READ THIS FIRST

Model W1877
IMPORTANT UPDATE
Applies to Models Mfd. Since 07/20
and Owner's Manual Printed 09/20

Phone #: (360) 647-0802 • Tech Support: techsupport@shopfoxtools.com • Web: www.shopfoxtools.com

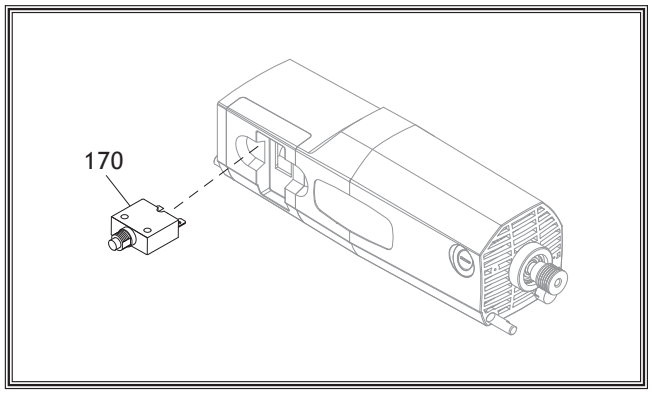
We made the following changes to this machine since the manual was printed:

- Part specification corrected.
- Wiring diagram revised.

Aside from the information contained in this update, all other content in the owner's manual is applicable and MUST be read and understood for your own safety.

IMPORTANT: Keep this update with the owner's manual for future reference. If you have any further questions, contact our Technical Support.

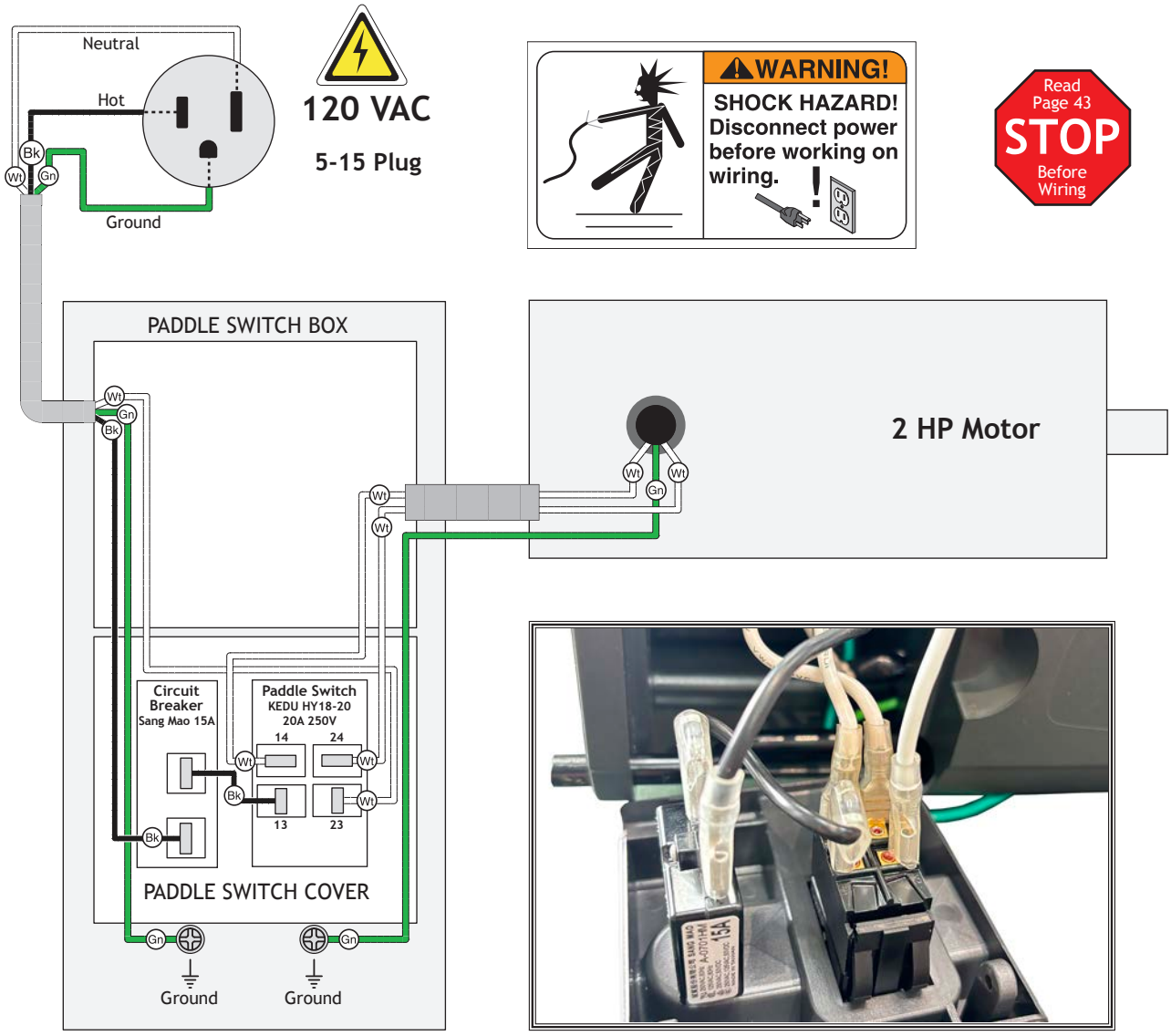
Revised Part



REF	PART #	DESCRIPTION
170	X1877170	CIRCUIT BREAKER SANG MAO 15A

 #23241LW Printed in Taiwan

Wiring Diagram



WOODSTOCK

SHOP FOX®

INTERNATIONAL

MODEL W1877
13" PORTABLE PLANER w/SPIRAL CUTTERHEAD

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 7/20)

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

C SP® US
262149

V1.06.21 #21226MN Printed in Taiwan

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

Contents

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

INTRODUCTION

Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 Ext. 2 or send e-mail to: **techsupport@woodstockint.com**. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from **http://www.woodstockint.com/manuals**.
If you have comments about this manual, please contact us at:

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

MACHINE SPECIFICATIONS

MODEL W1877
13" PORTABLE PLANER WITH SPIRAL-STYLE CUTTERHEAD

Product Dimensions

Weight..... 84 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 30 x 34 x 20 in.
Footprint (Length x Width)..... 22 x 13-1/2 in.

Shipping Dimensions

Type..... Cardboard
Content..... Machine
Weight..... 88 lbs.
Length x Width x Height..... 27 x 16 x 24 in.
Must Ship Upright..... Yes

Electrical

Power Requirement..... 120V, Single-Phase, 60 Hz
Full-Load Current Rating..... 15A
Minimum Circuit Size..... 20A
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
Switch Type..... Paddle Safety Switch w/Removable Key

Motors

Main

Horsepower..... 2 HP
Phase..... Single-Phase
Amps..... 15A
Speed..... 20,000 RPM
Type..... Universal
Power Transfer ..... Belt Drive
Bearings..... Shielded & Permanently Lubricated

Main Specifications

Main Specifications

Planer Size	13 in.
Max. Cut Width	13 in.
Min. Stock Length	8 in.
Min. Stock Thickness	1/8 in.
Max. Stock Thickness	6 in.
Number of Cuts Per Inch	32
Number of Cuts Per Minute	60,000 (effective)
Cutterhead Speed	10,000 RPM
Planing Feed Rate	26 FPM
Max. Cut Depth Planing Full Width	1/16 in.
Max. Cut Depth Planing 6-Inch Wide Board	1/8 in.

Cutterhead Info

Cutterhead Type	Spiral-Style
Cutterhead Diameter	2 in.
Number of Cutter Rows	6
Number of Indexable Cutters	26
Cutter Insert Type	HSS
Cutter Insert Size Length	14mm
Cutter Insert Size Width	14mm
Cutter Insert Size Thickness	2mm

Table Info

Table/Headstock Movement	6 in.
Table Bed Size Length	9-1/4 in.
Table Bed Size Width	13 in.
Table Wings Size Length	12 in.
Table Wings Size Width	14 in.

Construction

Table	Stainless Steel
Body	Plastic
Cutterhead Assembly	Steel
Infeed Roller	Rubber
Outfeed Roller	Rubber
Paint Type/Finish	Urethane

Other

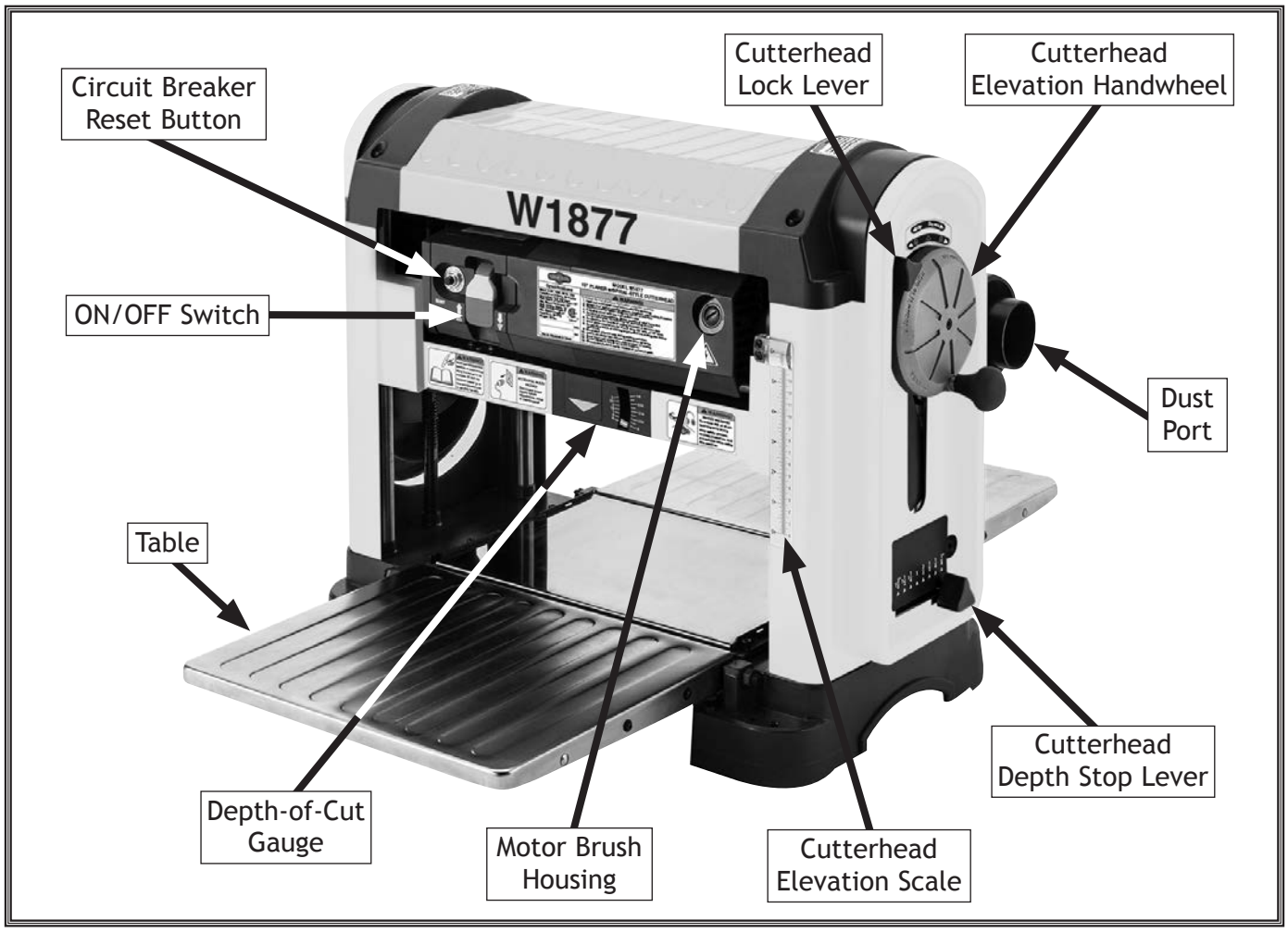
Table/Headstock Locks	Yes
Measurement Scale	Inch & Metric
Number of Dust Ports	1
Dust Port Size	4 in.

Other

Country of Origin	Taiwan
Warranty	2 Years
Approximate Assembly & Setup Time	15 Min.
Serial Number Location	Machine ID Label
Sound Rating	96 - 98 dB
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Identification

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



⚠WARNING

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

Controls & Components

Refer to **Figures 1-2** 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.

WARNING

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

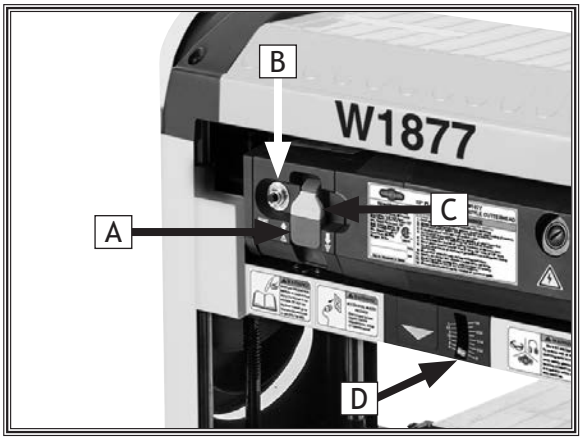


Figure 1. Main controls and components.

A. ON/OFF Switch: Turns motor ***ON*** when flipped up; turns motor ***OFF*** when pressed down.

B. Circuit Breaker Reset Button: Allows machine to be restarted after thermal overload protection has tripped. To reset, place ON/OFF switch in OFF position, wait a few minutes for motor to cool, then press reset button. If button does not *stay* depressed, allow motor to cool longer, then try again.

C. ON/OFF Switch Disabling Key: Disables switch when yellow key is removed to prevent unauthorized operation of planer.

D. Depth-of-Cut Gauge: Shows depth of cut (from 0"-$^{1}/_{8}$") when workpiece contacts indicator at bottom of gauge.

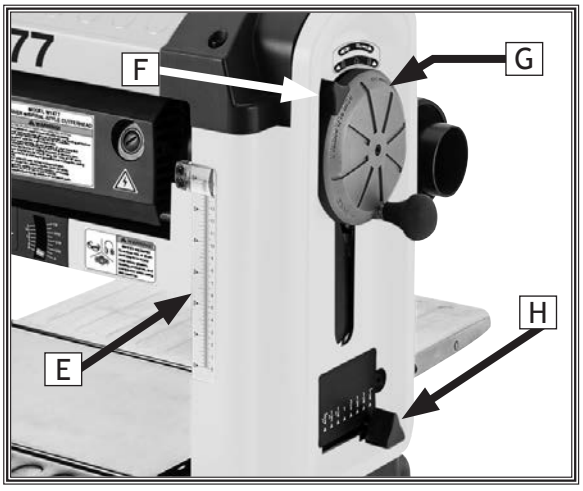


Figure 2. Elevation controls and components.

E. Cutterhead Elevation Scale: Shows elevation of cutterhead above table. The measurement indicated along top edge of red indicator shows effective thickness of board *after* planing.

F. Cutterhead Lock Lever: Locks cutterhead in place to ensure it does not move during operations. Rotate lever all the way right to engage lock; rotate all the way left to release lock. Lock must be released to adjust headstock height.

G. Cutterhead Elevation Handwheel: Raises and lowers cutterhead. Rotate counterclockwise to raise cutterhead; rotate clockwise to lower it. Each full rotation changes elevation $^{1}/_{16}$".

H. Cutterhead Depth Stop Lever: Quickly adjusts headstock height from $^{1}/_{8}$"-1$^{3}/_{4}$".

Internal Components

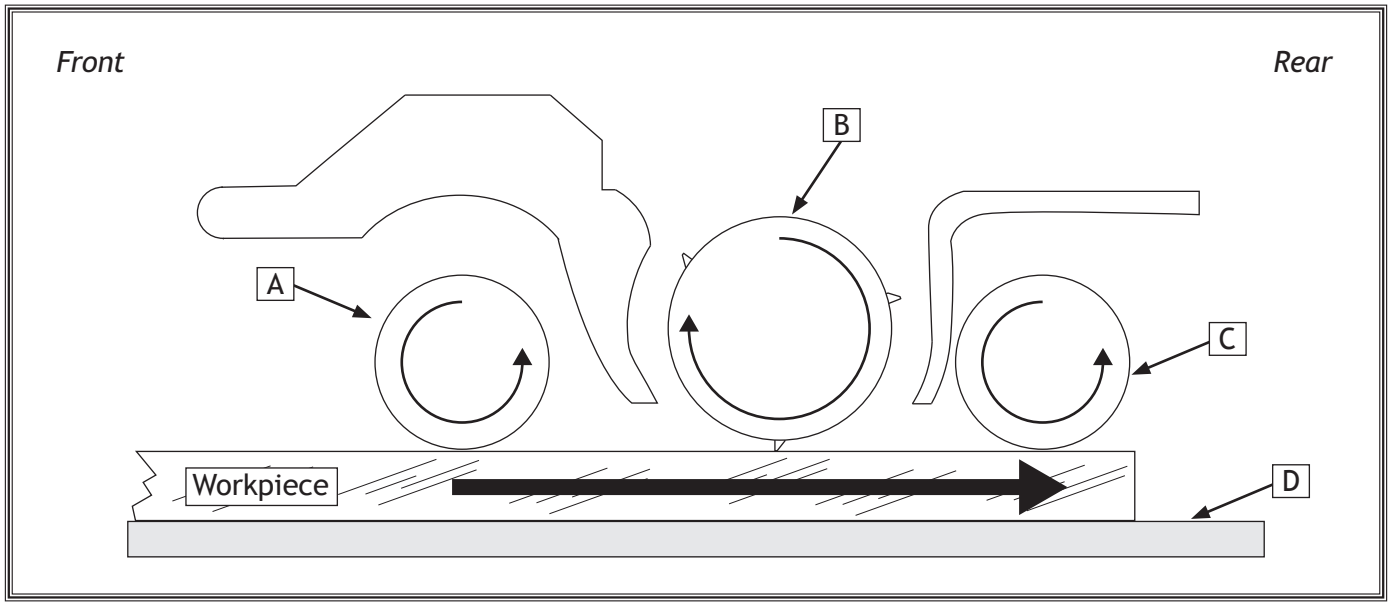


Figure 3. Workpiece path and major planing components (side cutaway view).

A. Infeed Roller: Rotates with the direction of feed to pull the workpiece toward the cutterhead.

B. Cutterhead: Holds the inserts that remove material from the workpiece. Rotates opposite the direction of feed.

C. Outfeed Roller: Rotates with the direction of feed to pull the workpiece through the planer.

D. Planer Table: Provides a smooth, flat surface for the workpiece to slide against as it moves through the planer. Planer extension tables fold up and down for mobility.

⚠WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

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 Planers

Amputation, serious cuts, entanglement, or death can occur from contact with rotating cutterhead or other moving parts! Flying chips can cause eye injuries or blindness. Workpieces or knives thrown by cutterhead can strike nearby operator or bystanders with deadly force. To reduce risk of these hazards, operator and bystanders MUST completely heed hazards and warnings below.

KICKBACK. Know how to reduce the risk of kickback and kickback-related injuries. "Kickback" occurs during operation when the workpiece is ejected from the machine at high speed. Kickback is commonly caused by poor workpiece selection, unsafe feeding techniques, or improper machine setup/maintenance. Kickback injuries typically occur as follows: (1) operator/bystanders are struck by the workpiece, resulting in impact injuries (i.e., blindness, broken bones, bruises, death); (2) operator's hands are pulled into blade, resulting in amputation or severe lacerations.

AVOID CONTACT WITH MOVING PARTS. Never remove guards/covers or reach inside the planer during operation or while connected to power. You could be seriously injured if you accidentally touch the spinning cutterhead or get entangled in moving parts. If a workpiece becomes stuck or sawdust removal is necessary, turn planer ***OFF*** and disconnect power before clearing.

DULL/DAMAGED KNIVES/INSERTS. Only use sharp, undamaged knives/inserts. Dull or damaged knives/inserts increase the risk of kickback.

INSPECTING STOCK. To reduce the risk of kickback injuries or machine damage, thoroughly inspect and prepare the workpiece before cutting. Verify workpiece is free of nails, staples, loose knots or foreign material. Workpieces with minor warping should be jointed first or planed with the cupped side facing the table.

BODY PLACEMENT. Stand to one side of planer during the entire operation to avoid getting hit if kickback occurs.

GRAIN DIRECTION. Planing across the grain is hard on the planer and may cause kickback. Plane in the same direction or at a slight angle with the wood grain.

PLANING CORRECT MATERIAL. Only plane natural wood stock with this planer. DO NOT plane MDF, OSB, plywood, laminates or other synthetic materials that can break up inside the planer and be ejected towards operator.

LOOKING INSIDE PLANER. Wood chips fly around inside the planer at a high rate of speed during operation. To avoid injury from flying material, DO NOT look inside planer during operation.

CUTTING LIMITATIONS. To reduce the risk of kickback hazards or damage to the machine, do not exceed the maximum depth of cut or minimum board length and thickness found in the **Data Sheet**. Only feed one board at a time.

INFEED ROLLER CLEARANCE. The infeed roller is designed to pull material into the spinning cutterhead. To reduce the risk of entanglement, keep hands, clothing, jewelry, and long hair away from the infeed roller during operation.

FEED WORKPIECE PROPERLY. To reduce the risk of kickback, never start planer with workpiece touching cutterhead. Allow cutterhead to reach full speed before feeding, and do not change feed speed during cutting operation.

WORKPIECE SUPPORT. To reduce the risk of kickback, always make sure workpiece can move completely across table without rocking or tipping. Use auxiliary support stands for long stock.

SECURE KNIVES/INSERTS. Loose knives or improperly set inserts can become dangerous projectiles or cause machine damage. Always verify knives/inserts are secure and properly adjusted before operation.

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 ..... 15 Amps

Circuit Requirements

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

Nominal Voltage 110V,115V, 120V
Cycle ..... 60 Hz
Phase ..... Single-Phase
Power Supply Circuit ..... 20 Amps
Plug/Receptacle ..... NEMA 5-15
Cord ..... "S"-Type, 3-Wire, 14 AWG, 300 VAC

⚠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

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.

⚠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.

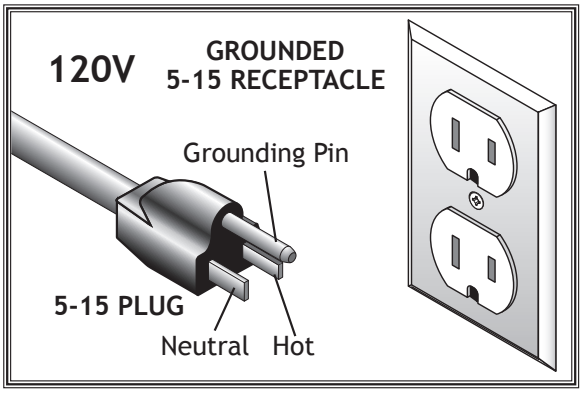
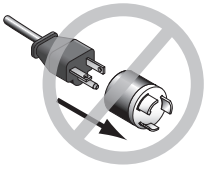


Figure 4. NEMA 5-15 plug & receptacle.

⚠CAUTION



No adapter should be used with the required plug. If the plug does not fit the available receptacle or the machine must be reconnected to a different type of circuit, the reconnection must be made by an electrician or qualified service personnel and it must comply with all 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
Maximum Length (Shorter is Better) ..... 50 ft.

SETUP

Unpacking

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

⚠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

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

Items Needed for Setup

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

Description	Qty
• Safety Glasses for Each Person	1
• Dust Collection System	1
• 4" or 2½" Dust Hose	1
• 4" or 2½" Hose Clamps	1
• Hex Wrench 4mm	1

Inventory

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

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

Box 1 (Figure 5)	Qty
A. Dust Hood	1
— 2½" Dust Port Adapter	1
B. Knob Bolts M5-.8 x 8 (Dust Hood)	2
C. Cap Screw M5-.8 x 12 (Handle)	1
D. Handle (Handwheel)	1
E. Hex Wrench 4mm	1
F. T-Handle Torx Wrench T-25	1

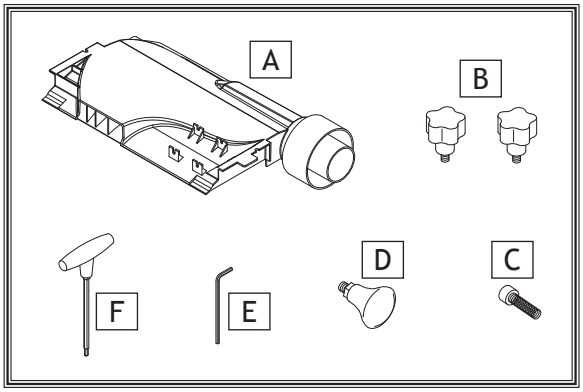
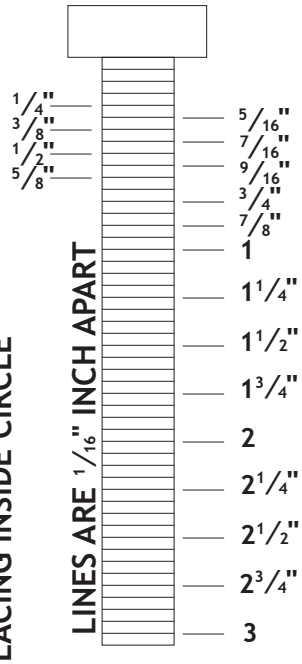
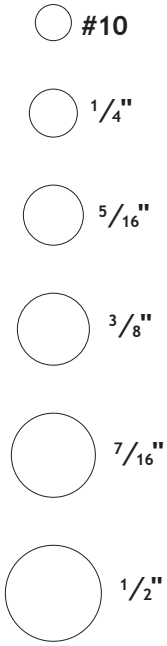


Figure 5. Box inventory.

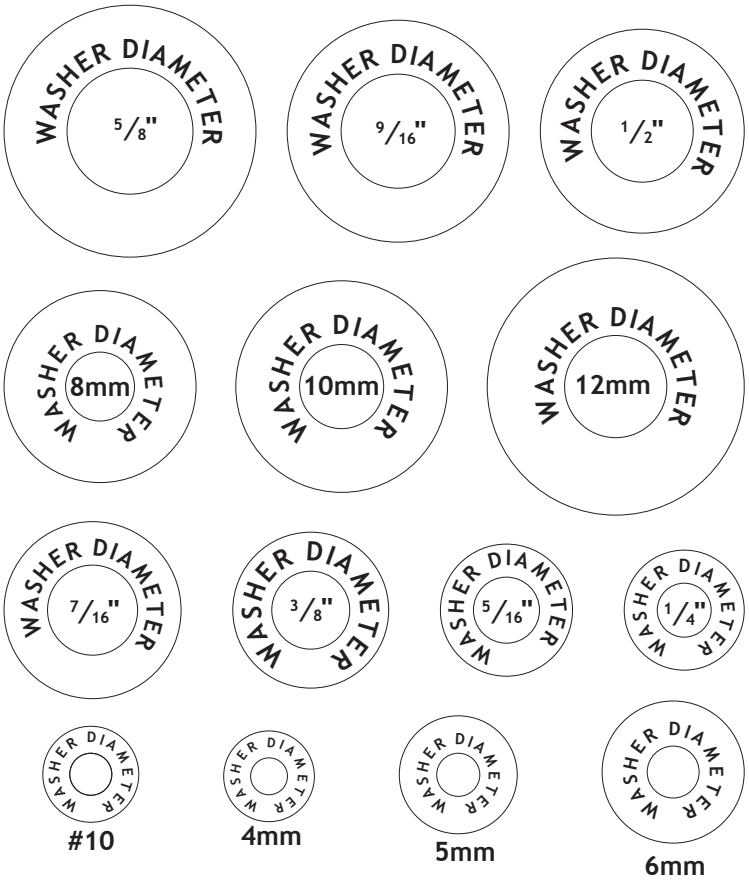
Hardware Recognition Chart

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

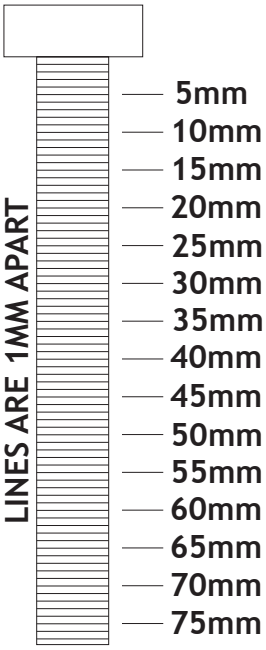


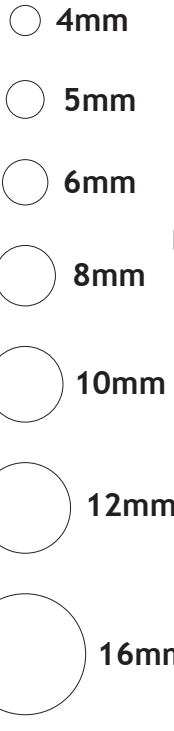


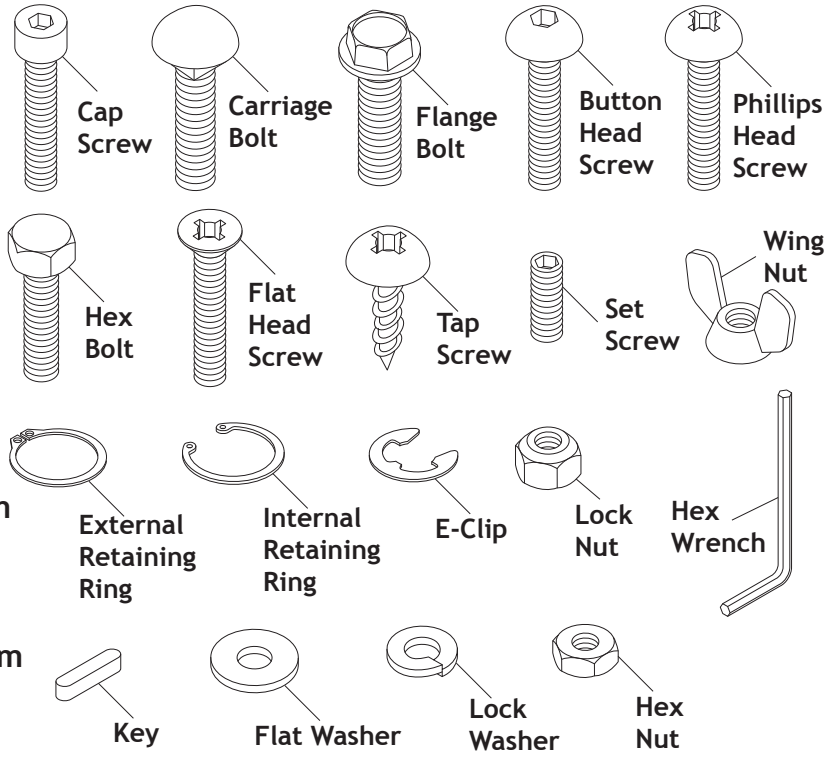
WASHERS ARE MEASURED BY THE INSIDE DIAMETER



MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE







Machine Placement

Workbench Load

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

Placement Location

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

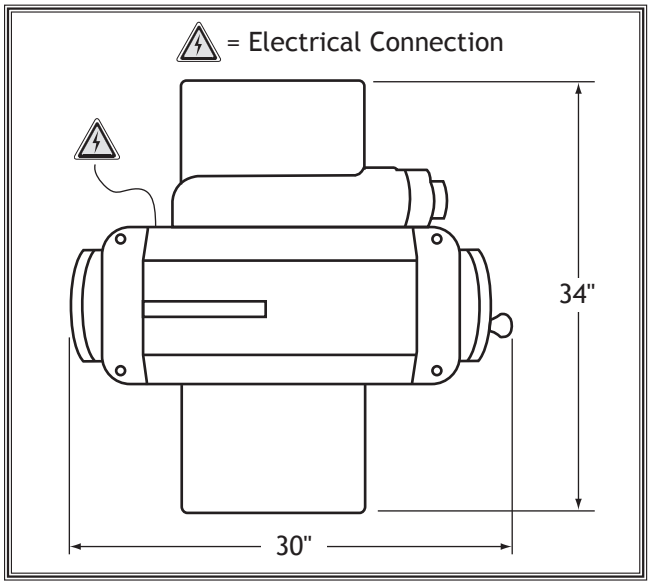


Figure 6. Minimum working clearances for Model W1877.

⚠CAUTION

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

Bench Mounting

Number of Mounting Holes..... 4
Diameter of Mounting Hardware Needed.....3/8"

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

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

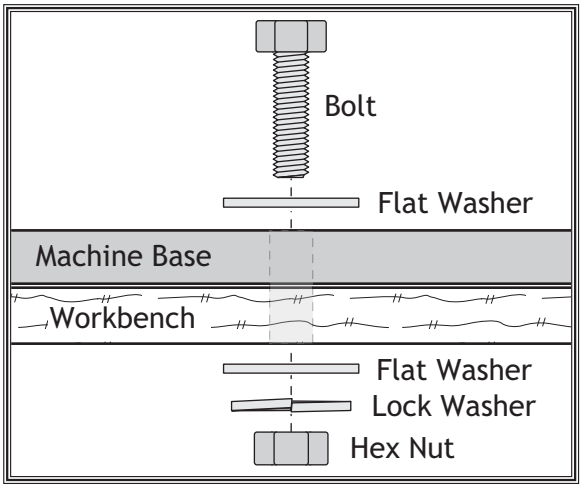


Figure 7. Typical "Through Mount" setup.

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

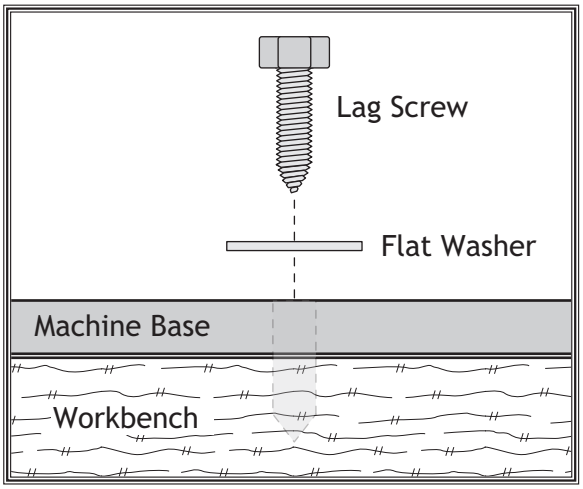


Figure 8. Typical "Direct Mount" setup.

Assembly

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

Tools Needed	**Qty**
Hex Wrench 4mm	1

To assemble machine, do these steps:

1. Attach dust hood (see **Figure 9**) to frame with (2) M5-.8 x 8 knob bolts.

2. Remove cap screw and lock washer (see **Figure 10**) that secure handwheel to internal shaft, and slide handwheel free.

3. Attach handle to handwheel with (1) M5-.8 x 12 cap screw.

4. Re-attach handwheel to internal shaft, and secure with cap screw and lock washer removed in **Step 2**.

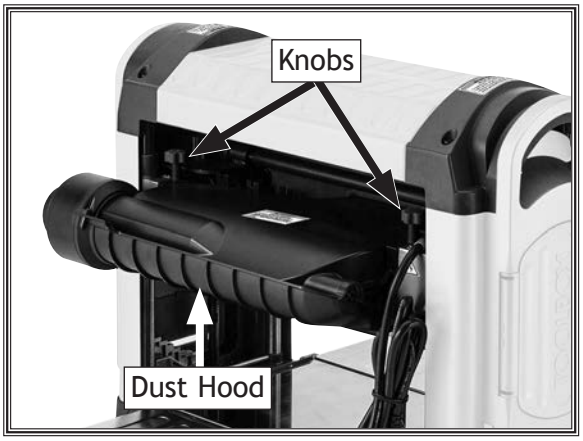


Figure 9. Dust hood installed.

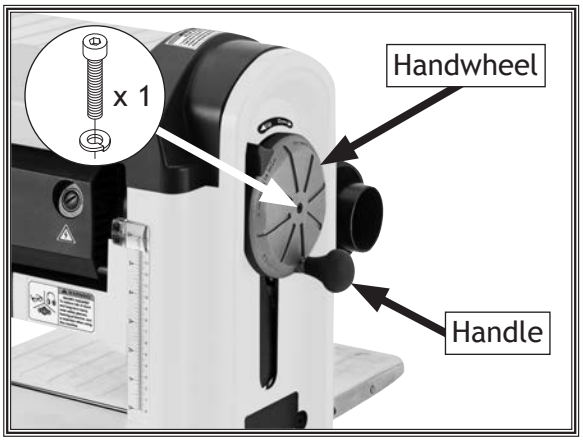


Figure 10. Handle installed on handwheel.

Dust Collection

Recommended CFM at Dust Port: ..... 400 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.

⚠CAUTION

This machine creates substantial amounts of dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust collection system.

Tools Needed	Qty
Dust Collection System	1
Dust Hose 4" or 2½"	1
Hose Clamps 4" or 2½"	1

To connect a dust collection hose, do these steps:

1. Fit 4" or 2½" dust hose over dust port, as shown in **Figure 11**, and secure it in place with hose clamp.

2. Tug hose to make sure it does not come off.

   Note: *A tight fit is necessary for proper performance.*

Figure 11. Dust hose connected to dust port.

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.

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the switch disabling key disables the switch properly.

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. Remove switch disabling key (see **Figure 12**).
5. Try to start machine with paddle switch. Machine should not start.

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

   — If machine *does* start, immediately turn machine ***OFF*** and disconnect from power. 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.

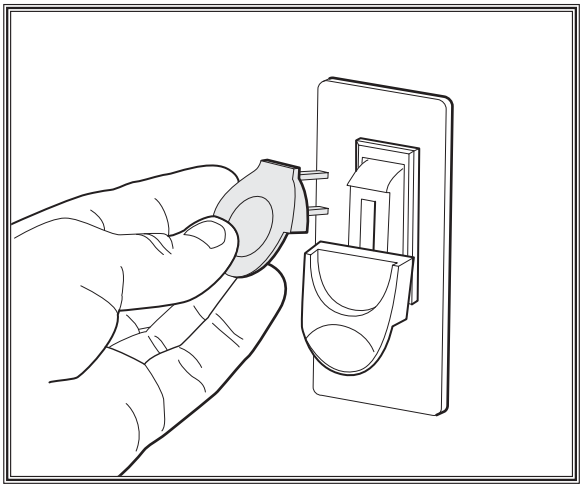


Figure 12. Removing switch key from paddle switch.

OPERATIONS

Operation Overview

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

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

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

1. Examines workpiece to make sure it is suitable for planing.

2. Puts on safety glasses or face shield, a respirator, and ear protection.

3. Places workpiece on table with flat side down and correctly adjusts cutterhead height for workpiece thickness and depth of cut.

— If workpiece is bowed, operator surface planes workpiece on a jointer until one side is flat. Doing so ensures that it will sit solidly on planer table during operation.

4. When all safety precautions have been taken, turns planer ***ON***.

5. Stands to one side of planer path to reduce risk of kickback injuries, then feeds workpiece into planer until infeed roller grabs it.

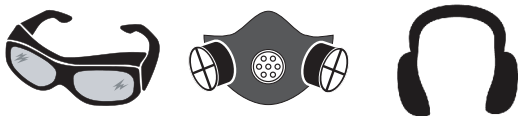
Note: *Infeed and outfeed rollers control feed rate of workpiece as it passes through planer. Operator does not push or pull on workpiece.*

— If cut is too deep and bogs down planer, operator immediately reduces depth of cut.

⚠WARNING

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

⚠WARNING



Eye injuries, respiratory problems, or hearing loss can occur while operating this tool. Wear personal protective equipment to reduce your risk from these hazards.

NOTICE

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

6. Once workpiece is clear of outfeed roller and stops moving, operator removes workpiece from outfeed table and measures workpiece thickness. If further planing is required, operator typically lowers cutterhead approximately 1/4 to 1/2 turn of the handwheel, then feeds workpiece into front of planer again.

7. Operator continues process until desired thickness is achieved, then turns machine ***OFF***.

Workpiece Inspection

Some workpieces are not safe to use or may require modification before they are. **Before cutting, inspect all workpieces for the following:**

- **Material Type:** This machine is only intended for workpieces of natural wood fiber. Attempting to use workpieces of any other material that may break apart during operation could lead to serious personal injury and property damage.
- **Foreign Objects:** Inspect workpiece for defects and foreign objects (nails, staples, embedded gravel, etc,). If you have any question about the quality of your workpiece, DO NOT use it. Remember, wood stacked on a concrete floor can have small pieces of stone or concrete pressed into the surface.
- **Large/Loose Knots:** Loose knots can become dislodged during operation. Large knots can cause kickback and machine damage. Always use workpieces that do not have large/loose knots.
- **Wet or "Green" Stock:** Avoid using wood with a high water content. Wood with more than 20% moisture content or wood exposed to excessive moisture (such as rain or snow), will cut poorly and cause excessive wear to the machine. Excess moisture can also hasten rust and corrosion of the machine and/or individual components.
- **Excessive Warping:** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and often unpredictable when being cut. DO NOT use workpieces with these characteristics!
- **Minor Cupping:** Workpieces with slight cupping can be safely supported if the cupped side is facing the table. On the contrary, a workpiece supported on the bowed side will rock during operation and could cause severe injury from kickback.

Wood Types

The species of wood, as well as its condition, greatly affects the depth of cut the planer can effectively take with each pass.

The chart in the figure below shows the Janka Hardness Rating for a number of commonly used species. The larger the number, the harder the workpiece, and the less material should be removed in any one pass for good results.

Note: *The Janka Hardness Rating is expressed in pounds of force required to embed a 0.444" steel ball into the surface of the wood to a depth equal to half the ball's diameter.*

Species	Janka Hardness
Ebony	3220
Red Mahogany	2697
Rosewood	1780
Red Pine	1630
Sugar Maple	1450
White Oak	1360
White Ash	1320
American Beech	1300
Red Oak	1290
Black Walnut	1010
Teak	1000
Black Cherry	950
Cedar	900
Sycamore	770
Douglas Fir	660
Chestnut	540
Hemlock	500
White Pine	420
Basswood	410
Eastern White Pine	380
Balsa	100

Figure 13. Janka Hardness Rating for some common wood species.

Planing Tips

- Inspect your workpiece for twisting or cupping, and surface one face on a jointer if necessary before planing workpiece.
- Scrape off all glue when planing glued-up panels. Dried glue can quickly dull knives/inserts.
- DO NOT plane more than one piece at a time.
- Never remove more than the recommended amount of material on each pass. Only remove a small amount of material on each pass when planing wide or dense stock.
- Support the workpiece on both ends. Get assistance from another person if you are planing a long workpiece, or use roller stands to support the workpiece.
- Measure the workpiece thickness with calipers to get exact results.
- Carefully inspect all stock to make sure it is free of large knots or foreign objects that may damage your knives/inserts, cause kickback, or be ejected from the planer.
- When possible, plane equal amounts on each side of the board to reduce the chance of twisting or cupping.
- Use the entire width of the planer to wear knives/inserts evenly. With narrow workpieces, alternate between far left, far right, and the middle of the table. Your knives/inserts will remain sharp much longer.
- To avoid "chip marks," always plane WITH the grain direction of the wood. Never plane cross-grain or end-grain.
- Plane ONLY natural wood fiber. Do not plane wood composites or other materials that could break up in the planer and cause operator injury or damage to planer.
- Always flatten cupped or warped workpieces on a jointer before planing.

Cutting Problems

Below is a list of wood characteristics you may encounter when planing. The following descriptions of defects will give you some possible answers to problems you may encounter while planing different materials. Possible solutions follow the descriptions.

Chipped Grain

Problem: Usually a result of cutting against the grain, planing workpieces with knots or excessive amount of cross grain, or using dull knives/inserts.

Note: *Some amount of chipping is normal with highly figured wood.*

Solution: Decrease the depth of cut. Reduce the feed rate. Inspect your workpiece and determine if its grain pattern is causing the problem. If the workpiece does not show substantial crossgrain, inspect your knives/inserts.

Fuzzy Grain

Problem: Usually caused by surfacing workpieces with too high of a moisture content. Sometimes fuzzy grain is an unavoidable characteristic of some woods, such as basswood. Fuzzy grain can also be caused by dull knives/inserts.

Solution: Check the workpiece with a moisture meter. If moisture is greater than 20%, sticker the workpiece and allow it to dry. Otherwise, inspect the knife/insert condition.

Snipe

Problem: Occurs when board ends have more material removed than the rest of the board. Usually caused when the workpiece is not properly supported as it goes through the machine. In many cases, however, a small amount of snipe is inevitable.

Solution: Hold workpiece up slightly as it leaves the outfeed end of the planer. The best way to deal with snipe is by planing the workpiece longer than your intended work length and then cutting off the excess after planing is completed.

Chip Marks or Indentations

Problem: Chip indentation or chip bruising is the result of wood chips not being ejected from the machine. Instead they are carried around the cutterhead, deposited on the planed surface and crushed by the outfeed roller. Some causes of chip indentation are:

- Wood chips/sawdust not being properly expelled from the cutterhead.
- The type of workpiece being planed. Certain species of wood have a tendency to chip bruise.
- High moisture content (over 20%) or surface moisture (refer to **Workpiece Inspection**).
- Dull knives/inserts.
- Excessive depth of cut.

Solution:

- Use a proper dust-collection system; adjust chip deflector in or out as necessary.
- Workpiece must be completely dry, preferably kiln-dried (KD). Air-dried (AD) lumber must be seasoned properly and have no surface moisture. DO NOT surface partially-air-dried (PAD) workpiece.
- Make sure planer knives/inserts are sharp.
- Reduce depth of cut.

Pitch & Glue Buildup

Problem: Glue/resin buildup on the rollers and cutterhead will cause overheating by decreasing cutting sharpness while increasing drag in the feed mechanism. This can result in scorched workpieces, uneven knife/insert marks, and chatter.

Solution: Clean the rollers and cutterhead.

Rippled Cut

Problem: Regularly spaced indentations across face of workpiece are caused by excessive outfeed roller pressure or excessive feed rate.

Solution: Reduce outfeed roller pressure; reduce feed rate.

Setting Depth of Cut

Cutterhead Movement per Handwheel Revolution
One Full Revolution..... 1/16"

Material Thickness Range
Minimum-Maximum Stock Thickness .....1/8"-6"

The depth of cut on a planer means the amount of material that is removed from the top of the workpiece as it passes underneath the cutterhead.

The depth of cut is set by adjusting the distance of the cutterhead above the table. This distance is the thickness of the workpiece minus the depth of cut. The planing depth of cut is controlled by using the cutterhead elevation handwheel (see **Figure 14**) on the right side of the machine. Rotating the handwheel counterclockwise raises the headstock.

Although the correct depth of cut varies according to wood hardness and workpiece width, we recommend the maximum depth of cut (per pass) be no more than 1/16". A series of light cuts will give better end results and put less stress on the planer than trying to take off too much material in a single pass.

The depth-of-cut scale functions as a general guide only, and is not intended for low-tolerance, precision results. A small amount of backlash may be present with the cutterhead elevation handwheel after switching height directions. Switching height direction may cause slightly less than 1/16" backlash during the first handwheel turn. As the handwheel is turned more rotations in the same direction, backlash will not be a factor.

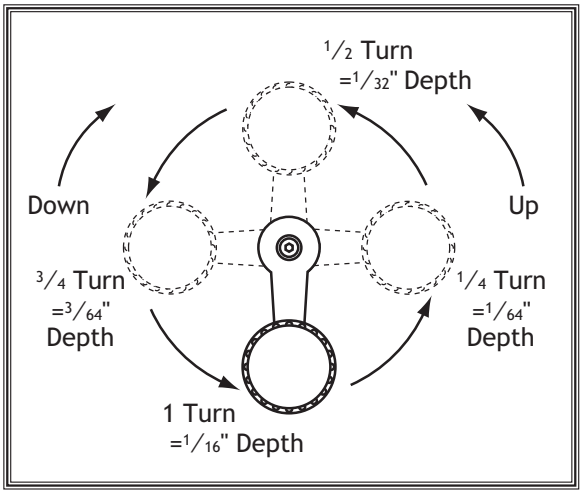


Figure 14. Handwheel elevation increments.

Elevation Scale

The elevation scale (see **Figure 15**) on the righthand side panel at the front of the machine shows workpiece thickness after it leaves the planer. The thickness measurement is indicated by the red line.

Note: *The cutterhead elevation scale does not provide a precise measurement and should only be used for approximate measurements. If precise workpiece thicknesses are needed, use calipers to ensure your workpieces meet your standards.*

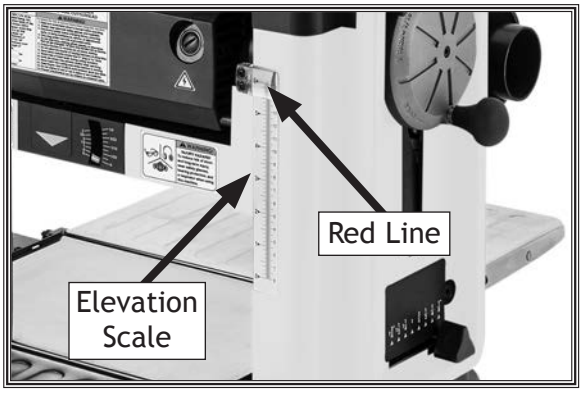


Figure 15. Elevation scale components.

Depth Stop Lever

The depth stop lever (see **Figure 16**) on the righthand side of the machine allows for pre-set cut depth for consistent repeat planing. Workpiece thickness is indicated by the line on the depth stop lever pointing to the height scale.

To adjust the lever, rotate the cutterhead elevation handwheel to raise the cutterhead assembly, move the lever to the preferred depth, then lower the cutterhead assembly until it gently rests on the depth stop.

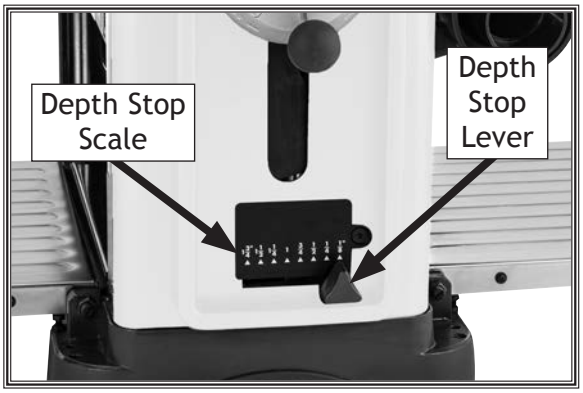


Figure 16. Depth stop lever and scale.

Adjusting Table Alignment

The front and rear table heights are adjustable for proper workpiece contact throughout the cut.

Tools Needed	**Qty**
Open-End Wrenches 10mm	2
Straightedge 24"	1

To adjust extension table height, do these steps:

1. To check alignment, lay a straightedge across bed and both extension tables (see **Figure 17**).

2. Loosen stop nuts and adjustment bolts underneath each extension table (see **Figure 18**).

3. Rotate adjustment bolts so extension tables and main table are on the same plane.

   Note: *No gap should be visible beneath straightedge when tables are properly aligned.*

4. Use one wrench to prevent adjustment bolt from rotating while using other wrench to tighten nut. Recheck table height from side to side, then tighten stop nut to secure setting.

Figure 17. Aligning extension tables.

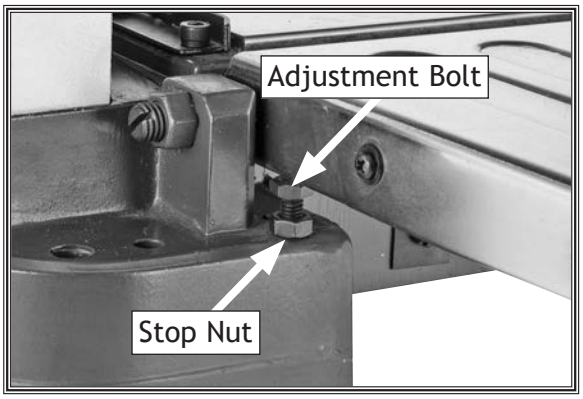


Figure 18. Location of components for adjusting table.

Feeding Workpiece

The feed rate on this planer is automatically set at 26 FPM. Infeed and outfeed rollers move the workpiece through the planer while keeping it firmly against the table and providing a consistent rate of movement.

To feed workpiece into planer, do these steps:

1. Place workpiece on table with side to be planed facing *up* toward cutterhead.

Note: *Boards more than 24" long should be supported on both sides of planer. This can be done with roller extension tables or standard extension tables.*

2. Lower cutterhead until indicator on depth-of-cut gauge reads 1/64" (see **Figure 19**).

Note: *Any time you switch directions with cutterhead elevation handwheel, there will be a small amount of backlash—so the first full crank of the handwheel after switching directions will be slightly less than 1/16". However, as long as you move the handwheel in the same direction during operation, backlash will not be a factor.*

3. Rotate cutterhead elevation handwheel 1/4 turn counterclockwise to raise cutterhead approximately 1/64". This will set depth of cut to 1/32". Remove workpiece from planer.

4. Turn planer ***ON***.

5. Feed workpiece into front of planer, making sure not to stand directly in front of or behind workpiece to reduce risk of a kickback injury.

— If cut is too deep and bogs down planer, raise cutterhead to reduce depth of cut, then repeat **Step 5**.

Note: *Infeed and outfeed rollers will automatically pull workpiece through planer during operation. Do not push or pull on workpiece once feed rollers have engaged it.*

6. Once workpiece is clear of outfeed roller, measure workpiece thickness. If further planing is needed, lower cutterhead another 1/4-1/2 turn (1/32") of the elevation handwheel, and repeat cutting operation.

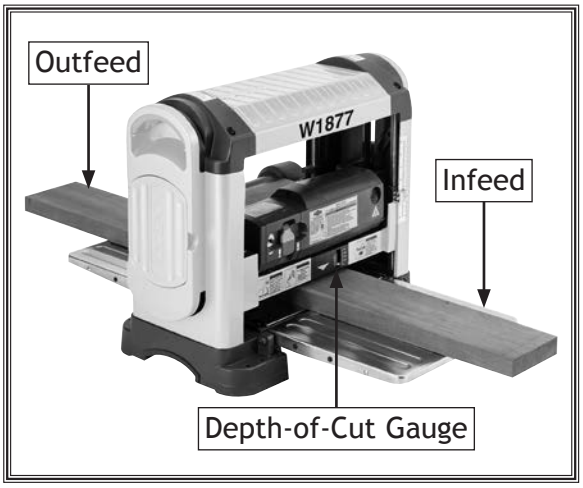
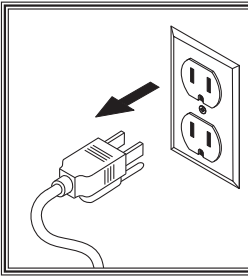


Figure 19. Basic planing operation setup.

7. Continue process until desired workpiece thickness is reached. Elevation scale shows approximate thickness of workpiece after it has been cut. Use this indicator to judge when thickness is approximately correct. For more precise applications, measure workpiece thickness with calipers during cutting operation.

Rotating/Replacing Cutterhead Inserts



⚠WARNING

To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.

⚠CAUTION

The inserts are very sharp and can quickly cut your hands. ALWAYS use caution and heavy leather gloves when handling these parts to reduce the risk of personal injury.

The spiral-style cutterhead is equipped with indexable high-speed steel inserts that can each be rotated to reveal one of two cutting edges. If one edge of an insert becomes dull or damaged, simply rotate it 90° counterclockwise to the adjacent cutting edge, as shown in **Figure 20**.

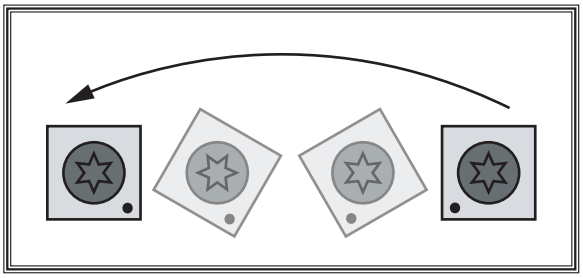


Figure 20. Rotation of insert counterclockwise to reveal fresh cutting edge.

Items Needed	**Qty**
Replacement Inserts	As Needed
Torque Wrench	1
Torx Wrench T-25	1
Hex Wrench 4mm	1
Heavy Leather Gloves	1 Pair
Light Machine Oil	As Needed

To rotate or replace a cutterhead insert, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Use elevation handwheel to position cutterhead at approximately 4" on elevation scale.
3. Remove dust hood to expose cutterhead (see **Figure 21**).
4. Put on heavy leather gloves to protect your fingers and hands.
5. Remove any sawdust or debris from head of insert, Torx screw, and surrounding area (see **Figure 21**).

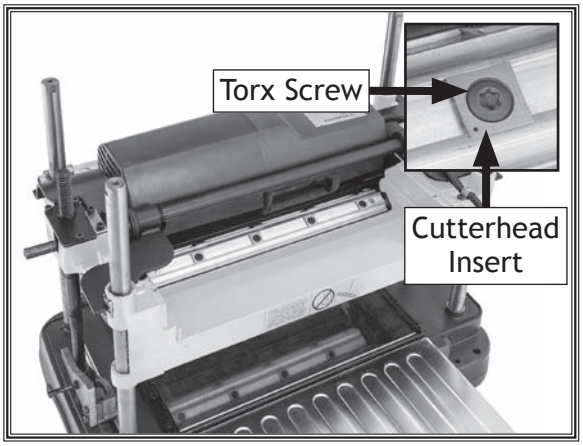


Figure 21. Dust hood removed to reveal cutterhead inserts and Torx screws.

6. Slide 4mm hex wrench through righthand side panel and insert in cutterhead shaft (see **Figure 22**). Use wrench to rotate cutterhead as necessary during remaining steps.

7. Remove Torx screw and insert, then clean all dust and debris from parts and cutterhead.

Note: *Proper cleaning of insert, Torx screw, and cutterhead is critical to achieving a smooth finish. Dirt or dust trapped between insert and cutterhead will raise insert, and make marks on your workpiece when planing.*

Tip: *Use low-pressure compressed air or a vacuum nozzle to clean around cutterhead.*

8. Rotate insert 90° counterclockwise and install so the fresh cutting edge faces outward (see **Figure 23**).

— When both insert cutting edges have been used, replace insert with a new one. Always position new insert reference dot in same position to aid in rotational sequencing.

9. Lubricate Torx screw threads with a very small amount of light machine oil, wipe excess off, and torque screw to 48–50 inch/pounds.

Note: *If too much oil is applied to the threads, excess oil will attempt to squeeze out of the threaded hole and raise insert during installation, bringing it out of height alignment.*

10. Re-install dust hood.

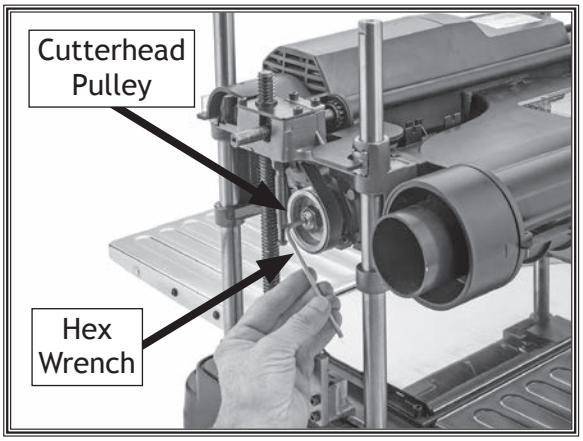


Figure 22. Inserting hex wrench in cutterhead. (Top cover and sides removed for clarity.)

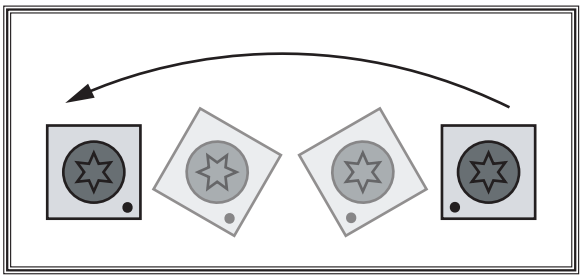


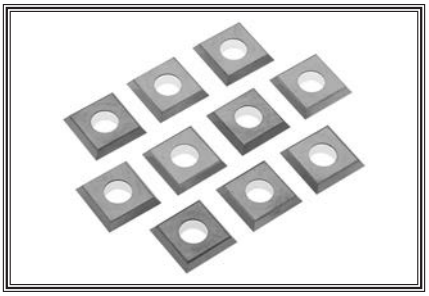
Figure 23. Insert rotating sequence.

ACCESSORIES
Planer Accessories

The following planer 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.

W1876—6" Benchtop Jointer w/Spiral-Style Cutterhead
At last, a benchtop jointer with a spiral-style cutterhead. Forget the hassle of changing knives, and reap the benefits of HSS inserts. Each insert can be rotated twice to provide a new sharp edge and leave silky-smooth surfaces on even the most figured hardwoods. CSA certified.

D4933—Replacement Carbide Inserts, 10-Pk.
Replacement inserts for the W1877 Planer. These indexable carbide inserts measure 14mm x 14mm x 2mm and are sold in a 10-pack.



D2273—Single Roller Stand
Large diameter ball bearing roller stand features smooth operation for a variety of processing and work support applications. Heavy pedestal base is stable and secure.

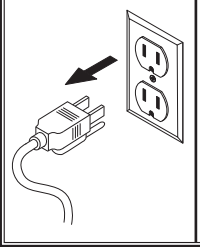
D2274—5-Roller Stand
For greater work stability and support, this 5-roller stand features large-diameter, ball bearing rollers mounted on a sturdy adjustable pedestal base.

W1844—Wall-Mount Dust Collector w/Cannister Filter
Nothing beats the convenience of this wall-mounted Dust Collector and the efficiency of the large surface area, pleated filter with internal paddle brushes. Whenever efficiency is being diminished due to dust cake, just a couple of turns of the handle rotates the paddle brushes against the inside of the filter to drop the fine dust cake into the plastic collection bag. It's as easy as that!

D2675—Safety Glasses Metal Frame
Exceeds ANSI Z87.1-1989 standards for impact resistance. A metal band across the top of these glasses adds strength, and are linked to the metal ear pieces through a tough hinge. These glasses have a wide field of view and side shields for added protection.

D3640—Tool Table Plus
Designed to accommodate larger benchtop machines, this table has a butcher block finish and measures 14" x 40" x 1¼" thick. The wide A-frame stand has a 700 lb. capacity and measures 33" high. Bottom measures 47½" x 25¼". Includes stand frame and top.

MAINTENANCE



⚠WARNING

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

Schedule

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

Ongoing

To maintain a low risk of injury and proper machine operation, if you ever observe any of the items below, shut down the machine immediately and fix the problem before continuing operations:

- Loose mounting bolts.
- Damaged inserts.
- Worn or damaged wires.
- Any other unsafe condition.

Monthly

- Clean chains and sprockets of dust, wood chips, and old grease.
- Lightly coat chains and sprockets with NLGI#2 grease (see **Page 32**).
- Lubricate elevation leadscrews with spray lubricant (see **Page 32**).
- Check V-belt for tension, damage, or wear (see **Page 35**). Also, ensure belt is clean and free of oil or grease that could cause it to slip.
- Remove dust hood, top cover, and side panels, and thoroughly clean builtup sawdust and chips.

Cleaning & Protecting

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.

Lubrication

NOTICE

Failure to follow reasonable lubrication practices as instructed in this manual for your machine could lead to premature failure of components and void the warranty.

There are four primary systems that require periodic lubrication: the cutterhead elevation leadscrews, the feed roller chain drive, the table height chain, and columns. Clean the components in this section with an oil/grease solvent cleaner or mineral spirits before applying lubrication.

Items Needed	Qty
Stiff Brush	1
Shop Rags	As Needed
Mineral Spirits	As Needed
Grease NLGI#2	As Needed
Dry Lubricant	As Needed
Hex Wrenches 4, 5mm	1 Ea.

Elevation Leadscrews & Columns

Grease Type..... Dry Coating Lube
Frequency..... Monthly

To lubricate elevation leadscrews & columns, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Lower headstock fully and remove side panels to expose leadscrews and columns (see **Figure 24**).
3. Vacuum chips and dust off of leadscrews.
4. Use mineral spirits, stiff brush, and shop rags to remove old lubricant.
5. Spray lubricant onto each leadscrew and column, taking care to keep it off belt. Move cutterhead up and down to evenly distribute.

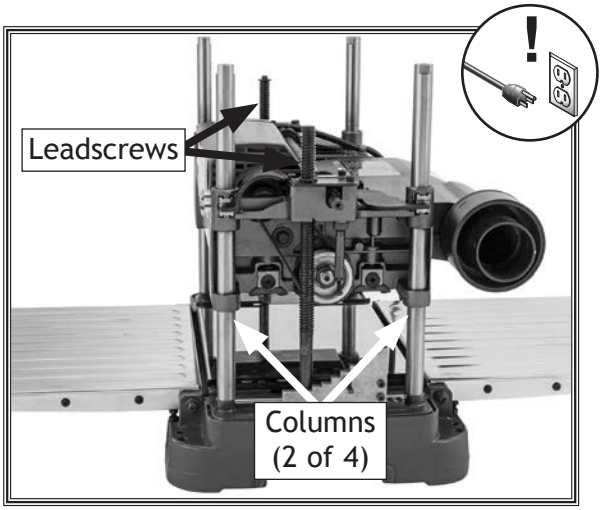


Figure 24. Location of cutterhead columns and leadscrews.

Feed Roller Chain Drive

Grease Type.....NLGI#2 Equivalent
Frequency..... Monthly

To lubricate feed roller chain drive, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove side panel to expose sprockets and chains (see **Figure 25**).
3. Use mineral spirits, stiff brush, and shop rags to clean old grease from chains.
4. Apply light coating of grease to chain linkage and sprockets.
5. Re-install side panel.

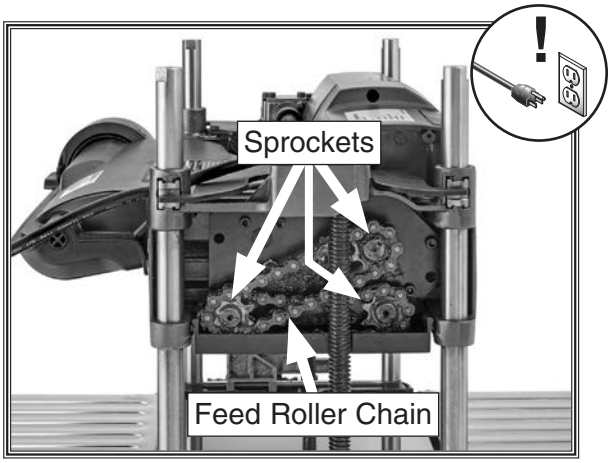


Figure 25. Leadscrews and drive chain exposed for lubrication.

SERVICE

Cleaning Infeed & Outfeed Rollers

Saw dust and workpiece grime can accumulate on the infeed and outfeed rollers, creating inconsistent pressure on the workpiece as it is fed through the cutterhead.

To remove sawdust from feed rollers, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Raise headstock completely to expose infeed and outfeed rollers (see **Figure 26**).

3. Clean rubber infeed and outfeed rollers with solvent to remove any pitch or stuck-on chips.

4. Use a vacuum and clean brush to remove any trapped material from between roller and headstock.

Figure 26. Cleaning infeed roller.

Cleaning Feed Roller Brackets

The feed rollers rotate in bushing blocks that are spring loaded. The feed rollers ride up on the board so that the roller pressure is maintained. If chips or sawdust build up between the bracket and bushing block (see **Figure 27**), the amount of roller vertical travel will be reduced, potentially causing improper feeding of workpiece through the machine.

Periodically check and clean chips and sawdust from between the bushing blocks and brackets.

Items Needed	**Qty**
4" Tall Block of Wood	1
Hex Wrenches 4, 5mm	1 Ea.

To clean feed rollers, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove righthand side panel.
3. Place a 4" tall block of wood between one feed roller and planer table. Ensure block of wood is not under cutterhead.
4. Lower cutterhead assembly just enough so roller is pushed up against spring and pressure is off of two brackets.
5. Remove any trapped material from between roller assembly and bracket.
6. Raise cutterhead, remove wood block, and re-install side panel.

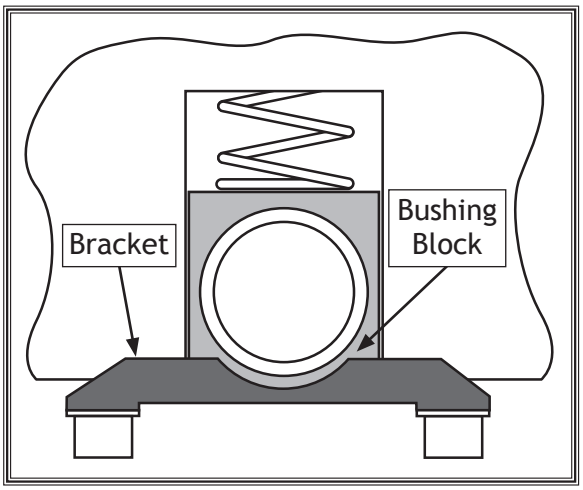


Figure 27. Sawdust can get trapped between the bushing block and the bracket.

Tensioning/Replacing Drive Belt

The drive belt transfers power from the motor to the cutterhead, and to the infeed and outfeed rollers. To ensure efficient transfer of power to these systems, make sure the belt is always properly tensioned and in good condition.

If the belt is worn, cracked, or damaged, replace it immediately.

Tools Needed	**Qty**
Hex Wrenches 4, 5mm	1 Ea.
Socket Wrench w/1/2" Socket & 4" Extension	1 Ea.
Replacement Belt (PN X1877066)	As Needed

To tension/replace drive belt, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Position headstock at approximately 3" on elevation scale.
3. Remove handwheel and depth stop handle.
4. Remove top cover and righthand side panel to expose drive belt and pulleys (see **Figure 28**).
5. Loosen motor tension hex bolt (see **Figure 28**) to reduce belt tension, and roll old belt off pulleys.
6. Loop new belt completely around motor pulley but only halfway on cutterhead pulley.
7. Apply pressure to belt with one hand, and slowly rotate motor pulley to fully seat belt in grooves.

   Note: *Belt is correctly tensioned when there is approximately 3/8" deflection when moderate pressure is applied midway between pulleys, as illustrated in* ***Figure 29****. Lift motor to adjust deflections, then tighten motor tension bolt.*
8. When belt is fully on both pulleys, rotate it several times to make sure belt ribs are seated in grooves.

   — If belt ribs are not properly seated, roll belt off pulleys and repeat **Steps 6-8** until they are.
9. Replace side panel, secure top cover, re-install cutterhead depth stop handle, and handwheel.

NOTICE

After approximately 16 hours of operation, V-belt will stretch and seat into pulley grooves and need to be properly tensioned to avoid severely reducing life of V-belt.

⚠CAUTION

V-belt and pulleys will be hot after operation. Allow them to cool before handling.

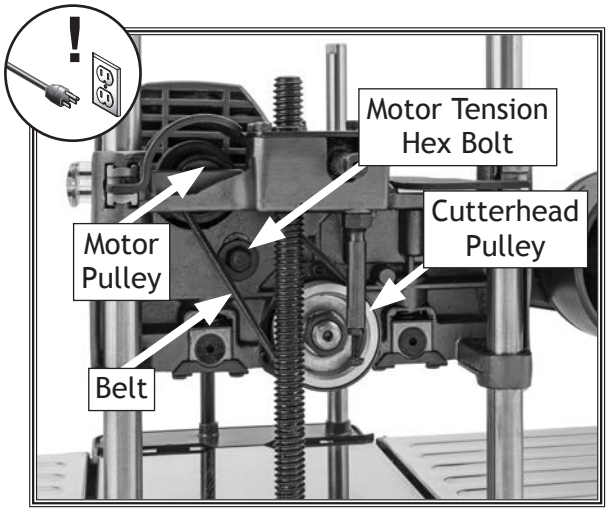


Figure 28. Drive belt and pulleys.

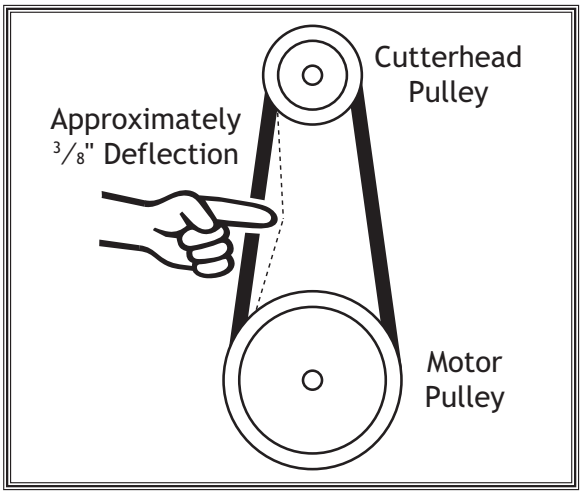


Figure 29. Correct amount of belt deflection.

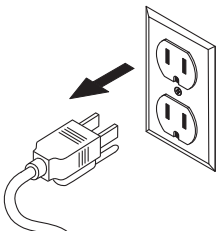
SERVICE

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**.

⚠WARNING



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

Calibrating Headstock Elevation Scale

Although correctly set at the factory, the scale can be adjusted for accuracy if it becomes necessary.

Tools Needed	**Qty**
Phillips Screwdriver #2	1
Scrap Piece of Stock	1
Calipers	1

To calibrate scale, do these steps:

1. Plane scrap piece of stock until it is flat on both sides and has even thickness along its length.

   Note: *Turn scrap board over between each pass to make surfaces parallel.*

2. Use calipers to measure board thickness.

3. If there is a discrepancy between board thickness and reading on elevation scale, loosen Phillips head screws shown in **Figure 30**, adjust position of red indicator line to show correct thickness, then re-tighten screws.

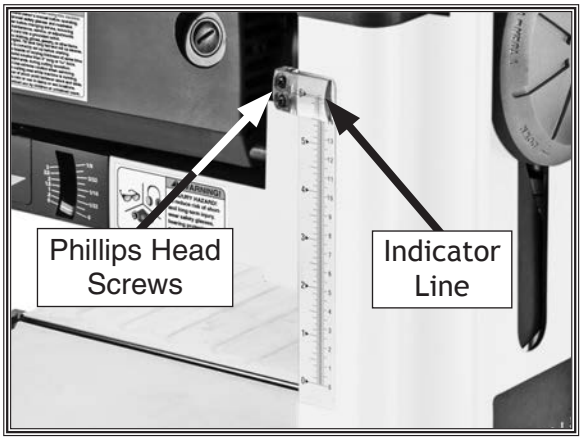


Figure 30. Elevation scale components used to calibrate thickness reading.

Adjusting Cutterhead/ Table Parallelism

The cutterhead/table parallelism has been correctly set at the factory. However, it can be re-adjusted for accuracy if the cutterhead assembly shifts over time.

Items Needed	Qty
Hex Wrench 5mm	1
Open-End Wrench 12mm	1
Socket Wrench w/17mm Socket	1
1½" x 12" Pieces of Stock	2

To adjust cutterhead/table parallelism, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Remove top cover and lefthand side panel.

3. Remove M10-1.5 lock nut from base of lefthand leadscrew (see **Figure 31**).

4. Disengage cutterhead lock by rotating lever all the way left.

5. Place both pieces of stock on either side of table, and lower headstock until cutterhead just touches (see **Figure 32**).

Note: *Having wood blocks at an even height is critical to the accuracy of your overall adjustments. For best results, square stock with a jointer and table saw before using as a gauge.*

6. Check cutterhead contact with wood blocks.

— If cutterhead makes even contact between wood blocks, no adjustment is needed.

— If cutterhead only touches one wood block, continue to **Step 7**.

7. Use 12mm open-end wrench on leadscrew flats (see **Figure 31**) to raise or lower headstock until cutterhead evenly touches wood blocks.

8. Raise headstock slightly, then lower until it just contacts wood blocks. Contact should be even across blocks. If contact is not even, repeat **Steps 6-8** until cutterhead is parallel.

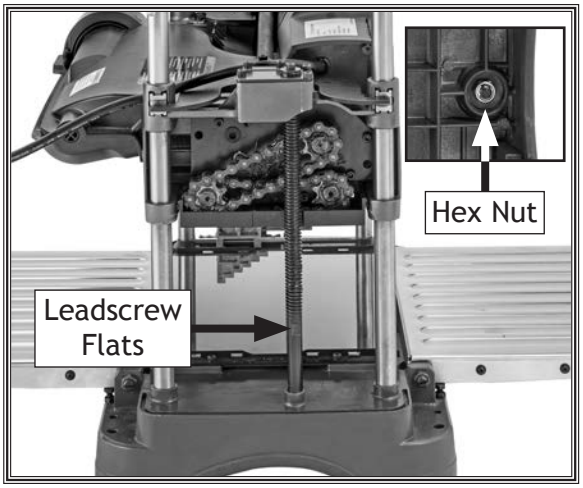


Figure 31. Location of leadscrew flats and hex nut.

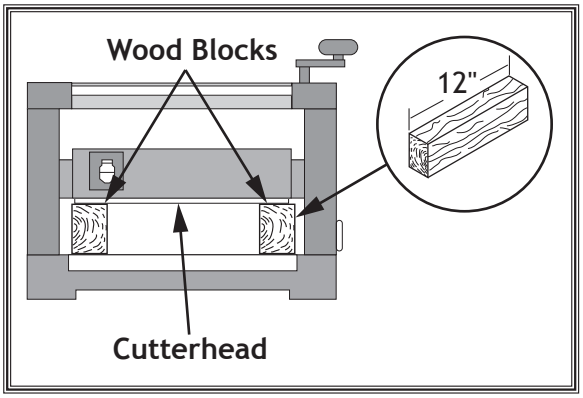


Figure 32. Checking cutterhead parallelism.

9. Engage cutterhead lock, and re-install lock nut, top cover, and side panel.

10. Plane a test piece to confirm even cut depth across width of workpiece.

Adjusting Cutterhead Lock Tension

The cutterhead lock lever can be adjusted to increase or decrease the amount of clamping force on the cutterhead, leadscrews, and columns.

When engaged, the cutterhead lock lever should be fairly easy to set in the locked position, and it should keep the headstock stationary during operations.

To adjust cutterhead lock tension, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Position headstock at approximately 3" on elevation scale.

3. Remove top cover and righthand side panel to reveal cutterhead lock assembly and lock lever (see **Figure 33**).

4. Pull lever out and away from machine ½" to disengage lever from sprocket (see **Figure 34**).

5. Rotate lever counterclockwise to increase tension; rotate clockwise to decrease tension; re-engage lever with sprocket.

   Note: *Getting tension just right is a matter of trial and error. We recommend moving the lever 1-2 teeth at a time, then re-engaging lever and sprocket, and testing tension.*

6. Repeat **Steps 4-5** until satisfied with results, then re-install side panel and top cover.

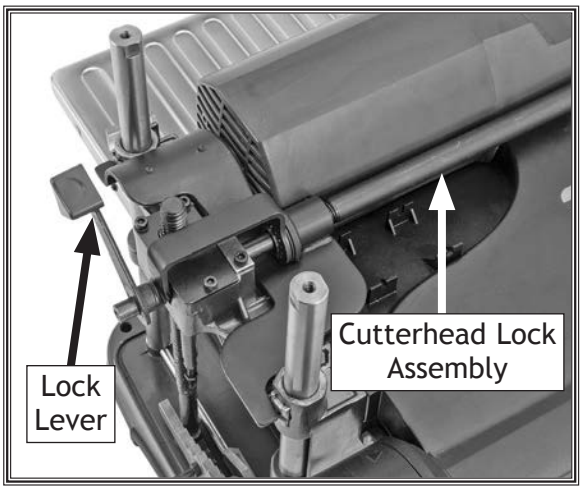


Figure 33. Cutterhead lock components.

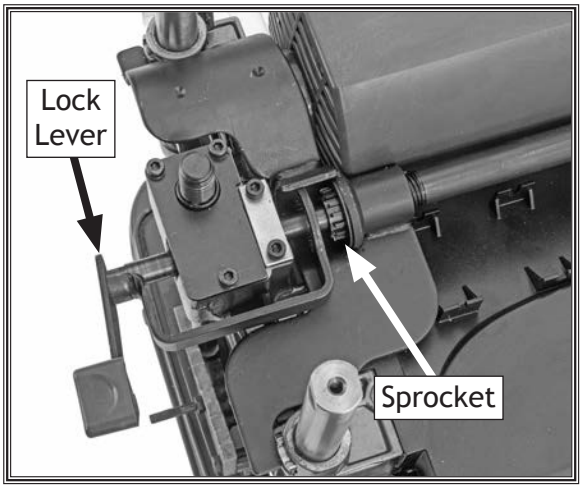


Figure 34. Cutterhead lock lever disengaged from sprocket.

Calibrating Depth Stop Lever

The settings on the depth stop lever indicator are pre-set by the factory to match the corresponding measurements on the elevation scale. Over time, the lever may need to be adjusted to maintain accuracy. To ensure accurate depth of cut, always follow the directions in **Calibrating Headstock Elevation Scale** before performing the steps outlined below.

Tools Needed	**Qty**
Open-End Wrenches 6mm	2
Hex Wrenches 4, 5mm	1 Ea.

To calibrate depth stop lever, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove handle from depth stop lever by pulling handle firmly outward (see **Figure 35**).
3. Remove top cover and righthand side panel.
4. Loosen hex nut (see **Figure 36**) and adjust height stop bolt up or down to increase or decrease depth of cut.
5. Tighten hex nut to secure setting.
6. Re-install side panel, top cover, and handle, and turn cutterhead elevation handwheel until cutter assembly rests gently on depth stop. Compare depth stop dial scale to cutterhead elevation scale.
7. Repeat **Steps 2-6** as needed until both scales match.

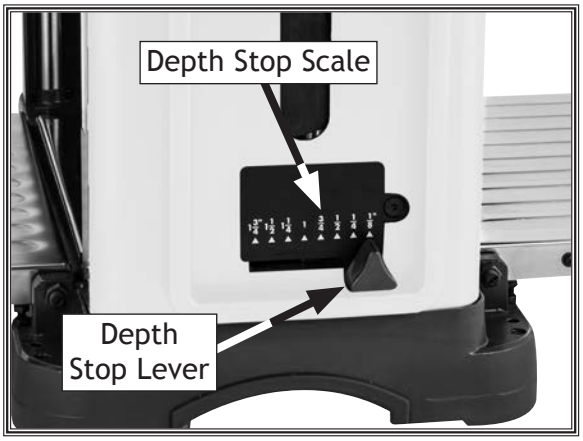


Figure 35. Location of depth stop handle.

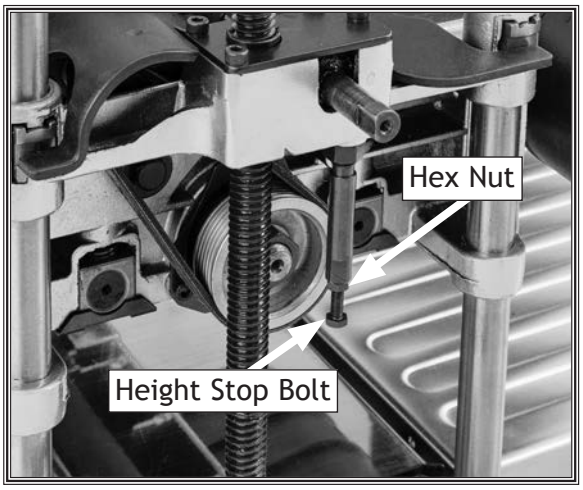


Figure 36. Depth stop height components.

SERVICE

Replacing Motor Brushes

The motor on the W1877 is equipped with two long-life carbon brushes—one on the front and one on the back of the motor. The brush life is affected by motor loads and usage. Worn brushes will result in intermittent operation and difficulty starting the motor. If either brush is worn down to ¼" (6mm) or less, replace both brushes as a set.

Tools Needed	**Qty**
Flat Head Screwdriver	1

To check/replace motor brushes, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Unscrew plastic brush covers, and remove motor brush assemblies (see **Figure 37**).

   Note: *As you remove brush assembly, make note of carbon tip orientation. If found acceptable, re-install in same way.*

3. Measure length of carbon tip. If carbon tip is worn down to ¼" (6mm) or less, replace both brush assemblies with new ones.

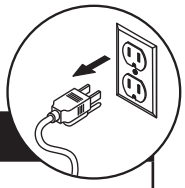
4. Insert brush assemblies back into motor, and re-install plastic caps.

Figure 37. Removing front motor brush.

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 & Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start, or power supply breaker trips immediately after startup.	1. Switch disabling key removed. 2. Machine circuit breaker tripped. 3. Incorrect power supply voltage or circuit size. 4. Power supply circuit breaker tripped or fuse blown. 5. Wiring broken, disconnected, or corroded. 6. Motor brushes worn out. 7. ON/OFF or circuit breaker switch at fault. 8. Motor at fault.	1. Install switch disabling key. 2. Reset circuit breaker on switch. 3. Ensure correct power supply voltage and circuit size (**Page 11**). 4. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 5. Fix broken wires or disconnected/corroded connections. 6. Replace motor brushes (**Page 40**). 7. Replace switch/circuit breaker. 8. Replace motor.
Machine stalls or is underpowered.	1. Workpiece not suitable for machine. 2. Machine undersized for task. 3. Belt slipping/pulleys misaligned/oil or grease on belt. 4. Dull inserts. 5. Motor brushes worn out. 6. Dust collector undersized. 7. Pulley/sprocket slipping on shaft. 8. Motor overheated, tripping machine circuit breaker. 9. Motor or motor at fault.	1. Only cut wood/ensure moisture is below 20%. 2. Reduce depth of cut (**Page 24**) 3. Clean/tension/replace belt. Ensure pulleys are aligned (**Page 35**). 4. Rotate/replace inserts (**Page 27**). 5. Replace motor brushes (**Page 40**). 6. Move closer to machine/redesign ducting layout/upgrade dust collector. 7. Tighten/replace loose pulley/shaft. 8. Clean motor/let cool, and reduce workload. Reset breaker. 9. Replace motor.
Machine has vibration or noisy operation.	1. Motor or component loose; planer not resting evenly on stand/workbench. 2. V-belt worn, loose, pulleys misaligned, or belt slapping cover. 3. Dull inserts. 4. Pulley loose. 5. Motor fan rubbing on fan cover. 6. Cutterhead bearings at fault. 7. Motor bearings at fault.	1. Inspect/tighten loose bolts/nuts; replace damaged components; shim under planer. 2. Tension/replace belt (**Page 35**); ensure pulleys are aligned. 3. Rotate/replace inserts (**Page 27**). 4. Re-align/replace shaft, pulley set screw, and key. 5. Fix/replace fan cover; replace loose/damaged fan. 6. Replace bearing(s). 7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Machine Operation

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Excessive snipe (gouge in end of board that is uneven with rest of cut). **Note:** A small amount of snipe is inevitable with all types of planers. The key is minimizing it as much as possible.	1. Feed rollers set too high. 2. Extension tables (or aftermarket support tables) not aligned with main table. 3. Workpiece not properly supported as it leaves planer. 4. Some snipe is inevitable.	1. Lower feed rollers. 2. Adjust rear extension table screws to align extension table with main table (**Page 25**). 3. Hold workpiece up slightly as it leaves outfeed end of planer. 4. Plane lumber longer than your intended workpiece length, then cut off excess after planing complete.
Workpiece stops/slows in middle of cut.	1. Taking too deep of a cut. 2. Feed rollers set too low or too high. 3. Table not parallel with headstock. 4. Pitch and glue buildup on planer components.	1. Take a smaller depth of cut. Reduce cutting depth when planing hard woods. 2. Adjust feed rollers; clean feed roller brackets (**Page 34**). 3. Adjust headstock so it is parallel with table (**Page 37**). 4. Clean internal cutterhead components with a pitch/resin-dissolving solvent.
Chipping (consistent pattern).	1. Knots or conflicting grain direction in wood. 2. Nicked or chipped insert. 3. Taking too deep of a cut.	1. Inspect workpiece for knots and grain direction; only use clean stock, and cut WITH the grain. 2. Rotate/replace inserts (**Page 27**). 3. Take a smaller depth of cut. Reduce cutting depth when planing hard woods.
Chipping (inconsistent pattern).	1. Chips are not being properly expelled from cutterhead.	1. Use a dust collection system.
Fuzzy grain.	1. Wood has high moisture content. 2. Dull inserts.	1. Ensure wood moisture content is less than 20%. Allow to air dry if necessary. 2. Rotate/replace inserts (**Page 27**).
Long lines or ridges that run along length of board.	1. Nicked or chipped inserts.	1. Rotate/replace inserts (**Page 27**).
Uneven cutter marks, wavy surface, or chatter marks across face of board.	1. Dirt or debris under inserts. 2. Worn cutterhead bearings.	1. Remove inserts, properly clean mounting face, and re-install. 2. Replace cutterhead bearings.
Glossy surface.	1. Dull inserts. 2. Cutting depth too shallow.	1. Rotate/replace inserts (**Page 27**). 2. Increase depth of cut (**Page 24**).
Infeed/outfeed rollers not rotating.	1. Chain and sprockets are worn, misadjusted, disconnected, or broken.	1. Adjust chain and sprockets; replace if necessary.

Electrical Safety Instructions

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

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

⚠WARNING

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

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

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

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

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

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

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

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

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

NOTICE

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

WIRING DIAGRAM COLOR KEY

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

SERVICE

Wiring Diagram

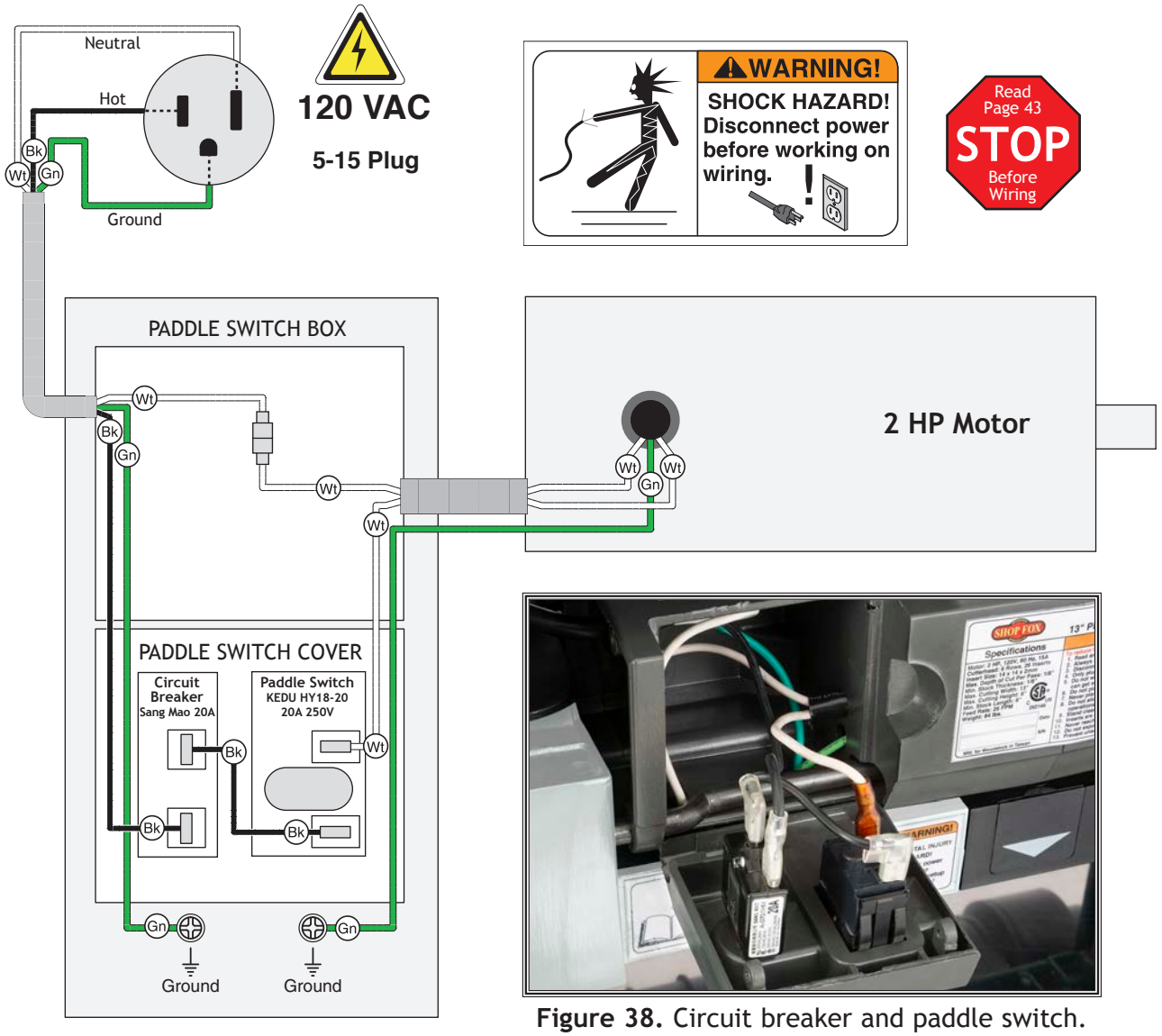
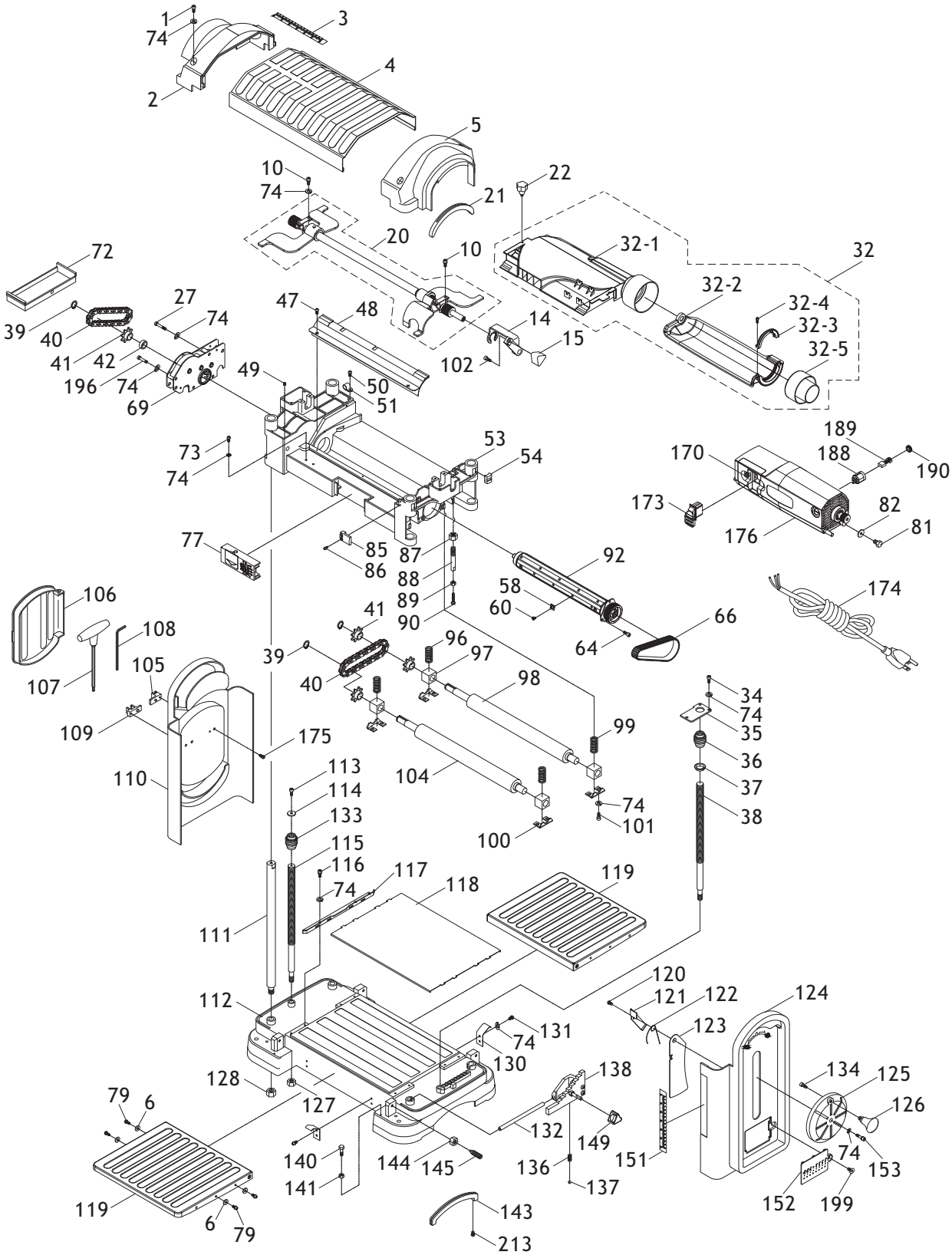


Figure 38. Circuit breaker and paddle switch.

SERVICE

PARTS

Main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Main Parts List

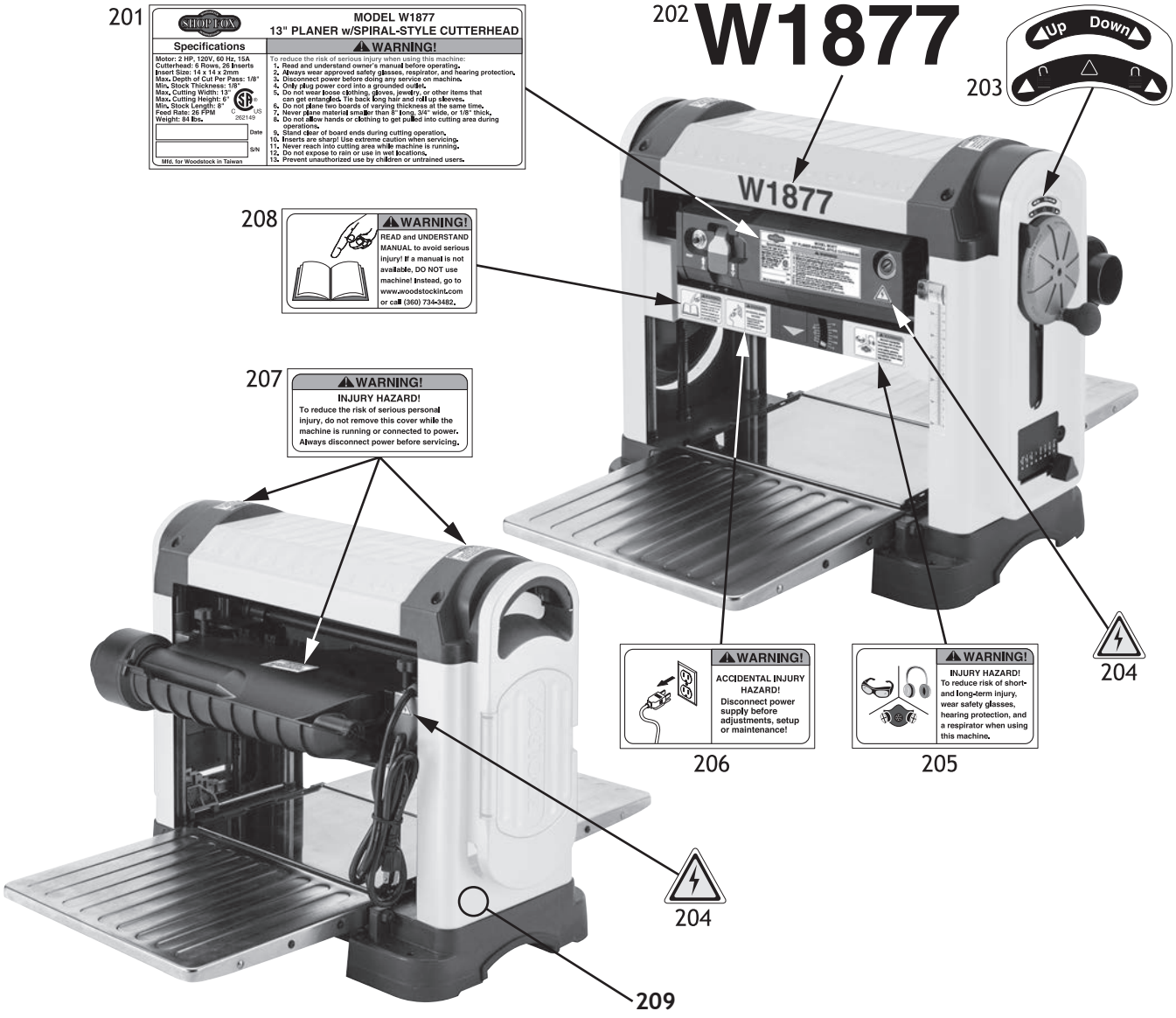
REF	PART #	DESCRIPTION
1	X1877001	CAP SCREW M6-1 X 20
2	X1877002	LEFT CAP
3	X1877003	LENGTH SCALE
4	X1877004	TOP COVER
5	X1877005	RIGHT CAP
6	X1877006	FLAT WASHER 4MM
10	X1877010	CAP SCREW M5-.8 X 12
14	X1877014	CUTTERHEAD LOCK LEVER
15	X1877015	KNOB M5-.8, 3-LOBE, D30
20	X1877020	CUTTERHEAD LOCK ASSEMBLY
21	X1877021	RUBBER PAD (UPPER)
22	X1877022	KNOB BOLT M5-.8 X 8, 5-LOBE, D25
27	X1877027	CAP SCREW M5-.8 X 35
32	X1877032	DUST HOOD ASSEMBLY
32-1	X1877032-1	DUST HOOD (UPPER)
32-2	X1877032-2	DUST HOOD (LOWER)
32-3	X1877032-3	SWIVEL RING
32-4	X1877032-4	TAP SCREW M3 X 16
32-5	X1877032-5	DUST PORT ADAPTER 4" X 2-1/2"
34	X1877034	CAP SCREW M5-.8 X 10
35	X1877035	COVER
36	X1877036	WORM GEAR (RIGHT)
37	X1877037	BUSHING
38	X1877038	LEADSCREW (RIGHT)
39	X1877039	EXT RETAINING RING 15MM
40	X1877040	CHAIN #410-26
41	X1877041	SPROCKET 8T
42	X1877042	SPACER
47	X1877047	PHLP HD SCR M5-.8 X 8
48	X1877048	DUST PORT PLATE
49	X1877049	SET SCREW M5-.8 X 8
50	X1877050	PHLP HD SCR M5-.8 X 8
51	X1877051	CORD CLAMP
53	X1877053	CARRIAGE
54	X1877054	SUPPORT BLOCK
58	X1877058	HSS INSERT 14 X 14 X 2
60	X1877060	FLAT HD TORX SCR M5-.8 X 16
64	X1877064	CAP SCREW M5-.8 X 12
66	X1877066	POLY V-BELT 135J6
69	X1877069	GEARBOX
72	X1877072	GEARBOX COVER
73	X1877073	TAP SCREW M5 X 8
74	X1877074	LOCK WASHER 5MM
77	X1877077	INDICATOR HOUSING
79	X1877079	PHLP HD SCR M4-.7 X 10
81	X1877081	HEX BOLT M8-1.25 X 20
82	X1877082	FLAT WASHER 8MM
85	X1877085	DEPTH-OF-CUT INDICATOR
86	X1877086	PHLP HD SCR M3-.5 X 16
87	X1877087	HEX NUT M10-1.5
88	X1877088	STEP BLOCK ROD
89	X1877089	HEX NUT M5-.8
90	X1877090	HEX BOLT M5-.8 X 25
92	X1877092	INDEXABLE CUTTERHEAD 13"
96	X1877096	COMPRESSION SPRING (LEFT)
97	X1877097	BEARING BLOCK
98	X1877098	OUTFEED ROLLER
99	X1877099	COMPRESSION SPRING (RIGHT)
100	X1877100	RETAINER PLATE
101	X1877101	CAP SCREW M5-.8 X 10
102	X1877102	CAP SCREW M5-.8 X 10
104	X1877104	INFEED ROLLER
105	X1877105	TOOL HOLDER (LEFT)
106	X1877106	TOOL BOX COVER
107	X1877107	T-HANDLE TORX WRENCH T-25
108	X1877108	HEX WRENCH 4MM
109	X1877109	TOOL HOLDER (RIGHT)
110	X1877110	SIDE PANEL (LEFT)
111	X1877111	COLUMN
112	X1877112	BASE
113	X1877113	CAP SCREW M5-.8 X 8
114	X1877114	FLAT WASHER 5MM
115	X1877115	LEADSCREW (LEFT)
116	X1877116	CAP SCREW M5-.8 X 10
117	X1877117	GUIDE RAIL
118	X1877118	WEAR PLATE
119	X1877119	EXTENSION TABLE
120	X1877120	PHLP HD SCR M5-.8 X 6
121	X1877121	STIFFENER PLATE
122	X1877122	TORSION SPRING
123	X1877123	GUARD PLATE
124	X1877124	SIDE PANEL (RIGHT)
125	X1877125	HANDWHEEL TYPE-34 125D X 6B-F X 8MM
126	X1877126	HOLLOW HANDLE 38 X 58, M5-.8
127	X1877127	LOCK NUT M10-1.5
128	X1877128	HEX NUT M12-1.75
130	X1877130	FLAT SPRING
131	X1877131	PHLP HD SCR M5-.8 X 10
132	X1877132	PIVOT ROD
133	X1877133	WORM GEAR (LEFT)
134	X1877134	CAP SCREW M5-.8 X 12
136	X1877136	COMPRESSION SPRING

Main Parts List (Cont.)

REF	PART #	DESCRIPTION
137	X1877137	STEEL BALL 10MM
138	X1877138	STEP BLOCK
140	X1877140	HEX BOLT M6-1 X 25
141	X1877141	HEX NUT M6-1
143	X1877143	RUBBER PAD (LOWER)
144	X1877144	HEX NUT M10-1.5
145	X1877145	SET SCREW M10-1.5 X 36 DOG-PT SLOTTED
149	X1877149	KNOB 3-LOBE D30
151	X1877151	THICKNESS SCALE
152	X1877152	STEP BLOCK COVER
153	X1877153	CAP SCREW M5-.8 X 20

REF	PART #	DESCRIPTION
170	X1877170	CIRCUIT BREAKER SANGMAO 20A
173	X1877173	PADDLE SWITCH KEDU HY18-20 20A
174	X1877174	POWER CORD 14G 3W 72" 5-15P
175	X1877175	TAP SCREW M4 X 8
176	X1877176	MOTOR 2HP 120V 1-PH
188	X1877188	BRUSH HOLDER
189	X1877189	CARBON BRUSH
190	X1877190	BRUSH COVER
196	X1877196	CAP SCREW M5-.8 X 30
199	X1877199	FLAT HD CAP SCR M6-1 X 12

Labels & Cosmetics



REF	PART #	DESCRIPTION
201	X1877201	MACHINE ID LABEL
202	X1877202	MODEL NUMBER LABEL
203	X1877203	UP/DOWN/LOCK LABEL
204	X1877204	ELECTRICITY LABEL
205	X1877205	EYE/EAR/LUNG LABEL

REF	PART #	DESCRIPTION
206	X1877206	DISCONNECT POWER LABEL
207	X1877207	INJURY/HAZARD LABEL
208	X1877208	READ MANUAL LABEL
209	X1877209	TOUCH-UP PAINT, SHOP FOX WHITE

⚠WARNING

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

WARRANTY

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

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

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

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

To register the warranty, go to **https://www.woodstockint.com/warranty**, or scan the QR code below. You will be directed to the Warranty Registration page on www.woodstockint.com. Enter all applicable production information.

WARRANTY

WOODSTOCKINT.COM