MODEL G0938
18" SCROLL SAW w/STAND
OWNER'S MANUAL
(For models manufactured since 03/21)

C US
174315

#JM22349 PRINTED IN CHINA V1.05.23

******Keep for Future Reference******

⚠ 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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INTRODUCTION

Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support
1815 W. Battlefield
Springfield, MO 65807
Phone: (570) 546-9663
Email: techsupport@grizzly.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.

Grizzly Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

⚠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.

⚠CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

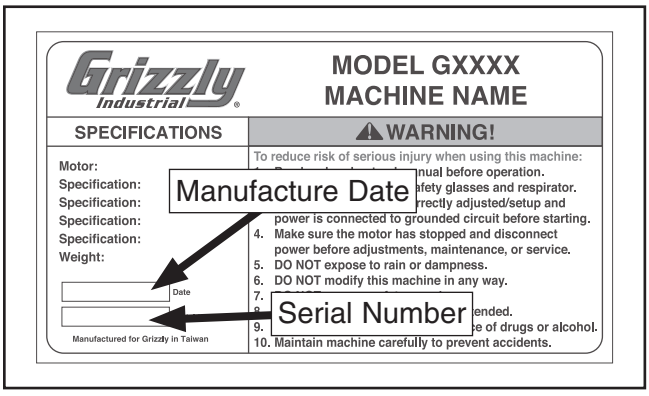
Manual Accuracy

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 in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual**.

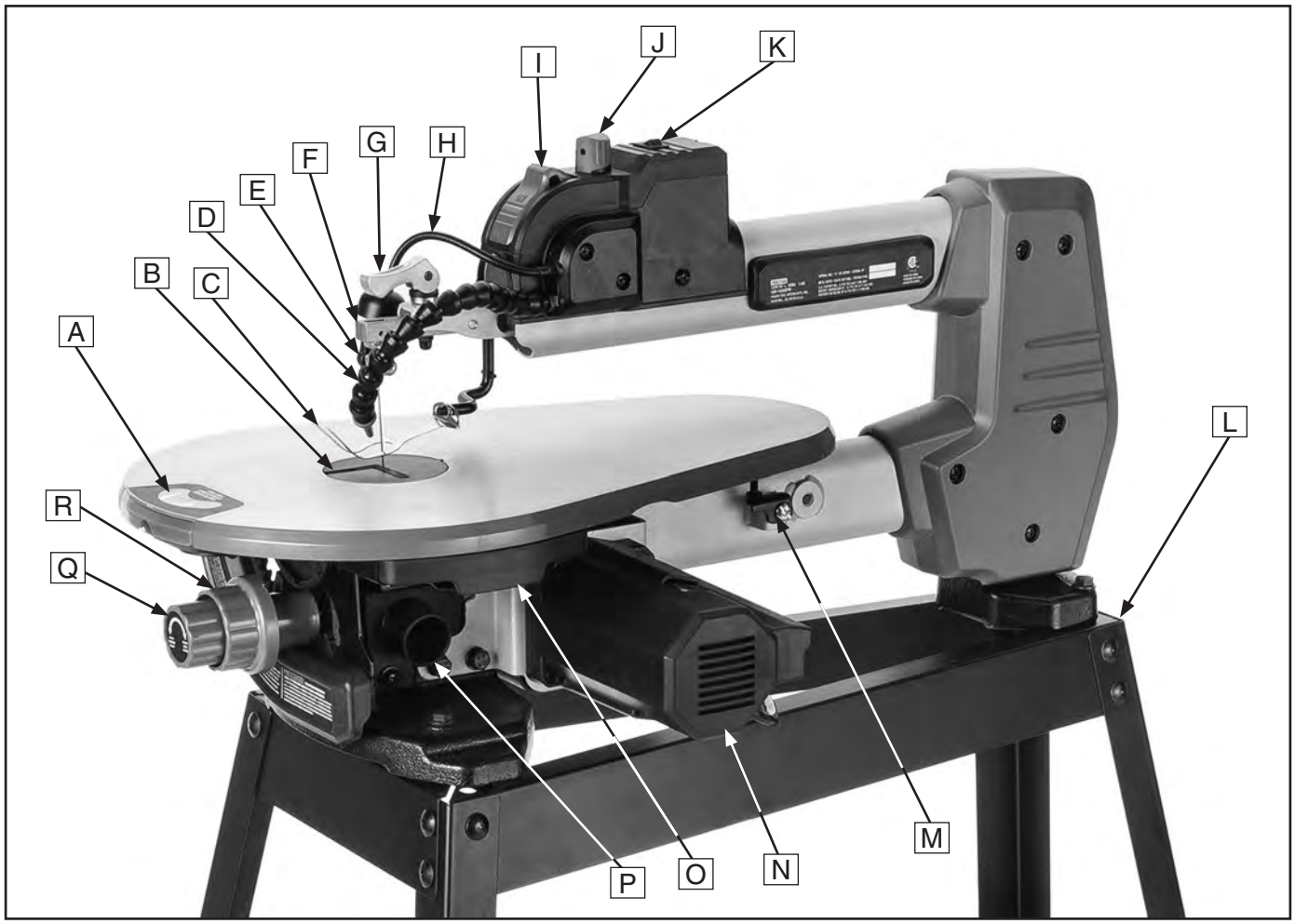
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.

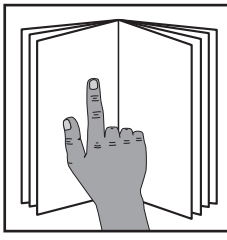


Identification

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



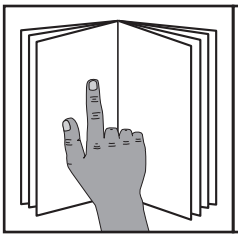
A. Table Tilt Scale
B. Table Insert
C. Hold-Down Shoe
D. Air Nozzle
E. Blade Holder Lock Knob (1 of 2)
F. Blade Holder
G. Blade Tension Lever
H. LED Work Light
I. ON/OFF Switch
J. Variable-Speed Knob
K. LED Work Light ON/OFF Switch
L. Stand
M. Positive Stop
N. Motor
O. Blade Storage Tray
P. Dust Port
Q. Table Lock Knob
R. Table Tilt Knob



⚠WARNING

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

Controls & Components



⚠WARNING

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

Refer to the following figures and 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 minimize your risk of injury when operating this machine.

Main Controls & Components

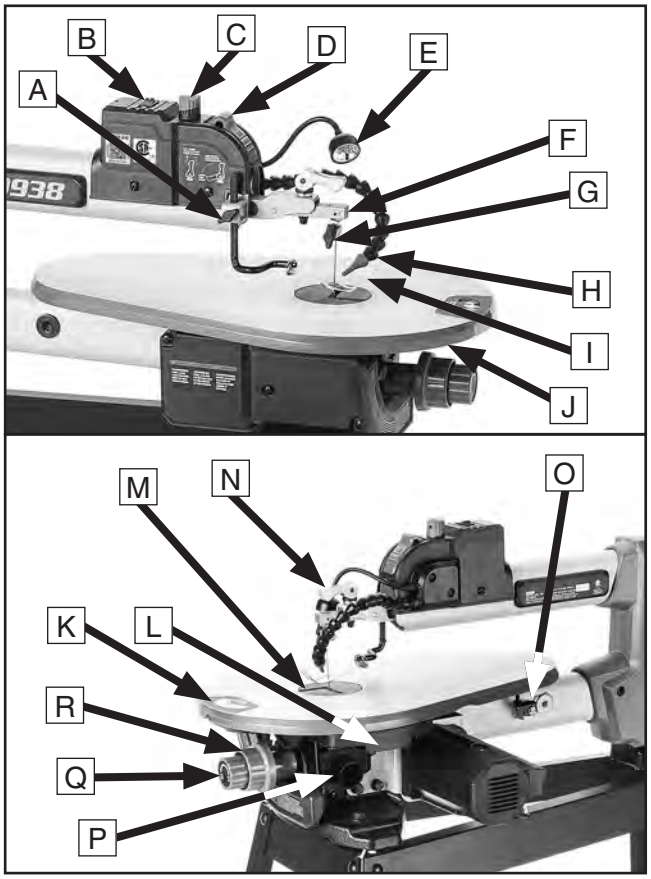


Figure 1. Main controls & components.

A. Hold-Down Shoe Lock Knob: Locks hold-down shoe in position.

B. LED Work Light ON/OFF Switch: Turns LED work light ***ON*** and ***OFF***.

C. Variable-Speed Knob: Adjusts blade speed from 450 to 1500 SPM.

D. ON/OFF Switch: Starts and stops motor.

E. LED Work Light: Used to illuminate workpiece.

F. Blade Holder: Holds blade in place.

G. Blade Holder Lock Knob: Locks blade in place, or unlocks blade for removal.

H. Air Nozzle: Adjustable nozzle blows debris away from line of cut during operations.

I. Hold-Down Shoe: Holds down workpiece as blade moves during operation. Adjust hold-down shoe to thickness of workpiece.

J. Table: Supports workpiece.

K. Table Tilt Scale: Displays degree of table angle from 0° to 45° when the table is tilted for bevel cutting.

L. Blade Storage Tray: Provides convenient access to extra blades or wrenches.

M. Table Insert: Removable plate when changing blades.

N. Blade Tension Lever: Increases/decreases blade tension. Turn clockwise to increase blade tension, and counterclockwise to decrease blade tension.

O. Positive Stop: Quickly return table to 0° from a left-tilt setting. Positive stop is adjustable, allowing for calibration, or if desired, minor deviations from 0°.

P. Dust Port: Connects vacuum hose or dust collection system.

Q. Table Lock Knob: Locks table at desired angle.

R. Table Tilt Knob: Adjusts table to desired angle for bevel cutting.

MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL G0938
18" SCROLL SAW WITH STAND

Product Dimensions:

Weight	46 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	35 x 24 x 45 in.
Footprint (Length x Width)	35 x 24 in.

Shipping Dimensions:

Type	Cardboard Box
Content	Machine
Weight	53 lbs.
Length x Width x Height	33 x 18 x 18 in.
Must Ship Upright	Yes

Electrical:

Power Requirement	120V, Single-Phase, 60 Hz
Full-Load Current Rating	1.6A
Minimum Circuit Size	15A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	72 in.
Power Cord Gauge	18 AWG
Plug Included	Yes
Included Plug Type	5-15
Switch Type	Toggle ON/OFF w/Variable-Speed Knob

Motor:

Main

Horsepower	1/9 HP
Phase	Single-Phase
Amps	1.6A
Speed	1500
Type	Universal (DC)
Power Transfer	Direct
Bearings	Shielded & Permanently Lubricated

Main Specifications:

Capacities

Depth of Throat	18 in.
Maximum Cutting Height	2-1/4 in.
Maximum Cutting Height at 45 Degrees	1-1/8 in.
Maximum Cutting Height at 15 Degrees	2-1/4 in.
Maximum Cutting Depth	18 in.

Blade & Movement

Blade Type	Pin-End or Plain-End
Blade Length	5 in.
Blade Width Range	3/32 in.
Blade Stroke	3/4 in.
Blade Strokes Per Minute (SPM)	450 - 1500 SPM

Table Information

Table Length	20 in.
Table Width	12-5/8 in.
Table Thickness	5/32 in.
Table Tilt	Left 45, Right 15 deg.
Table Tilt Adjustment Type	Manual

Construction

Table	Die-Cast Aluminum
Body	Die-Cast Aluminum
Stand	Steel
Lamp	LED
Paint Type/Finish	Powder Coated

Other Information

Number of Dust Ports	1
Dust Port Size	1-1/2 in (OD).

Other Specifications:

Country of Origin	China
Warranty	1 Year
Approximate Assembly & Setup Time	30 Minutes
Serial Number Location	ID Label
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Features:

Tool-Less Blade Holder Accepts Pin-End & Plain-End Blades
Variable Blade Speed
Machine Stand
Flexible Sawdust Blower & LED Worklight
Hold-Down Fork
Dust Port 1-1/2" (OD)

Accessories:

Pin-End Blade 5"
Plain-End Blade 5"
Hex Wrench 3mm

SECTION 1: SAFETY

For Your Own Safety, Read Instruction Manual Before Operating This 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. Always use common sense and good judgment.

⚠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. It may also be used to alert against unsafe practices.**

NOTICE **Alerts the user to useful information about proper operation of the machine to avoid machine damage.**

Safety Instructions for Machinery

⚠WARNING

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 your 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 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 prevents an injury risk 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.

⚠WARNING

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 reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

HAZARDOUS DUST. Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. 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!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to 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 BEFORE operating machine.

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 the 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.

DAMAGED PARTS. Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace BEFORE operating machine. For your own safety, DO NOT operate machine with damaged parts!

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. 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 our Technical Support at (570) 546-9663.

Additional Safety for Scroll Saws

⚠WARNING

Serious cuts or amputation can occur from contact with the moving saw blade during operation or if blade breakage occurs. To reduce this risk, anyone operating this machine MUST completely heed the hazards and warnings below.

HAND PLACEMENT. Never position fingers or hands in line with the blade. If the workpiece or your hands slip, serious personal injury could occur.

INTENDED USE. This machine is intended for cutting natural and man-made wood products, and laminate covered wood products. This machine is NOT designed to cut metal, glass, stone, tile, etc.

SMALL WORKPIECE HANDLING. If your hands slip while holding small workpieces with your fingers during a cut, amputation or laceration injuries could occur. Always support/feed the workpiece with push sticks, jig, vise, or some type of clamping fixture.

BLADE CONDITION. Do not operate with dull, cracked, or badly worn blade. Dull blades require more effort to perform the cut and increase the risk of kickback. Inspect blades for cracks and missing teeth before each use.

BLADE TENSION. To avoid mishaps that could result in operator injury, make sure the blade teeth face down toward the table and the blade is properly tensioned before operating.

BLADE SPEED. Always allow the blade to come to full speed before starting the cut. Moving the workpiece against a blade that is not at full speed could cause the blade to break or grab the workpiece and draw the operator's hands into the blade.

BLADE CONTROL. To avoid serious personal injury, DO NOT attempt to stop or slow the blade with your hand or the workpiece. Allow the blade to stop on its own.

FEED RATE. To avoid the risk of the workpiece slipping and causing operator injury, always feed stock evenly and smoothly. DO NOT force or twist the blade while cutting, especially when sawing small curves.

CUTTING TECHNIQUES. Plan your operation so the blade always cuts to the outside of the workpiece. DO NOT back the workpiece away from the blade while the saw is running, which could cause kickback and personal injuries. If you need to back the workpiece out, turn the scroll saw ***OFF*** and wait for the blade to come to a complete stop. DO NOT twist or put excessive stress on the blade that could damage it. Instead, use relief cuts for curve cuts that may twist the blade.

LEAVING WORK AREA. Never leave a machine running unattended. Allow the scroll saw to come to a complete stop before you leave it unattended.

CUT-OFF PIECES. Never use your hands to move cut-offs away from the blade while the saw is running. If a cut-off becomes trapped between the blade and table insert, turn the saw ***OFF*** and allow the blade to completely stop before removing it.

SECTION 2: POWER SUPPLY

Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.

⚠WARNING

Electrocution, fire, shock, or equipment damage may occur if machine is not properly grounded and connected to power supply.

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 .... 1.6 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

⚠WARNING

Serious injury could occur if you connect machine to power before completing setup process. DO NOT connect to power until instructed later in this manual.

120V 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 ..... 15 Amps
Plug/Receptacle ..... NEMA 5-15

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.)

⚠CAUTION

For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.

Note: *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*

Grounding & Plug Requirements

This machine MUST be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. DO NOT modify the provided plug!

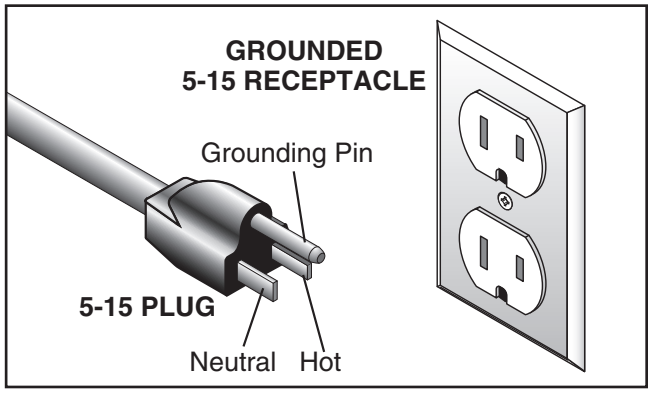
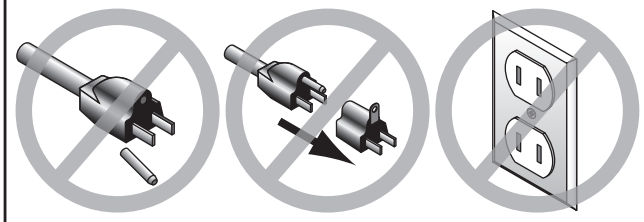


Figure 2. Typical 5-15 plug and receptacle.

⚠CAUTION



SHOCK HAZARD!

Two-prong outlets do not meet the grounding requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or 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.

Extension Cords

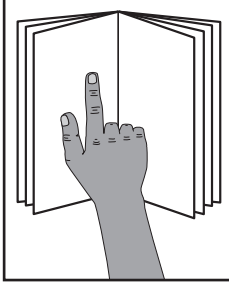
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

Minimum Gauge Size .....16 AWG
Maximum Length (Shorter is Better).....50 ft.

SECTION 3: SETUP



⚠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 the entire setup process!

⚠WARNING

This machine and its components are very heavy. Get lifting help if needed.

Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Additional Person (for lifting)	1
• Safety Glasses (for each person)	1 Pair
• Level	1
• Dust Collection System	1
• Dust Hose 1½"	1
• Hose Clamps 1½"	2
• Disposable Shop Rags	As Needed
• Phillips Head Screwdriver #2	1
• Flat Head Screwdriver ¼"	1
• Open-End Wrench 13mm	1
• Rubber Mallet	1
• Shop Vacuum (Optional)	1

Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

IMPORTANT: Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. *You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.*

Inventory

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

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

G0938 18" Scroll Saw (Figure 3)	Qty
A. G0938 18" Scroll Saw	1

Figure 3. G0938 18" Scroll Saw.

Loose Components (Figure 4)	Qty
B. Pin-End Blade 5"	1
C. Hex Wrench 3mm	1

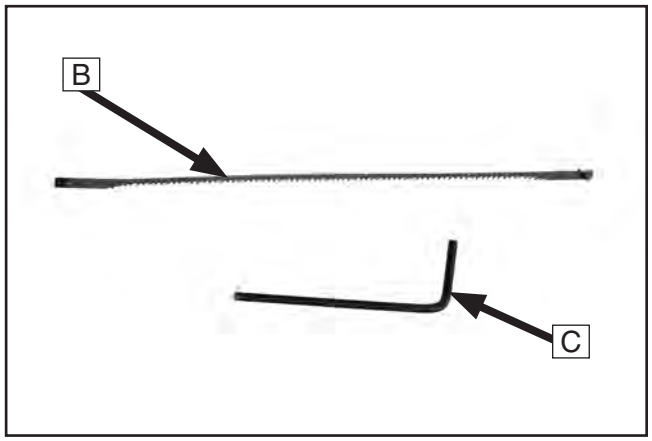


Figure 4. Loose components.

Stand Components (Figure 5)	Qty
D. Front Stand Legs	2
E. Rear Stand Legs	2
F. Upper Side Brackets	2
G. Upper Rear Bracket	1
H. Upper Front Bracket	1
I. Lower Side Brackets	2
J. Lower Front Bracket	1
K. Lower Rear Bracket	1
L. Foot Pads	4
M. Flat Washers 8mm	4
N. Carriage Bolts M8-1.25 x 12	20
O. Flange Nuts M8-1.25	24
P. Spacers 9 x 14 x 20mm	2
Q. Hex Bolts M8-1.25 x 45	4

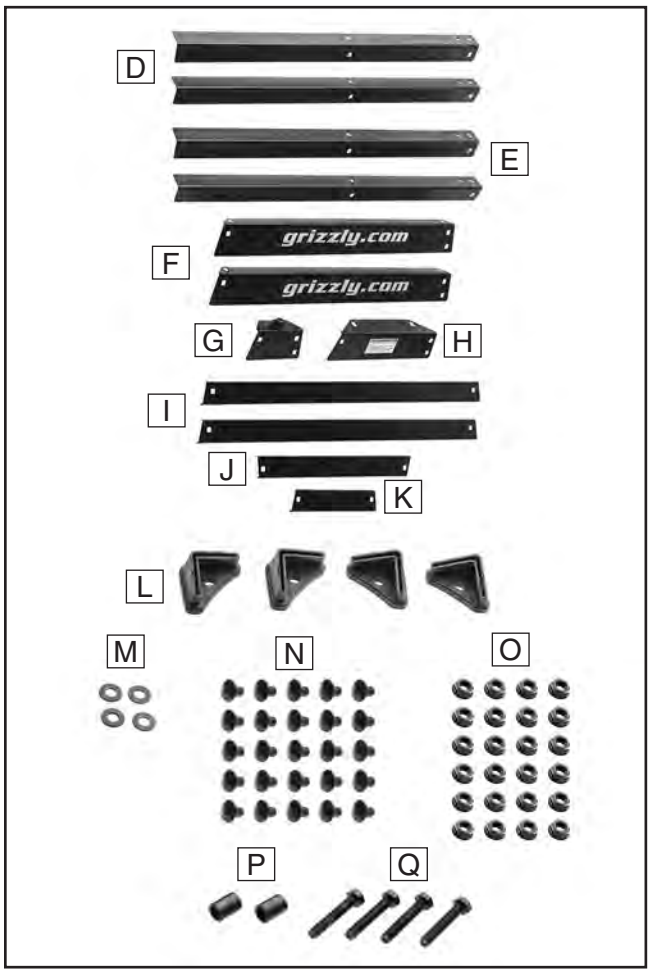


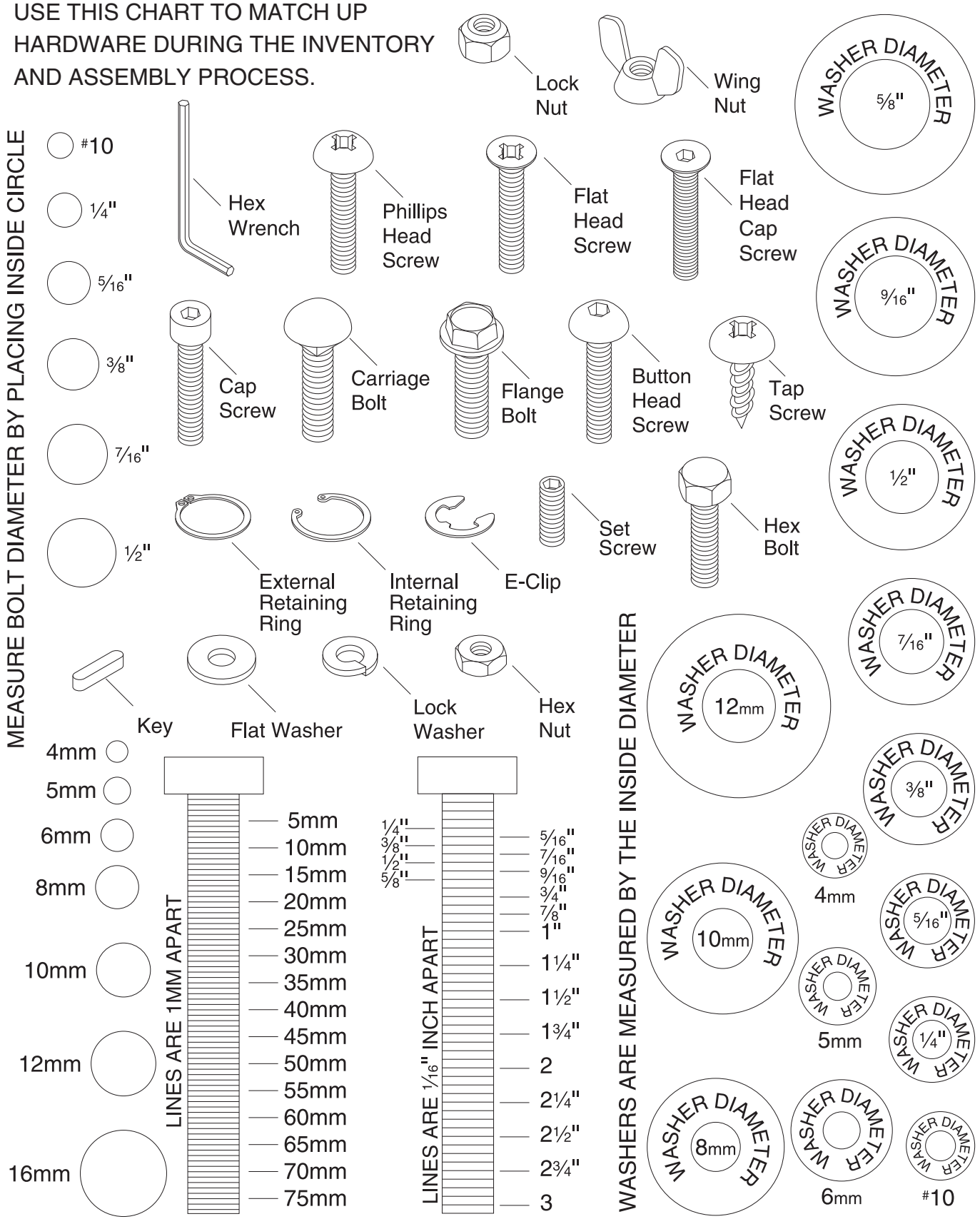
Figure 5. Stand components.

NOTICE

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.

Hardware Recognition Chart

USE THIS CHART TO MATCH UP HARDWARE DURING THE INVENTORY AND ASSEMBLY PROCESS.



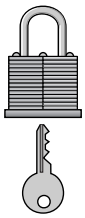
Site Considerations

Weight Load

Refer to the **Machine Data Sheet** 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 the machine is operated is important for safe operation and longevity of machine 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 enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

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.

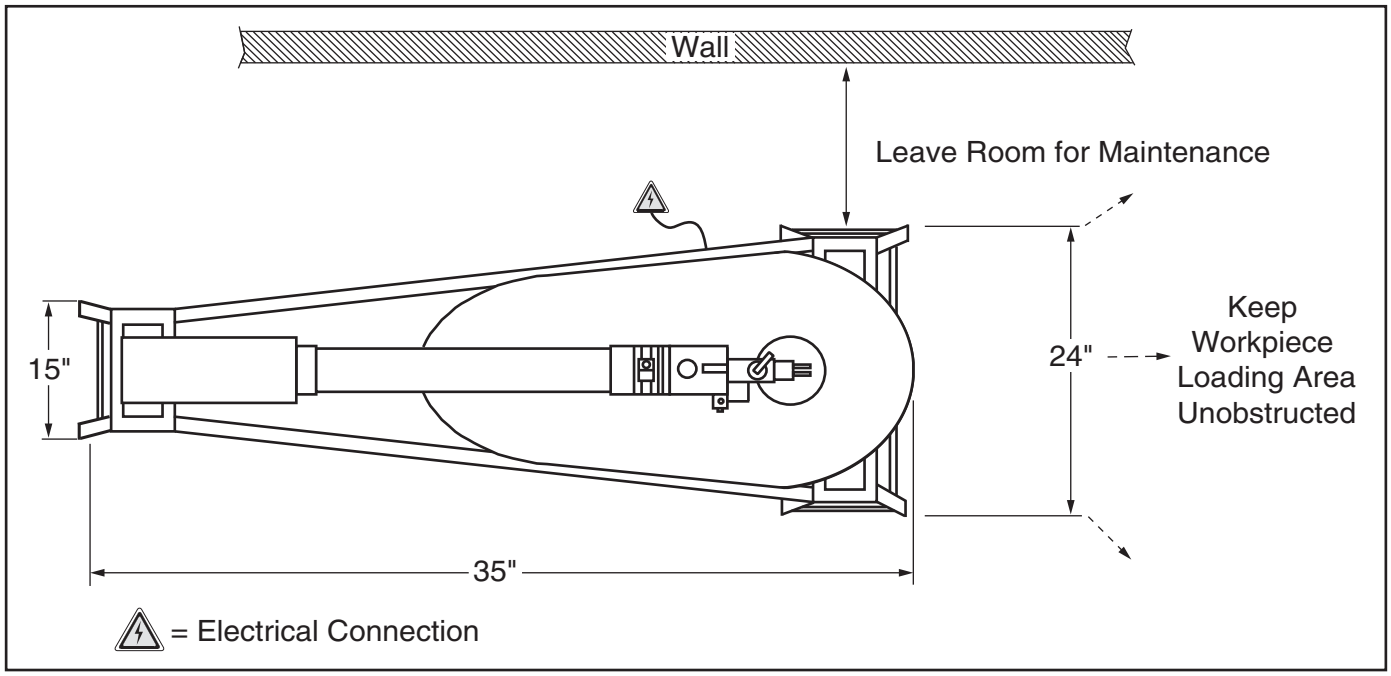


Figure 6. Minimum working clearances.

Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Needed for Setup** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

To assemble machine:

1. Attach upper front bracket to (2) front stand legs using (3) carriage bolts and (3) flange nuts (see **Figure 7**).

Note: *Front legs are marked with an "F". Do not fully tighten nuts until directed to do so in* ***Step 8****.*

2. Attach lower front bracket to front stand legs using (2) carriage bolts and (2) flange nuts (see **Figure 7**).

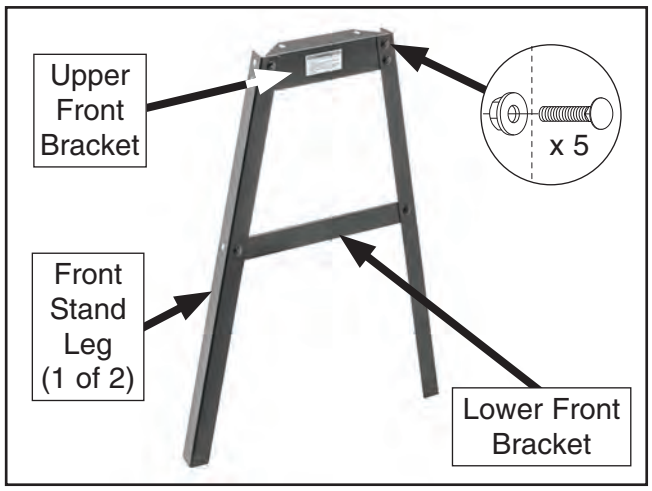


Figure 7. Front brackets and stand legs assembled.

3. Attach upper rear bracket to (2) rear stand legs using (3) carriage bolts and (3) flange nuts (see **Figure 8**).

Note: *Rear legs are marked with an "R".*

4. Attach lower rear bracket to (2) rear stand legs using (2) carriage bolts and (2) flange nuts (see **Figure 8**).

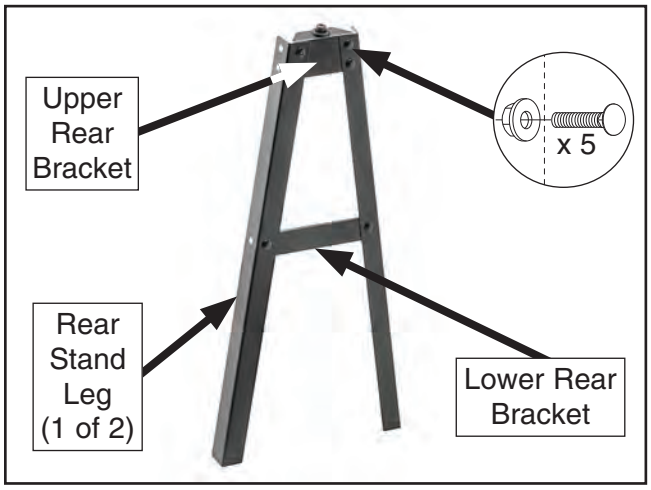


Figure 8. Rear brackets and stand legs assembled.

5. Attach (2) upper side brackets to front and rear leg assemblies using (6) carriage bolts and (6) flange nuts (see **Figure 9**).

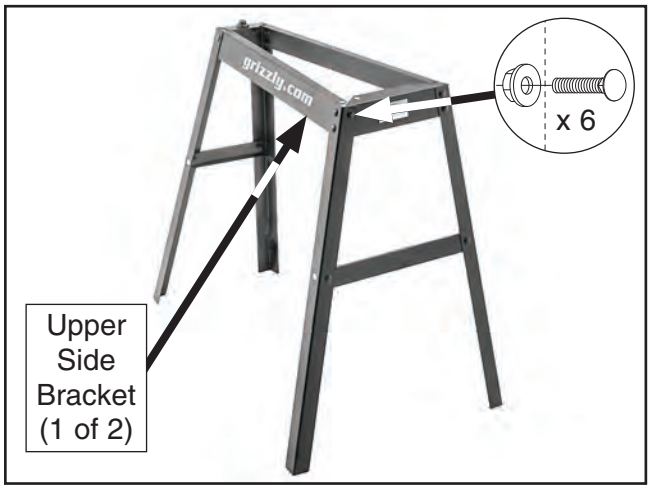


Figure 9. Upper side brackets and leg assemblies assembled.

6. Attach (2) lower side brackets to front and rear leg assemblies using (4) carriage bolts and (4) flange nuts (see **Figure 10**).

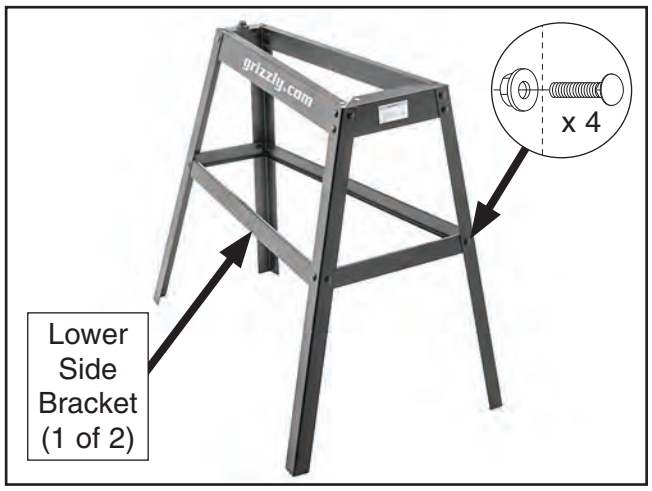


Figure 10. Lower side brackets and stand legs assembled.

7. Position stand upside down and place (2) foot pads marked with an "F" on front legs, and (2) foot pads marked with an "R" on rear legs. If needed, use a rubber mallet to securely attach pads (see **Figure 11**).

Figure 11. Installing foot pads.

8. Place stand right-side up on a flat, even surface, and adjust so it is straight and level, then tighten all flange nuts.

9. With help from another person, position scroll saw on stand so that all four mounting holes align with holes in stand, and alignment pin at rear of stand aligns with recess in saw base.

10. Secure scroll saw to front of stand using (2) M8-1.25 x 45 hex bolts, (2) 8mm flat washers, (2) spacers, and (2) M8-1.25 flange nuts (see **Figure 12**).

11. Secure scroll saw to rear of stand using (2) M8-1.25 x 45 hex bolts, (2) 8mm flat washers, and (2) M8-1.25 flange nuts (see **Figure 12**).

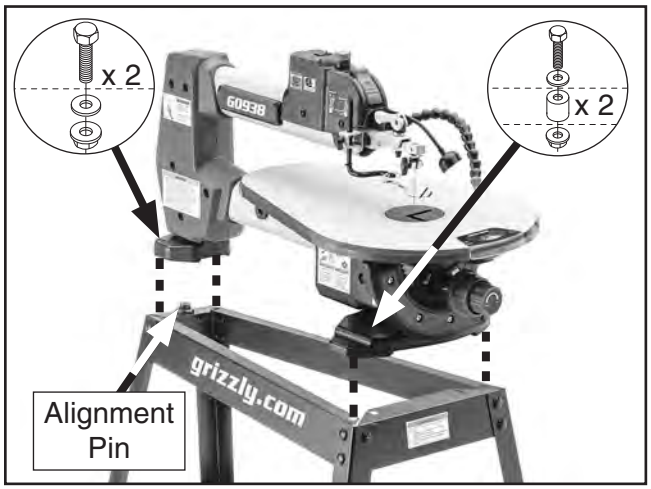


Figure 12. Mounting scroll saw on stand.

12. Verify pre-installed plain-end blade is secured in upper and lower blade holders. (Refer to **Removing/Installing Plain-End Blades** on **Page 24**).

13. Pinch blade and move it side to side with light pressure to verify it is tensioned enough that it will not come off during operation. Refer to **Adjusting Blade Tension** on **Page 21**.

Dust Collection

⚠CAUTION

This machine creates a lot of wood chips/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.

Minimum CFM at Dust Port: 100 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.

To connect dust collection system:

1. Fit 1½" dust hose over dust port and secure in place with hose clamp (see **Figure 13**).

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

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

Figure 13. Dust port and dust hose attached 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 correctly.

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.

⚠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.

To test run machine:

1. Clear all setup tools away from machine.

2. Rotate variable speed knob all the way counterclockwise.

3. Connect machine to power source.

4. Turn machine ***ON***, verify motor operation, and then turn machine ***OFF***.

   Motor should run smoothly and without unusual problems or noises.

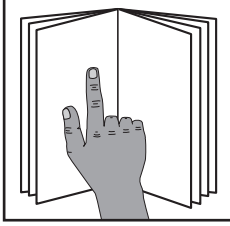
Congratulations! The Test Run is complete.

SECTION 4: 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, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

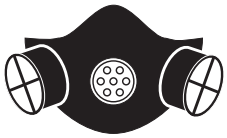


⚠WARNING

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

⚠WARNING

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when 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, Grizzly Industrial will not be held liable for accidents caused by lack of training.

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

1. Examines workpiece to make sure it is suitable for cutting.
2. Rotates variable speed knob all the way counterclockwise.
3. Adjusts table tilt, if necessary, to angle of desired cut.
4. Adjusts hold-down shoe to just clear workpiece.
5. Checks to make sure workpiece can safely pass all the way through blade without interference from other objects.
6. Puts on safety glasses and respirator.
7. Starts dust collector and turns machine ***ON***.
8. Rotates variable-speed knob to appropriate speed needed for workpiece.
9. Holds workpiece firmly and flat against table and then pushes workpiece into blade at a steady and controlled rate until cut is complete.
10. Rotates variable-speed knob all the way counterclockwise.
11. Turns machine ***OFF,*** then turns dust collector ***OFF***.

Basic Cutting Tips

A properly adjusted scroll saw performs many types of cuts with ease and accuracy. It is capable of performing these types of cuts:

Straight Cuts

- Miters, angles and compound angles, ripping, and crosscutting.

Irregular Cuts

- Simple and complex curves, duplicate parts, circles, and beveled curves.

Basic Cutting Tips

Basic tips to follow when operating a scroll saw:

- Typically, a scroll saw blade stays sharp from ½ hour to 2 hours of use, depending on how blade is used and type of material being cut.
- Best cutting results will be achieved when cutting workpieces less than 1" thick. When cutting workpieces thicker than 1", move workpiece through blade very slowly.
- Blades dull much faster when cutting plywood, hardwoods, and laminates.
- Exerting excessive side pressure on blade greatly increases chance of blade breakage.
- Plan cut before starting curves. Make relief cuts in waste areas near tight inside curves, or leave tight inside curves for a second pass to minimize backing out. Cut sharp outside curves by cutting past curve and looping around to cut from different angle.
- When approaching a tight radius, slow down feed rate, but don't stop. Give teeth time to make cut. Forcing workpiece through curve will cause blade to twist or break.
- If cut produces waste in interior of curve, turn power ***OFF*** and wait until all motion stops before removing waste.
- Scroll saw blades can drift. This is compensated for by adjusting feed direction.

Workpiece Inspection

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

- ***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 life of bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a table saw may lead to injury.
- ***Foreign Objects:*** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit operator, cause kickback, or break blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut workpiece.
- ***Large/Loose Knots:*** Loose knots can become dislodged during cutting operation. Large knots can cause kickback and machine damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.
- ***Wet or "Green" Stock:*** Cutting wood with a moisture content over 20% causes unnecessary wear on blades, increases risk of kickback, and yields poor results.
- ***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 Warping:*** Workpieces with slight cupping can be safely supported if cupped side is facing table or fence. On contrary, a workpiece supported on bowed side will rock during a cut and could cause kickback or severe injury.

Adjusting Hold-Down Shoe

The hold-down shoe keeps the workpiece from raising up from the force of the moving blade.

To adjust hold-down shoe:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen hold-down shoe lock knob and shoe cap screw shown in **Figure 14.**

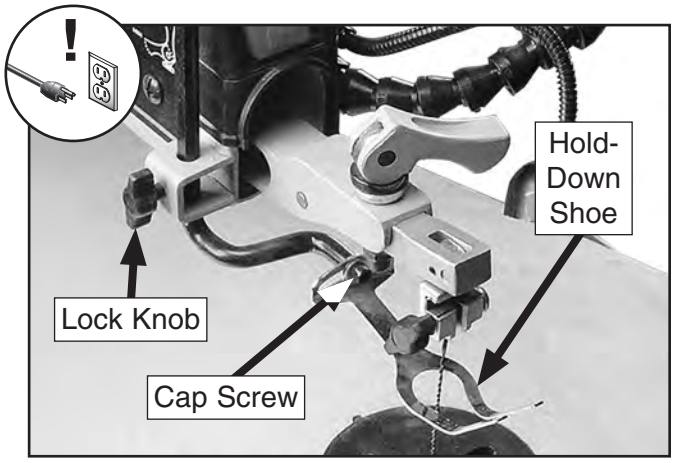


Figure 14. Hold-down shoe adjustment.

3. Adjust shoe so it is parallel with table and lightly touching workpiece.

   Note: *When tilting table for cutting operation, adjust shoe so it remains parallel with table.*

4. Tighten hold-down lock knob and shoe cap screw, then verify workpiece moves smoothly under shoe.

Adjusting Blade Tension

Blade tension is adjusted using the blade tension lever shown in **Figure 15**. Turn the lever clockwise to increase tension and counterclockwise to decrease tension.

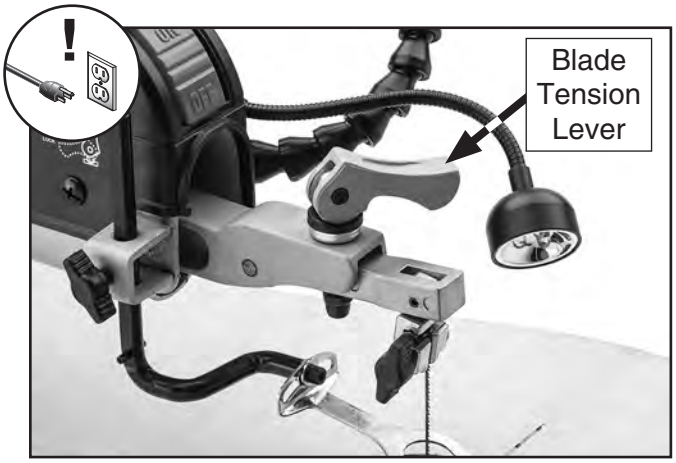


Figure 15. Blade tension lever adjustment.

If blade tension is too loose, the blade will drift while cutting, making it difficult to follow your cutting lines. If blade tension is too tight, the blade can break and damage the saw or the workpiece.

To adjust blade tension:

1. DISCONNECT MACHINE FROM POWER!

2. Pinch blade and try moving it side to side with light pressure to check tension. When properly tensioned, blade will deflect only slightly when moved, and ends will remain firmly in position.

3. Tighten/loosen blade tension lever as necessary. Perform a test cut on a scrap piece of wood and repeat this entire procedure if further adjustments are necessary.

   IMPORTANT: Blade tension lever must be in *down* position to make tension adjustments. Release blade tension lever only during blade changing operations. If blade is too tight, lever will be difficult to lower and could result in damage to blade holder or arm assembly.

Tilting Table

Using the table tilt knob (see **Figure 16**), you can adjust table tilt from 0°–45° left and 0°–15° right to make beveled cuts. A tilt scale is embedded in the table surface for quick angle adjustments, and a table lock knob is provided to quickly secure the desired angle.

Note: *Table tilt scale serves as a guide only. For more accurate results, use a bevel gauge or protractor to set desired table tilt relative to blade.*

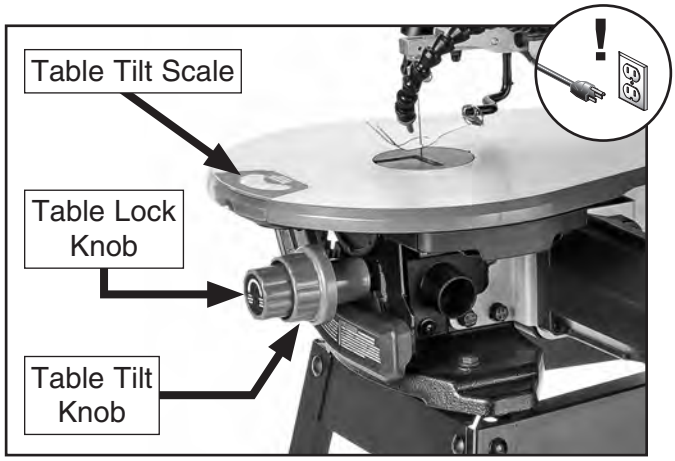


Figure 16. Table tilt controls.

Tilting Table

1. DISCONNECT MACHINE FROM POWER!

2. Loosen table lock knob (see **Figure 16**).

3. Use table tilt knob to tilt table to desired angle, then tighten table lock knob.

   Note: *When tilting table for cutting operation, adjust shoe so it remains parallel with table. Refer to* ***Adjusting Hold-Down Shoe*** *on* ***Page 21.***

Using Positive Stop (Left Tilt)

Tool Needed **Qty**
Open-End Wrench 10mm..... 1

The positive stop (see **Figure 17**) allows you to quickly return the table to 0° from a left-tilt setting. The positive stop is adjustable, allowing for calibration, or if desired, minor deviations from 0°.

To use positive stop (left tilt):

1. DISCONNECT MACHINE FROM POWER!

2. Loosen table lock knob (see **Figure 16**).

3. Use table tilt knob to tilt table to desired angle, then secure position by tightening table lock knob (see **Figure 16**).

4. Loosen jam nut on stop bolt (see **Figure 17**), and turn bolt until it just touches top of positive stop rest.

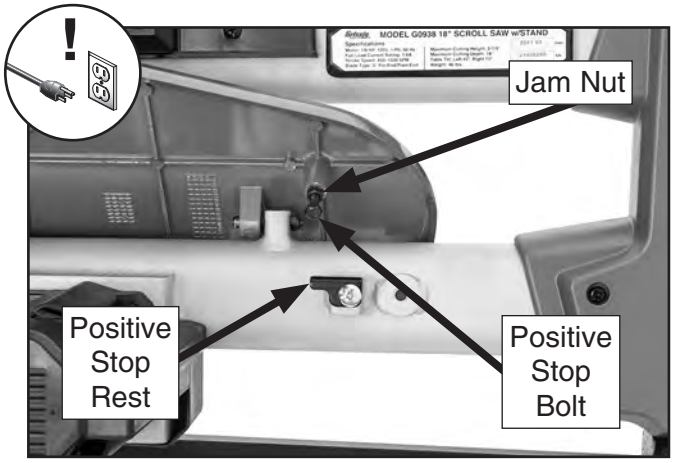


Figure 17. Location of positive stop components.

5. Tighten jam nut to secure stop bolt setting.

   Note: *Check table tilt scale and make sure positive stop bolt is correctly calibrated (see* ***Checking/Calibrating Positive Stop*** *on* ***Page 23****).*

Using Positive Stop (Right Tilt)

Tool Needed **Qty**
Open-End Wrench 10mm..... 1

For right-hand tilt operations, the positive stop (see **Figure 17**) can be adjusted from 0°–15° by making incremental changes to the stop bolt position or by rotating the stop rest out of the table tilt path.

Incremental Right Tilt

1. DISCONNECT MACHINE FROM POWER!

2. Ensure positive stop rest is in down position (see **Figure 18**).

3. Loosen jam nut (see **Figure 18**).

4. Thread positive stop bolt (see **Figure 18**) clockwise to increase right-hand tilt and counterclockwise to decrease right-hand tilt.

5. Tighten jam nut to secure stop bolt setting.

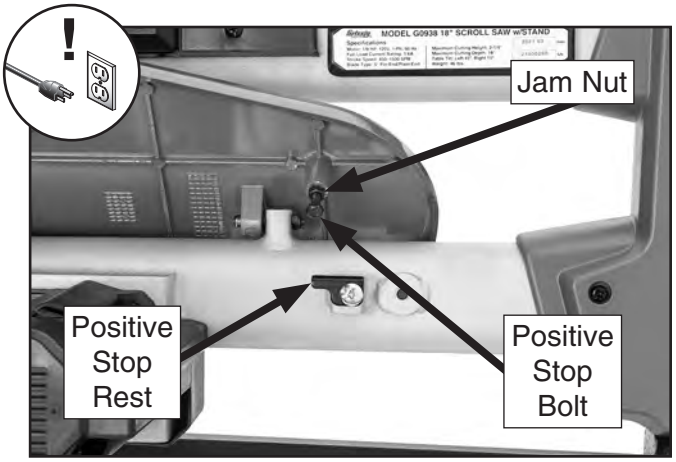


Figure 18. Location of positive stop components.

Full Right Tilt

1. DISCONNECT MACHINE FROM POWER!

2. Loosen Phillips head screw shown in **Figure 19**, rotate positive stop rest up.

3. Use table tilt knob to tilt table full right, then secure position by tightening table lock knob.

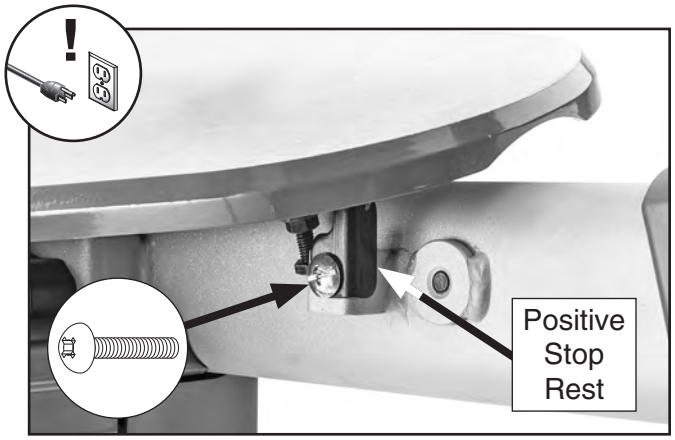


Figure 19. Stop rest positioned for full right tilt.

Checking/Calibrating Positive Stop

Tools Needed	**Qty**
Open-End Wrench 10mm	1
Machinist's Square	1

To check/calibrate positive stop:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen table lock knob and use table tilt knob to tilt table to approximately 10° left.

3. Loosen positive stop jam nut, and position positive stop bolt so it will not interfere.

4. Place a machinist's square flat on table against side of blade, as illustrated in **Figure 20**.

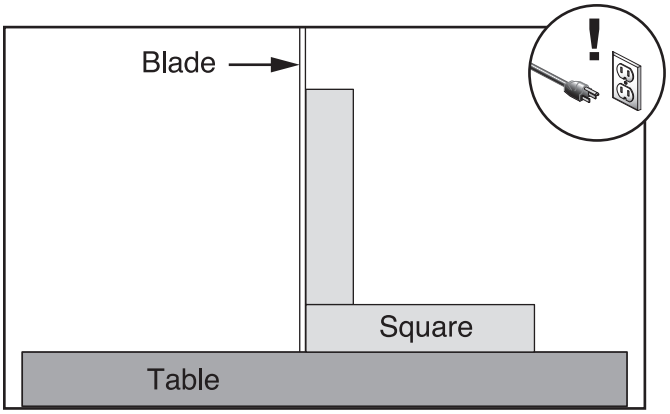


Figure 20. Squaring table to blade.

5. Tilt table until it is square with blade.

6. Adjust positive stop bolt so it just touches top of positive stop rest, and tighten jam nut to secure position.

7. Check table to ensure it is square with blade. If necessary, repeat **Steps 4–5**.

   Tip: *To set positive stop to an angle other than 0°, follow **Steps 1–5** for desired angle.*

   Note: *Table tilt scale should now read 0°. If scale does not read 0°, refer to **Calibrating Table Tilt** on **Page 32.***

Blade Selection

Scroll saw blades are classified as either "pin-end" (mounting pins in the ends of the blade) or "plain end" (no pins), as shown in **Figure 21**. The Model G0938 comes with one pin-end blade and one plain-end blade, but the scroll saw is designed to accept any 5" (124mm) blade for cutting a wide variety of materials.

The typical format for blade identification is:

Teeth Per Inch	Width	Thickness	SPM	Workpiece Material
10 TPI	0.110"	0.020"	1200–1500	General purpose cutting. Hard and soft woods between 3/16"–2". Also good for plastics, paper, felt, and bone.
15 TPI	0.110"	0.020"	700–1200	Thin wood and plastic between 3/32"–1/2".
18 TPI	0.095"	0.010"	500–700	Tight radius cutting in thin hard and soft woods between 3/32"–1/8". Also good for thin pieces of bone, ivory, plastics and veneer.

Note: *There may be other numbers or letters that have meaning for a particular type of blade. Always refer to the manufacturer's technical data for a complete explanation when choosing a scroll saw blade.*

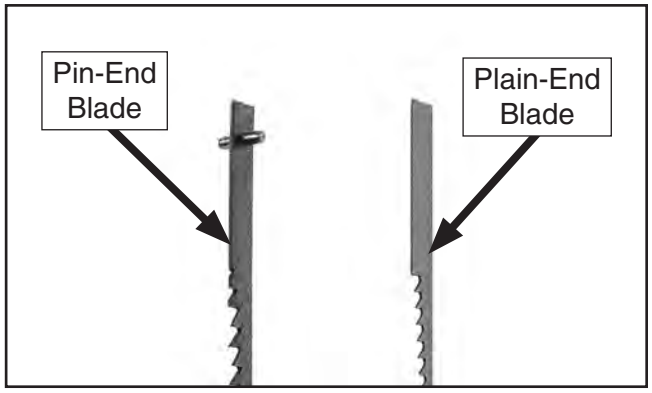


Figure 21. Pin-end and plain-end blade comparison.

Removing/Installing Plain-End Blade

For fine, accurate, or intricate work on 3/4" (19mm) or thinner workpieces, plain-end blades are suggested. Thinner kerfs are also possible with finer blades.

Tool Needed **Qty**
Hex Wrench 4mm..... 1

Removing Plain-End Blade

1. DISCONNECT MACHINE FROM POWER!

2. Remove table insert by pushing it up from under table (see **Figure 22**).

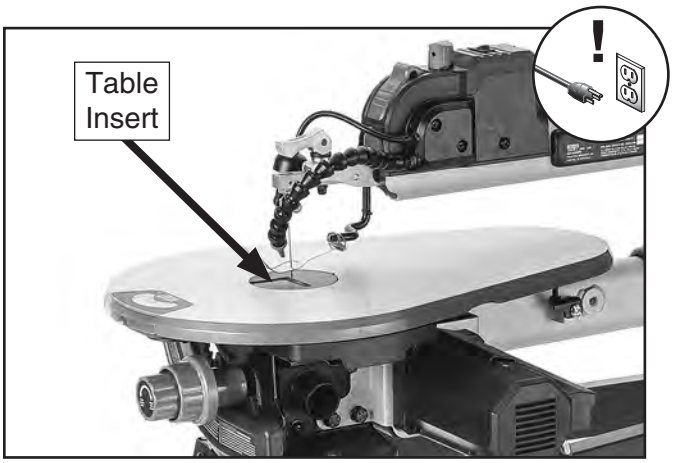


Figure 22. Location of table insert.

3. Move blade tension lever all the way up to relieve blade tension (see **Figure 23**).

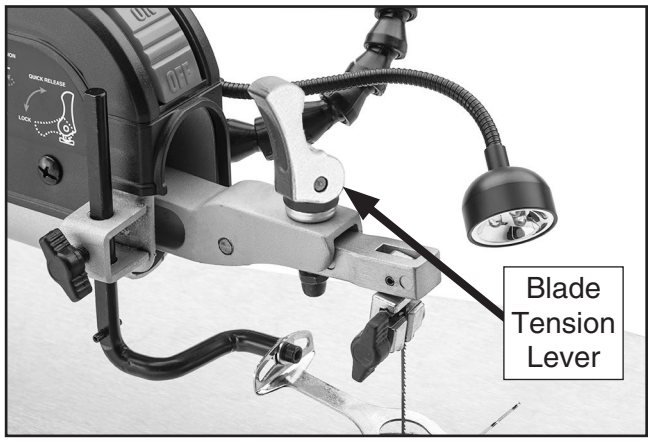


Figure 23. Blade tension lever adjustment.

4. Loosen upper blade holder lock knob and apply slight upward pressure against upper arm to remove blade from holder (see **Figure 24**).

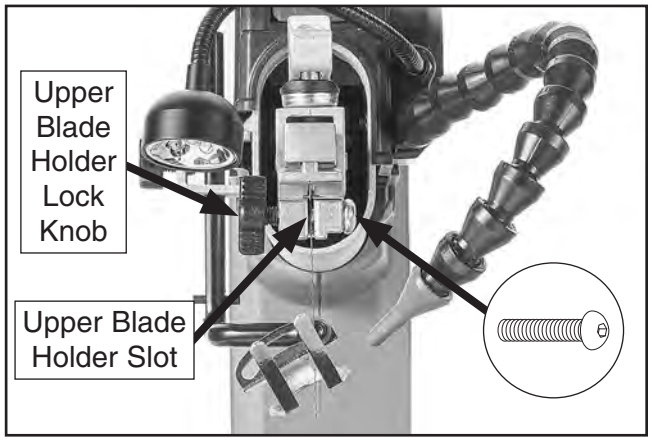


Figure 24. Upper blade holder slot and upper lock knob.

5. Tilt table to 45° to reveal lower blade holder, and loosen lower blade holder lock knob (see **Figure 25**) to release blade.

Installing Plain-End Blade

1. DISCONNECT MACHINE FROM POWER!

2. Remove table insert by pushing it up from under table (see **Figure 22** on **Page 24**).

3. Tilt work table to 45° left (see **Figure 25**) to reveal lower blade holder.

4. Insert new blade into lower blade holder slot with teeth pointing down (see **Figure 25**). Tighten lower blade holder lock knob.

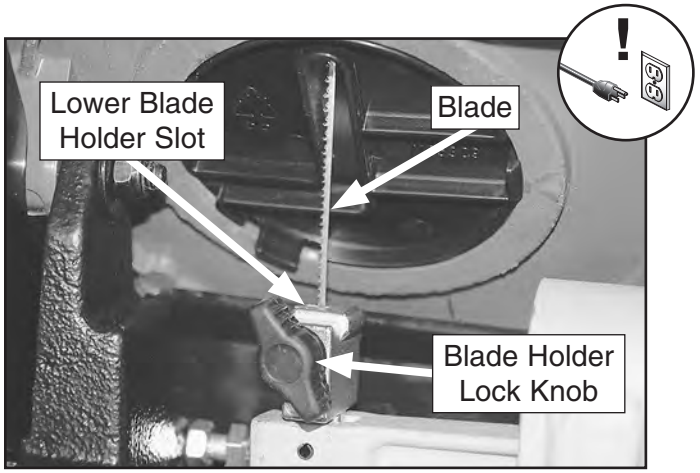


Figure 25. Lower blade holder slot and lock knob location.

5. Return table tilt to 0° and tighten table lock knob to secure table in place.

6. Insert top of blade into upper blade holder slot, and tighten upper blade holder lock knob (see **Figure 24**).

   Note: *When installing blade into upper blade holder, apply slight downward pressure on upper arm.*

7. Adjust blade tension (refer to **Adjusting Blade Tension** on **Page 21**).

8. Install table insert.

Removing/Installing Pin-End Blade

For faster cutting on workpieces more than ¾" (19mm) thick, or when less precision is required for an operation, pin-end blades are suggested. This blade type is usually thicker than plain-end blades and offers greater stability.

When using pin-end blades, the button head cap screws on the upper and lower blade holders should not be too tight or too loose. Proper blade tension will keep the blade securely in place.

Tool Needed **Qty**
Hex Wrench 4mm..... 1

Removing Pin-End Blade

1. DISCONNECT MACHINE FROM POWER!

2. Perform **Steps 2–6** of **Removing Plain-End Blade** on **Page 24**.

3. Remove blade from lower slot in lower blade holder (see **Figure 26**).

   Note: *Wiggling blade end back and forth with slight pressure may help to make sure pin is removed.*

4. Remove blade from upper slot in upper blade holder (see **Figure 26**).

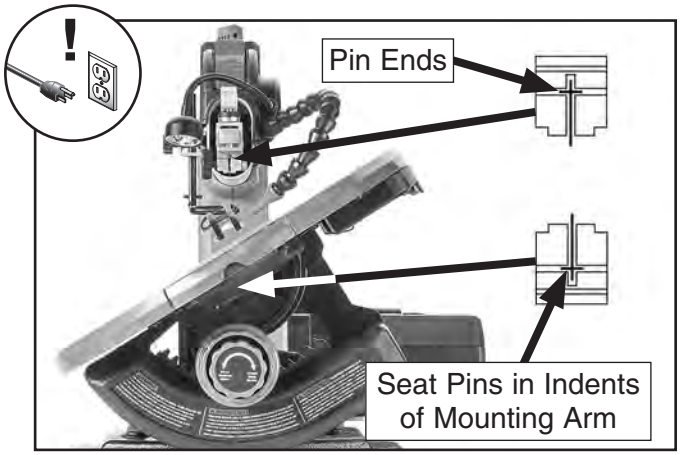


Figure 26. Pin-end blade installation.

5. Slide saw blade down through table hole to clear machine.

6. Return table tilt to 0° and install table insert.

Installing Pin-End Blade

1. DISCONNECT MACHINE FROM POWER!

2. Remove table insert (see **Figure 22** on **Page 24**).

3. Set work table to 45° left (see **Figure 25** on **Page 25**).

4. Insert blade into upper slot in upper blade holder. Make sure pin is properly located in slot (see **Figure 26**).

   Note: *Wiggle blade end back and forth with slight pressure to make sure pin is seated in indents of mounting arm.*

5. Slide saw blade down through table hole so that teeth face down and forward.

6. Insert blade into lower slot in lower blade holder. Make sure pin is properly located in slot (see **Figure 26**).

   Note: *Wiggle blade end back and forth with slight pressure to make sure pin is seated in indents of mounting arm.*

7. Tighten upper and lower blade holder lock knobs (see **Figures 24–25** on **Page 25**).

   Note: *Do not over-tighten blade holder lock knobs when using pin-end blades.*

8. Adjust blade tension (refer to **Adjusting Blade Tension** on **Page 21**).

9. If tension needs further adjustment rotate blade tension lever clockwise to tighten, and counterclockwise to loosen blade (see **Figure 23** on **Page 25**).

10. Return table tilt to 0° and install table insert.

Adjusting Blade Speed

Use the variable-speed knob shown in **Figure 27** to adjust blade speed between 450–1500 SPM (strokes per minute).

To reduce the risk of injury from unexpected fast speed at startup, always rotate the variable-speed knob all the way counterclockwise when starting/stopping the scroll saw.

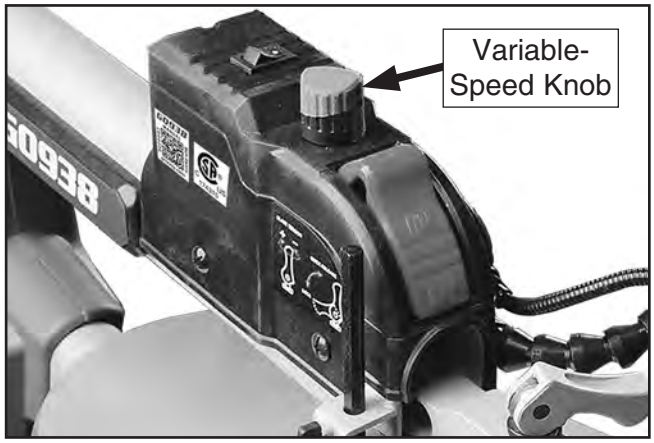


Figure 27. Location of variable-speed knob.

Making Standard Scroll Cuts

For standard scroll cutting, follow the pattern line on the workpiece by pushing and turning the workpiece at the same time, which allows the kerf of the cut to make way for the turn.

DO NOT turn the workpiece without pushing it through the blade at same time; otherwise, the blade could twist and break.

See **Figures 28**–**31** for examples of standard scroll cutting.

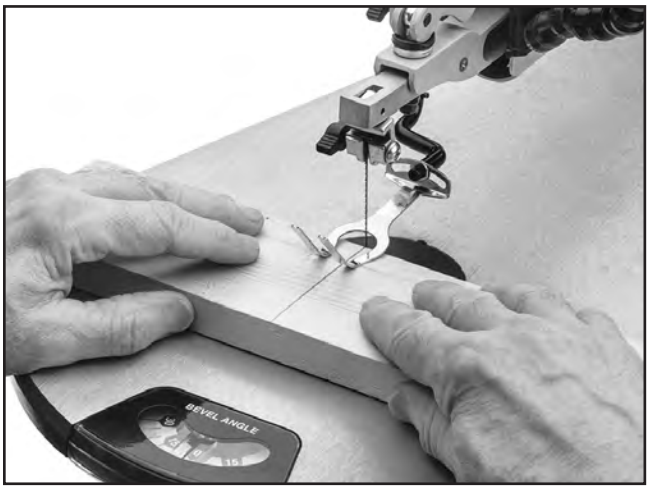


Figure 28. Making a straight cut.

Figure 29. Making a curved cut.

Making Inside Cuts

Inside cuts can easily be made with the scroll saw by threading the blade through a hole drilled in the workpiece.

Making an inside cut:

1. DISCONNECT MACHINE FROM POWER!

2. Drill a ⅛" hole in workpiece inside waste area of internal cut.

3. Remove blade from saw.

4. Insert blade through previously drilled hole in workpiece (see **Figure 30**).

Figure 30. Installing blade for an inside cut.

5. Re-install blade.

6. Adjust hold-down shoe, connect saw to power, then perform cut.

7. When finished, disconnect saw from power, remove blade and workpiece, then re-install blade on saw.

Making Bevel Cuts

Bevel cuts can be used for miters, cope joints, and making relief or recessed projects.

Making a bevel cut:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen table lock knob, then adjust table to desired angle. Tighten knob to secure.

3. Connect saw to power.

4. Using principles in **Making Standard Scroll Cuts** on **Page 27**, feed workpiece slowly and evenly into blade, remembering not to force workpiece through cut (see **Figure 31**).

Figure 31. Making a bevel cut.

5. Turn saw ***OFF*** and wait until all motion has stopped before removing waste near blade.

SECTION 5: ACCESSORIES

⚠WARNING

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

NOTICE

Refer to our website or latest catalog for additional recommended accessories.

H9022–5" Plain-End Scroll Saw Blade Assortment, 12-Pk.

Model	Size	Width	Thickness	TPI	QTY
H9016	#1	0.032"	0.015"	24	12
H9017	#2	0.032"	0.016"	22	12
H9018	#3	0.040"	0.018"	20	12
H9019	#4	0.048"	0.020"	20	12
H9020	#5	0.056"	0.023"	16	12
H9021	#6	0.062"	0.025"	14	12

T32387—Big Book of Scroll Saw Woodworking
More than 60 projects and techniques for fretwork, intarsia, and other scroll saw crafts. Includes detailed patterns, expert step-by-step instructions and crisp photographs, guaranteed to spur your creativity.

Figure 32. T32387 Big Book of Scroll Saw Woodworking.

H9836–5" Plain-End Spiral Scroll Saw Blade Assortment, 72-Pk.

Model	Size	Width	TPI	QTY
H9024	#1	0.042"	48	12
H9025	#2	0.046"	44	12
H9026	#3	0.052"	41	12
H9027	#4	0.060"	37	12
H9028	#5	0.066"	35	12
H9029	#6	0.075"	30	12

H9032–5" Pin-End Scroll Saw Blade Assortment, 6-Pk.

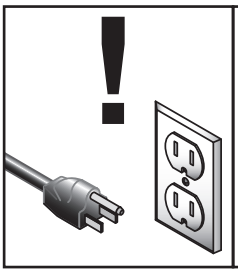
Model	Size	Width	TPI	QTY
T28361	#1	0.066"	25	2
T28362	#2	0.066"	20	1
T28363	#3	0.118"	18	1
T28364	#4	0.118"	15	1
T28365	#5	0.118"	10	1

Basic Eye Protection

T32323—Woodturners Face Shield
T32401—EDGE Brazeau Safety Glasses, Clear
T32402—EDGE Khor G2 Safety Glasses, Tint
T32404—EDGE Mazeno Safety Glasses, Clear

Figure 33. Assortment of basic eye protection.

SECTION 6: MAINTENANCE



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

Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

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

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

Weekly Maintenance
- Clean/vacuum dust buildup from table, motor and stand.

Monthly Check
- Table tilt and lock knob for damage or wear.
- Clean/vacuum dust buildup from body and off motor.

Cleaning & Protecting

Cleaning the Model G0938 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 aluminum table by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

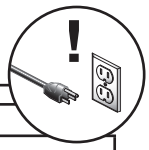
Lubrication

Ball bearings in the scroll saw are packed with grease at the factory and require no further lubrication

SECTION 7: SERVICE

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support at (570) 546-9663.
Note: *Please gather the serial number and manufacture date of your machine before calling.*

Troubleshooting



Symptom	Possible Cause	Possible Solution
Machine does not start, or power supply breaker immediately trips after startup.	1. Incorrect power supply voltage/circuit size. 2. Motor speed potentiometer at fault. 3. Power supply circuit breaker tripped or fuse blown. 4. Wiring broken, disconnected, or corroded. 5. Motor brushes worn out. 6. ON/OFF switch at fault. 7. Circuit board at fault. 8. Motor or motor bearings at fault.	1. Ensure correct power supply voltage/circuit size. 2. Test/replace if at fault. 3. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 4. Fix broken wires or disconnected/corroded connections. 5. Remove/replace brushes (**Page 32**). 6. Replace switch. 7. Inspect/replace if at fault. 8. Replace motor.
Machine stalls or is underpowered.	1. Dull blade. 2 Workpiece material unsuitable for machine. 3. Machine undersized for task. 4. Motor circuit board at fault. 5. Motor speed potentiometer at fault. 6. Motor brushes worn out. 7. Motor overheated. 8. Extension cord too long. 9. Motor or motor bearings at fault.	1. Sharpen/replace blade. 2. Only cut wood/ensure moisture if below 20% (**Page 20**). 3. Use correct blade/reduce feed rate or depth of cut. 4. Inspect and replace if at fault. 5. Test and replace if at fault. 6. Replace motor brushes. 7. Clean motor, let cool, reduce workload. 8. Move machine closer to power supply; use shorter extension cord. 9. Replace motor.
Machine has vibration or noisy operation.	1. Motor or component loose. 2. Blade at fault. 3. Motor mount loose/broken. 4. Motor bearings at fault.	1. Replace damaged or missing bolts/nuts or tighten if loose. 2. Replace warped/bent blade; resharpen dull blade. 3. Tighten/replace. 4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
Blade will not stay on layout line.	1. Blade not tensioned correctly. 2. Too much pressure applied to workpiece. 3. Blade holders not aligned correctly.	1. Properly tension blade (**Page 21**). 2. Reduce feed rate and pressure on workpiece. 3. Adjust blade holders so they are perpendicular (**Page 33**).
Excessive blade breakage.	1. Blade not tensioned correctly. 2. Not using relief cuts when cutting tight curves; twisting blade. 3. Wrong blade for operation. 4. Too much pressure on blade.	1. Properly tension blade (**Page 21**). 2. Use relief cuts for tight turns; reduce feed rate; do not twist blade. 3. Refer to **Blade Selection Chart,** and use correct blade for operation (**Page 24**). 4. Reduce pressure on workpiece as it passes through blade.

Checking/Replacing Motor Brushes

The motor on the Model G0938 is equipped with two long-life carbon brushes—one on each side 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.

Items Needed	Qty
Flat Head Screwdriver ½"	1
Motor Brushes (P0938100-2)	2

To check/replace motor brushes:

1. DISCONNECT MACHINE FROM POWER!

2. Unscrew plastic brush covers, and remove motor brush assemblies (see **Figure 34**).

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

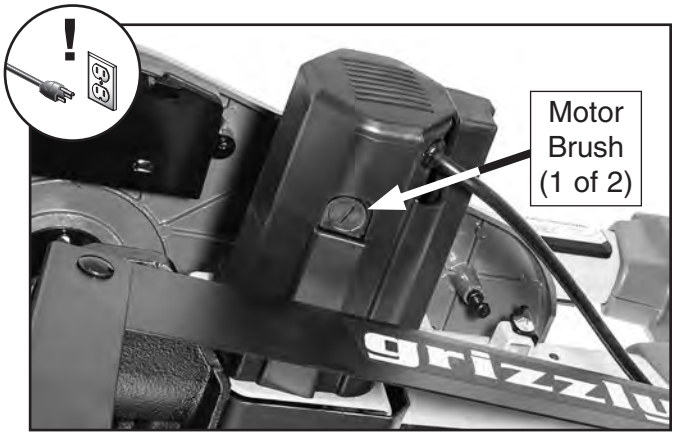


Figure 34. Motor brush location.

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.

Calibrating Table Tilt

The table tilt knob and tilt scale are used to position the table for performing bevel cuts. Over the life of the machine, the components may loosen or stretch, at which point it will be necessary to recalibrate the system to ensure accuracy.

Note: *The table tilt scale is only an approximate scale and should not be used when precise angle measurements are required for the operation.*

Tools Needed	Qty
Phillips Head Screwdriver #2	1
Adjustable Wrench	1
Machinist's Square	1
Locking Pliers	1

To calibrate table tilt:

1. DISCONNECT MACHINE FROM POWER!

2. Remove machine housing panel to access table tilt adjustment cable (see **Figure 35**).

3. Loosen hold-down lock knob and remove hold-down shoe (see **Figure 35**).

4. Remove table insert (see **Figure 35**).

5. Loosen table lock knob and set table to a flat position (see **Figure 35**).

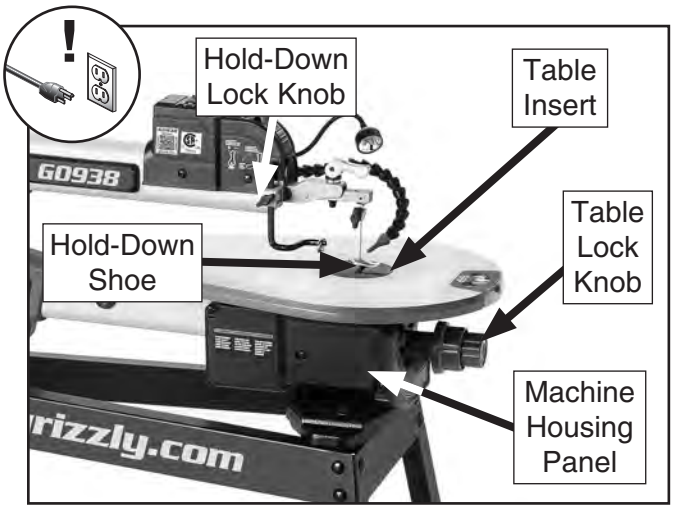


Figure 35. Table tilt components.

6. Place locking pliers on table tilt adjustment cable directly behind cable lock (see **Figure 36**).

   Note: *Locking pliers will prevent cable run-out and keep tensioning spring located in table scale from losing tension.*

7. Loosen lock screw holding cable lock in place (see **Figure 36**).

8. Loosen cable adjustment nut (see **Figure 36**).

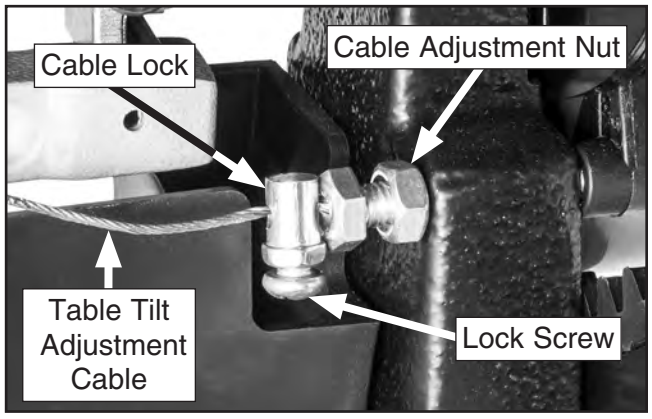


Figure 36. Scale adjustment components.

9. Lightly pull adjustment cable out until table tilt scale reads 0°.

10. Tighten lock screw on cable lock to hold cable securely.

11. Tighten cable adjustment nut.

12. Align blade (refer to **Aligning Blade Holders**).

13. Install insert, hold down shoe, and machine housing panel.

Aligning Blade Holders

The blade holders may become misaligned with use, which results in the blade no longer being aligned with the motion of the arm and being out of square with the table. The most common symptom of this condition is persistent blade run-out.

Tools Needed	Qty
Hex Wrench 5mm	1
Machinist's Square	1

To align blade holders:

1. Perform all steps in **Calibrating Table Tilt** on **Page 32**.

2. DISCONNECT MACHINE FROM POWER!

3. Ensure table tilt is set at 0°.

4. Remove hold-down shoe.

5. Place machinist's square flat on table with one edge against side of blade (see **Figure 37**).

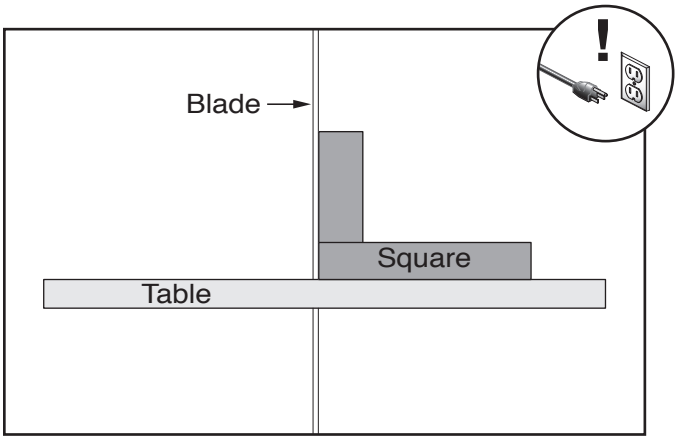


Figure 37. Squaring blade to table.

— If blade *is* square to table no further adjustments need to be made.

— If blade *is not* square to table proceed to **Step 6**.

6. Loosen button head cap screws on upper and lower blade holders (see **Figure 38**).

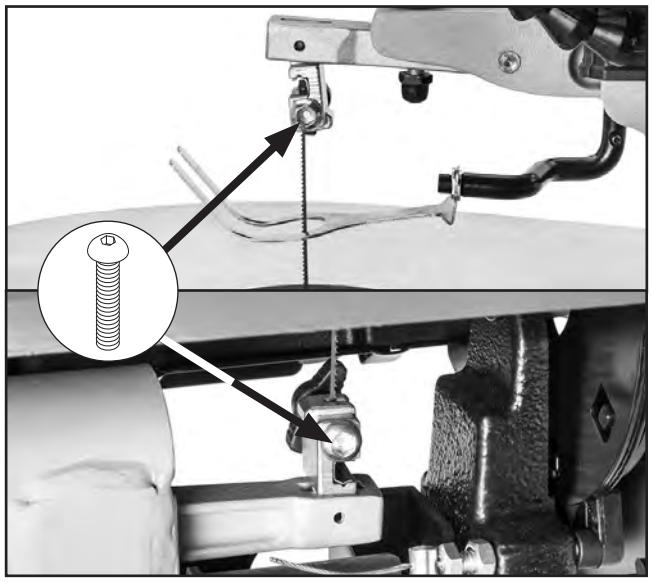


Figure 38. Location of blade holders.

7. Adjust blade holders until blade is flat against edge of square along its entire length.

8. Tighten button head cap screws loosened in **Step 5**.

Replacing LED Work Light

The LED work light can be replaced if it no longer functions. Replace when it stops operating correctly, fails to provide light, or flashes.

Tools Needed	**Qty**
Phillips Head Screwdriver #2	1
Open-End Wrench 6mm	1
Replacement LED Light (P0938101)	1

To replace LED work light:

1. DISCONNECT MACHINE FROM POWER!

2. Remove control panel and unplug LED work light from circuit board (see **Figure 39**).

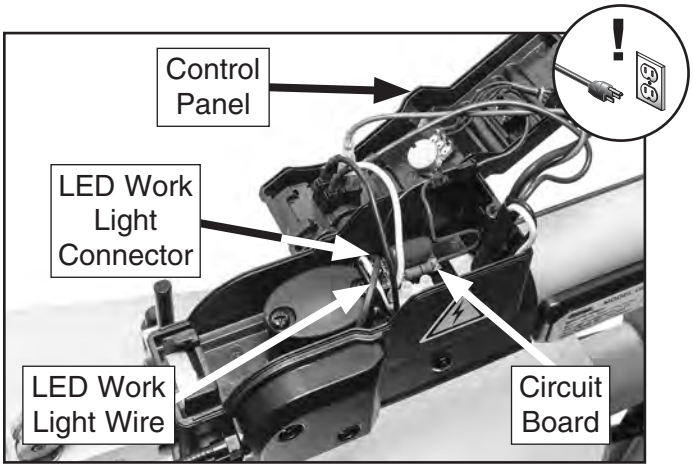


Figure 39. Control panel access and connections.

3. Remove side cover (see **Figure 40**).

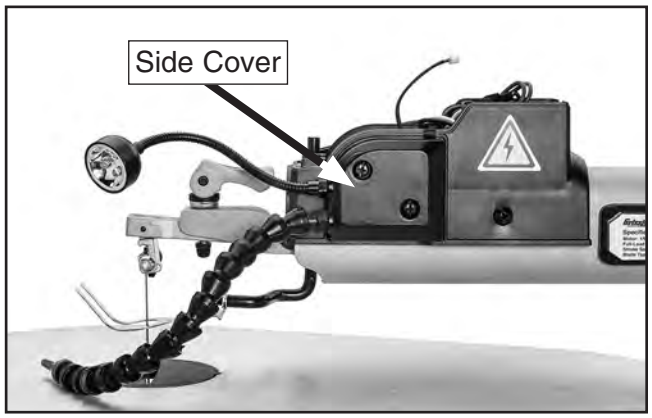


Figure 40. Location of side cover.

4. Remove LED work light from side cover (see **Figure 41**).

5. Loosen and remove nut to remove wire harness from side cover (see **Figure 41**).

6. To install new LED work light, thread wire harness into side panel and tighten inside nut (see **Figure 41**).

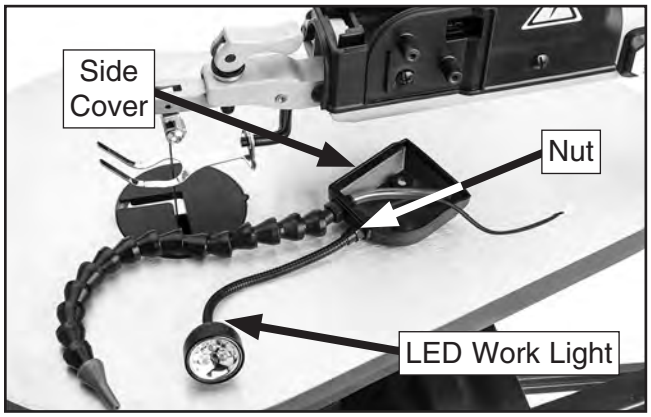


Figure 41. LED work light removal.

7. Route wire harness/connector though hole in control panel and connect to circuit board (see **Figure 39** on **Page 34**).

8. Before installing control panel, connect machine to power and press light switch to test light.

   — If light functions, install control panel.

   — If light *does not* function, check connections and retry lighting. Contact Grizzly Tech if problem persists.

SECTION 8: WIRING

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 (570) 546-9663 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
Wiring Safety Instructions

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!

MODIFICATIONS. Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved aftermarket parts.

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.

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

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.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, 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.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

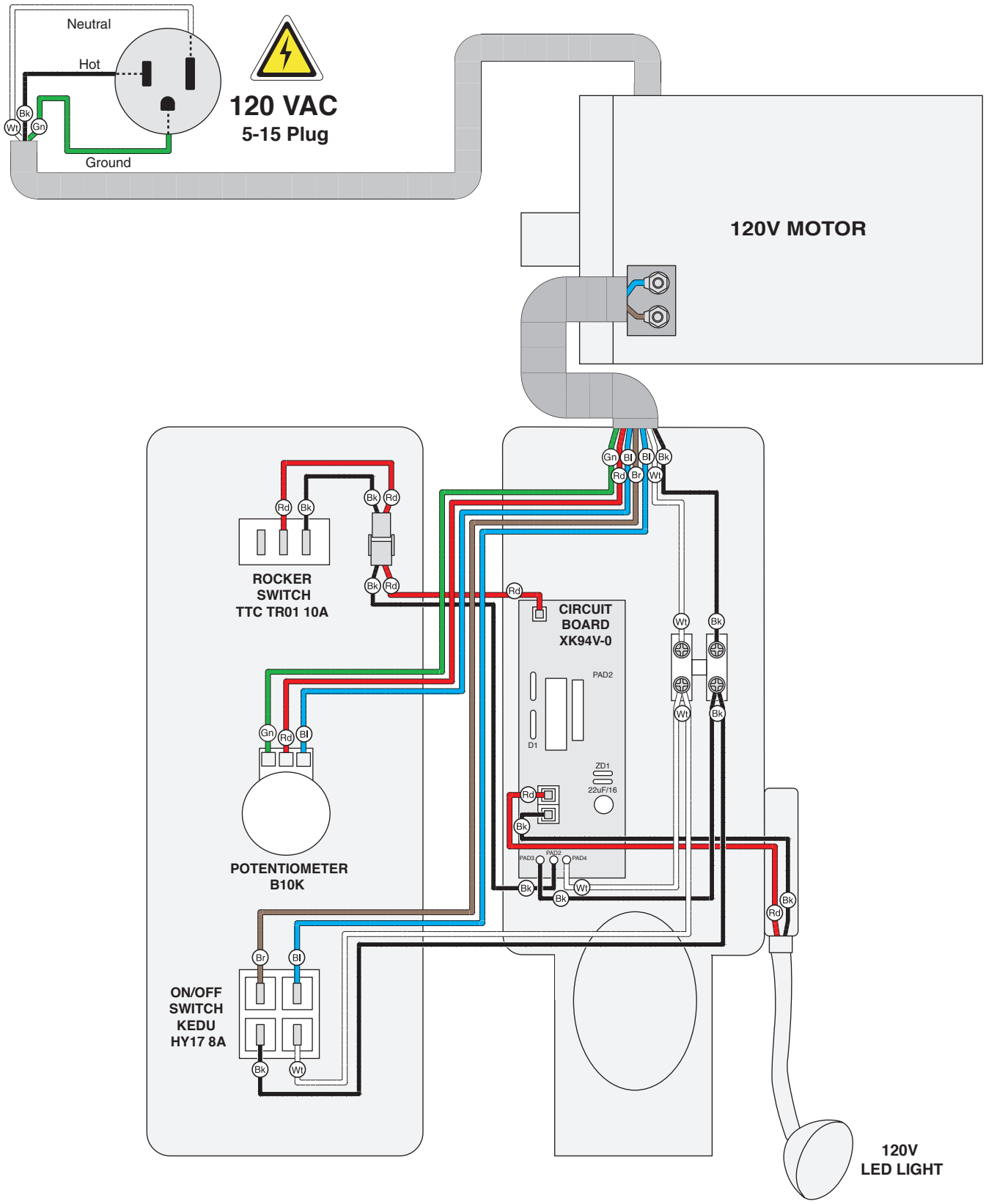
NOTICE

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

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	TURQUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

Wiring Diagram



STOP *READ ELECTRICAL SAFETY ON PAGE 36!*

Electrical Components

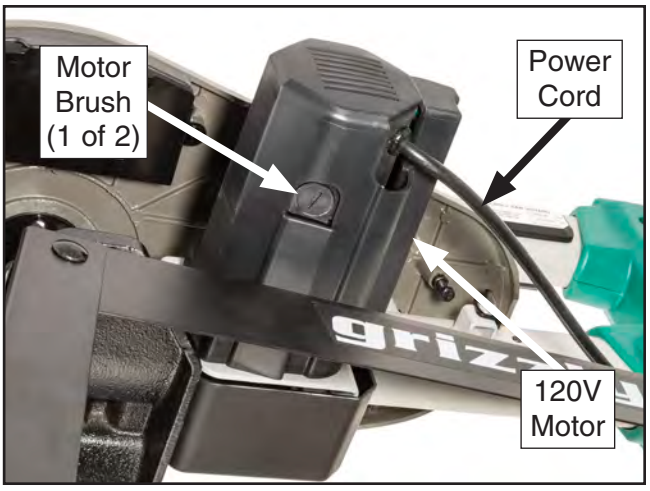


Figure 42. Scroll saw motor.

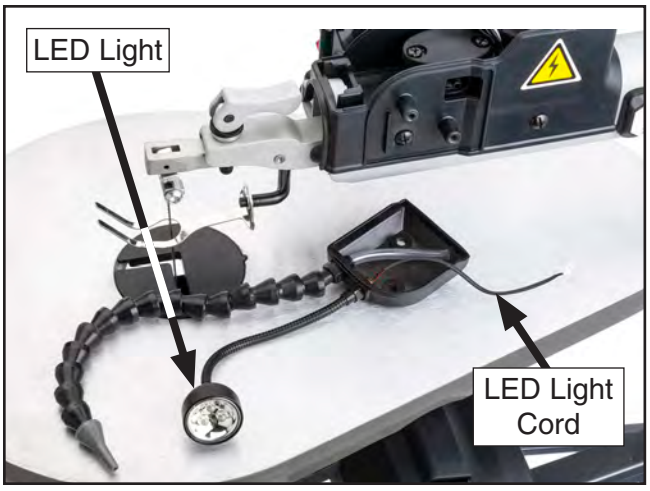


Figure 43. LED light.

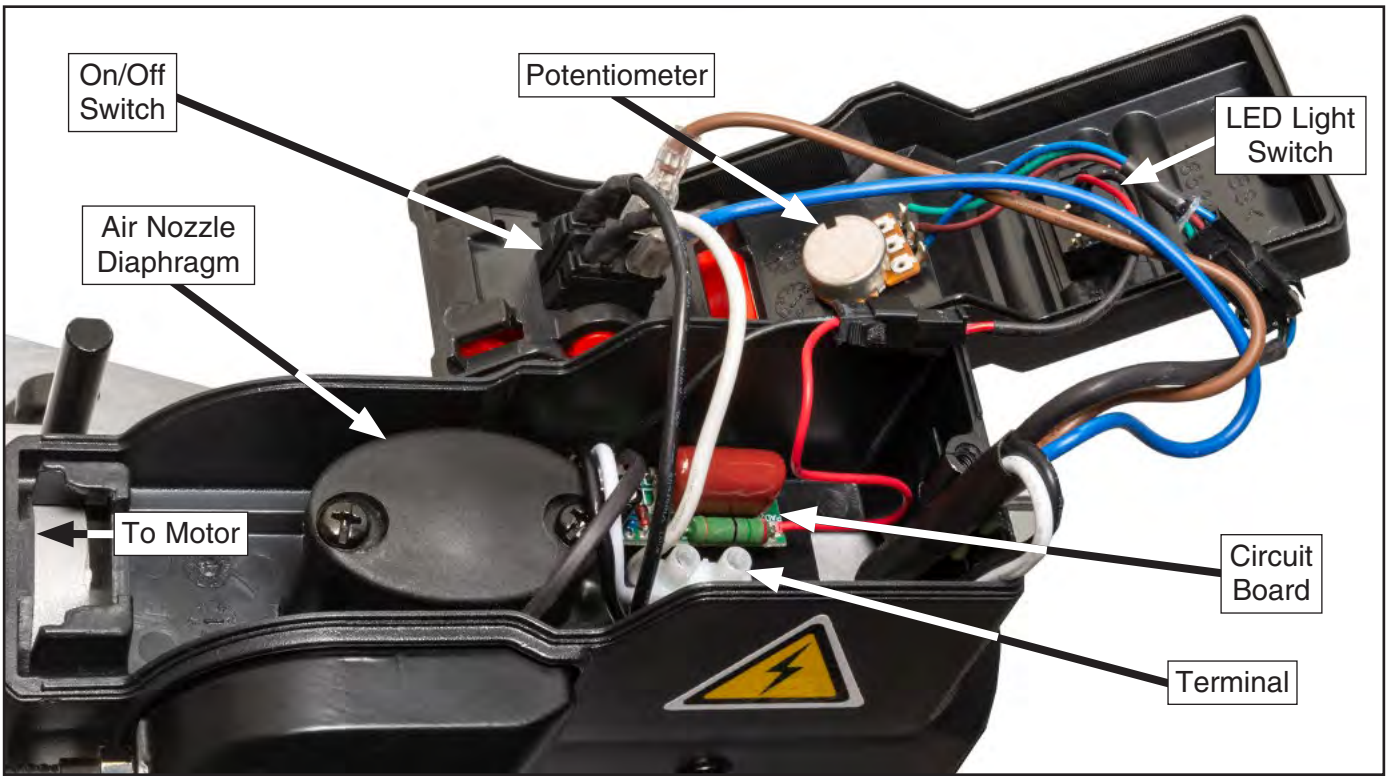


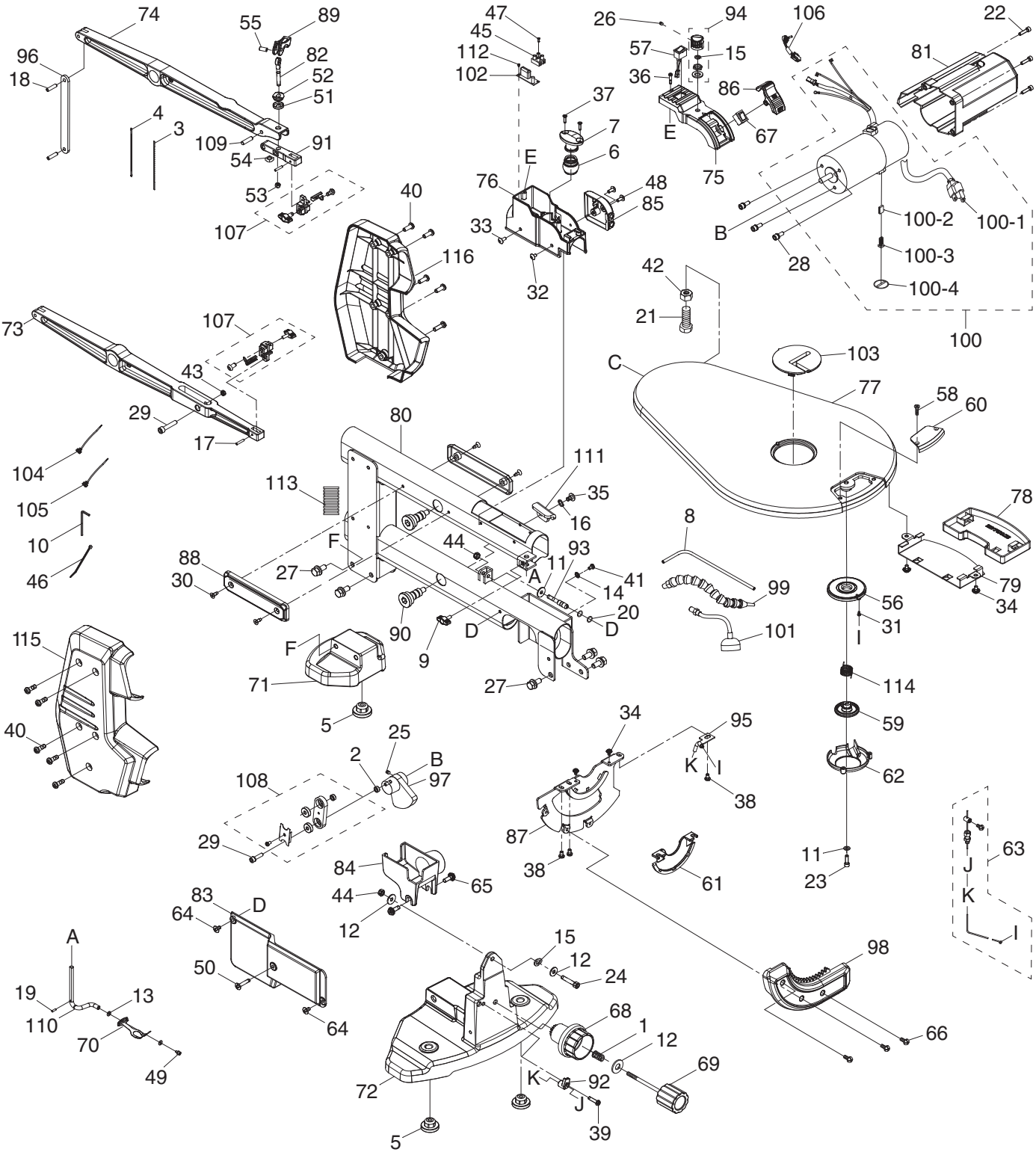
Figure 44. Control panel.

STOP *READ ELECTRICAL SAFETY ON PAGE 36!*

SECTION 9: PARTS

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call **(800) 523-4777** or visit **www.grizzly.com/parts** to check for availability.

Main



Main Parts List

REF	PART #	DESCRIPTION
1	P0938001	COMPRESSION SPRING 1.2 X 13.8 X 40
2	P0938002	FLAT WASHER 10MM
3	P0938003	BLADE 5" PLAIN-END 18TPI
4	P0938004	BLADE 5" PIN-END 15TPI
5	P0938005	FOOT PAD
6	P0938006	BELLOWS
7	P0938007	PLUG HOUSING
8	P0938008	PVC TUBE
9	P0938009	KNOB BOLT M6-1 X 13, D25, WING
10	P0938010	HEX WRENCH 3MM
11	P0938011	FLAT WASHER 6MM
12	P0938012	FENDER WASHER 6MM
13	P0938013	FLAT WASHER 4MM
14	P0938014	EXT TOOTH WASHER 5MM
15	P0938015	WAVY WASHER 6MM
16	P0938016	WAVY WASHER 8MM
17	P0938017	ROLL PIN 3 X 16
18	P0938018	ROLL PIN 5 X 20
19	P0938019	ROLL PIN 3 X 15
20	P0938020	O-RING 4.8 X 1.9 P5
21	P0938021	HEX BOLT M6-1 X 30
22	P0938022	CAP SCREW M5-.8 X 20
23	P0938023	CAP SCREW M6-1 X 20
24	P0938024	CAP SCREW M6-1 X 35
25	P0938025	SET SCREW M8-1.25 X 8
26	P0938026	SET SCREW M4-.7 X 6
27	P0938027	FLANGE BOLT M8-1.25 X 20
28	P0938028	CAP SCREW M6-1 X 16
29	P0938029	CAP SCREW M5-.8 X 20
30	P0938030	FLAT HD SCR M5-.8 X 12
31	P0938031	PHLP HD SCR M4-.7 X 6
32	P0938032	PHLP HD SCR M5-.8 X 8
33	P0938033	PHLP HD SCR M5-.8 X 12
34	P0938034	FLANGE SCREW M5-.8 X 8
35	P0938035	FLANGE SCREW M6-1 X 10
36	P0938036	TAP SCREW M4 X 20
37	P0938037	TAP SCREW M5 X 12
38	P0938038	PHLP HD SCR M5-.8 X 12
39	P0938039	PHLP HD SCR M5-.8 X 16
40	P0938040	PHLP HD SCR M6-1 X 16
41	P0938041	PHLP HD SCR M5-.8 X 6
42	P0938042	HEX NUT M6-1
43	P0938043	LOCK NUT M5-.8
44	P0938044	HEX NUT M6-1
45	P0938045	TERMINAL BLOCK PA9
46	P0938046	LOCKING CABLE TIE
47	P0938047	TAP SCREW M3 X 15
48	P0938048	TAP SCREW M5 X 15
49	P0938049	CAP SCREW M4-.7 X 12
50	P0938050	PHLP HD SCR M5-.8 X 25
51	P0938051	TENSION SPACER 6 X 18 X 1
52	P0938052	BRACKET STOP PLATE
53	P0938053	ACORN NUT M6-1

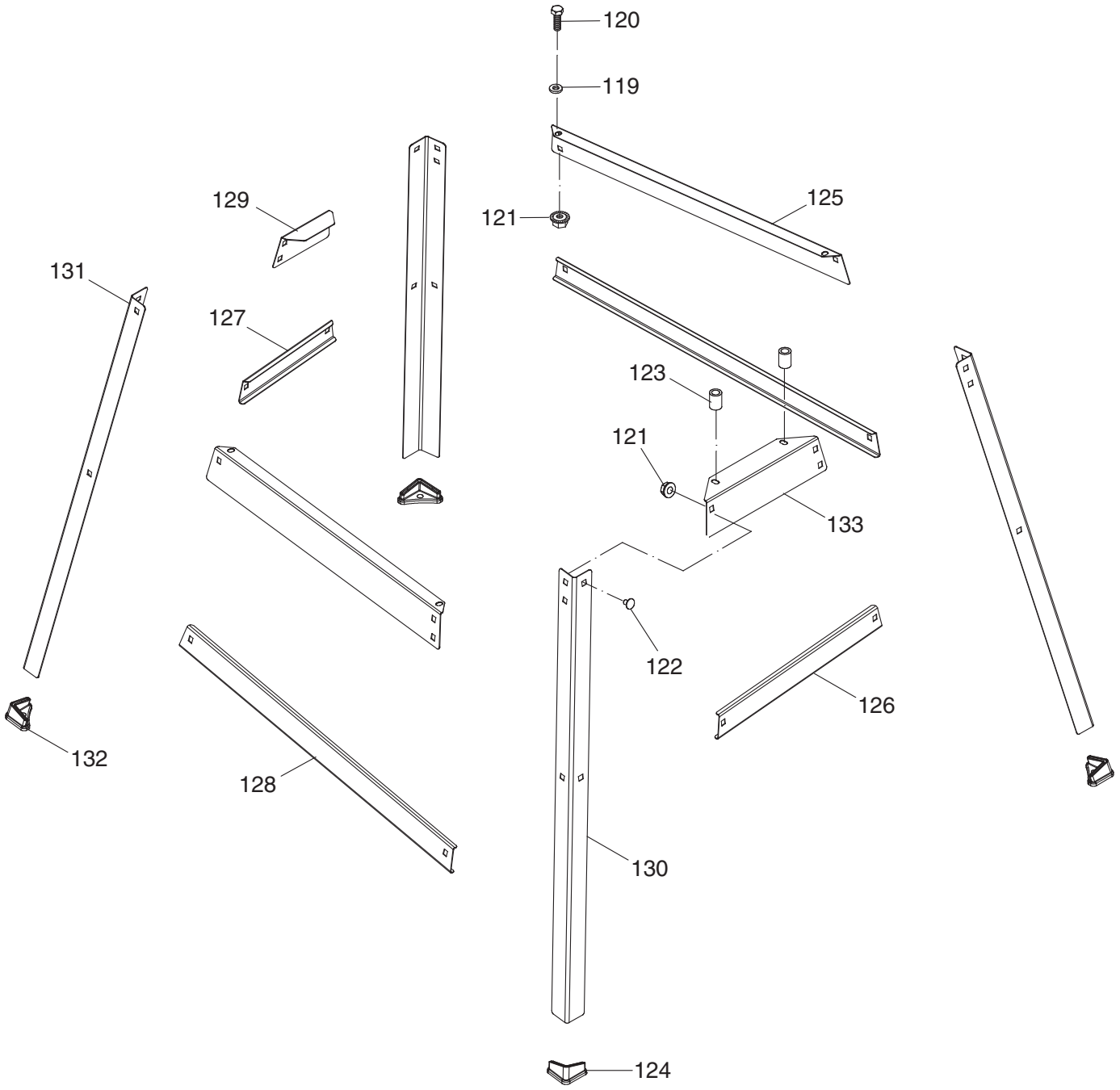
REF	PART #	DESCRIPTION
54	P0938054	SQUARE NUT M6-1
55	P0938055	ROLL PIN 6 X 14
56	P0938056	TURNTABLE
57	P0938057	ROCKER SWITCH TTC TR01 10A
58	P0938058	FLAT HD TAP SCREW M5 X 16
59	P0938059	TURNTABLE COVER
60	P0938060	PLATE COVER
61	P0938061	GUIDE HOLDER
62	P0938062	BEVEL ANGLE COVER
63	P0938063	WIRE ROPE ASSEMBLY
64	P0938064	PHLP HD SCR M5-.8 X 10
65	P0938065	FLANGE SCREW M6-1 X 12
66	P0938066	PHLP HD SCR M5-.8 X 12
67	P0938067	ROCKER SWITCH KEDU HY17 8A
68	P0938068	TENSION HANDLE
69	P0938069	PLUNGER HANDLE
70	P0938070	FOLLOWER PLATE
71	P0938071	BASE, REAR
72	P0938072	BASE, FRONT
73	P0938073	ROCKER ARM, LOWER
74	P0938074	ROCKER ARM, UPPER
75	P0938075	SWITCH BOX COVER
76	P0938076	SWITCH BOX HOUSING
77	P0938077	TABLE
78	P0938078	BLADE STORAGE TRAY
79	P0938079	BLADE STORAGE BRACKET
80	P0938080	BODY ASSEMBLY
81	P0938081	MOTOR COVER
82	P0938082	TENSION ROD
83	P0938083	SIDE COVER
84	P0938084	DUST PORT
85	P0938085	SWITCH BOX SIDE COVER
86	P0938086	ON/OFF BUTTON COVER
87	P0938087	BEVEL ANGLE SCALE
88	P0938088	UPPER SIDE COVER
89	P0938089	TENSION HANDLE
90	P0938090	ANCHOR BOLT
91	P0938091	LOCKING ROD
92	P0938092	GUIDE BLOCK
93	P0938093	PIVOT SHAFT
94	P0938094	SPEED DIAL KNOB
95	P0938095	RETAINING BRACKET
96	P0938096	LINKAGE BAR
97	P0938097	ECCENTRIC COUNTERWEIGHT
98	P0938098	TRUNNION BRACKET
99	P0938099	RIGID AIR HOSE W/NOZZLE
100	P0938100	MOTOR 1/9 HP 120V 1-PH
101-1	P0938100-1	POWER CORD 18G 3W 72" 5-15P
101-2	P0938100-2	CARBON BRUSH
101-3	P0938100-3	BRUSH HOLDER
101-4	P0938100-4	BRUSH COVER
101	P0938101	LED LAMP 120V 10W
102	P0938102	CIRCUIT BOARD XK94V-0

Main Parts List (Cont.)

REF	PART #	DESCRIPTION
103	P0938103	TABLE INSERT
104	P0938104	WIRE ROPE 120MM (BLACK)
105	P0938105	WIRE ROPE 120MM (WHITE)
106	P0938106	POTENTIOMETER
107	P0938107	BLADE HOLDER ASSEMBLY
108	P0938108	BEARING SEAT ASSEMBLY
109	P0938109	ROLL PIN 6 X 23

REF	PART #	DESCRIPTION
110	P0938110	SUPPORT ROD
111	P0938111	ANCHOR PLATE
112	P0938112	TAP SCREW M3 X 8
113	P0938113	PA HOSE 12 X 15 X 200
114	P0938114	TORSION SPRING 1.4 X 33 X 28
115	P0938115	COVER, LEFT
116	P0938116	COVER, RIGHT

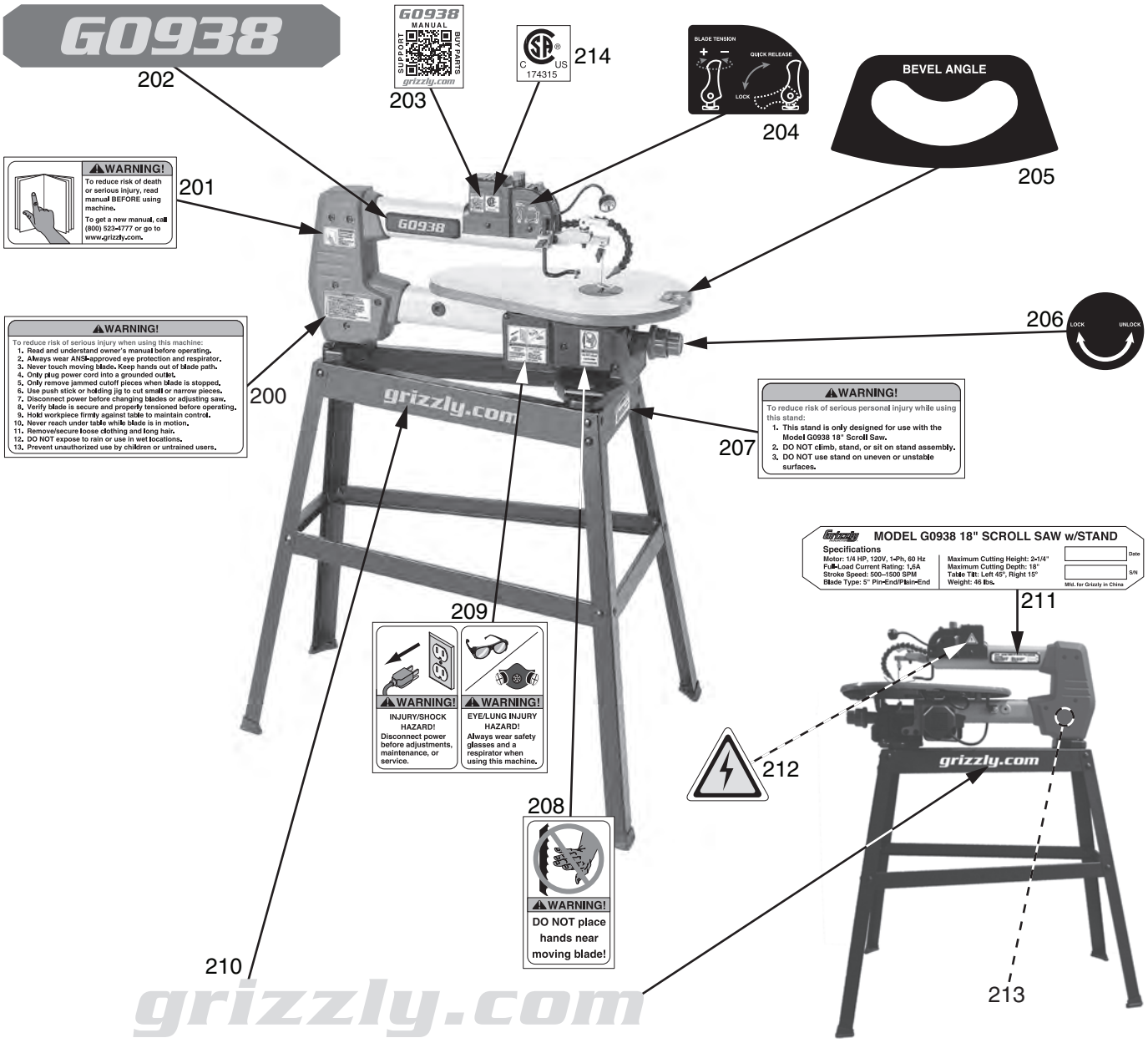
Stand



REF	PART #	DESCRIPTION
119	P0938119	FLAT WASHER 8MM
120	P0938120	HEX BOLT M8-1.25 X 45
121	P0938121	FLANGE NUT M8-1.25
122	P0938122	CARRIAGE BOLT M8-1.25 X 12
123	P0938123	SPACER 9 X 14 X 20
124	P0938124	FOOT, FRONT
125	P0938125	SUPPORT BRACKET, UPPER (SIDE)
126	P0938126	SUPPORT BRACKET, LOWER (FRONT)

REF	PART #	DESCRIPTION
127	P0938127	SUPPORT BRACKET, LOWER (REAR)
128	P0938128	SUPPORT BRACKET, LOWER (SIDE)
129	P0938129	SUPPORT BRACKET, UPPER (REAR)
130	P0938130	LEG, FRONT
131	P0938131	LEG, REAR
132	P0938132	FOOT, REAR
133	P0938133	SUPPORT BRACKET, UPPER (FRONT)

Labels & Cosmetics



REF	PART #	DESCRIPTION
200	P0938200	MACHINE WARNING LABEL
201	P0938201	READ MANUAL LABEL
202	P0938202	MODEL NUMBER LABEL
203	P0938203	QR CODE LABEL
204	P0938204	BLADE TENSION LABEL
205	P0938205	BEVEL ANGLE LABEL
206	P0938206	TABLE LOCK LABEL

REF	PART #	DESCRIPTION
208	P0938208	BLADE WARNING LABEL
209	P0938209	COMBO WARNING LABEL
210	P0938210	GRIZZLY.COM LABEL
211	P0938211	MACHINE ID LABEL
212	P0938212	ELECTRICITY LABEL
213	P0938213	TOUCH-UP PAINT, GRIZZLY GREEN
214	P0938214	CSA LABEL

WARRANTY & RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly'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 or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly 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.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

In the event you need to use this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

To take advantage of this warranty, you must register it at **https://www.grizzly.com/forms/warranty**, or you can scan the QR code below to be automatically directed to our warranty registration page. Enter all applicable information for the product.