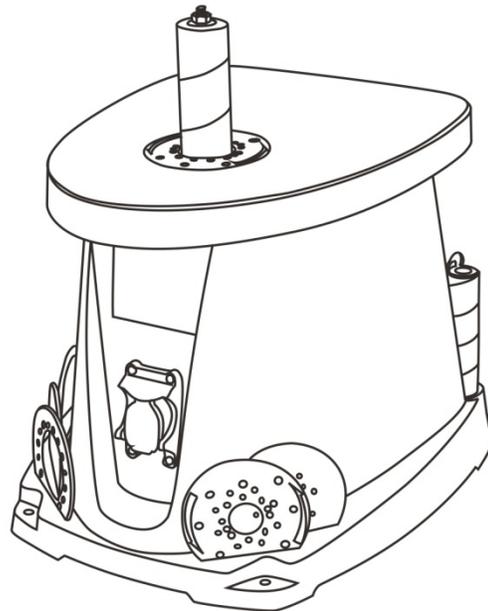




Oscillating Spindle Sander

Model: 6510



IMPORTANT:

Your new tool has been engineered and manufactured to WEN's highest standards for dependability, ease of operation, and operator safety. When properly cared for, this product will supply you years of rugged, trouble-free performance.

Pay close attention to the rules for safe operation, warnings, and cautions. If you use your tool properly and for its intended purpose, you will enjoy years of safe, reliable service.



Need help? Contact us!

Have product questions? Need technical support?

Please feel free to contact us at:

 **800-232-1195** (M-F 8AM-5PM CST)

 **techsupport@wenproducts.com**

 **WENPRODUCTS.COM**

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Technical data

Oscillating Spindle Sander

Model: 6510

Motor:	120 V AC, 60 Hz, 3.5 A, 7/16 HP
Speed:	2000 RPM (no load)
Oscillations:	58 OPM with 5/8" of travel
Spindle size:	1/2"
Sanding sleeve sizes:	1/2", 3/4", 1", 1-1/2", 2", 3"
Maximum sanding height:	3-5/8"
Weight:	35 lb

General safety rules

Safety is a combination of common sense, staying alert and knowing how your oscillating spindle sander works. **SAVE THESE SAFETY INSTRUCTIONS.**



WARNING: To avoid mistakes that could cause serious injury, do not plug in the sander until the following steps have been read and understood.

1. **READ** and become familiar with this entire instruction manual. **LEARN** the tool's applications, limitations, and possible hazards.
2. **AVOID DANGEROUS CONDITIONS.** Do not use power tools in wet or damp areas or expose them to rain. Keep work areas well-lit.
3. **DO NOT** use power tools in the presence of flammable liquids or gases.
4. **KEEP** your work area clean, uncluttered, and well-lit. **DO NOT** work on floor surfaces that are slippery.
5. **KEEP BYSTANDERS AT A SAFE DISTANCE** from the work area, especially when the tool is operating. **NEVER** allow children or pets near the tool.
6. **DO NOT FORCE THE TOOL** to do a job for which it was not designed.
7. **DRESS FOR SAFETY.** Do not wear loose clothing, gloves, neckties, or jewelry (rings, watches, etc.) when operating the tool. Inappropriate clothing and items can get caught in moving parts and draw you in. **ALWAYS** wear non-slip footwear and tie back long hair.
8. **WEAR A FACE MASK OR DUST MASK** as the sanding operation produces dust.



WARNING: Dust generated from certain materials can be hazardous to your health. Always operate this tool in a well-ventilated area and provide for proper dust removal. Use dust collection systems whenever possible.

9. **ALWAYS** remove the power cord plug from the electrical outlet when making adjustments, changing parts, cleaning or working on the tool.
10. **KEEP GUARDS IN PLACE AND IN WORKING ORDER.**
11. **AVOID ACCIDENTAL START-UPS.** Make sure the power switch is in the OFF position before plugging in the power cord.
12. **REMOVE ADJUSTMENT TOOLS.** Always make sure all adjustment tools are removed from this tool before turning it on.

General safety rules (continued)

13. NEVER LEAVE A RUNNING TOOL UNATTENDED. Turn the power switch to OFF. Do not leave the tool until it has come to a complete stop.
14. NEVER STAND ON A TOOL. Serious injury could result if the tool tips or is accidentally hit. DO NOT store anything above or near the tool.
15. DO NOT OVERREACH. Keep proper footing and balance at all times. Wear oil-resistant rubber-soled footwear. Keep the floor clear of oil, scrap, and other debris.
16. MAINTAIN TOOLS PROPERLY. ALWAYS keep tools clean and in good working order. Follow instructions for lubricating and changing accessories.
17. CHECK FOR DAMAGED PARTS. Check for alignment of moving parts, jamming, breakage, improper mounting, or any other conditions that may affect the tool's operation. Any part that is damaged should be properly repaired or replaced before use.
18. MAKE THE WORKSHOP CHILDPROOF. Use padlocks and master switches and ALWAYS remove starter keys.
19. DO NOT operate the tool if you are under the influence of drugs, alcohol, or medication that could affect your ability to use the tool properly.
20. USE SAFETY GOGGLES AT ALL TIMES--that comply with ANSI Z87.1. Normal safety glasses only have impact resistant lenses and are not designed for safety. Wear a face or dust mask when working in a dusty environment. Use ear protection, such as plugs or muffs, during extended periods of operation.



Specific safety rules for the spindle sander



WARNING: Do not operate the spindle sander until it is fully assembled and you have read and understood the following instructions and the warning labels on the spindle sander.

1. Know the condition of the spindle sander. If any part is missing, bent, or does not operate properly, replace the part before using the sander.
2. Determine the type of work you are going to be doing before operating the spindle sander.
3. Secure your work. Support the workpiece securely on the table, and hold it with both hands.
4. Be aware of the direction of feed. Feed the workpiece into the sanding sleeve against the direction of rotation of the sanding sleeve.
5. Always keep your hands out of the path of the sander and away from the sanding sleeves. Avoid hand positions where a sudden slip could cause your hand to move into the spindle. Do not reach underneath the workpiece or around the sanding sleeve while the spindle is rotating.
6. Disconnect the sander after turning off the power switch. Wait for the spindle to stop rotating before performing maintenance. The sander must be disconnected when not in use or when changing accessories, sanding sleeves, rubber spindles, or other items.
7. Make sure there are no nails or other foreign objects in the area of the workpiece to be sanded.
8. Never use this sander for wet sanding. Failure to comply may result in electric shock causing serious injury or worse.
9. Use only identical replacement parts when servicing this spindle sander.
10. Make sure the spindle has come to a complete stop before touching the workpiece.
11. Take precautions when sanding painted surfaces. Sanding lead-based paint is NOT RECOMMENDED. The contaminated dust is too difficult to control, and could cause lead poisoning. When sanding paint:
 - Protect your lungs. Wear a dust mask or respirator.
 - Do not allow children or pregnant women in the work area until the paint sanding job is finished and the clean-up is completed.
 - Do not eat, drink, or smoke in an area where painted surfaces are being sanded.
 - Use a dust collection system when possible. Seal the work area with plastic. Do not track paint dust outside of the work area.
 - Thoroughly clean the area when the paint sanding project is completed.

Electrical information

Grounding Instructions

IN THE EVENT OF A MALFUNCTION OR BREAKDOWN, grounding provides the path of least resistance for electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching outlet that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

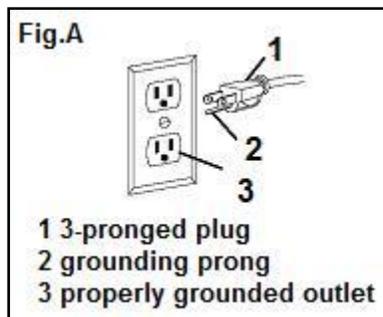
DO NOT MODIFY THE PLUG PROVIDED. If it will not fit the outlet, have the proper outlet installed by an electrician.

IMPROPER CONNECTION of the equipment grounding conductor can result in electric shock. The conductor with the green insulation (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 equipment grounding conductor to a live terminal.

CHECK with a licensed electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure if the tool is properly grounded.

Double insulated

This tool has a plug that looks like the one shown in Fig. A. The tool is double insulated in order to provide a double thickness of insulation between you and the tool's electrical system. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.



WARNING: Double insulation does not take the place of normal safety precautions when operating this tool.

Electrical information (continued)

Guidelines for using extension cords



WARNING: This tool is for indoor use only. Do not expose to rain or use in damp locations.

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to be used according to cord length and nameplate amperage rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Minimum Gauge for Extension Cords (AWG)
(When using 120 V only)

Ampere Rating		Total Length of Cord in feet			
More Than	Not More Than	25 feet	50 feet	100 feet	150 feet
0	6	18 gauge	16 gauge	16 gauge	14 gauge

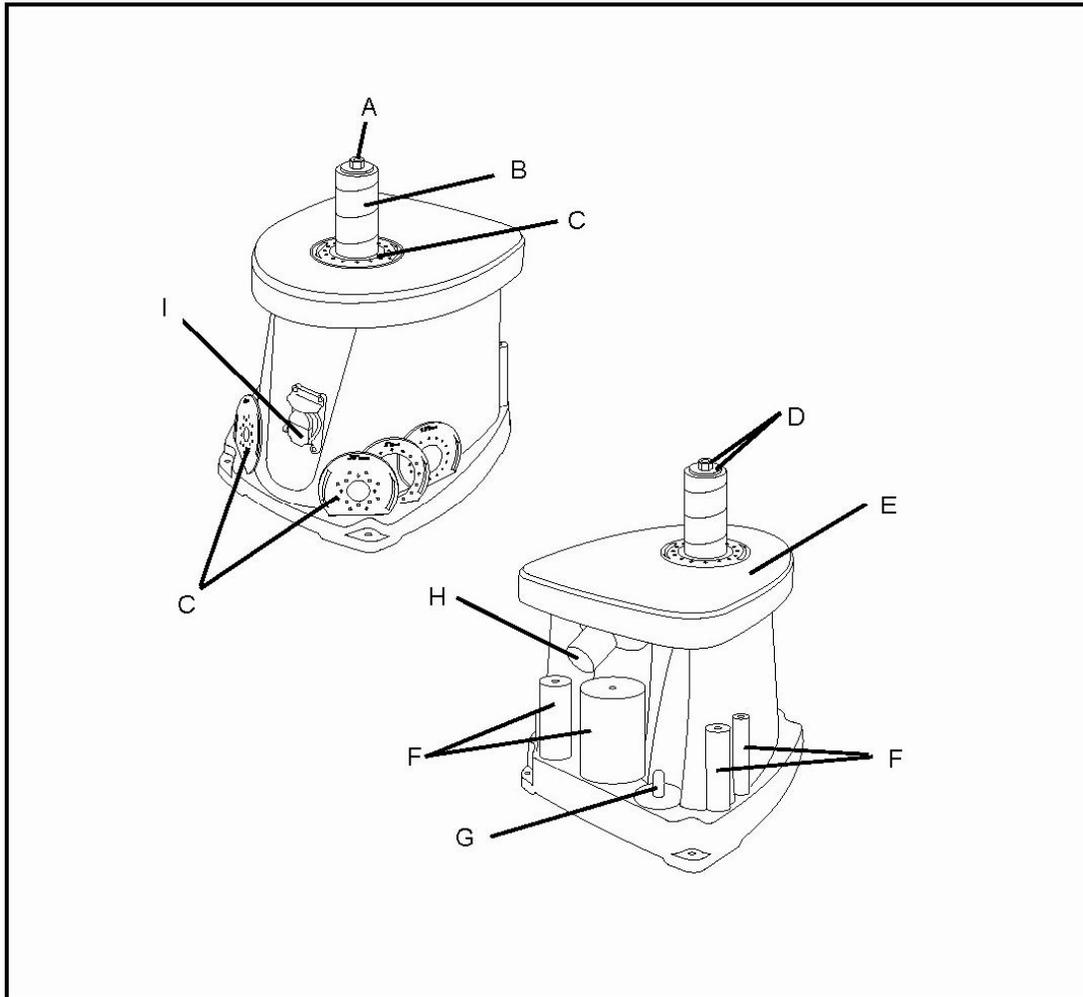
Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat and damp or wet areas. Use a separate electrical circuit for your tools. This circuit must not be less than a #12 wire and should be protected with a 15 A time-delayed fuse. Before connecting the motor to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.



WARNING: Although this tool is double insulated, the extension cord and receptacle must still be grounded while in use in order to protect the operator from electric shock.

Know your spindle sander



- A Spindle
- B Sanding sleeves (6)
- C Throat plates (6)
- D Upper spindle washer and hex nut
- E Table top
- F Rubber sanding drums (5)
- G Sanding drum storage peg
- H Dust port
- I ON/OFF switch

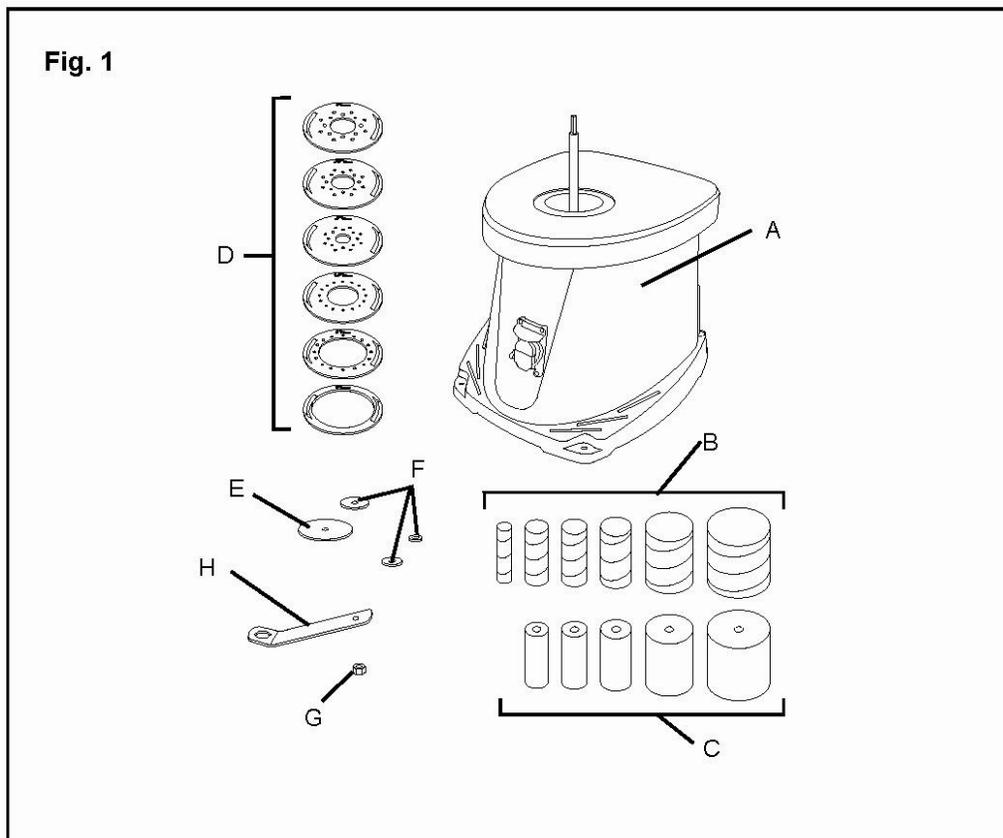
Assembly and adjustments

Unpacking (Fig. 1)

Carefully unpack the spindle sander and all its parts, and compare against the list below. Do not discard the carton or any packaging until the spindle sander is completely assembled.



WARNING: To avoid injury from accidental starting, turn switch OFF and remove plug from power source outlet before making any adjustments.



- A Spindle sander
- B Sanding sleeves (6)
- C Rubber drums (5)
- D Throat plates (6)
- E lower spindle washer (1)
- F Upper spindle washers (3)
- G Spindle lock nut
- H Wrench

Assembly and adjustments (continued)

This spindle sander requires some assembly. For your safety, completely assemble the spindle sander prior to plugging it in.

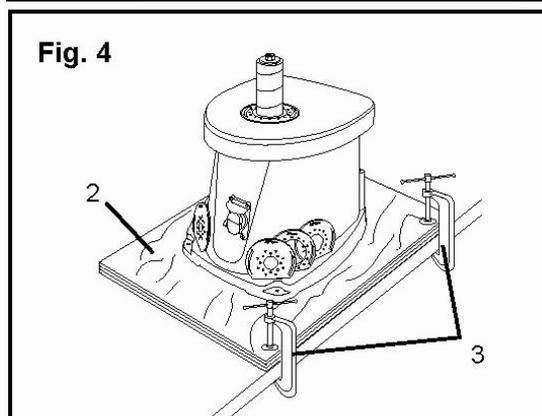
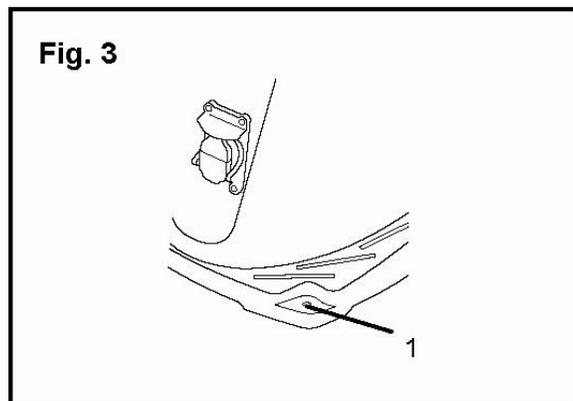
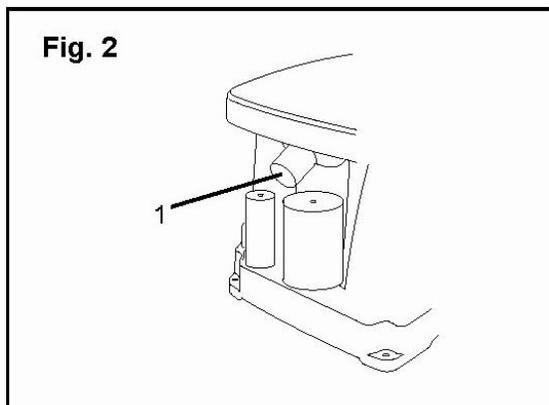
Dust collection (Fig. 2)

A 2-1/2" dust port is located at the back of the spindle sander. This port can be connected to a dust-collection system (not provided).

Mount the spindle sander (Fig. 3 and 4)

To mount the spindle sander in a permanent location, secure the base to a solid benchtop. If the sander is to be used for portable applications, permanently secure the sander to a mounting board (2). Use clamps (3) to hold the mounting board to a work bench or other supporting surface.

1. Use the four holes (1) in the base of the sander as a template.
2. Secure the sander to a mounting board, or directly to a workbench, using the appropriate hardware (not provided).
 - If using machine bolts, make sure they are long enough to go through the base and the benchtop.
 - If using lag bolts, make sure they are long enough to go through the base and far enough into the benchtop to hold securely.



Assembly and adjustments (continued)

Sanding sleeve selection

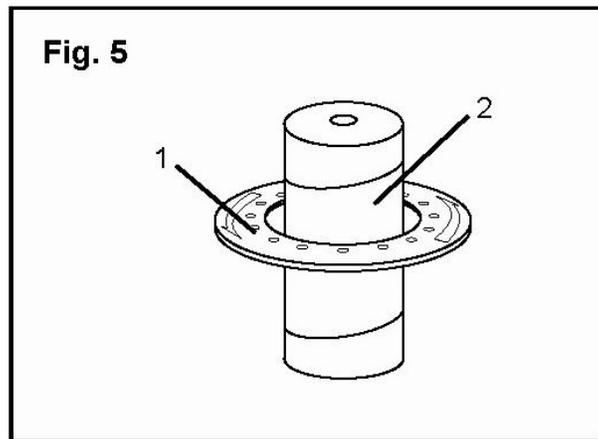
Select and install a sanding sleeve that is close in size to the workpiece that you will be sanding, and then select the matching throat plate.

Throat plate selection (Fig. 5)



WARNING: Failure to use the correct throat plate with its matching sanding sleeve could result in pinched fingers or the workpiece being pulled down between the throat plate and the sanding sleeve.

Use the throat plate (1) that provides the least amount of clearance between the sanding sleeve (2) and the opening in the throat plate. Use the following chart to determine the correct throat plate and upper spindle washer to use with each sanding sleeve.



Sanding sleeve diameter	Throat plate size	Upper spindle washer size
1/2"	.5"	small
3/4"	.75"	medium
1"	1"	medium
1 1/2"	1.5"	large
2"	2"	large
3"	3"	large

Assembly and adjustments (continued)

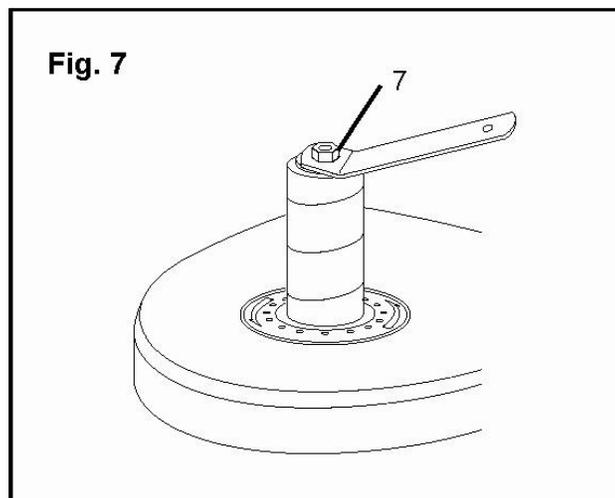
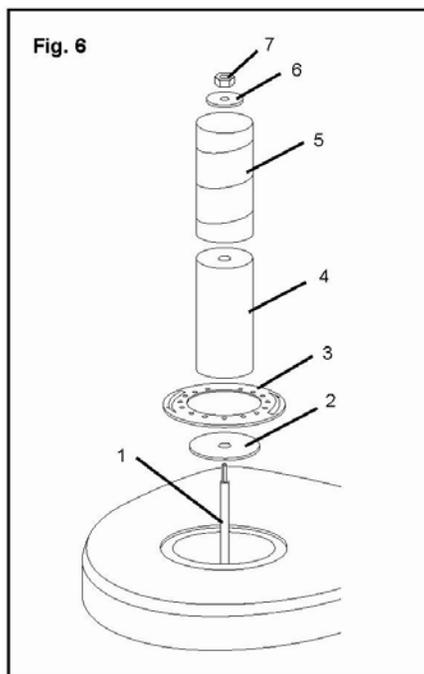
Install a sanding sleeve (Fig. 6 and 7)

All of the sanding sleeves, except the smallest 1/2" sleeve, fit over a similar sized rubber sanding drum.

1. Place the lower spindle washer (2) over the spindle (1) with the fin side facing down.
2. Select a sanding sleeve (5) for the job that you are planning. Select the corresponding rubber sanding drum (4).

Note: Do not use a sanding drum with the 1/2" sanding sleeve.

3. Select the throat plate (3) that provides the smallest clearance between the sanding sleeve (5) and the opening in the throat plate.
4. Place the throat plate (3) over the spindle (1), and fit it into the opening in the table.
5. Place the sanding drum (4) over the spindle.
6. Slide the sanding sleeve (5) over the sanding drum (4).
7. Place the upper spindle washer (6) over the spindle (1).
 - Use the large washer with the 3", 2", and 1 1/2" sanding drums.
 - Use the medium washer with the 1" and 3/4" sanding drums.
 - Use the small washer with the 1/2" sanding sleeve.
8. Place the hex nut (7) on the spindle (1). Tighten the hex nut only enough to expand the rubber sanding drum (4) against the sanding sleeve (5). Do not overtighten.



Operation

ON/OFF switch (Fig. 8)

1. To turn the sander ON, insert the safety key (1) in the switch (2), and then move the switch upward to the ON position.
2. To turn the sander OFF, move the switch (2) 1 downward to the OFF position.
3. To lock the switch in the OFF position, pull the safety key (1) out of the switch (2). The switch will not operate with the safety key removed.

Note: If the safety key is removed while the sander is running, the sander can be turned OFF, but it cannot be restarted without inserting the safety key.

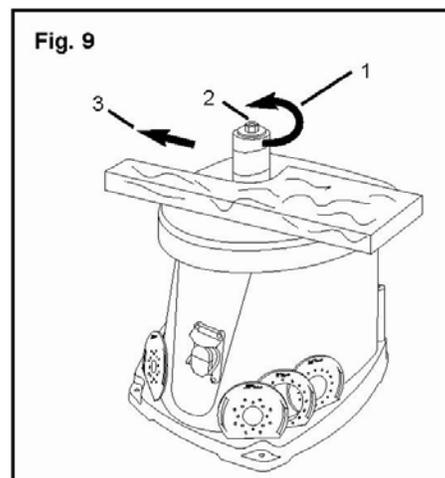
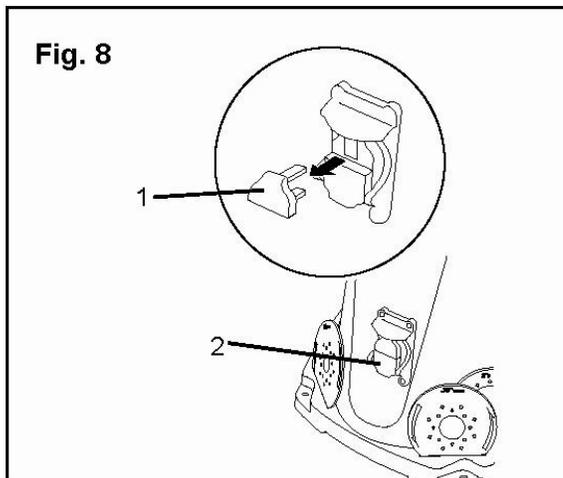
Operate the sander (Fig. 9)



WARNING: Do not sand metal with this sander. Sanding metal will cause sparks that may ignite wood and dust particles on the sander or in the workshop.

The spindle rotates in a counterclockwise (1) direction.

1. Make sure the hex nut (2) on top of the spindle is fastened securely.
2. Turn the sander ON, and let the motor reach full speed.
3. Feed the workpiece gradually against the sanding sleeve.
 - Do not force the workpiece.
 - Guide the workpiece from the right to left (3). If you guide the workpiece in the opposite direction, the rotation forces of the spinning sanding sleeve will tend to throw or bounce the workpiece away from the sanding sleeve.



Maintenance



WARNING: Turn the switch to the OFF position and unplug the power cord from the electric outlet before adjusting or performing maintenance on the spindle sander.

Lubrication

Ball bearings are grease packed at the factory, and require no further lubrication. Use a spray lubricant on all moving table parts to ensure smooth operation.

General Maintenance

Before each use, check for damaged, missing, or worn parts. Check for proper alignment of moving parts, moving parts that are jammed, broken, or improperly mounted. If any of these conditions exist, do not use the spindle sander until it is properly repaired or the parts are replaced.

Cleaning

Frequently blow or vacuum dust away from all sander parts and the motor housing. Periodically remove the throat plate and lower washer from the spindle and remove any dust accumulation in the throat plate area.

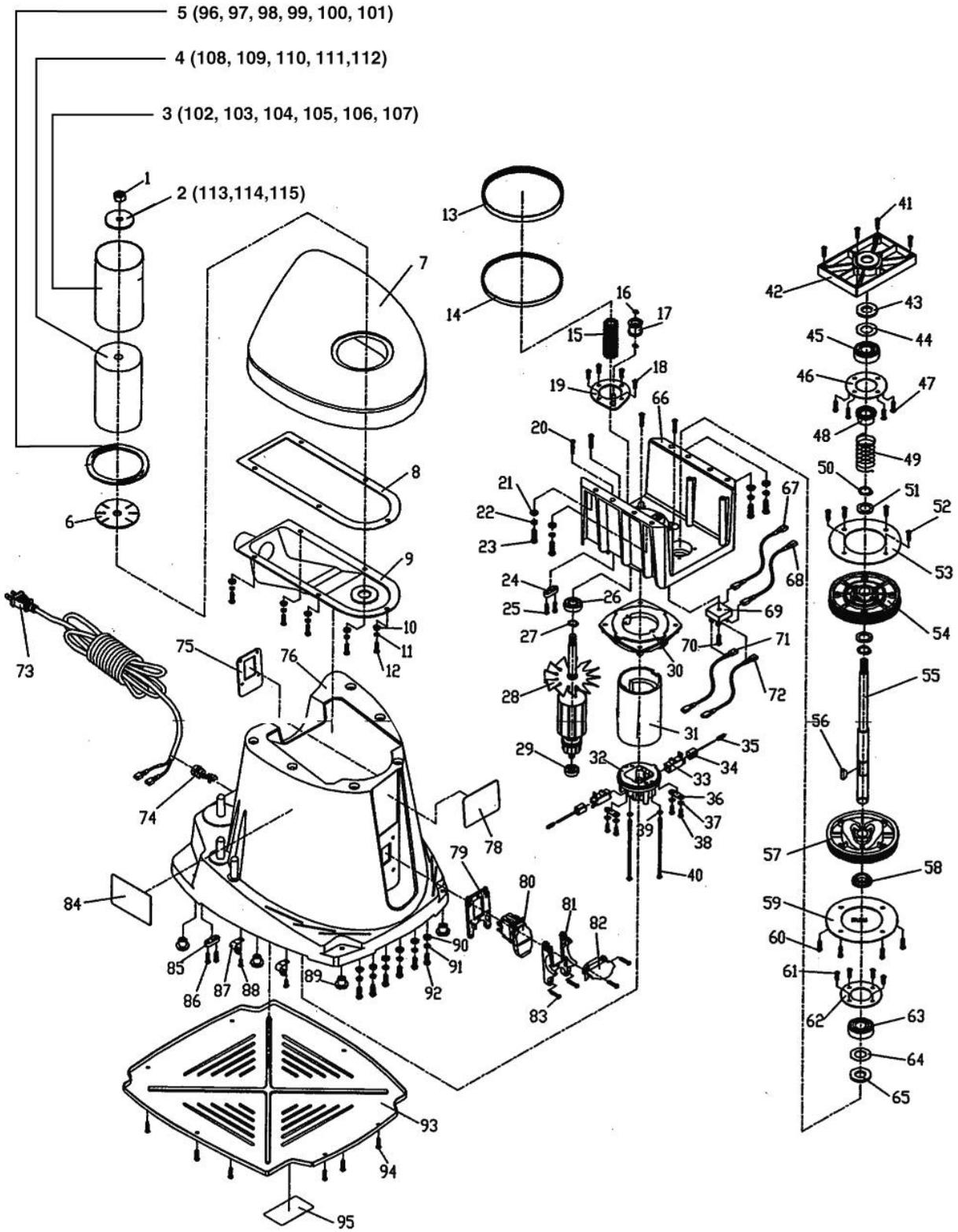


WARNING: Never use flammable or combustible solvents around tools. When servicing, use only identical WEN[®] replacement parts. Use of any other parts may create a hazard or cause product failure.

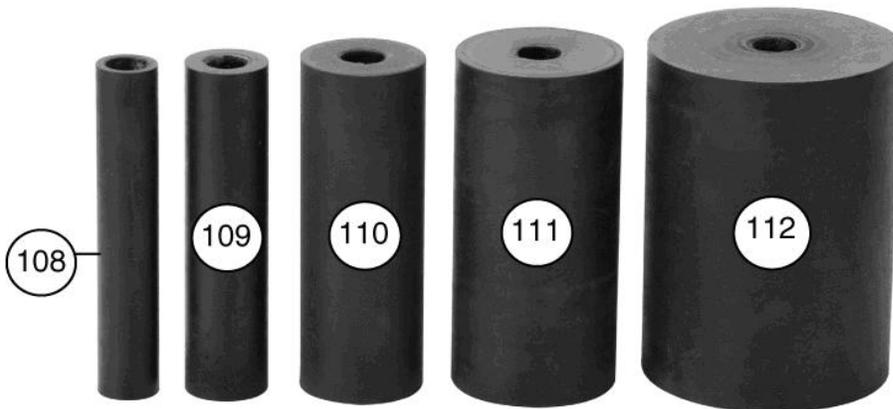
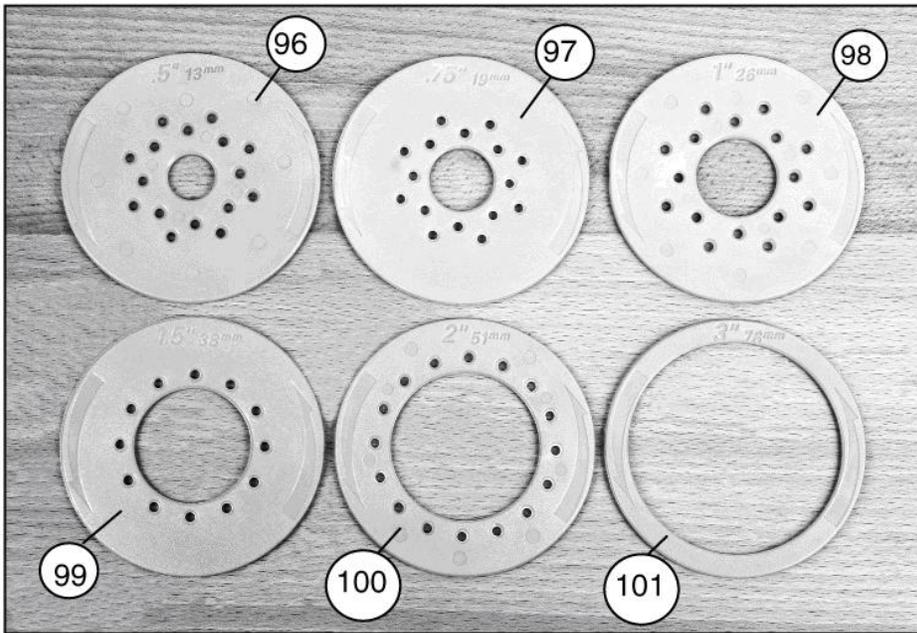
Troubleshooting

1. Over time, if the performance of the tool diminishes, or it stops working completely, it may be necessary to replace the Carbon Brushes (34) by removing the Brush Holder (33). This procedure should be completed by a qualified technician. If the Carbon Brushes are not worn down, try cleaning the Carbon Brush tips with an ink eraser.
2. If the Sanding sleeve stops rotating when you touch it or press the stock material against it, turn off the machine at once. Unplug the machine and check to make sure that the Hex Nut (1) is threaded on tight to the Spindle (55).

Exploded view and parts list



Exploded view and parts list (continued)



Exploded view and parts list (continued)

Part#	Stock #	Description
1	90225-001	Hex nut 10
2	90225-002	Upper spindle washer
3	90225-003	Sander sleeve
4	90225-004	Rubber spindle
5	90225-005	Throat plate
6	90225-006	Lower spindle washer
7	90225-007	Cast iron table
8	90225-008	Dust washer
9	90225-009	Dust cover
10	90225-010	Washer 5
11	90225-011	Spring washer 5
12	90225-012	Screw 5x12
13	90225-013	Belt
14	90225-014	Belt II
15	90225-015	Belt wheel
16	90225-016	Spring washer
17	90225-017	Tension roller assembly
18	90225-018	Screw 4.2x13
19	90225-019	Orientation plate assembly
20	90225-020	Screw 4.2x22
21	90225-021	Washer 6
22	90225-022	Spring washer 6
23	90225-023	Screw 6x16
24	90225-024	Cord clamp
25	90225-025	Screw 4.2x15
26	90225-026	Bearing 6001zz
27	90225-027	Spring washer
28	90225-028	Armature assembly
29	90225-029	Bearing 608zz
30	90225-030	Connection plate
31	90225-031	Field assembly
32	90225-032	Rear cover
33	90225-033	Brush holder
34	90225-034	Carbon brush
35	90225-035	Brush spring
36	90225-036	Cord clamp
37	90225-037	Washer 4
38	90225-038	Screw 4.2x13
39	90225-039	Washer 4
40	90225-040	Screw 4.2x110
41	90225-041	Screw 4.2x22

Part#	Stock #	Description
42	90225-042	Bearing Cover
43	90225-043	Felt
44	90225-044	Rubber washer
45	90225-045	Bearing 6203zz
46	90225-046	Bearing support
47	90225-047	Screw 4.2x15
48	90225-048	Bearing sleeve
49	90225-049	Spring
50	90225-050	Spring washer
51	90225-051	Spindle washer
52	90225-052	Screw 4.2x13
53	90225-053	Wheel plate
54	90225-054	Wheel(I)
55	90225-055	Spindle
56	90225-056	Pin
57	90225-057	Wheel(II)
58	90225-058	Bearing sleeve
59	90225-059	Wheel plate
60	90225-060	Screw 4.2x13
61	90225-061	Screw 4.2x13
62	90225-062	Bearing support
63	90225-063	Bearing 6203zz
64	90225-064	Rubber washer
65	90225-065	Felt
66	90225-066	Wheel support
67	90225-067	Wire assembly(I)
68	90225-068	Wire assembly(II)
69	90225-069	Rectifier
70	90225-070	Screw 4.2x19
71	90225-071	Wire assembly(III)
72	90225-072	Wire assembly(IV)
73	90225-073	Power cord
74	90225-074	Cord clamp
75	90225-075	Switch orientation plate
76	90225-076	Housing base
78	90225-078	Logo label
79	90225-079	Switch orientation(I)
80	90225-080	Switch
81	90225-081	Switch orientation(II)
82	90225-082	Switch assistant orientation
83	90225-083	Screw 4x16

Exploded view and parts list (continued)

Part#	Stock #	Description
84	90225-084	Warning label(I)
85	90225-085	Cord clamp
86	90225-086	Screw 4.2x15
87	90225-087	Thread
88	90225-088	Screw 4.2x10
89	90225-089	Rubber foot
90	90225-090	Washer 6
91	90225-091	Spring washer 6
92	90225-092	Screw 6x16
93	90225-093	Bottom plate
94	90225-094	Screw 4.2x13
95	90225-095	Warning label(II)
96	90225-096	1/2"Throat plate
97	90225-097	3/4"Throat plate
98	90225-098	1" Throat plate
99	90225-099	1-1/2" Throat plate

Part#	Stock #	Description
100	90225-100	2"Throat plate
101	90225-101	3" Throat plate
102	90225-102	1/2"Sanding sleeve(80 grit)
103	90225-103	3/4" Sanding sleeve(80 grit)
104	90225-104	1" Sanding sleeve(80 grit)
105	90225-105	1-1/2" Sanding sleeve(80 grit)
106	90225-106	2" Sanding sleeve(80 grit)
107	90225-107	3" Sanding sleeve(80 grit)
108	90225-108	3/4"Rubber spindle
109	90225-109	1" Rubber spindle
110	90225-110	1-1/2" Rubber spindle
111	90225-111	2" Rubber spindle
112	90225-112	3" Rubber spindle
113	90225-113	5/8"OD Rubber spindle
114	90225-114	7/8" OD Rubber spindle
115	90225-115	1-3/4" OD Rubber spindle

Warranty

WEN Products is committed to build tools that are dependable for years. Our warranties are consistent with this commitment and our dedication to quality.

LIMITED WARRANTY OF WEN CONSUMER POWER TOOLS PRODUCTS FOR HOME USE

GREAT LAKES TECHNOLOGIES, LLC ("Seller") warrants to the original purchaser only, that all WEN consumer power tools will be free from defects in material or workmanship for a period of two (2) years from date of purchase. Ninety days for all WEN products, if the tool is used for professional use.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or misrepaired by persons other than Seller or Authorized Service Center. To make a claim under this Limited Warranty, please contact us at 1-800-232-1195.. To acquire service, you will have to provide proof of purchase and may be asked to ship the tool back to us freight prepaid.

THIS LIMITED WARRANTY DOES NOT APPLY TO ACCESSORY ITEMS SUCH AS CIRCULAR SAW BLADES, DRILL BITS, ROUTER BITS, JIGSAW BLADES, SANDING BELTS, GRINDING WHEELS AND OTHER RELATED ITEMS.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO TWO (2) YEARS FROM DATE OF PURCHASE. SOME STATES IN THE U.S., SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

THIS LIMITED WARRANTY APPLIES ONLY TO PORTABLE ELECTRIC TOOLS, BENCH POWER TOOLS, OUTDOOR POWER EQUIPMENT AND PNUMATIC TOOLS SOLD WITHIN THE UNITED STATES OF AMERICA, CANADA AND THE COMMONWEALTH OF PUERTO RICO. FOR WARRANTY COVERAGE WITHIN OTHER COUNTRIES, CONTACT THE WEN CUSTOMER SUPPORT.



SAVE YOUR RECEIPTS. THIS WARRANTY IS VOID WITHOUT THEM.