WOODSTOCK

SHOP FOX®

INTERNATIONAL

MODEL W1701
1½ HP SHAPER

C US
208624

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 10/16)

Phone: (360) 734-3482 • E-Mail: tech-support@shopfox.biz

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⚠ 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.

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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

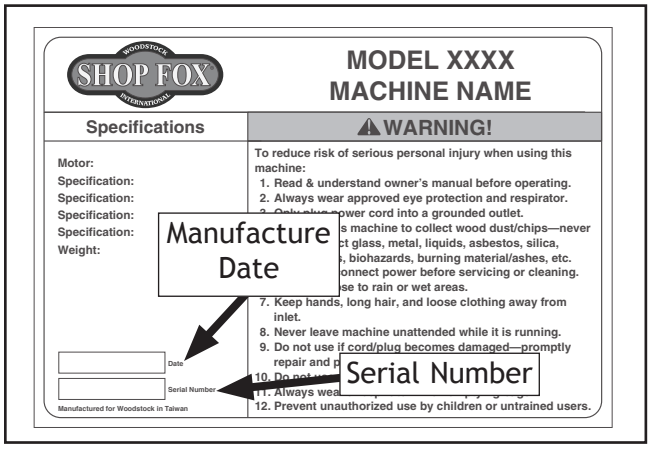
Manual Accuracy

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**.

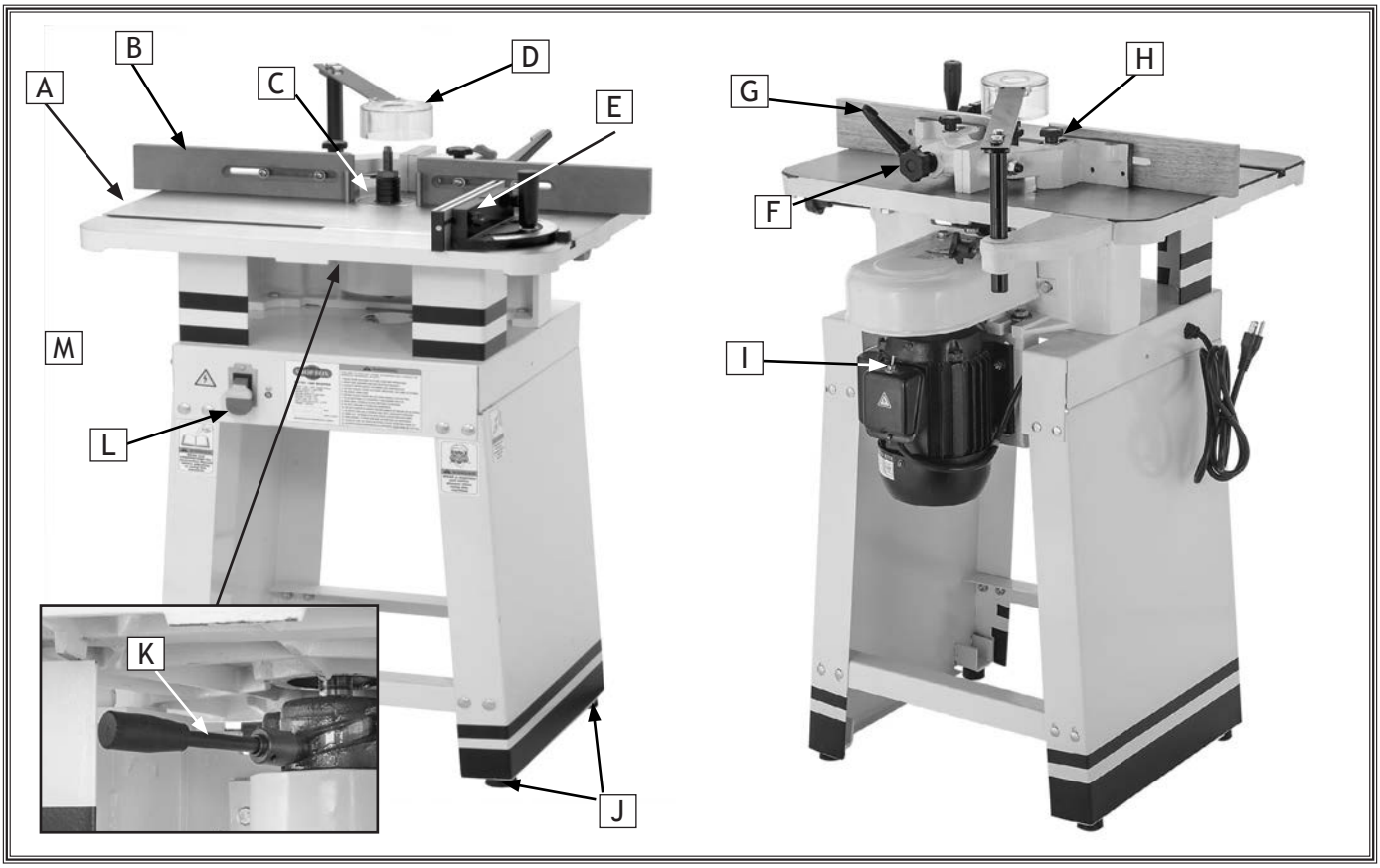
If you find this to be the case, and the difference between the manual and machine leaves you confused about a procedure, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.woodstockint.com**.

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.



Identification

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



A. Work Table
B. Fence (1 of 2)
C. Spindle Assembly
D. Cutterhead Guard
E. Miter Gauge
F. Fence Offset Knob
G. Fence Offset Lock Lever
H. Fence Lock Knob (1 of 2)
I. FOR/REV Switch
J. Adjustable Feet
K. Spindle Elevation Lever
L. ON/OFF Paddle Switch w/Key

⚠WARNING

For Your Own Safety Read Instruction Manual Before Operating Shaper

a) Wear eye protection.
b) Always keep cutterhead guard in place and in proper operating condition.
c) Be sure keyed washer is directly under spindle nut and spindle nut is tight
d) Feed workpiece AGAINST rotation of cutter.
e) Keep fingers away from revolving cutter-use fixtures when necessary.
f) Do not use awkward hand positions.

Controls & Components

Refer to the **Figures 1-3** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

ON/OFF Paddle Switch w/Key: Turns machine ON and OFF.

Starting Pin (not shown): Supports workpiece at beginning of freehand cuts until workpiece contacts rub collar (refer to **Page 30**).

Spindle Elevation Lever: Raises and lowers cutter to desired height.

Fence Offset Knob: Adjusts fence alignment.

Fence Offset Lock Lever: Locks fence alignment setting.

Carriage Lock Knobs: Tighten to lock fence position on table. Loosen to allow entire fence assembly to move front to back on either side of cutterhead opening.

Guard Support Arm: Supports cutterhead guard.

Forward/Reverse (FOR/REV) Switch: Changes spindle direction for specific work applications. Switch is located on motor junction box.

Cutterhead Guard: Adjusts to protect user from chips thrown by cutterhead and allows for a clear view of the workpiece cutting area.

Fence: Each fence is independently adjustable side-to-side, front to back, removable for freehand shaping, and made of wood for tighter tolerances with cutterhead.

Miter Gauge: Supports workpiece for controlled straight or angled cuts as it slides along the work table miter slot.

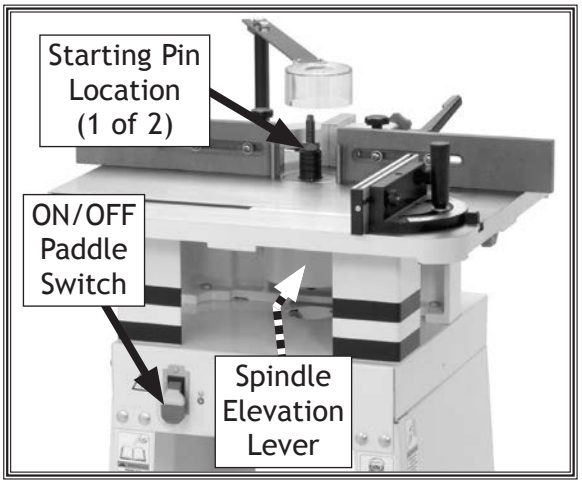


Figure 1. Work area components (front).

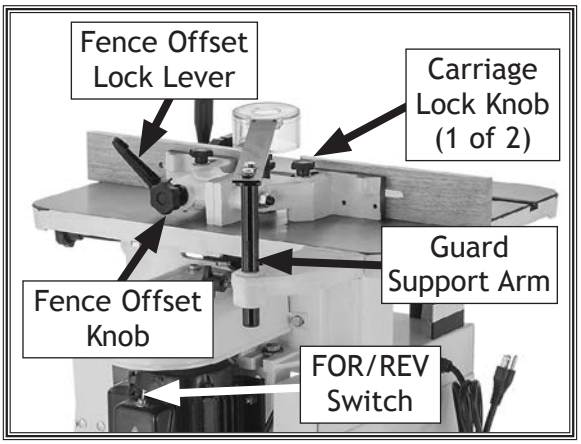


Figure 2. Work area components (rear).

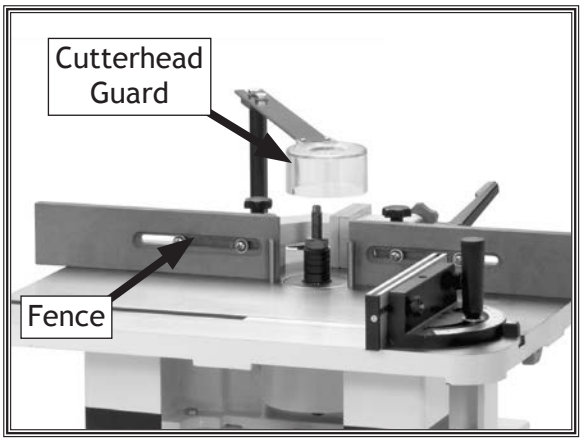


Figure 3. Work area components.

MACHINE SPECIFICATIONS

MODEL W1701
1.5 HP SHAPER

Product Dimensions

Weight	167 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	27 x 23 x 40-1/4 in.
Footprint (Length x Width)	16-5/8 x 18-7/8 in.

Shipping Dimensions

Type	Cardboard Box
Content	Machine
Weight	195 lbs.
Length x Width x Height	27 x 28 x 23 in.

Electrical

Power Requirement	120V/240V, Single-Phase, 60 Hz
Prewired Voltage	120V
Full-Load Current Rating	15A at 120V, 7.5A at 240V
Minimum Circuit Size	20A at 120V, 15A at 240V
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	6 ft.
Power Cord Gauge	14 AWG
Plug Included	Yes
Included Plug Type	5-15 for 120V
Recommended Plug Type	6-15 for 240V
Switch Type	Push Button ON/OFF Switch

Motors

Main

Type	TEFC Capacitor-Start Induction
Horsepower	1.5 HP
Phase	Single-Phase
Amps	15A/7.5A
Speed	3450 RPM
Power Transfer	Belt Drive
Bearings	Sealed & Permanently Lubricated

Main Specifications

Operation Info

Max. Cutter Height	2-1/2 in.
Max. Cutter Diameter	2-7/8 in.
Spindle Sizes	1/2 in.
Spindle Lengths	3 in.
Exposed Spindle Length	2-1/2 in.
Spindle Cap. Under the Nut	2-3/8 in.
Spindle Speeds	13,200 RPM
Spindle Travel	7/8 in.
Spindle Openings	1-3/8, 1-3/4, 3 in.

Table Info

Number of Table Inserts	2
Table Insert Sizes I.D.	1-3/8, 1-3/4 in.
Table Insert Sizes O.D.	3 in.
Table Counterbore Diameter	3 in.
Table Counterbore Depth	5/16 in.
Table Size Length	24 in.
Table Size Width	19 in.
Table Size Thickness	1-1/8 in.
Floor to Table Height	34-1/4 in.
Table Fence Length	26 in.
Table Fence Width	1/2 in.
Table Fence Height	2-3/4 in.

Miter Gauge Info

Miter Angle	0 – 60 deg. L/R
Miter Gauge Slot Type	Straight Slot
Miter Gauge Slot Width	3/4 in.
Miter Gauge Slot Height	7/16 in.

Construction

Table	Precision-Ground Cast Iron
Base	Pre-Formed Steel
Body Assembly	Cast Iron
Fence	Cast Iron with Wood
Miter Gauge	Plastic
Guard	Plastic
Spindle Bearings	Shielded & Permanently Lubricated
Paint Type/Finish	Powder Coated

Other

Mobile Base	D2260A

Other

Country of Origin	China
Warranty	2 Years
Approximate Assembly & Setup Time	1-1/2 Hours
Serial Number Location	ID Label on Stand
ISO 9001 Factory	No
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

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 Shapers

Serious cuts, amputation, entanglement, or death can occur from contact with rotating cutter. Cutters or other parts improperly secured to spindle can fly off and strike nearby operators with great force. Flying debris can cause eye injuries or blindness. To minimize risk of getting hurt or killed, anyone operating shaper MUST completely heed hazards and warnings below.

AVOIDING CUTTER CONTACT: Keep unused portion of cutter below table. Use smallest table insert possible. Adjust fences and guards as close as practical to cutter, or use a zero-clearance fence or box guard. *Always keep some type of guard or other protective device between your hands and cutter at all times!*

PROTECT HANDS/FINGERS: While feeding workpiece, avoid awkward hand positions. Never pass hands directly over or in front of cutter. As one hand approaches a 6-inch radius point from cutter, move it in an arc motion away from cutter, and reposition it on the outfeed side.

FEEDING WORKPIECE: To reduce risk of accidental cutterhead contact, always use push blocks or some type of fixture, jig, or hold-down device to safely feed workpiece while cutting. Use an outfeed support table if shaping long workpieces to ensure proper support throughout entire cutting procedure. ALWAYS feed workpiece AGAINST rotation of cutter. NEVER start shaper with workpiece contacting cutter!

CUTTING DEPTH: Never attempt to remove too much material in one pass. Doing this increases risk of workpiece kickback. Instead, make several light passes—this is a safer way to cut and it leaves a cleaner finish.

WORKPIECE CONDITION: Shaping a workpiece with knots, holes, or foreign objects increases risk of kickback and cutter damage/breakage. Thoroughly inspect and prepare workpiece before shaping. Always "square up" a workpiece before shaping or flatten workpiece edges with a jointer or planer. Rough, warped, or wet workpieces increase risk of kickback.

SAFETY GUARDS. To reduce risk of unintentional contact with cutter, always ensure included cutter guard, or a properly dimensioned box guard, or some other type of guard is installed and correctly positioned before operation.

CUTTER POSITIONING: Whenever possible, make shaping cuts with cutter on *underside* of workpiece to reduce operator exposure to cutter.

SMALL WORKPIECES: There is a high risk of accidental cutter contact with small workpieces, because they are closer to cutter and more difficult to control. To reduce your risk, only feed small workpieces using jigs or holding fixtures that allow your hands to maintain a safe distance from cutter. When possible, shape longer stock and cut to size.

SAFE CUTTER CLEARANCES: Operator or bystanders may be hit by flying debris if cutter contacts fence, guard, or table insert upon startup. Always ensure any new cutter setup has proper cutter rotational clearance—before starting shaper or reconnecting it to power.

SAFE CUTTER INSTALLATION: Improperly secured knives/inserts, cutters, or rub collars may become dangerous projectiles if they come loose. Always ensure keyed washer is directly under spindle nut and spindle nut is tight. If spindle does not use a keyed washer, always use two spindle nuts together, and ensure BOTH are tight. Never use cutters/bits rated for an RPM lower than spindle speed.

AVOIDING CLIMB CUTS: Feeding workpiece in same direction of cutter rotation is a "climb cut." Climb cutting can aggressively pull workpiece—and hands—into cutter. Always first verify direction of cutter rotation before starting, and always feed workpiece AGAINST cutter rotation.

CONTOUR SHAPING: To reduce risk of unintentional cutter contact while freehand shaping or using a rub collar as a guide (no fence), always use an overhead or "ring" type guard. To reduce kickback risk, always use starting pin or pivot board when starting the cut. NEVER start shaping at a corner!

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 120V ..... 15 Amps
Full-Load Current Rating at 240V ..... 7.5 Amps

Circuit Requirements for 120V (Prewired)

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

Circuit Type ..... 110V/115V/120V, 60 Hz, 1-Phase
Circuit Size ..... 20 Amps
Plug/Receptacle ..... NEMA 5-15

Circuit Requirements for 240V

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

Circuit Type ..... 208V/220V/230V/240V, 60 Hz, 1-Phase
Circuit Size ..... 15 Amps
Plug/Receptacle ..... NEMA 6-15

⚠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 120V Connection (Prewired)

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.

For 240V Connection (Must Be Rewired)

This machine is equipped with a power cord that has an equipment-grounding wire and NEMA 6-15 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.

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 120V ..... 12 AWG
Minimum Gauge Size at 240V ..... 14 AWG
Maximum Length (Shorter is Better).....50 ft.

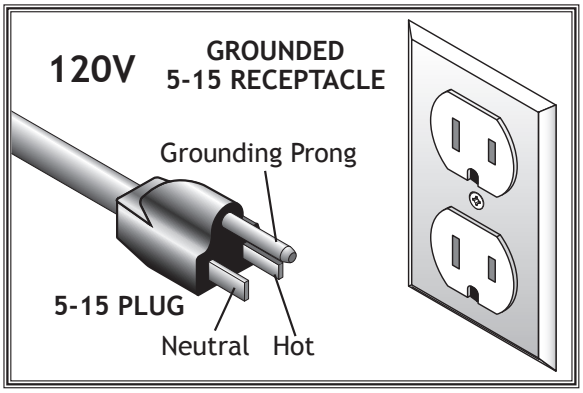


Figure 4. NEMA 5-15 plug & receptacle.

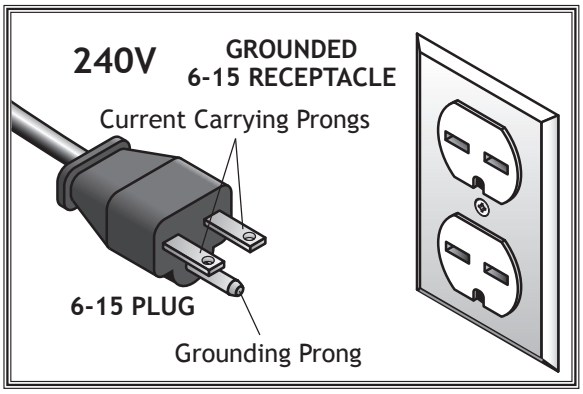
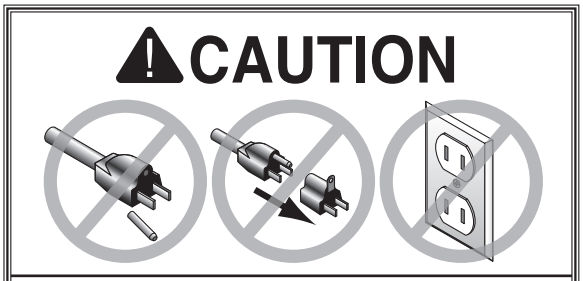


Figure 5. NEMA 6-15 plug & receptacle.



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.

SET UP

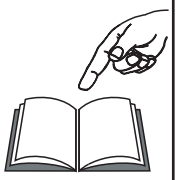
Unpacking

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
• Precision Level	1
• Safety Glasses (for each person)	1
• Solvent/Cleaner	1
• Shop Rags	1
• Another Person	1
• Wood Blocks 4 x 4 x 20"	2
• Wrench or Socket 13mm	1
• Open-End Wrench 8mm	1
• Open-End Wrench 14mm	1
• Phillips Head Screwdriver #2	1



⚠WARNING

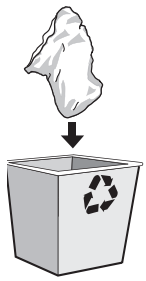
This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠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.



⚠WARNING

SUFFOCATION HAZARD!

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

Inventory List

The following is a description of the main components shipped with the **SHOP FOX®** Model W1701. Lay the components out to inventory them, and refer to the list below and **Figure 6**.

Main Contents	**Qty**
A. Shaper Unit	1
B. Stand Bolt Bag	1
— Carriage Bolts 5/16"-18 x 1/2"	16
— Flat Washers 3/8"	16
— Hex Nuts 5/16"-18	16
C. Stand Side Panels	2
D. Fence Assembly	1
E. Table Inserts 1-3/8", 1-3/4"	1
F. Wrench 8/10mm	1
G. Wrench 12 x 14	1
H. Wrench 22/24mm	1
I. Wrench 26mm	1
J. Wrench 27/30mm	1
K. Router Bit Collets 1/4", 1/2" & Nut	1 Ea
L. Fence Faces	2
M. Guard	1
N. Fence Lock Studs 5/16"-20	2
O. Guard Mounting Post	1
P. Guard Attachment Bar	1
Q. Miter Gauge Assembly	1
R. Tie Bars	2
S. Knob and Fence Bolt Bag	1
— Star Knobs M8-1.25	2
— Fender Washers 8mm	2
— Hex Bolts M8-1.25 x 12	2
— Phillips Head Screws M8-1.25 x 20	4
— Flat Washers 8mm	6
— Phillips Head Screws M4-.7 x 10	2
— Hex Nuts M4-.7	2
T. Table Spacer Kit	1
— Hex Bolt M12-1.75 x 30	2
— Hex Bolt M12-1.75 x 40	5
— Lock Washer 12mm	7
— Spacer 1/2"	7

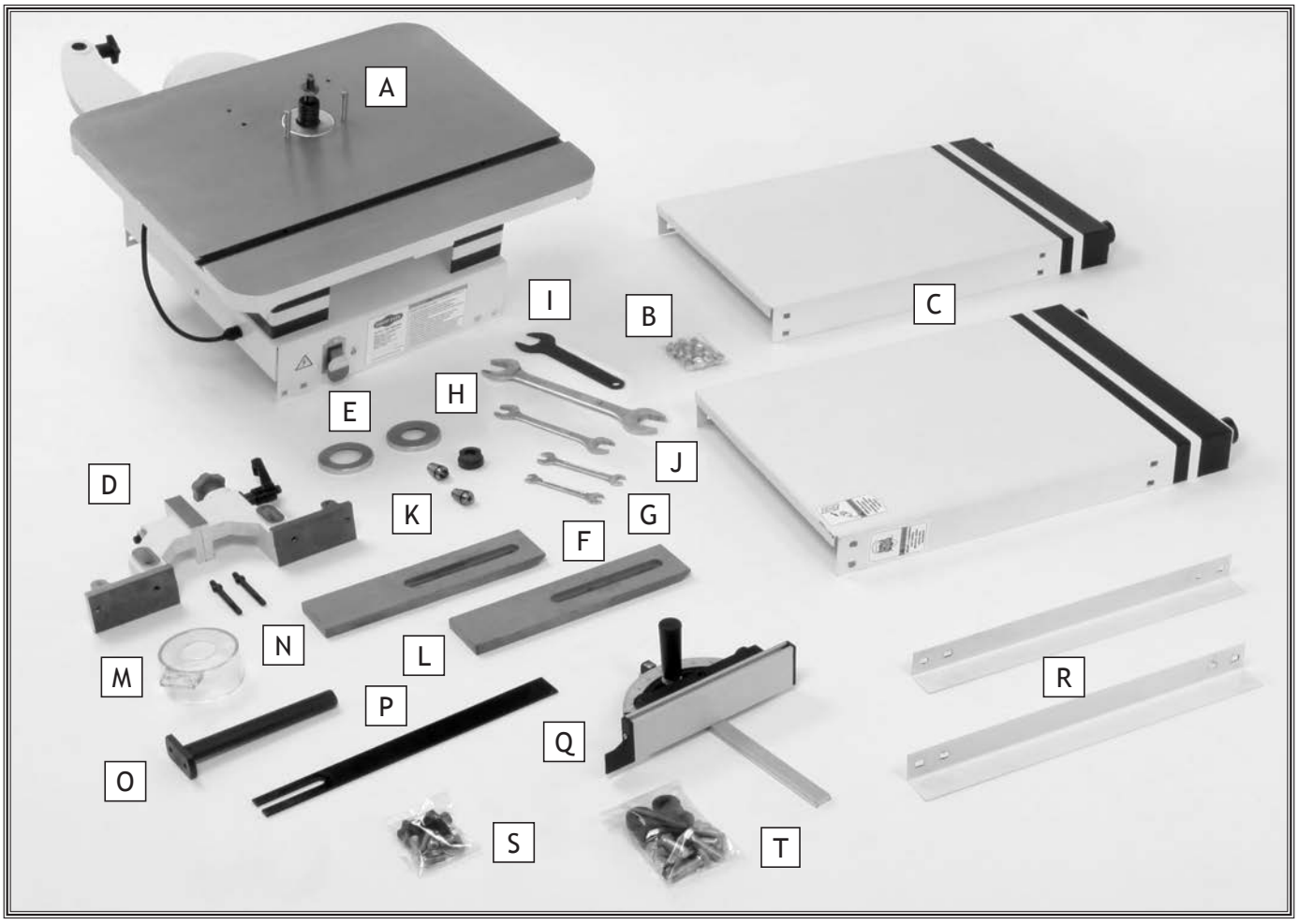
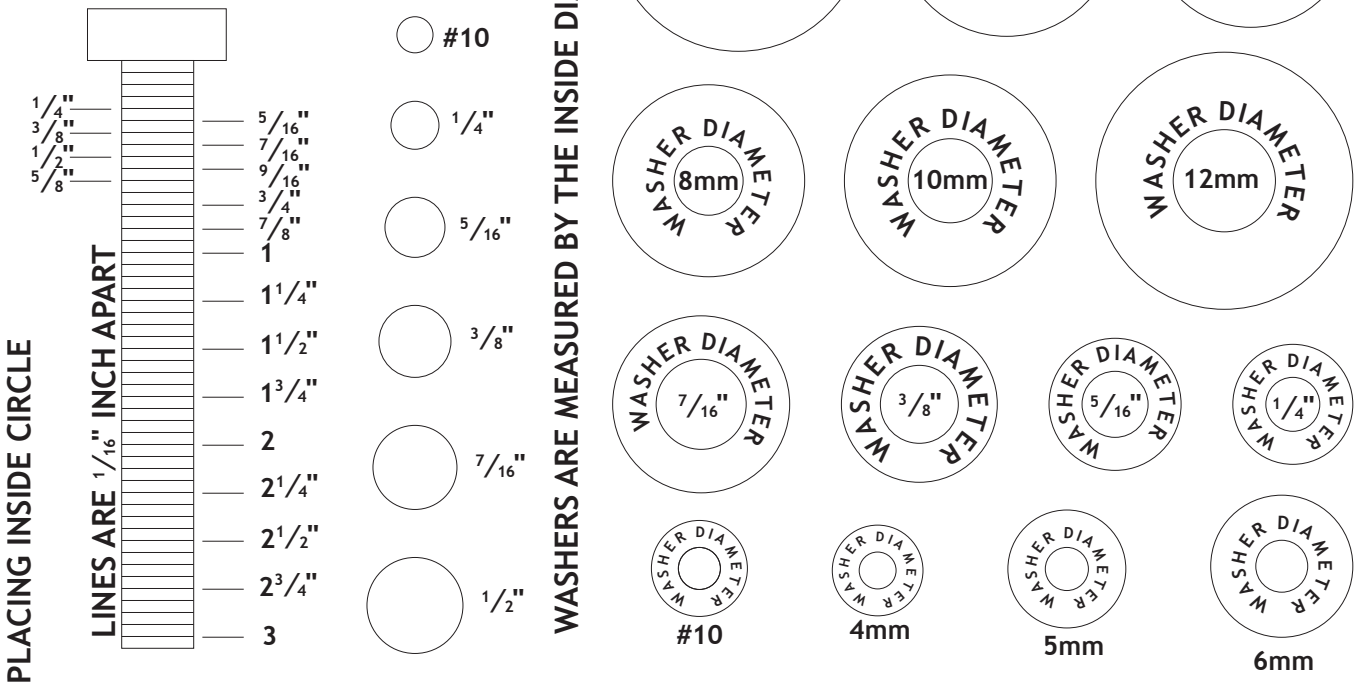
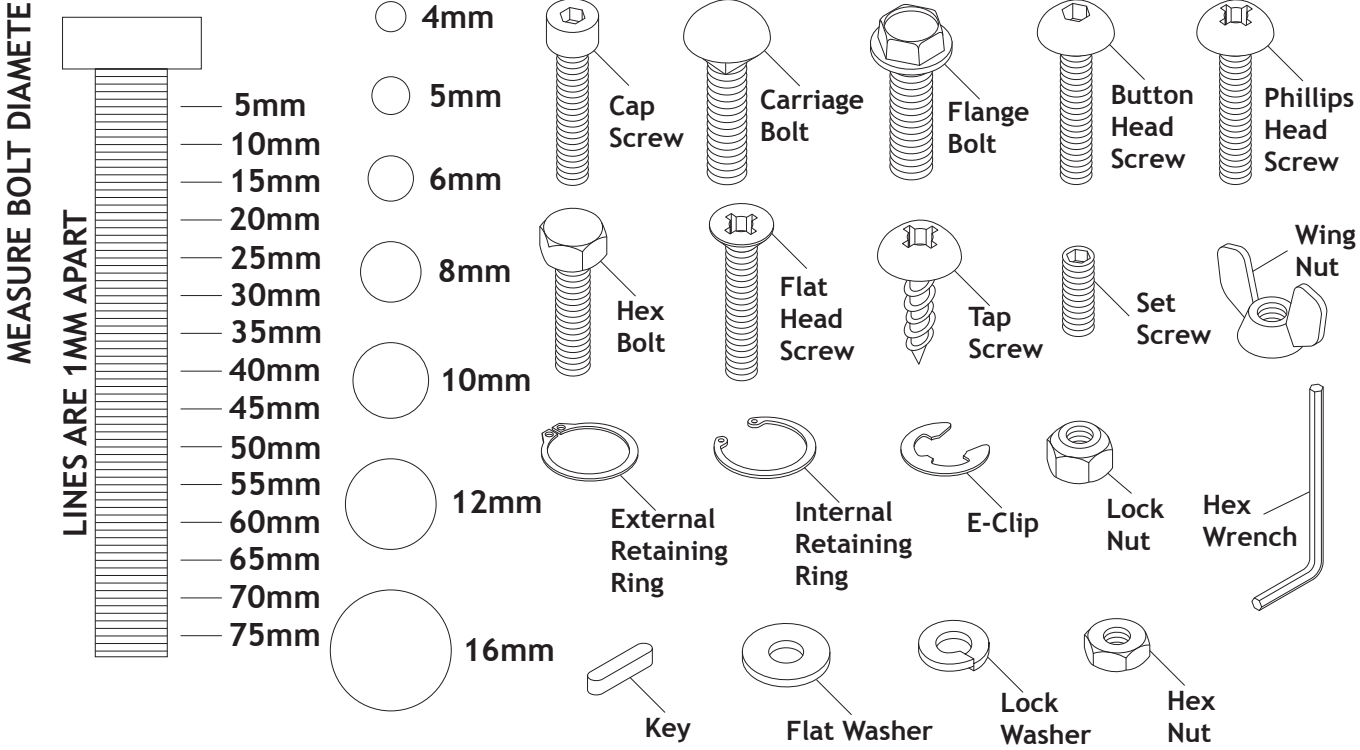


Figure 6. Component layout.

Hardware Recognition Chart

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





Cleaning Machine

To prevent corrosion during shipment and storage of your machine, the factory has coated the bare metal surfaces of your machine with a heavy-duty rust prevention compound.

If you are unprepared or impatient, this compound can be difficult to remove. To ensure that the removal of this coating is as easy as possible, please gather the correct cleaner, lubricant, and tools listed below:

- Cleaner/degreaser designed to remove storage wax and grease
- Safety glasses & disposable gloves
- Solvent brush or paint brush
- Disposable Rags

To remove rust preventative coating, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Put on safety glasses and disposable gloves.

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

4. Wipe off surfaces. If your cleaner/degreaser is effective, the coating will wipe off easily.

   Tip: An easier way to clean off thick coats of rust preventative from flat surfaces is to use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or you may scratch your machine.)

5. Repeat cleaning steps as necessary until all of the compound is removed.

6. To prevent rust on freshly cleaned surfaces, immediately coat with a quality metal protectant.

⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery. Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

NOTICE

In a pinch, automotive degreasers, mineral spirits or WD•40 can be used to remove rust preventative coating. Before using these products, though, test them on an inconspicuous area of your paint to make sure they will not damage it.

Machine Placement

Weight Load

Refer to the **Machine Specifications** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

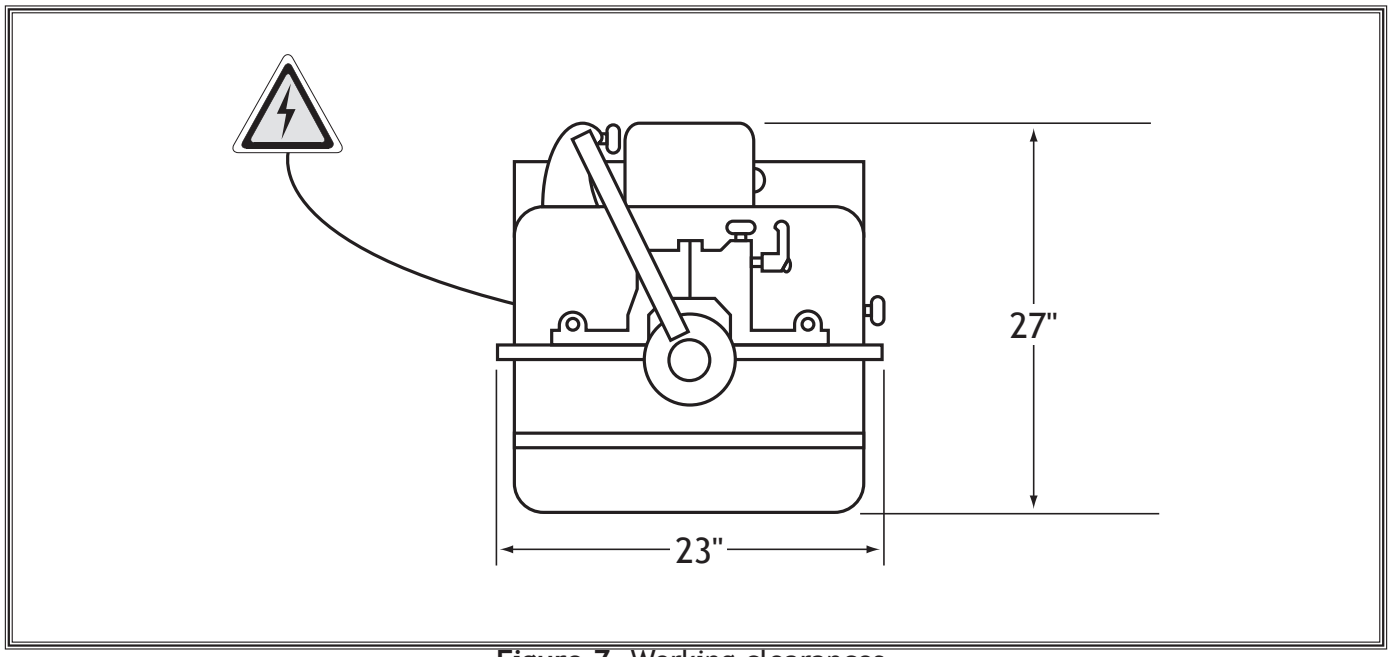


Figure 7. Working clearances.

Assembly

⚠CAUTION

LACERATION HAZARD!

Inspect edges of all metal parts before handling them. Some metal parts may have sharp edges, which can cause injury.

To assemble machine, do these steps:

1. Lay one stand side on the ground and attach the cross bars with the 8mm carriage bolts, 3/8" washers, and 8mm hex nuts as shown in **Figure 8.** DO NOT fully tighten the nuts and bolts at this time.

2. Attach the second stand side to the assembly.

   Note: *At this point, the assembly will be somewhat wobbly. Have an assistant hold the assembly in place while you attach the nuts and bolts.*

3. Place the shaper table upside down on two sturdy blocks that are at least 3 1/2" off the ground as shown in **Figure 9**. Make sure the spindle DOES NOT touch the ground or the weight of the shaper may damage the spindle.

4. Place the stand assembly on the shaper and attach it with the 8mm carriage bolts, 3/8" washers, and 8mm hex nuts as shown in **Figure 9**.

5. Have an assistant help you turn the shaper unit over.

6. Level the shaper, then tighten all of the assembly bolts on the stand.

NOTE: *Sheet steel will often "spring" after it has been fabricated at the factory, occasionally making it difficult to line up precisely with other parts without a bit of effort. Do not be surprised if the stand requires a bit of "persuasion" to fit together. On the other hand, if the parts just do not seem to work together, try switching parts around (such as the tie bars).*

7. Using the 5/16"-20 x 3/4" Phillips head screws, and 5/16" washers, install each fence facing to the fence mount brackets as shown in **Figure 10.**

Figure 8. Attaching cross bars to stand side.

Figure 9. Attaching stand to shaper unit.

Figure 10. Installing fence facing.

8. For custom fence facing, make sure the screw heads are countersunk completely below the surface of the fence face.

9. Connect the safety guard bar to the safety guard shaft with two M8-1.25 x 12 bolts and the 8mm flat washers. See **Figure 11**.

10. Connect the safety guard to the safety guard bar with two M4-0.7 x 12 Phillips® head screws and the M4-0.7 nuts. See **Figure 11**.

11. Position the extension bar and safety guard on the main fence housing and install the T-lock handle. See **Figure 11**.

12. Position the guard as close as possible to the spindle/cutter without impeding the feeding path of the workpiece.

13. Place an 8mm open-end wrench on top the spindle (see **Figure 12**).

14. Using a 14mm open-end wrench on the drawbar nut, (**Figure 13**), make sure the drawbar nut is tight, but **DO NOT** over-tighten the drawbar nut.

Note: *This is an important safety measure that must be done before the **Test Run** on the next page.*

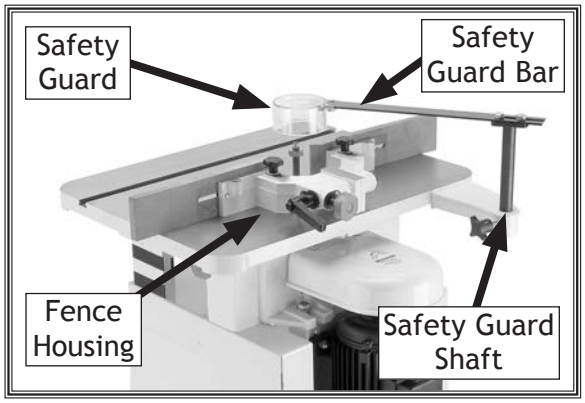


Figure 11. Guard and fence assembly.

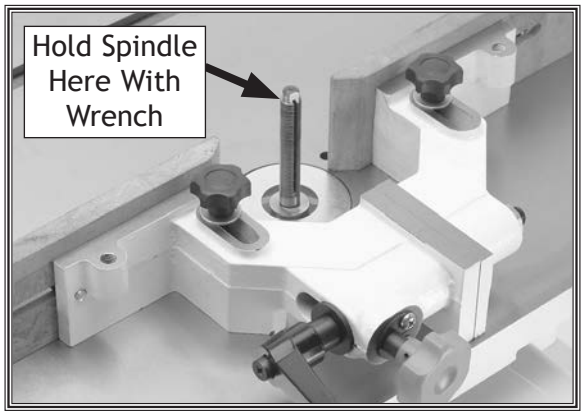


Figure 12. Location for wrench on spindle.

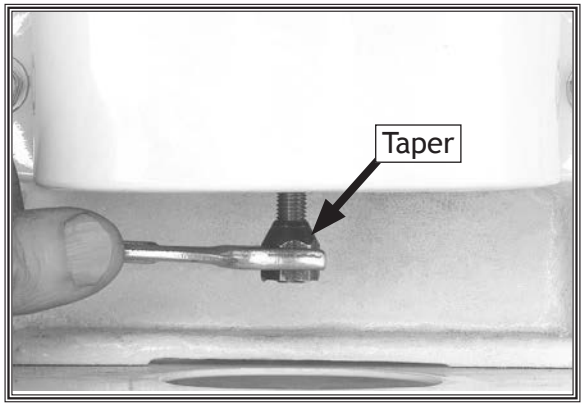


Figure 13. Threading on drawbar nut with the tapered end up.

⚠WARNING

Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses during the test run!

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. Clear all setup tools away from machine.
2. Connect machine to power supply.
3. Turn machine ***ON***, verify motor operation, then turn machine ***OFF***. The motor should run smoothly and without unusual noises.
4. Flip spindle forward/reverse switch (located on motor junction box) to the REV position.
5. Turn machine ***ON***, verify motor operation, then turn machine ***OFF***. The motor should run smoothly in reverse, and without unusual noises.
6. Return spindle rotation switch to FOR position.
7. Remove ON/OFF switch disabling key (see **Figure 14**).
8. Try to start machine with paddle switch. The machine should not start.

   — If machine *does not* start, the switch disabling feature is working as designed.

   — If machine *does* start, immediately stop the machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

⚠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.

⚠WARNING

Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses during the test run!

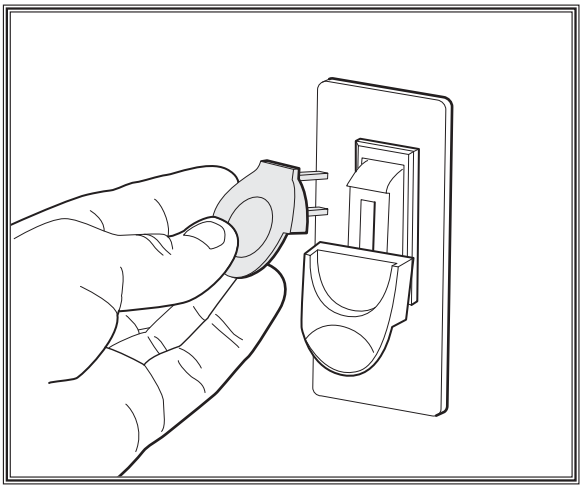


Figure 14. Removing switch key from paddle switch.

OPERATIONS

General

This machine will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine!

The overview below provides 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 its generic nature, this overview is **NOT** intended to be an instructional guide.

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

1. Examines workpiece to make sure it is suitable for shaping.
2. Chooses, installs, and adjusts shaper cutter or router bit to desired height; adjusts fence to desired position then locks it in place.
3. Checks outfeed side of machine for proper fence support and to make sure workpiece can safely pass through cutter/bit without interference.
4. Removes any clothing, apparel, or jewelry that may become entangled in shaper; puts on safety glasses, respirator, and hearing protection.
5. Turns machine ***ON***.
6. Verifies cutter rotation and feed direction.
7. Feeds workpiece through the cut while maintaining firm workpiece pressure against both table and fence, while always keeping hands and fingers out of the cutting path.
8. Turns 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 not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Shop Fox will not be held liable for accidents caused by lack of training.

Cutters vs. Router Bits

When shipped, the Model W1701W is set up for using shaper cutters. However, if you plan on using router bits, you must first convert the Model W1701W to a router table. To convert your shaper to a router table, refer to **Page 38**.

If you're not sure which type of cutting tools you will use, read below for the pros and cons of both.

Shaper Cutters

Pros—Shaper cutters are larger, more durable, and generally last longer than router bits. If you plan on cutting many linear feet of a certain profile, then shaper cutters are the best choice.

Cons—Shaper cutters are much more expensive than router bits, and they are typically too large for small projects.

Router Bits

Pros—Router bits are cheaper than shaper cutters and come in a wider range of profiles and sizes. If you plan on making small projects that do not require many linear feet of cutting, then router bits are the best choice.

Cons—Router bits are not as durable as shaper cutters, and they are typically designed to be operated faster than this machine can operate.

Figure 15. Shaper cutter installed on spindle.

Figure 16. DC1822 Router Bit Set. See **Accessories** on **Page 33** for more router bit set options.

Stock Inspection & Requirements

Here are some rules to follow when choosing and shaping stock:

- **DO NOT shape stock that contains large or loose knots.** Injury to the operator or damage to the workpiece can occur if the knots become dislodged during the cutting operation.
- **Avoid shaping against the grain direction.** Cutting against the grain increases the likelihood of stock kickback, as well as tear-out on the workpiece.
- **Shaping with the grain produces a better finish and is safer for the operator.** Cutting with the grain is described as feeding the stock so the grain points down and toward you as viewed on the edge of the stock.
- **Remove foreign objects from the stock**. Make sure that any stock you process is clean and free of any dirt, nails, staples, tiny rocks or any other foreign objects that may damage the cutter, or create a fire hazard if sparks are created. Wood stacked on a concrete floor may contain small pieces of stone or concrete and should be removed before shaping.
- **Make sure all stock is sufficiently dried before shaping.** Wood with a moisture content over 20% will cause unnecessary wear on cutter and produce poor cutting results.
- **Avoid stock with excessive warping:** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and can move in unpredictable ways when being cut. A workpiece supported on the bowed side will rock during a cut and could cause kickback or severe injury. DO NOT use workpieces with these characteristics!
- **Choosing your material type:** This machine is intended for cutting natural and man-made wood products, laminate covered wood products, and some plastics. Cutting drywall or cementitious backer board creates extremely fine dust and may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a table saw may lead to injury.

WARNING

Turn machine *OFF* and allow cutter to come to a complete stop before making cutter adjustments. Failure to follow this warning could result in serious personal injury.

WARNING

Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses during operation!

Spindle Elevation

Correct spindle height is crucial to most shaping applications. Use a piece of test wood to confirm the correct spindle height before cutting expensive lumber.

To set the spindle height, do these steps:

1. Loosen the spindle lock knob located on the side of the shaper as shown in **Figure 17**.

2. Move the spindle height lever shown in **Figure 18** to raise the spindle or left to lower the spindle.

3. Retighten the spindle lock knob on the side of the shaper. DO NOT over-tighten the knob. Only a small amount of tension is needed to keep the spindle from moving during operation.

Figure 17. Spindle lock knob.

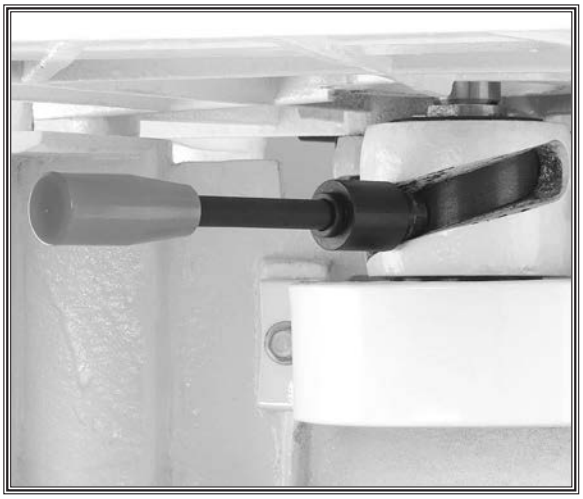


Figure 18. Spindle-height lever.

Spindle Direction

The Model W1701 is capable of operating in two directions by use of the forward and reverse switch shown in **Figure 19**.

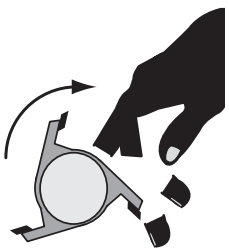
It is very important that the workpiece be fed against the direction of the cutter rotation. This will prevent a climb cut and maintains a safe cutting procedure for the operator.

Most operations are done with the switch in the FWD position. However, there will be times when it is necessary to flip the shaper cutter over and run the spindle in the opposite direction (REV).

- When the switch is pointing to the FWD position, the spindle and cutter rotate counterclockwise.

- When pointing to the REV position, the spindle and cutter rotate clockwise.

Figure 19. Forward and reverse switch.



⚠WARNING

CUTTER CONTACT HAZARD!

Feeding the workpiece in the same direction that the cutter is rotating may result in a climb cut, which can pull your hand into the cutter. Always feed the workpiece AGAINST the direction that the cutter is rotating to reduce this risk.

Fence Positioning

The two fence faces are independently adjustable to allow for different shaping tasks. The fence faces can be set at different positions to remove material from the entire edge of the wood stock or set at the same position to shape part of the edge.

To adjust the fence, do these steps:

1. Loosen the fence mount lock handle shown in **Figure 20**.
2. Adjust the position of the fence by turning the adjustment knob shown in **Figure 20**.
3. Once the fence is in the desired position, tighten down the fence mount lock handle.

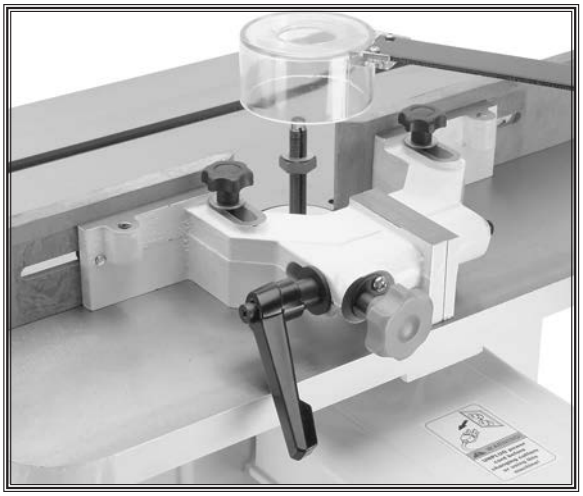


Figure 20. Fence mount lock handle and adjustment knob.

Fence Alignment

Before shaping, check that the two fence faces are parallel.

To align the fences so they are parallel with each other, do these steps:

1. Get a quality straightedge that is long enough to span the entire length of the fence assembly.
2. Adjust the fence faces so they are in as close to the same parallel position as possible.
3. Hold the straightedge across both of the fence faces as shown in **Figure 21**.
4. If the fence faces are not parallel, place shims between the back of the fence face and the face of the fence mount. With some trial and error shim adjusting, parallel fence faces can be achieved.

Figure 21. Use straightedge to check fence.

Table Inserts

Two inserts (**Figure 22**) are provided allowing for three different opening sizes to be achieved. Use the smallest-size opening for a cutter to reduce wood chips falling into the machine. Using the smallest-size opening also covers any unused portion of the bit below the surface of the table, thus reducing the chance of operator injury.

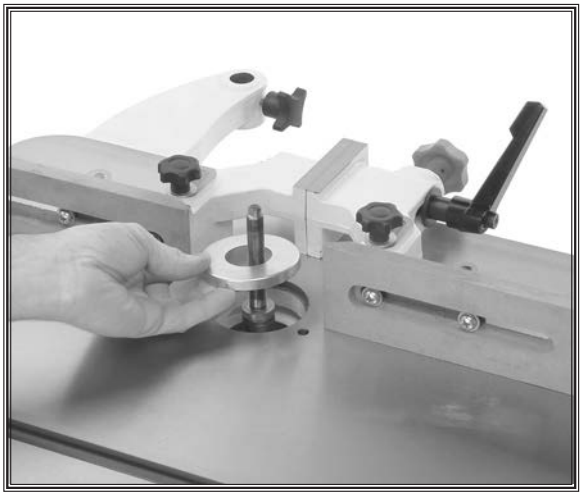
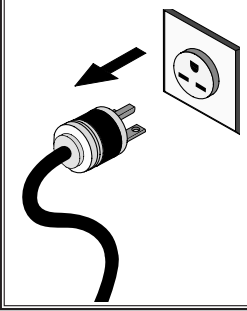


Figure 22. Using table insert to keep wood shavings on the table.

Cutter Installation



⚠WARNING

ACCIDENTAL START-UP HAZARD!
Always disconnect machine before installing or removing any cutting equipment. Performing these procedures while machine is connected to power greatly increases risk of serious injury!

⚠WARNING

CUTTER FLY-APART HAZARD!
Using cutters rated lower than the spindle speed greatly increases the risk that the cutter will fly apart during operation, which may cause very serious injury to the operator and bystanders.

Before installing cutters, you must plan the configuration of rub collars and cutters required for the intended application.

Rub collars limit the depth of cut and are typically used with most cutters, depending on the profile and type of cut being performed.

There are three set up positions for rub collars:

- **ABOVE THE CUTTER** as shown in **Figure 23**. This setup is the safest and produces the most consistent results.

- **BETWEEN TWO CUTTERS** as shown in **Figure 24**. This setup has the advantage of making two profile cuts in a single pass.

- **BELOW THE CUTTER** as shown in **Figure 25**. This setup allows the cut to be viewed by the operator; however, it is also the most dangerous because the operator is exposed to the moving cutter.

  WE DO NOT RECOMMEND SHAPING WITH A RUB COLLAR BELOW THE CUTTER!

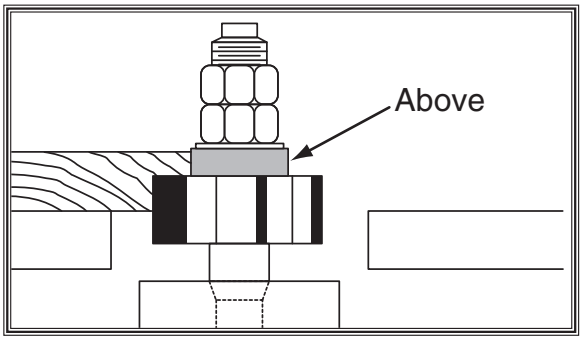


Figure 23. Rub collar mounted above cutter.

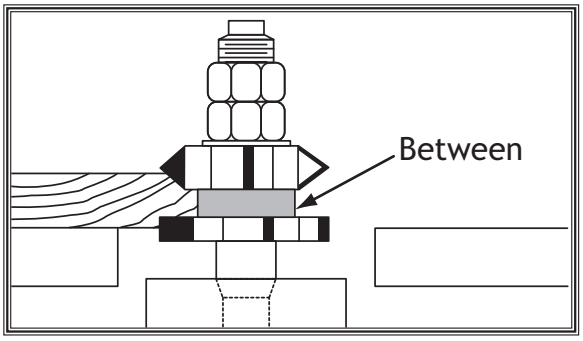


Figure 24. Rub collar mounted between two cutters.

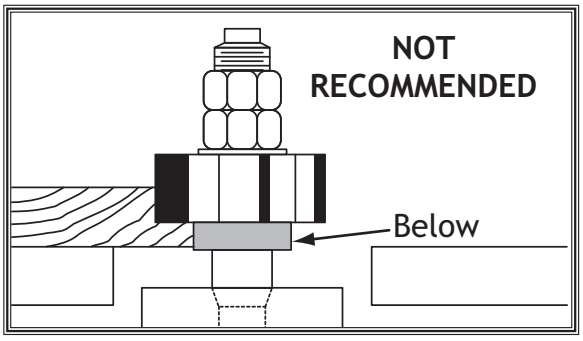


Figure 25. Rub collar mounted below cutter.

To install cutters and rub collars, do these steps:

1. DISCONNECT SHAPER FROM POWER SOURCE!

2. Slide the cutter(s) and rub collars onto the spindle in the correct orientation for your intended cut.

3. Install the keyed safety washer and nut as shown in **Figure 26**.

⚠WARNING

CUTTER FLY-APART HAZARD!

Always use the keyed safety washer! The lock tang on this washer prevents the shaper cutter bit from loosening the spindle nut during operation.

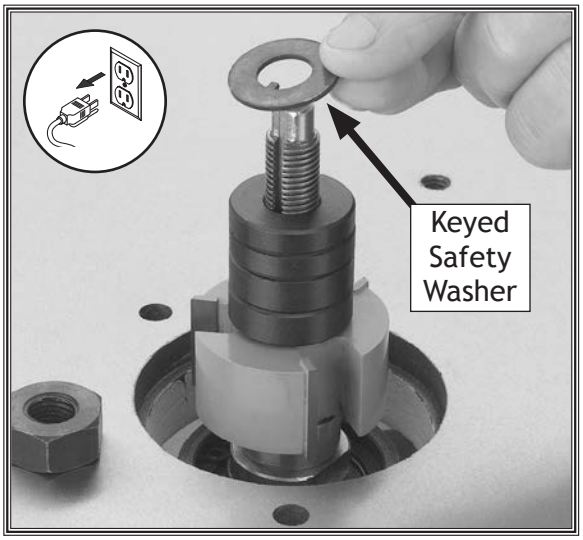


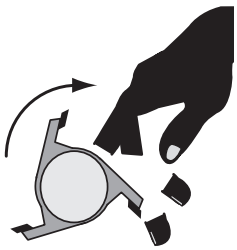
Figure 26. Placing the keyed safety washer.

4. Thread on and tighten down the spindle nut with the provided 23mm wrench, while holding the spindle at the top with an 8mm wrench, as shown in **Figure 27**.

5. Make sure the cutter rotates freely in the correct direction needed for the cut (in most cases this is the FWD direction on the FWD/REV switch, which is counterclockwise on the spindle).

6. Install applicable safety guard(s).

Figure 27. Tightening spindle nut.



⚠DANGER

AMPUTATION/LACERATION HAZARD! Accidental contact with a cutter during operation will remove parts of fingers or large chunks of flesh. A safety guard greatly reduces this risk and must always be used when operating this machine!

Router Bit Installation

Before using router bits, you should convert the shaper to a router table. Refer to **Table Spacer Kit** on **Page 23** to learn how to do this.

The Model W1701 comes with a 1/2" and 1/4" router bit collet. When installing router bits, make sure that the router bits are secure before starting the machine. A loose router bit may fly out of the spindle.

To install the router bit collet, do these steps:

1. DISCONNECT SHAPER FROM POWER SOURCE!

2. Push the collet into the collet nut until the off-center lip of the collet nut snaps into the collet groove. See **Figure 28**.

   Note: *This lip and groove pulls the collet from the spindle when the collet nut is removed.*

3. Place the collet nut and collet into the spindle. See **Figure 29**.

4. Finger tighten the collet nut onto the spindle until it is flush with the top of the collet nut.

5. Insert the router bit.

6. Using the 26mm special flat wrench, insert it under the table and hold the spindle stationary (see **Figure 30A**) while using the 30mm wrench to tighten the collet securing the router bit (see **Figure 30B**).

⚠WARNING

An improperly installed or secured router bit and collet may fly out of spindle during operation, which may cause very serious injury to operator and bystanders.

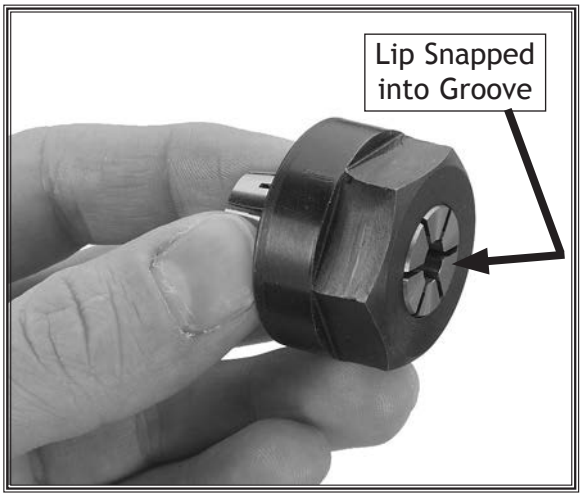


Figure 28. Router bit collet in collet nut.

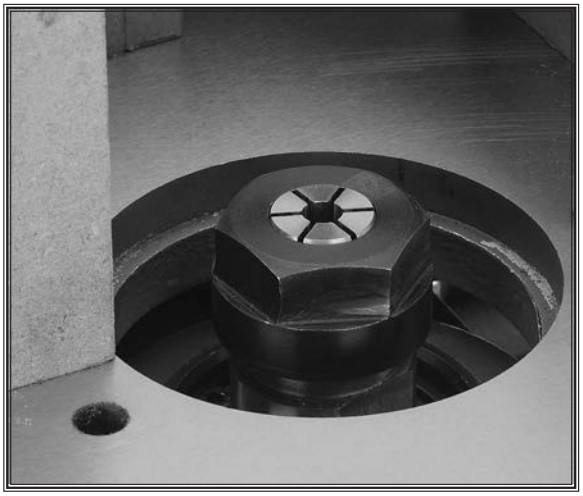


Figure 29. Installed collet flush with top of collet nut.

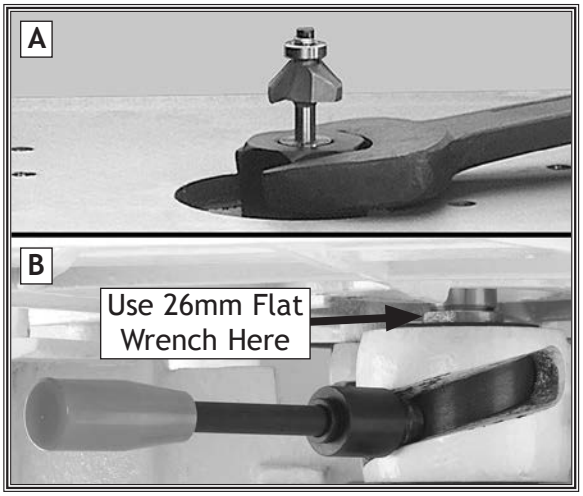


Figure 30. Installing a router bit.

Straight Shaping

Because the shaper fence halves are independently adjustable, you can set up the shaper to cut part or all of the workpiece edge.

Note: *To quickly set the depth of cut, loosen both carriage adjustment knobs and move the fence assembly in or out in relation to the cutter. This positions the fence to allow for the micro-adjustments described below.*

To set up the fence for cutting material from the whole edge of the workpiece, do these steps:

1. Loosen the lock handle (see **Figure 31**).

2. Turn the adjustment knob (see **Figure 31**) located on the back of the fence mount and adjust the infeed fence until the workpiece contacts the cutter at the desired location.

3. Tighten the lock handle and carriage adjustment knob to lock the fence into position.

4. Adjust the outfeed fence so that it is located as far back from the front of the table as possible, then tighten outfeed carriage adjustment knob.

5. Turn the shaper ***ON***.

6. Using a piece of scrap wood, advance the workpiece 8" into the cutter, and turn the machine ***OFF***. DO NOT remove the workpiece from the infeed fence face.

7. Once the cutter has come to a complete stop, adjust the outfeed fence so that it just touches the newly cut edge, as shown in **Figure 32**, and re-tighten the lock handle to secure the fence into position.

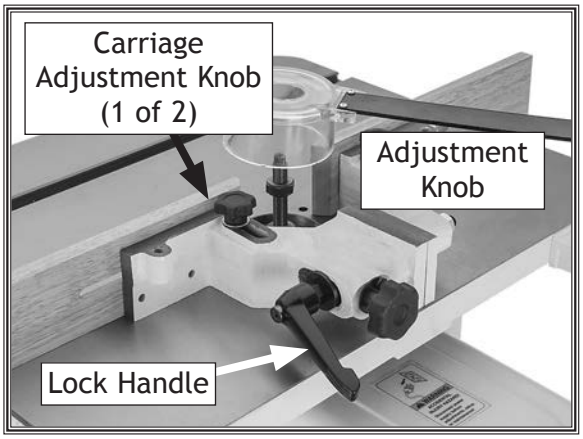


Figure 31. Fence controls.

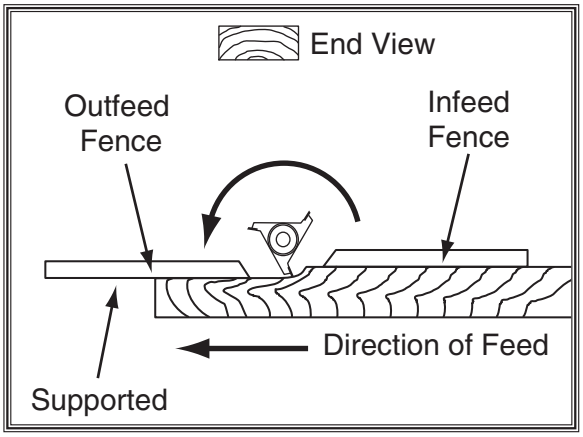


Figure 32. Fence setup for jointing-type operation.

Partial Edge Removal

When removing part of the workpiece edge, it is important to properly align the fence faces to supported the material from the infeed side to the outfeed side of the table (see **Adjusting Fence Parallelism** on **Page 23**).

Also, examine the grain on the side edge of the board. Whenever possible, run the board so the shaper cutters are cutting with the grain, as shown in **Figure 33**. This will minimize the chance of tear-out.

1. Loosen the lock handle (see **Figure 31**) on the side of the fence mount.

2. Turn the adjustment knob and adjust the infeed fence until the workpiece contacts the cutter at the desired location.

3. Tighten the lock handle to secure fence position.

4. Adjust the outfeed fence so that it comes into alignment with the infeed fence, as shown in **Figure 33**.

5. Now place a straightedge against both faces of the fence to check alignment. Once they are both in alignment, make sure the lock handle is tightened.

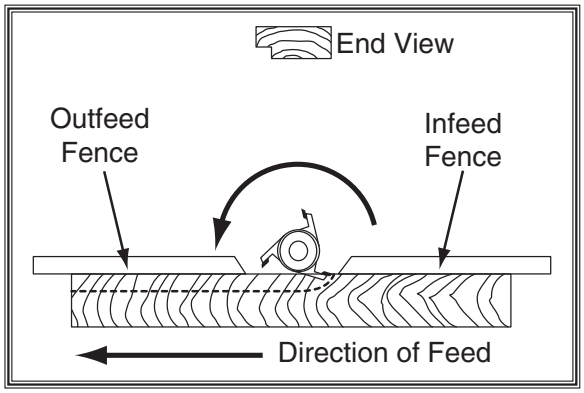


Figure 33. Fence set up for partial-edge removal.

Perimeter Cutting

When a workpiece requires all sides to receive a shaped profile, it is important to begin with the end grain sides before cutting the long grain side. As a cutter approaches the edge of end grain, a small amount of tear-out will commonly occur. By running end grain edges first, the tear-out is removed when the long grain cuts are completed.

Completing cuts in multiple passes (when possible) rather than one heavy cut will often produce cleaner results and can prolong cutter life.

To cut an edge around the workpiece perimeter:

1. Cut the workpiece (sides 1 & 2) with the end grain *first (*see **Figure 34**).

2. Cut the sides *with* grain (sides 3 & 4) last, or in sequence, as shown in **Figure 34**.

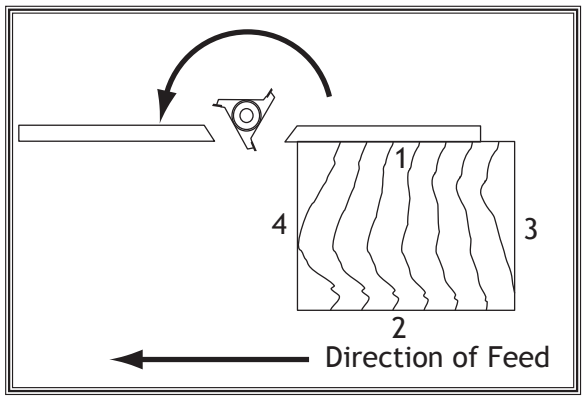


Figure 34. Sequence for shaping an edge around a workpiece.

Template Shaping

The use of templates allows identical parts to be cut with speed and accuracy. Shaping with a pattern begins by attaching a prefabricated template to the rough workpiece. The edge of the template rides against a rub collar on the spindle as the cutter cuts the matching profile on the workpiece edge, as shown in **Figure 35**.

Always perform test cuts on scrap stock to ensure pattern works as required.

Template Construction Tips:

- Use a material that will smoothly follow rub collar, ball bearing, or fence.
- Make sure that screws or clamps will not come into contact with the cutter.
- Design the assembly so that cutting will occur underneath the workpiece.
- Make handles for safety and control.
- Use materials that will move easily across the table surface and rub collar.
- Install hold-down clamps at three sides of the pattern assembly or screw the pattern assembly to the back side of the workpiece.
- Remember, there are tremendous cutting forces involved. Fixtures *must* be solid and stable, and any workpiece must be firmly secured.

⚠WARNING

CUTTER CONTACT HAZARD!

Cutting small or narrow workpieces greatly increases the risk of cutter contact during operation. Use jigs or holding devices when cutting to reduce this risk.

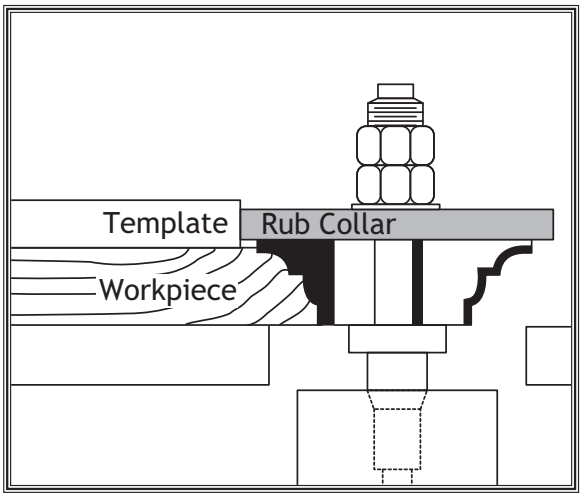


Figure 35. Profile of a template being used.

Freehand Shaping

Freehand shaping is shaping without the aid of the miter slot or fence. The most dangerous part of shaping freehand is beginning the cut, when the cutter first contacts the workpiece. Often the workpiece will tend to jerk or kickback, catching the operator off guard.

To reduce kickback and maintain workpiece control when freehand shaping, always use a starting pin (see **Figure 36**) or starting block (see **Figure 37**) to start shaping cut. The pin/block allows you to maintain workpiece control by anchoring and slowly pivoting the workpiece into the cutter as the cut is started (see **Figure 38**).

⚠WARNING

Freehand shaping often requires you to remove the fence resulting in reduced protection from the cutters. ALWAYS use an auxiliary jig and take extreme care when shaping with the fence removed.

To use a starting pin, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove the fence assembly from the shaper.
3. Insert the starting pin in the best-suited hole on the table so you can feed the workpiece into and against the rotation of the cutter.
4. Install the cutter so it will cut in the correct direction, and adjust the spindle height.
5. Install the safety guard. DO NOT use the shaper without a guard.
6. Use a supplemental hold-down jig like the **SHOP FOX® W1500 Right Angle Jig** shown in **Accessories Section** on **Page 33**. Or you can use rubberized-handle push blocks to support or guide the workpiece and protect your hands.
7. Place the workpiece against the starting pin.
8. Slowly pivot and feed the workpiece into the cutter. Avoid starting the cut on the corner of the workpiece as kickback could occur. Once the cut is started, the workpiece should be pulled away from the starting pin.

Figure 36. Using a starting pin with a hold-down jig to support workpiece.

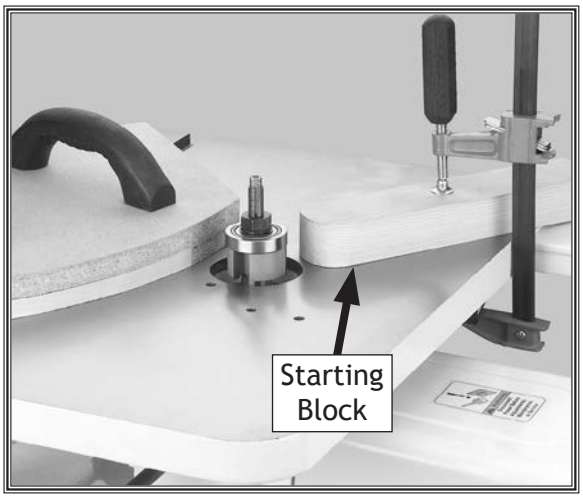


Figure 37. A piece of wood clamped to the table can serve as a starting block.

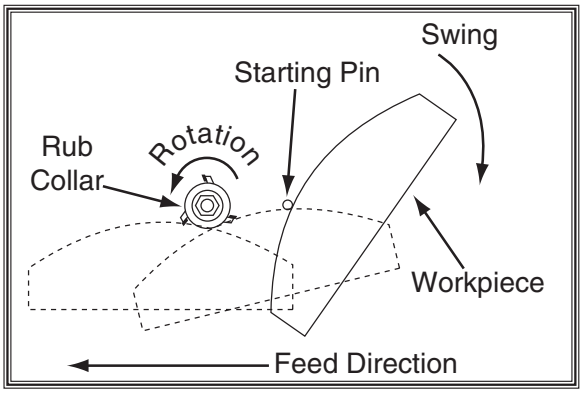


Figure 38. Starting pin operation.

Using Starting Block

Sometimes the starting pin will not be in the most advantageous position. To remedy this situation, firmly clamp a board in the desired position to act as a starting block (see **Figure 39**). Some type of pivot point **MUST** be used.

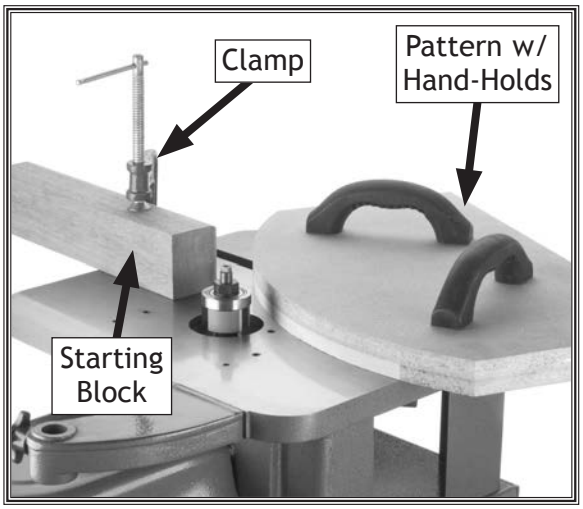


Figure 39. Example of starting block used in place of starting pin.

The purpose of the starting block is to support the workpiece during the beginning of the cut. The workpiece is typically placed in the starting position, using the starting fixture for support, then swung into the cutter while holding the workpiece firmly against the starting fixture. After the cut has been started, the work is swung away from the starting fixture and is supported only by the rub collar. **Always feed AGAINST the rotation of the cutter and do not start cuts at corners in order to avoid kickback or grain tear-out.**

When using a solid rub collar, do not use excessive pressure when running your workpiece through the shaper. Otherwise, a groove may burn into your pattern and be transferred to your workpiece. Instead, take several passes, using lighter pressure against the rub collar. If you find this to be a consistent problem, you may consider using ball bearing rub collars instead of solid collars (see **Accessories** on **Page 33**).

NOTICE

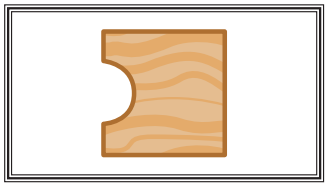
Incorrectly feeding stock—feeding WITH rotation of cutter—creates potentially uncontrollable feed situations that may pull stock from your hands. Follow instructions at all times or serious personal injury can occur.

ACCESSORIES

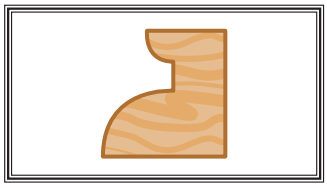
Shaper Accessories

The following shaper 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.

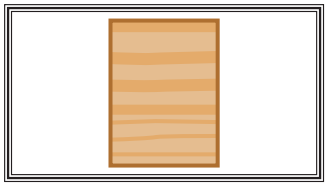
DC2020—1/2" Cove
1/2" Bore, 2" Diameter, 1/2" Cutting Length

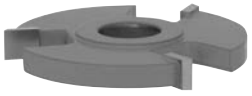
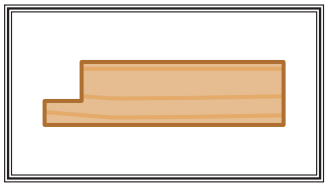
DC2004—1/4" & 1/2" Quarter-Round
1/2" Bore, 2 1/8" Diameter, 11/32" Cutting Length

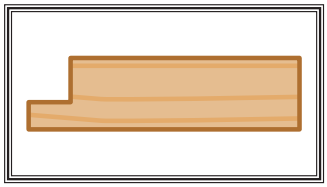
DC2007—1" Straight
1/2" Bore, 2" Diameter, 1" Cutting Length

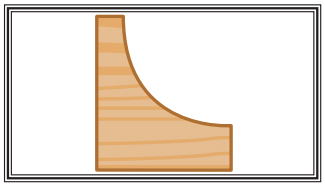
DC2008—1/4" Rabbet
1/2" Bore, 2" Diameter, 1/4" Cutting Length

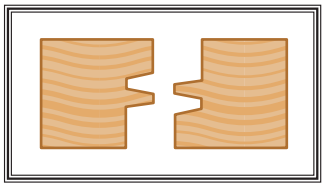
DC2009—1/2" Rabbet
1/2" Bore, 2" Diameter, 1/2" Cutting Length

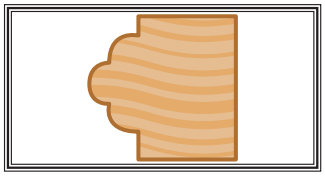
DC2013—Drop Leaf Cove
1/2" Bore, 2 1/8" Diameter, 63/64" Cutting Length

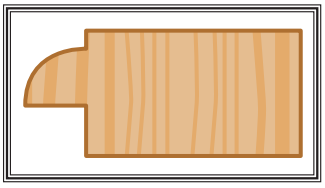
DC2014—Glue Joint
1/2" Bore, 2" Diameter, 1" Cutting Length

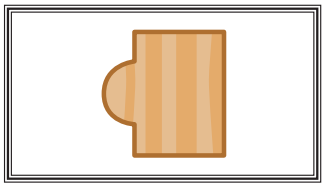
DC2015—Screen Mould
1/2" Bore, 2 1/8" Diameter, 1" Cutting Length

DC2018—Cabinet Door Lip
1/2" Bore, 2" Diameter, 1" Cutting Length

DC2019—1/2" Half-Round
1/2" Bore, 2" Diameter, 3/4" Cutting Length

OPERATIONS

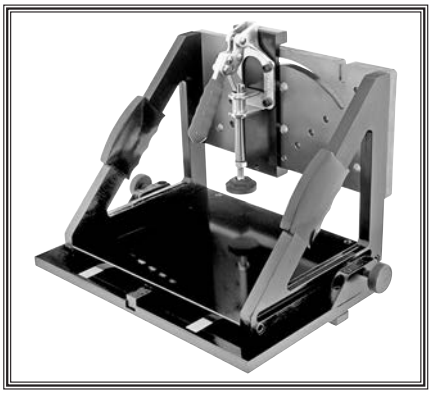
W1159—Spacer 1/2" Bore, 1" OD, 1/4" High
W1160—Spacer 1/2" Bore, 1" OD, 3/8" High
W1161—Spacer 1/2" Bore, 1" OD, 1/2" High
W1162—Spacer 1/2" Bore, 1" OD, 3/4" High
W1163—Spacer 1/2" Bore, 1" OD, 1" High
Spacers allow you to position your shaper cutter anywhere on the spindle. Use them between cutters or stack them above the cutter to bear against the spindle nut. Every shaper owner needs a set of these on-hand.

W1114—3/4" Rub Collar, 1 5/8" Outside Dia.
W1116—3/4" Rub Collar, 1 3/4" Outside Dia.
W1118—3/4" Rub Collar, 1 7/8" Outside Dia.
W1119—3/4" Rub Collar, 2" Outside Dia.
W1120—3/4" Rub Collar, 2 1/8" Outside Dia.
W1122—3/4" Rub Collar, 2 5/8" Outside Dia.
If you do any kind of irregular shaping, rub collars are a must! Rub collars are used for shaping curved work such as cathedral doors, as well as many custom shapes. They are also used for limiting depth-of-cut, like guide bearings on router bits.

D3726—30 Pc. Carbide-Tipped Router Bit Set, 1/4" Shank
These are super sharp, micro-grain carbide tipped bits that are ground up to 800-grit to glide through your cuts. Includes protective wooden case with see-thru, touch latch doors for easy access.

DC1822—20 Pc. Master Set, 1/4" Shank
This is an excellent combination of micro grain carbide-tipped router bits. This set includes twenty of the most popular bits offered by Roman Carbide, all housed in a handsome wooden box. This is an unbelievable buy.

W1500—Right Angle Jig
The SHOP FOX® Right Angle Jig is constructed using top quality aluminum castings and plates which are machined to exacting tolerances. It has the perfect weight-use ratio to dampen vibration, yet is still light enough to easily slide the workpiece through the machining process. Its quality and precision are evident from the first cut. Cut tenons, dados, rail ends, and finger joints safely and with complete accuracy.



MAINTENANCE

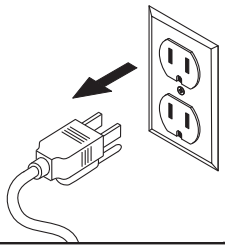
General

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

Ongoing (with each use)
- Loose mounting bolts.
- Vacuum all dust on and around the machine.
- Wipe down table and all unpainted cast-iron components.
- Worn or damaged wires.
- Any other unsafe condition.

Monthly Check
- V-belt tension, damage, or wear.
- Clean/vacuum dust buildup from inside cabinet and off motor.

⚠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 cast-iron table top is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it.

Protect the unpainted cast-iron table by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep your table rust-free with regular applications of quality lubricants.

Lubrication

Since all bearings are shielded and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

The only part of this machine that requires periodic lubrication is where the spindle cartridge rides on the elevation housing (see **Figure 40**). Use a light grease or anti-seizing compound on the ways. The frequency of lubrication depends on the amount you use the shaper. As a habit, inspect this area at least once a month.

Occasional application of light machine oil on moving components may be necessary. Before applying lubricant, clean off sawdust. Too much lubrication attracts dirt and sawdust, resulting in poor component movement.

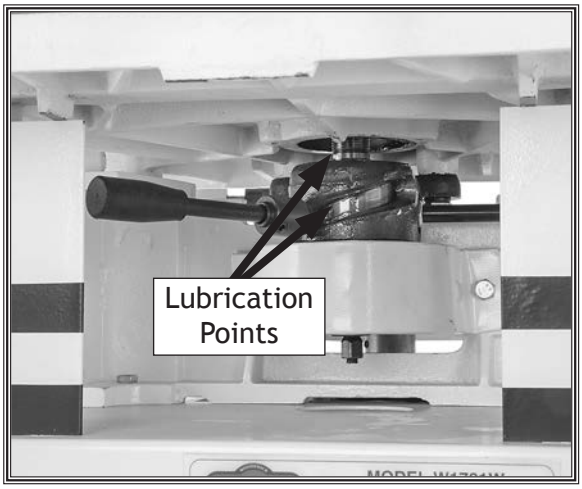


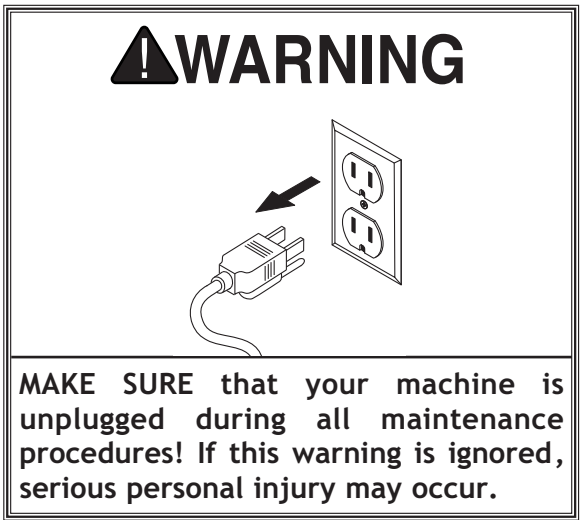
Figure 40. Lubrication points on spindle cartridge and spindle elevation housing.

SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: **techsupport@woodstockint.com**.



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

Belt Tension

Over time, the belt can stretch and wear based upon the workload applied, operating environment, and storage conditions. As the machine is used over time, the belts will slightly wear and stretch, eventually losing their efficiency of transmitting power until they can be re-tensioned. Regularly check belt tension (deflection), and belt wear to determine if the belt needs to be replaced.

Belt deflection should be 1/4" with moderate finger pressure (see **Figure 41**).

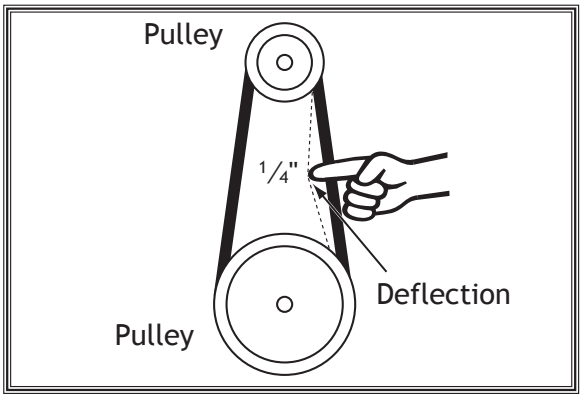


Figure 41. Proper belt deflection for W1701.

You will need to remove the belt guard (see **Figure 42**) in order to perform the following steps.

Tools Needed:	**Qty**
Open-End Wrench 13mm	1
Open-End Wrench 18mm	1

To adjust V-belt tension, do these steps:

1. DISCONNECT THE MACHINE FROM POWER!
2. Ensure both pulleys are properly aligned (see **Page 37**).
3. Loosen both motor mount plate bolts (see **Figure 42**) and slide motor in or out to modify belt tension, while keeping the pulleys aligned.
4. Tighten the motor mount plate bolts, test tension, and check the pulleys alignment.
5. Repeat **Steps 2-3** until tension is correct and pulleys are aligned, then tighten the motor mount plate bolts.

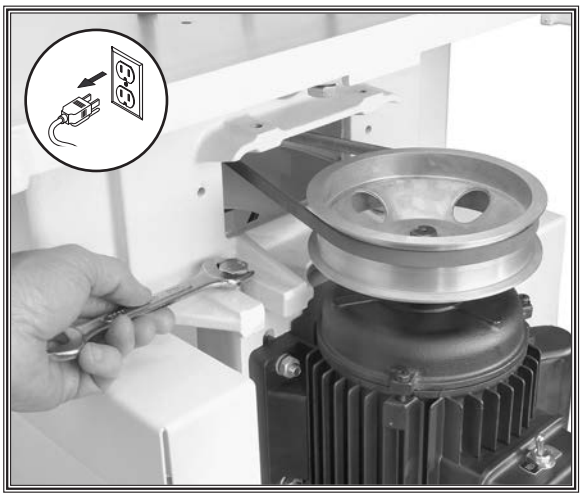


Figure 42. Adjusting belt tension.

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. Switch disabling key removed. 2. Power supply switched OFF or at fault. 3. Plug/receptacle at fault/wired wrong. 4. Motor connection wired wrong. 5. Wall circuit breaker tripped. 6. Wiring open/has high resistance. 7. Start capacitor at fault. 8. Spindle switch at fault. 9. Motor at fault.	1. Insert switch disabling key. 2. Ensure power supply is ON/has correct voltage. 3. Test for good contacts; correct the wiring. 4. Correct motor wiring connections (**Page 45**). 5. Ensure circuit size is correct/replace weak breaker. 6. Check/fix broken, disconnected, or corroded wires. 7. Test/replace if faulty. 8. Replace switch. 9. Test/repair/replace.
Machine stalls or is underpowered.	1. Workpiece material not suitable for machine. 2. Fence/jig loose or misaligned. 3. V-belt slipping. 4. Motor wired incorrectly. 5. Plug/receptacle at fault. 6. Pulley slipping on shaft. 7. Motor bearings at fault. 8. Machine undersized for task. 9. Motor overheated. 10. Spindle switch at fault. 11. Motor at fault.	1. Only cut wood/ensure moisture is below 20%. 2. Adjust fence/jig. 3. Tension/replace V-belt (**Page 35**). 4. Wire motor correctly (**Page 45**). 5. Test for good contacts/correct wiring. 6. Replace loose pulley/shaft. 7. Test/repair/replace. 8. Use correct, sharp cutter; reduce feed rate/depth of cut. 9. Clean motor, let cool, and reduce workload. 10. Test/replace switch. 11. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component loose. 2. Cutter at fault. 3. V-belt worn or loose. 4. Spindle at fault. 5. Pulley loose. 6. Motor mount loose/broken. 7. Machine incorrectly mounted. 8. Motor fan rubbing on fan cover. 9. Motor bearings at fault.	1. Inspect/replace damaged bolts/nuts, and re-tighten. 2. Replace damaged cutter. 3. Tension/replace V-belt (**Page 35**). 4. Tighten loose spindle; replace defective spindle or spindle cartridge. 5. Realign/replace shaft, pulley, set screw, and key. 6. Tighten/replace. 7. Tighten mounting bolts; relocate/shim machine. 8. Fix/replace fan cover; replace loose/damaged fan. 9. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Operations

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Workpiece is burned when cut.	1. Dull cutter. 2. Too slow of a feed rate. 3. Pitch build-up on cutter. 4. Cutter rotating in the wrong direction. 5. Taking too deep of a cut.	1. Replace cutter or have it professionally sharpened. 2. Increase feed speed. 3. Clean cutter with a blade and bit cleaning solution. 4. Reverse the direction of the cutter rotation. 5. Make several passes of light cuts.
Fuzzy Grain	1. Wood may have high moisture content or surface wetness. 2. Dull cutter.	1. Check moisture content and allow to dry if moisture is more than 20%. 2. Replace or have cutter professionally sharpened.
Chipping.	1. Knots or conflicting grain direction in wood. 2. Nicked or chipped cutter. 3. Feeding workpiece too fast. 4. Taking too deep of a cut. 5. Cutting against the grain of the wood.	1. Inspect workpiece for knots and grain direction; only use clean stock. 2. Replace the cutter, or have it professionally sharpened. 3. Slow down the feed rate. 4. Take a smaller depth of cut. (Always reduce cutting depth when working with hard woods.) 5. Cut with the grain of the wood.
Divots in the edge of the cut.	1. Inconsistent feed speed. 2. Inconsistent pressure against the fence and rub collar. 3. Fence not adjusted correctly.	1. Move smoothly or use a power feeder. 2. Apply constant pressure. 3. Adjust fence.

Table Spacer Kit

The provided table spacer kit allows you to modify your shaper for use as a router table by raising the table. A higher table will allow you to make shallow cuts and utilize the upper blade area of most router bits with standard-length shanks.

To install the table spacer kit, do these steps:

1. DISCONNECT SHAPER FROM POWER SOURCE!
2. Remove the spindle lock nut and any cutters or rub collars installed on the spindle.
3. Remove table from the shaper by undoing the seven bolts that secure it in place.
4. Loosen and remove the taper nut (see **Figure 43**) while holding the top of the spindle with a wrench.
5. Gently tap the bottom of the drawbar to knock the spindle loose.
6. Remove the spindle/drawbar assembly from the spindle cartridge.
7. Place the table spacers over the table mounting holes on the shaper.
8. Place the table on the spacers and secure it to the shaper with the hex bolts from the router table spacer kit (see **Figure 44**).
9. Save the removed table bolts for when you need to covert the Model W1701 back to use as a shaper.
10. Refer to Router Bit Installation on **Page 17** for instructions on installing the collets and router bits.

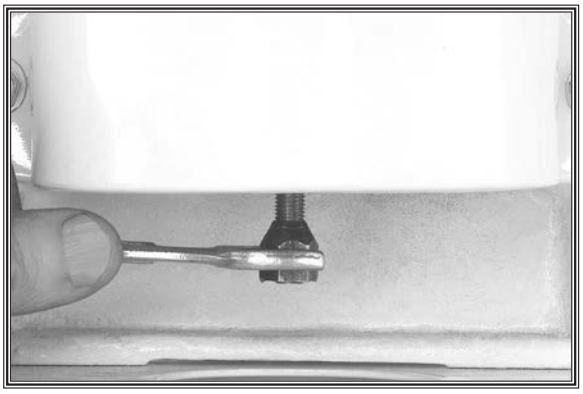


Figure 43. Removing taper nut from drawbar.

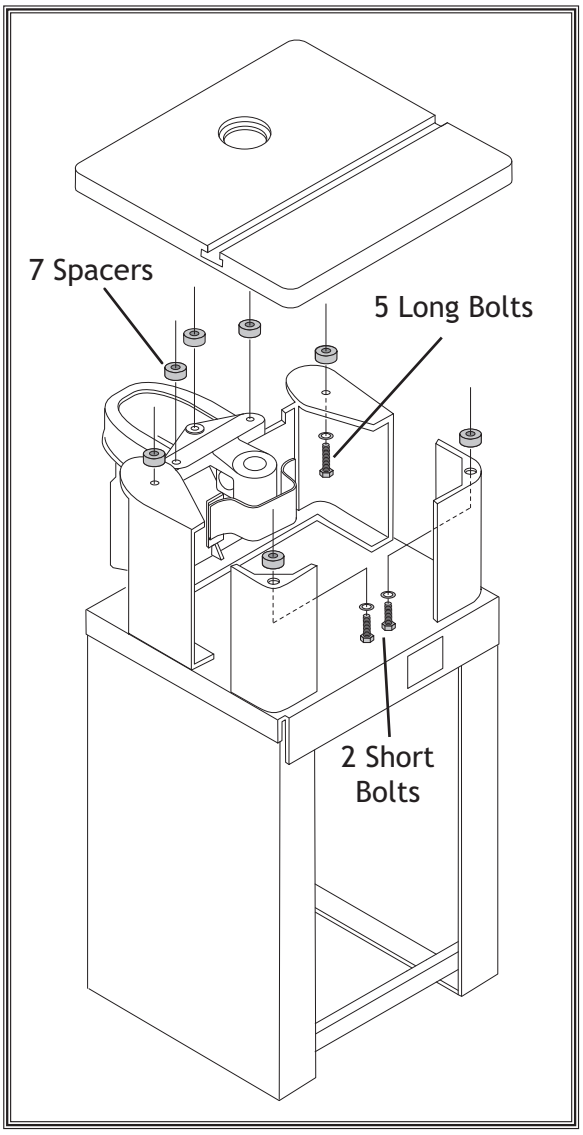


Figure 44. Installing table spacers.

Spindle Cartridge Replacement

Should a bearing fail, your shaper will probably develop a noticeable rumble, which will increase when the machine is put under load. If allowed to get worse, overheating of the journal containing the bad bearing could occur, which may cause the bearing to seize and possibly damage other parts of the machine.

Rather than disassemble the spindle cartridge to remove worn out bearings, Woodstock International offers replacement spindle cartridge assemblies (Part# X1701407) as whole units, which makes replacement very simple. The procedure takes 15-20 minutes.

To replace the spindle cartridge assembly:

1. DISCONNECT SHAPER FROM POWER SOURCE!
2. Remove the spindle and drawbar from the spindle cartridge assembly. (Remove tapered drawbar nut and tap the drawbar up to knock it loose.)
3. Take off the spindle pulley cover by removing the two mounting bolts shown in **Figure 45**.
4. Loosen the two motor mount bolts, slide the motor forward, and remove the V-belt.
5. Loosen the spindle lock knob.
6. Remove the cartridge nut on the bottom of the spindle, as shown in **Figure 46**, and slide the pulley off.
7. Hold your hand under the spindle cartridge and remove the elevation handle by unthreading it counterclockwise. The spindle cartridge should drop into your hand.
8. Install the new cartridge assembly in the reverse order of removal.

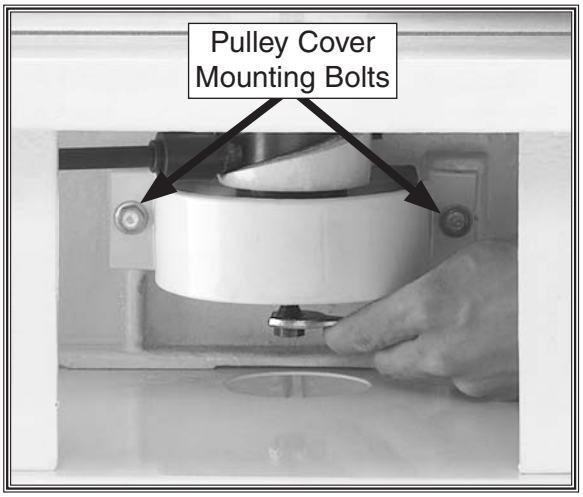


Figure 45. Location of pulley cover mounting bolts.

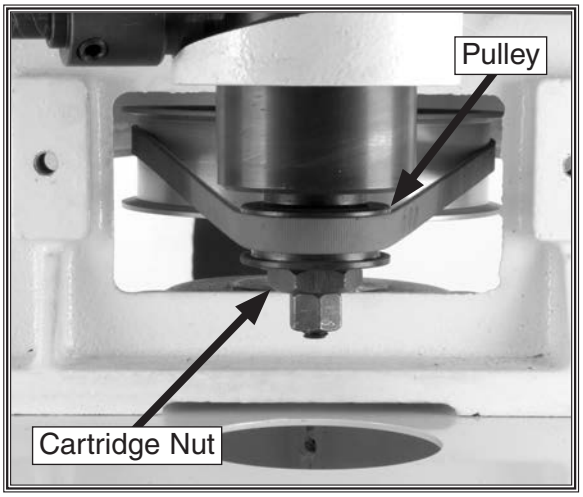


Figure 46. Location of cartridge nut and pulley.

Resurfacing Fence

The fence can be resurfaced or made flat with a jointer to correct any warping. This procedure should only be done if the fences will not align with each other after careful adjustment or they are warped.

To resurface the fence, do these steps:

1. Make sure the fence face mounting screws are far enough below the surface of the fence that they will not contact the jointer knives during operation.

   Note: *New fence faces can easily be made out of hard wood and resurfaced by using this same procedure*.

2. Align both fence faces as straight as possible, using a straightedge or your jointer table as an alignment guide.

3. Resurface the fences on the jointer, as shown in **Figure 47**.

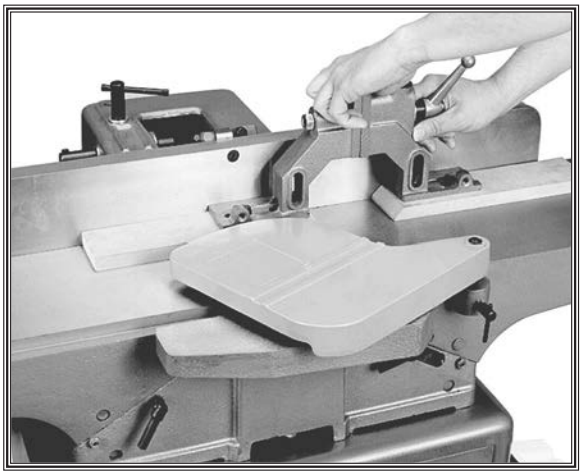


Figure 47. Resurfacing a shaper fence on a jointer.

Electrical Components & Wiring

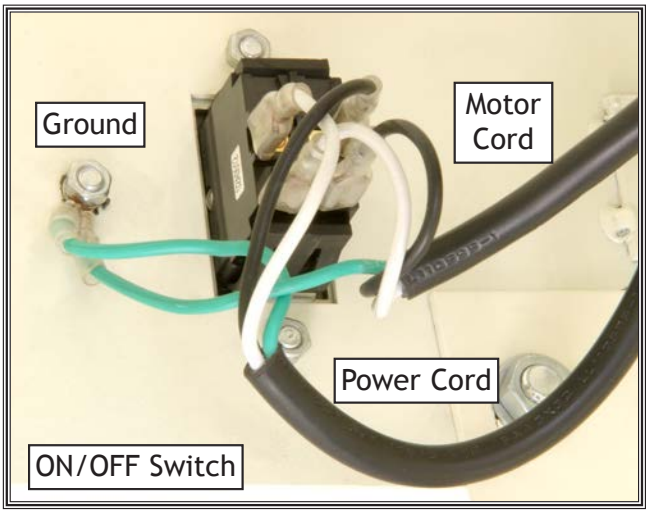


Figure 48. On/Off switch.

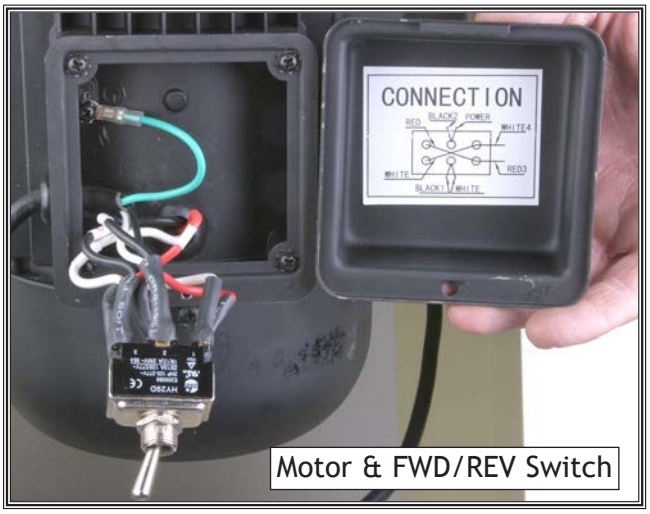


Figure 49. Motor and FWD/REV switch.

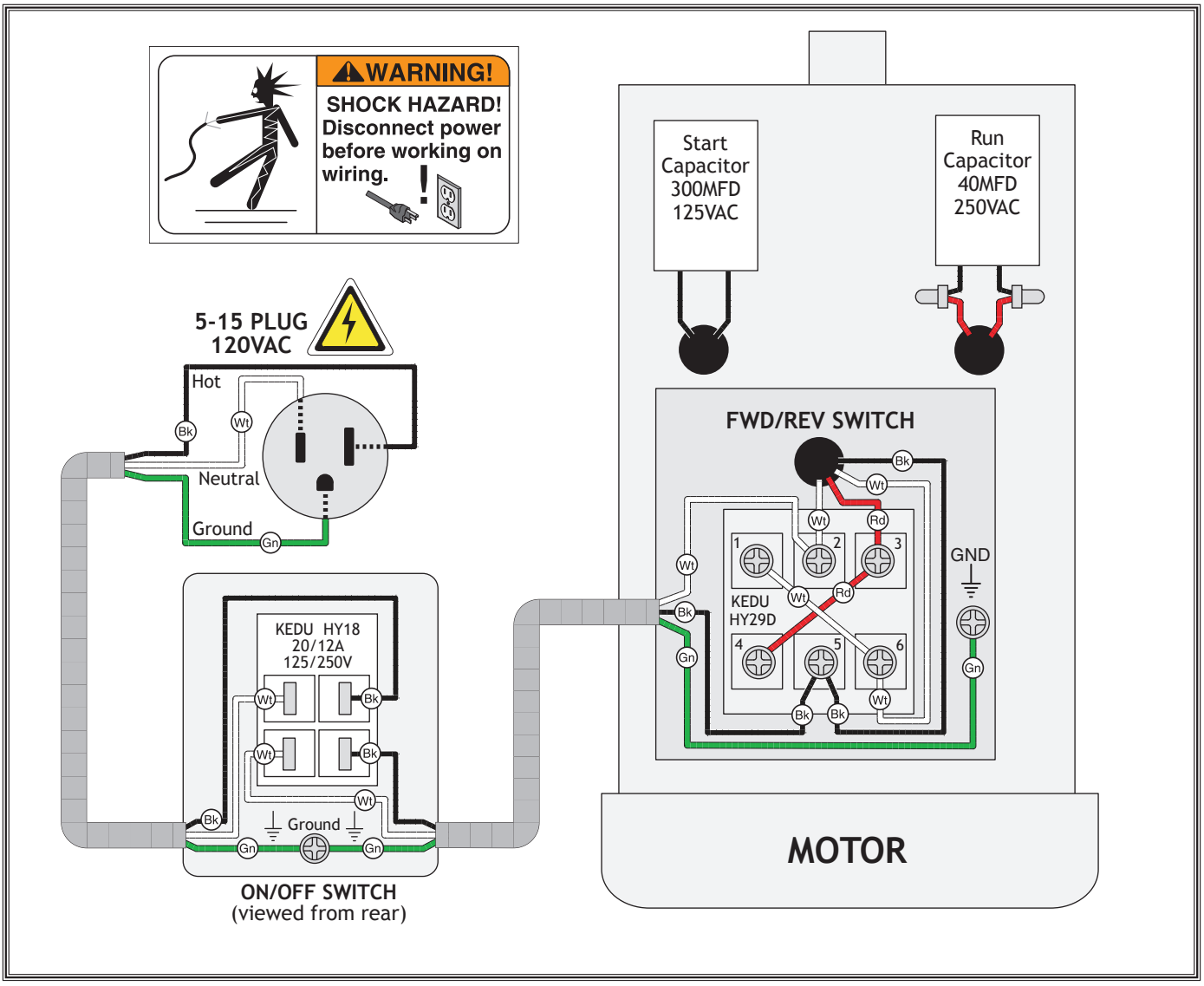
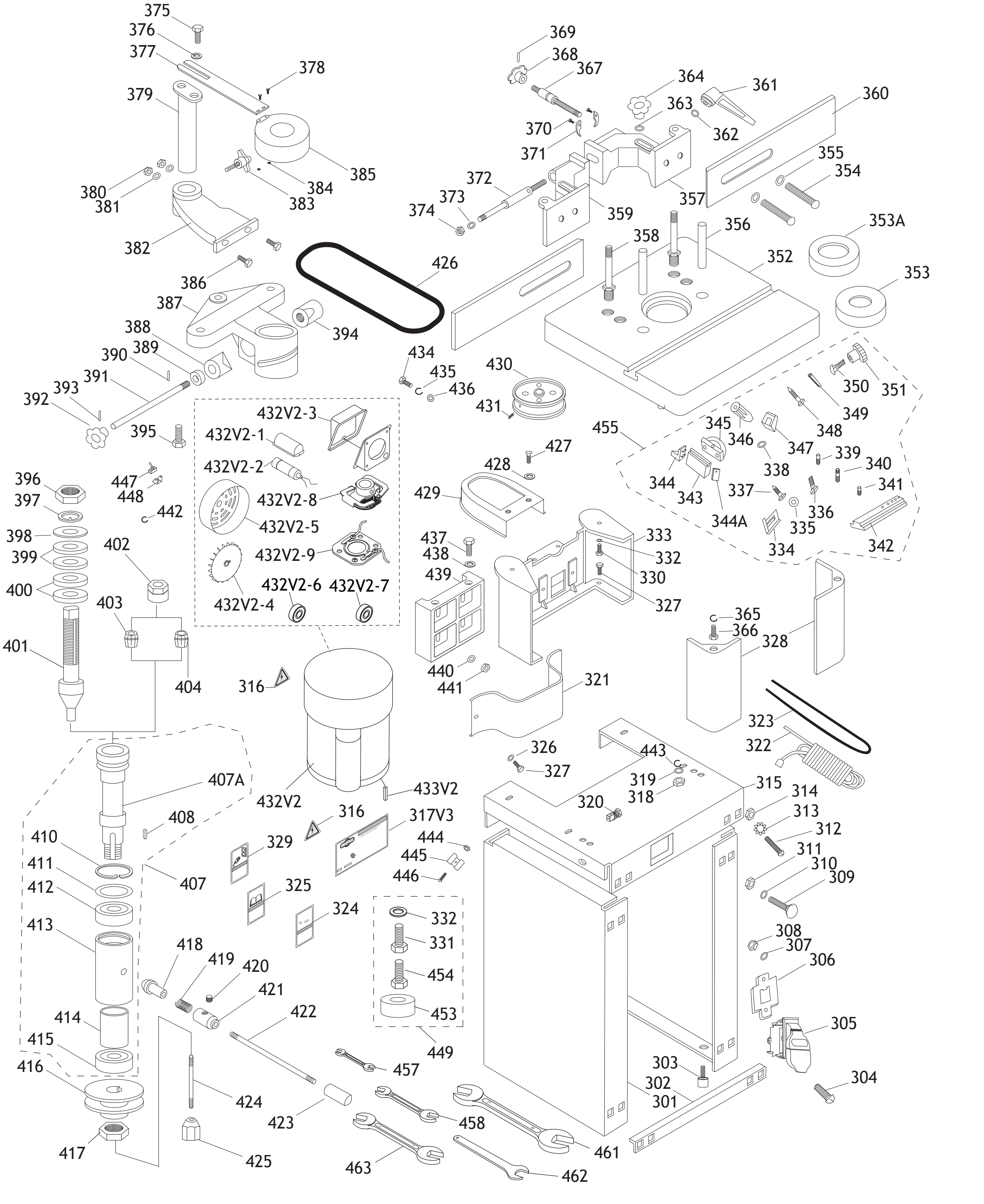


Figure 50. Wiring diagram.

PARTS

Main



PARTS

Main Parts List

REF	PART #	DESCRIPTION
301	X1701301	SIDE PANEL
302	X1701302	TIE BAR
303	X1701303	RUBBER FOOT
304	X1701304	PHLP HD SCR M4-0.7 X 25
305	X1701305	ON/OFF PADDLE SWITCH
306	X1701306	SWITCH LAMELLA
307	X1701307	FLAT WASHER 4MM
308	X1701308	HEX NUT M4-0.7
309	X1701309	CARRIAGE BOLT 5/16-18 x 1/2
310	X1701310	FLAT WASHER 3/8
311	X1701311	HEX NUT 5/16-18
312	X1701312	PHLP HD SCR M5-0.8 X 12
313	X1701313	EXT TOOTH WASHER 5MM
314	X1701314	HEX NUT M5-0.8
315	X1701315	SHELF
316	X1701316	ELECTRICITY LABEL
317V3	X1701317V3	MACHINE ID LABEL CSA V3.11.16
318	X1701318	HEX NUT M8-1.25
319	X1701319	FLAT WASHER 3/8"
320	X1701320	STRAIN RELIEF
321	X1701321	SPINDLE PULLEY GUARD
322	X1701322	POWER CORD 14G 3W 72" 5-15P
323	X1701323	MOTOR CORD
324	X1701324	SAFETY GLASSES LABEL
325	X1701325	READ MANUAL LABEL
326	X1701326	FLAT WASHER 3/8"
327	X1701327	HEX BOLT M8-1.25 X 12
328	X1701328	TABLE LEG
329	X1701329	UNPLUG MACHINE LABEL
330	X1701330	HEX BOLT M8-1.25 X 25
331	X1701331	HEX BOLT M12-1.75 X 30
332	X1701332	LOCK WASHER 12MM
333	X1701333	TABLE SUPPORT
334	X1701334	MITER BLOCK
335	X1701335	FLAT WASHER 1/4"
336	X1701336	PHLP HD SCR M4-0.7 X 6
337	X1701337	TAP SCREW M3.5 X 12
338	X1701338	FLAT WASHER 3/8"
339	X1701339	SUPPORT POLE
340	X1701340	STUD BOLT
341	X1701341	ANTI-KICKBACK PIN
342	X1701342	MITER BAR
343	X1701343	ALUMINUM ALLOY FENCE
344	X1701344	RIGHT FENCE LID
344A	X1701344A	LEFT FENCE LID
345	X1701345	MITER GAUGE BODY
346	X1701346	PLASTIC HANDLE
347	X1701347	POINTER
348	X1701348	SELF TAP SCREW M3 X 15
349	X1701349	TENSION PIN 2 X 16MM
350	X1701350	CARRIAGE BOLT M6-1 X 35

REF	PART #	DESCRIPTION
351	X1701351	KNOB FEMALE M6-1.0
352	X1701352	WORKING TABLE
353	X1701353	TABLE INSERT 13/8" HOLE
353A	X1701353A	TABLE INSERT 13/4" HOLE
354	X1701354	PHLP HD SCR M8-1.25 X 20
355	X1701355	FLAT WASHER 3/8"
356	X1701356	TAPER PIN 8 X 75MM
357	X1701357	FENCE BODY RIGHT
358	X1701358	CLAMP STUD
359	X1701359	FENCE BODY LEFT
360	X1701360	WOODEN FENCE
361	X1701361	LOCK HANDLE M12-1.75
362	X1701362	FLAT WASHER 1/2"
363	X1701363	FLAT WASHER 3/8"
364	X1701364	KNOB M8-1.25 FEMALE
365	X1701365	LOCK WASHER 1/2"
366	X1701366	HEX BOLT M12-1.75 X 20
367	X1701367	ADJUSTING SCREW STUD
368	X1701368	HAND KNOB 8MM PINNED
369	X1701369	ROLL PIN 3 X 20
370	X1701370	PHLP HD SCREW M6-1 X 12
371	X1701371	HALF COLLAR
372	X1701372	ADJUSTING SHAFT
373	X1701373	FLAT WASHER 1/2"
374	X1701374	HEX NUT M12-1.75
375	X1701375	HEX BOLT M8-1.25 X 12
376	X1701376	FLAT WASHER 3/8"
377	X1701377	HOLD DOWN BAR
378	X1701378	PHLP HD SCR M4-0.7 X 10
379	X1701379	GUARD MOUNTING POST
380	X1701380	HEX NUT M8-1.25
381	X1701381	FLAT WASHER 3/8"
382	X1701382	MOUNTING BRACKET
383	X1701383	HAND KNOB M10-1.5 X 28
384	X1701384	HEX NUT M4-0.7
385	X1701385	SAFETY GUARD
386	X1701386	HEX BOLT M8-1.25 X 30
387	X1701387	HOUSING BRACKET
388	X1701388	CLAMP SLEEVE LEFT
389	X1701389	STUFF RING
390	X1701390	ROLL PIN 3 X 20MM
391	X1701391	LOCK BAR
392	X1701392	HAND KNOB 12MM, PINNED
393	X1701393	ROLL PIN 3 X 20MM
394	X1701394	CLAMP SLEEVE RIGHT
395	X1701395	HEX BOLT M12-1.75 X 30
396	X1701396	SPECIAL SPINDLE NUT
397	X1701397	KEYED SAFETY WASHER
398	X1701398	RUB COLLAR 1/2" X 1-3/16" X 3/16"
399	X1701399	RUB COLLAR 1/2" X 13/16" X 1/4"

Main Parts List (Cont.)

REF	PART #	DESCRIPTION
400	X1701400	RUB COLLAR 1/2" X 13/16" X 3/8"
401	X1701401	CUTTER SPINDLE
402	X1701402	COLLET NUT
403	X1701403	COLLET 1/4"
404	X1701404	COLLET 1/2"
407	X1701407	SPINDLE CARTRIDGE ASSY
407A	X1701407A	SPINDLE CARTRIDGE
408	X1701408	KEY 4 X 4 X 20MM
410	X1701410	INT RETAINING RING 47MM
411	X1701411	WAVY WASHER 45MM
412	X1701412	BALL BEARING 6204
413	X1701413	SPINDLE HOUSING
414	X1701414	BALL BEARING SLEEVE
415	X1701415	BALL BEARING 6204ZZ
416	X1701416	SPINDLE PULLEY
417	X1701417	LOWER SPINDLE NUT
418	X1701418	BEARING CONE
419	X1701419	COIL SPRING
420	X1701420	SET SCREW M8-1.25 X 8
421	X1701421	SPRING COLLAR
422	X1701422	STUD M12-1.75 X 355
423	X1701423	SLIP-ON HANDLE
424	X1701424	DRAW BAR M8-1.0 X 130
425	X1701425	TAPER NUT M8-1.25
426	X1701426	FLAT BELT 690 X 10MM
427	X1701427	HEX BOLT M8-1.25 X 12
428	X1701428	FLAT WASHER 3/8"
429	X1701429	BELT GUARD
430	X1701430	MOTOR PULLEY
431	X1701431	SET SCREW M6-1 X 10
432V2	X1701432V2	MOTOR 1.5HP 120V/240V 1-PH V2.10.16
432V2-1	X1701432V2-1	S. CAPACITOR 200MFD 125VAC
432V2-2	X1701432V2-2	CAPACITOR COVER
432V2-3	X1701432V2-3	JUNCTION BOX
432V2-4	X1701432V2-4	MOTOR FAN
432V2-5	X1701432V2-5	MOTOR FAN COVER
432V2-6	X1701432V2-6	BALL BEARING 6204ZZ
432V2-7	X1701432V2-7	BALL BEARING 6204ZZ
432V2-8	X1701432V2-8	CENTRIFUGAL SWITCH 20MM 3450
432V2-9	X1701432V2-9	CONTACT PLATE 20MM
433V2	X1701433V2	KEY 5 X 5 X 30MM
434	X1701434	HEX BOLT M8-1.25 X 35
435	X1701435	LOCK WASHER 8MM
436	X1701436	FLAT WASHER 3/8"
437	X1701437	HEX BOLT M12-1.75 X 35
438	X1701438	FLAT WASHER 1/2"
439	X1701439	MOTOR MOUNT PLATE
440	X1701440	FLAT WASHER 3/8"
441	X1701441	HEX NUT M8-1.25
442	X1701442	LOCK WASHER 12MM
443	X1701443	LOCK WASHER 8MM
444	X1701444	FLAT WASHER 1/4"
445	X1701445	TWO CORD CLAMP
446	X1701446	PHLP HD SCR M6-1 X 12
447	X1701447	FWD/REV SWITCH
448	X1701448	SWITCH BRACKET
449	X1701449	TABLE SPACER KIT
453	X1701453	RUB COLLAR 1/2" X 13/16" X 1/2"
454	X1701454	HEX BOLT M12-1.75 X 40
455	X1701455	MITER GAUGE ASSEMBLY
457	X1701457	COMBO WRENCH 8/10MM
458	X1701458	COMBO WRENCH 12/14MM
461	X1701461	COMBO WRENCH 27/30MM
462	X1701462	FLAT WRENCH 27MM
463	X1701463	COMBO WRENCH 23/26MM

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
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____ Shotgun News
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____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

9. Comments:_____

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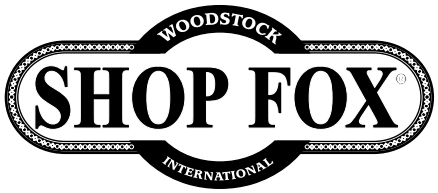

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WARRANTY

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.

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