

## UNCRATING EQUIPMENT

When you uncrate your equipment, make certain that the machine has not been damaged and that all fasteners and guards are properly tightened.

Your machine may not have been shipped assembled with cutters and other accessories. Assembly may be required.

**REMEMBER:** Only authorized, experienced and properly trained personnel should operate this equipment. Operating personnel should practice safety at all times and wear protective gear (gloves, goggles, safety vests, ear plugs, steel-toe shoes, etc.)

## SAFETY GUIDELINES



**Incorrect use of the surface preparator can result in property damage, personal injury, or death. Be sure to read and follow all directions and precautions as outlined in this manual.**

### OPERATION

- Get acquainted with the controls
- Always wear protective equipment, including ear protection, breathing apparatus, steel-toed shoes, and goggles
- Never wear baggy or loose fitting clothing that can be caught on controls or moving parts
- The surface preparator can emit flying particles and debris during operation. Never operate the machine near bystanders, animals or children

- Do not operate the machine in an explosive atmosphere, near combustible materials, or when gas fumes may not be properly dispersed
- Never leave the machine unattended when running, and you must hold onto the handle with two hands when the cutter drum is engaged

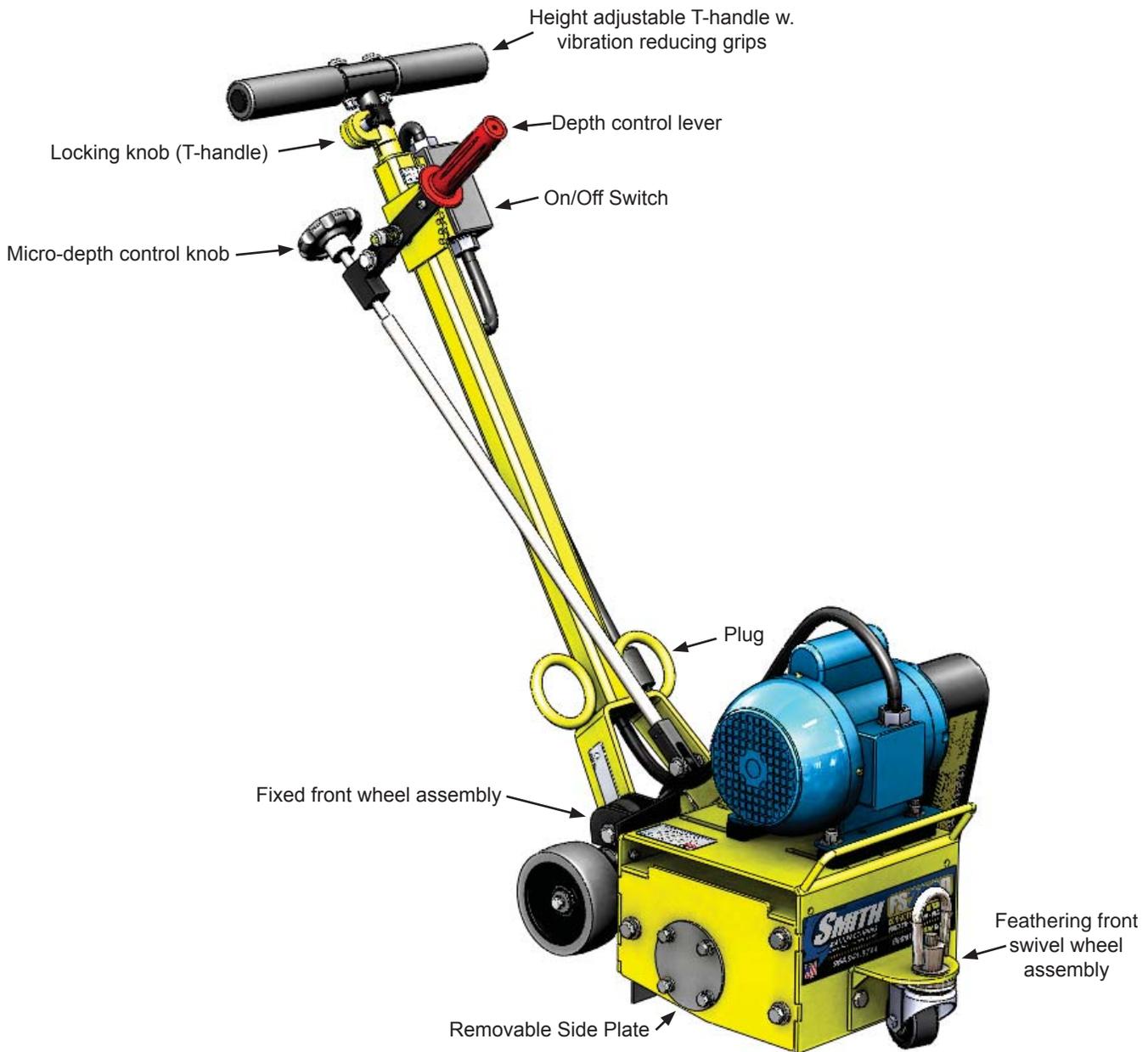
### DAILY CHECKLIST

- Check all electrical components to ensure they are not damaged
- Ensure that all guards are in place before the machine is operated, since rotating and moving parts will cause injury upon contact.
- Check and replace (as needed)
  - \*Cutters      \*Bearings      \*Shafts
  - \*Drive shaft   \*Dust flap      \*Wheels
- Check that all fasteners are secure
- Check that all controls and safety devices are functioning properly

## YOUR FS200™ SURFACE PREPARATOR

Please take time to familiarize yourself with the FS200™'s controls, as well as some of the features of your new machine.

Read the engine manual before preparing the engine for starting.



## MACHINE START-UP



**Do not start machine while drum is in contact with the ground. Doing so can cause the operator to lose control of the machine, resulting in property damage and/or personal injury.**

Before starting the machine, make sure that all cables are clear and undamaged.

Before substrate removal, test run the drum with cutters not touching the surface. If there is excessive vibration, you need to re-balance the cutter set-up, check bearing condition, and/or make sure that the drive shaft is secured.

## SUBSTRATE REMOVAL

Adjust the height of the cutter drum with the depth control lever. Set the depth of cut to allow the cutters to go through only the materials to be removed. Make certain that the drum is positioned to where only the cutters strike the surface, and that the drum assembly never comes into contact with the substrate. **The cutter tips alone should strike the surface** (1/8" to 1/4" maximum depth per removal pass on new cutters).

The drum will not withstand substrate contact. **Contacting the removal surface too deeply will cause premature wear to cutters, shafts, drum and other components!** **TIP: The correct depth setting is indicated by relatively little machine vibration.**

Too much downward pressure only has negative results. Try to remove materials in several passes rather than one, deep pass. Several tests will show the best, most appropriate cutter impact. Use a forward, backward and/or circular pattern to achieve your desired finish.

**NOTE:** Only use a forward motion when the CM2519 or CM2535 carbide scraping cutters are used.

**TIP:** Positioning the machine over the surface in many directions, as well as dialing the hand wheel up or down can help create desirable surface patterns. After several hours of practice, the operator will become comfortable and should be able to remove materials faster with enhanced results.

When the job is completed, or the operator wants to cease work, stop the engine by first lifting the drum above the substrate using the hand-wheel and/or the cam lever. Stop the machine using the on/off switch. Then disconnect the power plug from the power supply.

The drum assembly must be removed daily and inspected for drum wear, hole elongation and possible weld separation. Replace the cutter shafts and drum bushings every 40 hours, or prior to any drum wear. If the drum's center holes are elongated, order another SMITH cutter drum.

## STORAGE

Make sure that the unit is unplugged before putting it away for storage.

## ORDERING

**To ensure product safety and reliability, and to maintain your warranty, always use genuine replacement cutters and parts from SMITH when making repairs to equipment.**

When ordering please specify the model and serial number of the machine. In addition, give a part number, description, and quantity as listed on your parts list.

If you have any questions about the operation of your machine or would like to order replacement parts, contact your SMITH Manufacturing representative directly. Contact 1-800-653-9311 (954-941-9744) for information.

Visit our website at  
**[www.smithmfg.com](http://www.smithmfg.com)**

## WARRANTY CLAIMS

The manufacturer reserves the right to change or improve the machine design without assuming any obligation to update any products previously manufactured before this manual. It is the customer's responsibility to complete the warranty card and mail it to the seller within 10 days from date of purchase. If a failure occurs during the warranty period, the customer must contact the seller to determine the appropriate action.

**Any and all transportation charges are to be borne by the purchaser.**

## TROUBLESHOOTING

### PROBLEM

- Possible Reason(s)/Solution(s)

### CUTTERS WEARING UNEVENLY/PREMATURELY

- Drum is too low
- Incorrect set-up
- Material Build-up
- Cutters too tightly loaded
- Wrong cutters for application

### CUTTERS SHAFT BREAKAGE UNEVENLY/PREMATURELY

- Drum is too low
- End plates or bushings worn
- Shafts worn
- Wrong cutter set-up

### DRUM WEARING PREMATURELY OR CRACKING

- Drum hitting ground
- Shafts and bushings not replaced in time

### EXCESS VIBRATION

- Bearing worn
- Hex bushing worn
- Drive shaft worn
- Improper cutter set-up
- Drum contacting ground
- Wheels worn out

### MACHINE JUMPS ERRATICALLY

- Drum hitting ground
- RPM is too low
- Surface is severely uneven

### DRIVE BELT WEARING PREMATURELY

- Pulley is misaligned
- Wrong belt
- Drum is contacting the surface

### DEPTH CONTROL LEVER IS SET TOO LOW

- Adjust the height of lever

### UNEVEN CUTTING

- Cutting too deeply
- Rear wheel fork is bent

For any other problems or questions,  
please contact your local representative  
or  
SMITH Mfg today at 800-653-9311  
or  
(954) 941-9744.