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4. Read the product label for instructions and cautions on

proper handling and application of lawn chemicals.

5. Keep all nuts, bolts and screws tight to be sure

6. Follow maintenance and lubrication instructions as

equipment is in safe working condition.

outlined in this manual.

# **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 using equipment.

- 1. Do not allow anyone to operate the broadcast spreader without proper instructions.
- 2. Do not permit children to operate the broadcast spreader.
- 3. Wear eye protection when handling and when applying lawn chemicals.



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

## CARTON CONTENTS (LOOSE PARTS IN CARTON)

Your broadcast spreader carton contains parts as shown in the carton contents diagram below. The hardware package contains parts shown on page 3. Identify all parts and lay out as shown.

- 1. Hopper Assembly
- 2. Drive Wheel
- 3. Idler Wheel
- 4. Spreader Shield
- 5. Braces
- 6. Flow Control Rod
- 7. Vinyl Hopper Cover

- 8. Hopper Screen
- 9. Handle Tube (Short)
- 10. Flow Control Arm
- 11. Handle Tube (Long)
- 12. Leg Stand Tube
- 13. Flow Control Gauge
- 14. Flow Control Mount Bracket



**CARTON CONTENTS** 



REF.	QTY.	DESCRIPTION	REF.	QTY.	DESCRIPTION
А	3	Bolt, Carriage 1/4" x 3/4"	L	1	Spacer Tube, Short (1")
В	2	Bolt, Hex 1/4" x 5/8"	М	1	Spacer Tube, Long (1-5/16")
С	6	Bolt, Hex 1/4" x 3/4"	Ν	4	Bracket, Swivel
D	2	Bolt, Hex 1/4" x 1-1/2"	0	1	Link, Flow Control
E	6	Bolt, Hex 1/4" x 1-3/4"	Р	2	Bracket, Angle Stop
F	16	Nut, Hex Lock 1/4-20	Q	1	Spring, Extension
G	17	Washer, 5/16"	R	1	Knob, Hand
н	5	Washer, Nylon	S	2	Knob, Plastic 1/4"
1	4	Washer, 3/4"	Т	1	Grip, Control Arm
J	1	Cotter Pin, 3/32" x 3/4"	U	1	Cap, Vinyl
К	1	Cotter Pin, 1/8" x 1-1/2"	V	2	Grip, Handle

# **ASSEMBLY INSTRUCTIONS**

#### TOOLS REQUIRED FOR ASSEMBLY

- (1) Pliers
- (2) 7/16" Open End or Box Wrenches
- (2) 9/16" Open End or Box Wrenches

#### **REMOVAL OF PARTS FROM CARTON**

Refer to carton contents on page 2 and to the hardware chart on page 3 to lay out and identify parts and hardware needed to assemble the spreader.

#### ASSEMBLY OF SPREADER

- 1. Place the spreader upside down.
- 2. Assemble the long spacer tube and a 3/4" washer onto the end of axle of the axle that has the small drilled hole (right hand side). See figure 1.
- 3. Place the idler wheel (no notch in hub) onto the axle. The air valve should face to the outside. See figure 1.
- 4. Assemble one or two more 3/4" washers onto the axle and then assemble the 1/8" x 1-1/2" cotter pin.



- 5. Place the short spacer tube and a 3/4" washer onto the end of the axle that has the large drilled hole (left hand side). See figure 2.
- Place the drive wheel onto the axle. The notched hub and the air valve should face to the outside. See figure 2.
- Fasten the wheel to the axle using a 1/4" x 1-3/4" hex bolt and a 1/4" hex lock nut. See figure 2.



**FIGURE 2** 

- 8. Tip the spreader over to rest on the front edge of the hopper and on the wheels.
- Remove the middle 3/8" hex bolt, flat washer and hex lock nut that fasten the shaft support plate to the crossover tube. Do not loosen or remove the two outer bolts. See figure 3.





10. Assemble the (long) handle tube to the side of the crossover tube opposite the shaft support plate, as shown in figure 4. Fasten the handle tube to the middle hole using the bolt, flat washer and hex lock nut which you removed in step 9. **Do not tighten yet.** 

**IMPORTANT: DO NOT** assemble the handle tube to the side of the crossover tube where the shaft support plate is located. When the spreader is placed in the upright position, the handle tube must be on to the top side of the crossover tube. Refer to figure 17 on page 9.

- Assemble the end of a handle brace to the inside of each leg of the hopper tube frame, using a 1/4" x 1-3/4" hex bolt and 1/4" lock nut for each brace. See figure 4. Do not tighten yet.
- Assemble the other end of both handle braces to the handle tube using a 1/4" x 1-3/4" hex bolt and 1/4" hex lock nut. Do not tighten yet. See figure 4
- 13. **Tighten** in sequence the bolts and nuts that were assembled in steps 10, 11 and 12.



FIGURE 4

- 14. Assemble the leg stand tube to the handle tube (long) using two 1/4" x 1-1/2" hex bolts and two 1/4" hex lock nuts. **Tighten.** See figure 5.
- 15. Place the vinyl cap on the leg stand tube. See figure 5.



**FIGURE 5** 

- 16. Assemble the flow control link (the long end with the small hole) to the flow control arm using one 1/4" x 5/8" hex bolt and one 1/4" hex lock nut. **Do not over tighten.** The flow control link must pivot freely. See figure 6.
- 17. Place the vinyl grip on the flow control arm. See figure 6.



FIGURE 6

- 18. Assemble the flow control arm to the flow control mounting bracket using one 1/4" x 5/8" hex bolt and one 1/4" hex lock nut. **Do not over tighten.** The flow control arm must pivot freely. See figure 7.
- 19. Hook one end of the spring through the hole at the bend in the flow control rod. Hook the other end in the hole in the flow control mounting bracket. See figure 7.



#### **FIGURE 7**

20. Place a 5/16" flat washer over the end of flow control rod and insert the rod through the slot in the flow control mount bracket and through the hole in the flow control link. Secure with a 3/32" x 3/4" cotter pin. See figure 8.



**FIGURE 8** 

21. 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 9.



FIGURE 9

- 22. Assemble the flow control mounting bracket and the short handle tube to the long handle tube using two 1/4" x 1-3/4" hex bolts, two 5/16" flat washers and two 1/4" hex lock nuts. See figure 10. Do not tighten yet.
- 23. Place a handle grip on each handle tube. See figure 10.



FIGURE 10

- 24. Assemble the flow control gauge onto the flow control mounting bracket using a 1/4" x 3/4" carriage bolt, a nylon washer and the hand knob. See figure 11.
- 25. Push the flow control arm forward to the off position and slide flow control mounting bracket toward hopper until closure plate (bottom of hopper) is fully closed. Carefully tighten the 1/4" hex lock nuts without deforming the slots. The closure plate should open half way when the flow control gauge is set at "5". Reposition the flow control mounting bracket as necessary. See figure 11.



#### **FIGURE 11**

- 26. Attach an angle stop bracket (inside) and a swivel bracket (outside) to the rear hole in the R.H. shield bracket using a 1/4" x 3/4" hex bolt, two 5/16" washers, a nylon washer and a 1/4" hex lock nut. **Tighten** the locknut so that the swivel bracket can pivot freely. See figure 12. Repeat step on L.H. shield bracket.
- 27. Attach a swivel bracket to the front hole in the R.H. shield bracket using a 1/4" x 3/4" hex bolt, two 5/16" washers, a nylon washer and a 1/4" hex lock nut. **Tighten** the locknut so that the swivel bracket can pivot freely. See figure 12. Repeat step on L.H. shield bracket.



- 28. Assemble the spreader shield to the front swivel brackets using two 1/4" x 3/4" carriage bolts, 5/16" washers and the two 1/4" plastic knobs. See figure 13.
- 29. Assemble the spreader shield to the rear swivel brackets using two 1/4" x 3/4" hex bolts, four 5/16" washers and two 1/4" hex lock nuts. **Tighten** the locknuts so that the swivel bracket can still pivot freely. See figure 13.



FIGURE 13

30. Place the hopper screen down into the hopper to help break up clumpy material and to prevent large clumps from reaching the bottom of the hopper and clogging the opening. See figure 14.



**FIGURE 14** 

# **OPERATION**

### STARTING THE SPREADER

- 1. Pull the flow control arm back against the flow control gauge for the "ON" position. This opens the closure plate in the bottom of the hopper and starts the material flow. See figure 15.
- 2. Always start the spreader in motion before moving the flow control arm to the on position.

### STOPPING THE SPREADER

- 1. Push the flow control arm forward for the "OFF" position. This closes the closure plate in the bottom of the hopper and stops the material flow. See figure 15.
- 2. Always move the flow control arm to the off position while the spreader is still in motion.

#### SETTING THE FLOW RATE

- 1. Move the flow control arm to the "OFF" position.
- 2. Determine the proper flow rate setting by referring to the application charts on page 9 and to the instructions on the chemical package.
- 3. Loosen the hand knob and move the flow control gauge to the recommended setting and retighten the hand knob. See figure 15.



**FIGURE 15** 

### SETTING THE SPREADER SHIELD

#### SPREADER SHIELD RAISED

For a normal spread pattern used in open areas, loosen the plastic knob on each side of the shield, raise the shield and retighten the knobs.

#### SPREADER SHIELD LOWERED

For a restricted spread pattern when applying material to a confined area or next to sensitive plants, loosed the plastic knob on each side of the shield, lower the shield and retighten the knobs.

#### **USING THE SPREADER**

- Determine approximate square footage of area to be covered and estimate amount of fertilizer or seed required.
- 2. With flow control arm in **off position**, set flow rate gauge at number indicated in flow rate chart for light or heavy application rate. Also refer to instructions on bag for manufacturers recommended settings.
- 3. With the flow control arm set at the off position, fill the hopper with up to 125 pounds of material, breaking up lumpy fertilizer as you fill hopper. The hopper screen helps prevent any large lumps from clogging the opening in the bottom of the hopper.
- 4. To broadcast, always start the spreader in motion before opening the closure plate.
- 5. Walk at a brisk pace when spreading. The application charts are based on a ground speed of 3 m.p.h. which equals travelling 100 feet in 23 seconds.
- 6. Overlap the spread pattern to insure uniform coverage at the edges. Approximate distance between each pass is shown in the application diagrams in figure 16.
- 7. When using weed control fertilizers make sure the broadcast pattern does not hit evergreen trees, flowers or shrubs. The spreader shield may be lowered to limit the dispersal pattern. Adjust the flow control according to the application chart on page 9.
- 8. **Do not** allow the spreader to sit stationary with the flow control arm in **ON** position. If fertilizer is accidentally deposited too heavily in a small area, soak the area down thoroughly with a garden hose to prevent burning of the lawn.



FIGURE 16

**IMPORTANT:** Application rates (shown on chart) are affected by humidity and mixture content of material (granular and pellet). Minor adjustment of the flow rate setting may be necessary to compensate for these variables. The rate chart is calculated for light and heavy application. The faster you walk, the wider the broadcast width. A variation in speed will determine the flow rates and width of broadcast.

**NOTE:** We do not recommend the use of powdered materials due to difficulty in obtaining a satisfactory or consistent broadcast pattern.

APPLICATION CHART (SHIELD UP)			
TYPE MATERIAL	FLOW SETTING 3 MPH (100 FT. IN 23 SEC.)	SPREAD WIDTH IN FEET	
FERTILIZER Powder Granular Pelleted Organic GRASS SEED Fine Coarse ICE MELTER	3 - 5 3 - 5 3 - 5 6 - 8 3 - 4 4 - 5 6 - 8	3 - 4 8 - 10 10 - 12 6 - 8 6 - 7 8 - 9 10 - 12	

APPLICATION CHART (SHIELD DOWN)			
TYPE MATERIAL	SPREAD WIDTH IN FEET		
FERTILIZER Powder Granular Pelleted Organic GRASS SEED Fine Coarse ICE MELTER	1 - 3 1 - 3 1 - 3 3 - 4 1 - 3 2 - 3 2 - 4	3 - 4 3 - 4	

# LUBRICATION

- 1. Apply a little automotive grease to the sprocket and gear.
- 2. Oil nylon bushings on sprocket shaft. See figure 17.
- 3. Oil axle/shaft bushing on axle as shown in figure 17.
- 4. Oil right hand wheel bearing as needed.



FIGURE 17

# **MAINTENANCE & STORAGE**

- 1. Do not store spreader with any material in hopper.
- 2. Clean your spreader after use. Flush thoroughly with water.
- 3. If for any reason the axle, gear and sprocket assembly is disassembled, be sure to mark position of parts as they are removed. Drive wheel and sprocket position determine relation direction of spreader plate. With reassembly of gear and sprocket use shim washers as needed for minimum backlash. Add grease to gear and sprocket.
- 4. If agitator wire becomes damaged or worn it can be replaced. Loosen 3/8" hex nut at top end of sprocket shaft until agitator wire is free. Remove old agitator wire from hole in agitator sleeve and replace with new agitator wire. Position agitator wire so that sprocket shaft turns freely and tighten 3/8" hex nut on top of sprocket shaft. See figure 18.



FIGURE 18

## **REPAIR PARTS FOR BROADCAST SPREADER MODEL 45-02101-101**



# **REPAIR PARTS FOR BROADCAST SPREADER MODEL 45-02101-101**

REF. NO.	PART NO.	QTY.	DESCRIPTION	REF. NO.	PART NO.	QTY.	DESCRIPTION
NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	NO. 44466 43882 62482 44462 23753 23758 43648 23756 43013 43808 43084 43086 43064 44463 44463 44456 44457 44464 23752 43851 43871 1540-032 1540-162 44798 44494 47437 04367 43850 44500 C-9M5732 23766 43878	$\begin{array}{c}1\\1\\1\\1\\2\\2\\2\\1\\1\\1\\1\\2\\1\\5\\1\\2\\1\\1\\1\\1\\$	Hopper Rivet, Stainless Ass'y, Guide Closure Tube, Frame Slide Gate Angle Bracket Slide Gate Bracket Bolt, Hex 1/4-20 x 1-1/2" Lg.* Flow Control Link Nut, Hex Lock 1/4-20 Thd. * Tube, Crossover Bolt, Hex 5/16-18 x 1-3/4" Lg. Gr. 5 Lock Washer, 5/16"* Nut, Hex 5/16-18 Thd.* Tube, Handle (Long) Wheel Ass'y. 14" x 4" Wheel Ass'y. 14" x 4" Wheel Ass'y. (W/Hole) 14" x 4" Tube, Handle (Short) Shaft, Axle Pin, Spring 3/16" Dia. x 1-1/4" Lg. Bushing, Axle Shaft Washer, Flat 3/4" Std. Bearing, Flange Tube, Spacer Shaft, Impeller Spreader Plate Pin, Spring 1/8" Dia. x 5/8" Lg. Spacer, 1" O.D. x 1" Lg. Rivet, Pop Sleeve, Agitator	NO. 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 9 60 61 62 63 64 65 66 67	NO. 1509-069 43866 1543-069 43088 23755 23754 62474 23759 44101 23533 43000 43848 44481 43093 43009 43849 44285 43009 43849 44285 43054 44482 43054 44482 43082 41576 44465 43962 44566 43012 46055 44950 R191111116 46119 24125 46120	12 2 11 9 1 1 1 1 1 1 1 1 1 1 2 1 2 3 2 1 1 1 7 1 3 17 1 2 2	Bolt, Hex 1/4-20 x 1-3/4" Lg. * Bolt, Hex 1/4-20 x 5/8" Lg. Gr. 5* Washer, Nylon Washer, Flat 1/4" Std. Gage, Flow Control Bracket, Flow Control Mount Gear Assembly Flow Control Arm Cotter Pin 3/32" x 3/4" Lg.* Plate, Closure Spring, Extension Grip, Flow Control Arm Cap, Vinyl Cotter Pin, 1/8" x 101/2" Lg. Washer, 1-5/8" O.D. x 25/32" I.D. Knob, Plastic 1/4-20 Thd. Bushing, Delrin 3/8" I.D. Bolt, Hex 3/8-16 x 2" Lg. Gr. 5 Grip, Handle Nut, Hex Lock 3/8-16 Thd. Bolt, Hex 3/8-16 x 1-3/4" Lg. Gr. 5 Tube, Leg Stand Optional Vinyl Hopper Cover Spring, Torsion Bolt, Hex 1/4-20 x 3/4" Lg. Gr. 5 Pin, Spring 1/8" x 1" Lg. Bolt, Carriage 1/4-20 x 3/4" Lg. Washer, Flat 5/16" Shield, Spreader Bracket, Shield Knob, Plastic
32 33 34 35 36	43070 44468 44514 23525 23762	5 1 2 1	Washer, Flat 3/8" Sprocket - 6 Tooth Rod, Flow Control Brace, Hitch Support, Shaft	68 69 70 71 72	23998 23999 47441 43015 43003 47438	4 2 1 1 1	Bracket, Swivel Bracket, Angle Stop Screen, Spreader Nut, Hex 3/8-16 Thd. Lock Washer, 3/8" Owner's Manual

#### **REPAIR PARTS**

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