

OPERATOR'S MANUAL



JRCO ELECTRIC BROADCAST SPREADER

Model 503 with Foot Control

Model 504 with Cable Control

**For Commercial Riding
& Walk-Behind mowers**

JRCO, Inc., P. O. Box 41304, Minneapolis, MN 55441

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The JRCO Electric Broadcast Spreader is used to spread all types of fertilizer, seed, fire ant bait and ice melting or lime pellets. It attaches to the JRCO Universal Mount Bar with four clevis pins.

SPECIFICATIONS

Approximate shipping weight: 50 lbs.

Tools required for assembly:
9/16 in. socket wrench, 9/16 in. open or box
end wrench, Phillips screwdriver, 3/32 hex
wrench.

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RULES FOR SAFE OPERATION

Be Careful!!

Shut off the mower before attaching, adjusting or disconnecting the JRCO Electric Broadcast Spreader.

Know how to stop the mower quickly. READ THE MOWER OWNER'S MANUAL.

Use eye protection and appropriate protective clothing and masks.

READ AND FOLLOW THE MANUFACTURERS INFORMATION AND MSDS (Material Safety Data Sheet) ON THE MATERIAL YOU ARE USING.

Do not allow others, including children and pets, in the area while operating the JRCO electric spreader.

Check for and replace broken parts before operating the mower or broadcaster.

Keep all fasteners tightened.

Do not alter the JRCO broadcaster.

Do not add weight to or stand on the broadcaster.

ASSEMBLY

Attach Vertical Channels to Hopper Support

1. Use two or four 3/8 x 3/4 HH capscrews and nylon locknuts to install the two vertical channels to the hopper support. The legs of the vertical channels are facing out. See fig. 1. There are two sets of holes on the hopper support. The inner set of holes is used for mount bars with 10-inch vertical channel spacing (all current mount bars) and the outer set of holes is used for bars with 15-inch vertical channel spacing (some older mount bars). When using the 10 inch spacing, the bumper u-bolt will have to be temporarily removed and reinstalled through the upper hole of the vertical channels.

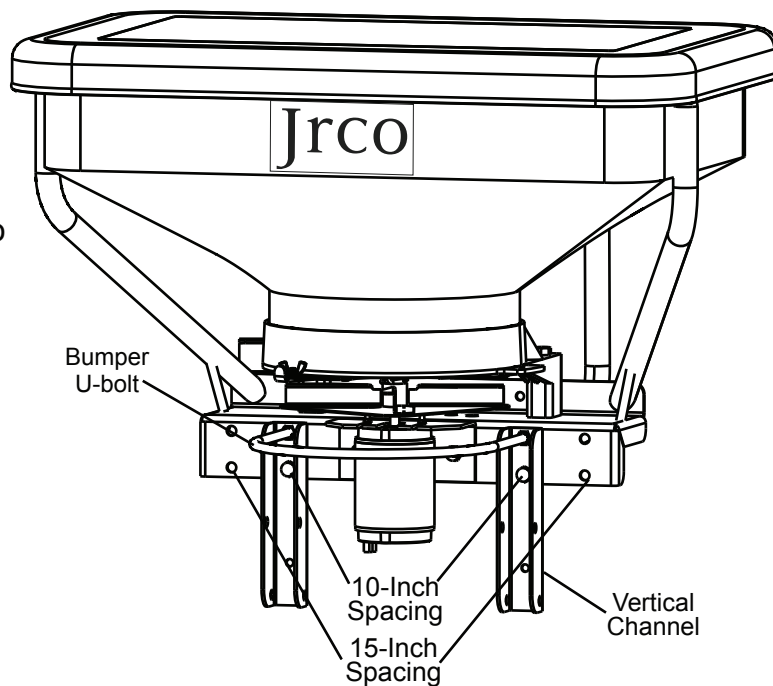


Figure 1

INSTALLATION

A. Install Broadcaster

1. Install mount bar on mower. See instructions included with JRCO Universal Mount Bar.
2. Align vertical channels on spreader with u-brackets on mount bar and secure with four clevis pins and circle cutters. See Fig. 2
3. Install wedge bolt into each vertical channel. Tighten just enough to remove any wobble.

NOTE: The spreader should be mounted as low as possible, allowing clearance for mower, caster wheels and foot control or cable control. If necessary, remove spreader and adjust u-brackets.

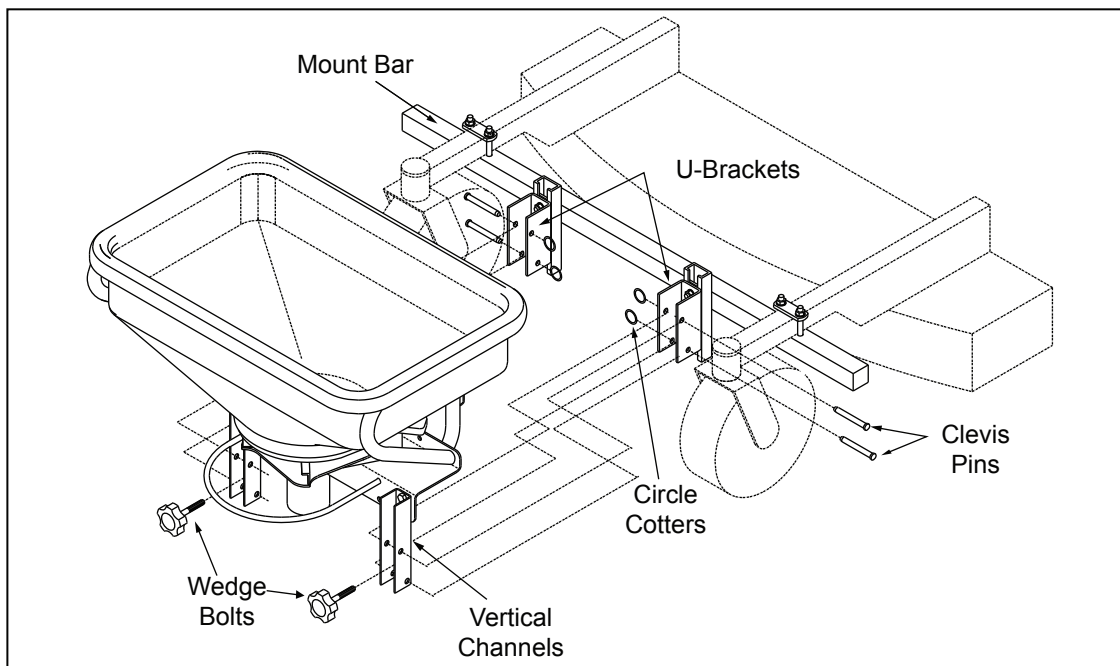


Figure 2

NOTE: If you have a model 503 foot controlled spreader, the foot control is factory installed. Skip to step C. pg. 5. The model 504 spreader requires mounting the cable and cable mount to the mower as outlined below.

B. Install Push/Pull cable

1. The cable mount can be installed two ways:

For riding mowers, install cable mount to an existing bolt near the seat or drill and bolt to the frame. For walk-behind mowers, install cable mount with hose clamps or drill and bolt to tubular frame near handle bars.

2. Slide knob end of push/pull cable into the u-slot of cable mount between nuts. See Fig. 3
3. Secure with safety clip.

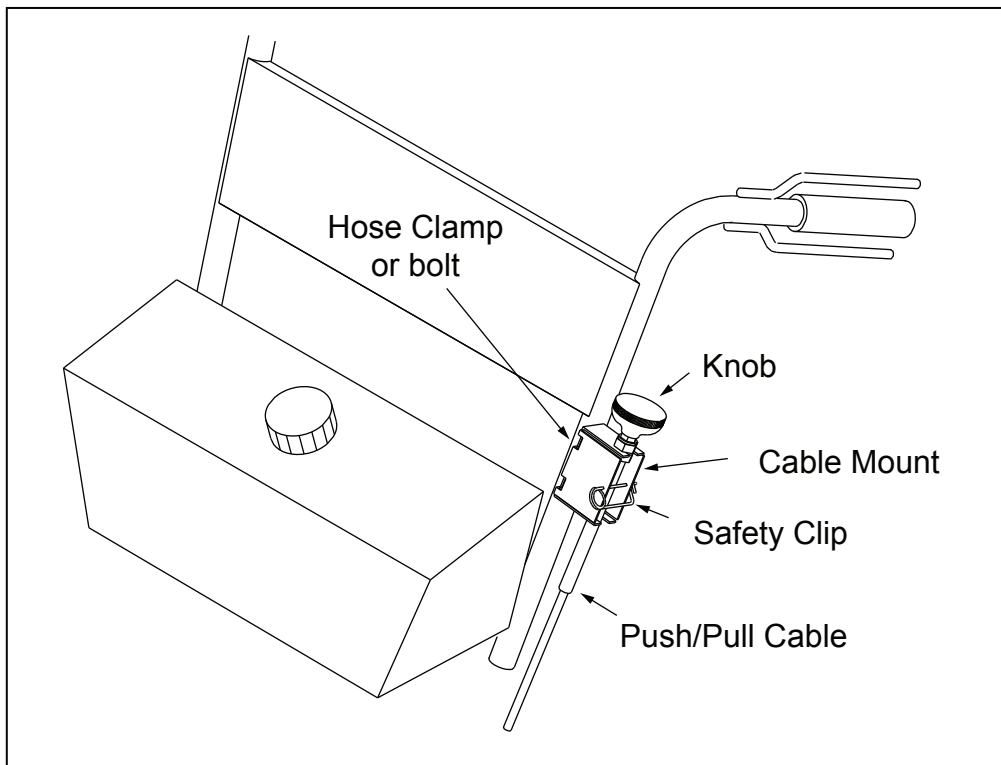


Figure 3

4. Route push/pull cable along mower frame to gate control mechanism.

Note: Position push/pull cable so that it does not interfere with any mower mechanisms or operation and there are no sharp bends in cable.

5. Determine length of push/pull cable. Mark the cable jacket at the point where it meets the end of the gauge plate.

6. Pull cable knob out 6 inches. Cut cable jacket and inner wire cable 1 inch BEYOND mark on jacket. After cutting, push in the knob. The inner wire should extend 6 inches beyond the jacket. See Figure 4.

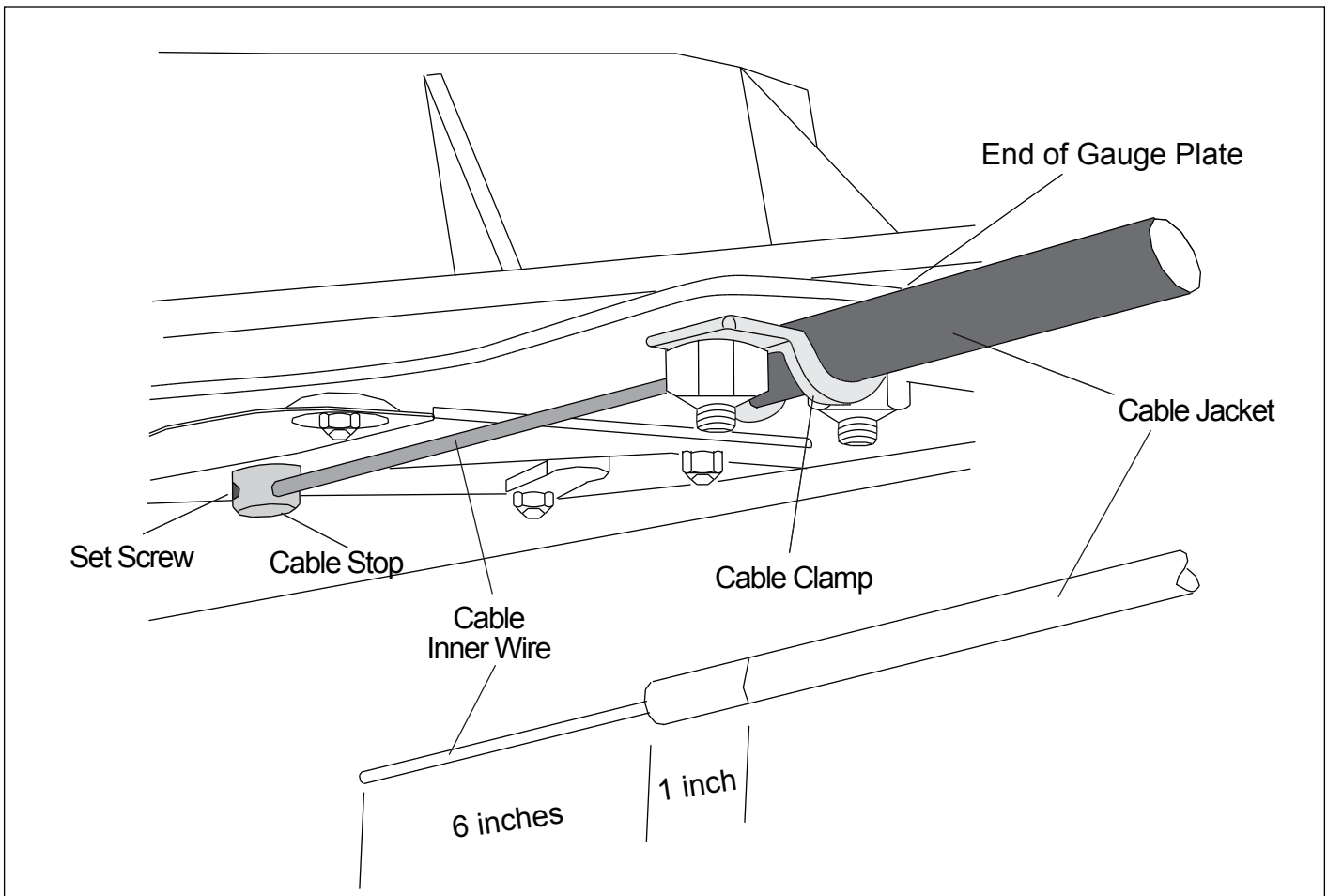


Figure 4

7. Insert cable through cable clamp and cable stop. Ensure gate is fully closed and cable knob is pushed all the way in. Tighten cable clamp and set screw in cable stop.

C. Wire Broadcaster to Battery

NOTE: Walk-behind mowers without a battery must be wired to a auxiliary battery. DO NOT wire Broadcaster to electric system of a non-electric start mower!

Use the following steps for mowers with electric start and equipped with a battery.

1. Connect 6 ft. battery harness directly to the battery. The red wire to the positive (+) and the black wire to the negative (-) battery terminal.

2. Route wire from battery along mower frame, keeping it away from moving parts that may damage cable. Secure with cable ties provided.

CAUTION

- Improper wiring can cause damage to equipment.
- Do not attach battery harness to another circuit or auxiliary switch position.
- Do not use mount bar as ground.

3. Ensure speed control switch is in OFF position. Plug battery harness into the speed control.

WARNING!

Be sure there are no body parts, clothing or obstructions near fan before testing motor. Failure to check can cause personal injury or equipment damage.

4. Set speed control to number 8 and switch motor on. The motor should run at full speed. Fan speed will slow as speed control is set to lower numbers.

OPERATION

WARNING!

Wear protective clothing and eye protection appropriate for the material being spread. Read and follow manufacturers MSDS information.

CAUTION

- Drive at speeds that are safe for the conditions. Reduce speed over rough or hilly ground. Rough ground increases strain on mower, mounting brackets and broadcaster when loaded.
- Do not use broadcaster on windy days.
- Run mowers engine at high RPMs to keep battery charged.

A. Determine Mower Speed

1. Set two markers 88 feet apart. Drive mower at a steady speed between markers and record time. See Table for mower speed.

Distance	Time	Speed
88 ft.	30 seconds	2 mph
88 ft.	20 seconds	3 mph
88 ft.	15 seconds	4 mph
88 ft.	10 seconds	6 mph
88 ft.	7.5 seconds	8 mph

NOTE: See pages 14 & 15 for recommended speeds and settings.

2. Use this information and the speed chosen from the setting charts on pg 14-15 to ensure consistency in spreading.

B. Set Electronic Speed Control

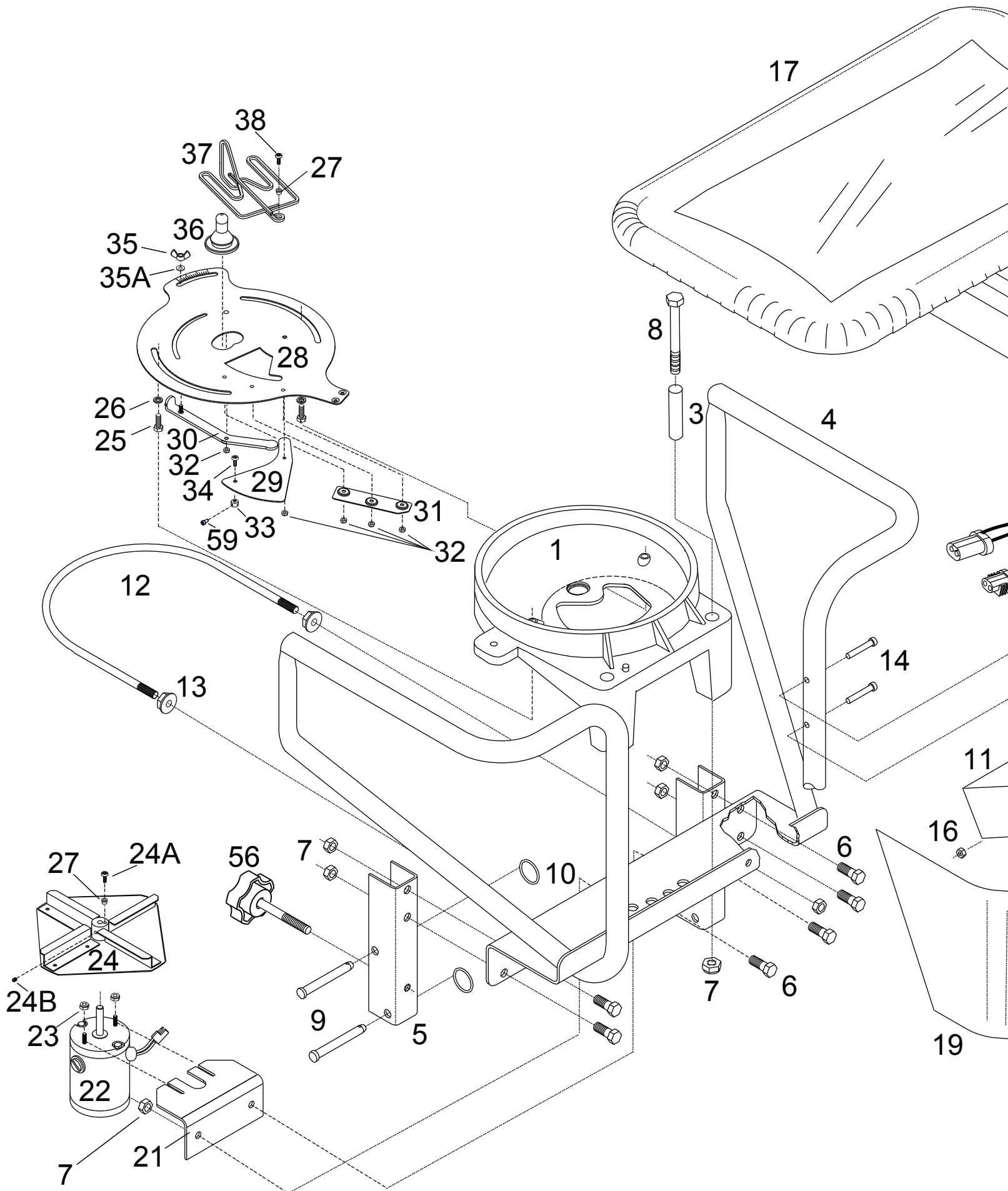
1. Adjust speed control to set the spread width. The highest fan speed will spread the widest.
2. After adjusting the speed control to the desired width for the material you are using, leave the dial on this setting and use the power switch to turn fan on and off.

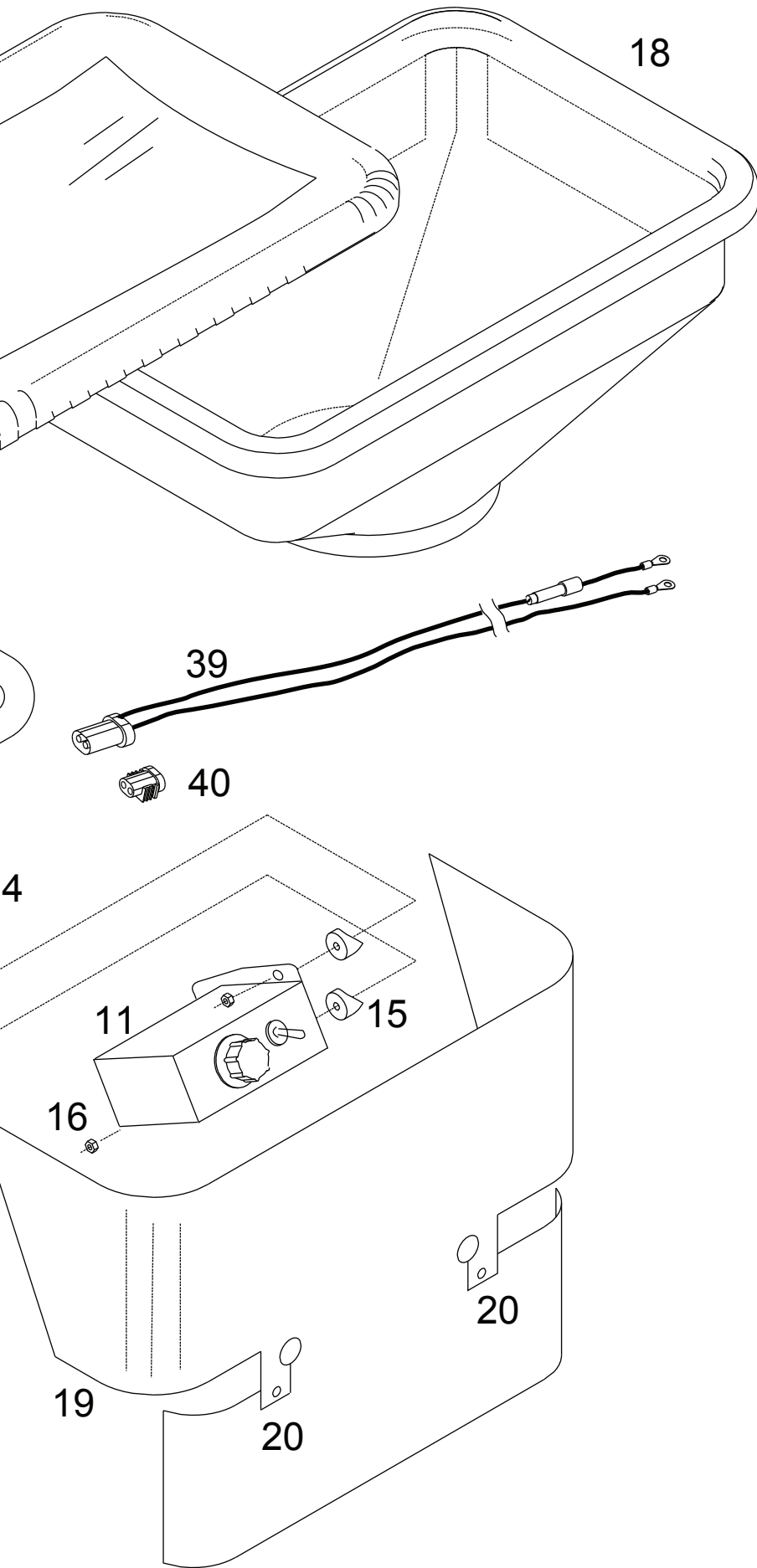
C. Set Opening Gauge Control

1. Refer to settings charts on pages 14 & 15 for proper settings.
2. Loosen wing nut and move gauge to desired setting. See Fig. 5. Tighten wing nut.

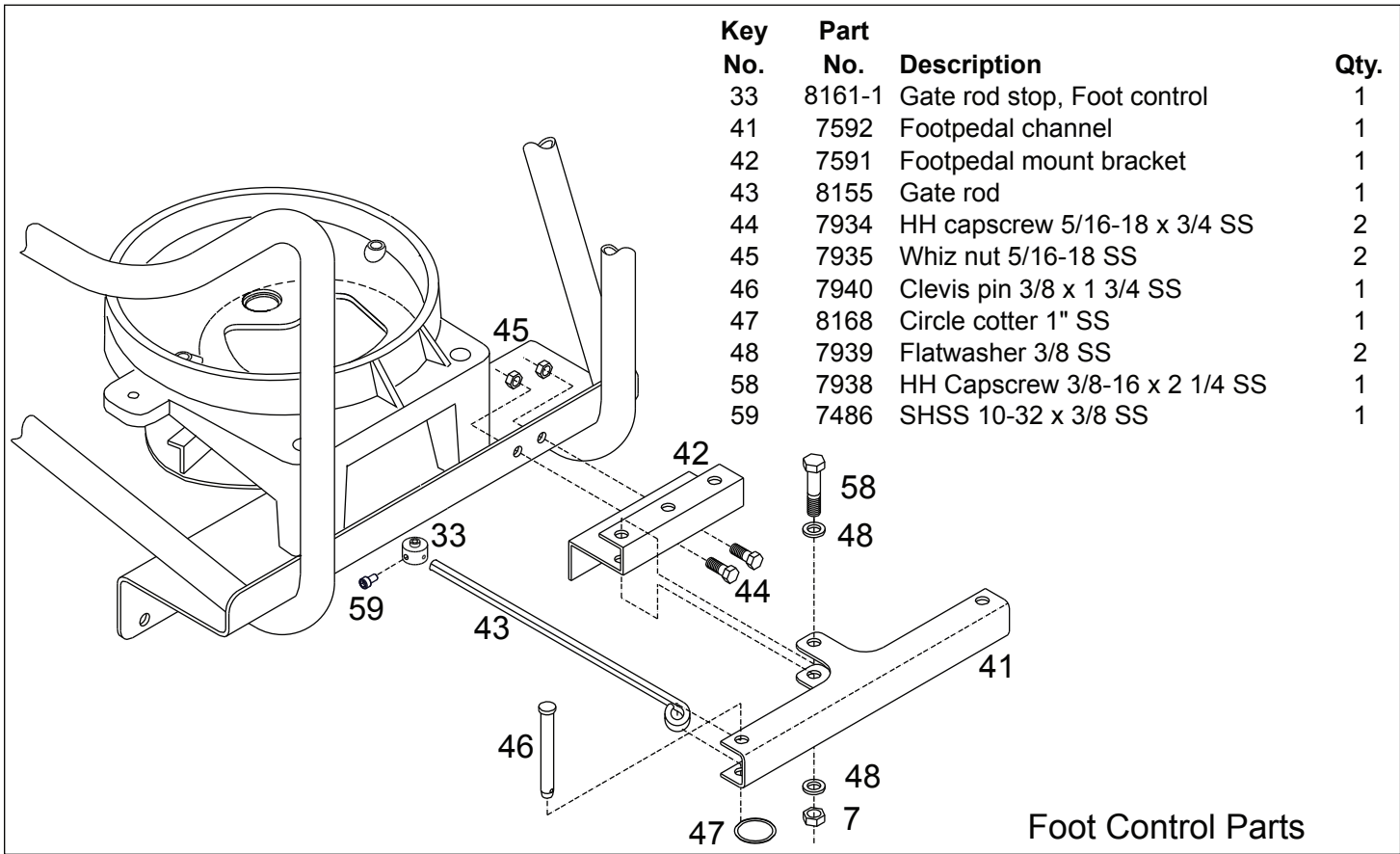


Figure 5



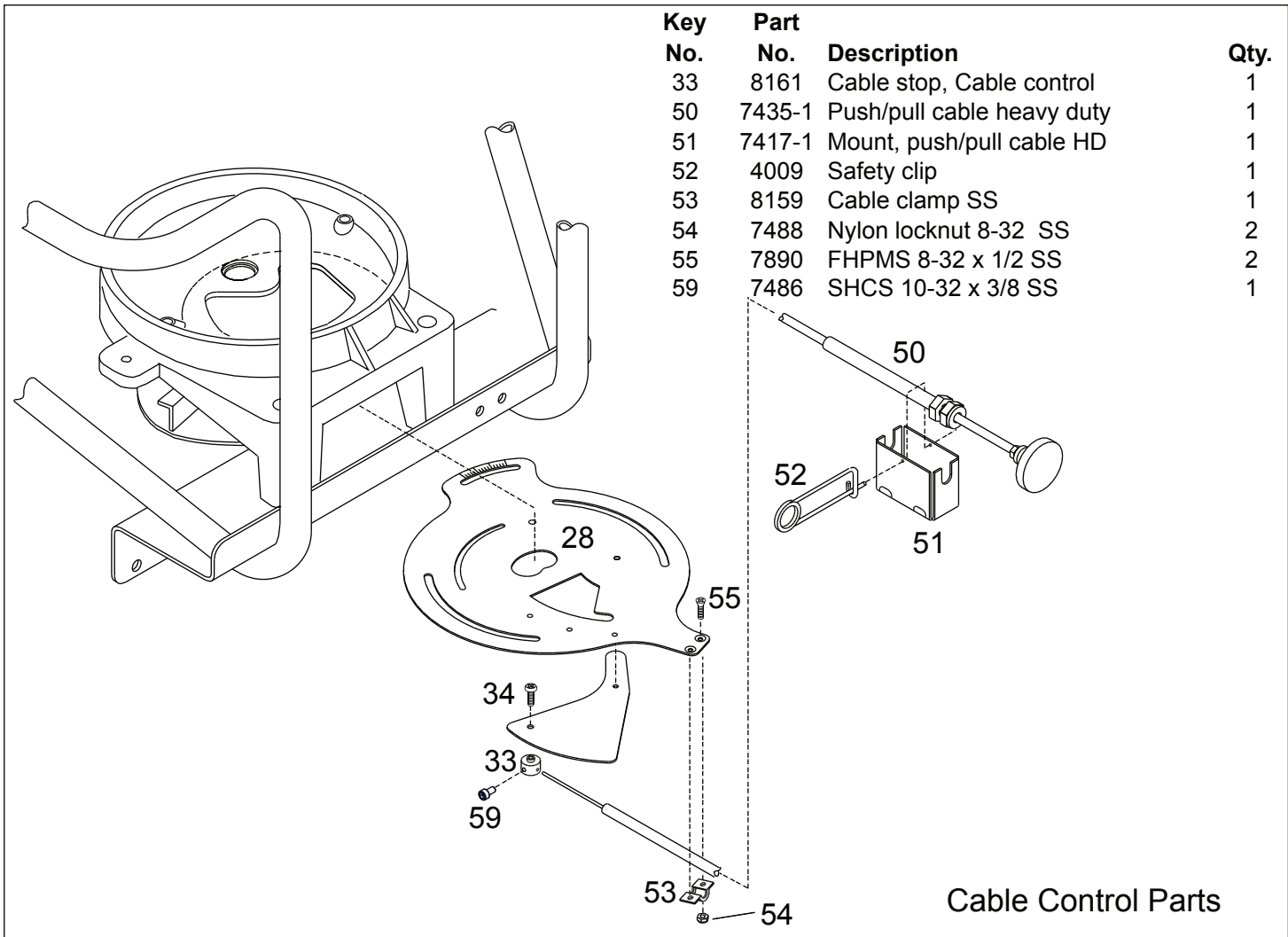


Key No.	Part No.	Description	Qty.
1	8151	Hopper base	1
3	8162	Spacer 1/2" OD SS	2
4	7473	Hopper support	1
5	7365-1	Vertical channel	2
6	7937	HH capscrew 3/8-16 x 3/4 SS	6
7	7936	Nylon locknut 3/8-16 SS	9
8	7495	HH capscrew 3/8-16 x 3 1/4 SS	2
9	4684	Clevis pin 3/8 x 2 3/4	4
10	4110	Circle cotter 1 1/8	4
11	7964	Electronic speed control	1
12	8166	Bumper U-bolt	1
13	8167	Whiz nut 3/8-16	2
14	7930	HH capscrew 1/4-20 x 1 1/2 SS	2
15	7482	Spacer, black, concave	2
16	7932	Whiz nut 1/4-20 SS	2
17	7442-1	Moisture cover	1
18	7375	Hopper	1
19	7507	Dust shield	1
20	7126	Plastic rivet	4
21	8158	Motor mount	1
22	7505	Motor HD	1
23	7515	Whiz nut 10-32 SS	2
24	8170	Fan assembly SS	1
	8163	Fan blade disc	1
	8164	Fan hub	1
	7496	Snap ring 7/8 external SS	1
24B	7514	Set screw 1/4-20 x 5/16 SS	2
24A	7428	PPMS 10-24 x 1/2 SS	1
25	7529	HH capscrew 1/4-20 x 1/2 SS	2
26	7530	Flatwasher, 1/4 SS	2
27	8182	Bearing, plastic .187 ID .25 long	2
28	8152	Gauge plate SS	1
29	8154	Gate	1
30	8153	Gauge	1
31	8156	Gate rail	1
32	7487	Nylon locknut 8-32 low profile SS	5
33	8161	Cable stop, Cable control	1
33	8161-1	Gate rod stop, Foot control	1
34	8184	PPMS 6-32 x 3/16 SS	1
35A	8147	1/4 external star washer SS	1
35	7491	Wingnut 1/4-20 SS	1
36	7522-1	Nipple, silicone	1
37	8157	Agitator	1
38	7518	PPMS 10-24 x 3/8 SS	1
39	7430-4	Battery harness 6 foot	1
40	7430-5	Battery harness rain cap	1
56	8260	Knob, Wedge bolt	2
59	7486	SCHS, 10-32 x 3/8 SS	1



Key No.	Part No.	Description	Qty.
33	8161-1	Gate rod stop, Foot control	1
41	7592	Footpedal channel	1
42	7591	Footpedal mount bracket	1
43	8155	Gate rod	1
44	7934	HH capscrew 5/16-18 x 3/4 SS	2
45	7935	Whiz nut 5/16-18 SS	2
46	7940	Clevis pin 3/8 x 1 3/4 SS	1
47	8168	Circle cotter 1" SS	1
48	7939	Flatwasher 3/8 SS	2
58	7938	HH Capscrew 3/8-16 x 2 1/4 SS	1
59	7486	SHSS 10-32 x 3/8 SS	1

Foot Control Parts



Key No.	Part No.	Description	Qty.
33	8161	Cable stop, Cable control	1
50	7435-1	Push/pull cable heavy duty	1
51	7417-1	Mount, push/pull cable HD	1
52	4009	Safety clip	1
53	8159	Cable clamp SS	1
54	7488	Nylon locknut 8-32 SS	2
55	7890	FHPMS 8-32 x 1/2 SS	2
59	7486	SHCS 10-32 x 3/8 SS	1

Cable Control Parts

D. Adjust Gauge Plate Position to Center Spread Pattern

If spread pattern is off-center, it may be adjusted by rotating the gauge plate. This is normally only required if spread width or material density has changed.

NOTE: Depending upon material being used, it may be necessary to empty the hopper before adjusting pattern.

1. Turn off speed control.
2. Unplug power to spreader.

CAUTION

Adjusting spreader with motor running may cause personal injury or equipment damage.

3. Loosen two capscrews holding gauge plate to base approximately 1/2 turn. See Fig. 6
4. Adjust gauge plate to re-center spread pattern. If spread is heavy to drivers left, rotate gauge plate clockwise (viewed from top) until pattern is even. If pattern is heavy to drivers right, rotate gauge plate counter-clockwise (viewed from top) until pattern is even.
5. Re-tighten capscrews. - *Do not over tighten!*

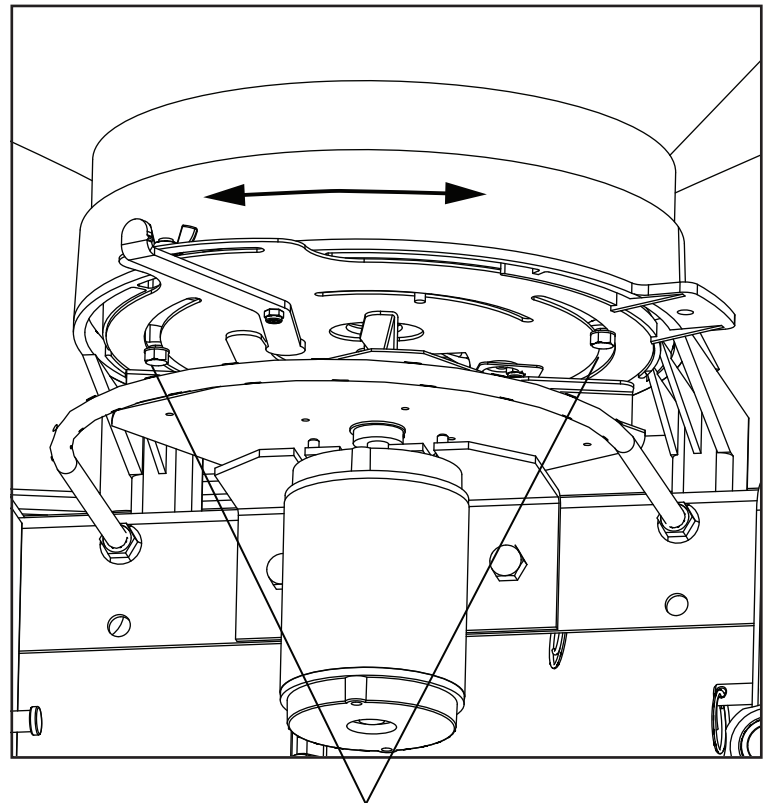


Figure 6

Adjustment Capscrews

E. Do Not Transport or Store Fertilizer in Hopper

1. Do not transport mower and broadcaster on trailer with fertilizer in the hopper. Materials such as fertilizer will pack in the hopper and the added weight causes strain on the mount and broadcaster.
2. Remove all fertilizer at the end of each day.

CLEANING

1. Use appropriate safety equipment, eye protection and clothing. Wipe or blow excess fertilizer from broadcaster at the end of each day. **DO NOT USE PRESSURIZED WATER** spray to clean broadcaster.
2. Do not apply oil to any of the gate or gauge mechanisms. Oil will allow fertilizer dust to collect and solidify.

STORAGE

1. Store broadcaster upside down (on hopper) with moisture cover removed.
2. For off-season storage, clean broadcaster thoroughly. **DO NOT PRESSURE WASH.**

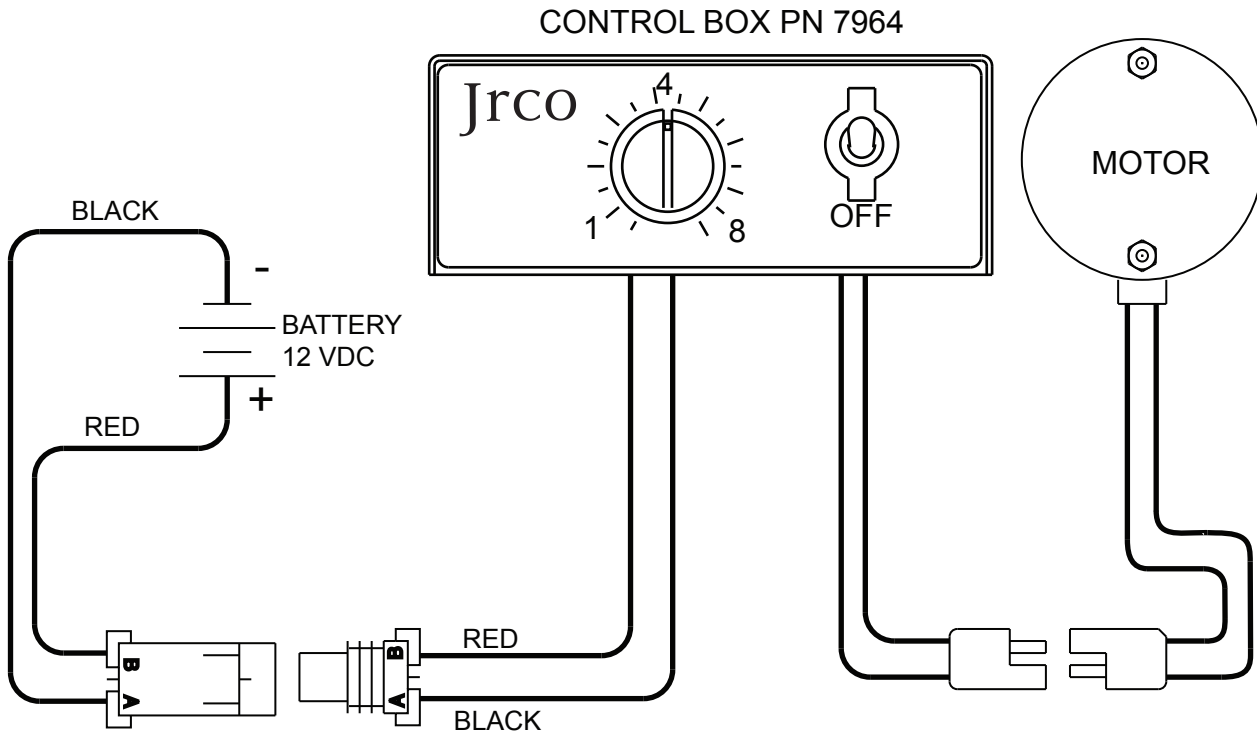
TROUBLESHOOTING

Symptom	Possible Cause	Action
Motor won't run	Broken or corroded connection	Check continuity; check for broken wire; CLEAN ALL CONNECTIONS.
	No power to speed control	Check fuse; check voltage at connector.
	Overvoltage; damaged speed control	Power harness incorrectly connected to auxiliary circuit. Connect direct to battery. Power incorrectly connected to under-regulated electrical system on non-electric start mower.
Erratic spread pattern	Lumps in material	Break up lumps.
Gate won't close or open properly	Fertilizer solidified in gate rail	Remove gate rail and clean. DO NOT use oil on guides or gate.

WIRING DIAGRAM FOR JRCO BROADCAST SPREADER

CAUTION !

CONNECT DIRECTLY TO THE 12V BATTERY, NOT AN AUXILIARY CIRCUIT.
DO NOT REVERSE POLARITY.
DO NOT SHORT CIRCUIT.
DO NOT CONNECT MOTOR OR SUPPLY TO CHASSIS GROUND.
DO NOT CONNECT TO THE ELECTRIC CIRCUIT OF A NON-ELECTRIC START MOWER.



Limited Warranty

We warrant each new JRCO Electric Broadcast Spreader sold by us to be free from manufacturing defects in normal service for a period of 90 days for commercial use, commencing with delivery to the original retail user. Our obligation under this warranty is expressly limited, at our option, to the replacement or repair at JRCO, Inc. (Minneapolis, Minnesota), or at a service facility designated by us, of such part or parts as inspection shall disclose to have been defective. This warranty does not apply to defects caused by damage or unreasonable use (including failure to provide reasonable and necessary maintenance) while in the possession of the consumer.

This warranty is void should the product be repaired or modified in any way not authorized by JRCO, Inc.

We shall not be liable for consequential damages of any kind, including but not limited to consequential labor costs or transportation charges in connection with the replacement or repair of defective parts.

Any implied or statutory warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. We make no other express warranty, nor is anyone authorized to make any in our behalf.

JRCO Model 503/504 Broadcast Spreader settings for Commercial, Pelletized Fertilizers

MOWER SPEED	GATE SETTING					SPREAD WIDTH (SPEED CONTROL SETTING)
	Pounds per 1000 sq. ft.					
	2.5 lb.	3 lb.	4 lb.	5 lb.	6 lb.	
2 mph	3 1/2	4	4 1/2	5	5 1/2	8 ft
3	4	4 1/2	5	5 1/2	6	8 ft
4	4 1/2	5	6	6 1/2	7	8 ft
5	5	5 1/2	6 1/2	7	8	8 ft
6	5 1/2	6	7	8	9	8 ft
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2	4	5	5 1/2	6	6 1/2	12 ft
3	5	5 1/2	6	7	7 1/2	12 ft
4	5 1/2	6	7	8	9	12 ft
5	6	7	8	9	10	12 ft
6	7	8	9	10	12	12 ft
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2	5	5 1/2	6	7	7 1/2	18 ft
3	6	6 1/2	7	8	9	18 ft
4	7	7 1/2	9	10	12	18 ft
5	8	8 1/2	10	13	15	18 ft
6	8 1/2	9 1/2	12	15	NA	18 ft
<hr/>						
2	6	6 1/2	7	8	9	25 ft
3	7	7	9	11	13	25 ft
4	8	9	11	15	NA	25 ft
5	9	11	15	NA	NA	25 ft
6	11	13	NA	NA	NA	25 ft

Speeds greater than those listed on the above chart are **NOT** recommended.
Spreading at faster than recommended speeds may cause uneven application.

Distance	Time	Speed
88 ft.	30 seconds	2 MPH
88 ft.	20 seconds	3 MPH
88 ft.	15 seconds	4 MPH
88 ft.	10 seconds	6 MPH
88 ft.	7.5 seconds	8 MPH

To determine mower speed, set two markers 88 feet apart and record time it takes to go from one to the other. See table below to determine speed.

JRCO Model 503/504 Broadcast Spreader settings for common Grass Seeds

MOWER SPEED	GATE SETTING										WIDTH	
	Pounds per 1000 sq. ft.											
	1/2 lb.	1 lb.	2lb.	3 lb.	4 lb.	5 lb.	6 lb.	7 lb.	8 lb.	10 lb.		
Athletic Blend 8' (39% Tall Fescue, 30% Perennial Ryegrass, 20% Kentucky Bluegrass, 9.5% Chewing Fescue)	2 mph	4 1/4	5	6	7	8	9 1/4	10	11	12 1/2	14 1/2	8 ft
	3	4 1/2	5 1/2	7	8 1/2	10 1/2	12 1/2	14 1/2	NA	NA	NA	8 ft
	4	5	6	8	10	12 1/2	14 1/2	NA	NA	NA	NA	8 ft
	5	5 1/4	6 1/2	9	12	15	NA	NA	NA	NA	NA	8 ft
	6	5 1/2	7	10	14	NA	NA	NA	NA	NA	NA	8 ft
Athletic Blend 12' (39% Tall Fescue, 30% Perennial Ryegrass, 20% Kentucky Bluegrass, 9.5% Chewing Fescue)	2	4 1/2	5 1/4	6	7	8	8 3/4	9 1/2	10 1/2	12	13 1/2	12 ft
	3	4 3/4	5 1/2	6 3/4	8	9 1/4	10 1/2	12	13 1/2	14 1/2	NA	12 ft
	4	5	5 3/4	7 1/2	9	11	13	14 1/2	NA	NA	NA	12 ft
	5	5 1/4	6	8 1/2	10 1/2	13	15	NA	NA	NA	NA	12 ft
	6	5 1/2	6 1/2	9 1/4	12 1/4	14 1/2	NA	NA	NA	NA	NA	12 ft
Ryegrass 10' Wide	2	5 1/2	6	7 1/2	8 1/2	10	11 1/2	13	NA	NA	NA	10 ft
	3	5 3/4	6 1/2	8	11	12 1/2	14 1/2	NA	NA	NA	NA	10 ft
	4	6	7	10	12 1/2	15	NA	NA	NA	NA	NA	10 ft
	5	6 1/4	7 1/2	11	14	NA	NA	NA	NA	NA	NA	10 ft
	6	6 1/2	8	13 1/2	15	NA	NA	NA	NA	NA	NA	10 ft
Ryegrass 14' Wide	2	5	5 1/2	6 1/2	7 1/4	8 1/2	10	11	12 1/2	14	NA	14 ft
	3	5 1/4	6	7 1/2	8 1/2	10 1/2	12 1/2	14	15	NA	NA	14 ft
	4	5 1/2	6 1/2	8	10 1/2	13	15	NA	NA	NA	NA	14 ft
	5	5 3/4	7	9 1/2	12 1/2	15	NA	NA	NA	NA	NA	14 ft
	6	6	7 1/2	10 1/2	14	NA	NA	NA	NA	NA	NA	14 ft
DOT Blend 8' Wide (33.7% Brome, 28.7% perennial ryegrass, 12% switchgrass, 11% alfalfa, 11% timothy)	2	2	3	4 1/2	5 1/2	6	7	8	9	10	12	8 ft
	3	2 1/2	3	5	6 1/2	8	9 1/2	11	12 1/2	14	NA	8 ft
	4	2 3/4	4	6	8	10	12	14	15	NA	NA	8 ft
	5	3	4 1/2	7	9 1/2	12	14 1/2	NA	NA	NA	NA	8 ft
	6	3 1/2	5 1/2	8	11	14	NA	NA	NA	NA	NA	8 ft
Kentucky Bluegrass 8'	2	3 1/2	4	5	6	6 3/4	7 1/2	8 1/2	9	10	12	8 ft
	3	4	4 1/2	6	7	8 1/2	9 1/2	11	12 1/2	14	15	8 ft
	4	4 1/2	5	6 1/2	8 1/2	10	12	14	15	NA	NA	8 ft
	5	4 3/4	5 1/2	7 1/2	9 1/2	12	14	NA	NA	NA	NA	8 ft
	6	5	6	8 1/2	11	14	NA	NA	NA	NA	NA	8 ft
White Dutch Clover 15'	2	6	6 1/2	8 1/2	10 1/2	13	15	NA	NA	NA	NA	15 ft
	3	6 1/4	7 1/2	10	14	NA	NA	NA	NA	NA	NA	15 ft
	4	6 1/2	8 1/2	12 1/2	NA	NA	NA	NA	NA	NA	NA	15 ft
	5	7	9	14	NA	NA	NA	NA	NA	NA	NA	15 ft
	6	7 1/2	11	NA	NA	NA	NA	NA	NA	NA	NA	15 ft

NA= Not applicable

Speeds greater than those listed on the above chart are **NOT** recommended.
Spreading at faster than recommended speeds may cause uneven application.

Optional Equipment

JRCO offers a side deflector option and a screen option for the JRCO Electric Broadcast Spreader. Please contact your dealer to order.



Side Deflector Kit Model 7053 Stainless Steel Hopper Screen 8436

The deflector cup locks in both the working and storage positions. The connecting bracket, rod and hardware are all stainless steel.

The Hopper screen rests in the middle of the hopper and sifts lumps from the material. The openings are large, for unobstructed flow.

JRCO offers a full line of labor-saving attachments that fit the JRCO Universal Mount Bar.

Tine Rake Dethatcher
Hooker Soft-Plug Aerator
Leaf Blade Plow
Transporter and Tub
Blower Buggy Carrier

JRCO tow-behind attachment:
Zero-Turn Sprayer

For more information on JRCO attachments, see your dealer or see us on the web at www.jrcoinc.com