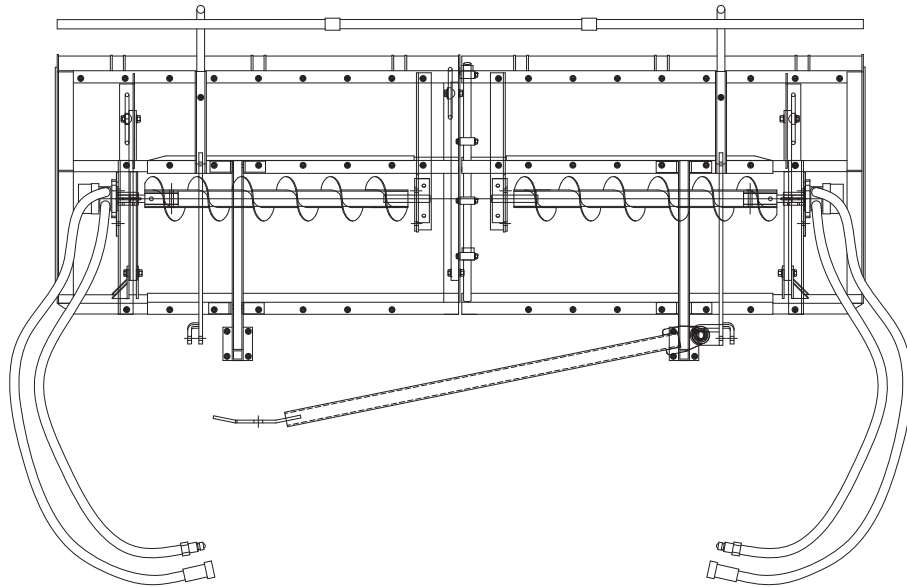


# Macropaver<sup>®</sup>

## Standard Spreader Box



## Instruction Manual



a division of Reed International

Pavement Preservation Solutions From One Source

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## **Safety Information**

Be alert when seeing this symbol in this manual.

There is the potential for personal injury

Follow recommended precautions and safe operating practices.

Personnel must be fully qualified to perform procedures in this manual.



## **Follow Safety Instructions**

Learn how to operate the machine properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the machine's function and/or safety features and may also affect machine life.

## **Prevent Auger Injuries**

Avoid possible injury or death from entanglement with spreader box augers.

Do not wear loose clothing.

**ALWAYS** stop auger rotation when making depth adjustments to spreader box. Shut off engine and remove and pocket the ignition key.

**ALWAYS** disconnect auger hydraulic quick disconnects from paver when working on spreader box.

## **Prepare for Emergencies**

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher and emergency numbers handy.

## General Description

The Macropaver Standard Spreader Box is generally used with Type I and Type II slurry seal applications. A Macropaver Microsurfacing Box is used when applying microsurfacing mixes. The Standard Spreader Box can be used with or without augers. The augers are generally used when heavier and thicker slurry seal mix designs are used. The augers are a simple bolt-in option.

In operation, the spreader box is connected to and is pulled along the pavement by the Macropaver. It can be shifted side-to-side to follow the pavement edge by the side shift mechanism on the Macropaver. The box is lifted from the pavement at the end of the paving operation by the box lift mechanism on the Macropaver. Slurry is deposited into the box from the Macropaver pugmill. It can be placed in the center, or either side, by the diverter rubber located on the outlet of the pugmill.

As the box is pulled along the pavement the middle rubber brings the depth of the slurry down to approximately the final thickness and then the rear rubber brings it down to the actual final thickness. The thickness is adjusted by adjusting the height of the box skids. The drag mop, which trails out behind the box, applies the final finish and texture to the slurry. Side rubbers keep slurry from exiting the sides of the box. The augers are used to help distribute the slurry evenly throughout the box, especially with thicker mixes and when operating wider boxes.

The box width paving capacity can vary from 8' to 13' (2.4m to 4m) in 6" (15cm) increments. The outside box width varies from 109-1/2" to 169-1/2" (278.1cm to 430.5cm).

## Assembly Instructions

### Box Rubber Installation

The spreader box is shipped with the box rubber shipped loose to prevent shipping damage. The box rubber will have to be cut to length and installed. It is easiest to install the box rubber if the box is turned over and the rubber is installed from the bottom. Make SURE the box is adjusted to the required width before installing the rear rubber. All box rubbers are held in place by the clamping strips. It is not necessary to drill holes in the rubber to install it in place. See illustration on following page for installation locations.

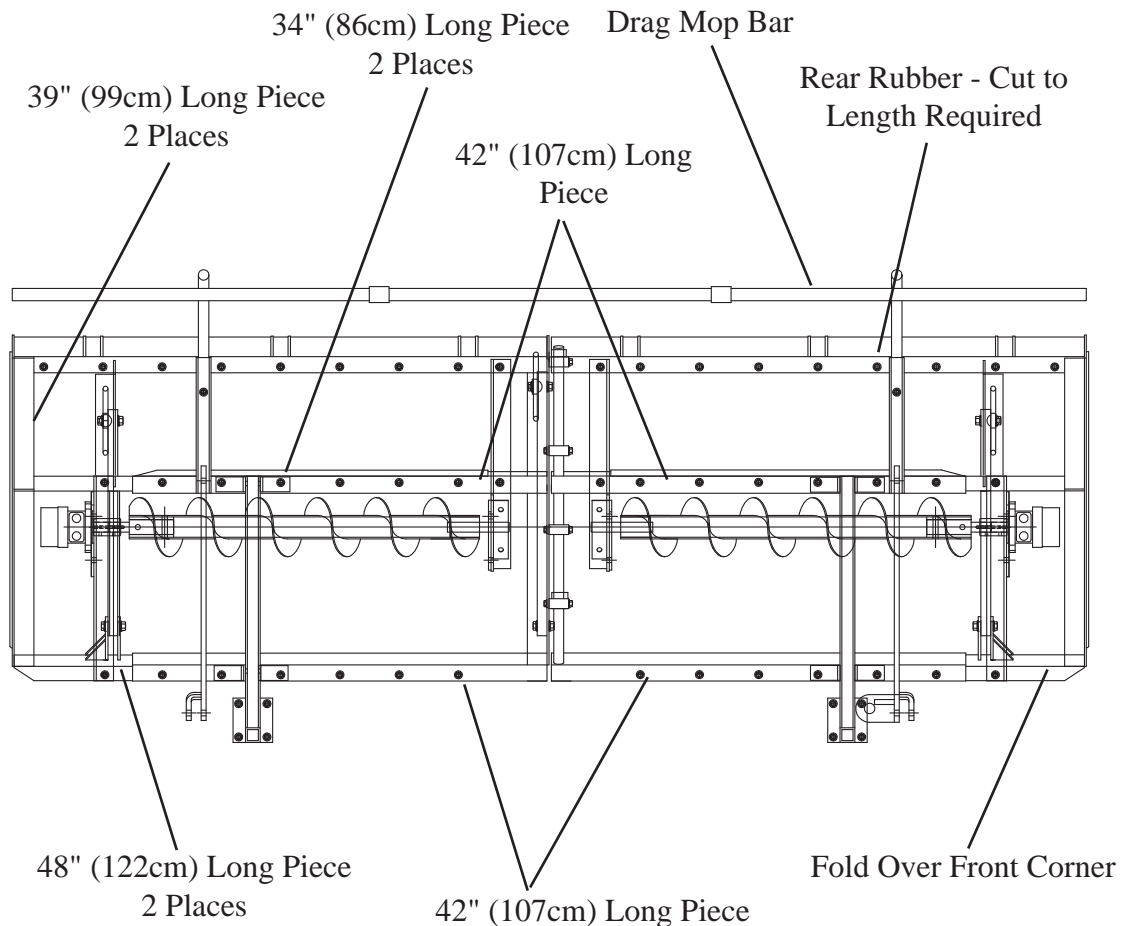
The rubber should be cut as follows:

1. Four 6" (15cm) wide pieces cut 42" (107cm) long for front and center screed inner positions - notch the two left pieces to fit around spreader box center pivot shaft.
2. Two 6" (15cm) wide pieces cut 48" (122cm) long for front screed outer position.
3. Two 6" (15cm) wide pieces cut 34" (86cm) long for center screed outer position.
4. Two 6" (15cm) wide pieces cut 39" (99cm) long for side plates. Fold over front edge about 3" (8cm), tighten the front clamp bolt, then tension rubber toward the back and tighten remaining clamp bolts. The back edge of the side rubber should extend back about 4-5" (10-13cm) underneath the rear rubber.

**Assembly Instructions (cont'd)**

Box Rubber Installation (cont'd)

5. The 7" (18cm) wide piece is used on the rear screed. Before cutting to length, push the rubber in against the hinge and clamp one end into one of the end clamps, leaving about 2" (5cm) extending out past clamp. Then grab opposite end and stretch the rubber to put tension on it. Close the remainder of the clamps, starting with the clamp already closed, until all clamps are closed. Then cut the rubber, leaving About 2" (5cm) extending past last clamp. See page 7 for adjusting the clamps for proper gripping force, if required.
6. Pay attention to side and rear rubber fit to prevent leaks out of back corners of box. It may be necessary to trim side rubbers to obtain a good fit.



Shown With Optional Augers In Place

## **Assembly Instructions (cont'd)**

### Drag Mop Installation

See illustration on previous page for drag mop bar location. The drag mop bar is cut so that the length is approximately 12" (30cm) wider than the spreader box. A burlap (or other material, such as geomat) mop is cut to the same width as the mop bar and cut approximately 6' (2m) long. It is then folded in half widthwise around the mop bar. The mop bar is then inserted into the support brackets and the retaining bolts are then installed. The mop bar is simply 3/4" (19mm) pipe, so different lengths of mop bar can be cut for different width spreader box applications.

### Auger Installation (Optional Components)

If the spreader box was factory ordered with the auger option, the augers will have been factory installed. The box is normally assembled and shipped in the 13' (2.4m) width. If the width must be narrowed for your application, refer to Box Width Adjustment section of this instruction manual.

If the augers were not factory installed, the following will provide instructions for assembling the augers into the spreader box. See parts illustration on page 10 for a picture of the augers installed.

1. Lift the spreader box off of the ground and lower the outer skids to their maximum adjustment. This will provide access for installing the augers.
2. Mount the motor cross bar, with the motor and primary auger section, to the second set of holes in from the end of the spreader box.
3. Add extension augers (12" - 30cm and/or 6" - 15cm) to equal the number of rear clamp plates already installed on the spreader box. Install retaining bolts in the retaining clips to hold the extension augers in place.
4. Install the inner cross bar and bearing onto the 1" (25.4mm) shaft on the end of the auger assembly. Tighten the setscrews on the bearing to hold the shaft in place.
5. Bolt the inner cross bar to the second set of holes in from the center of the spreader box.
6. Repeat the above steps for the other side of the spreader box.

### Auger Height Adjustment (Optional Components)

Adjust auger height so that augers are approximately 1/4 - 3/8" (6-10 mm) above surface of pavement with depth skids adjusted to required height. Adjust by loosening mounting plate adjusting bolts and sliding mounting plates up or down in slots as required. Keep auger height equal at both ends of auger.

## Spreader Box Adjustment

### Box Height

Slurry seal application thickness is controlled by adjusting the height of the spreader box. For thinner application, lower the height of the spreader box by rotating all three of the depth control handles clockwise. This will raise the skids, thereby lowering the spreader box. For thicker applications, raise the height of the spreader box by rotating all three of the depth control handles counter-clockwise. This will lower the skids, thereby raising the spreader box. Be sure to rotate all of the handles equally to make sure the slurry seal thickness is consistent from one side of the box to the other. The center adjustment handle can be adjusted differently from the outer handles to adjust for crown in the road. Rotating the handle clockwise will raise the center skid to allow for the increased height of the crown in the road.



**WARNING: ALWAYS STOP AUGER ROTATION BEFORE ATTEMPTING ANY ADJUSTMENTS ON SPREADER BOX. FAILURE TO DO SO COULD CAUSE ENTANGLEMENT WITH THE AUGERS AND POSSIBLE INJURY OR DEATH.**

### Box Width

The box width is adjusted by moving the outer ends of the spreader box in or out as required, as follows:

1. Remove the drag mop bar and the rear rubber from the spreader box. The drag mop bar is removed by removing the retaining bolts from the support bracket. The rear rubber is removed by lifting up on the rear clamp handles.
2. Remove the bolts that hold each outer box section to the inner box.
3. If the box is being made narrower, remove the required number of rear clamp plates from the box.
4. If the spreader box has augers it will be necessary to loosen the setscrews holding the auger shaft in the inner bearing. If the box is being made narrower, remove the retaining bolts from the retaining clips and remove the required number of extension augers. It will be necessary to spread the box slightly to remove the extension augers.
5. If the spreader box has augers and is being made wider, spread the box slightly wider than is required, insert the correct number of extension augers onto each primary auger and install the retaining bolts into the retaining clips.

## **Spreader Box Adjustment (cont'd)**

### Box Width (cont'd)

6. Slide the outer box sections in or out to achieve the required box width. The box adjusts in 6" (15cm) increments on each side. Slide the box as required to align the bolt holes and re-insert the bolts into each section.
7. If the spreader box has augers, as the box is being adjusted to the final width, insert the auger support shaft into the bearing on the inner support bar and tighten the setscrews to hold the shaft to the bearing.
8. If the box has been made wider, install the required number of rear clamp plates onto the box.
9. Cut and install a new rear rubber. See assembly instructions on page 3 and 4 for details.
10. Cut and install a new mop bar and drag mop. See assembly instructions on page 5 for details.

### Rear Clamps

The rear clamps are adjusted at the factory to provide proper clamping force for the rubber supplied from the factory. They will need to be adjusted to accommodate wear in the clamps or if different rubber materials or thicknesses are used. To adjust clamps:

1. Release clamp by lifting up on clamp lever.
2. Remove cotter pin from lower clevis pin on clamp and remove clevis pin.
3. Rotate clevis clockwise (shortening the clevis length) to reduce clamp pressure and counterclockwise (lengthening clevis) to increase clamp pressure.
4. Re-install clevis pin and close clamp on rubber to be used to check for proper clamping pressure. The clamp should be difficult to close when the proper clamping pressure is achieved. Otherwise rear rubber could slip in the clamp, causing uneven finish on slurry.
5. Re-install the cotter pin.



## **Maintenance**

### Box Rubber

Box rubber maintenance consists of daily cleaning of the spreader box and box rubbers. Use a solvent to soften the hardened slurry and high-pressure washer to remove it. After cleaning, inspect the rubber for excessive wear, loose mounting conditions or damage. Repair or replace as required.

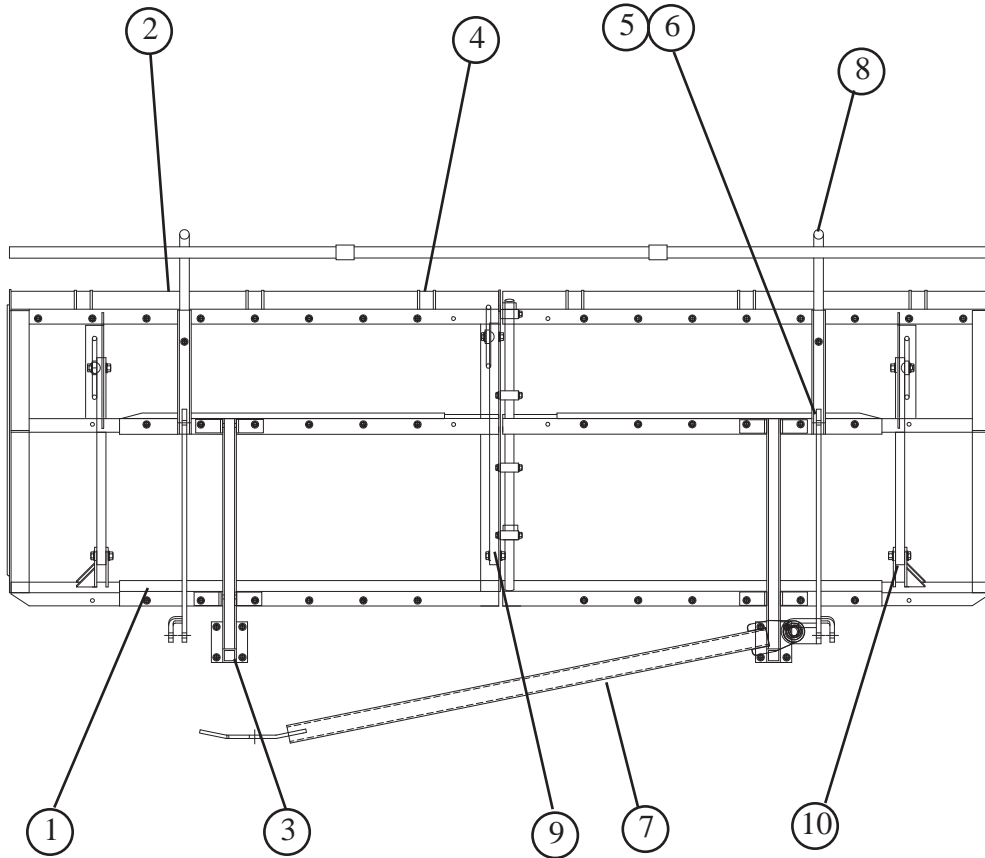
### Height Adjusters

Height adjuster maintenance consists of cleaning and inspection. The skids are supplied with carbide wear chips soldered to the bottom of the skid. Inspect the skids for excessive wear of these wear chips and replace as required. Remove old chips by heating with a torch to melt the solder and install new chips by soldering them in place. Inspect the adjusters for wear or damage and repair or replace as required.

### Augers (Optional Components)

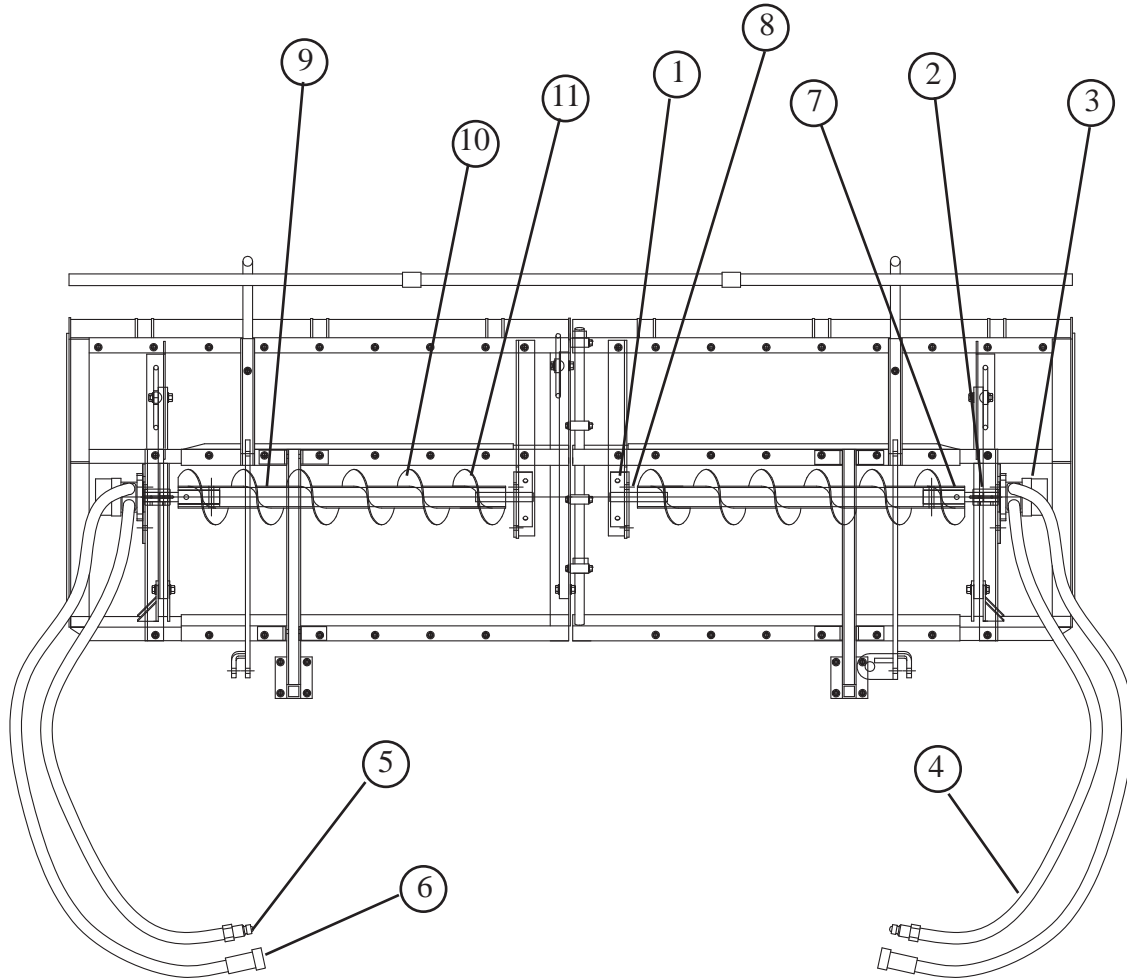
Auger bearings should be greased daily, after cleaning of the spreader box. Use a multipurpose grease. Inspect augers and bearings for wear or damage after daily cleaning. Repair or replace components as required. Worn auger flighting can be built back up to required diameter by application of hard-facing material providing wear is not excessive. The auger diameter is 6" (15cm) when new.

### Spreader Box Components



ITEM	PART NO.	DESCRIPTION	QTY
1	270-0014-20	Spreader Box Rubber - 1/4" x 6" x 20 Ft. Long	2
2	270-0015-15	Spreader Box Rubber - 1/4" x 7" x 15 Ft. Long	1
3	610-0100	Wheel Assembly	2
4	SSB05105	Rear Clamp	12
5	225-0035	Chain, 3/8" Proofcoil	18'
6	715-0008	Chain Shackle, 3/8"	2
7	EMB1022	Side Shift Arm - Quick-Attach Style (w/ Pin)	1
	EMB1025	Side Shift Arm Pin (Included w/ Side Shift Arm)	1
8	SSB01103	Burlap Drag Bar Link	2
9	SSB41021H	Center Skid, Complete w/ Hardfacing	1
10	SSB41022H	Outer Skid, Complete w/ Hardfacing	2
	SSB04102H	Set of Skids, Complete w/ Harfacing	1

Auger Components (Optional)



ITEM	PART NO.	DESCRIPTION	QTY
1	210-0040	Pillow Block Bearing - 1"	2
2	SSB06101-26	Shaft Coupler Assembly - 1"	2
3	255-0102	Hydraulic Motor - Auger Drive	2
4	250-0202	Hydraulic Hose - Auger Drive Motor	4
5	255-0968P	Hydraulic Quick Disconnect - Male	2
6	255-0970P	Hydraulic Quick Disconnect - Female	2
7	SSB6015A-6	Motor Connecting Shaft	2
8	SSB6015A-8	Bearing Shaft Assembly	2
9	SSB06101-9	Basic Auger Section - 35-1/2" Long	2
10	SSB06101-12	Auger Extension - 12" Long	4
11	SSB06101-6	Auger Extension - 6" Long	2

**PARTS ORDER FORM**



To order parts in this manual, please copy this form and FAX or mail to:

VSS Macropaver  
P.O. Box 178  
Hickman, CA 95323 USA  
FAX (209) 874-1174

MY MAILING ADDRESS

MY SHIPPING ADDRESS

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SHIP VIA: \_\_\_\_\_

ATTN: \_\_\_\_\_

DATE: \_\_\_\_\_

EQUIP. S/N: \_\_\_\_\_

Part Number	Part Name	Quantity

ORDERED BY: \_\_\_\_\_

PAYMENT:     CHECK     P.O.# \_\_\_\_\_     COD