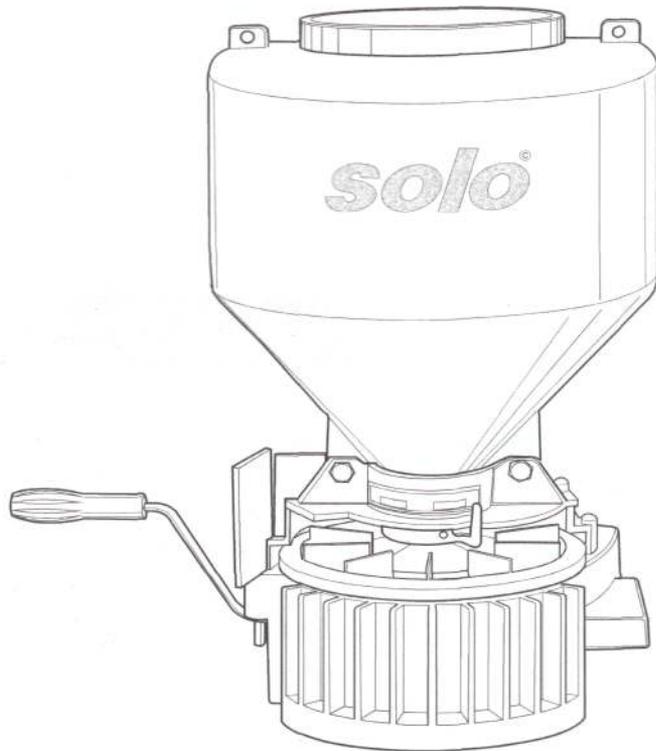


Solo Operator's Manual and Spare Parts List

Model 421S

Portable Spreader



CAUTION: Before using this product, read this manual and follow all Safety Rules and Operating Instructions.

Solo Incorporated · 5100 chestnut Ave · Newport News, VA 23605

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Dear Customer,

The Solo model 421S portable spreader is designed for spreading a variety of materials over irregular terrain more conveniently than a wheeled spreader. A few of the possible uses include spreading:

- Ice melters
- Sand, Salt, etc.
- Oil absorbers
- Cleaning agents
- Seed
- Fertilizers
- Pelletized lime
- Bird seed
- Feed stock
- Wild game feed

The model 421S spreader requires very little maintenance and will provide good service with regular cleaning and periodic lubrication of the gearbox.

Table of Contents

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Warranty

LIMITED ONE YEAR WARRANTY

For one (1) year from the date of purchase, if the portable spreader is maintained according to the instructions in the owner's manual, Solo will repair or replace, free of charge, any parts found to be defective in material or workmanship.

This warranty does not cover repairs necessary because of operator abuse, negligence, improper storage, accident, normal wear or failure to maintain the equipment according to the instructions contained in the owner's manual.

Warranty service is available by returning the spreader to a Solo service center. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

PRODUCT SPECIFICATIONS

- Weight: 5.5 pounds (empty)
- Capacity: 20 lbs.
- Height: 19 in
- Width: 11 in.
- Carry Strap: Included
- Flow Rate: Adjustable
- Directions: 180° adjustable
- Gears: Metal worm gear drive
- Agitator: Built-in agitator turns steadily during cranking

Model No. 421S
Date of Purchase: _____
Record the date of purchase and keep this manual and purchase receipt in a safe place for future reference.

Safety Instructions

TRAINING

Read the owner's manual carefully. Become familiar with the controls and know how to operate your spreader.

- Do not allow children to use your spreader. Never allow adults to use the spreader without proper instructions.
- Do not bend at the waist. Bend only at the knees and support yourself as required to ensure personal safety.
- Keep the treatment area clear of people and pets, especially small children.
- Use spreader only as described in this manual.
- Do not operate spreader if it has been dropped or damaged in any manner. Always have damage repaired before use.
- Do not use accessory attachments that are not recommended by the manufacturer. Use of such attachments may be hazardous.

PREPARATION AND SAFETY

- Always wear safety glasses or eye shields when using your spreader.
- Dress properly. Wear only closed shoes with good traction. Do not operate spreader when barefoot or wearing open sandals.
- Wear long-sleeved clothes that are snug fitting. Avoid wearing loose clothing.
- Wear either tightly cuffed or cuffless pants.
- Wear non-slip gloves during operation. Wear a respirator if appropriate for type material being spread.
- Long hair should be tied back and kept away from the spreader.
- Make directional adjustments before using the spreader.
- Use only in daylight or good artificial light.
- Read all instructions of the chemical manufacturer.

CAUTION

- Keep your eyes and mind on the job at hand. Do not become distracted.
- Always be sure of your footing. Use extra caution in wet or slippery areas. **WALK - DON'T RUN.**

WARNING: Chemicals or materials which can be harmful to individuals or the environment should be avoided. Follow all warnings of the chemical manufacturer.

MAINTENANCE AND STORAGE

- Check all bolts, nuts, and screws at frequent intervals for proper tightness to be sure the spreader is in safe working condition.
- Keep all safety devices in place and working.

CUSTOMER RESPONSIBILITIES

- Read and observe the Safety Rules.
- Follow a regular schedule in maintaining, caring and using your spreader.
- Follow the instructions under the Maintenance and Storage sections of this manual.

Assembly

Your Solo 421S spreader needs to have the carry strap and the crank handle attached before operation.

Remove the hopper lid. The crank handle and carry strap are located inside.

Mounting the Crank Handle

- Place the spreader on its right side (as viewed from operator's position), figure A.
- Find the threaded crankshaft and affix the crank handle in a clockwise motion, tighten the jambnut against the crank handle.

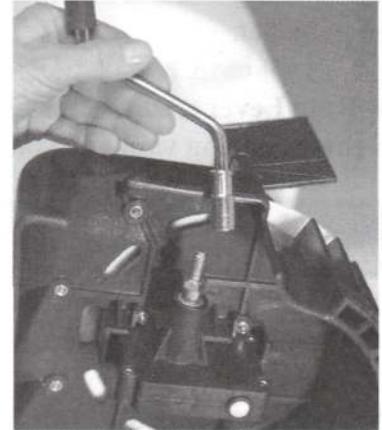


Figure A.

Carry Strap

- Stand the spreader upright at about waist level on a table, bench or stand.
- Adjust the strap to its longest reach.
- Attach the strap hook to the top right eye on the spreader (as viewed from operator's position).
- With the back of the spreader facing your chest, slip strap over your right shoulder and across your back.
- Set strap hook under spreader housing, see figure B.
- With the spreader properly fitted, crank the handle and determine if the spreader is set at a comfortable height. Remove the spreader, adjust the strap and try again until you are comfortable with fit and function.

Lubrication Point

- With the spreader on its right side (crank handle side), observe the small oil hole in the gear case.
- Add a few drops of light oil every four hours of operation, figure C.



Figure B



Figure C

Adjusting the Spreader

Your spreader is adjustable for both volume and direction. Four factors determine the volume and direction. They are:

Flow Limiter Stop - This brass locking knob allows you to set the hopper opening to a fixed position for consistent delivery of material to the propeller.

Flow Rate Lever - Look down into the hopper to observe how the drop chute opening varies as you adjust the flow rate lever.

Directional Lever - This control adjusts the point where the material is to be deposited on the impeller and consequently, the width of spread. A label indicates where the lever can be set for center, left or right spreading, figure D.

Deflector Shield - Increases or decreases the width of spread, figure E.

Cranking Speed - Cranking faster or slower affects volume and coverage.

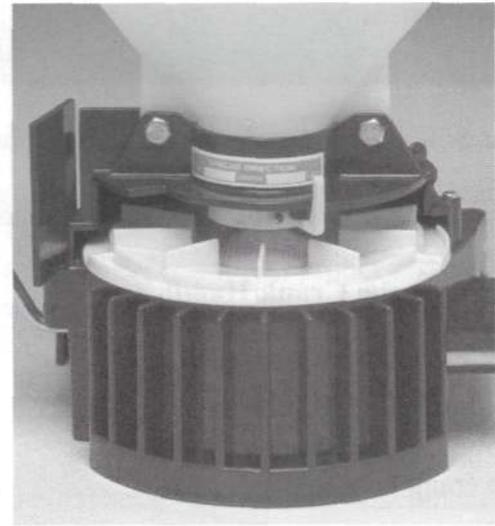


Figure D

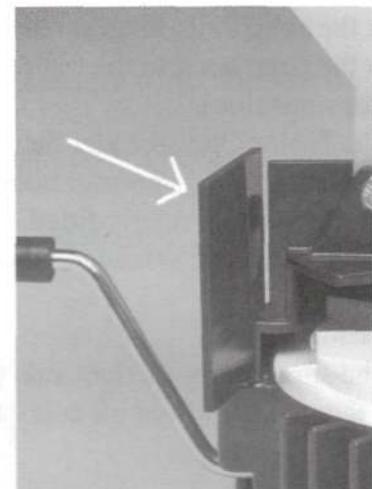


Figure E

Spread Rate Table

Flow rate adjuster setting #3 (middle)

<u>Cranking RPM</u>	<u>Pellitized Fertilizer</u>	<u>Pounds Delivered Per Minute</u>
55-60	Brand "O"	4.4
55-60	Brand "V"	3.75
55-60	Grass Seed	.7

Flow rate adjuster setting #6 (full open)

<u>Cranking RPM</u>	<u>Pellitized Fertilizer</u>	<u>Pounds Delivered Per Minute</u>
55-60	Brand "O"	7.44
55-60	Brand "V"	10.0
55-60	Grass Seed	2.0

Pellitized Fertilizer is usually thrown about 10-12 feet in front of the operator and 5-7 feet on each side at 55-60 rpm. Grass seed usually carries 5-7 feet forward and 4-5 feet to the side. A walking speed of 2.5 to 3 feet per second is suggested.

Please test the product you are spreading to achieve the manufacturer's recommended coverage.

Filling the Hopper

- Move flow rate lever to zero position.
- Set spreader on a flat surface.
- Remove hopper lid.
- Fill hopper. For the initial use it is wise to partly fill the hopper and practice spreading and making adjustments.
- Replace hopper lid - the lid prevents spillage and helps keep dust and other material away from the operator.
- When spreading chemicals be sure to wear protective clothing, respirator and eye protection.
- Do not load hopper while carrying spreader.

Operating Instructions

- Set spreader on a surface to safely and conveniently fit the carry strap as outlined in assembly section.
- Set deflector to desired position.
- Adjust spreading direction lever to the desired position. Directional changes can also be made simply by walking in the desired direction.
- While turning the crank handle with your right hand, move the flow rate lever with the left hand to adjust flow rate. Flow limiter stop will control flow rate. **Caution:** Keep hand away from rotating impeller.
- After use, turn the flow rate lever to the closed (zero) position. Crank the handle several times to make sure no material residue is attached to impeller. Clean the whole unit thoroughly using soap and water.

Other Operating Suggestions

- Walking speed: 2.5-3.0 feet per second.
- Crank handle speed: 55-65 rpm.
- Each complete revolution of the crank handle causes the impeller to rotate 7½ turns.
- In windy conditions, plan your work so the wind is behind you if possible.

Storage

- Empty hopper of contents. Store or dispose of contents properly and in accordance with the chemical manufacturer's instructions.
- Check all bolts, nuts and screws for proper tightness.
- Clean unit with soap and water.
- Dry.
- Store in safe place.

Spare Parts List - 421S

Item #	Part #	Description	Qty.	Retail Price (Each)
1	8411	Tank Cap	1	1.80
2	US8412	Instruction Manual	1	N/C
3	8413	Tank	1	12.00
4	8414	Carry Strap	1	4.90
5	8415	Bolt	1	.70
6	8416	Support Bracket	1	1.25
7	8417	Nut	1	.50
8	8418	Nut	12	.50
9	8419	Bolt	12	.50
10	84110	Bolt	2	.50
11	84111	Nut	2	.50
12	84112	Agitator Knob*	1	3.10
13	84113	Gasket	1	.60
14	84114	Volume Control Plate (A)	1	1.10
15	84115	Volume Control Plate (B)	1	1.35
16	84116	Volume Control Lever	1	1.10
17	84117	Screw	4	.50
18	84118	Gasket	1	.50
19	84119	Direction Controller	1	1.35
20	84120	Gasket	1	.55
21	84121	Direction Control Lever	1	1.10
22	84122	Nut	1	.65
23	84123	Gasket	1	.50
24	84124	Bolt	1	.50
25	84125	Screw	2	.50
26	84126	Adjuster Plate	1	.65
27	84127	Lid	1	6.00
28	84128	Bolt	1	.50
29	84129	Nut	1	.50
30	84130	Bolt	1	.50
31	84131	Washer	1	.50
32	84132	Nut	1	.50
33	84133	Deflector	1	1.10
34	84134	Propeller	1	4.00
35	84135	Base	1	11.10
36	84136	Crank Handle	1	5.55
37	84137	Gear Box	1	4.45
38	84138	Handle Shaft	1	10.00
39	84139	Nut	1	.50
40	84140	Washer	1	.50

* Left-hand thread

Solo Spreader Spare Parts List Order Form

Item #	Part #	Description	Qty.	Total
1	8411	Tank Cap		
2	US8412	Instruction Manual		N/C
3	8413	Tank		
4	8414	Carry Strap		12.00
5	8415	Bolt		4.90
6	8416	Support Bracket		
7	8417	Nut		
8	8418	Nut		
9	8419	Bolt		
10	84110	Bolt		
11	84111	Nut		
12	84112	Agitator Knob*		
13	84113	Gasket		
14	84114	Volume Control Plate (A)		
15	84115	Volume Control Plate (B)		
16	84116	Volume Control Lever		
17	84117	Screw		
18	84118	Gasket		
19	84119	Direction Controller		
20	84120	Gasket		
21	84121	Direction Control Lever		
22	84122	Nut		
23	84123	Gasket		
24	84124	Bolt		
25	84125	Screw		
26	84126	Adjuster Plate		
27	84127	Lid		
28	84128	Bolt		
29	84129	Nut		
30	84130	Bolt		
31	84131	Washer		
32	84132	Nut		
33	84133	Deflector		
34	84134	Propeller		
35	84135	Base		
36	84136	Crank Handle		
37	84137	Gear Box		
38	84138	Handle Shaft		
39	84139	Nut		
40	84140	Washer		

* Left-hand thread

Mail or Fax to: Solo Incorporated
 5100 Chestnut Ave.
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 Fax: (757) 245-0800

Order Online: www.solousa.com

Va residents add applicable sale tax

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Please do not send cash with this order. Make check or money order payable to Solo Incorporated. You may request C.O.D shipment.

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Exp Date _____

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