

# Owner's Manual

## **POWERTEC**

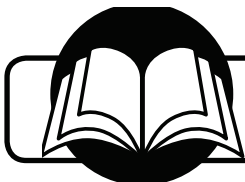
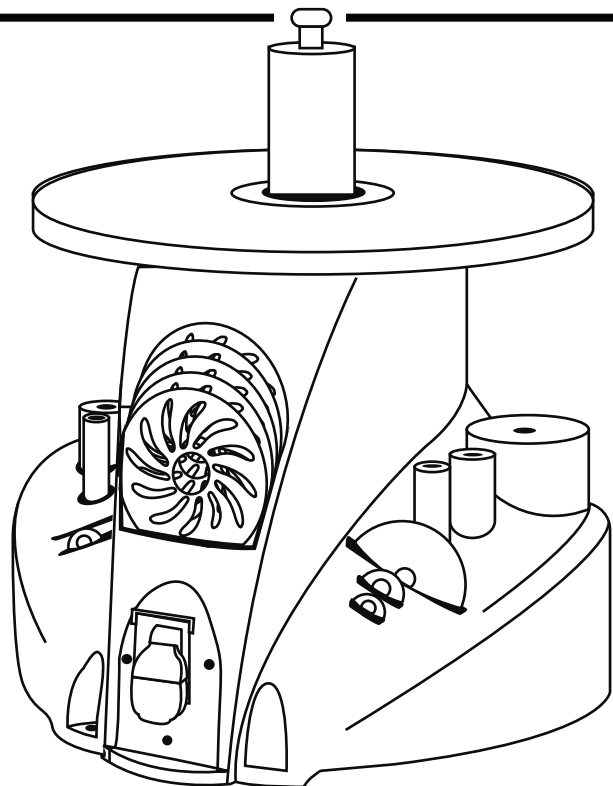
# **OSCILLATING SPINDLE SANDER**

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**QUESTION...**








**1•877•393•7121**



Visit us on the web at **[www.southerntechllc.com](http://www.southerntechllc.com)**

You will need this manual for safety instructions, operating procedures and warranty. Put it and the original sales invoice in a safe, dry place for future reference.

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# PRODUCTION SPECIFICATIONS

Spindle diameter . . . . .	.1/2"
Drum diameters. . . . .	1/2", 3/4", 1", 1 1/2", 2" and 3"
Drum length. . . . .	4 1/2"
Spindle stroke. . . . .	5/8"
Spindle oscillation . . . . .	30 OPM
Spindle speed . . . . .	1725 RPM
Table diameter . . . . .	14"
Dust port diameter. . . . .	2"

## WARNING

For your own safety, read and understand all warnings and operating instructions before using any tool or equipment.

## WARNING

Some dust created by operation of power tool contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment. Always wear OSHA/NIOSH approved, properly fitting face mask or respirator when using such tools.

## WARNING

Failure to follow these rules may result in serious personal injury. Remember that being careless for even a fraction of a second can result in severe personal injury.

### WORK PREPARATION

- Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts of the tool.
- Nonslip protective footwear is recommended.
- Wear protective hair covering to contain logn hair.
- Wear eye and hearing protection. Always use safety glasses. Eye protection equipment should comply with ANSI Z87.1 standards. Hearing equipment should comply with ANSI S3.19 standards.
- Wear face mask or dust mask if operation is dusty.
- Be alert and think clearly. Never operate power tools when tired, intoxicated or when taking medications that cause drowsiness.

### WORK AREA PREPARATION

- Keep work area clean. Cluttered work areas and benches invite accidents.
- Work area should be properly lighted.
- Do not use the machine in a dangerous environment. The use of power tools in damp or wet locations or in rain can cause shock or electrocution.
- Three-prong plug should be plugged directly into properly grounded, three-prong receptacle.
- Use the proper extension cord. Make sure your extension cord is in good condition and should have a grounding prong and the three wires of extension cord should be of the correct gauge.
- Keep children and visitors away. Your shop is a potentially dangerous environment. Children and visitors can be injured.
- Make your workshop childproof with padlocks, master switches or remove switch keys to prevent any unintentional use of power tools.

### TOOL MAINTENANCE

- Turn the machine "OFF", and disconnect the machine from the power source prior to inspection.
- Maintain all tools and machines in peak condition. Keep tools sharp and clean for best and safest performance.
- Follow instructions for lubricating and changing accessories.
- Check for damaged parts. Check for alignment of moving parts, binding, breakage, mounting and any other condition that may affect tool's operation.
- Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
- A guard or any other part that is damaged should be repaired or replaced. Do not perform makeshift repairs.

### TOOL OPERATION

- Avoid accidental start-up. Make sure that the tool is in the "OFF" position before plugging in.
- Use the right tool for your job. Do not force your tool or attachment to do a job for which it was not designed.
- Disconnect tool when changing parts.
- Don't force the workpiece on the machine. Damage to the machine and/or injury may result.
- Never leave tool running unattended. Turn the power off and do not leave tool until it comes to a complete stop.
- Do not overreach. Loss of balance can make you fall into a working machine, causing injury.
- Never stand on tool. Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
- Know your tool. Learn the tool's operation, application and specific limitations before using it.
- Use recommended accessories. Use of improper accessories may cause damage to the machine or injury to the user.
- Handle workpiece correctly. Keep hands away from moving parts.
- Turn tool off if it jams. .
- Always feed workpiece against the direction of the sanding rotation. To maintain control, properly support long or wide work-pieces.

**CAUTION:** Think safety! Safety is a combination of operator common sense and alertness at all times when tool is being used.

## WARNING

Do not attempt to operate tool until it is completely assembled according to the instructions.



## UNPACKAGING

Refer to Figure 1.

Check for shipping damage. If damage has occurred, a claim must be filled with carrier. Check to ensure all parts are present. Immediately report missing parts to dealer.

The sander comes assembled as one unit. Additional parts should be located and accounted for before assembling.

A Table Inserts (6), ( $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 2" and 3")

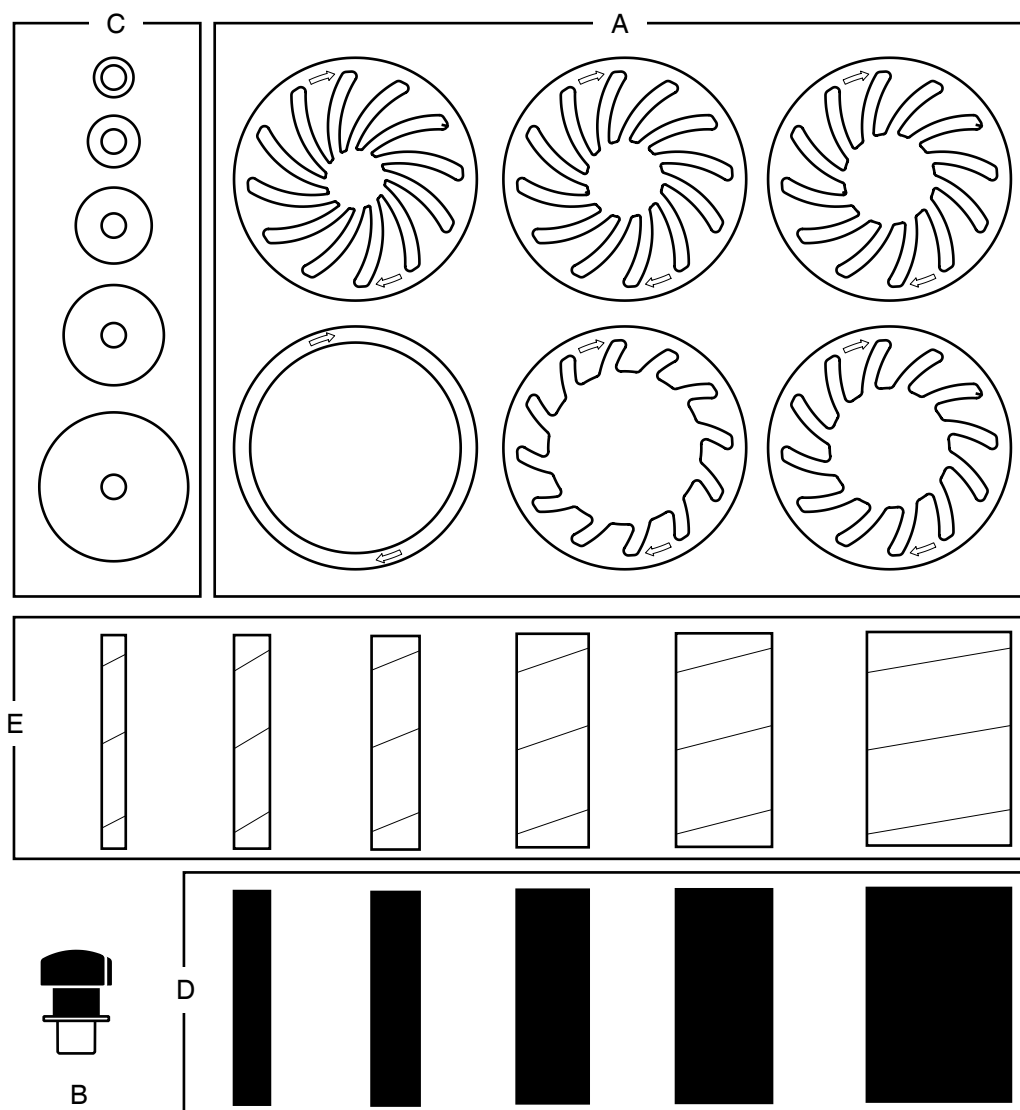
B Spindle Knob

C Drum Washers (5), ( $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 2" and 3")

D Spindle Drums (5), ( $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 2" and 3")

E Abrasive Sleeves (6), ( $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 2" and 3")

**Figure 1 - Unpacking**



Refer to Figures 2 - 5.

**CAUTION:** Do not attempt assembly if parts are missing. Use this manual to order replacement parts.

### **WARNING**

Do not operate machine until completely assembled.  
Do not operate machine until you have completely read and understood this manual.

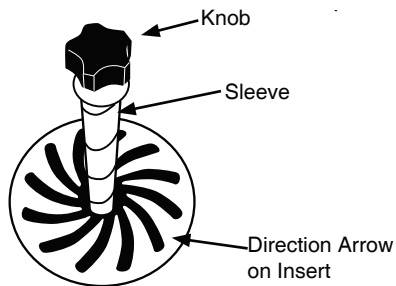
## **ATTACH ABRASIVE SLEEVES**

Refer to Figures 2 and 3.

### **TO ATTACH 1/2" ABRASIVE SLEEVE**

- Place the 1/2" table insert over spindle and onto the table. The top side of the insert has directional arrows, as shown.
- Slide sleeve over the spindle.
- Tighten the knob by turning counterclockwise to secure sleeve in position so that sleeve will not spin loose during operation.

**Figure 2- Attaching the 1/2" Sleeve**

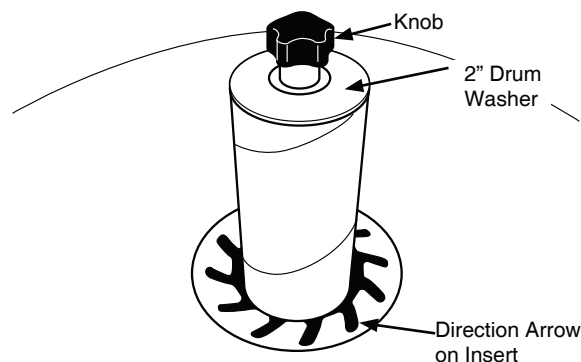


### **TO ATTACH 3/4" - 3" ABRASIVE SLEEVES**

Example: 2"

- Place the 2" table insert over spindle and onto the table. The top side of the insert has directional arrows, as shown.
- Slide 2" sleeve over the 2" drum first, then slide drum with sleeve onto spindle.
- Place 2" drum washer on drum.
- Tighten the knob to secure drum in position. Knob and washer must hold the drum securely so that it does not spin loose during operation.

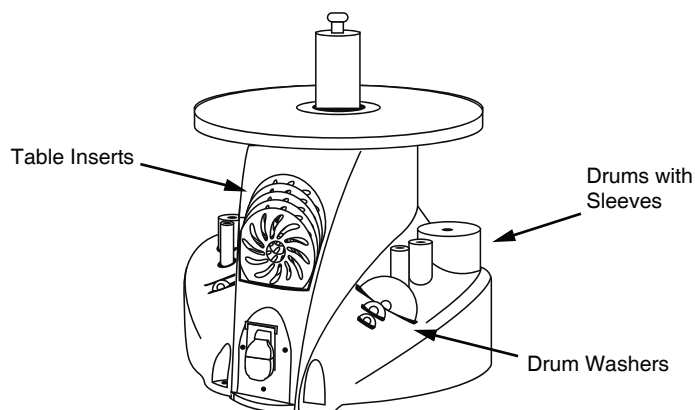
**Figure 3- Attaching 2" Drum with Sleeve**



## **ONBOARD STORAGE**

Onboard storage is provided to hold drums, inserts and washers.

**Figure 4- Onboard Storage**



## POWER SOURCE

### **⚠ WARNING**

Do not connect to the power source until the machine is completely assembled.

The machine is wired for 120 volts, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position. Running the unit on voltages which are not within range may cause overheating and motor burn-out. Heavy loads require that voltage at motor terminals be no less than the voltage specified on nameplate.

- Power supply to the motor is controlled by a single pole locking rocker switch. Remove the key to prevent unauthorized use.

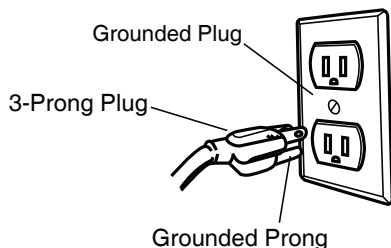
## GROUNDING INSTRUCTIONS

### **⚠ WARNING**

Improper connection of equipment grounding conductor can result in the risk of electrical shock.

- The machine should be grounded while in use to protect operator from electrical shock.
- In the event of an electrical short circuit, grounding reduces the risk of electrical shock by providing an escape wire for the electric current.
- This machine is equipped with an approved 3-conductor cord rated at 150V and a 3-prong grounding type plug (Figure 5) for your protection against shock hazards.
- Grounding plug should be plugged directly into a properly installed and grounded 3-prong grounding-type receptacle, as shown (Figure 5)
- The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- Check with a qualified electrician or service personnel if these instructions are not completely understood or if in doubt as to whether the tool is properly grounded.
- Do not modify plug provided. If it will not fit in outlet, have proper outlet installed by a qualified electrician. Use only 3-wire extension cords, that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as show in Figure 5

**Figure 5 - 3-Prong Receptacle**



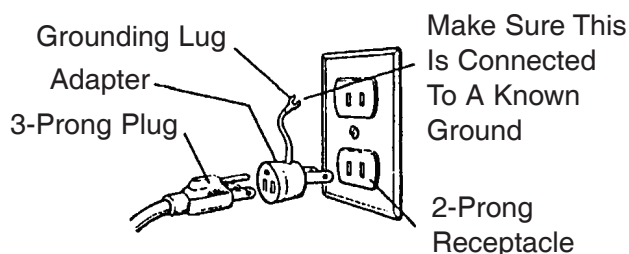
### **⚠ WARNING**

Do not permit fingers to touch the terminals of plug when installing or removing from outlet.

- Inspect tool cords periodically, and if damaged, have repaired by an authorized service facility.
- The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the green (or green and yellow) wire to a live terminal.

A temporary 3-prong to 2-prong grounding adapter (see Figure 6) may be used to connect this plug to a matching 2-conductor receptacle as shown in figure 6. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician.

**Figure 6 - 3-Prong Receptacle**



In Canada, the use of temporary adapter is not permitted by the Canadian Electric Code. Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded water pipe, a properly grounded outlet box or a properly grounded wire system.

- Many cover plate screws, water pipes and outlet boxes are not properly grounded. To ensure proper ground, grounding means must be tested by a qualified electrician.

## EXTENSION CORDS

Use proper extension cords. Make sure the extension cord is in good condition. Use only 3-wire extension cords have 3-prong grounding type plugs and 3-pole receptacles which accept the tool plug. When using an extension cord, make sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in the voltage, resulting in loss of power and overheating. Use the table to determine the minimum wire size (A.W.G.) extension cord.

### Extension Cord Length

Wire Size	A.W.G.
Up to 25 ft.	18
25 to 50 ft.	16

**NOTE:** Using extension cords over 50 ft. long is not recommended.

## MOTOR

The machine is assembled with motor and wiring installed. The electrical wiring schematic is shown in Figure 8.

### MOTOR SPECIFICATIONS:

Horsepower (Peak HP)	0.4
Voltage	120
Amp.	2.6
Hertz	60
Phase	Single
RPM	1725

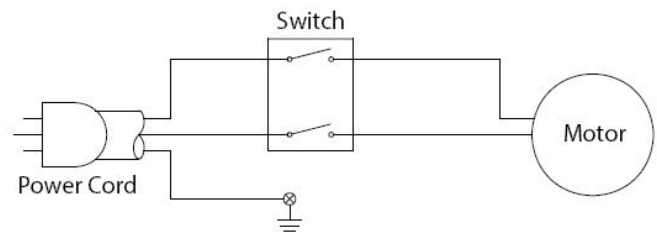
## ELECTRICAL CONNECTIONS

### ⚠ WARNING

All electrical connections must be performed by a qualified electrician. Make sure tool is off and disconnected from power source while motor is mounted, connected, reconnected or anytime wiring is inspected.

Motor and wires are installed as shown in wiring schematic (See Figure 7). Motor is assembled with approved, 3-conductor cord to be used at 120 volts.

**Figure 7 - Wiring Schematic**



The power lines are inserted directly onto the switch. The green ground line must remain securely fastened to the frame to properly protect against electrical shock. The power supply to the motor is controlled by a single pole locking rocker switch.



Refer to Figures 8 and 9.

## DESCRIPTION

The POWERTEC Oscillating Spindle Sander makes sanding irregular shapes and curves in wood easy and convenient.

Sander features a large 14" cast iron table, dust port and onboard storage of drums, inserts and washers.

Six sizes of drums are included.

## SPECIFICATIONS

Spindle diameter	1/2"
Drum diameters	1/2", 3/4", 1", 1 1/2", 2" and 3"
Drum length	4 1/2"
Spindle stroke	5/8"
Spindle oscillation	30 OPM
Spindle speed	1725 RPM
Table diameter	14"
Dust port diameter	2"

## WARNING

Operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with United States ANSI Z87.1 (shown on package) before commencing power tool operation.

**CAUTION:** Always observe following safety precautions.

## SAFETY PRECAUTIONS

- When adjusting or replacing any parts on the tool, turn switch OFF and unplug the power cord.
- Make sure all moving parts are free and clear of any interference.
- Make sure all guards are properly attached and fastened in position.
- Make sure all fasteners are tight and have not vibrated loose.
- Always wear eye protection or face shield.
- Test operation by hands for clearance and adjust if necessary. Do this only when the power is off.
- The drum should turn clockwise.
- Allow drum to come up to full speed before starting sanding.
- Do not attempt to stall motor or reduce speed. Do not force the work into the abrasives.
- Keep your hands clear of any moving parts.
- Avoid kickback of the workpiece by sanding in accordance with the directional arrows.
- Never push a sharp object rapidly against sleeve. Abrasive backing may be damaged.
- Never use the machine for wet sanding, which can result in hazard of electrical shock.

- Make sure workpiece is well supported by table during operation.
- Replace abrasives when they become worn or glazed.

## ON/OFF SWITCH

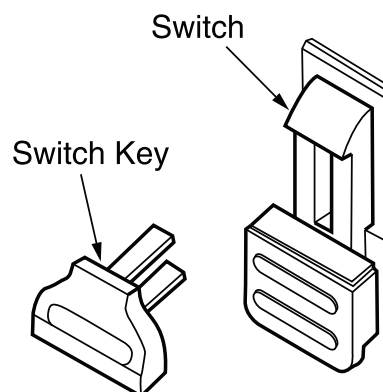
Refer to Figure 8.

The ON/OFF switch is located on the sander base. To turn the sander ON, pull the switch to the up position. To turn the sander OFF, push the switch to the down position.

**NOTE:** when the machine is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use.

- To lock the machine, turn the switch to "OFF" position. Pull the key out. The switch can't be turned on without the key.
- If the key is removed when the switch is at the "ON" position, the switch can be turned off but can not be turned on again.
- To unlock, place the key into the slot on switch unit until it snaps.

**Figure 8 - Locking Switch in OFF Position**





## BASIC SANDING OPERATION

NOTE: This tool is designed for sanding wood and wood products only.

- Use the desired sanding sleeve and drum for the particular application. Choose the size that is similar to the contour of your workpiece.

### WARNING

Failure to use the correct size table insert with its matching sanding sleeve could result in injuries to fingers or the workpiece being pulled down between the table insert and sanding sleeve.

For best results, start with a coarse grit and sand until the surface is uniform. Medium grit may then be used to remove scratches from by the coarser grit and finer grit used for the final finishing.

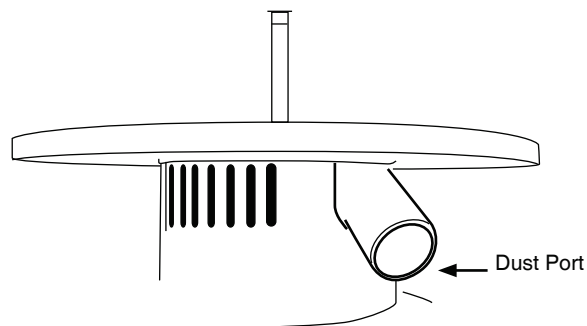
## DUST COLLECTION

Refer to Figure 9.

A dust collection port has been provided; it is located beneath the work table on the rear side of the sander. The dust port is sized to fit many commonly used wet/dry vacuums.

The use of dust collection is highly recommended. Sawdust buildup beneath the table may prevent the spindle from oscillating completely, causing damage to the tool.

**Figure 9 - Location of Dust Port**



**⚠ WARNING**

Disconnect the unit from power source before servicing or disassembling any components.

**CLEANING**

Keep machine and workplace clean. Avoid accumulation of sawdust on the tool.

Be certain motor is kept clean and free of dust.

Use soap and water to clean painted parts, rubber parts and plastic guards.

**LUBRICATION**

The shielded ball bearings in this unit are permanently lubricated at the factory. They require no more lubrication.

- A light coat of paste wax on the work table, will make it easier to feed the workpiece and prevent rust.

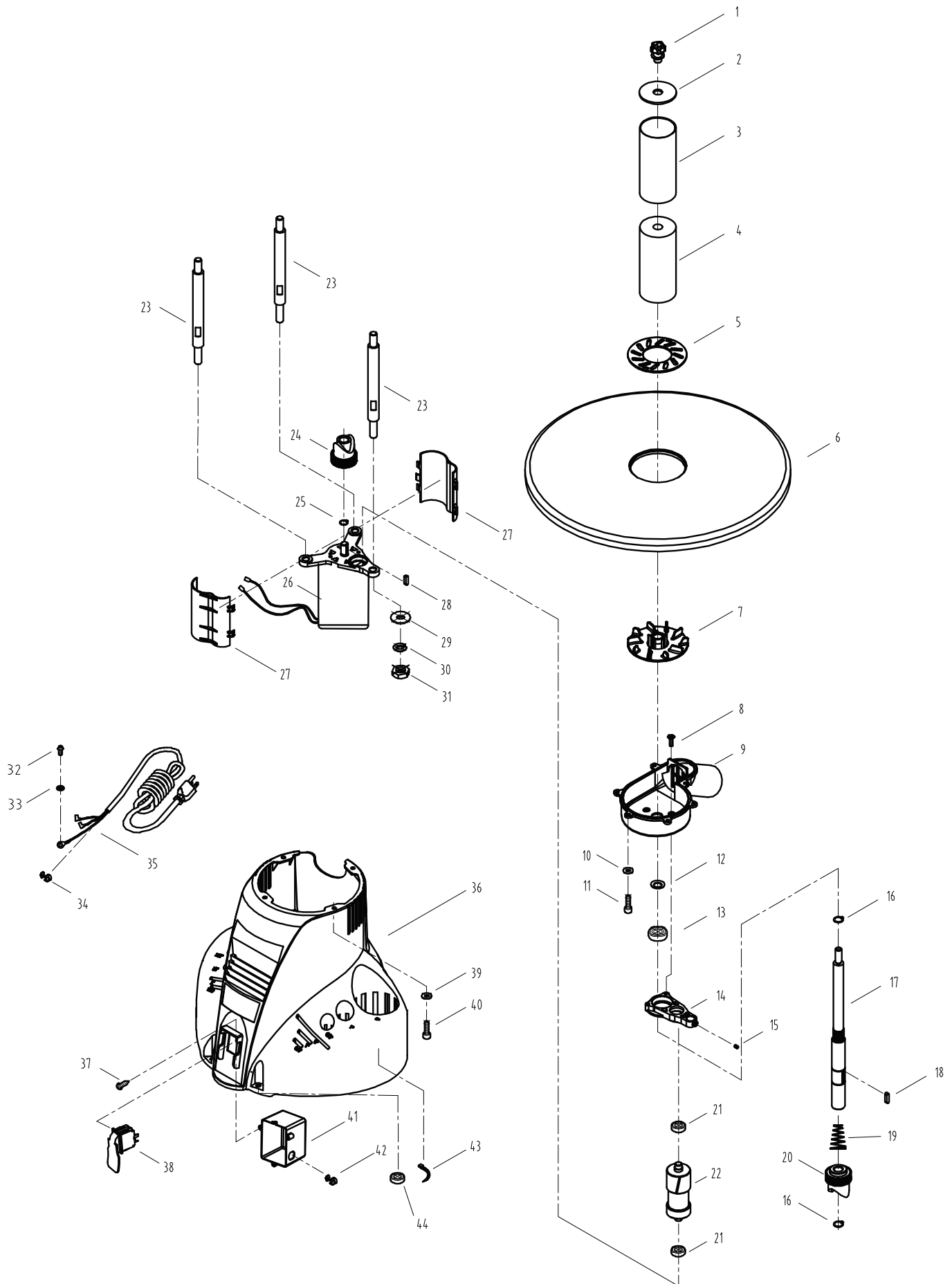
**KEEP TOOL IN REPAIR**

- If power cord is worn, cut, or damaged in any way, do not operate the machine.
- Replace any worn, damaged, or missing parts. Use parts list to order parts.

Any attempt to repair motor may create a hazard unless repair is done by a qualified service technician.

**NOTE**

SYMPTON	POSSIBLE CAUSE(S)	SOLUTIONS
Motor will not start	<ol style="list-style-type: none"> <li>1. Low voltage</li> <li>2. Short circuit in line cord or plug</li> <li>3. Short circuit in motor</li> <li>4. Open circuit or loose connection in motor</li> <li>5. Incorrect fuses or circuit breakers</li> <li>6. Defective switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power supply for proper voltage</li> <li>2. Inspect line cord and plug for faulty insulation or shorted connection</li> <li>3. Inspect connection on motor.</li> <li>4. Inspect connection on motor</li> <li>5. Replace with correct fuses or circuit breakers</li> <li>6. Replace switch</li> </ol>
Motor stalls or fails to reach full speed	<ol style="list-style-type: none"> <li>1. Power overload</li> <li>2. Low voltage from power supply</li> <li>3. Undersized line cord</li> <li>4. Motor overload</li> <li>5. Short circuit or loose connection in motor</li> <li>6. Incorrect fuses or circuit breakers</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce workload on the power supply</li> <li>2. Check power supply for proper voltage</li> <li>3. Use line cord of adequate size or reduce length of wiring</li> <li>4. Reduce load on motor</li> <li>5. Inspect the connection in motor for loose or shorted connection</li> <li>6. Replace with correct fuses or circuit breakers</li> </ol>
Motor overheats	Motor overloaded	Reduce load on motor. Turn off the machine until motor cools down
Machine slows down while operating	Applying too much pressure during operation	Ease up on pressure
Sandpaper slips on drum	<ol style="list-style-type: none"> <li>1. Applying too much pressure during operation</li> <li>2. Spindle knob loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Ease up on pressure</li> <li>2. Tighten spindle knob</li> </ol>
Sandpaper not removing wood	Sandpaper glazed or loaded with sawdust	Replace sandpaper
Wood burns while sanding	Sandpaper glazed or loaded with sawdust	Replace sandpaper
Spindle cannot complete the entire oscillating circle	<ol style="list-style-type: none"> <li>1. Too much sawdust builds up</li> <li>2. Faulty oscillating mechanism</li> </ol>	<ol style="list-style-type: none"> <li>1. Vacuum clean the machine</li> <li>2. Inspect the oscillating mechanism</li> </ol>
Excessive noise or vibration	<ol style="list-style-type: none"> <li>1. Spindle and motor not aligned properly</li> <li>2. Drum and sleeve not secured properly</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust motor and spindle alignment and tighten all fasteners</li> <li>2. Adjust and tighten spindle knob properly to secure drum and sleeve in position</li> </ol>



# OSCILLATING SPINDLE SANDER PARTS LIST



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Key No.	Part No.	Description	Specification	Qty	Key No.	Part No.	Description	Specification	Qty
1	OS1000001	Knob		1	23	OS1400018	Motor Stud		3
2	OS1000002	Drum Washer	(Set of 5: 3/4", 1", 1-1/2", 2", 3")	1	24	OS1400019	Flange Straight Gear		1
3	OS1000003	Abrasive Sleeve	(Set of 5: 1/2", 3/4", 1", 1-1/2", 2", 3")	1	25	OS1400020	Circlip For Shaft	ø12	1
4	OS1000004	Rubber Drum	(Set of 5: 3/4", 1", 1-1/2", 2", 3")	1	26	OS1400021	Motor		1
5	OS1000005	Table Inserts	(Set of 6: 1/2", 3/4", 1", 1-1/2", 2", 3")	1	27	OS1400022	Sound Insulation Cover		2
6	OS1400001	Table		1	28	OS1400023	Diode rectifier bridge		1
7	OS1400002	Fan		1	29	OS1400024	Flat Washer	ø10	3
8	OS1400003	Hex Sunk Screw	M5x10	2	30	OS1400025	Spring Washer	ø10	3
9	OS1400004	Fan Housing		1	31	OS1400026	Hexnut	M10	3
10	OS1400005	Flat washer	ø5	6	32	OS1400027	Hex Pan Head Screw	M5x10L	1
11	OS1400006	Hex Socket Head Bolt	M5x12	6	33	OS1400028	Serrated Washer	ø5	1
12	OS1400007	Seal	ø16xø30x2.5	1	34	OS1400029	Strain Relief	6P-4	2
13	OS1400008	Bearing	6003-2Z	1	35	OS1400030	Power Cord	18AWG/3Cx2.5m(L)	1
14	OS1400009	top bearing bracket		1	36	OS1400031	Base		1
15	OS1400010	Set Screw	M5x6L	1	37	OS1400032	Hex Pan Head Tapping Screw	ST4x8	3
16	OS1400011	Circlip For Shaft	ø17	2	38	OS1400033	Switch (4 claws)		1
17	OS1400012	shaft		1	39	OS1400034	Flat Washer	ø6	4
18	OS1400013	A model (round) flat key	5x5x20L	1	40	OS1400035	Hex Socket Head Screw	M6x12L	4
19	OS1400014	Spring		1	41	OS1400036	Switch Box		1
20	OS1400015	Flange Bevel Gear		1	42	OS1400037	Strain Relief	5P-4	1
21	OS1400016	Bearing	6001-2Z	2	43	OS1400038	Nylon Ribbon		1
22	OS1400017	Gear Shaft		1	44	OS1400039	Foot		4

Thank you for investing in a **POWERTEC** power tool. These products have been designed and manufactured to meet high quality standards and are guaranteed for domestic use against defects in workmanship or material for a period of 12 months from the date of purchase. This guarantee does not affect your statutory rights.

**SOUTHERN TECHNOLOGIES LLC. BENCH TOP AND STATIONARY POWER TOOL  
LIMITED 1 YEAR WARRANTY AND 30-DAY SATISFACTION GUARANTEE POLICY**

**POWERTEC** products are designed and manufactured by **Southern Technologies LLC**. All warranty communications should be directed to **Southern Technologies LLC**, 206 Terrace Dr. Mundelein, IL 60060, Attn: **POWERTEC** technical service; or by calling 1-877-393-7121 (toll free), 9 AM to 5 PM, Monday through Friday, US Central Time.

**30- DAY SATISFACTION GUARANTEE POLICY**

During the first 30 days after the date of purchase, if you are dissatisfied with the performance of this **POWERTEC** tool for any reason, you may return the tool to the retailer from which it was purchased for a full refund or exchange. You must present proof of purchase and return all original equipment packaged with the original product. The replacement tool will be covered by the limited warranty for the balance of the one year warranty period.

**LIMITED ONE YEAR WARRANTY**

This warranty covers all defects in workmanship or materials in this **POWERTEC** tool for a one year period from the date of purchase. This warranty is specific to this tool. **Southern Technologies, LLC** reserves the right to repair or replace the defective tool, at its discretion.

**HOW TO OBTAIN SERVICE**

To obtain service for this **POWERTEC** tool you must return it, freight prepaid, to an authorized **POWERTEC** service center for bench top and stationary power tools. You may obtain the location of the authorized service center nearest you by calling (toll free) 1-877-393-7121 or by logging on to the **POWERTEC** website at [www.southerntechllc.com](http://www.southerntechllc.com). When requesting warranty service, you must present the proof of purchase documentation, which includes a date of purchase. The authorized service center will either repair or replace any defective part, at our option at no charge to you. The repaired or replacement unit will be covered by the same limited warranty for the balance of one year warranty period.

**WHAT IS NOT COVERED**

This warranty applied to the original purchaser at retailer and may not be transferred.

This warranty does not cover consumable items such as saw blades, knives, belts, discs, cooling blocks and sleeves. This warranty does not cover required service and part replacement resulting from normal wear and tear, including accessory wear.

This warranty does not cover any malfunction, failure or defect resulting from:

- 1) misuse, abuse, neglect and mishandling not in accordance with the owner's manual.
- 2) damage due to accidents, natural disasters, power outage, or power overload.
- 3) commercial or rental use.
- 4) alteration, modification or repair by other than an authorized service center for **POWERTEC** product.

**DISCLAIMER**

To the extent permitted by applicable law, all implied warranties, including warranties of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, are disclaimed. Any implied warranties, that cannot be disclaimed under state law are limited to one year from the date of purchase. **Southern Technologies LLC.** is not responsible for direct, indirect, incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Southern Technologies LLC., makes no warranties, representations, or promises as to the quality or performance of its power tools other than those specifically stated in this warranty.



***POWERTEC***

Southern Technologies, LLC  
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Mundelein, Illinois 60060