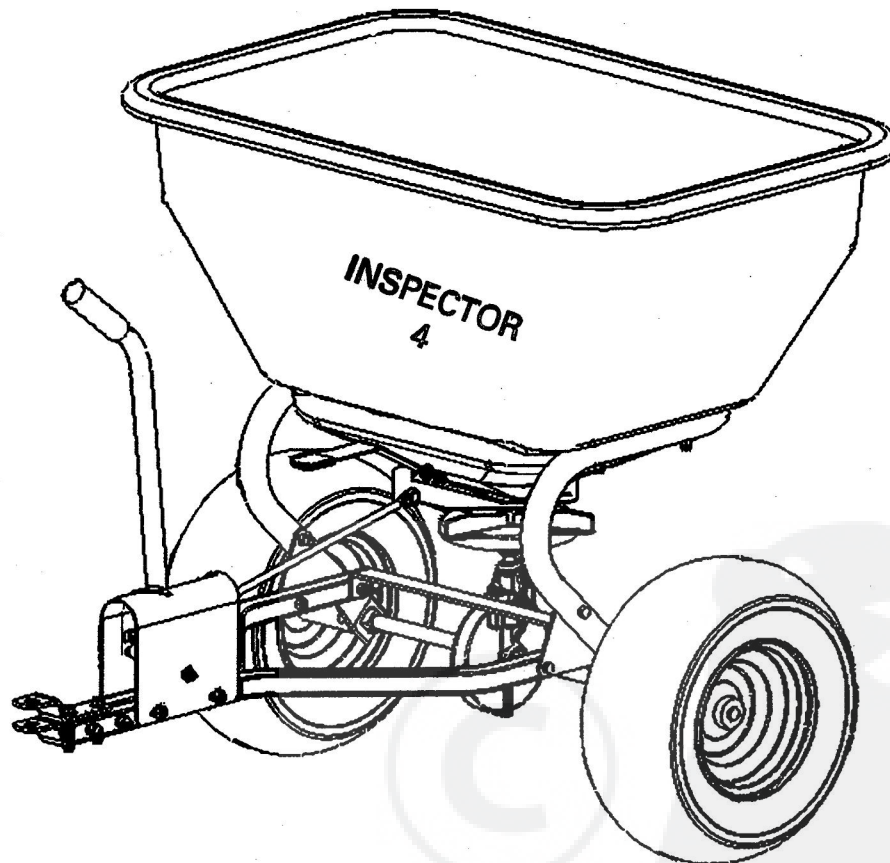


TBS7000RD Assembly and Operation Manual

200 lb. Commercial Trail Behind Broadcast Spreader

2177-2

03/07



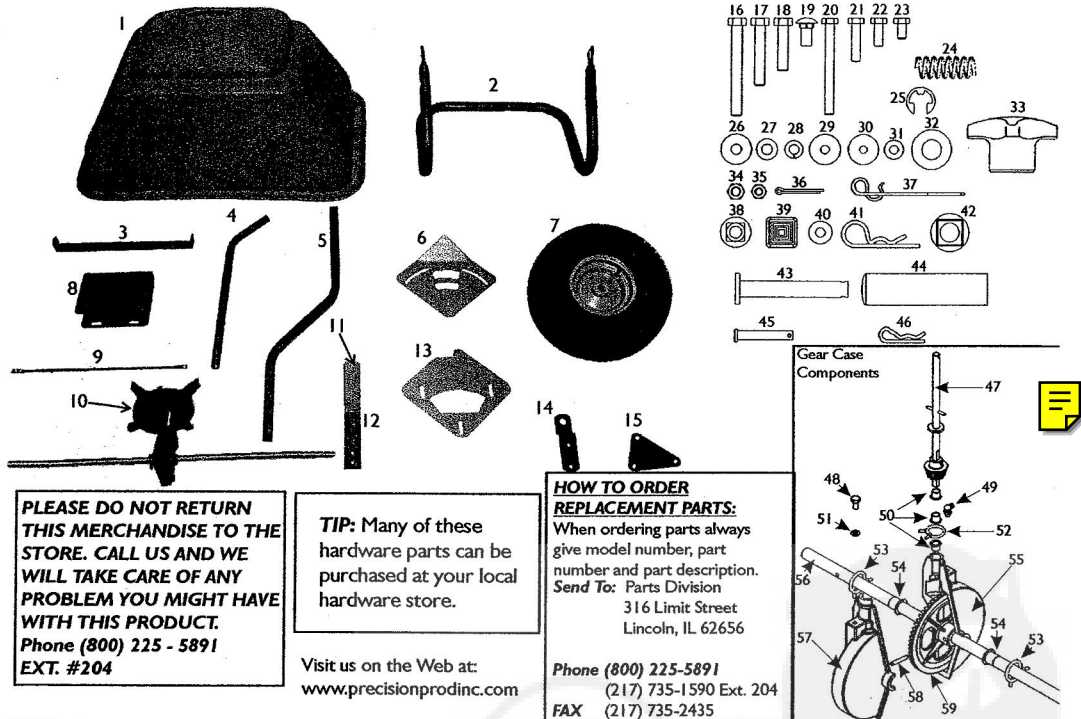
Precision Products, Inc.

LIMITED WARRANTY

This unit is warranted against defects in materials and workmanship to the original purchaser, under normal use and service, for a period of ninety (90) days from date of sale. During the Warranty Period, we will repair or replace, at our option free of charge to the original purchaser, any part of the Unit that our examination shows to be defective workmanship or materials. This Warranty **Does Not** apply to damage caused by transit, misuse, abuse, neglect, accident, normal wear, or alterations by unauthorized persons.

1. Empty hopper after each use. Do not store spreader with material left in hopper.
2. Wash spreader thoroughly and wipe dry.
3. Lubricate all moving parts. Use a grease gun to apply grease to the gearbox assembly. **CAUTION: Use a reasonable amount of grease. DO NOT pack gearbox full of grease.** Apply oil to spinner shaft (including area shaft extends through hopper), slide plate and where the spinner shaft and axle extend through the gearbox.

Parts List for the TBS700RD Spreader



PLEASE DO NOT RETURN THIS MERCHANDISE TO THE STORE. CALL US AND WE WILL TAKE CARE OF ANY PROBLEM YOU MIGHT HAVE WITH THIS PRODUCT.
Phone (800) 225-5891
EXT. #204

TIP: Many of these hardware parts can be purchased at your local hardware store.

Visit us on the Web at:
www.precisionprodinc.com

HOW TO ORDER REPLACEMENT PARTS:

When ordering parts always give model number, part number and part description.
Send To: Parts Division
316 Limit Street
Lincoln, IL 62656

Phone (800) 225-5891
(217) 735-1590 Ext. 204
FAX (217) 735-2435

Ref No	Parts No	Description	Qty	Ref No	Parts No	Description	Qty	Ref No	Parts No	Description	Qty
1	2155	Hopper	1	21	1660	1/4 x 1-1/4 Hex Head Bolt	1	41	1042	#14 Hitch Pin	1
2	2151	Wrap Around Support	1	22	1643	1/4 x 3/4 Hex Head Bolt	3	42	2150	Axle Bearing	2
3	2154	Cross Brace	1	23	1647	1/4 x 1/2 Hex Head Bolt	3	43	4289	1/2 x 3-1/2 Clevis Pin	1
4	2162	Control Handle	1	24	2157	Compression Spring	1	44	1029	7/8 Handle Grip	1
5	2152	Hitch Arm	2	25	2175	E-Clip	1	45	2198	Clevis Pin 1/4" x 1-3/4"	1
6	2167	Spread Adjustment Plate	1	26	2172	5/16 x 1" O.D. Washer	6	46	2189	#213 Hitch Pin Clip	1
7	2197	Wheel	2	27	1044	5/16 Flat Washer	23	47	2982A	Spinner Shaft Assembly	1
8	2164	Control Housing	1	28	1276	5/16 Lock Washer	7	48	2984	1/4 x 1/2 Hex Head Bolt FT	1
9	2156	Control Rod	1	29	6143	1/4 Fender Washer	6	49	2983	1/4 Grease Zerk	1
10	2614	Spinner Disc	1	30	6127	1/4 Rubber Washer	6	50	2973	3/8 Nylon Bushing	3
11	2166	Vinyl Handle Cap	1	31	1817	1/4 Flat Washer	6	51	1807	1/4 Lock Washer	1
12	2169	Spread Adj. Plate Handle	1	32	1646	5/8 Flat Washer	4	52	2978	7/8 Spring Clamp	1
13	2168	Slide Plate	1	33	2158	Control Knob	1	53	2977	15/16 Spring Clamp	2
14	4266G	Clevis Plate	2	34	1557	5/16 Lock Nut	18	54	2970	5/8 Nylon Bushing	2
15	2153	Side Bracket	2	35	1558	1/4 Lock Nut	9	55	2976	Rear Gear Case Housing	1
16	2173	5/16 x 3 Hex Head Bolt	6	36	1262	1/8 x 1-1/4 Cotter Pin	2	56	2190	Axle	1
17	4041	5/16 x 2 Hex Head Bolt	10	37	2148	Agitator Pin	1	57	2975	Front Gear Case Housing	1
18	4014	5/16 x 1-1/2 Hex Head Bolt	2	38	2160	Spinner Shaft Bushing	1	58	2979	3/16 x 1-1/4 Split Pin	1
19	1314	5/16 x 3/4 Carriage Bolt	1	39	2176	1" Square Tube Plug	4	59	2971	Drive Gear	1
20	2179	1/4 x 3 Hex Head Bolt	1	40	2178	5/16 x 5/16 Rubber Roller	1	2171GY	Strainer (Not Shown)	1	
					2163	Calibration Strip (Not Shown)		2170	Rain Cover (Not Shown)	1	

RD APPLICATION CHART

USING YOUR SPREADER:

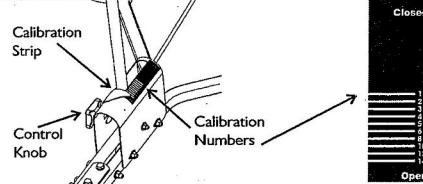
After the calibration number has been determined, loosen the Control Knob and slide the (long) edge of the Calibration Strip to the desired setting.

Tighten the Control Knob. (See Photo).

TO OPEN SLIDE PLATE: Pull the Control Lever forward until it stops against the Calibration Strip.

TO CLOSE SLIDE PLATE: Push the Control Lever fully back until closed.

Please see unit instruction sheet for full operations instructions.



MAINTENANCE INSTRUCTIONS:

AFTER EACH USE: Wash unit thoroughly and let dry.

CAUTION: Care must be taken with any weed killer, pesticide or combination product. They can be harmful to other plant life in the yard.

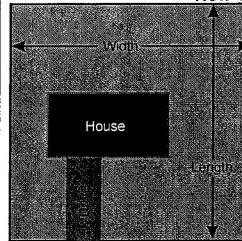
TIPS:

- * Always follow directions indicated on this instruction sheet.
- * Never apply a lawn care product by hand.
- * Walk at a steady pace to ensure even application throughout the lawn. The faster you walk, the thinner the coverage.
- * To avoid gaps and streaks, first spread the border of lawn and then fill in center with uniform parallel passes.
- * For best results, apply in two passes, using a crisscross pattern and 1/2 of setting number given below.
- * All fertilizers should be watered in after application.
- * In case of accidental over application, increase watering.

General Instructions for properly setting your Spreader

1. Use the settings under "Standard Settings" Section for most applications by figuring lbs. per 1000 square feet.
2. These numbers are for a one pass application.
3. A two pass application is recommended, using a crisscross pattern. If using this method, use half the setting number given.
4. There are too many variables involved with setting any spreader to perfectly grade the settings. Differences will exist between fertilizers, even if they are the same brand and type.
5. If you think too much is being applied, cut down your setting. The antidote for too much fertilizer is water.
6. Close Spreader at the end of each pass. Open again at the start of your next pass.
7. Gravity and motion are critical forces influencing the Spreader. The faster you walk, the thinner the coverage.

How To Measure Lawn Application Total



$$\begin{aligned} & \text{Length} \\ \times & \text{Width} \\ = & \text{Total Sq. Ft.} \\ - & \text{Non-Lawn Areas (House, Drive, etc.)} \\ = & \text{Total Sq. Ft. Coverage To Be Treated.} \end{aligned}$$

CALCULATING POUNDS PER 1,000 SQUARE FEET

To calculate how many pounds of fertilizer to put down, you first need to read on the fertilizer bag how many pounds of fertilizer will cover. For example, you have purchased a bag of fertilizer that states it will cover 15,000 square feet, and weighs 48.56 pounds. To figure coverage simply divide the bag weight by the suggested coverage to get how many pounds per square feet. This example would be $48.56 / 15,000 = .003104$ pounds per square feet. To convert up to 1,000 square feet simply multiply by 1,000 to equal 3.104 pounds. **CAUTION:** These settings are intended for reference only. As there are many variables involved with setting any spreader, including physical composition of the material being applied, walking speed and terrain; settings may have to be adjusted. Because of these conditions, Precision Inc. makes no warranty as to the uniformity of coverage actually obtained from the settings listed.

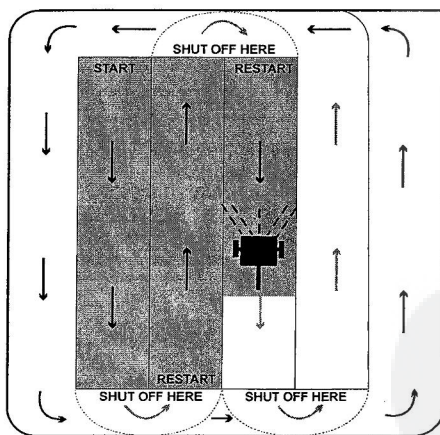
The following settings can be used to apply products not found in the application chart. These are general information settings intended to be used as references.

STANDARD SETTINGS

Fertilizer	Setting	Grass Seed	Setting	Insecticide	Setting
Pounds Per 1000 sq. Ft.	Broadcast Spreaders	Blue Grass	3	(Diazinon)	Broadcast
2.5	2	Bent Grass	3	2	2
3	3	Fine Mixture	10		
3.5	3	Coarse Seed (Rye, Fescue)	10		
4	4	Bermuda			

All Season, Farmers Seed & Nursery, Howard Johnsons, Atwoods, Gold Kist, Lawn Groom, Bachmar Nursery, Grand Prize, Loveland Lawns, Barzen Seed, Gravinas Nursery, Nursery Pro, Green Charm, Farm & Fleet, Coast to Coast, Green Spot, Shur Green, Colonial Garden, Greenbrier, Super America, Duckwall - Alco, Gurneys, Supreme Brand, Farm & Home, Hardware Hank, Surety

Spread Diagram



Brand	Setting	Pounds per 1000 Sq. Ft.
10-6-4 Weed & Feed	4	4
18-22-6 Starter Winterizer	3	3
20-10-5 Turf Food	4	4
22-3-11 Crabgrass Preventer Plus	4	4
25-3-3 Weed 7 Feed 2/Triamine	4	4
26-3-3 Turf Food	4	4
Agway		
Greenlawn 29-2-4 Team	3/4	3/4.5
Greenlawn Weed & Feed 31-3-5	3	3
Starter 13-25-12	4	4
Greenlawn 32-3-5 4 Win	3	3
Stage 1 New Seeding 11-23-10	3/2	3.5 / 1.75
Stage 1 Team 22-4-10	3/4	3/4.5
Stage 2 Weed & Feed 27-4-6	3	3.2
Stage 3 Fertilizer with Insect Control 25-3-3	2	2
Stage 4 Fall 25-3-13	3	3.6
Greenlawn Fall Weed & Feed 24-5-14	3	3.2
Fall 26-3-13	4	3.8
Spring Crabgrass Team	2 / 2 / 3	1.75 / 1.25
Lawn Weed Control Timec	2	2



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	Pounds per 1000 Sq. Ft.	Brand	Setting	Pounds 1000 Sq
Bandini				
Fall & Winter 21-6-12	4			
Pre Sprout 1 6-4-6	4			4.5
Pre Sprout 2 16-4-6	5			5
St. Augustine Weed & Feed 15-5-7	4			4
Start-N-Grow 6-20-20	13			13
Super Blade 26-3-6	3			3.6
Super Blade Weed & Feed 25-3-6	3			3.6
Super Green Fast Acting 21-7-14	4			4
Super Green Longer Lasting 28-4-6	3			3
Super Green Weed & Feed 15-7-7	4			4
Super Plush Fall & Winter 23-4-7	4			4
Super Plush Lawn Food 26-3-5	3			3.2
Super Plush Weed & Feed 15-7-7	4			4
Best				
Golden Turf Supreme 27-3-7	4			4
Golden Turf Supreme Weed & Feed 26-2-6	3			3.6
Best Turf Supreme 16-6-8	5			5
Best Turf Supreme Crabgrass & Lawn Fertilizer	3			3.6
Best Turf Supreme Fall & Winter Feed 20-3-13	4			4
Best Turf Supreme St. Augustine 16-7-7	3			3.6
Best Turf Supreme Starter 6-20-20	10			10
Best Turf Supreme Weed & Feed 15-5-7	3			3.6
Earl May				
25-3-7 Dandelion Control & Food	3			3.5
Insect Control / Lawn & Garden	2			2
27-4-8 Lawn & Turf Food	3			3.5
Fred Meyer				
8-12-12 Fall & Winter Lawn Food	4			4
28-4-4 Turf King w/ Iron	4			4
26-3-3 Weed & Feed w/ Iron	4			4
28-4-4 FM Lawn Food	4			4
26-3-3 FM Weed & Feed	4			4
12-15-15 FM Fall & Winter	4			4
14-24-14 FM Seed & Sod	4			4
Greenview				
Two Way Weed & Feed	3			3
Green Power Fertilizer	3			3
19-4-4 Crabicide Green	4			4
Expel Dandelion Killer	2			2
10-16-2 Fall Fertilizer	3			3.5
Green Pro Insect Control & Food	3			3.5
30-3-3 Green Pro Weed Control & Lawn Food	3			3
Professional Lawn Service	3			3
30-4-4 Two Way Green Power	3			3
Hyponex				
29-8-4 Premium Lawn Fertilizer	3			3
K-Mart Products				
Kgro Crabgrass Preventer & Lawn Fertilizer 29-3-4	3			3.5
Kgro Premium Lawn Fertilizer 29-3-4	3			3.2
Kgro Starter 20-27-5	6			6
Kgro Texas Turf Fertilizer 15-5-10	6			6
Kgro Weed & Feed 28-3-3	3			3.2
Kgro Weed & Feed w/Atrazine 28-3-4	4			4
Lebanon Chemical				
13-25-12 Country Club Fertilizer	3			3
18-4-10 Country Club Fertilizer	5			5
18-5-9 Country Club Fertilizer	5			5
Dandelion Killer & Weed Control	2			2
10-6-4 Greenskeeper	5			5
24-4-10 Greenskeeper	5			5
Meijer				
5-10-5 Garden Fertilizer	3			3
23-7-7 Better Lawn Fertilizer	4			4
27-3-3 Best Lawn Fertilizer	4			4
27-3-3 Best Weed & Feed	4			4
10-6-4 Good Weed & Feed	4			4
10-6-4 Good Lawn Fertilizer	4			4
10-16-20 Winter Food & Seed Starter	4			4
25-3-3 Best Crabgrass Preventer	4			4
Menards Premier				
Crabgrass Preventer 26-2-8	3			3.4
Starter/Winterizer 19-8-14	3			3.4
Lawn Food 30-2-5	3			3.4
Weed & Feed 28-2-8	3			3.4
Fall Weed & Feed 18-8-12	3			3.4
Forever Green				
Fall Weed & Feed 18-5-10	4			3.6
Lawn Food 27-3-4	4			3.6
Starter / Winterizer 18-12-14	4			3.6
Crabgrass Preventer 22-3-5	4			3.6
Weed & Feed 26-3-5	4			3.6
Ideal				
Lawn Food 20-5-10	4			4
Weed & Feed 10-6-4	3			3.4
Ringer				
9-4-4 Lawn Restorer	10			10
Scotts				
Super Turf Builder 30-3-3	3			3.2
Turf Builder 29-3-4	3			3.1
Scotts Turf Builder w/Halts Crabgrass Preventer	2			2.8
Starter Fertilizer	3			3.6
Halts Crabgrass Preventer	2			2.2
Moss Control 0-0-16	3			3.6
Fall Winterizer 24-3-12	3			3.3
Weed & Feed Plus Fertilizer 27-4-4	3			3.0
Diazin Lawn Insect Control	2			2.2
Insect Control Plus Lawn Fertilizer 23-3-9	3			3.0
Crabgrass Preventer Plus Fertilizer 21-3-3	4			3.8
Lawn Fertilizer Plus 2% Iron 26-3-4	3			3.0
Sta-Green				
Bahia Weed & Feed 24-6-12	3			3.5
Winter Conditioner 8-8-25	4			4.5
3+3 Lawn Fertilizer 31-2-4	3			3.6
Fall Feed / Winterizer 22-3-14	3			3.1
St. Augustine Weed & Feed 27-3-8	4			4
Texas Fertilizer 15-5-10	6			6.6
Centipede Weed & Feed 15-0-15	4			4
Feed & Sod Start 18-24-10	3			3.6
Lawn Fertilizer 29-2-5	3			3.6
Ultra Starter 20-28-6	3			3.6
Ultra Fertilizer 31-2-4	3			3.6
Ultra Lawn Fertilizer 29-3-4	3			3.6
Lawn Weed Control	5			5
200 Plus Weed Control & Lawn Fertilizer 28-3-3	3			3.2
Weed & Feed 28-2, Feed 24-4-11	3			3.2
Insect Control 28-4-6	3			3
Lawn Weed Control	2			2
Stein				
Premium Dandelion Knock Out	2			2
10-18-10 Premium Lawn Starter	3			3.6
18-4-8 Premium Crabgrass Control	4			4
25-3-3 Premium Food & Weed Control	3			3.6
34-5-5 Premium Turf Food	3			3.6
Premium Winterizer	3			3.6
Vigoro				
Vigoro Centipede Weed & Feed 15-0-15	3			3.6
Vigoro Crabgrass Preventer 0-0-0	3			3.6
Vigoro Crabgrass Preventer & Lawn Fertilizer	3			3.6
Vigoro Winterizer Weed & Feed 22-4-11	3			3.6
Vigoro Lawn Fertilizer 29-3-4	3			3.2
Vigoro Lawn Fertilizer & Insect Control 28-4-6	4			4
Vigoro Lawn Weed Control (w/o fert.) 0-0-0	4			4
Vigoro Texas Turf 15-5-10	6			6.6
Vigoro Weed & Feed 28-3-3	3			3.2
Vigoro Weed & Feed w/Atrazine 29-3-5	4			4
Vigoro Winterizer 22-4-14	3			3.6
Ultra Vigoro Starter Fertilizer 20-28-6	3			3.6
Ultra Vigoro Lawn Fertilizer 31-2-4	3			3.6
Ultra Vigoro Weed & Feed 31-3-4	3			3.2
Ultra Vigoro St. Augustine Weed & Feed 30-3-4	4			4
For VIGORO Lawn Products (Canada ONLY)				
			<u>1/2 Rate</u>	<u>Full Rate</u>
26-6-6			5	6.5
24-6-6 W&F			5	6.5
Can 21-7-7			5	6.5
Can 21-7-7 W&F			5	6.5
Prem 21-7-7			5	6.5
Prem 21-7-7 W&F			5	6.5
6-8-16			4	5
6-8-16 W&F			4	5
Crabgrass			5	7.5
Insect Grub			5	7
Cinch			4	5
Summer			4	5
12-2-12			5	6
12-2-12 W&F			5	6

TBS7000RD Assembly & Operation Manual

ASSEMBLY TIP: Loosely tighten nuts and bolts at first. Fully tighten when the spreader is completely assembled.

Note: Bolts on the Hitch Arm Assembly are not fully tightened to make assembly easier.

TOOLS NEEDED FOR ASSEMBLY
2 - 1/2" Wrenches
2 - 7/16" Wrenches

Attach the Hitch Arm Assembly to the Hopper Assembly with the 5/16" bolts pre-attached to the Hopper Assembly.

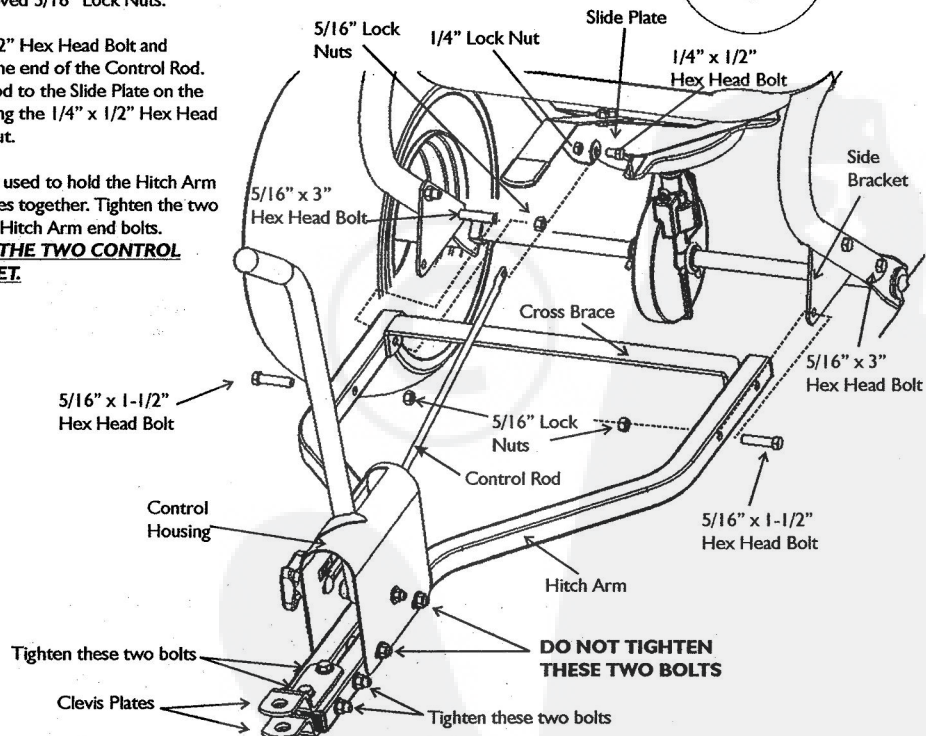
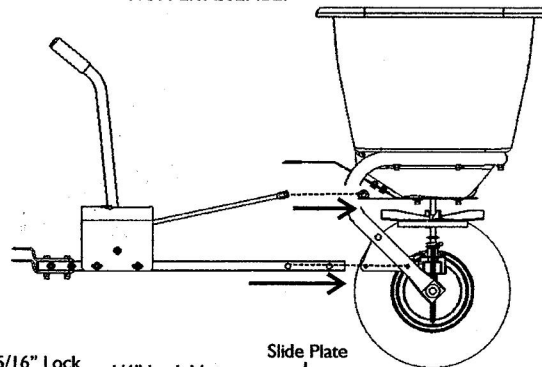
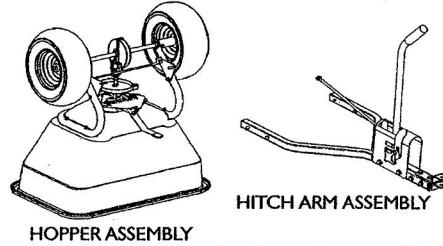
Remove the 5/16" Lock Nuts (both sides) and Cross Brace from the 5/16" x 3" Hex Head Bolts. Attach the Hitch Arm Assembly and re-insert the Cross Brace inside both sides of the Hitch Arm Assembly. Secure with the two (removed) 5/16" Lock Nuts.

Remove the 5/16" x 1-1/2" Hex Head Bolt from the Side Brackets and re-insert through (in order) the Side Bracket and Hitch Arm. Secure with the removed 5/16" Lock Nuts.

Remove the 1/4" x 1/2" Hex Head Bolt and 1/4" Lock Nut from the end of the Control Rod. Attach the Control Rod to the Slide Plate on the Hopper Assembly using the 1/4" x 1/2" Hex Head Bolt and 1/4" Lock Nut.

Tighten the four bolts used to hold the Hitch Arm and Hopper Assemblies together. Tighten the two Clevis Plate bolts and Hitch Arm end bolts. **DO NOT TIGHTEN THE TWO CONTROL HOUSING BOLTS YET.**

Spreader Components for Assembly



ADJUSTMENT

For proper calibration, the Slide Plate must be "zeroed-out" first. This means that the Slide Plate must be fully closed when the Handle is in the Closed position.

Place the Handle in the closed position. Check inside the Hopper to make sure there is no gap between the Slide Plate and the Hopper opening on the bottom. If there is a gap, adjust the Control Housing either forward or back until the gap closes to the edge of the Hopper bottom. Once this is accomplished, tighten the two bolts on the Control Housing to lock the adjustment in place.

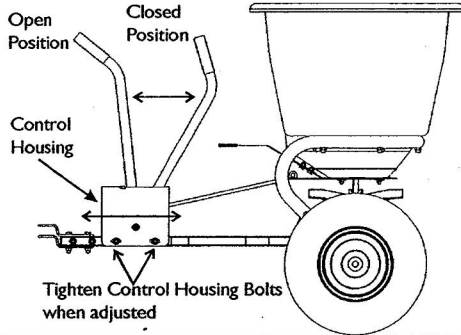
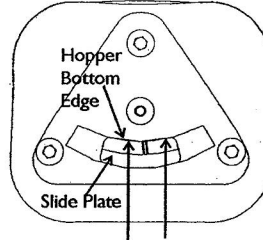


Diagram Shows Slide Plate Half-Opened

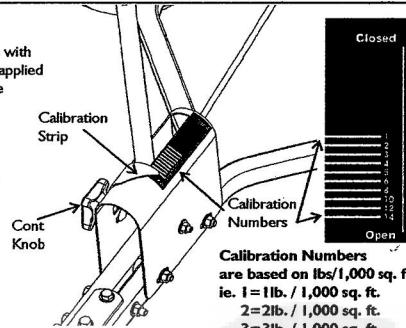


Adjust Slide Plate back to this edge

CALIBRATION

The Calibration Numbers are based on pounds per 1,000 square feet. These calculations are based on tests with a popular brand of fertilizer, so results may vary slightly. Calculate the amount of fertilizer that needs to be applied according to the bag of fertilizer you plan to use. To do this: first read how much the bag weighs. Divide the total bag weight by how many square feet the manufacturer says the bag will cover. Take your total (which will be pounds per square foot) and multiply by 1,000 to get your pounds per 1,000 square feet total. For example, a 50 lb. bag of fertilizer says it will cover 15,000 sq. ft. Take 50 and divide by 15,000 and get .00333 (this number is the total for pounds per 1 square foot). Multiply .00333 by 1,000 to get 3.33. This is the total pounds per 1,000 square feet you will need to apply. Round the number down to 3, and set the Calibration Strip edge to the number 3.

After the calibration number has been determined, loosen the Control Knob and slide the (long) edge of the Calibration Strip to the desired setting. Tighten the Control Knob. **NOTE: The Calibration Strip CANNOT fully stop the Handle if opened with a great amount of force. It is there as a guide. Gently pull the Handle to the edge of the Calibration Strip, then stop.**



Calibration Numbers are based on lbs/1,000 sq. ft.
ie. 1 = 1lb. / 1,000 sq. ft.
2 = 2lb. / 1,000 sq. ft.
3 = 3lb. / 1,000 sq. ft.
8 = 8lb. / 1,000 sq. ft.

BROADCAST SPREADER OPERATION

1. Always have the control lever in CLOSED position before filling the hopper.
2. Always pull the spreader forward to operate; do not operate in reverse.
3. Start moving forward before pushing the control lever to the OPEN position. Pull the control lever to OFF position before stopping or turning.

DO NOT allow spreader to sit stationary with material in the hopper and control lever in the OPEN position.

If you do spill the fertilizer or feel you have over-fertilized, the antidote is plenty of water. Water pushes the fertilizer past the roots so it will not burn plants.

4. Pull the spreader at a steady speed (approximately 3 - 4 mph is recommended).
5. To avoid misses or striping, space each pass across the lawn so approximately 20% of the spread width overlaps onto the previous pass. This provides a "feathered" overlap to even out distribution over the width of the spread.

CAUTION: care must be taken with any weed killer, pesticide, or combination product. They can be harmful to other plant life in the yard.

Recommended operating weight - 180 lbs.

Free-Wheel Option

Your TBS7000RD Spreader has a unique feature which allows the spreader to be transported over long distances, at greater speeds without wear and tear on the gear case assembly. This "free-wheel" option turns only the wheels and leaves the axle and the gear case assembly at rest. **REMEMBER: if you are traveling with a loaded hopper at higher speeds, the spreader stands an easier chance of becoming unstable and turning over.**

BE CAUTIOUS OF THE TERRAIN! The more un-even the terrain is, the more you need to lower your speed.

Remove the #213 Hitch Pin Clip from the hole in the 1/4 x 1-3/4 Clevis Pin. Remove the Clevis Pin from the wheel hub. The wheel will now turn freely.

To re-engage the axle: align the hole in the wheel hub with the hole through the axle. Insert the 1/4 x 1-3/4 Clevis Pin through the hole in the wheel hub and the axle. Secure the Clevis Pin in place using the #213 Hitch Pin Clip.

