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**MODEL 2400**  
**RAISED BED PLASTIC MULCH LAYER**

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**OPERATING  
MANUAL**

***Rain-Flo Irrigation***

929 Reading Road  
East Earl, Pa 17519  
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# **!! Safety First !!**

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- ⚠ 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 nearly 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.
- ⚠ Tractor operator is responsible for extra worker (s) around machine.
- ⚠ Rain-Flo Irrigation is not responsible for accidents if any should occur.

# Features

- Will lay 4' plastic, 30" bed top.
- Adjustable 3" to 5" bed height.
- Requires minimum 40-hp with 4-wheel drive.
- 50 gal. water tank to adjust weight for a full firm pressed bed.
- Compact machine for high tunnels and small tractors.
- Adjustable tension brake on plastic roll carriers.
- Replaceable, reversible plow shares.
- $\frac{3}{8}$ " &  $\frac{1}{2}$ " UHMW poly lined bed press.
- Category I and II 3-point hitch.

# Options

- \* Optional double or single drip applicator.
- \* Optional center fillers, for heavy soil.

# 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 3-point top link.

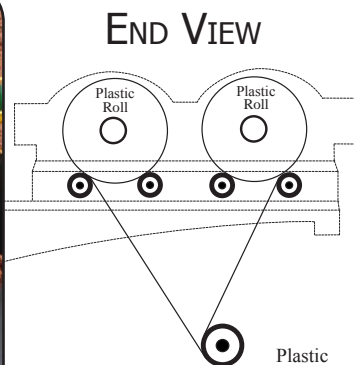
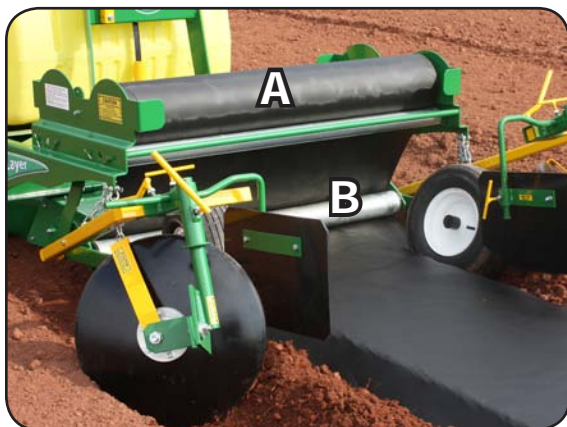
It is not necessary to pull more soil than needed to fill the bed. Pulling too much soil may cause tractor slippage, therefore resulting side drifting.

To get 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.



# Installing Plastic Rolls

To install a plastic roll, place it 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.



Tension  
Brake  
Adjustment

# Bed Height Adjustment

Bed height is adjusted by lifting and lowering the bed press. Remove the bolt and nut shown below (on each side of the machine). 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. Place the bolt and nut as before.



## Bed Height Adjustment

(Move up for higher bed; down for lower.)

Top Hole ..... 3" Bed  
Bottom Hole ..... 5" Bed

# 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

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## Water Tank



The Mini Layer has a 50 gallon water tank for weight to make a firm bed. Add as much water (weight) as possible. The 3-point top link can be lengthened if pulling too much soil.



# 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 below).

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.



# Drip Irrigation Roll Carrier & DripTape Placement



**NOTICE:** Make sure drip roll is compressed firmly between plates, for positive braking effect.

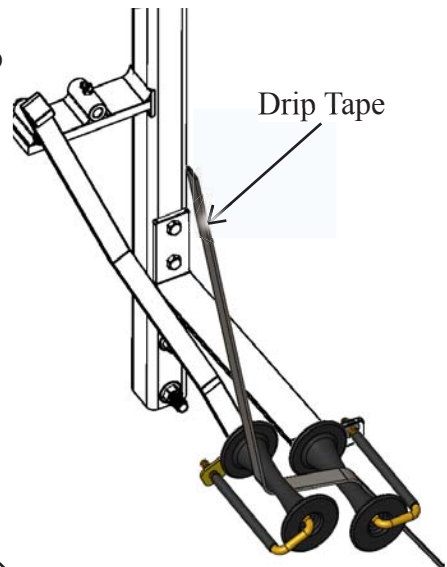
Guides / Rollers  
for drip line

Drip Line  
Down Pipe

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

Feed drip tape through swing arm guide and stationary guide, (See sketch) and into the drip line down pipe.

To avoid damaging drip tape with the press pan, adjust down pipe to bury drip tape 1" to 2" in the bed.



# 2400



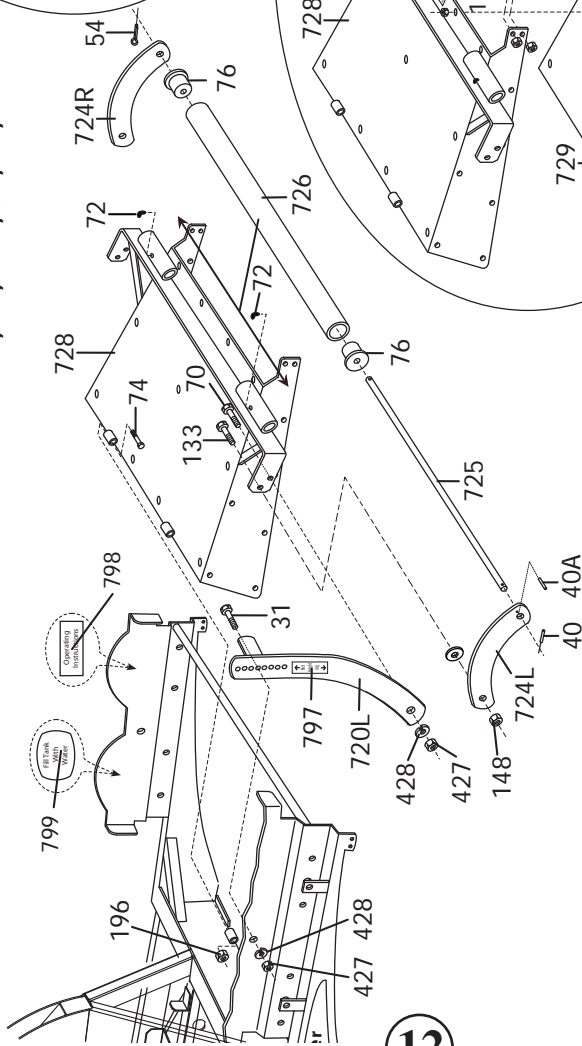
Figure 2

2400

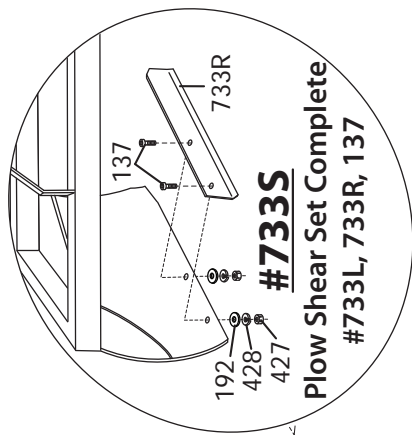
**#726C**

**Bottom Roller Kit**

# 724-726, 40, 40A, 54, 76, 133

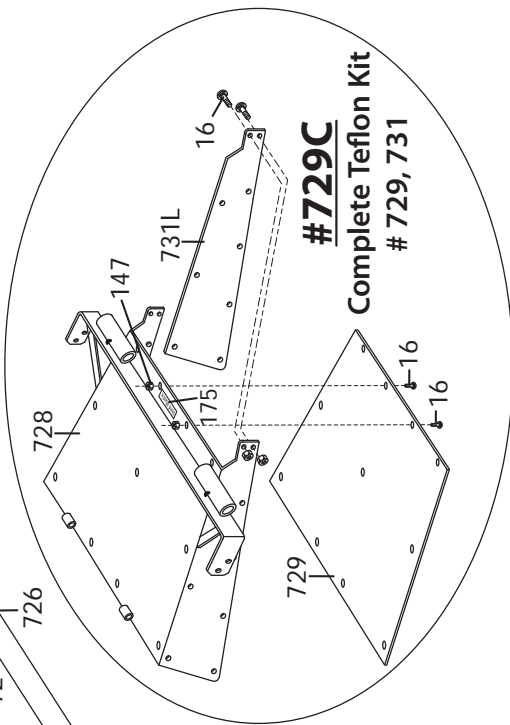


12



**#733S**

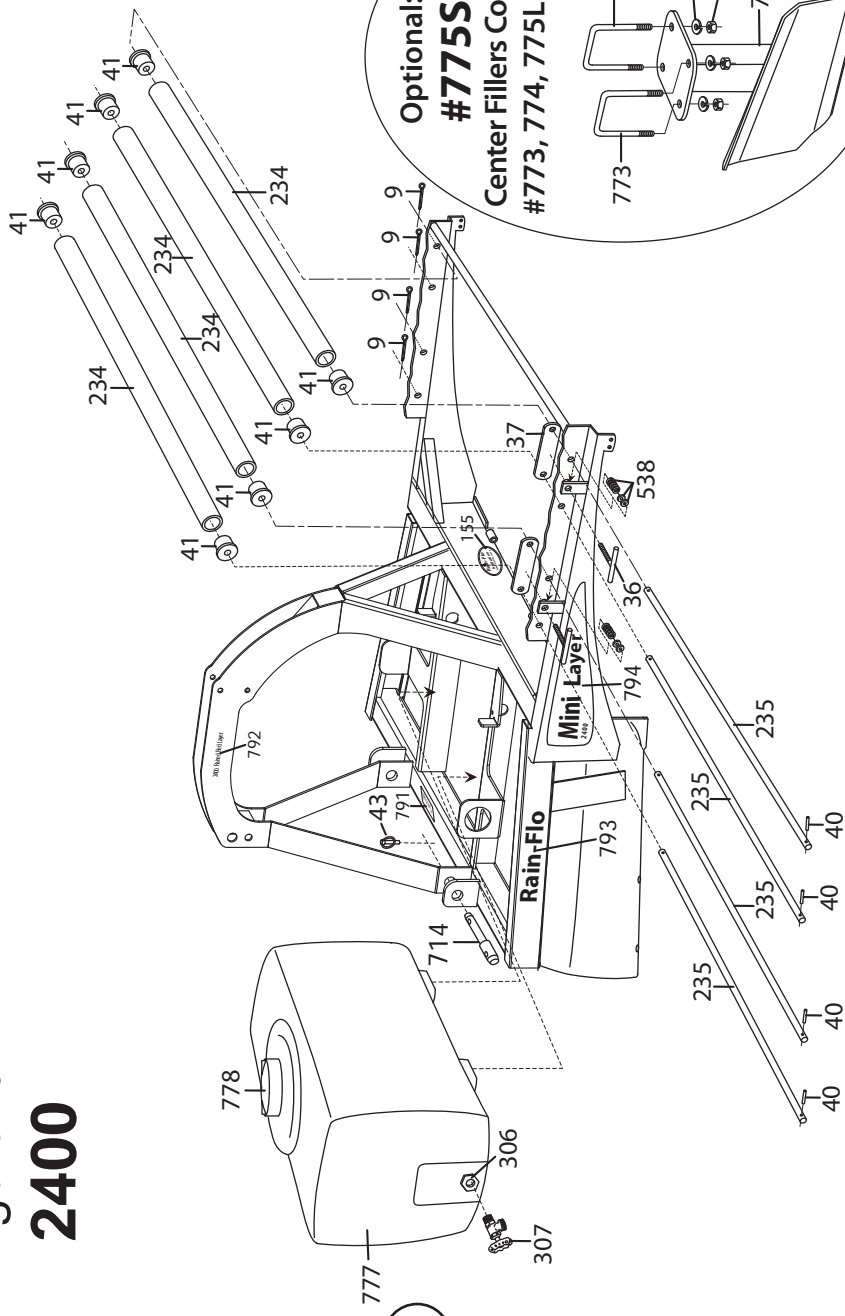
**Plow Shear Set Complete**  
#733L, 733R, 137



**#729C**

**Complete Teflon Kit**  
# 729, 731

Figure 3  
2400

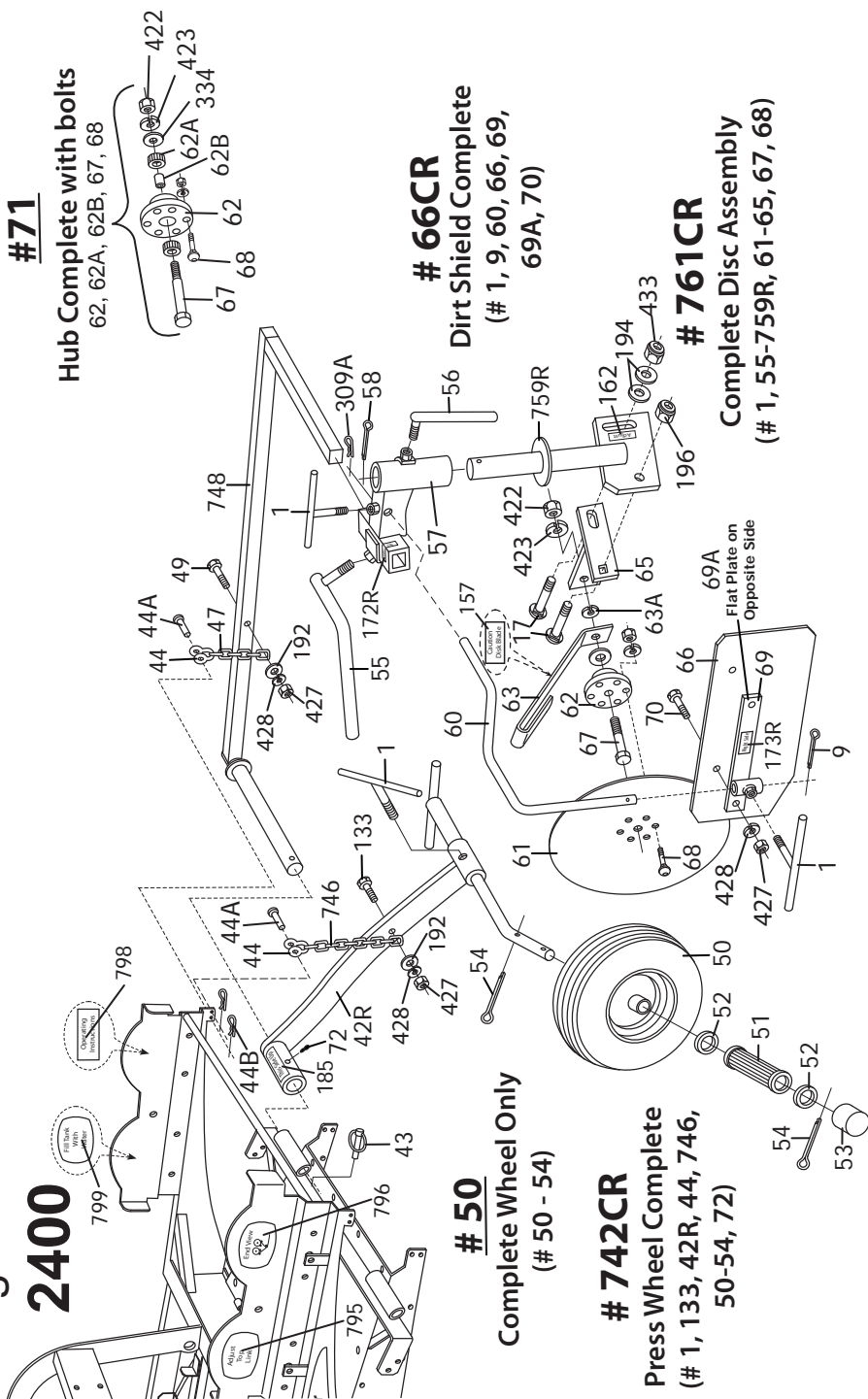


**Optional:**  
**#775S**  
**Center Fillers Complete**  
**#773, 774, 775L & 775R**

This inset diagram shows the optional center filler components. It includes two side rails (773), a central support (774), and two end caps (775L and 775R). The components are shown assembled together, with a central bolt (190) and a washer (146) used to secure the assembly.

Figure 4

2400



# MODEL 2400 MINI LAYER

ITEM #	DESCRIPTION
1.....(9) .....	Tee handle
2.....	Roll carrier clamp
3A.....	Drip attach adjustable brake tension plate
3B.....	Drip attach brake plate
3C.....	Drip attach -- mounting for brake plate
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
6.....	Drip roll carrier frame (Single and Double)
6B.....	Drip attach arm to guide drip tape
6C.....	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
8C.....(2) .....	Drip Attach Arm U-Bolt 3/8" x 2" x 6-1/2"
8E.....(2) .....	Drip attach arm plastic roller
8F.....	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.....(15) .....	1/4" x 7/8" bolt
17.....(4) .....	5/8" x 2" carriage bolt
19.....(3) .....	1/2" Flange Nut
20.....(3) .....	5/16" x 3/4" Carriage bolt
22.....(3) .....	5/16" x 1" Thumb Screw
31.....(6) .....	3/8" x 1" bolt
36.....(2) .....	Tension tee handle
37.....(2) .....	Tension plate
40.....(5) .....	3/16" x 2" roll pin
40A.....(2) .....	1/4" x 2" roll pin
41.....(8) .....	UHMW bushing
42L.....	Left side press wheel arm
42R.....	Right side press wheel arm
43.....(4) .....	Lynch pin
44.....(4) .....	Chain shackle complete
44A.....	Chain shackle pin
44B.....	Chain shackle safety hitch pin
49.....(2) .....	3/8" x 3" chain bolt
50.....(2) .....	Press wheel tire (#50 -thru- #54)
51.....(2) .....	Needle bearing
52.....(4) .....	Bearing retainers
53.....(2) .....	Hub cap
54.....(4) .....	Cotter pin
55.....(2) .....	Adjustable handle
56.....(4) .....	Ell handle
57.....(2) .....	Sliding adjustable bracket
58.....(4) .....	Cotter pin
60.....(2) .....	Dirt shield support arm
61.....(2) .....	60" disk blade
62A.....(4) .....	205KR3 bearing
62B.....(2) .....	Spacer



# MODEL 2400 MINI LAYER

ITEM #	DESCRIPTION
63.....(2)	Disk dirt scraper
63A.....(2)	¾" extension tooth lock washer
65.....(2)	Hub mounting bracket
66.....(2)	Dirt shield
66CL.....	Left side dirt shield complete
66CR.....	Right side dirt shield complete
67.....(2)	Hub center bolt
68.....(12)	⅜" x 1½" button socket cap bolt
69.....(2)	Dirt shield bracket
69A.....(2)	Dirt shield flat plate bracket
70.....(6)	⅜" x 1¼" bolt
71.....(2)	6-Bolt hub complete
72.....(5)	¼" x 90° grease fitting
72A.....	¼" x 45° grease fitting
74.....(2)	⅝" x 3½" bolt
76.....(2)	UHMW bushing (bottom roller)
89.....(3)	¼" x ¾" carriage head bolt
120.....(2)	½" x 1½" bolt
133.....(4)	⅜" x 1½" bolt
135.....	Drip pipe holder bracket
137.....(4)	3/8" x 1-1/4" plow shear bolt
146.....(8)	1/2" hex nut
147.....(11)	1/4" nylon lock nut
148.....(2)	3/8" nylon lock nut
155.....	Rain-Flo oval logo
157.....(2)	Disc scraper caution label
162.....(2)	More coverage label
168.....	Notice label on drip attach
168A.....	"Turn Drippers Up For Less Clogging" label
169.....	Direction label for drip attach
169A.....	Drip attach brake adjustment plate label
172L.....	Left side standing in back label for disk
172R.....	Right side standing in back label for disk
173L.....	Left side standing in back label for dirt shield
173R.....	Right side standing in back label for dirt shield
175.....(2)	Feed plastic under roller label
185.....(2)	This side up label
190.....(8)	5/8" locking washer
192.....(8)	3/8" flat washer
193.....(4)	1/2" flat washer
194.....(4)	5/8" flat washer
195.....(3)	5/16" flange nut
196.....(4)	5/8" nylon lock nut
201.....(2)	1/2" x 3-1/4" bolt
234.....(4)	Plastic mulch support rolls
235.....(4)	Roll holder rod
306.....	¾" tank adapter
307.....	Boiler drain valve
309A.....(2)	Safety pin
334.....(2)	3/4" SAE flat washer
422.....(2)	3/4" hex nut
423.....(2)	3/4" locking washer



# MODEL 2400 MINI LAYER

ITEM #	DESCRIPTION
427.....(18)	3/8" hex nut
428.....(18)	3/8" locking washer
433.....(2)	5/8" hex nut
518.....	Drip line down pipe
538.....(2)	Tension spring and washers
701C.....	Complete single top drip roll carrier
701D.....	Complete double top drip roll carrier
708.....	Double top drip attach extension mounting
714.....(2)	2400 Category I and II lift pin
715.....	Bottom drip attach rod
718C.....	Complete single bottom drip attachment
718D.....	Complete double bottom drip attachment
719.....	Model 2400 frame only
720L.....	Left side bed height adjuster
720R.....	Right side bed height adjuster
724L.....	Left side bottom roller flex plate
724R.....	Right side bottom roller flex plate
725.....	Bottom roller mounting rod
726.....	3" galvanized bottom roller
726C.....	Bottom roller kit
728.....	Bed press
729.....	Bed press top teflon only
729C.....	Complete teflon kit
731L.....	Left side teflon only
731R.....	Right side teflon only
733L.....	Left side plow shear
733R.....	Right side plow shear
733S.....	Plow shear set complete
742CL.....	Left side press wheel complete
742CR.....	Right side press wheel complete
746.....(2)	Press wheel chain
748.....(2)	Cover disk support arm
759L.....	Left side cover disk shank
759R.....	Right side cover disk shank
761CL.....	Left side disk assembly complete
761CR.....	Right side disk assembly complete
773.....	Center filler 'U' bolt
775L.....	Left side center filler
775R.....	Right side center filler
775S.....	One set, center fillers complete
777.....	50 gallon water tank
778.....	Tank cap only
780.....	Tank holder bracket
791.....	Serial number label
792.....(2)	Raised bed layer side label
793.....(2)	Rain-Flo side label
794.....(2)	Mini Layer side label
795.....	Top link instruction label
796.....	Plastic roll end view label
797.....(2)	Bed height adjustment label
798.....	Operating instruction label
799.....	Water tank instruction label

# **Helpful Tips**

- \* Adjust 3-point top link on tractor to level machine.
- \* Add water in tank for more soil and firmer bed.
- \* Periodically check for shallow spots in bed; hollow bed will effect planting and hinder plant growth.
- \* Two or more people are recommended when laying plastic mulch to maintain proper machine adjustments.
- \* A sizable tractor is needed for stability and lifting power. Minimum tractor size for Model 2400 is 40 HP, 4 wheel drive.
- \* 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 previously laid plastic. Careful steering will also provide more uniform coverage.
- \* Stretching plastic in length and side to side will help plastic from blowing off.

# **Warranty**

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

If any part is found defective, return the defective part with serial number 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

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

**SOLUTION:** \* Pull less soil by lengthening top link. Pull just enough soil to firmly fill the bed.  
\* Make sure sway bar is in place.  
\* 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 9).

**3. PROBLEM:** Plastic not staying under press wheel.

**SOLUTION:** \* Tension too tight on plastic roll carrier. \*  
\* Angle press wheel toward bed.

**4. PROBLEM:** Not firm beds and shallow spots in center.

**SOLUTION:** \* Add water in tank or shorten top link.  
\* Tractor's 3-point not low enough or draft control is lifting up.  
\* Soil not tilled deep enough.  
\* Install optional center filler on mulch layer.

**~2015 Edition~**

**Rain-Flo Irrigation**  
**(717) 445-3000**