

OWNERS MANUAL

Model No.
45-0187

CAUTION:
Read Rules for
Safe Operation
and Instructions
Carefully



BROADCAST SPREADER 160

- Assembly
- Operation
- Maintenance
- Repair Parts

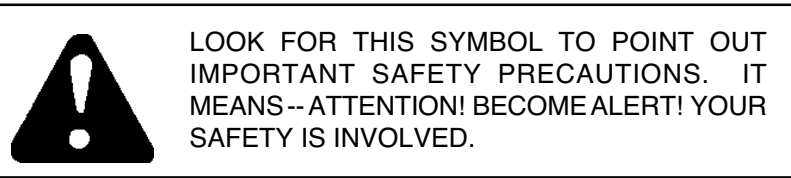


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RULES FOR SAFE OPERATIONS

Remember, 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 power equipment.

1. Read the owners manual and know how to operate your tractor, before using the spreader attachment.
2. Never operate tractor and spreader attachment without wearing substantial footwear, and do not allow anyone to ride or sit on spreader attachment frame.
3. Never allow children to operate the tractor or spreader attachment, and do not allow adults to operate without proper instructions.
4. Always begin with the transmission in first (low) gear and engine at low speed, and gradually increase speed as conditions permit.
5. 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.
6. 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.
7. Read instructions and caution notes for handling/spreading of materials purchased for spreading.
8. Follow maintenance and lubrication instructions as outlined in this manual.

Your broadcast spreader carton contains parts as shown in figure 1. The hardware package contains parts shown in figure 2 on page 3. Identify all parts and layout as shown in figures 1 and 2.

CARTON CONTENTS

LOOSE PARTS IN CARTON

- | | |
|-------------------------------|-----------------------------------|
| 1. Hitch Tube | 6. Flow Control Rod |
| 2. Braces | 7. Hitch Bracket |
| 3. Flow Control Mount Bracket | 8. Wheels (R.H. and L.H.) |
| 4. Flow Control Gauge | 9. Hopper Assembly |
| 5. Flow Control Arm | 10. Hopper Cover |
| | 11. Hardware Packeage (not shown) |

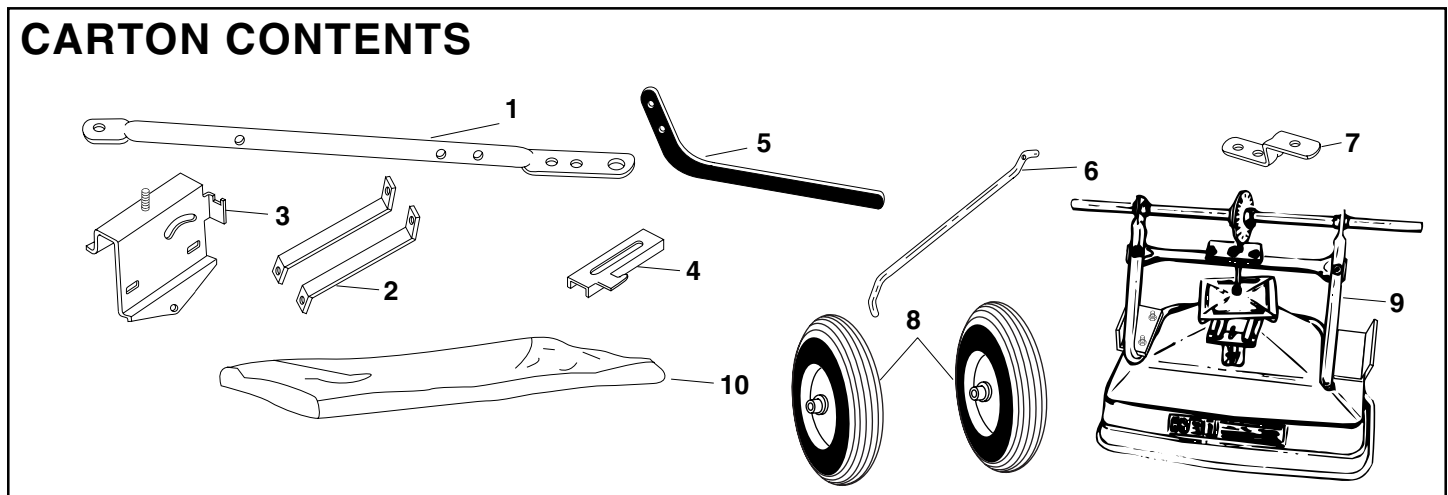


FIGURE 1

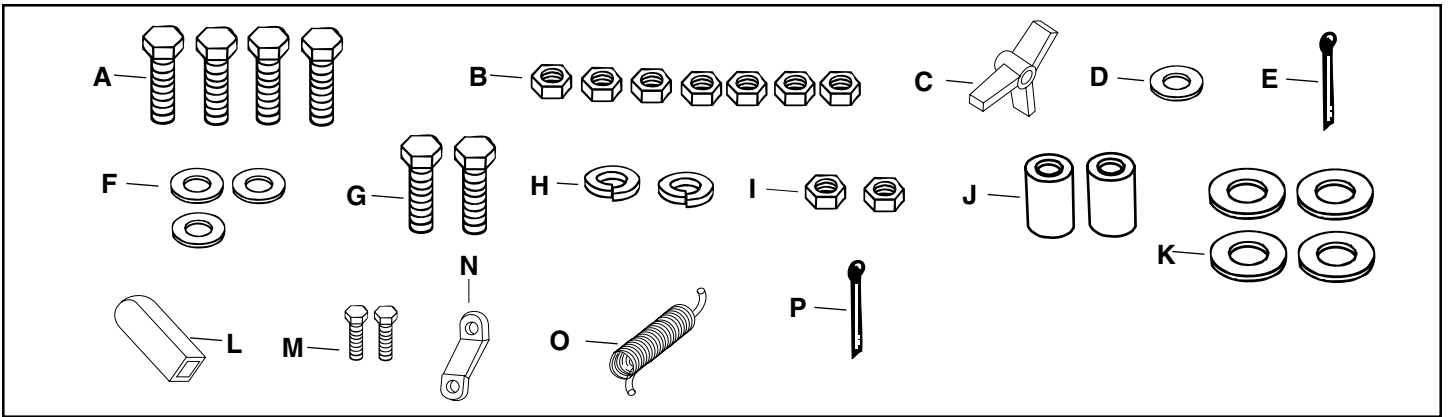
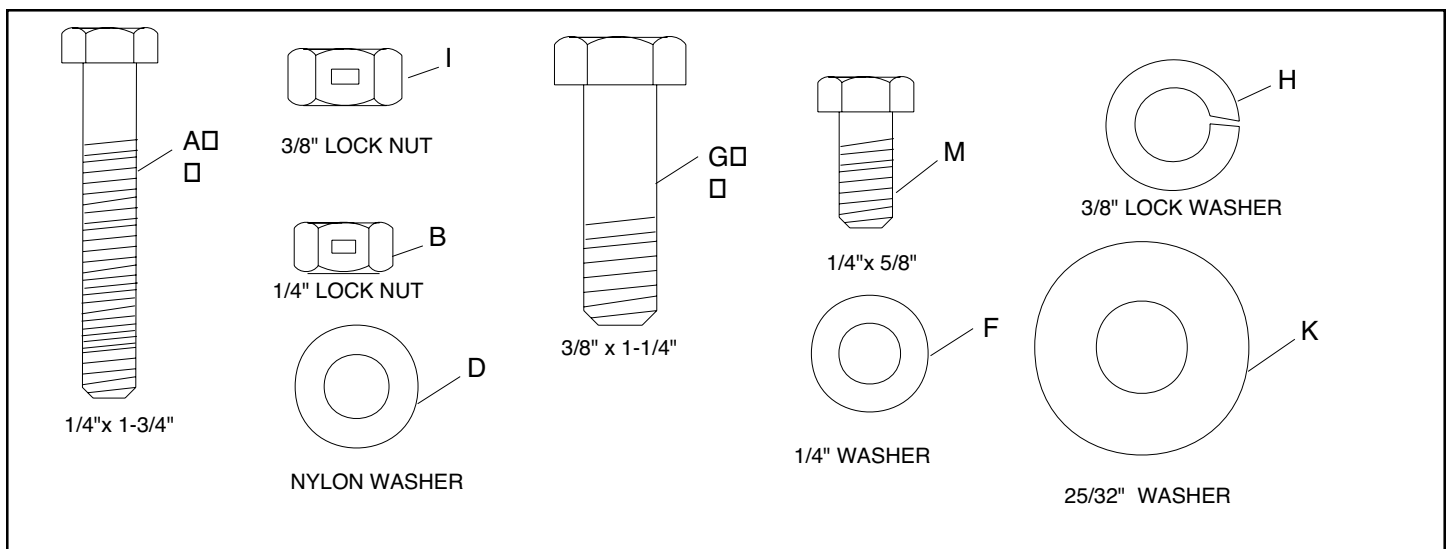


FIGURE 2 - HARDWARE PACK

KEY	QTY.	DESCRIPTION	KEY	QTY.	DESCRIPTION
A	6	Hex Bolt 1/4-20 x 1-3/4" Long	I	2	Hex Lock Nuts 3/8-16 Thread
B	8	Hex Lock Nuts 1/4-20 Thread	J	2	Spacers
C	1	Hand Knob	K	4	Flat Washers 1-5/8" O.D.
D	1	Nylon Washer	L	1	Grip
E	1	Cotter Pin 3/32" x 3/4" Long	M	2	Hex Bolt 1/4-20 x 5/8" Long
F	3	Flat Washer 1/4" Standard	N	1	Flow Control Link
G	2	Hex Bolts 3/8-16 x 1-1/4" Long	O	1	Extension Spring
H	2	Lock Washers 3/8" I.D.	P	1	Cotter Pin 1/8 x 1-1/2" Long



FULL SIZE HARDWARE REFERENCE CHART

ASSEMBLY INSTRUCTIONS

TOOLS REQUIRED FOR ASSEMBLY

- (1) Pliers
- (2) Open or Boxed End Wrench
- (2) 9/16" Open or Boxed End Wrench

1. Remove the spreader, loose parts and hardware package from the carton. See figures 1 and 2.
2. Turn the spreader upside down as shown in figure 3, so that it rests on the hopper.
3. Remove the 3/8" hex bolt, flat washer and hex lock nut from the center of the crossover tube and shaft support plate. See figure 3.

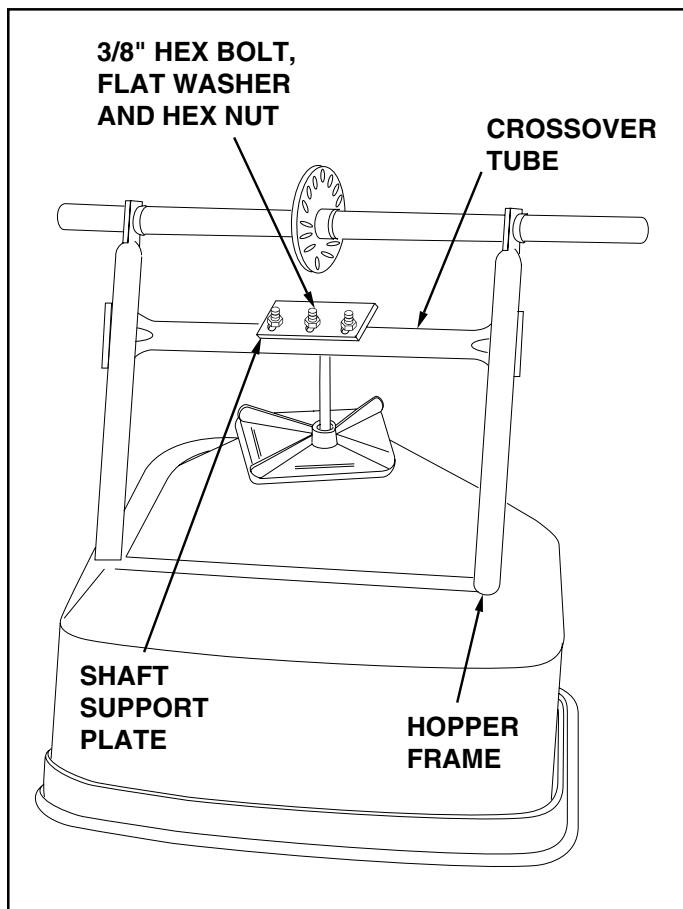


FIGURE 3

4. Place the hitch tube up against the crossover tube, align the holes in the hitch tube, crossover tube and shaft support plate, assemble with 3/8" hex bolt, 3/8" flat washer and 3/8" hex lock nut, removed in step 3. See figures 3 and 4. **MAKE ONLY FINGER TIGHT AT THIS TIME.**



NOTE

WHEN SPREADER IS UP SIDE DOWN, AS SHOWN IN FIGURE 4, HITCH TUBE IS UNDERNEATH CROSSOVER TUBE

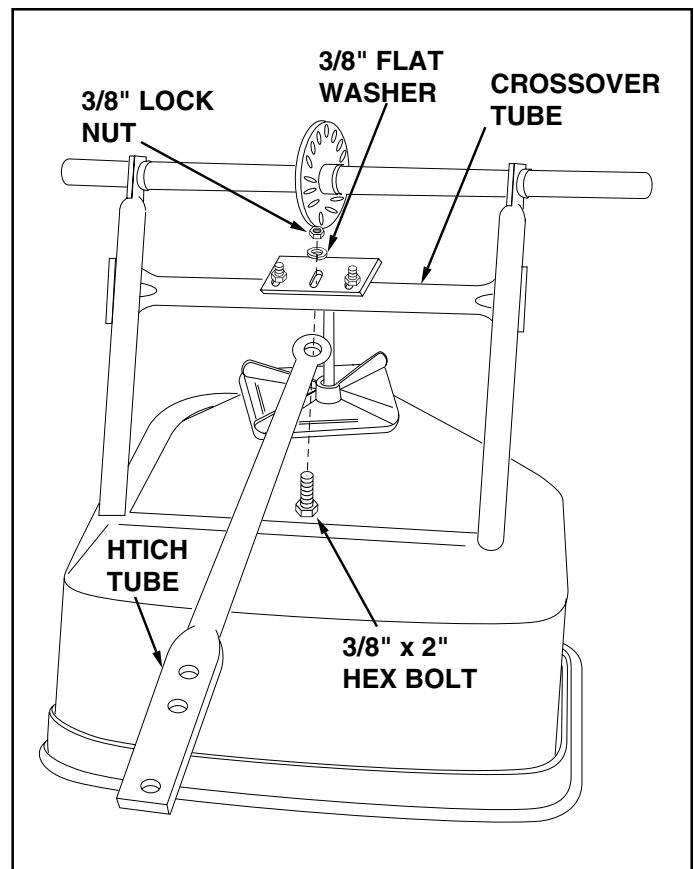


FIGURE 4

5. Assemble two hitch braces to the inside of the hopper frame, one on each side, using two 1/4" x 1-3/4" and two 1/4" hex lock nuts. See figure 5. **DO NOT TIGHTEN AT THIS TIME.**
6. Align the holes in the ends of the two hitch braces with the nearest hole in the hitch tube, secure with 1/4" x 1-3/4" hex bolt and 1/4" hex lock nut. See figure 5.
7. Tighten all hex nuts and bolts, following same sequence as assembled in steps 4, 5 and 6. **DO NOT COLLAPSE TUBE WHEN TIGHTENING.**
8. Assemble one spacer, and one 1-5/8" dia. flat washer to each side of axle. See figure 5.

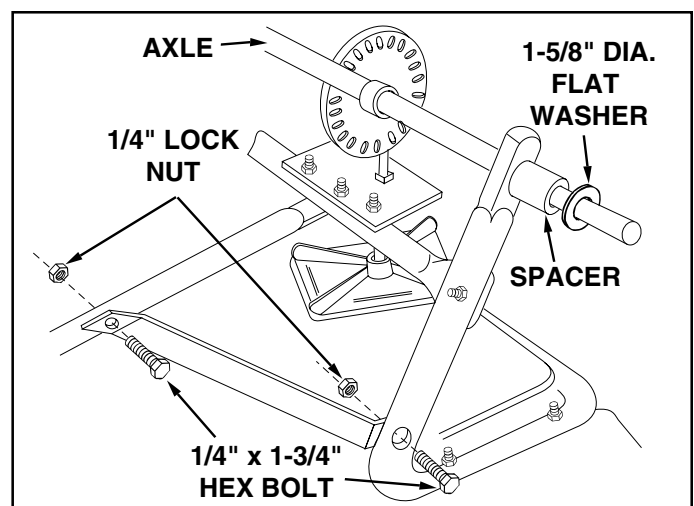


FIGURE 5

- Place wheel assembly without hole through hub (air valve to the outside) onto axle end having the smallest and secure with 1-5/8" dia. flat washer and 1/8" x 1-1/2" cotter pin. See figure 6. Use extra 1-5/8" diameter flat washer if needed to take up play.

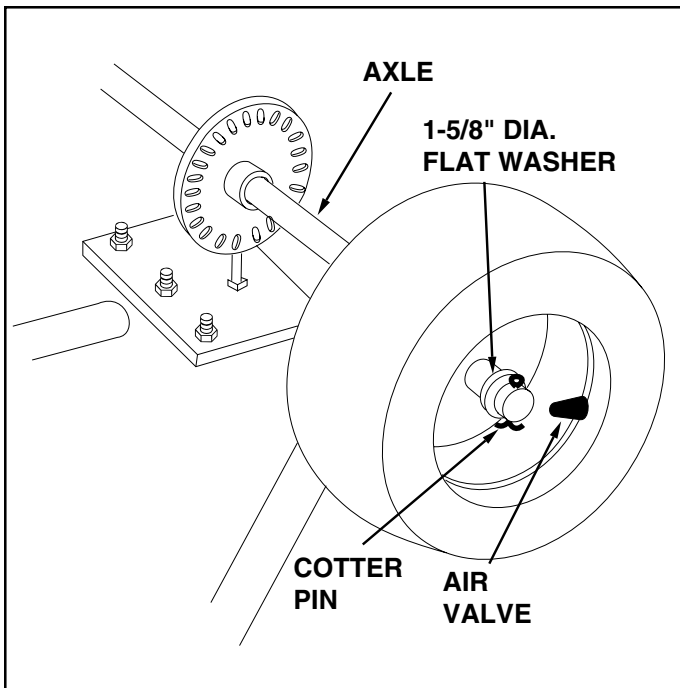


FIGURE 6

- Place the drive wheel onto the axle (air valve to the outside) and secure with 1/4" 1-3/4" hex bolt and 1/4" hex lock nut. See figure 7.

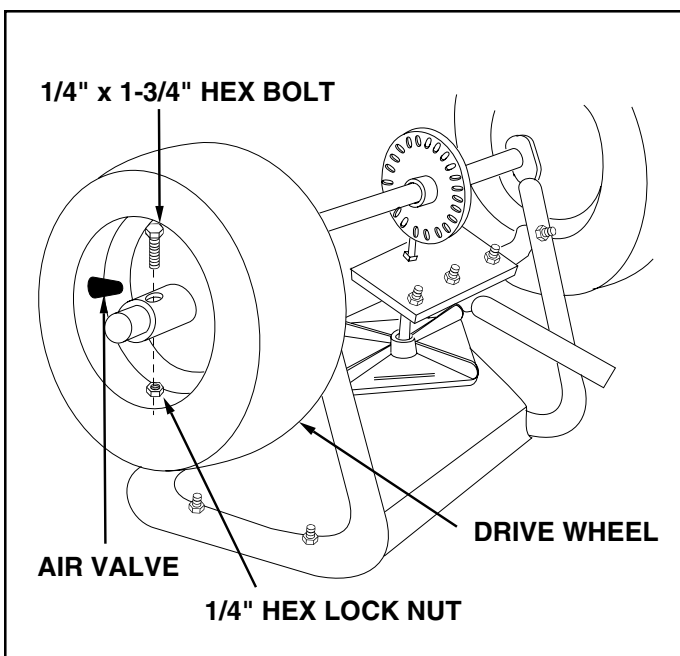


FIGURE 7

- Turn the broadcast spreader over so that it rests on its wheels.
- Assemble the hitch bracket to the hitch tube. See figure 8. Secure with two 3/8" x 1-1/4" hex bolts, 3/8" lock washers and 3/8" lock nuts. See figure 8.

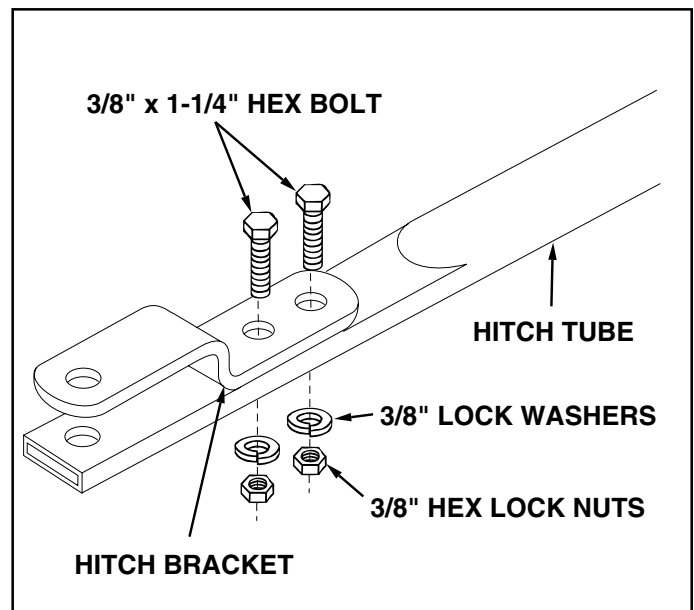


FIGURE 8

- Assemble the flow control link (the end with the smallest hole) to the flow control arm using one 1/4" x 5/8" hex bolt and one 1/4" hex lock nut. See figure 9. **DO NOT OVER TIGHTEN, FLOW CONTROL LINK MUST PIVOT FREELY.**
- Place the vinyl grip on the flow control arm. See figure 9.

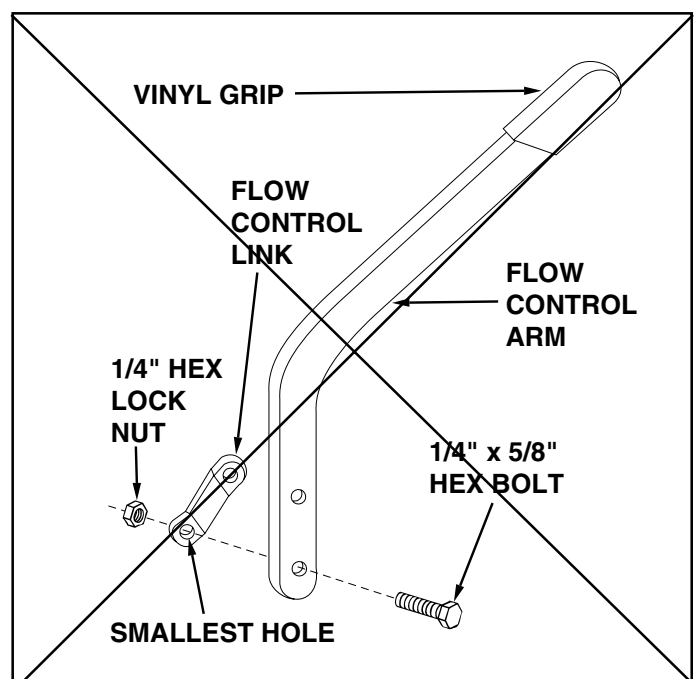


FIGURE 9

15. 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. See figure 10. **DO NOT OVER TIGHTEN FLOW CONTROL ARM MUST PIVOT FREELY.**
16. Hook one end of extension spring through small hole near bend in flow control rod and the other end through the hole in flow control mounting bracket. See figure 10.

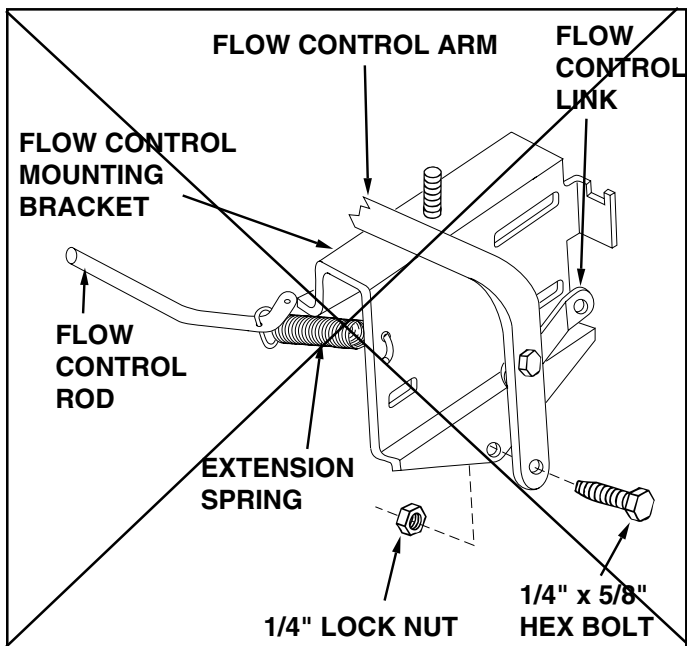


FIGURE 10

17. Place 1/4" flat washer on end of flow control link, align with slot in flow control mounting bracket and insert end of flow control rod through slot and hole in flow control link. Secure with 3/32" cotter pin. See figure 11.

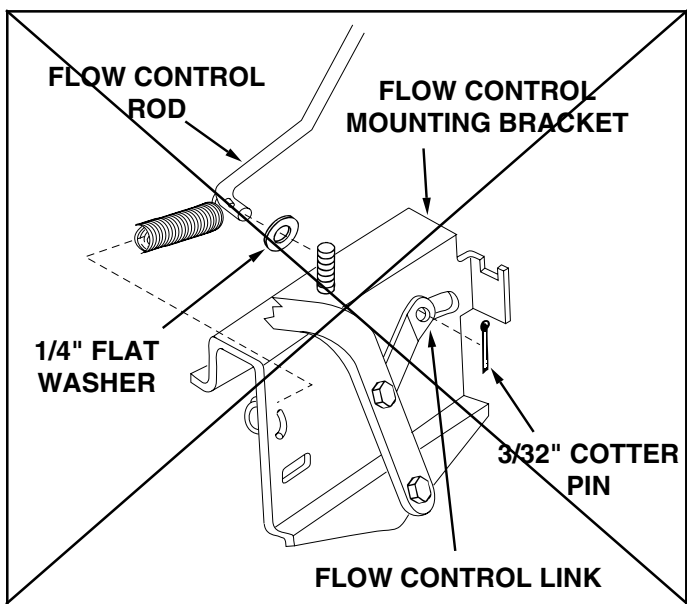


FIGURE 11

18. Hook free end of flow control rod through hole in slide gate bracket located near bottom of hopper. See figure 12.

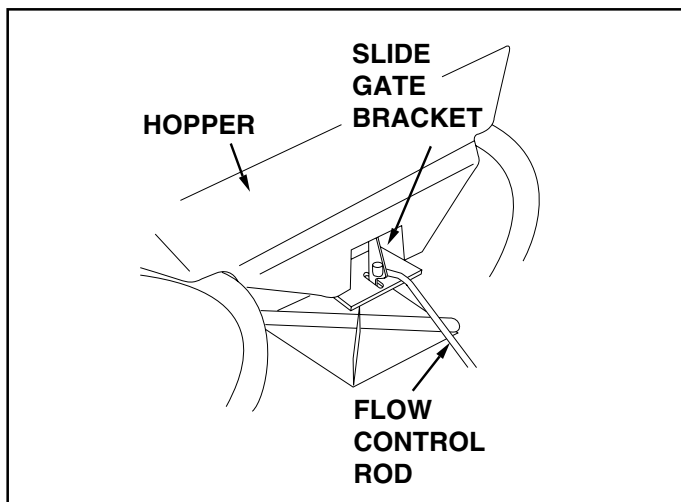


FIGURE 12

19. Assemble flow control mounting bracket to the hitch tube using two 1/4" x 1-3/4" hex bolts, two 1/4" flat washers and two 1/4" hex lock nuts. See figure 13. **DO NOT TIGHTEN AT THIS TIME.**

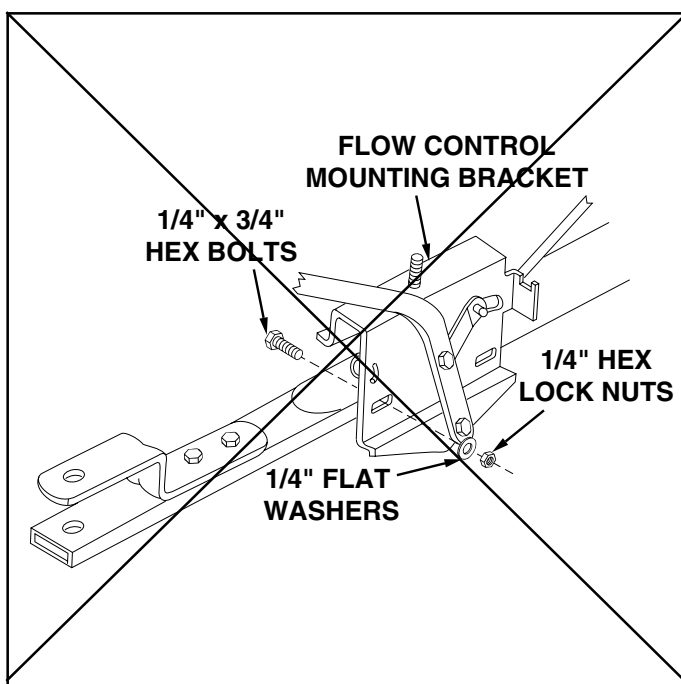


FIGURE 13

20. Assemble the flow control gauge onto the flow control mounting bracket as shown in figure 14. Secure with nylon washer and hand knob.

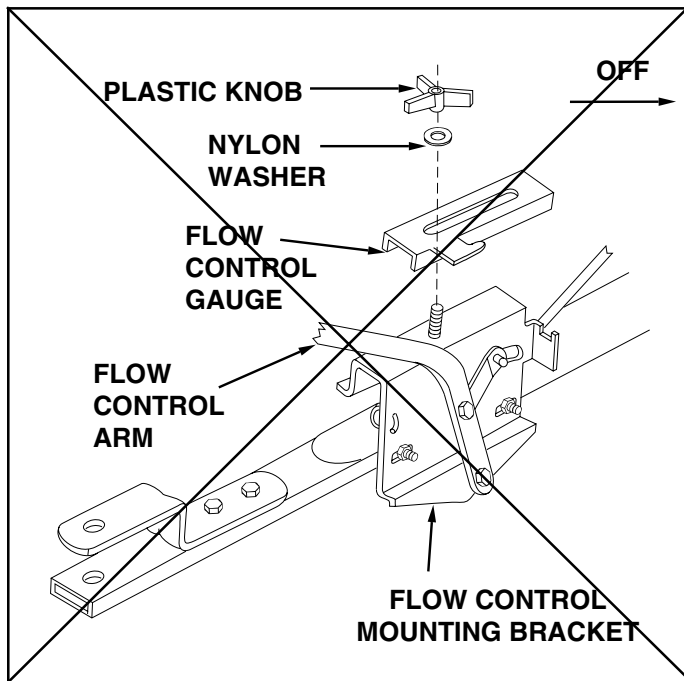


FIGURE 14

21. Move flow control arm to off position and slide flow control mounting bracket toward hopper until closure plate (located in bottom of hopper) is completely closed. Tighten 1/4" hex lock nuts assembled in step 19. See figure 14.
22. Pre-lubricate per lubrication section on page 9 before operating spreader.

OPERATION

The application spray pattern should overlap to insure uniform coverage at the edges. The approximate distance between each pass is shown in the application diagram. See figure 15.

APPLICATION DIAGRAM

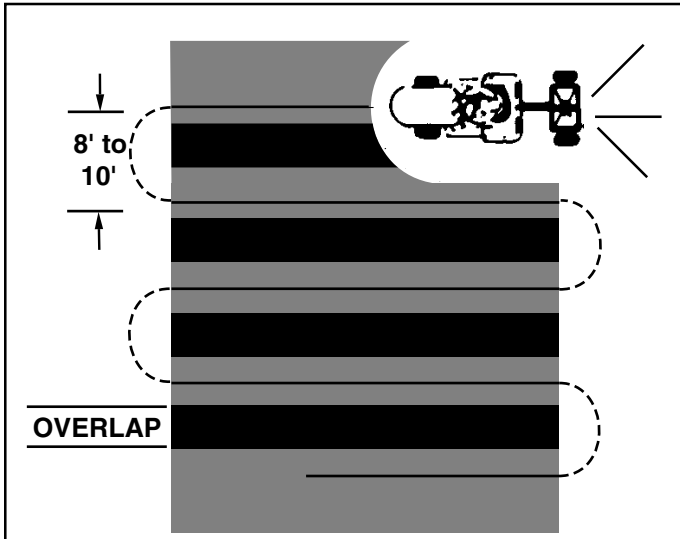


FIGURE 15

FLOW RATE ADJUSTMENT

(SEE FIGURE 16)

1. Push back on the flow control arm to the off position and pull forward to the on position. The higher the number on the flow rate gauge the larger the opening in the bottom of the hopper.
2. **REFER TO FLOW RATE CHART AND INSTRUCTIONS ON FERTILIZER BAG TO SELECT PROPER FLOW RATE SETTING.**
3. Loosen the hand knob to set the flow gauge to the desired flow setting and tighten the hand knob.
4. Always move flow control arm to **off** position before stopping or turning spreader.
5. The spreader should be moving before you move the flow control arm to the **on** position.

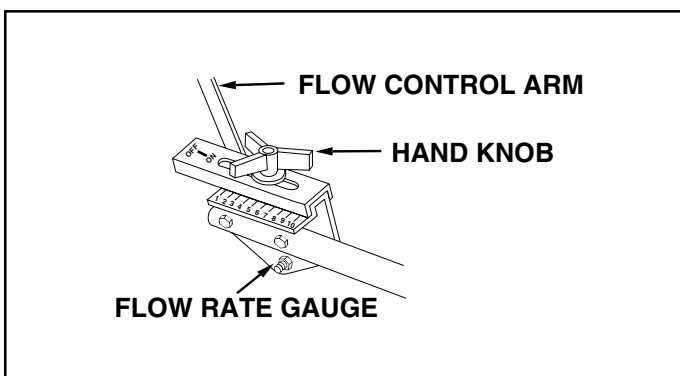


FIGURE 16

MATERIAL	TYPE	Flow Rate Setting At 3 M.P.H.	
		Light	Heavy
FERTILIZER	Granular	3	5
	Pelleted	5	7
GRASS SEED	Fine	2	4
	Coarse	6	8
ICE MELTER	Granular	6	8
	Pelleted	6	8

1. Determine approximate square footage of area to be covered and estimate amount of material required.
2. With flow control arm in the off position, set flow rate gauge at the number indicated in flow rate chart - light or heavy application rate. Also refer to the bag instructions for manufacturers recommended settings.
3. Break up lumpy fertilizer as you fill hopper.
4. To broadcast, always start tractor in motion before opening closure plate. **Do not allow tractor to sit stationary with flow control arm in the on position.** If fertilizer is accidentally deposited heavily in a small area, soak down thoroughly with garden hose or sprinkler to prevent burning of lawn.

IMPORTANT: Application rates (shown on chart) are affected by humidity and moisture content of material (granular and pellet); therefore, minor setting adjustments may be necessary to compensate for this condition. The rate chart is calculated for light and heavy application. The faster you drive, the wider the broadcast width. A variation in speed will determine the flow rates and width of broadcast.



CAUTION

When broadcasting weed control fertilizers make sure broadcast pattern does not hit evergreen trees, flowers or shrubs.

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" lock nut on the top 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" lock nut on top of sprocket shaft. See figure 17.

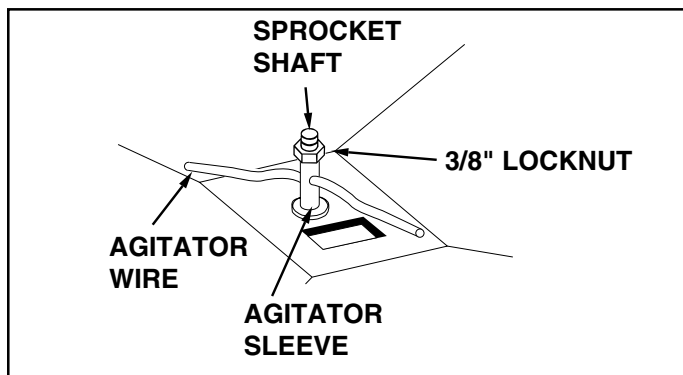


FIGURE 17

5. Keep tires inflated to 15-20 P.S.I. **Do not over inflate.**



6. 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. See figure 18.



FIGURE 18

LUBRICATION

(SEE FIGURE 19)

1. Apply a little automotive grease to the sprocket and gear.
2. Oil nylon bushings on sprocket shaft as shown in figure 19.
3. Oil axle/shaft bushing on axle as shown in figure 19.
4. Oil right hand wheel bearing as needed.

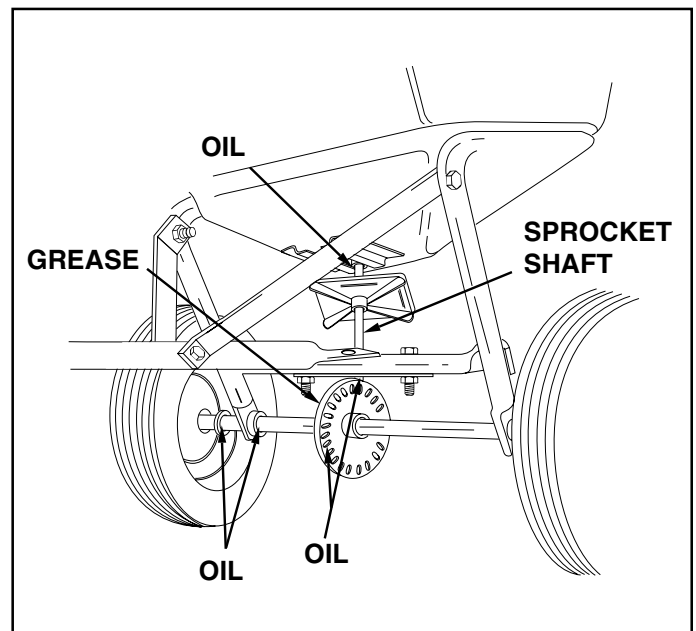
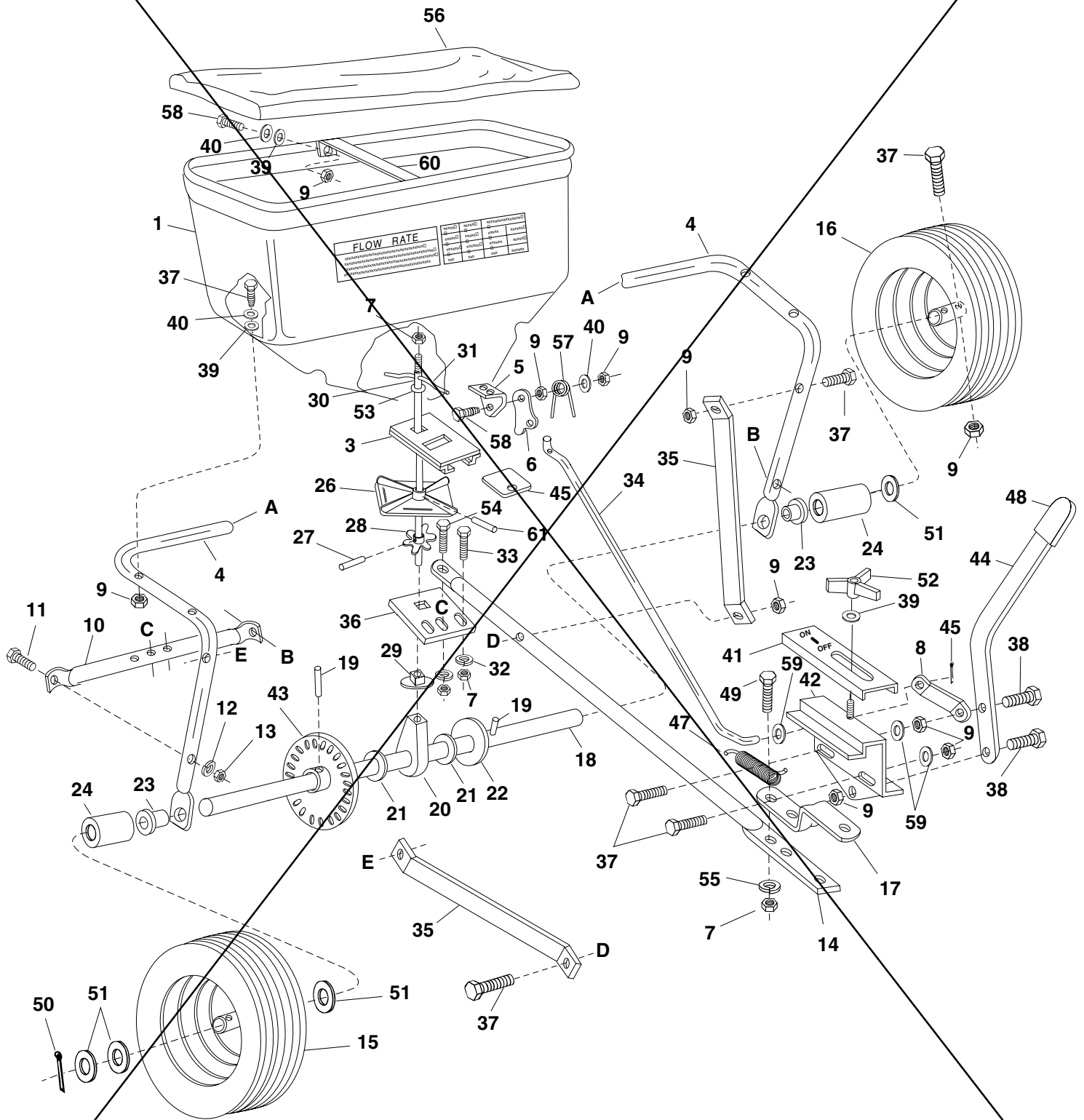


FIGURE 19

REPAIR PARTS BROADCAST SPREADER MODEL 45-0187



REPAIR PARTS LIST FOR BROADCAST SPREADER MODEL 45-0187

REF. NO.	PART NO.	QTY.	DESCRIPTION	REF. NO.	PART NO.	QTY.	DESCRIPTION
1	44480	1	Hopper	32	43070	3	3/8" Flat Washer
2	43882	6	Rivet	33	41576	2	Bolt, Hex 3/8-16 x 1-3/4" Lg.
3	62482	1	Ass'y - Guide Closure	34	44469	1	Flow Control Rod
4	44462	1	Tube Frame	35	23525	2	Brace, Hitch
5	23753	1	Slide Gate Angle Bracket	36	23762	1	Shaft, Support
6	23758	1	Slide Gate Bracket	37	1509-069	12	Bolt, Hex 1/4-20 x 1-3/4"
7	43082	5	Nut, Hex Lock 3/8"	38	43866	2	Bolt, Hex 1/4-20 x 5/8" Lg.
8	23756	1	Flow Control Link	39	1543-069	9	Washer, Nylon
9	43013	18	Nut, Hex Lock 1/4-20 Thread	40	43088	9	Washer, Flat 1/4" Std
10	43808	1	Tube Crossover	41	23755	1	Gauge, Flow Control
11	43084	2	Bolt, Hex 5/16" x 1-3/4"	42	62732	1	Ass'y. Flow Control Mount
12	43086	2	Lock Washer, Spring 5/16" ID	43	62474	1	Ass'y Gear
13	43064	2	Nut, Hex Lock 5/16-18 Thread	44	23757	1	Flow Control Arm
14	44487	1	Tube, Hitch	45	44101	1	Cotter Pin 3/32" x 3/4" Lg.
15	44458	1	Wheel, Ass'y 16" x 4"	46	23533	1	Plate, Closure
16	44459	1	Wheel, Ass'y 16" x 4" W/ Hole	47	43000	1	Spring, Extension
17	23687	1	Bracket, Hitch	48	43848	1	Grip, Flow Control Arm
18	23522	1	Shaft, Axle	49	43087	2	Bolt, Hex 3/8" x 1-1/4"
19	43851	2	Pin, Roll 3/16" Dia. x 1.25" Lg.	50	43093	1	Cotter Pin, 1/8" x 1-1/2" Lg.
20	43871	1	Bushing, Axle/Shaft	51	43009	4	Washer 1-5/8" OD x 25/32"
21	1540-032	5	Washer, Flat .78"	52	43849	1	Knob, Plastic 1/4-20 Thread
22	1540-162	1	Washer, Std. 3/4"	53	44285	1	Bushing Derlin .375 ID
23	44798	2	Bearing Flange	54	43054	1	Bolt, Hex 3/8" x 2" Lg.
24	44474	2	Spacer	55	43003	2	Lock Washer, Spring 3/8" ID
25	23524	1	Shaft, Sprocket	56	43962	1	Vinyl Hopper Cover
26	04367	1	Spreader Plate	57	44566	1	Spring, Torsion
27	43850	1	Pin, 1/8" x 5/8" Spring	58	43012	3	Bolt, Hex 1/4-20 x 3/4" Lg.
28	44468	1	Sprocket - 6T	59	R1911116	3	Washer, 5/16" SAE
29	43852	1	Bushing, Nylon .375 ID	60	23697	1	Strap, Hopper
30	23766	1	Sleeve Agitator	61	46055	1	Pin, 1/8" Dia. x 1" Lg. Spring
31	43878	1	Wire, Agitator		44659	1	Owner's Manual

REPAIR PARTS
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