

OWNERS MANUAL

Model No. 45-02153-131



# 100 LB. TOW BROADCAST SPREADER

CAUTION: Read Rules for Safe Operation and Instructions Carefully

- Assembly
- Operation
- Maintenance
- Repair Parts

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## **RULES FOR SAFE OPERATION**

Any power equipment can cause injury if operated improperly or if the user does not understand how to operate the equipment. Exercise caution at all times when operating equipment.

- Read the towing vehicle owners manual and towing vehicle safety rules. Know how to operate your tractor before using the broadcast spreader attachment.
- Read the chemical label instructions and cautions for handling and applying the chemicals purchased for spreading.
- Wear eye and hand protection when handling and when applying lawn or garden chemicals.
- Never operate tractor and spreader attachment without wearing substantial footwear, and do not allow anyone to ride or sit on spreader attachment frame.
- Never allow children to operate the tractor or spreader attachment, and do not allow adults to operate without proper instructions.

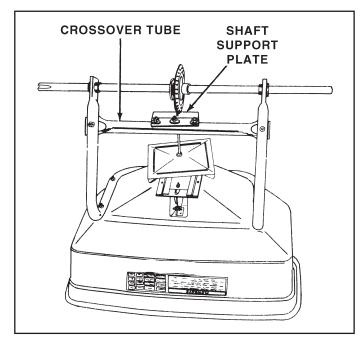
- Always begin with the transmission in first (low) gear and with the engine at low speed, and gradually increase speed as conditions permit. Maximum towing speed - 6 M.P.H.
- When towing broadcast spreader do not drive too close to a creek or ditch and be alert for holes and other hazards which could cause you to loose control of the broadcast spreader and tractor.
- Before operating vehicle on any grade (hill) refer to the safety rules in the vehicle owner's manual concerning safe operation on slopes. Stay off steep slopes!
- Follow maintenance and lubrication instructions as outlined in this manual.



LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS — ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

### **ASSEMBLY INSTRUCTIONS**

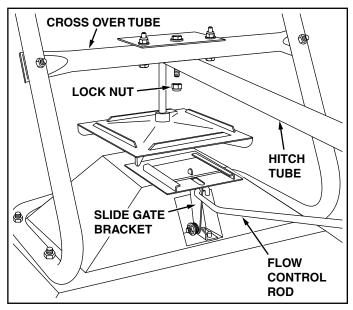
1. Turn the spreader upside down as shown in figure 1, so that it rests on the hopper.





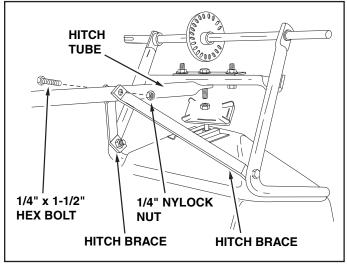
- 2. Hook the free end of the flow control rod through the hole in the slide gate bracket located near the bottom of the hopper. See figure 2.
- 3. Remove the lock nut from the middle bolt in the crossover tube and shaft support plate. Leave the bolt in place. See figure 2.
- 4. Assemble the hitch tube onto the middle bolt and secure it with the same lock nut you removed. **Do not tighten at this time.** See figure 2.

**IMPORTANT:** The hitch tube must attach to the side of the crossover tube opposite the shaft support plate.



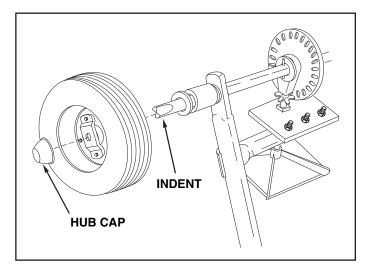


- Assemble the two hitch braces to the hitch tube using a 1/4" x 1-1/2" hex bolt and a 1/4" nylock nut. See figure 3. Do not tighten at this time.
- 6. Tighten all loose hex nuts and bolts attached to hitch tube and hitch braces. **Do not collapse tubes when tightening.**



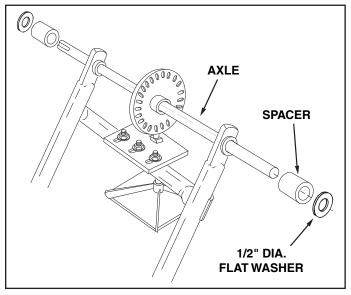
**FIGURE 3** 

- 8. Place the drive wheel onto the end of the axle that has an indent. The long end of the hub goes to the inside. See figure 5.
- 9. Place a hub cap onto the end of the axle. Using a small hammer, lightly tap the hub cap until it is snug against the wheel. See figure 5.



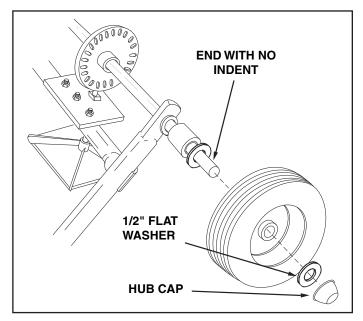
**FIGURE 5** 

7. Assemble a spacer and then a 1/2" flat washer onto each end of the axle. See figure 4.



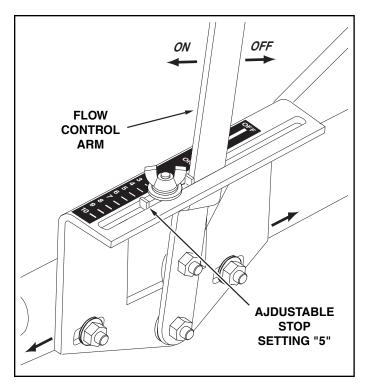


- 10. Place the wheel (long end of hub first) onto the end of the axle that has no indents. See figure 6.
- 11. Place a 1/2" flat washer onto the axle and then lightly tap a hub cap onto the axle until it is snug against the washer and wheel hub. See figure 6.





- 12. Position the flow control mounting bracket (figure 7).
  - a. Push on flow control arm until it locks in "OFF" position.
  - b. Slide flow control mounting bracket along tube until closure plate in bottom of hopper just closes.
  - c. Snug the 1/4" lock nuts just enough to hold flow control mounting bracket in place.
  - d. Set adjustable stop at "5". Pull flow control arm against stop. Verify that closure plate has opened about half way.
  - e. If closure plate does not open half way, it may be closed too far at "OFF". Adjust position of flow control mounting bracket until closure plate will open about half way at "5" and still close when arm is locked in "OFF". Tighten 1/4" lock nuts.



**FIGURE 7** 

## OPERATION

### HOW TO USE YOUR SPREADER

#### SETTING THE FLOW CONTROL

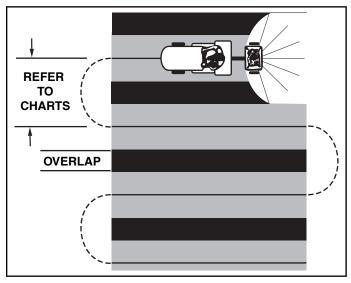
(Refer to figure 7 on page 4.)

- 1. Loosen the nylon wing nut, set the adjustable stop to the desired flow rate setting and retighten the wing nut. The higher the setting number, the wider the opening in the bottom of the hopper.
- 2. Refer to the application chart on page 5 and to the instructions on the fertilizer bag to select the proper flow rate setting.
- 3. Pull the flow control arm against the adjustable stop for the on position and toward the hopper for the off position.

### **USING YOUR SPREADER**

We do not recommend the use of any powdered lawn chemicals, due to difficulty in obtaining a satisfactory or consistent broadcast pattern.

- 1. Determine approximate square footage of area to be covered and estimate amount of material required.
- 2. Before filling the hopper make sure the flow control arm is in the off position and the closure plate is shut.
- 3. Break up any lumpy fertilizer as you fill the hopper.
- 4. Set the adjustable stop with the flow control arm still in the off position. Refer to the application chart on this page and to the instructions on the fertilizer bag to select the proper flow rate setting.
- 5. The application chart is calculated for light to heavy application at a vehicle speed of 3 mph, or 100 ft. in 23 seconds. A variation in speed will require an adjustment of the flow rate to maintain the same coverage. The faster you drive, the wider the broadcast width.
- 6. Always start the tractor in motion before opening closure plate.
- 7. Always shut the closure plate before turning or stopping the tractor.
- 8. If fertilizer is accidentally deposited too heavily in a small area, soak the area thoroughly with a garden hose or sprinkler to prevent burning of the lawn.
- 9. To insure uniform coverage, make each pass so that the broadcast pattern slightly overlaps the pattern from the previous pass as shown in figure 8. The approximate broadcast widths for different materials are shown in the application chart on this page.
- 10. When broadcasting weed control fertilizers, make sure the broadcast pattern does not hit evergreen trees, flowers or shrubs.
- 11. Heavy moisture conditions may require a cover over the hopper to keep contents dry. The vinyl cover acts as a wind and moisture shield, but should not be used as a rain cover.



#### **FIGURE 8**

**IMPORTANT:** Application rates shown in the chart are affected by humidity and by the moisture content of the material (granular and pellet). Some minor setting adjustments may be necessary to compensate for this condition.

APPLICATION CHART (SHIELD UP)							
TYPE MATERIAL	FLOW SETTING	SPREAD WIDTH					
FERTILIZER							
Powder	3 - 5	3' - 4'					
Granular	3 - 5	8' - 10'					
Pelleted	3 - 5	10' - 12'					
Organic	6 - 8	6' - 8'					
GRASS SEED							
Fine	3 - 4	6' - 7'					
Coarse	4 - 5	8' - 9'					
ICE MELTER	6 - 8	10' - 12'					

OPERATING SPEED - 3 MPH. (100 ft. in 23 seconds)

## MAINTENANCE

#### CHECK FOR LOOSE FASTENERS

1. Before each use make a thorough visual check of the spreader for any bolts and nuts which may have loosened. Retighten any loose bolts and nuts.

#### CHECK FOR WORN OF DAMAGED PARTS

2. Check for worn or damaged parts before each use. Repair or replace parts if necessary.

#### **CHECK TIRE INFLATION**

3. Check if tires are adequately inflated before each use. Do not inflate beyond maximum recommended pressure.



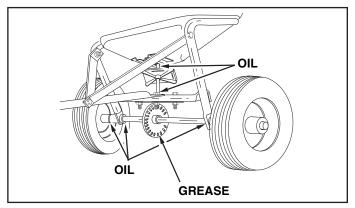
**CAUTION: DO NOT** inflate tires beyond the maximum recommended pressure printed on side of tire.

#### CLEANING

4. Rinse inside of hopper and exterior of spreader and dry off before storing.

#### LUBRICATE (See figure 9.)

- 5. Lightly apply automotive grease as needed to the sprocket and gear.
- 6. Oil the nylon bushings on the vertical sprocket shaft and on the axle at least once a year, or more often as needed.
- 7. Oil right hand (idler) wheel bearing at least once a year or more often as needed.



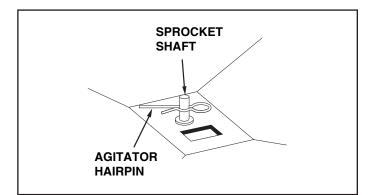
#### FIGURE 9

## STORAGE

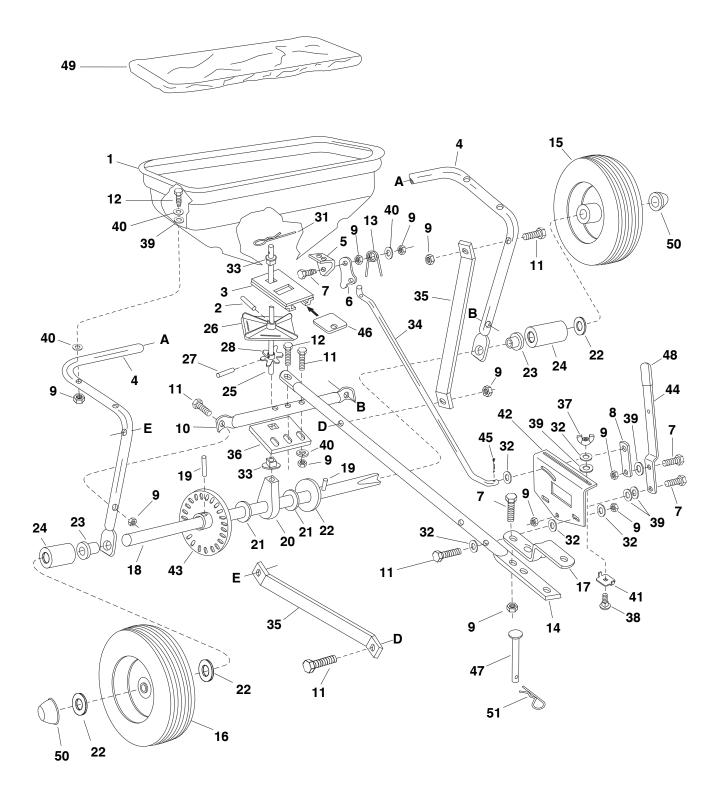
- 1. Rinse inside of hopper and exterior of spreader and dry off before storing.
- 2. Store in a clean, dry area.

## SERVICE AND ADJUSTMENTS

- 1. If the axle, slotted gear and sprocket assembly is disassembled, mark down the positions of the parts as they are removed. The drive wheel and sprocket positions in relation to the slotted gear determine which direction the spreader plate will spin. Be sure to reassemble them in their original positions. (Refer to figure 5 on page 3.) Use shim washers (Ref. no. 21 on pages 6 and 7) as needed for minimum backlash. Add grease to gear and sprocket.
- 2. If the agitator hairpin becomes damaged or worn it can be replaced. See figure 10.







### **REPAIR PARTS FOR BROADCAST SPREADER MODEL 45-02153-131**

REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	44624	1	Hopper	27	43850	1	Pin, Spring 1/8" Dia. x 5/8" Lg.
2	46055	1	Pin, Spring 1/8" Dia. x 1" Lg.	28	44468	1	Sprocket, 6 Tooth
3	62482	1	Ass'y, Guide Closure	29	C-9M5732	2	Pop Rivet (not shown)
4	40469	1	Tube, Frame	31	48934	1	Hairpin Agitator
5	23753	1	Slide Gate Angle Bracket	32	R19111116	9	Washer, 5/16 SAE
6	23758	1	Slide Gate Bracket	33	44285	2	Bushing, Delrin
7	43661	5	Bolt, Hex 1/4-20 x 1" Lg.*	34	44469	1	Rod, Flow Control
8	24857	1	Flow Control Link	35	23525	2	Brace, Hitch
9	47189	22	Nylock Nut, 1/4-20	36	23780	1	Support, Shaft
10	44591	1	Tube, Crossover	37	47141	1	Nylon Wing Nut, 1/4-20 Thd.
11	43648	9	Bolt, Hex 1/4-20 x 1-1/2" Lg.	38	44950	1	Bolt, Carriage 1/4-20 x 3/4" Lg.
12	1509-69	7	Bolt, Hex 1/4-20 x 1-3/4"	39	1543-69	10	Washer, Nylon
13	44566	1	Spring, Torsion	40	43088	16	Washer, Flat 1/4" Std.
14	44586	1	Tube, Hitch	41	24858	1	Adjustable Stop
15	40539	1	Drive Wheel	42	24855	1	Bracket, Flow Control Mount
16	40540	1	Wheel	43	46885	1	Gear
17	23687	1	Bracket, Hitch	44	24859	1	Flow Control Arm
18	23781	1	Shaft, Axle	45	44101	1	Cotter Pin 3/32" x 3/4" Lg.*
19	44665	2	Pin, Spring 5/32" Dia. x 1-1/4" Lg.	46	23533	1	Plate, Closure
20	44672	1	Bushing, Axle Shaft	47	47623	1	Hitch Pin
21	44137	6	Washer, Shim 1/2"	48	43848	1	Grip, Flow Control Arm
22	R19171616	4	Washer, Flat 1/2"	49	40883	1	Vinyl Hopper Cover
23	47963	2	Bearing, Flange	50	44663	2	Hub Cap
24	46501	2	Tube, Spacer	51	43343	1	Hair Cotter Pin, #4 1/8"
25	25305	1	Shaft, Sprocket		40537	1	Owner's Manual
26	04367	1	Spreader Plate				

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#### **REPAIR PARTS**

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