

2100P ESTATE BROADCAST SPREADER

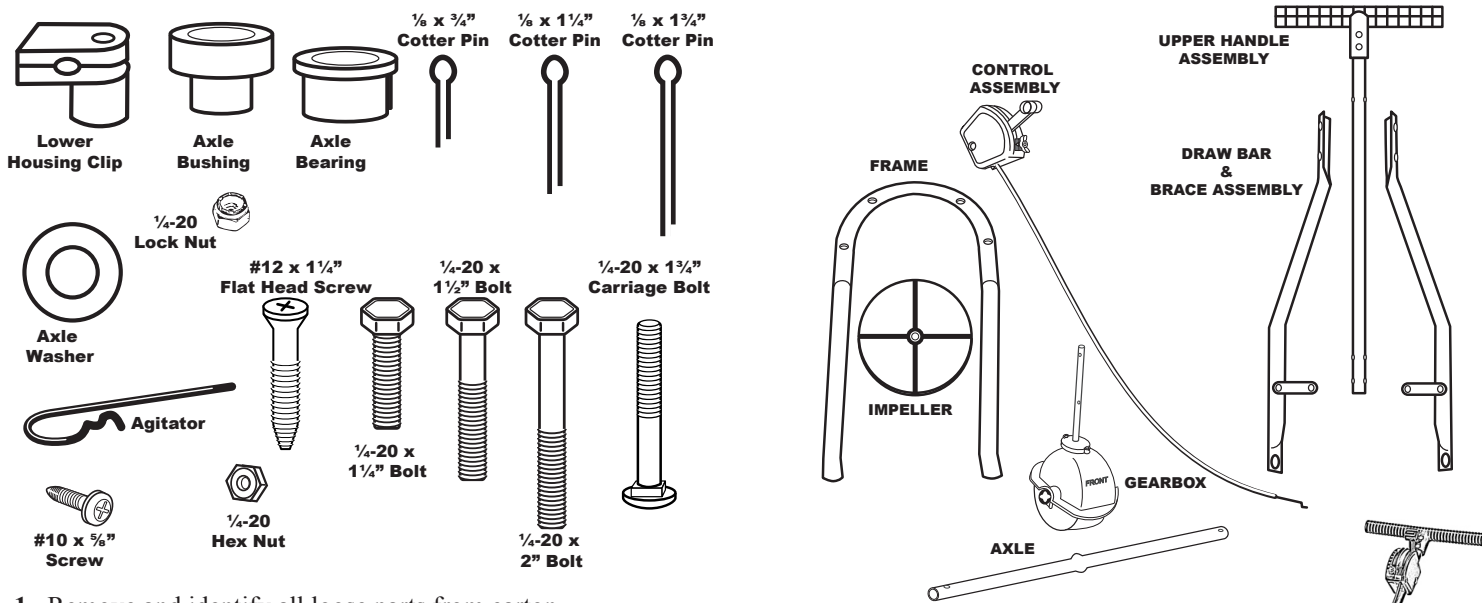
ASSEMBLY and OPERATING INSTRUCTIONS

EarthWay® EV-N-SPRED

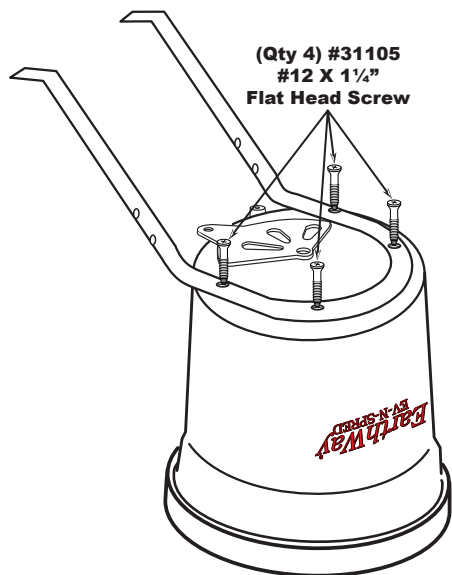
PLEASE CALL IF YOU ARE MISSING ANY PARTS, HAVE ANY DIFFICULTY IN ASSEMBLY, OR HAVE ANY QUESTIONS REGARDING THE SAFE OPERATION OF THIS SPREADER. THIS MODEL INCLUDES **LIFETIME TECHNICAL SUPPORT** SUPPORT HOT LINE: 574-848-7491 or 800-294-0671, EMAIL: TECHSUPPORT@EARTHWAY.COM

HELPFUL HINTS: READ THE DIRECTIONS BEFORE ASSEMBLY

- ☑ If your spreader does not spread evenly, be sure the FRONT on the gear box points to the front of the spreader. The impeller must turn clockwise. Reversing the gearbox will cause the impeller to turn counter clockwise. Clean the impeller plate after each use. Fertilizer stuck on the impeller blades will cause uneven spreading.
- ☑ Your spreader is designed to be pushed at three miles per hour, which is a brisk walking speed. Slower or faster speeds will change the spread patterns. Wet fertilizer will also change the spread pattern and flow rate. Clean and dry your spreader thoroughly after each use. Coat all metal surfaces (inside & outside of chassis tubes) with light oil or silicon spray to help prevent corrosion. Wash between the shut off plate and bottom of the hopper. **Do not use powdered materials.**
- ☑ Gears are permanently lubricated at the factory. Do not open the gearbox or dirt may enter.



1. Remove and identify all loose parts from carton.

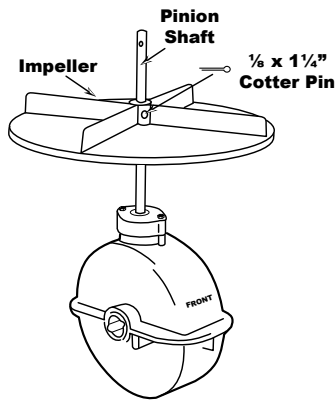


2. Position the Hopper on its top as shown to the left. Install frame using (4) #12 x 1 1/4" Flat Head Phillips screws. **TIGHTEN THESE NOW - use care to not over tighten**



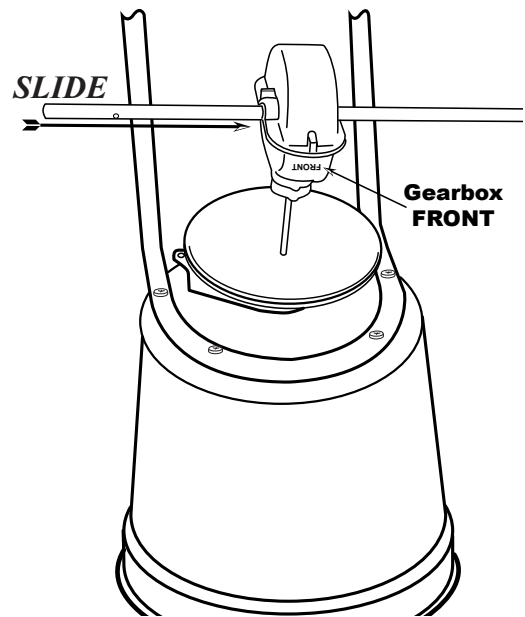
Warning
Remove agitator when
using Rock Salt to prevent
gearbox damage



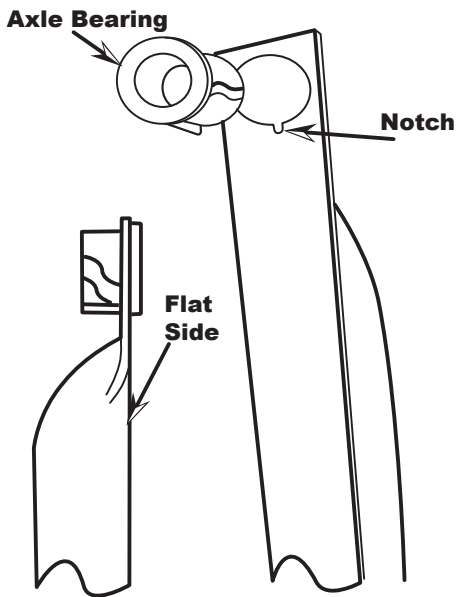


Gearbox Assembly

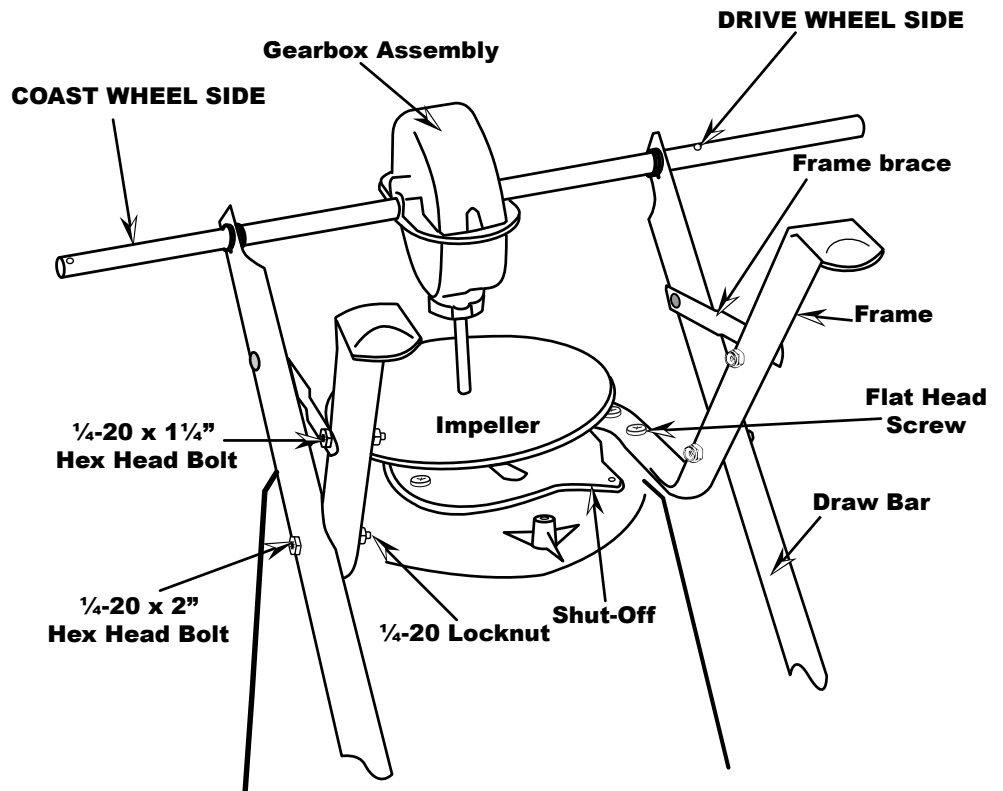
3. Install impeller onto pinion shaft. Insert $\frac{1}{8}$ " x $\frac{1}{4}$ " Cotter pin through impeller then through pinion shaft. Use hole closest to the gear box. Spread cotter pin to prevent from falling out.



4. Install gear box by inserting the pinion shaft into hole in center of hoppers bottom. The word "FRONT" on the gearbox must point to FRONT of the hopper. Follow label instructions on hopper. Next, slide axle thru the gearbox with the drive wheel hole positioned as shown in the drawings below.

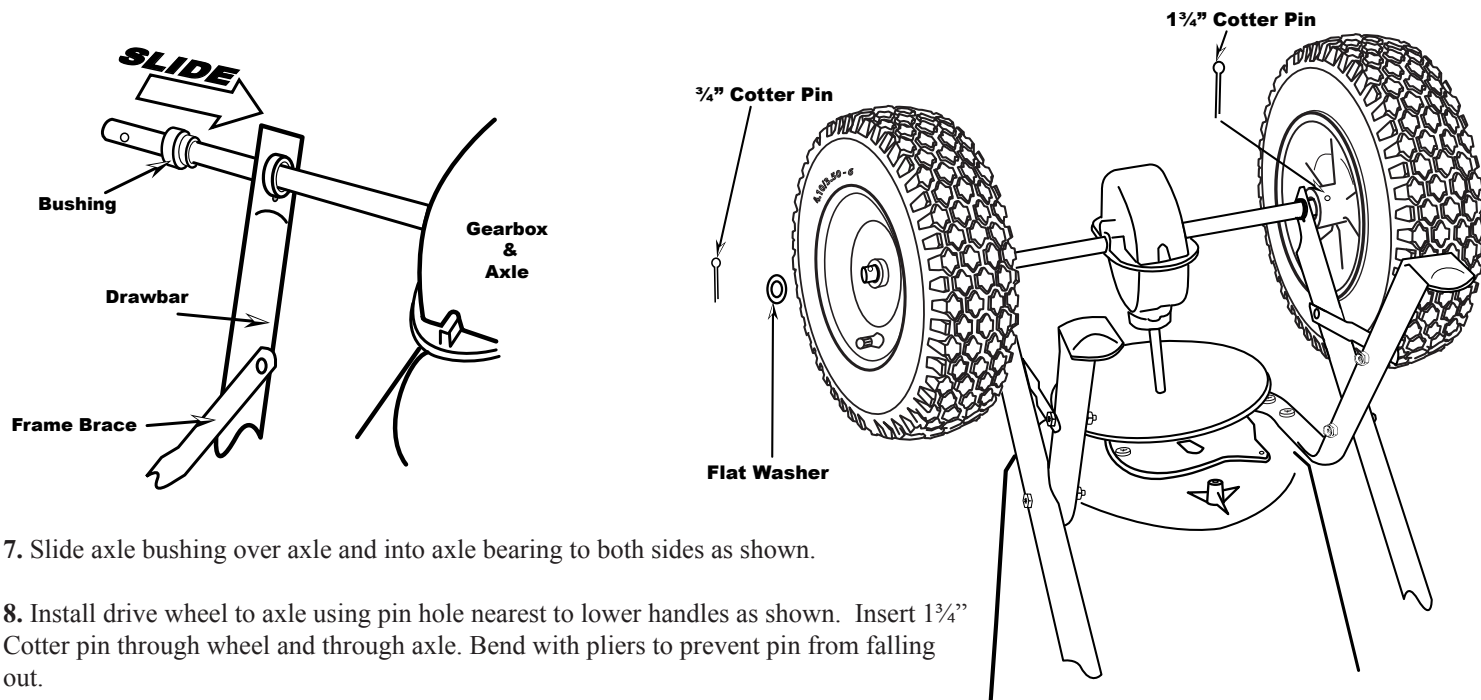


5. Install axle bearings to both Draw bars. **NOTE:** Notch on bearings and in the Draw bar line up. Bearings must go through flat side of lower handle.



6. Install lower handles onto axle to both sides as shown. Insert $\frac{1}{4}$ -20 x 2" bolt through hole in Draw Bar and through first hole in frame install locknut. **DO NOT TIGHTEN.** Next insert $\frac{1}{4}$ -20 x $\frac{1}{4}$ " bolt through frame brace and through second hole in frame install locknut.

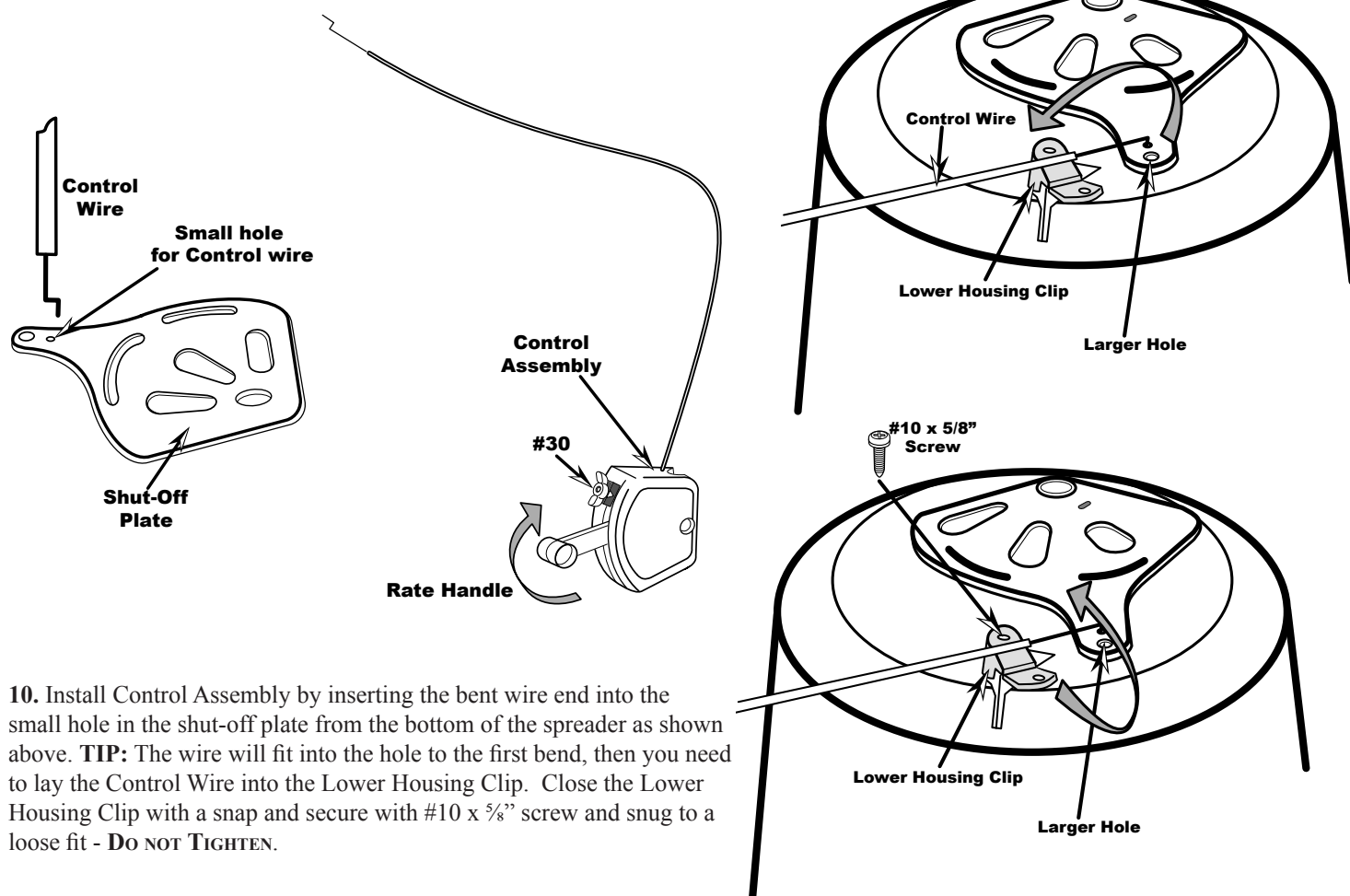
NOW GO BACK AND TIGHTEN ALL NUTS AND BOLTS STARTING WITH FIRST STEP. DO NOT OVER TIGHTEN.



7. Slide axle bushing over axle and into axle bearing to both sides as shown.

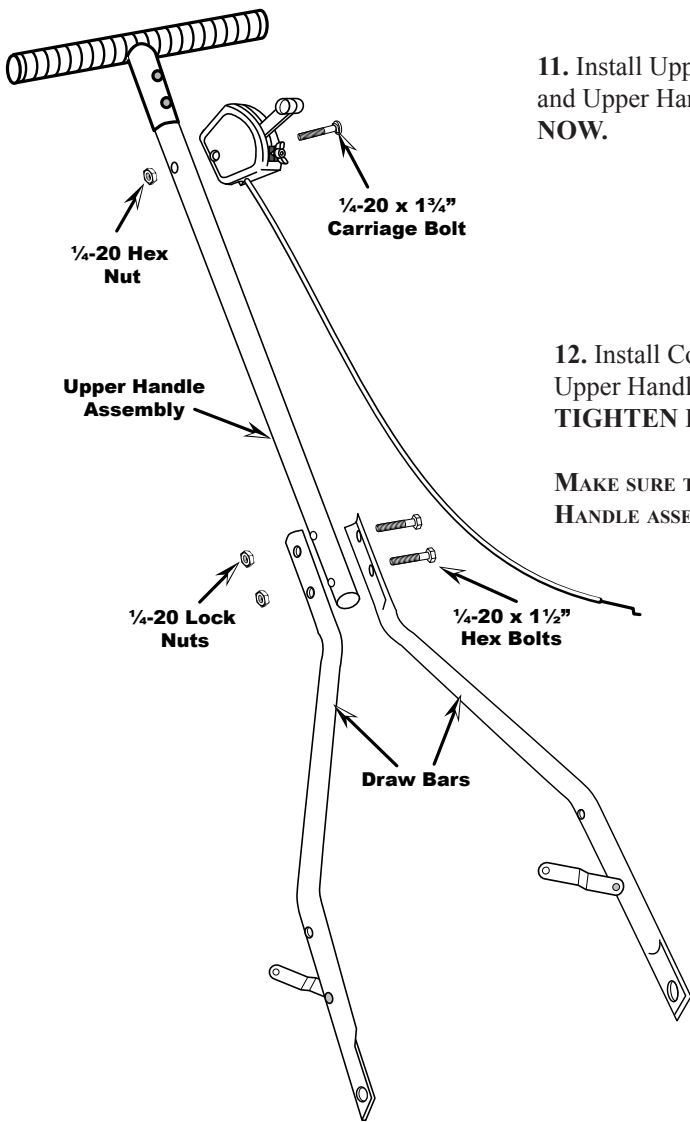
8. Install drive wheel to axle using pin hole nearest to lower handles as shown. Insert $1\frac{3}{4}$ " Cotter pin through wheel and through axle. Bend with pliers to prevent pin from falling out.

9. Install coast wheel to axle using outside pin hole. As shown, add the flat washer, and insert $\frac{3}{4}$ " Cotter pin through axle (**NOT THRU THE WHEEL**). Bend with pliers to prevent pin from falling out.



10. Install Control Assembly by inserting the bent wire end into the small hole in the shut-off plate from the bottom of the spreader as shown above. **TIP:** The wire will fit into the hole to the first bend, then you need to lay the Control Wire into the Lower Housing Clip. Close the Lower Housing Clip with a snap and secure with #10 x $\frac{5}{8}$ " screw and snug to a loose fit - **DO NOT TIGHTEN.**

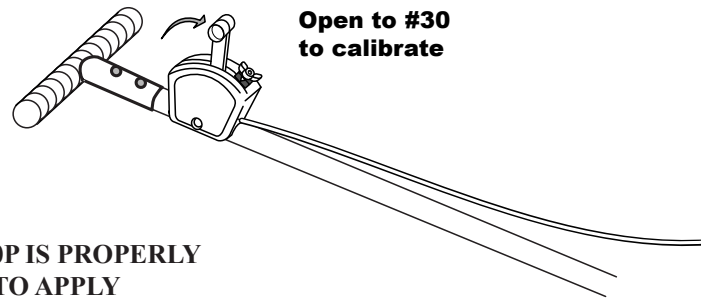
TURN SPREADER UPRIGHT ON TO WHEELS.



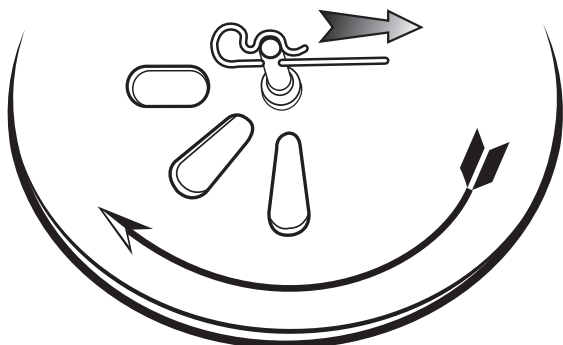
11. Install Upper Handle between Draw Bars. Insert 1/4-20 x 1 1/2" bolts through Draw Bar and Upper Handle and secure with 1/4-20 Lock Nuts. **TIGHTEN BOLTS AND NUTS NOW.**

12. Install Control Assembly onto Upper Handle by sliding the Control Assembly over Upper Handle shaft then securing with 1/4-20 x 1 3/4" Carriage Bolt and 1/4-20 Hex Nut. **TIGHTEN BOLTS AND NUTS NOW.**

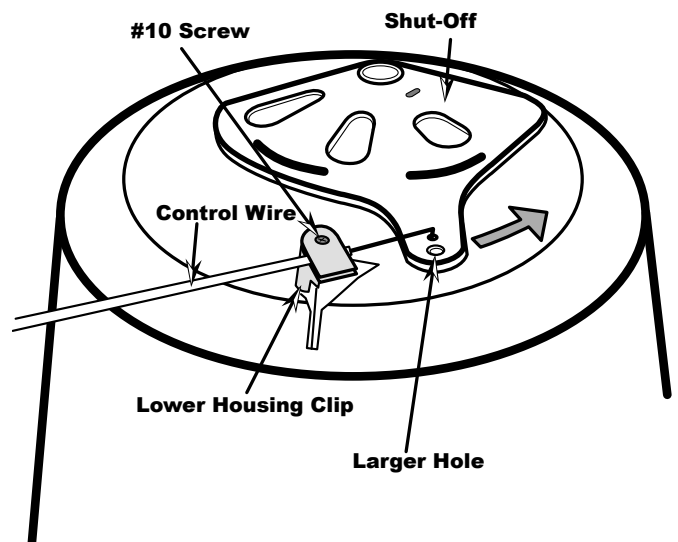
MAKE SURE TO POSITION THE CONTROL ASSEMBLY WIRE ABOVE THE DRAW BAR AND UPPER HANDLE ASSEMBLY AS SHOWN.



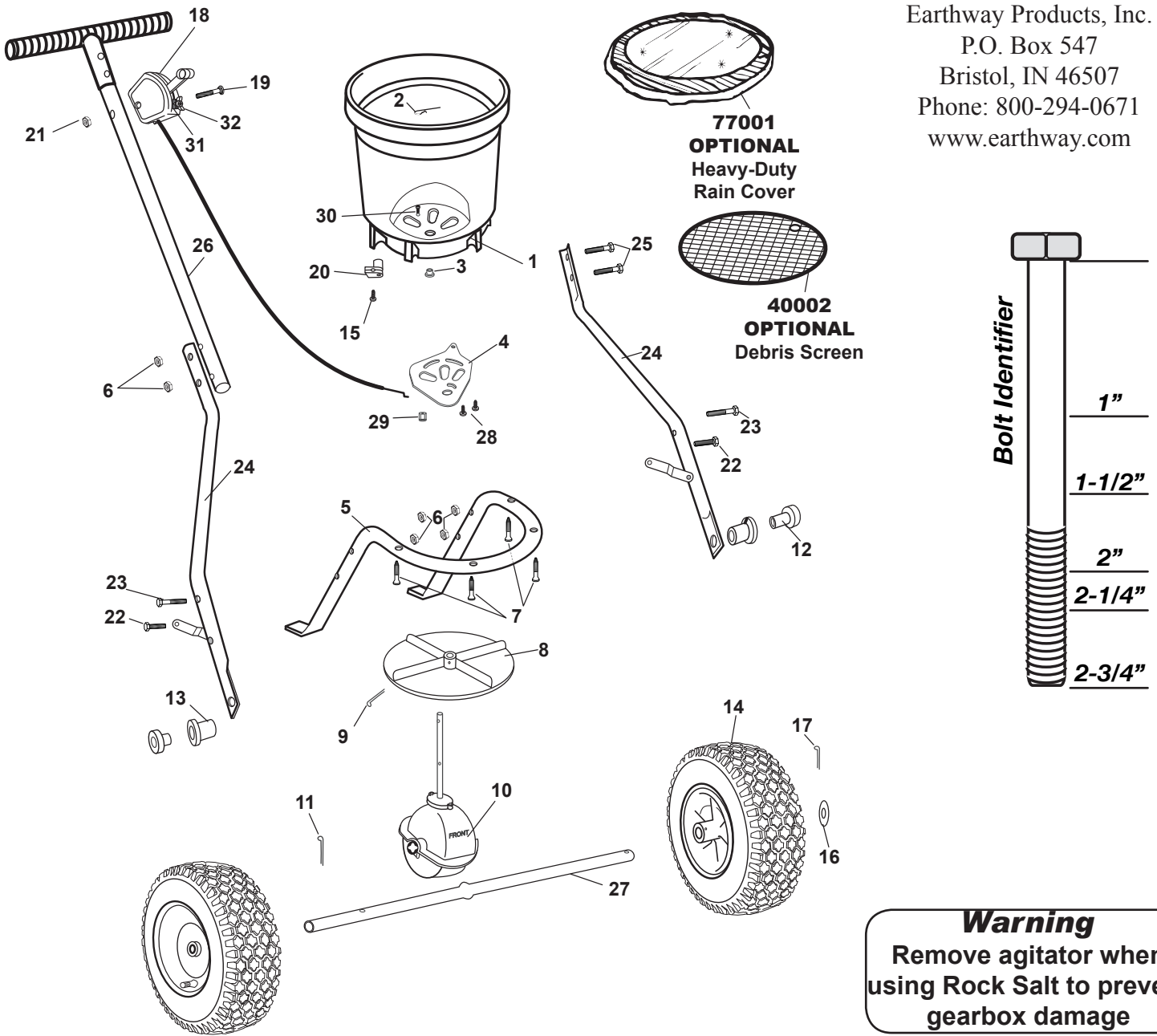
13. **CALIBRATION - THIS STEP ENSURES THAT YOUR 2100P IS PROPERLY ADJUSTED TO GIVE YOU A CORRECT STARTING POINT TO APPLY MATERIALS AT THE CORRECT SETTING. NOW TURN THE SPREADER OVER ON TO THE HOPPER.** With the spreader resting on its hopper push the Control Handle forward to #30, then push the shut-off plate forward until the shut-off and the drop holes are fully open. Now tighten the #10 Screw on the Lower Housing Clip firmly. Check to confirm calibration by closing the Control Handle, and reopening to #30 and confirm that the drop holes are fully open.



14. Insert agitator to pinion shaft on inside of hopper. **Note:** the position of flat side of the agitator. This pin should be installed as shown.



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2100P Broadcast Spreader ~ Parts List

Key #	Part #	Description	Key #	Part #	Description
1	60332	HOPPER ASSEMBLY	17	33106	1/8" X 3/4" COTTER PIN ZINC
2	33117	AGITATOR	18	60520	CONTROL ASSEMBLY
3	12220	HOPPER BUSHING	19	37108	1/4-20 X 1 3/4" CARRIAGE BOLT ZINC
4	12317	SHUT OFF PLATE	20	12318	LOWER HOUSING CLIP
5	25100	FRAME	21	32100	1/4-20 HEX NUT ZINC
6	32103	1/4-20 NYLON INS LOCKNUT ZINC	22	31121	1/4-20 X 1 1/4" HHCS ZINC
7	31105	#12 X 1 1/4" TYPE A FHPS ZINC	23	31120	1/4-20 X 2" HHCS ZINC
8	12109	IMPELLER (9" DIA)	24	60038	DRAW BAR & BRACE ASSEMBLY
9	36105	1/8" X 1 1/4" COTTER PIN SS	25	31100	1/4-20 X 1 1/2 HHMS ZINC
10	60190	GEAR BOX ASSEMBLY	26	60036	UPPER HANDLE ASSEMBLY
11	33107	1/8" X 1 3/4" COTTER PIN SS	27	26001	AXLE
12	12150	AXLE BUSHING	28	31138	#8 X 3/8" PMT HD COARSE BLACK
13	12148	AXLE BEARING	29	11927	SHUTOFF SUPPORT- LARGE
14	70106	10" PNEUMATIC DRIVE WHEEL	30	36208	#6 X 3/8" TYPE 25 PHPS SS
15	31124	#10 X 5/8" TYPE A PHPS ZINC	31	12222	INDICATOR-BROADCAST
16	34103	1"OD X 17/32"ID X 1/32" WASHER ZINC	32	32106	10-24 WING NUT ZINC

Broadcast Setting Matrix

Calibration Techniques

How to ensure your spreader is properly calibrated

Make sure the drop holes in the bottom of the hopper are fully open when the Rate Control handle is on #30. If not, please adjust control cable or control rod to allow for a full open hopper position at #30.

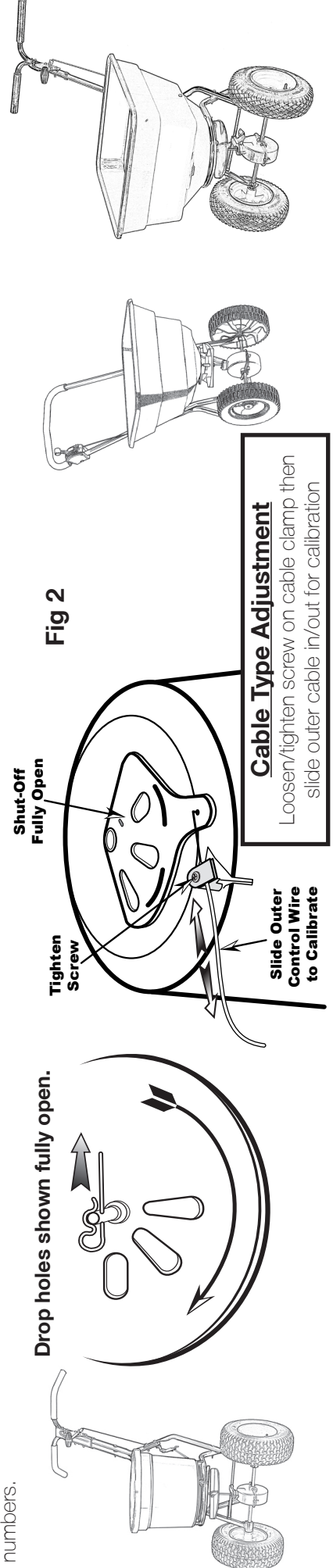
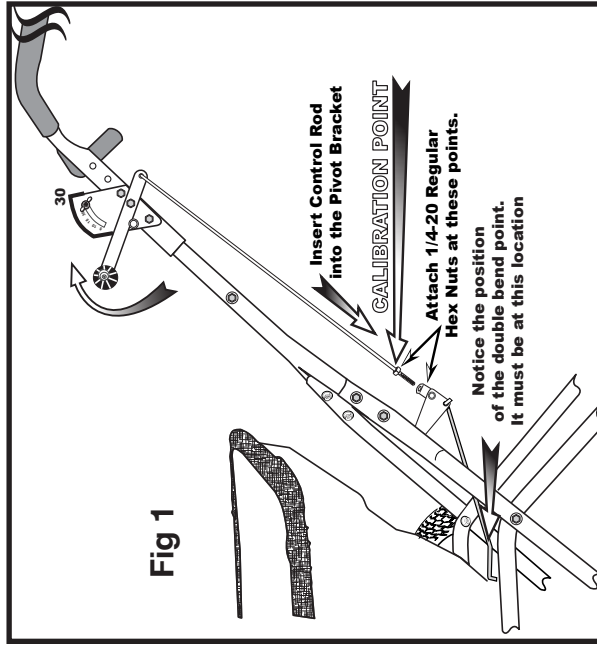
Rod Type Adjustment

1. Open the shut-off so that the drop holes are completely open as illustrated to the right.
2. Review the Control Lever position - if it is set so that the forward edge is at #30, you are calibrated. If not, you need to adjust the control rod at the pivot bracket shown in Fig 1.
 - A. If your shut-off is not able to open fully as in step #1. Loosen the top nut a few turns, then loosen the lower nut so that it allows you to push the shut-off open fully. Next tighten each nut so that they contact the pivot bracket without moving it, and then carefully tighten each nut fully so they do not loosen during use. Recheck adjustment as outlined in #1 above.
 - B. If your shut-off is able to open fully as in step #1, but the Control Lever is not at #30. Loosen the top nut a few turns, then loosen the lower nut so that it allows you to push the Control Lever to #30. Next tighten each nut so that they contact the pivot bracket without moving it. Carefully tighten each nut fully so they do not loosen during use. Recheck adjust as outlined in #1 above.

Cable Type Adjustment

1. Open the Control Lever so that the shut-off and drop holes are completely open as illustrated above right.
2. Review the Control Lever position so that the indicator is pointed to #30, if it is your calibration is correct. If not you need to adjust the control cable at the cable clamp on the underside of the hopper as shown in Fig 2.
 - A. If your shut-off is not able to open fully as in step #1. Loosen the cable clamp screw slightly so that you can slide the outer cable out so that the shut-off is fully open. Next tighten the cable clamp screw securely. Recheck adjustment as outlined in #1 above.
 - B. If your shut-off is able to open fully as in step #1, but the Control Lever is not at #30. Loosen the cable clamp screw slightly so that you can slide the outer cable in so that the Control Lever opens to #30. Next tighten the cable clamp screw securely. Recheck adjustment as outlined in #1 above.

If you have any questions regarding the operation or assembly of your spreader please call us at 800-294-0671 or 574-848-7491 Monday - Friday 9:00am - 4:00pm Eastern. Accessories and Repair Parts are also available at these numbers.



ESTABLISHING A SETTING RATE

Step 1: Use **Chart 1** to estimate the number of LBS/1,000 square feet of coverage (Example: 20 LB. bag with 10,000 square foot coverage = 2.0 LBS/1,000 square feet)




Step 2: Find the closest LBS/1,000 square feet in **Chart 2** that you estimated using **Chart 1** (Example: 2.0 LBS/1,000 square feet = Spreader Setting of 13)



Step 3: Determine the Spread Width by evaluating the particle or seed size in

Chart 3 to determine the Spread Width between Spread Paths

CHART 1		BAG COVERAGE IN SQUARE FEET	
		5,000	10,000
		LBS/1,000 SQ FT	
5 LBS.		1.0	0.5
10 LBS.		2.0	1.0
15 LBS.		3.0	1.5
18 LBS.		3.6	1.8
20 LBS.		4.0	2.0
25 LBS.		5.0	2.5
30 LBS.		6.0	3.0
35 LBS.		7.0	3.5
40 LBS.		8.0	4.0
45 LBS.		9.0	4.5
50 LBS.		10.0	5.0

CHART 2		
GRAMS/SQ METER	LBS./1,000 SQ FT	SPREADER SETTING
5 Grams	1.0 LBS.	11
10 Grams	2.0 LBS.	13
15 Grams	3.0 LBS.	14
20 Grams	4.0 LBS.	16
25 Grams	5.0 LBS.	17
30 Grams	6.0 LBS.	18
35 Grams	7.0 LBS.	19
40 Grams	8.0 LBS.	20
45 Grams	9.0 LBS.	22
50 Grams	10.0 LBS.	23

CHART 3		
SPREAD WIDTHS FOR DIFFERENT PARTICLE SIZES		
Particle Size	English	Metric
	5-7ft.	1.5-2.1m
	7-9ft.	2.1-2.7m
	9-12ft.	2.7-3.7m

SPREAD WIDTH FOR DIFFERENT SIZE GRASS SEED		
Seed Size	English	Metric
	5-7ft.	1.5-2.1m
	7-10ft.	2.1-3.1m

METRIC RATE SETTING

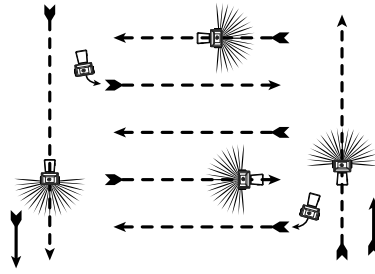
Determining a Setting Rate

Use chart below to determine the **Setting Rate** based on **Grams/Square Meter** of coverage as directed on the bag.

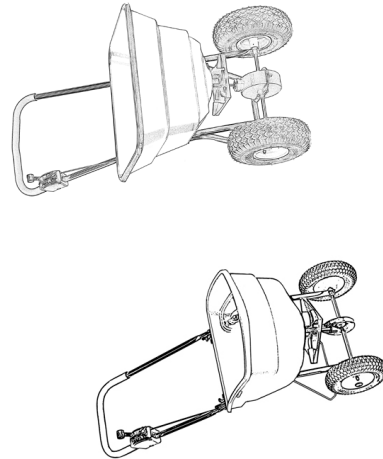
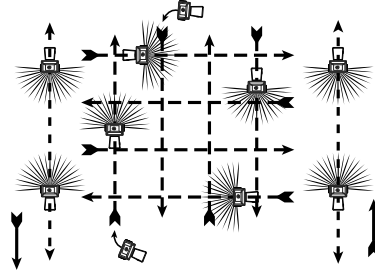
All spread widths are determined by particle size and weight.

SPREAD PATHS

FULL Rate (one pass)



HALF Rate (two passes)



Maintain a consistent walking speed of 2-3mph or the application rate will change.

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The settings furnished on the Rate Setting Matrix are intended as a guide only. Variations in physical characteristics of material applied, walking speed, and roughness of ground surface may require slightly different spreader settings. Due to the above conditions, EPI makes no warranty as to the uniformity of coverage actually obtained from the settings listed.