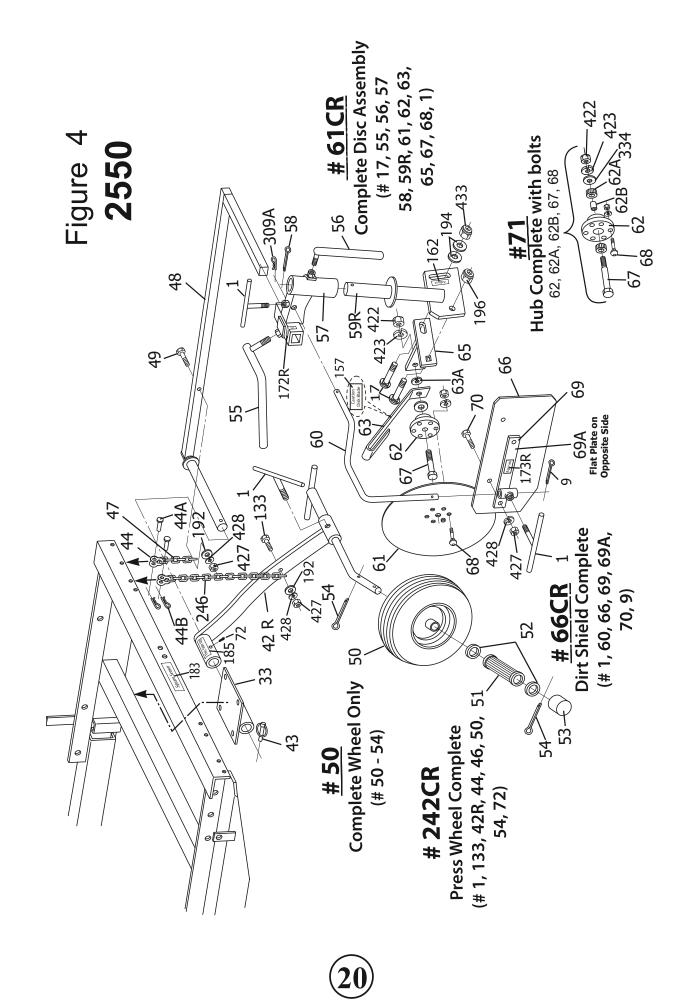
(No.4) Rear Cover Disk and Plastic Width Adjustment

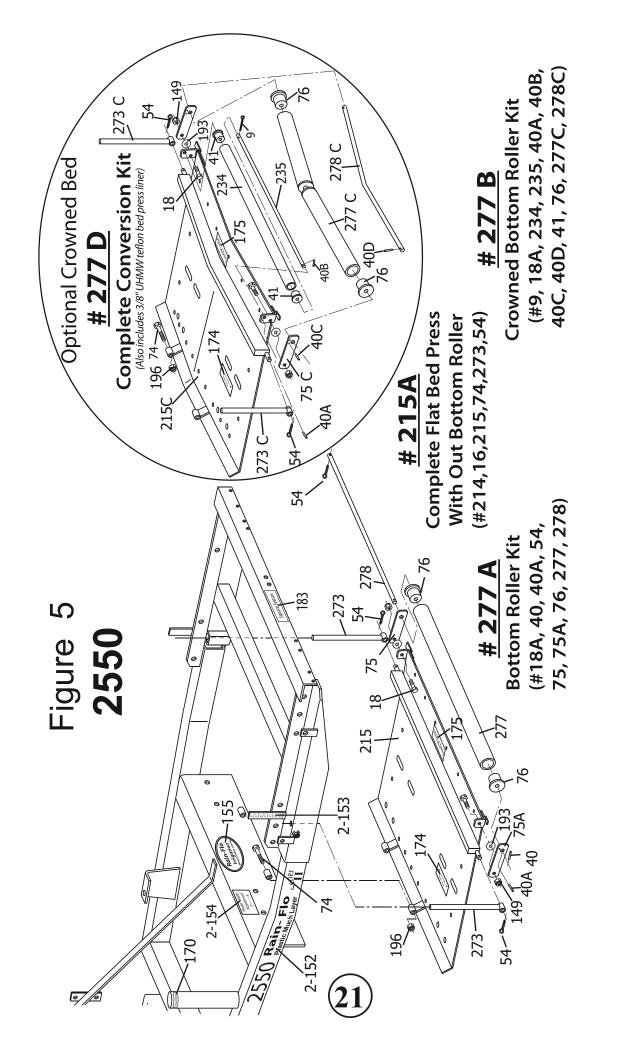


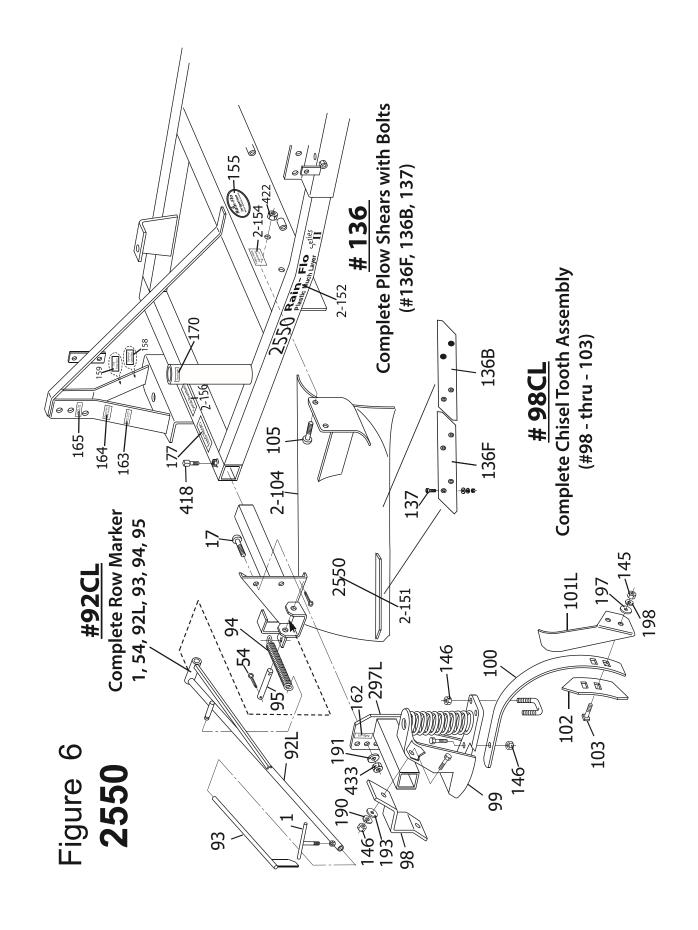


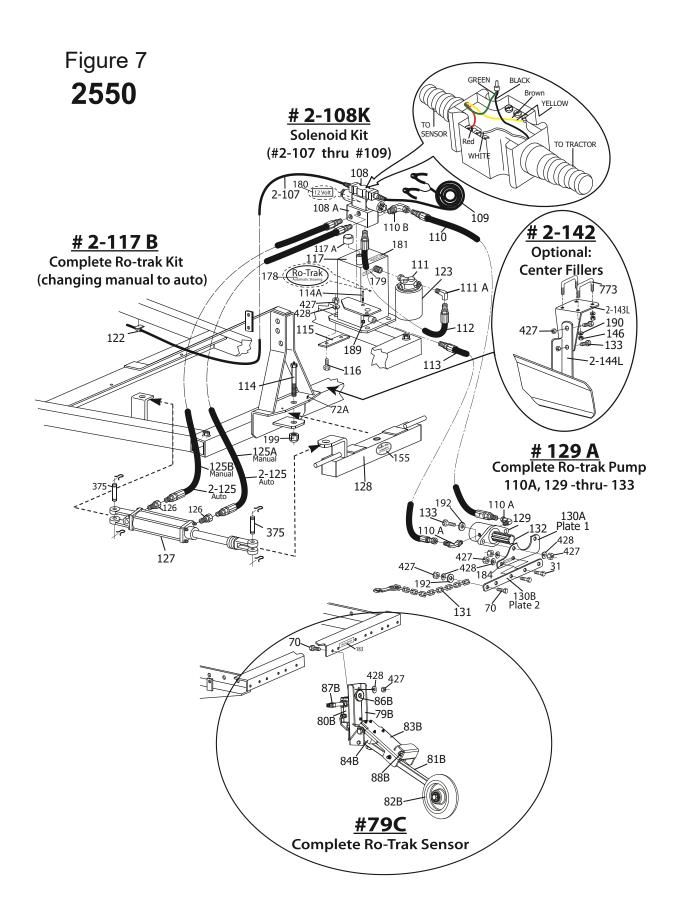












ITEM#	DESCRIPTION
1(9)	. Tee handle
1A	. Complete top drip roll carrier
1D	. Complete double top drip roll carrier
2	Roll carrier clamp
3 Δ	. Drip attach adjustable brake tension plate
	. Drip attach brake plate
2C	. Drip attach mounting for brake plate
2D	Die attach besta tongion plate notation ston
3D	. Drip attach brake tension plate rotation stop
3E	Drip attach teflon continues brake washer
3-P(2)	. Drip roll side plates
5A	. 3/8" x 1/2" Set Screw
5(2)	. 3/8" x 3/4" plate set screw
6	. Drip roll carrier frame (Single and Double)
6B	. Drip attach arm to guide drip tape
	. Drip attach arm to guide drip tape for double drip
7	1" SAE washer
8	Swing arm
8B	. Drip attach brake tension spring for 1" rod
9C (2)	. Drip Attach Arm U-Bolt 3/8" x 2" x 6-1/2"
9E (2)	Drip Attach arm plastic roller
oe(2)	. Drip attach arm plastic roller
	Drip attach arm U-bolt plate only
9(7)	. Cotter pin[1/8"]
10	. Drip roll shaft
11(3)	. Rubber brake assembly.
13	. Straight grease fitting
16	. 1/4" x 7/8" machine screw
17(12)	. 5/8" x 2" carriage bolt
18(2)	. ½" x 1¾" bolt
19(3)	
20 (3)	5/16" x 3/4" Carriage Bolt
21 (4)	. 1/4" x 1" machine screw
$\frac{21}{22}$ (3)	. 5/16" x 1" Thumb Screw
	. ½" x ½" carriage head bolt
24	
25	. Seat mounting
26(3)	. 3/8" x 3 ³ / ₄ " bolt
27(4)	$1.5/16$ " x $\frac{1}{2}$ " bolts
28	. Frame
29(2)	. Roll support plate
30(2)	. Roll width adjustment plate
31(6)	. 3/8" x 1" bolt
32(8)	. 1/2" x 4" carriage bolt
33 (2)	. Bottom plate roll width adjustment
36(2)	Tension tee handle
37(2)	Tancian enring and weehers
30(2)(4)	Tension spring and washers (24)
40(9)	. 5/10 X Z 1011 piii

ITEM #	DESCRIPTION

	DESCRIPTION
40A (2)	3/16" x 1" roll pin
40D	2/16" x 1 1/2" no11 nin
	3/16" x 1-1/2" roll pin
40C	1/4" x 1" roll pin
40D	1/4" x 2" roll pin
11 (2)	IIIMW hushing
41(8)	Univi w bushing
42L	Left side press wheel arm
42R	Left side press wheel arm Right side press wheel arm
43(2)	Lynch nin
43(2)	Lynch pin
44(4)	Chain shackle complete
44A	Chain shackle pin
MR	Chain shackle pin Chain shackle safety hitch pin
47 (2)	Chain shackle safety filten pin
47(2)	
48(2)	Cover disk support arm
49 (4)	3/8" x 3" Zinc grade 5 hex bolt
50 (2)	Duaga11 4' (#50 41 #54)
50(2)	Press wheel tire (#50 -thru- #54)
51(2)	Needle bearing
52(4)	Regring retainers
52 (2)	Hub con
53(2)	
54(10)	Cotter pin
55(2)	Adjustable handle
56(4)	Fil lock handle
57(4)	
	Sliding adjustable bracket
58(2)	Cotter pin
591	Left side cover disk shank
50D	Dight side cover disk shark
59K	Right side cover disk shank
60(2)	Dirt shield support arm
61(2)	20" disk blade
61CI	Left side complete disk assembly
	Right side complete disk assembly
62A(4)	205KR3 bearing
62B(2)	
(2)	Dist. 1'
63(2)	Disk dirt scraper
63A(2)	³ / ₄ " extension tooth lock washer
65 (2)	Hub mounting bracket
66 (2)	Dirt shield
66(2)	Dirt silletu
66CL	Left side dirt shield complete
66CR	Right side dirt shield complete
67 (2)	3/4" x 4-1/2" Hub center bolt
(0) (12)	2/02 11/21 4 1 - 1 - 1 - 1
68(12)	3/8" x 1½" button socket cap bolt
69(2)	Dirt shield bracket
69A (2)	Dirt shield flat plate bracket
70 (2)	3/9" v 11/." holt
70(8)	
71(2)	6-bolt hub, complete
72(3)	1/4" x 90° Grease Zert
72Δ (4)	1/4" NFT 45 * Grease Zert
74 (2)	5/2 21/21 1.14
74(2)	/8 X 3 ½ DOIT (25)
75	Right side bottom roller flex plate [flat bed]

ITEM#	DESCRIPTION Left side bottom roller flex plate [flat bed]
75A	. Left side bottom roller flex plate [flat bed]
75C(2)	. Bottom roller flex plate [crowned bed]
76(2)	. UHMW bushing, bottom roller
79B	.Sensor vertical mounting bracket
	Complete Ro-trak sensor assembly #79B - 88B
80B	
81B	
	.Sensor tracking wheels
83	1/2" x 41/4" holt
83B	
84B	Ro-trak sensor aluminum block bearing
85B	Ro-trak sensor aluminum block
	Ro-trak sensor magnet
	Sensor electric plug-in 4 -square
88B	Ro-Trak sensor proximity sensor switch
89 (5)	1/4" x 3/4" carriage head holt
90	. ½" x ¾" carriage head bolt . 5/16" x ¾" bolt
92L	
	. Right side row marker
02CI	. Left side complete row marker
92CL	. Right side complete row marker
	. Row marker extension
94(2)	
08 (2)	. Row marker hinge pin Mounting clamp
98(2)	. Left side complete chisel tooth assembly w/ shovel
	. Right side complete chisel tooth assembly w/ shovel
	. Shovel spring assembly
100(2)	
	. Left side dirt spill plate
	. Right side dirt spill plate
101(2)	
102(2)	. 7/16" x 2" tooth shovel bolt
105(4)	3/." x 2" carriage holt
108	
108A	
	. Sensor wire to battery
110	. Hose, pump pressure side
110A(2)	
110B	Hydraulic block ell
111	Filter head
	. Hyd filter head ell fitting, 1/2" M x 3/8" F
	. Hydraulic hose, filter to solenoid manifold
113	. Hydraulic hose, pump intake side
114	. 11/4" \times 6½" bolt and locknut
	$\frac{174 \times 072}{5011}$ socket head cap bolt (26)
11 7 /1	. 5/10 A 2/2 Socket head cap bott (20)

ITEM # DESCRIPTION	ON
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	DESCRIPTION
115(2)	Hydraulic tank mounting plate
116(4)	3/8" x 4" bolt
117	Oil reservoir
117A	
118	Drip line cross bar
118A	Bottom drip attachment complete
118D	Complete bottom drip attachment
120(2)	
121	Drip line down pipe
122	
123	
	Hyd cylinder hose [manual ro-trak], Front hose
	Hyd cylinder hose [manual ro-trak], Back hose
	Hydraulic elbow with flow orifice
127	
128	Steering bar
129	Hydraulic pump
	Ro-trak pump complete
	Pump support (plate number one)
	Pump support (plate number two)
131	Chain with snap
132	PTO coupling
133(3)	$3/8$ " x $1\frac{1}{2}$ " bolt
134	Bot. drip bolted angle iron
135	Drip pipe holder bracket
136(4)	Plow shears
136B(2)	Back plow shears
136F(2)	Front plow shears
	3/8" x 1-1/4" plow bolt
145(2)	
146(16)	
147(10)	
148(3)	3/8 nylon lock nut
149(2)	1/2 nylon lock nut
150(2)	
	Caution label for roll holder
157 (2)	Rain-Flo oval logo label
13/(2)	Disc scraper caution label
	Center of bed filler label on 'A' frame
	Sway bar label on 'A' frame
161 (2)	Important notice label on seat
162 (4)	End view label for roll holder
102(4)	More coverage label Keep front of machine full of soil label
103 16 <i>1</i>	Keep front of machine full of soil label
165	Top link instruction label
167 (2)	Use top hole for high lift label Deeper trench label (27)
167(2)	Deeper treffett tabet

	DESCRIPTION
168	. Notice label on drip attach
	. "Turn Drippers Up For Less Clogging" label
169	. Direction arrow for drip attach
	. Drip attach brake adjustment plate label
170	
	. Left side standing in back label for disk
	. Right side standing in back label for disk
	. Left side standing in back label for dirt shield
	. Right side standing in back label for dirt shield
174(2)	. Bed width label
175(2)	. Feed plastic under roller label
177(2)	. Feed hoses through 'A' frame label
178	. Oval ro-trak label
179	
180	
181	
104	. Make sensor square label
	. Ro-trak chain caution label
185(2)	. I his side up label
189	. 5/16" nylon lock nut
190(9)	. 1/2" locking washer
191(2)	. 5/8" locking washer
192(6)	. 3/8" flat washer
193(6)	
194(6)	
195(3)	
196(6)	5/8" nylon lock nut
197(2)	7/16" flat washer
108 (2)	. 7/16" locking washer
	. 1-1/4" nylon lock nut
201(2)	. 1/2 X 3-1/4 DOIL
214	. 3/8" UHMW teflon (machine serial # needed)
	. Complete kit side plates
215	. Bed press plate [flat]
215A	. Bed press complete without bottom roller
215 C	. Bed press plate [crowned]
219A	. Complete set 1/2" UHMW teflon side plate
	. Left side 1/2" UHMW teflon side plate
	. Right side 1/2" UHMW teflon side plate
	. Left side complete side plate with teflon
	. Right side complete side plates with teflon
2201	. 3/8" bed side press plate (machine serial # needed)
220R	. 3/8" bed press side plate (machine serial # needed)
222L	
222R(4)	
235	. Plastic mulch support roll (28)
235(4)	. Koll holder rod

Model 2550 Raised Bed Layer Item # Description

242CL	Left side press wheel complete
	Right side press wheel complete
246(2)	
273 (2)	Bed height adjustable rod [flat bed]
273(2)(2)	Ded height adjustable rod [frat bed]
277	Bed height adjustable rod [crowned bed]
277	3" galvanized bottom roller [flat bed]
2//A	Complete flat bed bottom roller kit
2//B	Complete crowned bed bottom roller kit
277C	3" galvanized bottom roller [crowed bed]
277D	Raised bed crowned press pan conversion kit
278	Bottom roller mounting rod [flat bed]
278 C	Bottom roller mounting rod [crowned bed]
279	Sensor mounting support
279 A	Complete Ro-trak sensor assembly #279-91
287	Sensor electric plug-in
297L	Left side shovel mounting bracket
297R	Right side shovel mounting bracket
2-104	Scraper mold hoard
2-107	Rear sensor wire
2-108	
2-100 K	Solenoid kit (includes wiring harness)
2-11 / D	Complete ro-trak kit (manual to auto)
2-125(2)	Hydraulic cylinder hose
2-142	Center filler set complete
2-143L	Left side top center filler bracket
2-143R	Right side top center filler bracket
2-144L	Left side center filler plow bracket
	Right side center filler plow bracket
2-151(2)	Mold board label
2-152(2)	Side label
2-153(2)	Bed height label
2-154	Caution label for roll holder
2-155(2)	Rain-Flo oval logo label
2-156	Plastic width label
309A(2)	
334	3/4" sae flat washer
375(2)	Cylinder nin
418 (2)	5/8" x 1½" sq. head set screw
422(6)	3/4" hex nut
423(2)	3/4" locking washer
427(19)	3/7 100king washer 3/8" hev nut
72/(19)	5/0 nex nut 3/2" locking wesher
428(19)	5/0 TOCKING WASHEL
433(6)	J/O HEX HUL 1/2" x 4" x 2 1/16" Conton £11 an (LT) h a 14
//3	1/2" x 4" x 3-1/16" Center filler 'U' bolt
	,

Helpful Tips

- * Adjust 3-point top link on tractor to level machine.
- * Periodically check for shallow spots in bed; hollow bed will effect planting and hinder plant growth.
- * We recommend two or more people when laying plastic mulch to maintain proper machine adjustment.
- * A sizable tractor is needed for stability and lifting power. Minimum tractor size for Model 2550 is 60 HP.
- * This machine can also be used for a bedder only, (without laying plastic). The rear cover disks and tires can be removed for this application.
- * Avoid over steering; rear cover disk will move far and cut into plastic. Careful steering will also provide more uniform coverage.
- * Stretching plastic in length and side to side will help plastic from blowing off.
- * Check drip tape down pipe for wearing to avoid damaging drip tape from sharp edges.

Warranty

All Rain-Flo mulch layers have a two year warranty against defects in material and workmanship.

If any part is found defective, return the defective part with serial No. of the machine. If Rain-Flo finds it defective, it will be replaced or repaired at no charge.

Call Customer Service at (717) 445-3000 Fax (717) 445-8304

TROUBLESHOOTING

1. PROBLEM Machine tends to drift sideways causing press wheels to come off the plastic.

SOLUTION * Pull less soil. Pull just enough to fill the bed firm.

* Adjust 3-point top link.

* If your machine has manual Ro-Trak, make sure the sway bar is in place.

* On Auto Ro-Trak machines, make sure Ro-Trak is functioning properly.

* or, tractor may be too small.

2. PROBLEM Cover disk not getting enough soil to cover plastic

SOLUTION * Tilt disk back to dig in more (page 11).

* Set chisel shovels in line (page 12).

* Bed press side plates not set correctly for bed height (page 6 & 7).

3. PROBLEM Plastic not staying under press wheel.

SOLUTION * Tension too tight on plastic roll carrier.

4. PROBLEM Ro-Trak not functioning.

SOLUTION * Follow Ro-Trak information, page 13 and 14.

5. PROBLEM Not firm beds and shallow spots in center.

SOLUTION * Add weight on bed press.

* Tractor's 3-point not low enough or draft control lifting up.

* Soil not tilled deep enough.

Install optional center filler on mulch layer.

~2015 Edition~