WOODSTOCK

SHOP FOX®

INTERNATIONAL

MODEL W1843
KNIFE BLADE SANDER/BUFFER

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 3/17)

Phone: (360) 734-3482 • Online Technical Support: techsupport@woodstockint.com

#18917JH Printed in Taiwan

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Contents

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!

INTRODUCTION

Contact Info

We are committed to customer satisfaction. If you have any questions or need help, use the information below to contact us.

IMPORTANT: Before contacting, please get the original purchase receipt, serial number, and manufacture date of your machine. This information is required for all Technical Support calls and it will help us help you faster.

Woodstock International Technical Support
Phone: (360) 734-3482
Email: techsupport@woodstockint.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Technical Documentation Manager
P.O. Box 2309
Bellingham, WA 98227
Email: manuals@woodstockint.com

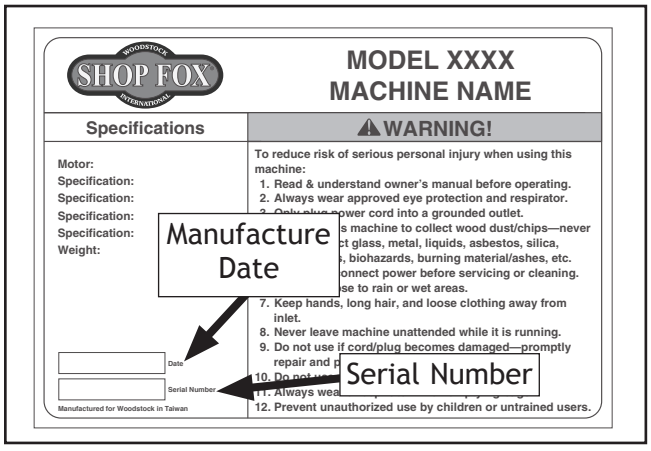
Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs contained inside. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive will be slightly different than what is shown in the manual**.

If you find this to be the case, and the difference between the manual and machine leaves you confused about a procedure, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.woodstockint.com**.

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **Manufacture Date** and **Serial Number** from the machine ID label (see below). Also, if available, have a copy of your **original purchase receipt** on hand. This information is required for all Tech Support calls.



MACHINE SPECIFICATIONS

MODEL W1843
KNIFE BELT SANDER/BUFFER

Product Dimensions

Weight	105 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	39 x 29-1/2 x 39 in.
Footprint (Length x Width)	10 x 16-1/2 in.

Shipping Dimensions

Carton #1

Type	Cardboard
Content	Machine
Length x Width x Height	31 x 17 x 15 in.
Weight	58 lbs.

Carton #2

Type	Cardboard
Content	Sanding Arm
Length x Width x Height	27 x 11 x 9 in.
Weight	54 lbs.

Electrical

Power Requirement	110V, Single-Phase, 60 Hz
Full-Load Current Rating	14A
Minimum Circuit Size	20A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	5 ft.
Power Cord Gauge	16 AWG
Plug Included	Yes
Included Plug Type	NEMA 5-15
Switch Type	Push/Pull

Motor

Main

Type	TEFC Capacitor-Start Induction
Horsepower	1 HP
Phase	Single-Phase
Amps	14A
Speed	1725 RPM
Power Transfer	Direct Drive
Bearings	Shielded & Permanently Lubricated

Main Specifications

Belt Info

Sanding Belt Width	2 in.
Sanding Belt Length	72 - 76 in.
Sanding Belt Speed	4500 FPM
Belt Arm Tilt	0 - 90 deg.
Height Belt Arm Horizontal	11-1/2 in.
Height Belt Arm Vertical	39 in.
Belt Release Type	Quick Release
Drive Roller Type	Cast Aluminum with Rubber
Drive Roller Length	7 in.
Drive Wheel Diameter	10 in.
Idler Roller Type	Aluminum
Idler Roller Length	2 in.
Idler Roller Diameter	4 in.

Spindle Info

Spindle Speed	1725 RPM
Total Arbor Length	8 in.
Shaft Height	7-1/2 in.

Wheel Info

Max Buffing Wheel Diameter	10 in.
Max Buffing Wheel Width	3/4 in.
Buffing Wheel Bore Size	5/8 in.

Platen Info

Platen Type	Graphite Coated
Platen Length	9-1/4 in.
Platen Width	1-7/8 in.

Construction

Base	Cast Iron
Frame	Cast Iron
Paint Type/Finish	Epoxy

Other Specifications

Country of Origin	Taiwan
Warranty	2 Years
Approximate Assembly & Setup Time	1 Hour
Serial Number Location	ID Label
ISO 9001 Factory	No
Certified by a Nationally Recognized Testing Laboratory (NRTL)	No

Features

Left Arbor Accepts Buffing Wheels, Sanding Drums, or Flap Wheels
Belt Arm Can Be Tilted from 0–90 Degrees
All Ball-Bearing Construction
Cast-Iron Body

Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.

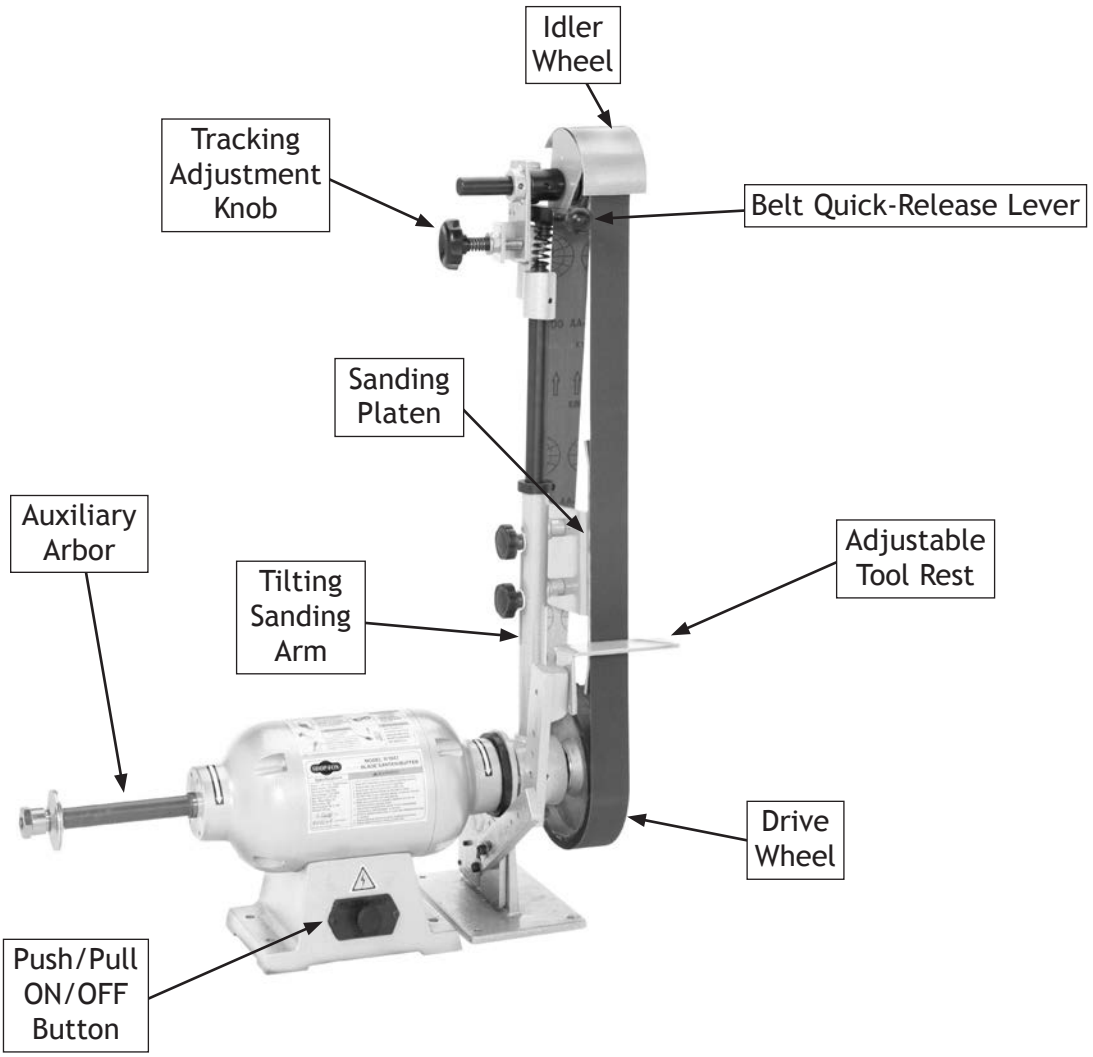


Figure 1. Model W1843 identification.

⚠CAUTION

For Your Own Safety Read Instruction Manual Before Operating the Sander

a) Wear eye and ear protection.
b) Support workpiece on worktable.
c) Maintain $^{1}/_{16}$" maximum clearance between worktable and sandpaper.
d) Avoid kickback by sanding in accordance with directional arrows.

SAFETY

For Your Own Safety, Read Manual Before Operating Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures—this responsibility is ultimately up to the operator!

⚠DANGER **Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

⚠WARNING **Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**

⚠CAUTION **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.**

NOTICE **This symbol is used to alert the user to useful information about proper operation of the equipment or a situation that may cause damage to the machinery.**

Standard Machinery Safety Instructions

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow an electrician or qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply BEFORE making adjustments, changing tooling, or servicing machine. This eliminates the risk of injury from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris—make sure they are properly installed, undamaged, and working correctly.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase risk of serious injury.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn machine ***OFF*** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside, resulting in a short. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact Technical Support at (360) 734-3482.

Additional Safety for Belt Sanders

Serious injury or death can occur from fingers, clothing, jewelry, or hair getting entangled in moving belt, spindle, or other components. Abrasion injuries can occur from touching moving sandpaper with bare skin. Incorrect feeding of workpiece can lead to workpiece being thrown and striking operator or bystanders with enough force to cause impact injuries. Long-term respiratory damage can occur from using sander without proper use of a respirator. To reduce the risk of these hazards, operator or bystanders MUST completely heed the hazards and warnings below.

SANDPAPER DIRECTION. Feeding workpiece incorrectly can cause it to be thrown from machine, striking operator or bystanders, or causing your hands to slip into the moving sandpaper. To reduce these risks, only sand against direction of sandpaper travel, ensure workpiece is properly supported, and avoid introducing sharp edges into moving sandpaper on the leading side of the workpiece.

HAND PLACEMENT. Rotating sandpaper can remove a large amount of flesh quickly. Always keep hands away from sandpaper during operation. Never touch moving sandpaper on purpose. Use a brush to clean table of sawdust and chips.

FEEDING WORKPIECE. Forcefully jamming workpiece into sanding surface could cause it to be grabbed aggressively, pulling hands into sanding surface. Firmly grasp workpiece in both hands and ease it into sandpaper using light pressure.

AVOIDING ENTANGLEMENT. Becoming entangled in moving parts can cause pinching and crushing injuries. To avoid these hazards, keep all guards in place and closed. DO NOT wear loose clothing, gloves, or jewelry, and tie back long hair.

WORKPIECE SUPPORT. Workpiece kickback can occur with violent force if workpiece is not properly supported during operation. Always sand with workpiece firmly against table or another support device.

MINIMUM STOCK DIMENSION. Small workpieces can be aggressively pulled from your hands, causing contact with sanding surface. Always use a jig or other holding device when sanding small workpieces, and keep hands and fingers at least 2" away from sanding surface.

WORKPIECE INSPECTION. Nails, staples, knots, or other imperfections in workpiece can be dislodged and thrown from sander at a high rate of speed at people, or cause damage to sandpaper or sander. Never sand stock that has embedded foreign objects or questionable imperfections.

SANDPAPER CONDITION. Worn or damaged sandpaper can fly apart and throw debris at operator, or aggressively grab workpiece, resulting in subsequent injuries from operator loss of workpiece control. Always inspect sandpaper before operation and replace if worn or damaged.

IN-RUNNING NIP POINTS. The gap between moving sandpaper and fixed table/support creates a pinch point for fingers or workpieces; the larger this gap is, the greater the risk of fingers or workpieces getting caught in it. Minimize this risk by adjusting table/support to no more than $^{1}/_{16}$" away from sandpaper. For spindle sanders, always use the table insert that fits closest diameter of installed drum.

WORKPIECE INTEGRITY. Sanding fragile workpieces can result in loss of control, resulting in abrasion injuries, impact injuries, or damage to sandpaper. Only sand solid workpieces that can withstand power sanding forces. Make sure workpiece shape is properly supported; avoid sanding workpieces without flat bottom surfaces unless a jig is used to maintain support and control when sanding force is applied.

SANDING DUST. Sanding creates large amounts of dust that can lead to eye injury or respiratory illness. Reduce your risk by always wearing approved eye and respiratory protection when using sander. Never operate without adequate dust collection system in place and running. However, dust collection is not a substitute for using a respirator.

Additional Safety for Buffing Systems

Serious injury or death can occur from fingers, clothing, jewelry, or hair getting entangled in rotating buffing wheel, spindle, or other moving components. Workpieces thrown by buffing surface can strike operator or bystanders with moderate force, causing impact injuries. Long-term respiratory damage can occur from using machine without proper use of a respirator. To reduce the risk of these hazards, operator or bystanders MUST completely heed the hazards and warnings below.

HAND/WHEEL CONTACT. Never purposely touch moving buffing wheel or shaft. Take care to keep fingers away from buffing wheel during operations. If the workpiece is small or difficult to hold, use a workpiece holding fixture. Abrasives can quickly remove large amounts of skin!

BE AWARE OF DUST ALLERGIES. Be aware that certain woods may cause an allergic reaction in people and animals, especially when fine dust is created by buffing. Make sure you know what type of wood dust you will be exposed to in case there is a possibility of an allergic reaction.

AVOID KICKBACK. Avoid kickback by buffing in accordance with directional arrows. Always buff on the downward side of the wheel—pay close attention to the direction of wheel rotation to avoid placing the workpiece against the upward side of the buffing wheel. Avoid buffing with excessive force.

WORKPIECE SELECTION. Always inspect the condition of your workpiece. DO NOT buff pieces with loose knots, large splinters, protruding nails, or other objects with sharp edges. DO NOT buff cable, chain, or other irregularly shaped objects that may be grabbed by the buffing wheel and thrown at the operator.

WORKPIECE FEED. Allow the wheel to reach full speed, then slowly ease the workpiece into the buffing wheel, holding it in front of and slightly below the wheel center. DO NOT buff workpiece on the top or sides of the buffing wheel. DO NOT place an edge or corner of the workpiece against the buffing wheel or jam it against the wheel. The workpiece may eject toward the operator or be torn from the operator's hands, causing serious personal injury.

WORKPIECE CONTROL. If you cannot hold small workpieces securely, do not buff them with this machine. Hold them with clamps or similar jigs, or use a smaller buffer.

DISCONNECT POWER WHEN SERVICING. Disconnect the machine from power and allow the wheel to come to a complete stop before service, maintenance, or adjustments. Avoid pulling cord-connected machinery from the cord—instead, grasp the plug when disconnecting it from power.

AVOID ENTANGLEMENT. Tie back long hair and remove any loose-fitting clothing or jewelry that could be caught up in the buffing wheel or other moving machine parts. Avoid wearing gloves as they may get caught in the buffing wheel and cause entanglement injuries.

MOUNTING TO BENCH/STAND. An unsecured buffer may become dangerously out of control during operation. Make sure buffer is FIRMLY secured to a bench/stand before use.

CORRECT ACCESSORIES AND USE. Never install a grinding wheel on this buffer. It is only designed for buffing and polishing. Never exceed maximum speed listed on each buffing/polishing wheel.

OPERATOR POSITION. Do not stand directly in front of the buffer wheel when turning the machine on, or when buffing. Do not buff material from the rear of the machine.

AVOID WORKPIECE GRAB. Firmly support the workpiece against the rotation direction of the buffing wheel. Otherwise, the buffing wheel could grab the workpiece and pull your hands into the moving wheel.

ELECTRICAL

Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 110V ..... 14 Amps

Circuit Requirements for 110V

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Circuit Type ..... 110V/120V, 60 Hz, Single-Phase
Circuit Size ..... 20 Amps
Plug/Receptacle ..... NEMA 5-15

⚠WARNING

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do so later in this manual.

⚠WARNING

Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

NOTICE

The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult with an electrician to ensure that the circuit is properly sized for safe operation.

Grounding Requirements

This machine MUST be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

For 110V Connection

This machine is equipped with a power cord with an equipment-grounding wire and NEMA 5-15 grounding plug (see figure). The plug must only be inserted into a matching receptacle that is properly installed and grounded in accordance with local codes and ordinances.

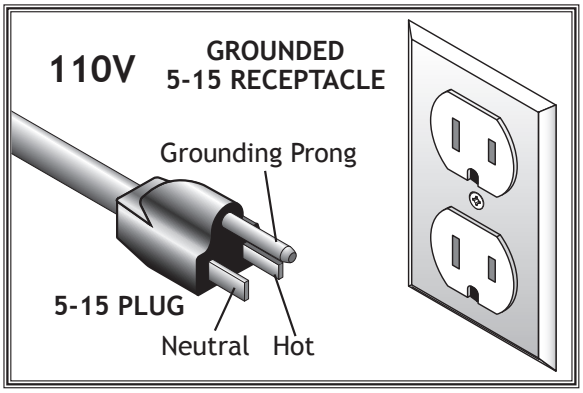
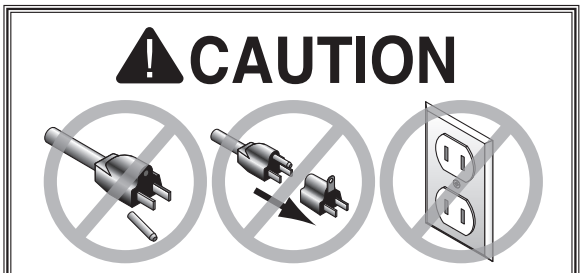


Figure 2. NEMA 5-15 plug & receptacle.



DO NOT modify the provided plug or use an adapter if the plug will not fit the receptacle. Instead, have an electrician install the proper receptacle on a power supply circuit that meets the requirements for this machine.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Minimum Gauge Size at 110V ..... 14 AWG
Maximum Length (Shorter is Better) ..... 50 ft.

SETUP

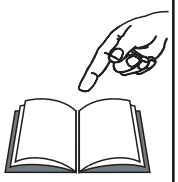
Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Items Needed for Setup

The following items are needed, but not included, to set up your machine.

Description	Qty
• Safety Glasses	1
• Cleaner/Degreaser	As Needed
• Disposable Shop Rags	As Needed
• Hex Wrench 4mm	1
• Hex Wrench 5mm	1
• Hex Wrench 6mm	1
• Dead-Blow Hammer	1
• Mounting Hardware (**Page 16**)	As Needed



⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠WARNING

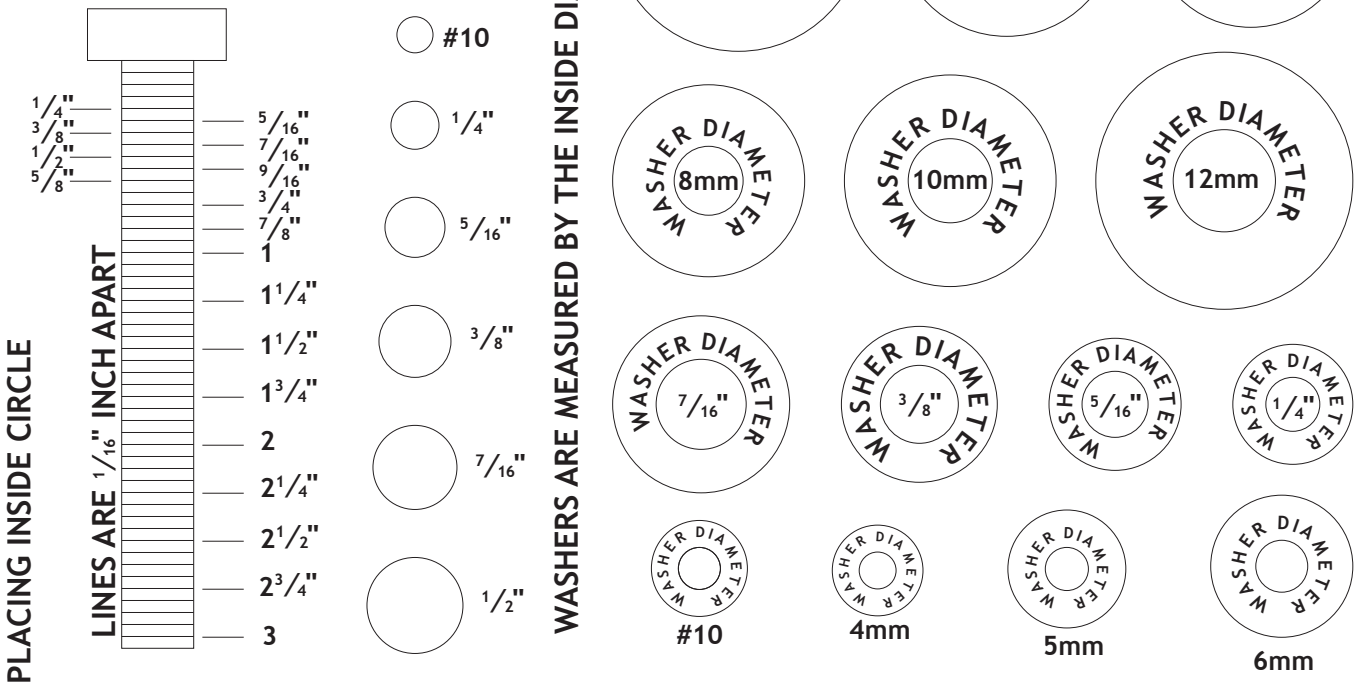
Wear safety glasses during entire setup process!

⚠WARNING

USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.

Hardware Recognition Chart

USE THIS CHART TO IDENTIFY HARDWARE DURING THE INVENTORY/ASSEMBLY PROCESS.



Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

Note: *If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.*

Inventory (Figure 3)	Qty
A. Motor Assembly	1
B. Sanding Belt 2" x 72" 100-Grit	1
C. Mounting Adapter	1
D. Cap Screws 1/4"-20 x 1/2"	6
E. Pivot Arm Mounting Bracket	1
F. Quick-Release Lever Knob	1
G. Sanding Arm Assembly	1
H. Auxiliary Arbor Flanges & Hex Nut 5/8"-18LH	1
I. Platen Bracket	1
J. Drive Wheel Arbor Flanges & Hex Nut 3/4"-16	1
K. Pivot Arm Bracket	1
L. Platen Bracket	1
M. Pivot Arm	1
N. Drive Wheel 10"	1
O. Tool Rest Support Assembly	1
P. Tool Rest	1

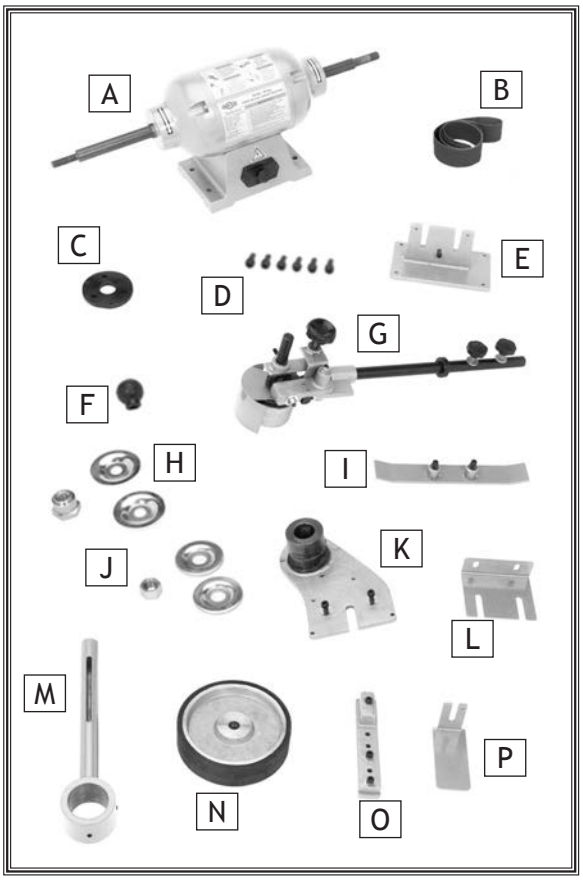
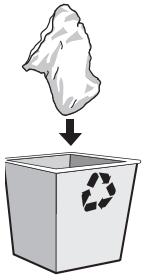


Figure 3. Machine inventory.



⚠WARNING

SUFFOCATION HAZARD!

Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.

Machine Placement

Workbench Load

Refer to the **Machine Specifications** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space needed for the machine.

⚠CAUTION

INJURY HAZARD! Untrained users can injure themselves with this machine. Restrict access to machine when you are away, especially if it is installed where children are present.

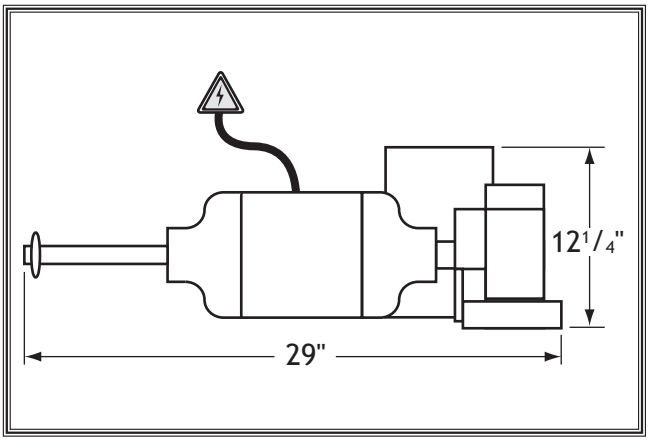


Figure 4. Machine clearances.

Cleaning Machine

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

Basic steps for removing rust preventative:

1. Put on safety glasses.

2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.

3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.

4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

NOTICE

Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.

Bench Mounting

Number of Mounting Holes..... 8
Diameter of Mounting Hardware Needed.....1/2"

The base of this machine has mounting holes that allow it to be fastened to a workbench or other mounting surface to prevent it from moving during operation and causing accidental injury or damage.

The strongest mounting option is a "Through Mount" (see example) where holes are drilled all the way through the workbench—and hex bolts, washers, and hex nuts are used to secure the machine in place.

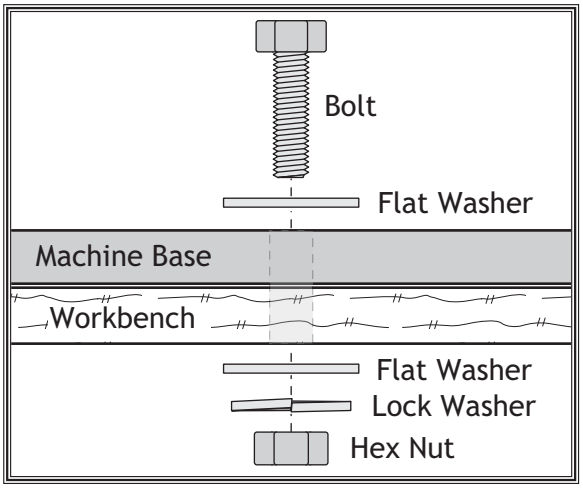


Figure 5. Typical "Through Mount" setup.

Another option is a "Direct Mount" (see example) where the machine is secured directly to the workbench with lag screws and washers.

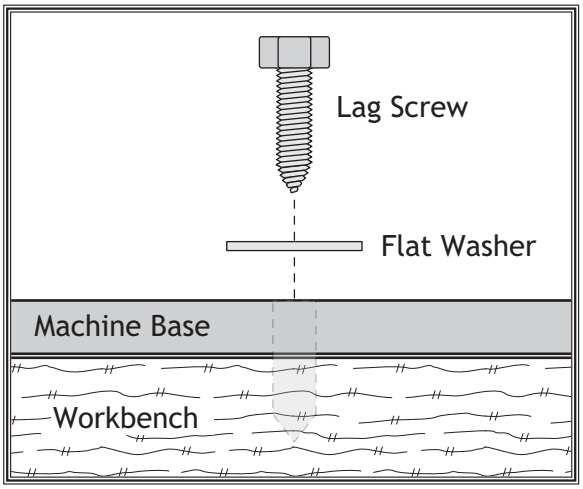


Figure 6. Typical "Direct Mount" setup.

Assembly

Before beginning the assembly process, refer to **Items Needed for Setup** and gather everything you need. Ensure all parts have been properly cleaned of the heavy-duty rust-preventative applied at the factory, if applicable. Be sure to complete all steps in the assembly procedure prior to performing the **Test Run**.

To assemble machine, do these steps:

1. Slide the mounting adapter onto the right-hand arbor of the motor assembly with the countersunk holes facing out, then rotate it so that the flat edge is at the 10 o'clock position, as shown in **Figure 7**.

2. Secure the adapter to the motor assembly with (3) 1/4"-20 x 1/2" cap screws (see **Figure 7**).

3. Back out the (3) cap screws and (4) set screws in the pivot arm mounting bracket and the pivot arm bracket, then slide the pivot arm bracket onto the pivot arm mounting bracket, as shown in **Figures 8-9**.

   Note: *The pivot arm bracket bushing is shipped with a lubricating grease coating on its outer surface. This lubricant will keep the motion of the pivot arm smooth during operation and reduce the wear on the metal-to-metal surfaces.*

4. For now, finger-tighten the three cap screws enough to hold the two brackets together. You will fully tighten these fasteners in a later step.

   Note: *Make sure the four set screws DO NOT make contact with the opposite bracket.*

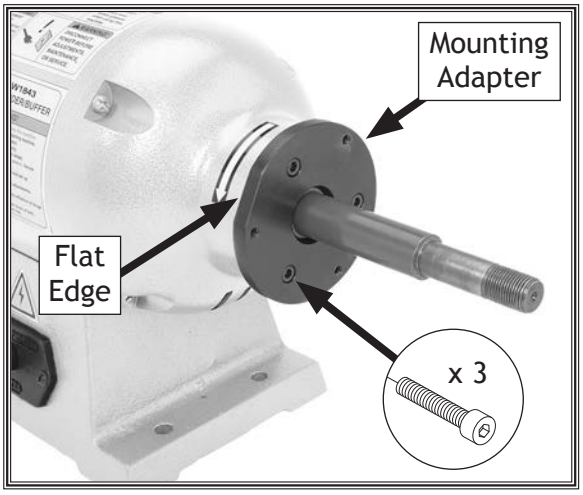


Figure 7. Mounting adapter installed.

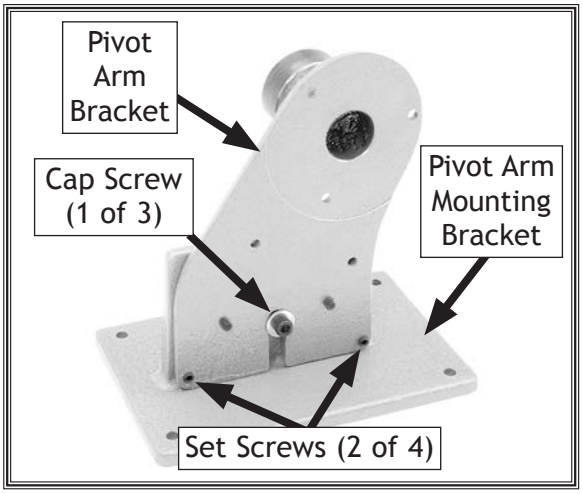


Figure 8. Left side of pivot arm bracket assembly.

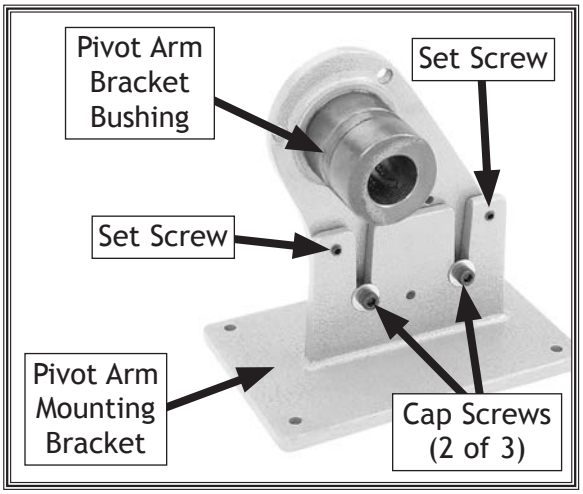


Figure 9. Right side of pivot arm bracket assembly.

5. Slide the assembled arm brackets onto the right-hand arbor with the arm bracket bushing facing out, as shown in **Figure 10**, then secure it with the remaining (3) 1/4"-20 x 1/2" cap screws.

6. Move the machine to the selected mounting surface, and use the eight holes in the base of the motor assembly and the pivot arm bracket assembly as a template for drilling the mounting holes.

7. Loosen the three cap screws of the pivot arm bracket assembly (see **Figures 8-9** on **Page 17**), then use the mounting hardware you have chosen to firmly secure the motor assembly and the bracket assembly in place.

Note: *Before fully tightening the mounting hardware, make sure that the three cap screws and four set screws of the arm bracket assembly are loose. This will allow the mounting bracket to lay flat on the mounting surface.*

8. Tighten the four set screws in the pivot arm bracket assembly (see **Figures 8-9** on **Page 17**) just until you feel resistance. This will keep the two parts of the assembly stable during operation.

9. Fully tighten the three cap screws on the pivot arm bracket assembly.

10. Back out the two set screws in the round end of the pivot arm, slide the arm onto the bracket bushing so that the platen bracket cap screws are facing to the right, as shown in **Figure 11**, then tighten the set screws to hold the pivot arm in place.

Note: *The pivot arm and bushing are designed so that the set screws tighten into the grooved surface of the bushing. This keeps the pivot arm from sliding off the bushing when using the tilt feature.*

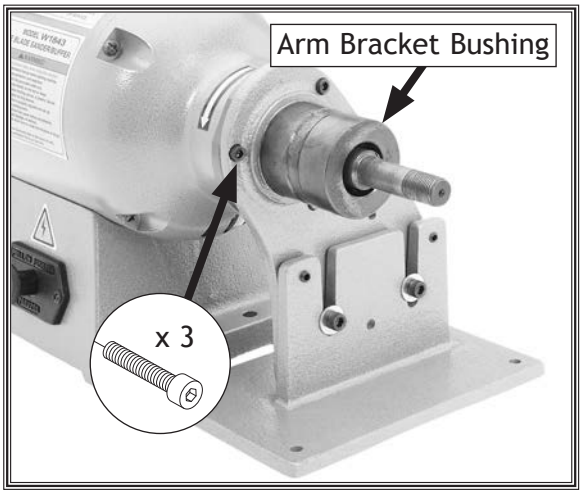


Figure 10. Pivot arm bracket assembly installed onto the motor assembly.

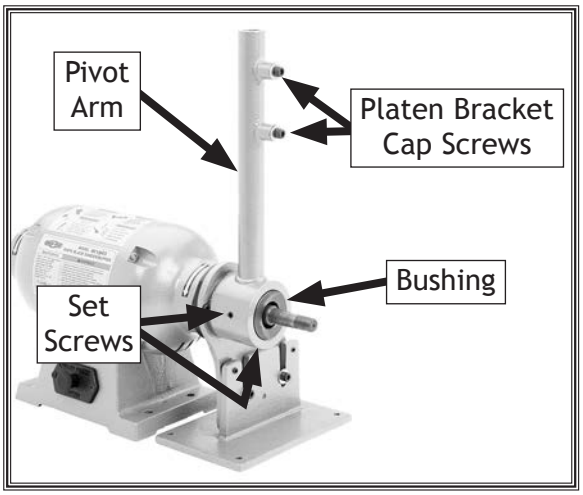


Figure 11. Pivot arm installed.

11. Slide the drive wheel onto the right-hand arbor with a drive wheel flange (3/4" center bore) on each side, then secure it in place with the remaining 3/4"-16 arbor hex nut (see **Figure 12**).

Note: *It may be necessary to use a dead-blow hammer to seat the drive wheel onto the arbor. Take great care not to damage the drive wheel or the threads of the arbor.*

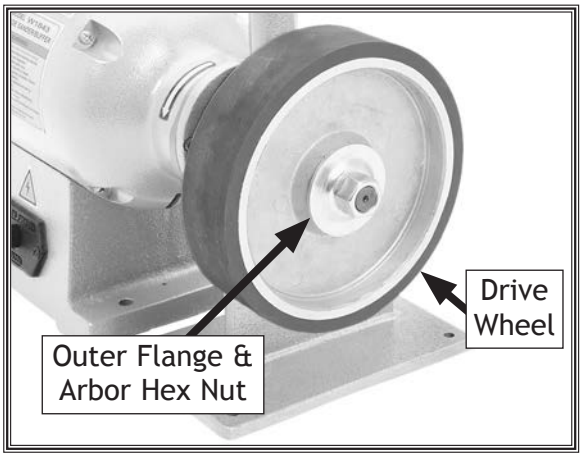


Figure 12. Drive wheel installed.

12. Remove the two threaded knobs and flat washers from the sanding arm assembly, insert the shaft into the pivot arm tube until the lock collar rests on top of the tube, as shown in **Figure 13**, then re-install the knobs and flat washers to hold it in place.

13. Install the quick-release lever knob, as shown in **Figure 13**.

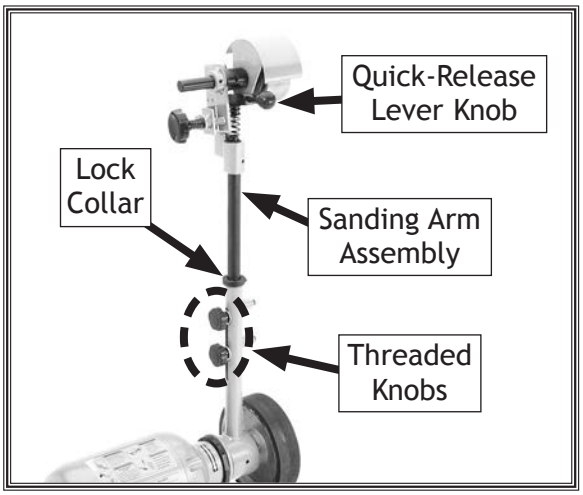


Figure 13. Sanding arm assembly installed.

14. Install the platen bracket onto the pivot arm with the pre-installed hardware, as shown in **Figure 14**.

15. Install the sanding platen onto the platen bracket with the pre-installed hardware, as shown in **Figure 14**.

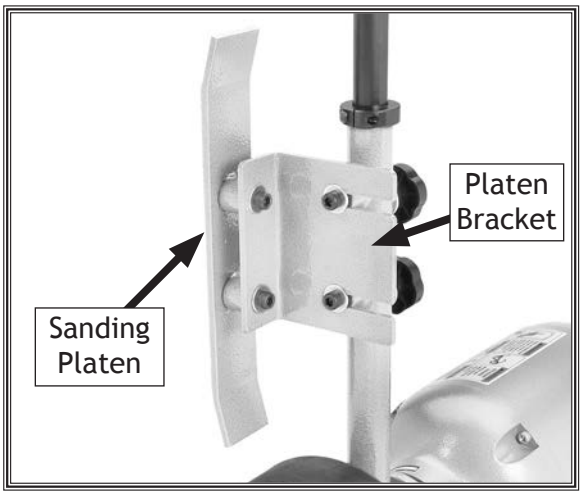


Figure 14. Sanding platen and bracket installed on pivot arm.

16. Remove the (3) cap screws and flat washers that hold the two pieces of the tool rest support assembly together.

17. Mount the first tool rest support to the back of the arm bracket with the $^{5}/_{16}$"-18 x $^{3}/_{4}$" cap screw (the shortest of the three) and flat washer removed in **Step 16**, as shown in **Figure 15**.

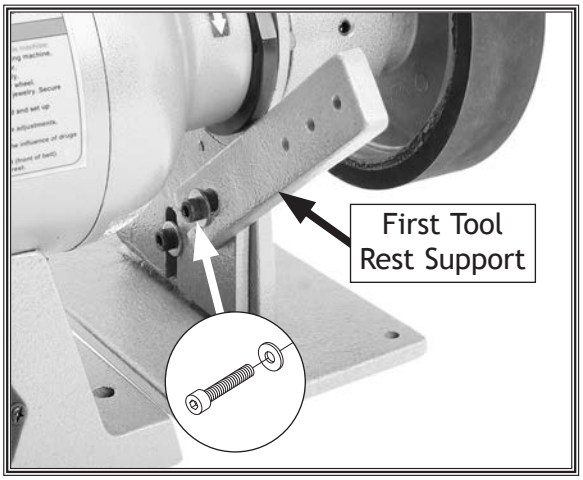


Figure 15. First tool rest bracket installed.

18. Position the second tool rest support so that its flat side faces the first support, then secure it with (1) $^{5}/_{16}$"-18 x $1^{1}/_{4}$" cap screw and flat washer removed in **Step 16**, as shown in **Figure 16**.

Note: *There are several holes provided for attaching the tool rest assembly so that you can choose the best position for your operation.*

19. Secure the tool rest to the support assembly with the remaining $^{5}/_{16}$"-18 x $1^{1}/_{4}$" cap screw and flat washer, as shown in **Figure 16**.

Note: *When the sanding belt is installed and properly tensioned, there should be no more than $^{1}/_{16}$" between the tool rest and the belt to ensure the workpiece will not become trapped between the rest and belt during operation.*

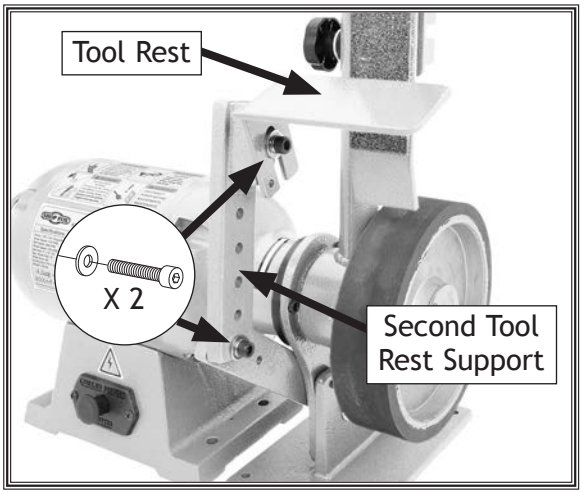


Figure 16. Tool rest installed.

Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning properly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

To test run the machine, do these steps:

1. Make sure all tools and objects used during setup are cleared away from the machine, and that a sanding belt or auxiliary attachment are NOT installed on the machine.

2. Make sure the ON/OFF button (see **Figure 17**) is pushed *in*, then connect the machine to power.

3. Pull the ON/OFF button *out* to turn the machine ***ON***.

4. Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.

   — Strange or unusual noises should be investigated and corrected before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

5. Push the ON/OFF button in to turn the machine ***OFF***.

⚠WARNING

Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.

⚠WARNING

DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

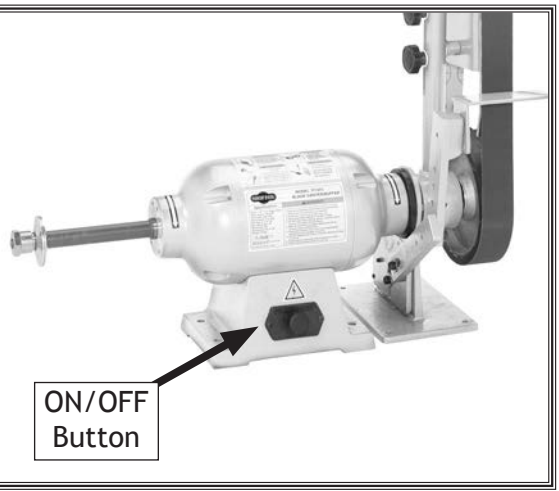


Figure 17. Location of ON/OFF button.

OPERATIONS

General

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual and seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

To complete a typical sanding operation, the operator does the following:

1. Examines the workpiece to make sure it is suitable for sanding.
2. Installs the correct sanding belt for the operation (composition and grit).
3. Turns the drive wheel by hand to make sure the sanding belt is tracking correctly and is properly tensioned.
4. Verifies that the platen is centered on the sanding belt.
5. Adjusts the tool rest to the correct position for the operation and makes sure that it is no more than $^{1}/_{16}$" away from the sanding belt.
6. Connects the machine to power and pulls the ON/OFF button out to turn it ***ON***.
7. Verifies that the sanding belt is tracking properly and rotating without interference.
8. Places the workpiece onto the tool rest and slowly moves it into the sanding belt with the direction of the belt.
9. Removes the workpiece and pushes the ON/OFF button in to turn the machine ***OFF***.

⚠WARNING

To reduce your risk of serious injury or damage to the machine, read this entire manual BEFORE using machine.

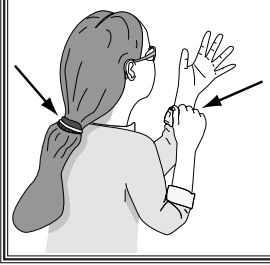
⚠WARNING


To reduce the risk of eye injury and long-term respiratory damage, always wear safety glasses and a respirator while operating this machine.

NOTICE

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. **Above all, safety must come first!**

⚠WARNING



Loose hair, clothing, or jewelry could get caught in machinery and cause serious personal injury. Keep these items away from moving parts at all times to reduce this risk.

Sanding Belt

Sanding Belt Width ..... 2"
Sanding Belt Length .....72"

To ensure a safe operation and good sanding results, the sanding belt must be properly installed, tensioned, and tracked.

Tool Needed	**Qty**
Hex Wrench 6mm	1

Installing Sanding Belt

1. DISCONNECT MACHINE FROM POWER!

2. With the direction arrows printed on the inside front of the belt facing down, pull down on the quick release lever and wrap the belt around the idler and drive wheels so that it is centered on both, as shown in **Figure 18**, then release the lever.

Note: *To prevent the belt seam from catching on the workpiece, install the belt so that the direction arrows printed on the inside face of the belt follow the belt rotation, as shown in* ***Figure 18****.*

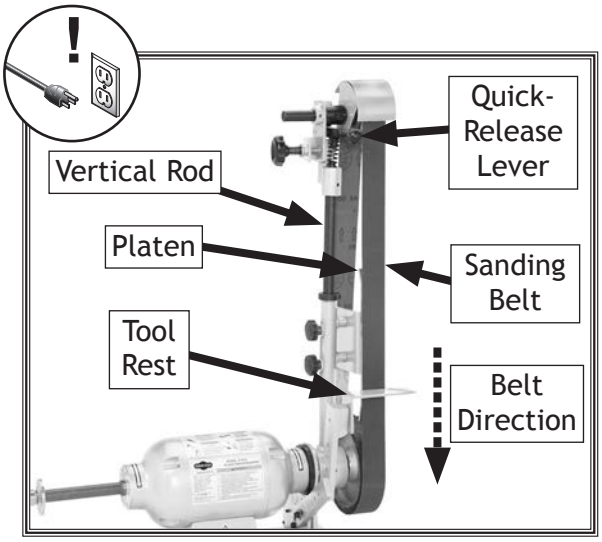


Figure 18. Sanding belt installed.

3. Adjust the platen by loosening both cap screws securing platen to vertical rod (see **Figure 19**). Center platen behind the belt, and re-tighten cap screws.

Note: *The platen provides a solid back rest and helps reduce friction as belt passes the tool rest. Platen should be lightly touching backside of belt, but not bowing belt outward.*

4. If needed for your operation, adjust the tool rest position as required. Make sure that it is no more than $^{1}/_{16}$" away from the sanding belt to prevent the workpiece being trapped between the tool rest and belt.

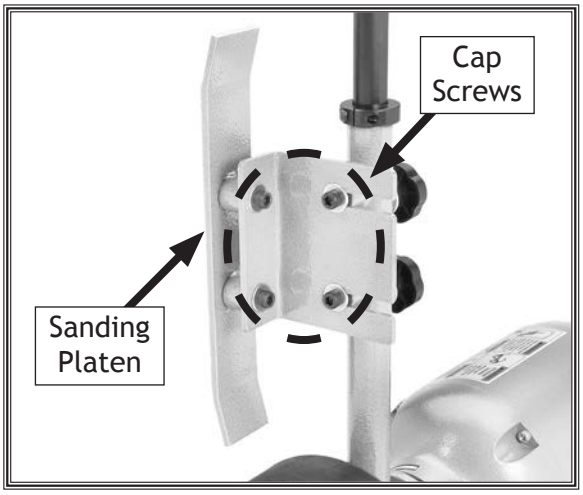


Figure 19. Sanding platen adjustment (belt removed for clarity).

Tensioning Sanding Belt

The sanding belt is properly tensioned when there is approximately 1/2" deflection with slight pressure applied to the back loop of the belt, as shown in **Figure 20**.

The sanding belt tension is adjusted by raising or lowering the sanding arm assembly.

Tool Needed	**Qty**
Hex Wrench 3/16"	1

To correctly tension the sanding belt, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Make sure the sanding belt is correctly installed and centered on the idler and drive wheels.

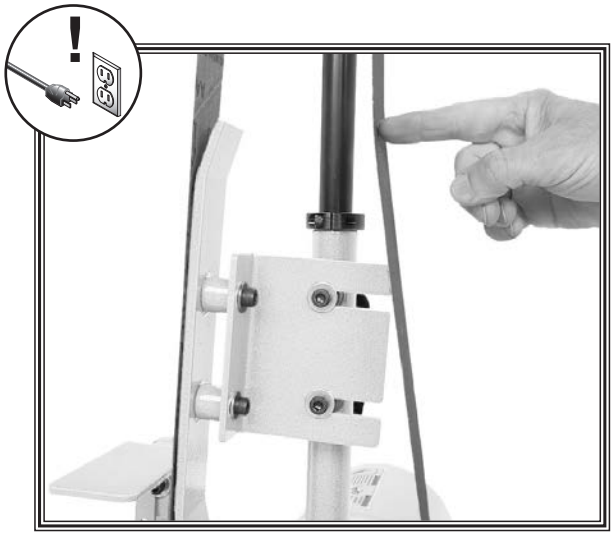


Figure 20. Checking sanding belt tension.

⚠WARNING

If sanding belt comes loose from machine during operation, it could cause serious personal injury from entanglement or abrasion. ALWAYS make sure sanding belt is properly installed, tensioned, and tracked before connecting machine to power.

3. Hold onto the sanding arm assembly to keep it from moving, then loosen the threaded knobs and the lock collar cap screw shown in **Figure 21**.

4. Adjust the height of the sanding arm assembly so there is the correct amount of tension on the sanding belt, then re-tighten the threaded knobs to hold the assembly in place.

5. Adjust the lock collar so that it is firmly seated on the pivot arm top, then re-tighten its cap screw.

   Note: *The lock collar ensures the stability and position of the sanding arm beyond the holding power of the threaded knobs.*

6. Re-check the sanding belt tension. If necessary, repeat this procedure until the correct belt tension is achieved.

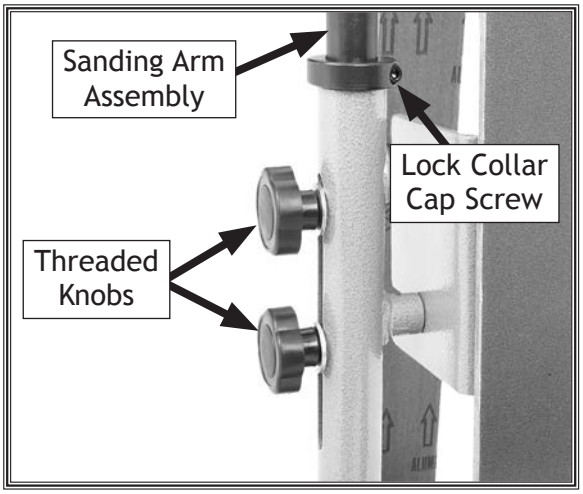


Figure 21. Sanding belt tension controls.

Adjusting Sanding Belt Tracking

To ensure safe operation, the sanding belt must stay centered on the idler and drive wheels while the machine is ***ON***. This is a trial-and-error process that requires some patience.

To adjust the sanding belt tracking, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Make sure the sanding belt is correctly installed and tensioned (refer to the **Sanding Belt** subsection on **Page 23** for detailed instructions).

3. Rotate the drive wheel several times by hand and watch the sanding belt as it tracks on the idler and drive wheels.

   — If the sanding belt is centered on the idler and drive wheels, and *does not* move to one side or the other after several rotations, no further adjustments are necessary.

   — If the sanding belt moves to one side or the other while rotating, continue with this procedure.

4. Make a small adjustment to the tracking adjustment knob, then rotate the drive wheel several times while observing the sanding belt (see **Figure 22**).

   — If the sanding belt moves to the *right*, rotate the adjustment knob clockwise.

   — If the sanding belt moves to the *left*, rotate the adjustment knob counterclockwise.

5. Repeat **Step 4** until the sanding belt stays centered on the idler and drive wheels after several rotations.

6. To verify the sanding belt tracking, turn the machine ***ON*** and watch the belt tracking.

   — If the belt *does not* wander, then it is tracking correctly.

   — If the belt *does* wander, very slowly adjust the tracking adjustment knob until the belt stays centered on the wheels.

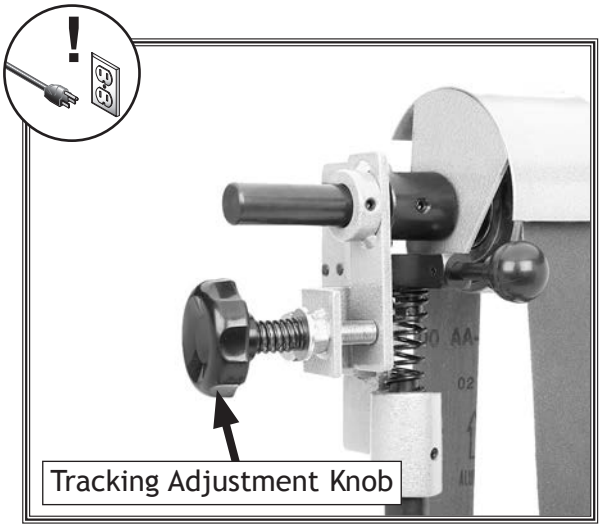


Figure 22. Sanding belt tracking adjustment knob.

Belt Sanding

The sanding belt is used to sand wood or metal. We recommend using aluminum oxide sanding belts for wood and silicon carbide for metal. Refer to **Accessories** on **Page 34** for options from Shop Fox.

Always be sure the sanding belt is properly installed, tensioned, and tracked before connecting the machine to power (refer to the **Sanding Belt** subsection on **Page 23** for detailed instructions).

Always adjust the tool rest so that it is no more than 1/16" away from the belt. This helps to ensure that the workpiece does not get trapped between the rest and the belt.

Make sure the platen is centered on the sanding belt. Adjust the platen by loosening both cap screws securing platen to the vertical rod, then re-tighten the cap screws.

Note: *The platen provides a solid back rest and helps reduce friction as the belt passes the tool rest. Platen should be lightly touching backside of belt, but not bowing belt outward.*

Figure 23 shows a typical wood sanding operation with the tool rest perpendicular to the belt surface.

The sanding belt is also used for knife grinding and sharpening. **Figure 24** depicts a typical knife edge grinding operation. Generally, this is done with the tool rest removed.

Note: *There are many different techniques for using the sanding belt to grind and sharpen knives. Whichever one you use, make sure that you hold the knife firmly and ease it into the belt without excessive pressure to ensure a safe operation.*

The belt is also used for contour sanding. When doing this type of operation, it is best to remove the platen and the tool rest so the belt can flex to better conform to the shape of the workpiece (see **Figure 25**).

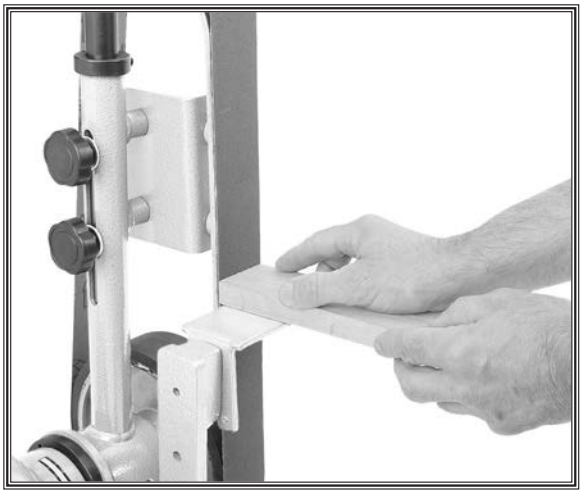


Figure 23. Typical wood sanding operation.

Figure 24. Typical knife grinding operation.

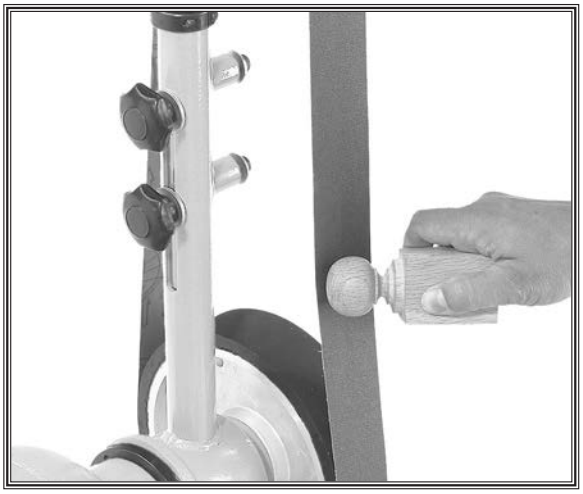


Figure 25. An example of contour sanding.

The sanding arm assembly tilts to a horizontal position, as shown in **Figure 27**. This arrangement is more convenient for certain types of sanding or grinding operations.

Tools Needed	**Qty**
Hex Wrench 5mm	1
Hex Wrench 6mm	1

To position the sanding arm assembly horizontally, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. While holding the arm assembly, loosen the two set screws in the round end of the pivot arm (see **Figure 26**).

3. Pivot the assembly to the desired angle, then re-tighten the pivot arm set screws to secure it in place.

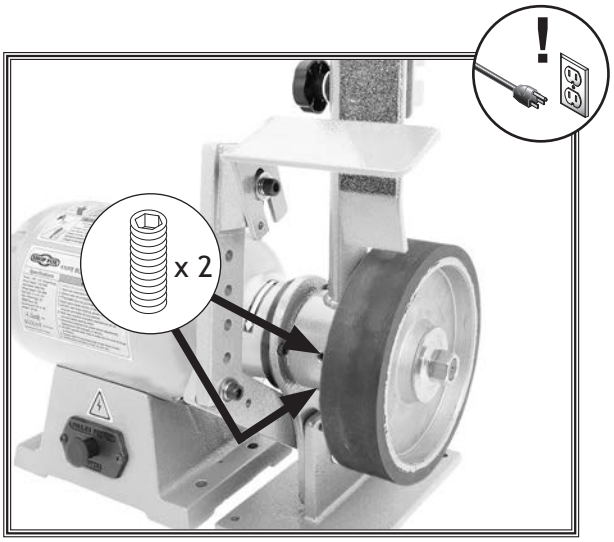


Figure 26. Pivot arm set screw locations.

4. Adjust the tool rest in the position (see **Figure 27**) that is correct for your operation.

Note: *If you will be using the contour of the drive wheel for sanding or grinding, remove the tool rest assembly so that it will not interfere with the operation. Otherwise, you will need to mount it differently so that it will not interfere with the sanding belt.*

5. Check and adjust, if necessary, the sanding belt tracking (refer to **Adjusting Sanding Belt Tracking** on **Page 25** for detailed instructions).

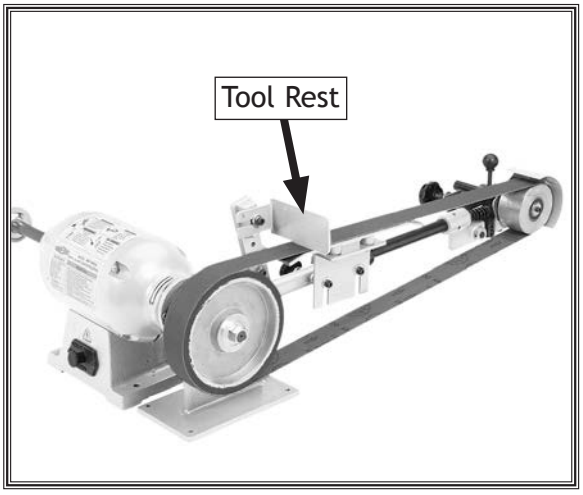


Figure 27. Sanding arm assembly in the horizontal position.

Buffing & Polishing Setup

The Model W1843 is capable of both buffing and sanding operations. IT IS NOT A GRINDER. The absence of grinding wheel guards and eye shields prohibits the use of this machine as a grinder.

Note: *Use caution when polishing plated metals; there is a chance that the thin plated material may be damaged. A light pressure is all that is needed for quality work.*

Tool Needed	**Qty**
Adjustable Wrench	1

To buff or polish, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove the arbor nut at the end of the shaft.
3. Insert a buffing wheel (not included) between the provided wheel flanges. Secure flanges with the arbor nut removed in the previous step, as shown in **Figure 28.**
4. Put on safety glasses and a respirator, then connect machine to power.
5. Stand to the side of the buffer and turn it ***ON***.
6. Allow the buffer to reach full speed.
7. Select the appropriate stick of polishing compound for your application, and apply to the rotating face of the wheel.
8. Once compound is thoroughly applied, firmly grasp the workpiece with both hands and lightly and evenly move the workpiece back and forth on the buffing wheel.

⚠WARNING

To reduce the risk of eye injury and long-term respiratory damage, always wear safety glasses and a respirator while operating this machine.

NOTICE

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. **Above all, safety must come first!**

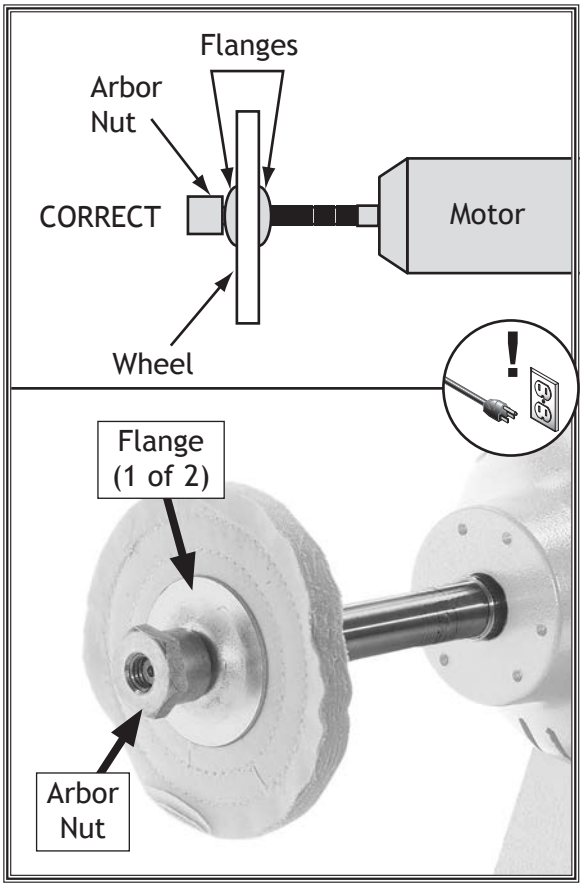


Figure 28. Buffing wheel installed.

Buffing

Below are some quick tips for getting the most out of your buffer. Remember, there is no substitute for experience. Learning how to hold the workpiece, how much pressure to apply, how to move the workpiece against the wheel, and how much compound to use requires trial and error.

- Thoroughly clean all parts that you plan to buff. Dirt, oil, rust, paint or other film must be removed chemically or with water. Dry parts with a rag.
- Apply buffing compounds in small amounts at a time. Apply paste-type compounds with a wand or directly to the part. For wax-based polishing stick-type compounds, press the compound on the wheel for a couple of seconds while the machine is running. Avoid using too much compound.
- Put your workpiece under the wheel when you are loading the compound on the buffing wheel. This way, you will catch any compound that would normally be wasted on the floor.
- Only use the area indicated in **Figure 29** to do the actual buffing. Contacting the workpiece on areas outside the correct area may flip the workpiece out of your hands.
- Hold the workpiece tightly at all times while buffing. Placing one hand near the contact point will give you better control.
- Keep buffing wheels raked out before each use and when buildup gets heavy during use. Raking means to clean the buffing wheels with a wheel rake to remove built-up compounds and metal particles. ALWAYS use light pressure when raking wheels!
- Do not mix two different compounds on the same wheel. For best results, use a separate wheel for each compound.
- Always use an upward stroke with heavy to moderate pressure for cutting. Use a downward stroke with light pressure for polishing. See **Figure 30**.
- Wear safety equipment when buffing. If the buffer forces the workpiece out of your hand, be prepared for it to come flying at you! Wear safety glasses or a face shield and a heavy leather apron. Also, wear a dust mask to protect your lungs from microscopic particulate that will be flying off the wheel.

⚠CAUTION

Never buff with workpiece on top of the wheel. Workpiece may catch on wheel and be thrown at operator. Always buff workpiece near the bottom of the wheel!

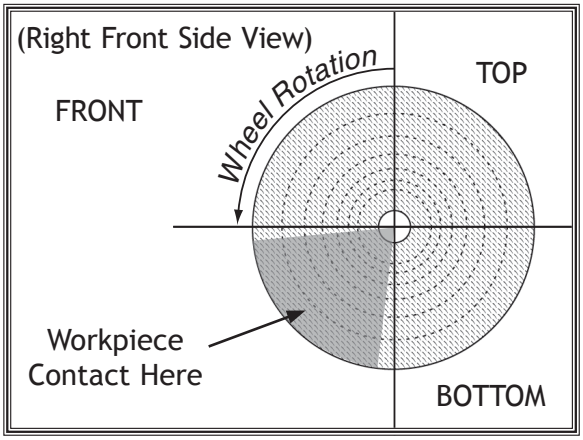


Figure 29. Location where workpiece should contact wheel.

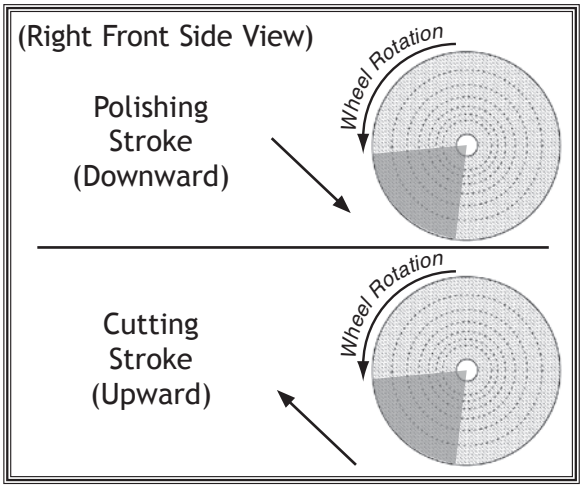


Figure 30. Cutting and polishing strokes.

Buffing Compound Selection

Most colors of abrasives have similar applications, but always check with the manufacturer of your particular compound.

Shop Fox offers the following compounds:

Red Rouge — Made for fine polishing on brass and gold. Provides an excellent shine when used with the loose muslin buffing wheel.

Green (Extra Fine) — Great for extra-fine polishing on most metals to bring out that mirror finish. Works best with loose muslin and spiral-sewn buffing wheels.

White — Great for ivory, plastic and resins when used successively with the soft spiral sewn and soft airway buffing wheels.

Black — Designed to be used with sisal and airway hard buffing wheels, this compound is perfect for the initial rough cut on stainless steel and iron.

Tripoli — A true middle-of-the-road abrasive, Tripoli provides an excellent medium cut for brass, aluminum and zinc alloy.

Green (Fine) — Slightly more abrasive than the extra fine green, this green compound is great for a medium to fine polish with most softer metals.

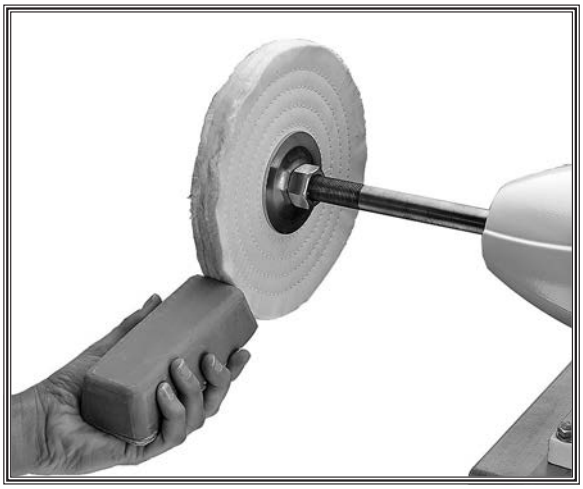


Figure 31. Applying buffing compound to wheel.

	Plastics Soft Metals			Thin Plating Gold Silver			Chrome & Nickel Plate			Copper Brass Aluminum			Iron Steel Stainless		
	R	F	P	R	F	P	R	F	P	R	F	P	R	F	P
Compound Type															
Tripoli	X							X		X					
Dark Rouge						X			X		X	X			X
White Rouge		X	X												
Black Rouge													X	X	

Buffing Sequence: R = Rough F= Final Cut, Initial Polish P = Final Polish

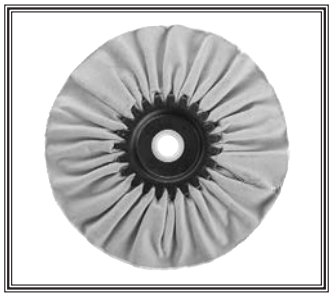
Buffing Wheel Selection

Buffing wheels are available for most types of metals and for different stages in the buffing process. Below are pictures and descriptions of common wheel types:

	Plastics Soft Metals			Thin Plating Gold Silver			Chrome & Nickel Plate			Copper Brass Aluminum			Iron Steel Stainless		
	R	F	P	R	F	P	R	F	P	R	F	P	R	F	P
Buff Style															
Loose Muslin-Soft			X			X			X			X			
Loose Muslin-Hard											X		X	X	
Airway Hard	X										X		X		
Airway Soft			X			X			X			X			
Laminated Sisal										X			X		
Spiral Sewn		X						X			X			X	

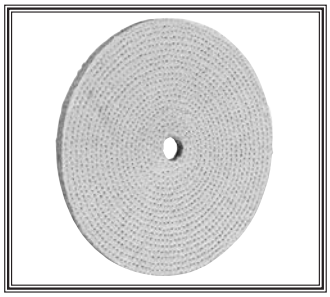
Buffing Sequence: R = Rough F= Final Cut, Initial Polish P = Final Polish

Airway Hard
Made of 100% cotton sheets that are treated to stiffen the material. Pleats in the material help hold compound. These are great for rough cutting plastics and initial polishing a wide variety of metals.

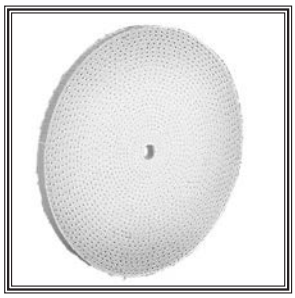


Loose Muslin
Soft feather-edged muslin stitched together near the center leaves the outer edge to provide a wide angle, fine polishing surface. Perfect for polishing stainless steel, chrome, gold or silver.

Laminated Sisal
Designed for rough cutting, sisal works well with various steels, copper, aluminum, and brass to remove scratches and prepare the piece for polishing.



Spiral Sewn
Consist of layers of 100% unbleached cotton sheeting that are spiral sewn $^{1}/_{8}$" apart. Works well for initial polish on brass, stainless steel, aluminum, bronze and cast iron.

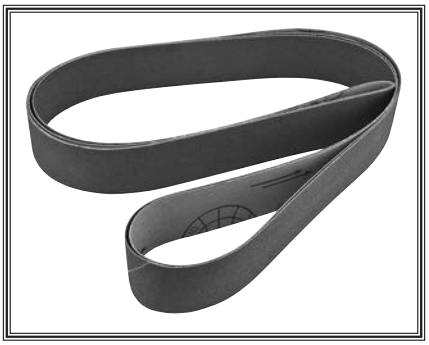


Airway Soft
Made of 100% cotton sheets and held together with a steel retainer. Pleats in the material help hold compound. These wheels are great for polishing soft metals and plastics.

ACCESSORIES

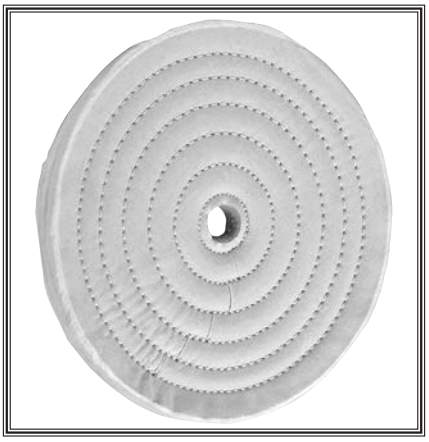
Sander/Buffer Accessories

The following sander/buffer accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.



Shop Fox **Aluminum Oxide Sanding Belts** are available in a wide range of grit options for your wood sanding needs. Each belt measures 2" x 72" and are sold in a 2-pack.

D1221 — 60-Grit
D1222 — 80-Grit
D1223 — 100-Grit
D1224 — 120-Grit
D1225 — 150-Grit
D1226 — 180-Grit
D1227 — 220-Grit



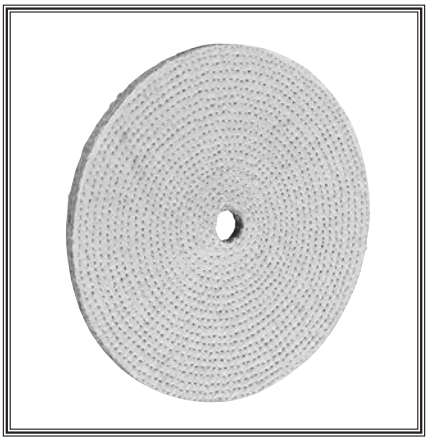
Bring your soft and delicate metal workpiece to a fine polish with our selection of **Loose Muslin Buffing Wheels.** Soft feathered edge muslin is concentrically stitched near the center, leaving the outer edge to provide a deep, lustrous shine. Perfect for stainless steel, chrome, gold, or silver.

D3186 — 3"D x 40 Ply x 5/8" Bore
D3187 — 4"D x 40 Ply x 5/8" Bore
D3188 — 5"D x 40 Ply x 5/8" Bore
D3189 — 6"D x 40 Ply x 5/8" Bore
D3190 — 8"D x 40 Ply x 5/8" Bore
D3191 — 6"D x 50 Ply x 5/8" Bore
D3192 — 8"D x 50 Ply x 5/8" Bore

Treated to provide stiffness, these 100% cotton wheels are perfect for rough and final cuts of plastics, brass and stainless steel. Reinforced by a metal fastener, the pleats trap the compound while the airway design makes it possible to reach awkward places.

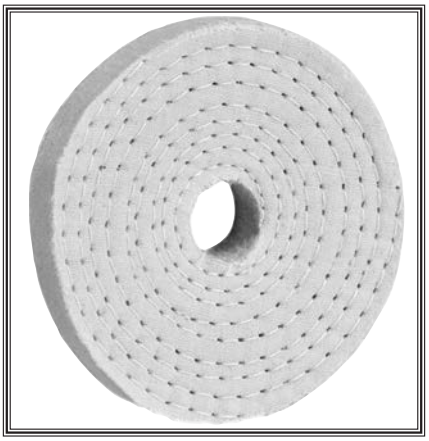
D3193 — 6" x 12 Ply x 5/8" Bore
D2517 — 8" x 12 Ply x 5/8" Bore

The **Shop Fox Laminated Hard Sisal Wheel** is a popular choice for finishing various steels (including stainless), copper, aluminum and brass. Sisal removes small scratches, while the cloth gives a fine finish.



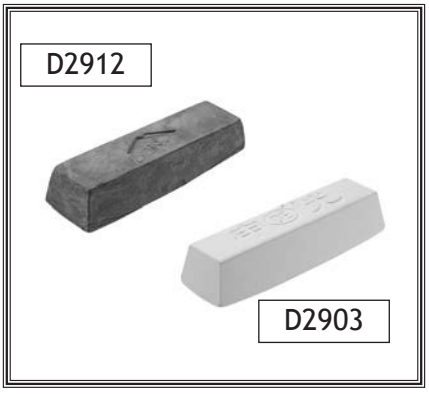
D3195 — 6" x 1/2" x 5/8" Bore
D2523 — 8" x 1/2" x 5/8" Bore

These **Spiral Sewn Buffing Wheels** are excellent for making the final cut when polishing plastics and most metals (excluding delicate metals such as gold and silver). Can be used with any compound. For final finishing on brass, stainless steel, aluminum, bronze and cast-iron. Each layer is 100% unbleached cotton sheeting, spiral-sewn approximately 1/8" apart.



D3175 — 3"D x 40 Ply x 5/8" Bore
D3176 — 4"D x 40 Ply x 5/8" Bore
D3177 — 4"D x 30 Ply x 5/8" Bore
D3181 — 6"D x 40 Ply x 5/8" Bore
D3182 — 8"D x 40 Ply x 5/8" Bore
D3184 — 6"D x 60 Ply x 5/8" Bore
D3185 — 8"D x 40 Ply x 5/8" Bore

Shop Fox offers the best **Buffing and Polishing Compounds** money can buy. Whether buffing resin, plastics, stainless steel, iron, or any number of materials, our compounds are great for virtually all buffing and polishing needs.



D2901 — Red Rouge Buffing Compound (Brass or Gold)
D2902 — Green Extra-Fine Buffing Compound (Most Metals)
D2903 — White Buffing Compound (Plastic, Resin, etc.)
D2904 — Black Buffing Compound (Stainless or Iron)
D2905 — Tripoli Buffing Compound (Brass, Aluminum, etc.)
D2912 — Green Fine Buffing Compound (Softer Metals)

MAINTENANCE

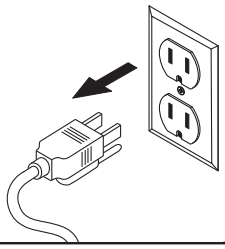
General

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Check:
- Loose mounting bolts.
- Damaged or worn sanding belt.
- Worn or damaged wires.
- Any other unsafe condition.

Monthly Check:
- Lubricate pivot arm bushing.

WARNING



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

Cleaning & Protecting

Cleaning the Model W1843 is relatively easy. Vacuum excess chips, sawdust, and debrис, then wipe off the remaining dust and grime with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning.

Lubrication

The bearings for the Model W1843 were lubricated and sealed at the factory. Merely leave them alone unless they need replacement.

To lubricate the pivot arm bushing, remove the sanding arm assembly and pivot arm, apply a light coat of multi-purpose grease to the outer surface of the bushing (see **Figure 32**), then re-install the components.

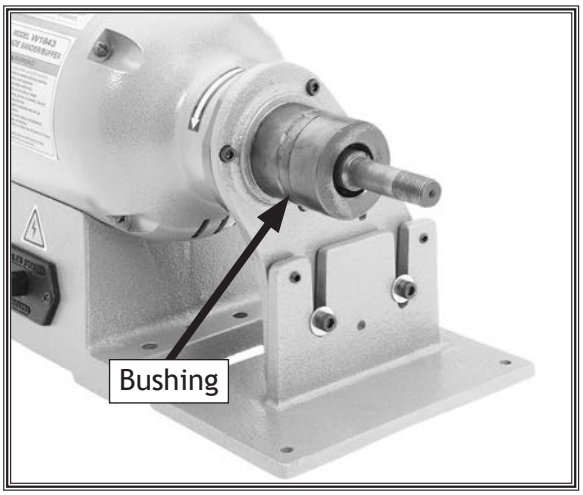
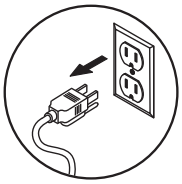


Figure 32. Location of pivot arm bushing.

SERVICE



Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: *Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.*

Motor and Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start or a breaker trips.	1. Incorrect power supply voltage or circuit size.	1. Ensure correct power supply voltage and circuit size.
	2. Power supply circuit breaker tripped or fuse blown.	2. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.
	3. Motor wires connected incorrectly.	3. Correct motor wiring connections.
	4. Wiring open/has high resistance.	4. Check/fix broken, disconnected, or corroded wires.
	5. ON/OFF button at fault.	5. Replace button.
	6. Motor at fault.	6. Test/repair/replace.
Machine stalls or is underpowered.	1. Machine undersized for task.	1. Clean/replace sandpaper; reduce feed rate/sanding depth.
	2. Motor wired incorrectly.	2. Wire motor correctly.
	3. Plug/receptacle at fault.	3. Test for good contacts/correct wiring.
	4. Motor overheated.	4. Clean motor, let cool, and reduce workload.
	5. Motor bearings at fault.	5. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
	6. Motor at fault.	6. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component loose.	1. Inspect/replace damaged bolts/nuts, and retighten with thread-locking fluid.
	2. Machine incorrectly mounted to workbench.	2. Re-tighten mounting bolts; relocate/shim machine.
	3. Motor bearings at fault.	3. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
	4. Motor shaft bent.	4. Test with dial indicator and replace motor.

Operations

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Sanding belt runs off wheels.	1. Belt tracking not correct. 2. Belt not correctly tensioned. 3. Belt is damaged.	1. Adjust belt tracking (**Page 25**). 2. Correctly adjust the belt tension (**Page 24**). 3. Replace belt.
Sanding belt breaking or tearing.	1. Belt tension too tight. 2. Belt rotation incorrect. 3. Poor quality/incorrect type belt.	1. Correctly adjust the belt tension (**Page 24**). 2. Make sure belt is installed with direction arrows following rotation direction (**Page 23**). 3. Replace belt with good quality belt of the correct type for the operation.
Sanding belt makes grinding noise during operation.	1. Belt rubbing against wheel housing. 2. Tool rest rubbing against belt. 3. Graphite coating on platen worn out. 4. Idler wheel bearing worn out.	1. Adjust upper wheel guard; correctly adjust belt tracking (**Page 25**). 2. Adjust tool rest away from belt no more than 1/16". 3. Replace platen. 4. Replace bearing and idler wheel.
Pivot arm hard to move.	1. Pivot arm set screws tight. 2. Pivot arm bushing not lubricated.	1. Loosen pivot arm set screws before rotating the arm (**Page 27**). 2. Lubricate the pivot arm bushing (**Page 34**).

Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (360) 734-3482 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

⚠WARNING

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

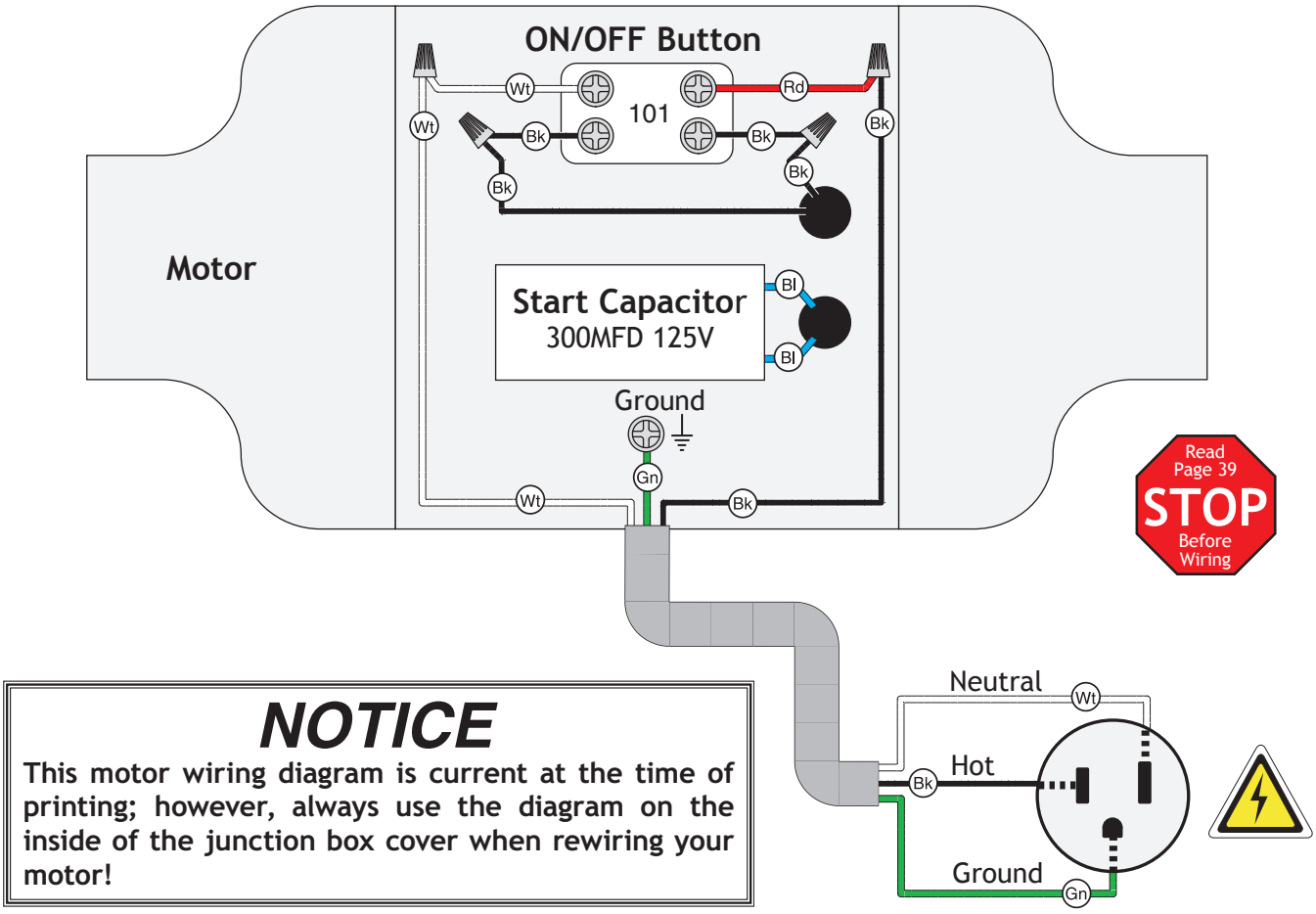
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.

WIRING DIAGRAM COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TUR-QUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

SERVICE

Wiring Diagram



NOTICE

This motor wiring diagram is current at the time of printing; however, always use the diagram on the inside of the junction box cover when rewiring your motor!

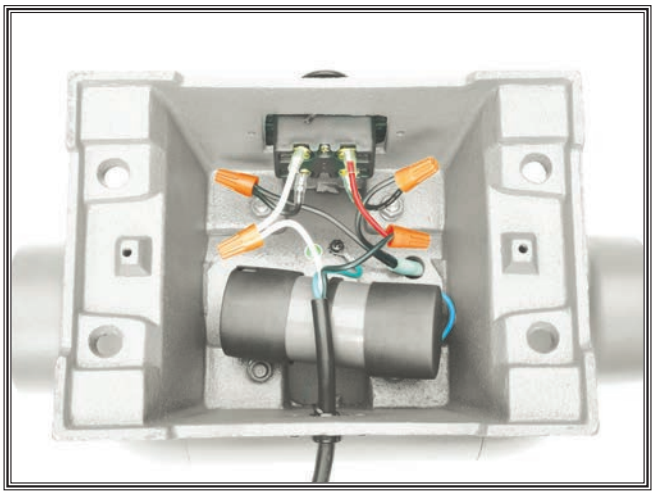
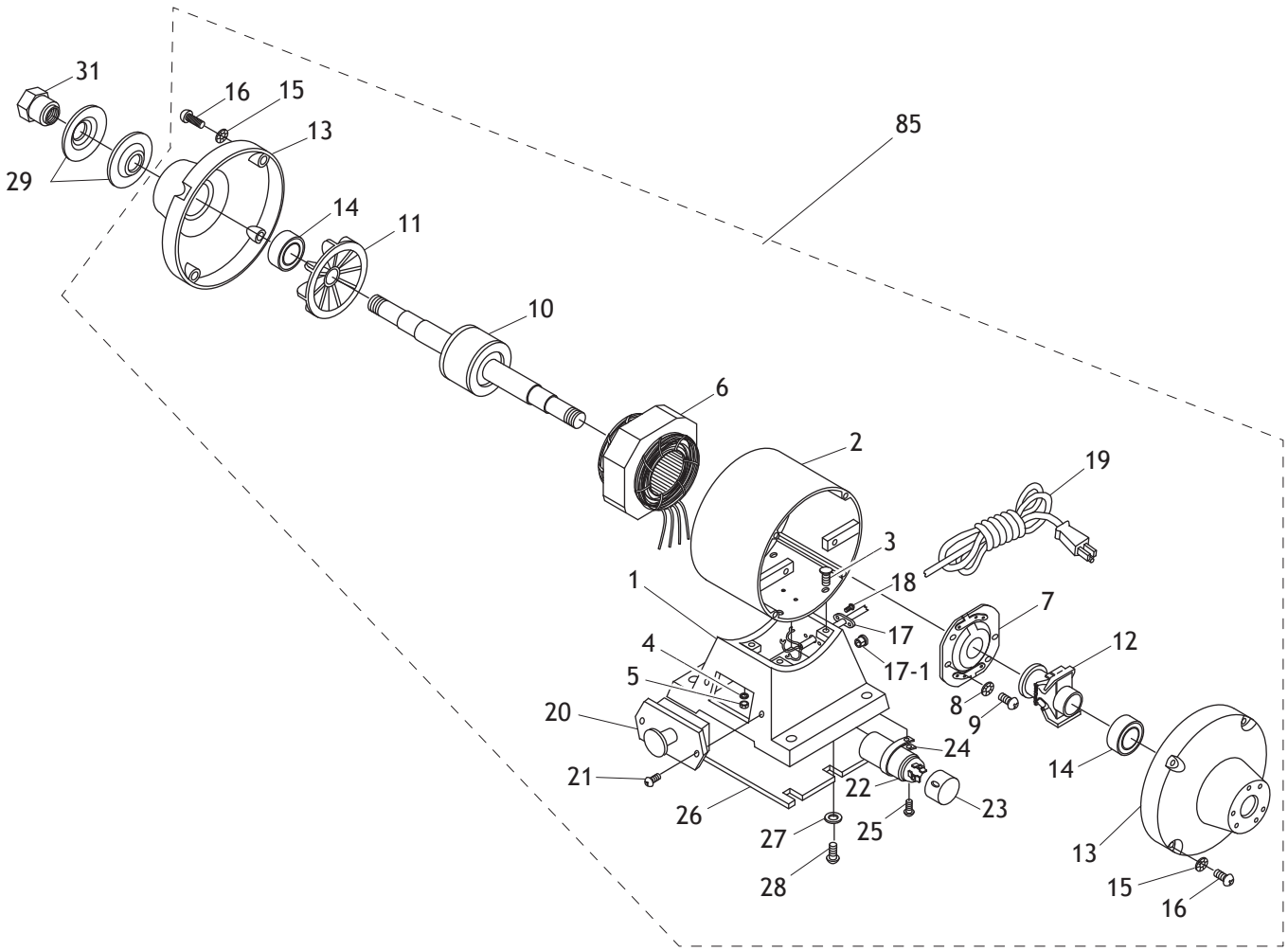


Figure 33. Electrical wiring.

SERVICE

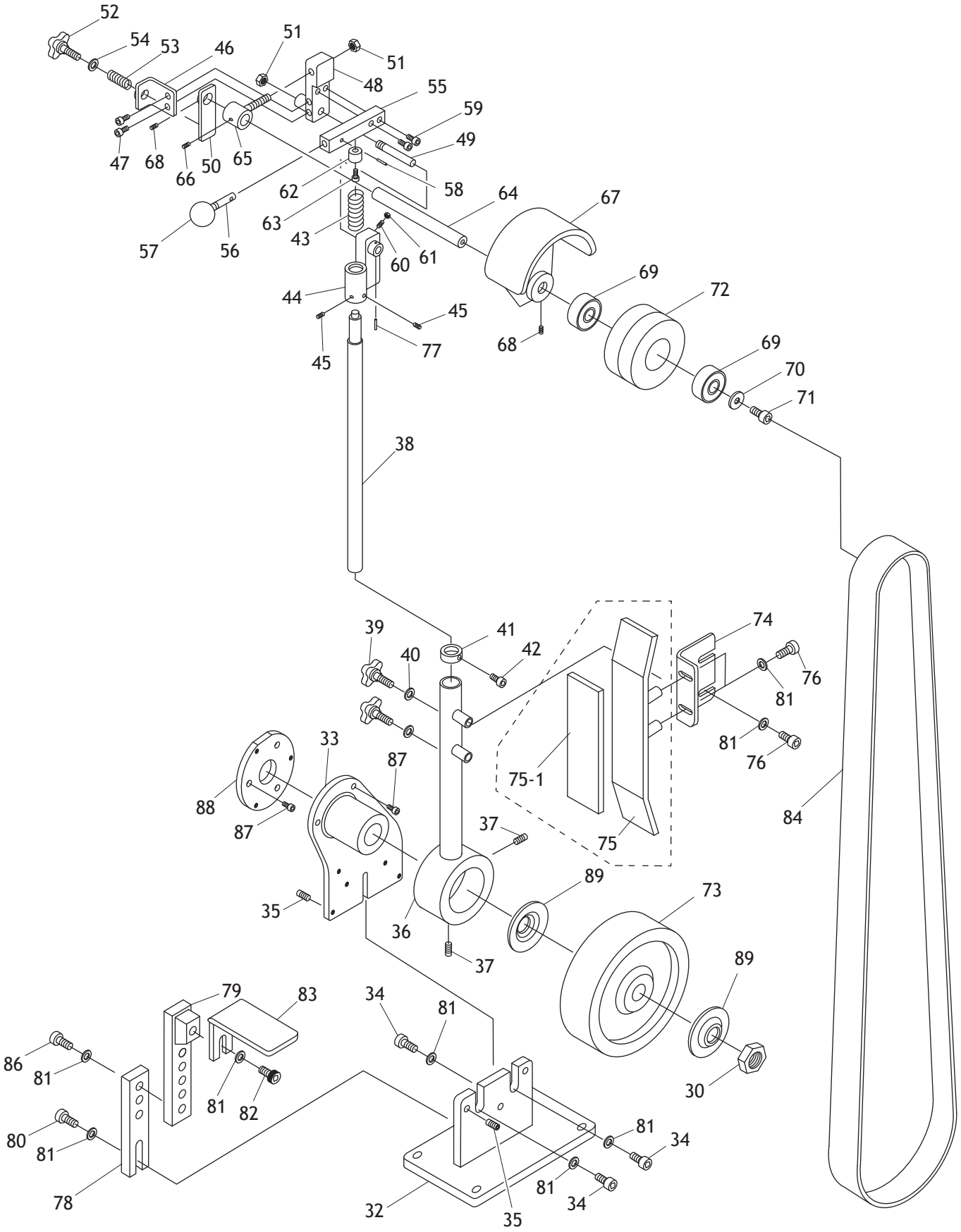
PARTS
Motor Assembly



REF	PART #	DESCRIPTION
1	X1843001	BASE
2	X1843002	MOTOR CASE
3	X1843003	PHLP HD SCR 5/16-18 X 1-1/4
4	X1843004	LOCK WASHER 5/16
5	X1843005	HEX NUT 5/16-18
6	X1843006	STATOR WINDING
7	X1843007	CONTACT PLATE
8	X1843008	LOCK WASHER #10
9	X1843009	PHLP HD SCR 10-24 X 1/2
10	X1843010	ROTOR/SHAFT
11	X1843011	FAN
12	X1843012	CENTRIFUGAL SWITCH
13	X1843013	END COVER
14	X1843014	BALL BEARING 6206ZZ
15	X1843015	LOCK WASHER 1/4
16	X1843016	PHLP HD SCR 1/4-20 X 5/8

REF	PART #	DESCRIPTION
17	X1843017	CORD BRACKET
17-1	X1843017-1	STRAIN RELIEF 3/8" TYPE-1
18	X1843018	PHLP HD SCR 10-24 X 1-1/4
19	X1843019	POWER CORD 16G 3W 73"L 5-15P
20	X1843020	PULL ON/PUSH OFF SWITCH 20A 250V
21	X1843021	PHLP HD SCR 10-24 X 1/2
22	X1843022	S CAPACITOR 400M 125V 1-3/4 X 3-3/8
23	X1843023	CAPACITOR CAP
24	X1843024	CAPACITOR CLAMP
25	X1843025	PHLP HD SCR 10-24 X 3/8
26	X1843026	BOTTOM PLATE
27	X1843027	FLAT WASHER #10
28	X1843028	PHLP HD SCR 10-24 X 3/8
29	X1843029	WHEEL FLANGE 19.2 X 64.7 X 2.7MM
31	X1843031	ARBOR W/COLLAR NUT 5/8-18 LH
85	X1843085	MOTOR ASSEMBLY

Sanding Assembly

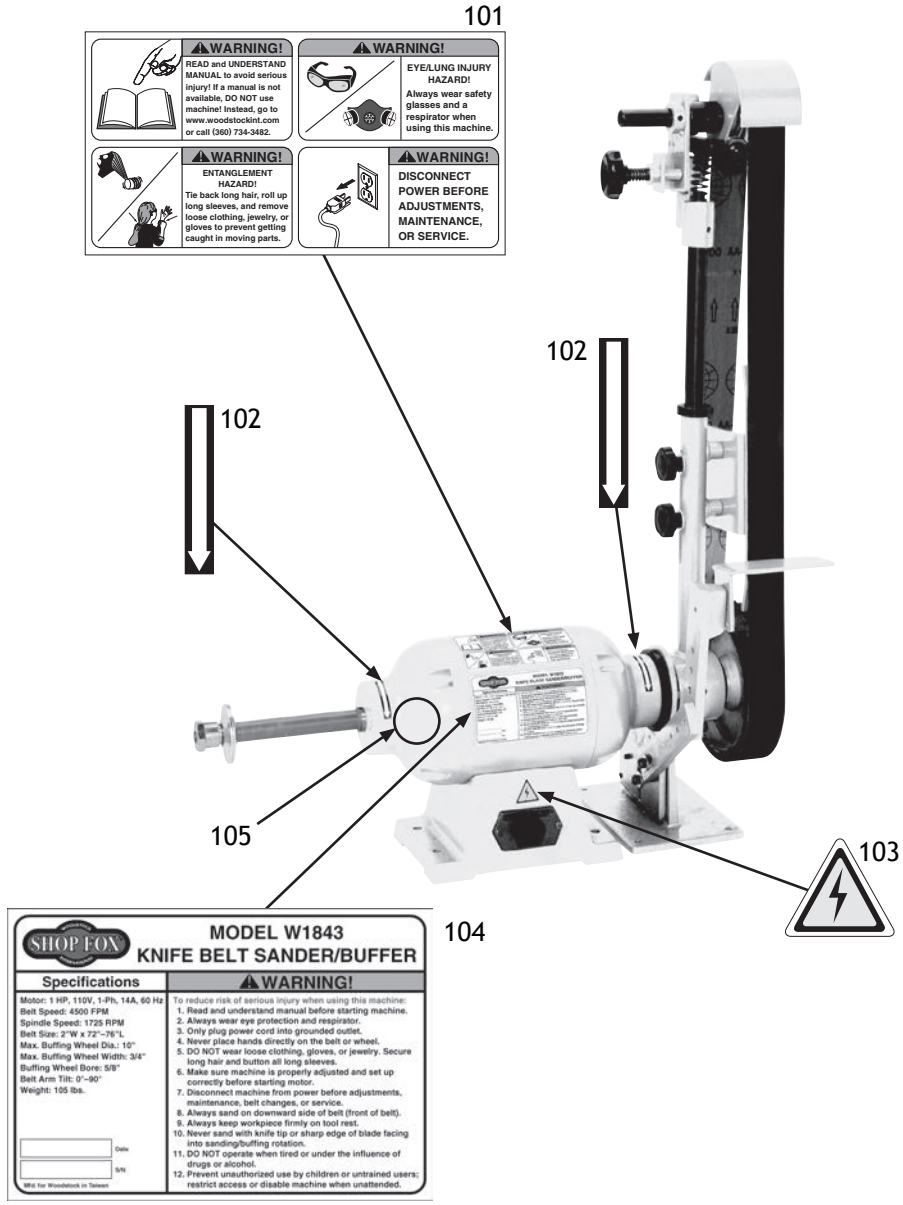


Sanding Assembly Parts List

REF	PART #	DESCRIPTION
30	XP1843030	HEX NUT 3/4-16
32	X1843032	PIVOT ARM MOUNTING BRACKET
33	X1843033	PIVOT BRACKET W/O BUSHING
34	X1843034	CAP SCREW 5/16-18 X 1
35	X1843035	SET SCREW 5/16-18 X 1/2
36	X1843036	PIVOT ARM
37	X1843037	SET SCREW 3/8-16 X 1/2
38	X1843038	SHAFT 1"
39	X1843039	KNOB 3/8-16 5-LOBE
40	X1843040	FLAT WASHER 5/16
41	X1843041	COLLAR FOR 1" SHAFT
42	X1843042	CAP SCREW 1/4-28 x 5/8
43	X1843043	COMPRESSION SPRING 22 X 87 X 3
44	X1843044	UPPER SHAFT BRACKET
45	X1843045	SET SCREW 5/16-18 X 1/4
46	X1843046	TRACKING BRACKET
47	X1843047	CAP SCREW 1/4-20 X 1/2
48	X1843048	PIVOT BRACKET
49	X1843049	TENSION BAR SHAFT
50	X1843050	TRACKING LEVER
51	X1843051	LOCK NUT 3/8-16
52	X1843052	KNOB 1/2-20 6-LOBE
53	X1843053	COMPRESSION SPRING 18 X 56 X 2
54	X1843054	FLAT WASHER 1/2
55	X1843055	TENSION BAR 4-1/8 X 3/4 X 3/4
56	X1843056	TENSION KNOB SHAFT 3/8-16 X 3
57	X1843057	TENSION KNOB 1-1/4
58	X1843058	ROLL PIN 5 X 20
59	X1843059	CAP SCREW 5/16-18 X 3/4
60	X1843060	SET SCREW 1/4-20 X 5/8

REF	PART #	DESCRIPTION
61	X1843061	HEX NUT 1/4-20
62	X1843062	SPRING BUSHING
63	X1843063	CAP SCREW 1/4-20 X 1
64	X1843064	AXLE
65	X1843065	PIVOT BUSHING
66	X1843066	SET SCREW 1/4-20 X 3/8
67	X1843067	WHEEL GUARD
68	X1843068	SET SCREW 5/16-18 X 1/4
69	X1843069	BALL BEARING 6204ZZ
70	X1843070	FLAT WASHER 1/4
71	X1843071	CAP SCREW 1/4-20 X 1/2
72	X1843072	IDLER WHEEL
73	X1843073	DRIVE WHEEL 10"
74	X1843074	PLATEN BRACKET
75	X1843075	PLATEN
75-1	X1843075-1	GRAPHITE PAD 2"W X 9"L
76	X1843076	CAP SCREW 5/16-18 X 3/4
77	X1843077	ROLL PIN 1/8 X 1
78	X1843078	TOOL REST SUPPORT LOWER
79	X1843079	TOOL REST SUPPORT UPPER
80	X1843080	CAP SCREW 5/16-18 X 1
81	X1843081	FLAT WASHER 5/16
82	X1843082	CAP SCREW 5/16-18 X 3/4
83	X1843083	TOOL REST
84	X1843084	SANDING BELT 2" X 72" 100-GRIT
86	X1843086	CAP SCREW 5/16-18 X 1-1/4
87	X1843087	CAP SCREW 1/4-20 X 1/2
88	X1843088	MOUNTING ADAPTER
89	X1843089	WHEEL FLANGE 16.1 X 73.2 X 2.8MM

Labels & Cosmetics



REF	PART #	DESCRIPTION
101	X1843101	COMBO WARNING LABEL
102	X1843102	ROTATION DIRECTION LABEL
103	X1843103	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
104	X1843104	MACHINE ID LABEL
105	X1843105	TOUCH-UP PAINT, SHOP FOX WHITE

⚠WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine MUST maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, REPLACE that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.

Warranty Registration

Name_____

Street _____

City _____ State_____ Zip_____

Phone #_____ Email_____ Invoice #_____

Model #_____ Serial #_____ Dealer Name_____ Purchase Date_____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. ***Of course, all information is strictly confidential.***

1. How did you learn about us?

_____ Advertisement _____ Friend ____ Local Store
_____ Mail Order Catalog _____ Website ____ Other:

2. How long have you been a woodworker/metalworker?

_____ 0-2 Years _____ 2-8 Years ____ 8-20 Years _____ 20+ Years

3. How many of your machines or tools are Shop Fox?

_____ 0-2 _____ 3-5 ____ 6-9 _____ 10+

4. Do you think your machine represents a good value? _____ Yes ____ No

5. Would you recommend Shop Fox products to a friend? _____ Yes ____ No

6. What is your age group?

_____ 20-29 _____ 30-39 ____ 40-49
_____ 50-59 _____ 60-69 ____ 70+

7. What is your annual household income?

_____ $20,000-$29,000 _____ $30,000-$39,000 ____ $40,000-$49,000
_____ $50,000-$59,000 _____ $60,000-$69,000 ____ $70,000+

8. Which of the following magazines do you subscribe to?

____ Cabinet Maker
____ Family Handyman
____ Hand Loader
____ Handy
____ Home Shop Machinist
____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Modeltec
____ Old House Journal
____ Popular Mechanics
____ Popular Science
____ Popular Woodworking
____ Practical Homeowner
____ Precision Shooter
____ Projects in Metal
____ RC Modeler
____ Rifle
____ Shop Notes
____ Shotgun News
____ Today's Homeowner
____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

9. Comments:_____

_____

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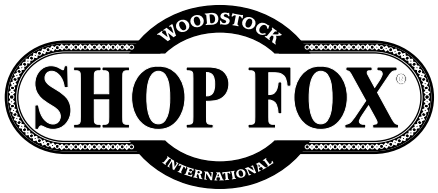
CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

Place
Stamp
Here



WOODSTOCK INTERNATIONAL INC.
P.O. BOX 2309
BELLINGHAM, WA 98227-2309

FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.’s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.’s liability under this limited warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We are commited to continuously improving the quality of our products, and reserve the right to change specifications at any time.

High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:

BROSEM® PRECISION STOP BLOCK

THE REBEL®

BOARD BUDDIES®

PLANER PAL®

SLICKPLANE®

ACCU-SHARP®

ROMAN CARBIDE®

JOINTER PAL®

DURASTICK®

SOUTH BEND™

STEELEX® FINE TOOLS

STEELEX® PLUS

Rotacator®

Gutmann®

Junglee®

PARROT VISE®

PRO-STIK® ABRASIVE BELT & DISC CLEANER

Aluma-Classic®

WOODSTOCK SHOP FOX® INTERNATIONAL

WHOLESALE ONLY

WOODSTOCK INTERNATIONAL, INC.

Phone: (360) 734-3482 · Fax: (360) 671-3053 · Toll Free Fax: (800) 647-8801

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