

Grizzly *Industrial, Inc.*®

MODEL G0960 MINI SAWMILL PRO OWNER'S MANUAL

(For models manufactured since 09/22)



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**
#CSLW22408 PRINTED IN TAIWAN

V1.05.25

******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

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.

		MODEL GXXXX MACHINE NAME	
SPECIFICATIONS		▲ WARNING!	
Motor:		To reduce risk of serious injury when using this machine:	
Specification:		1. Read manual before operation.	
Specification:		2. Wear safety glasses and respirator.	
Specification:		3. Make sure safety glasses/setup and	
Weight:		4. power is connected to grounded circuit before starting.	
		5. Make sure the motor has stopped and disconnect	
		6. power before adjustments, maintenance, or service.	
		7. DO NOT expose to rain or dampness.	
		8. DO NOT modify this machine in any way.	
		9. DO NOT use while intoxicated or tired.	
		10. Maintain machine carefully to prevent accidents.	
		Manufactured for Grizzly in Taiwan	

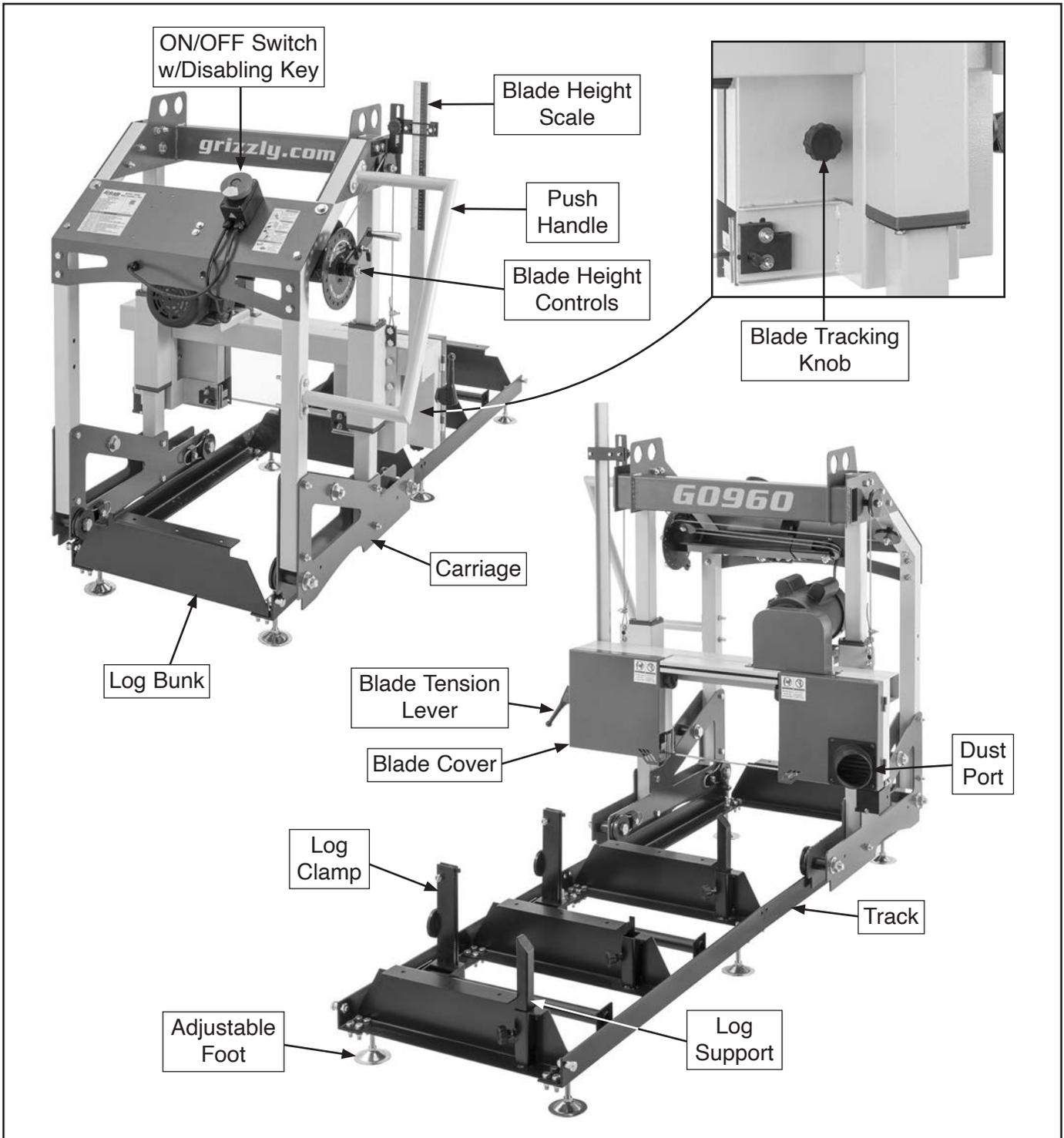
Manufacture Date

Serial Number

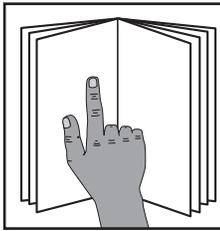


Identification

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



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.

Track

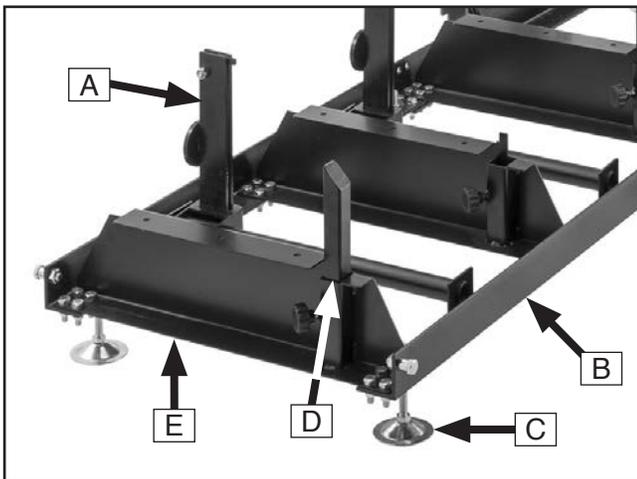


Figure 1. Track components.

- A. Log Clamp (1 of 2):** Secures log against log support.
- B. Rail:** Supports carriage.
- C. Adjustable Foot (1 of 6):** Keeps track level and stable.
- D. Log Support (1 of 2):** Secures and levels log to ensure flat cuts.

IMPORTANT: Log supports and log clamps must be adjusted/angled to stay below saw blade height during operation.

- E. Log Bunk (1 of 4):** Supports log.

Carriage

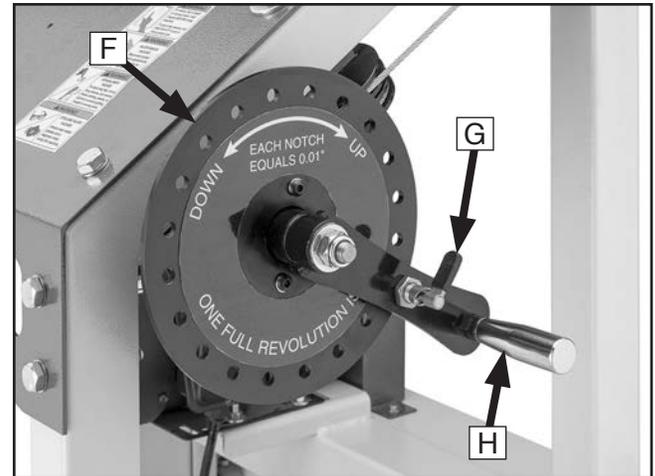


Figure 2. Blade height controls.

- F. Blade Height Handwheel:** Provides notches to position blade height lever at 0.01" increments. One full revolution of handwheel moves blade approximately 0.2".
- G. Blade Height Index Plunger:** Uses cam-action to seat plunger in blade height handwheel notches to secure height setting. Turn lever 180° to keep plunger from seating.
- H. Blade Height Handle:** Raises/lowers saw blade.

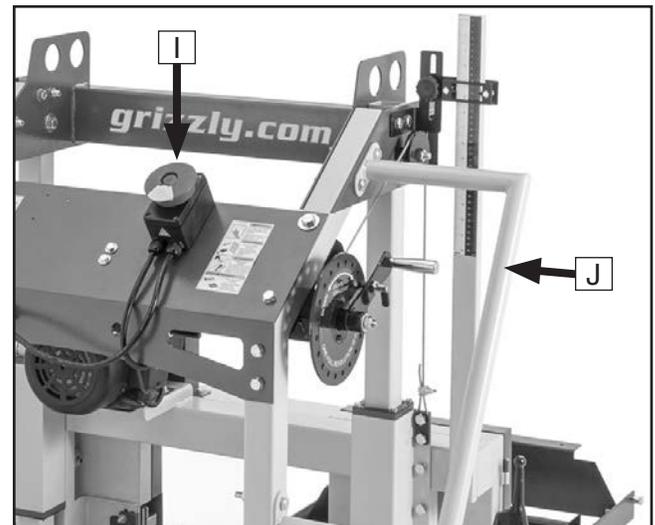


Figure 3. Operator controls.

- I. ON/OFF Switch w/Disabling Key:** Turns machine **ON** when pulled out; turns machine **OFF** when pressed in. When key is removed, button is disabled and machine cannot start.
- J. Push Handle:** Moves carriage along track.



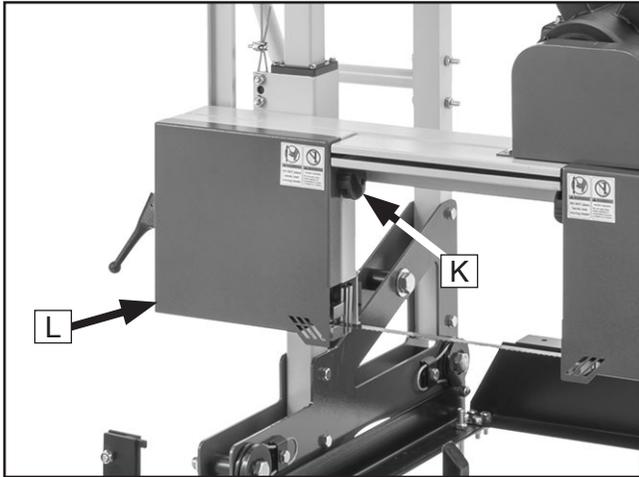


Figure 4. Blade removal components.

- K. Blade Cover Lock Knob (1 of 2):** Turn knob clockwise to open blade cover; turn knob counterclockwise to secure blade cover.
- L. Blade Cover (1 of 2):** Protects blade and wheels from elements, and guards operator from entanglement and injury.

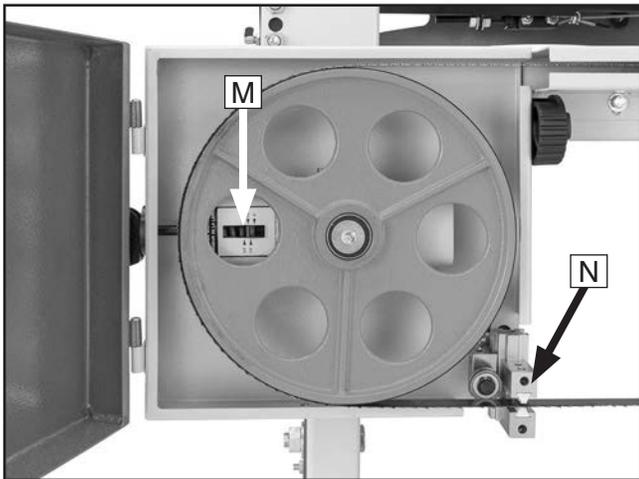


Figure 5. Inside blade cover components.

- M. Blade Tension Scale:** Displays recommended blade tension according to blade width and current tension setting.
- N. Blade Guide (1 of 2):** Supports blade.

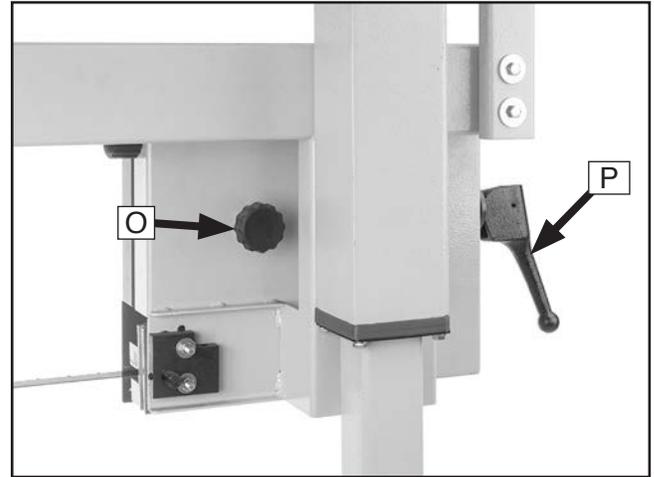


Figure 6. Blade tracking and tension controls.

- O. Blade Tracking Knob:** Adjusts blade tracking on wheels.
- P. Blade Tension Lever:** Turn lever clockwise to tension blade; turn lever counterclockwise to release tension; lift lever to disengage.

Circuit Breaker

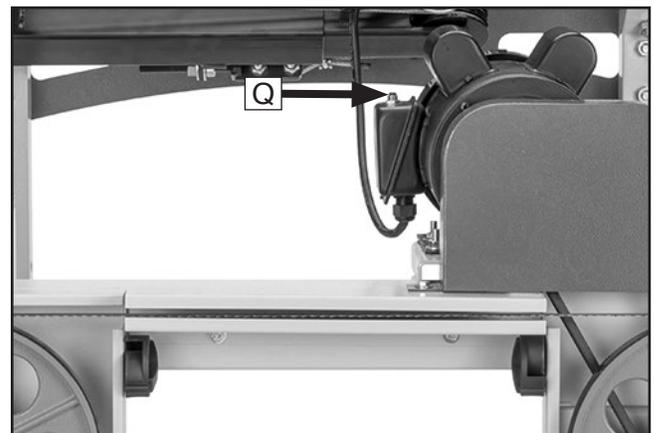


Figure 7. Location of circuit breaker.

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



Glossary Of Terms

The following is a list of common definitions, terms and phrases used throughout this manual as they relate to this sawmill and milling in general. Become familiar with these terms for assembling, adjusting or operating this machine. Your safety is **VERY** important to us at Grizzly!

Board Foot: Unit of measurement for volume of lumber cut from a log. Used to measure productivity and cost. A board foot is typically measured as a piece of wood 1' x 1' x 1", or 144 cubic inches.

Burl: A tough outgrowth on a log with deformed grains that make elaborate patterns. Burls are difficult to cut, but often have unique patterns desirable to woodworkers.

Cant: Partially cut log with one to four flat sides. A cant might be cut on a sawmill and moved to another machine, finished on the sawmill, or sold as-is.

Carriage: Structure that supports the motor and saw blade and moves along the track.

Flatsawn: Lumber sawn nearly parallel to the wood grain. Most efficient lumber to mill, but most susceptible to warping and cupping. Also called plainsawn lumber.

Fitch: Piece of wood with two flat surfaces and one or two natural edges. Fitches can be edged to produce finished lumber.

Grade Sawing: Process of rotating log or cant multiple times throughout milling in order to produce lumber of the highest possible grade.

Kerf: The resulting cut or gap in the workpiece after the saw blade passes through during a cutting operation.

Live Sawing: Process of cutting parallel through log or cant from top to bottom. Most efficient method of milling that produces flatsawn, quartersawn, and riftsawn lumber.

Parallel: Being an equal distance apart at every point along two given lines or planes; i.e., the log bunks are parallel to the face of the saw blade.

Perpendicular: Lines or planes that intersect and form right angles; i.e., the blade is perpendicular to the log supports.

Pith: The central rings in a log or tree. The pith is the oldest wood, created when the tree was young. It is prone to cracking as wood dries and shrinks.

Plainsawn: See "*Flatsawn*".

Quartersawn: Lumber sawn so the grain is perfectly perpendicular to the flat surface of the board. Quartersawn lumber is resistant to warping and cupping, but is time consuming and produces the most waste wood.

Riftsawn: Lumber sawn so that the grain is close to perpendicular to the flat surface of the board. Riftsawn lumber is resistant to warping and cupping, but is time consuming to mill.

Slab: Piece of wood with one flat surface and the rest is natural wood. As a by product of milling lumber, slabs are often sectioned and used as firewood.

Sticker: Pieces of narrow wood (approximately 1"x1") used to separate lumber that is stacked for air drying. Usually made of light wood that will not stain the drying lumber.

Stickering: Process of stacking wood using stickers.

Waney: Edge of a board that is tapered or unfinished.





MACHINE DATA SHEET

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

MODEL G0960 MINI SAWMILL PRO

Product Dimensions:

Weight 430 lbs.
Width (side-to-side) x Depth (front-to-back) x Height 44-1/2 x 79 x 64 in.
Footprint (Length x Width) 74 x 24-1/2 in.

Shipping Dimensions:

Type Wood Slat Crate
Content Machine
Weight 585 lbs.
Length x Width x Height 45 x 34 x 32 in.
Must Ship Upright No

Electrical:

Power Requirement 110V or 220V, Single-Phase, 60 Hz
Prewired Voltage 110V
Full-Load Current Rating 14A at 110V, 7A at 220V
Minimum Circuit Size 20A at 110V, 15A at 220V
Connection Type Cord & Plug
Power Cord Included Yes
Power Cord Length 70 in.
Power Cord Gauge 14 AWG
Plug Included Yes
Included Plug Type 5-15 for 110V
Recommended Plug Type 6-15 for 220V
Switch Type Push Button w/Large Shut-Off Paddle & Removable Key

Motors:

Main

Horsepower 2 HP
Phase Single-Phase
Amps 14A/7A
Speed 1720 RPM
Type TEFC Capacitor-Start Induction
Power Transfer Belt
Bearings Shielded & Permanently Lubricated
Centrifugal Switch/Contacts Type Internal



Main Specifications:

Cutting Capacity

Max. Log Length (with included track sections).....	43-5/16 in.
Min. Log Length	20 in.
Max. Log Diameter.....	13 in.
Min. Log Diameter.....	4 in.
Max. Width of Cut	13 in.
Max. Depth of Cut.....	6-1/2 in.
Min. Depth of Cut.....	0.075 in.
Max. Cutting Height.....	14-1/2 in.
Min. Height Above Bed	9/16 in.
Track Length	78-1/2 in.
Track Width	23-13/16 in.
Track Height.....	7-7/8 x 10-5/8 in.

Blade Information

Blade Speed.....	2900 FPM
Blade Length.....	84 - 84-3/4 in.
Blade Width.....	3/4 in.
Blade Thickness.....	0.025 - 0.035 in.
Blade Guides.....	Ceramic Guides

Operation

Feed System	Manual
Lift System	Manual
Log Supports.....	2 Supports & 2 Log Clamps

Construction

Track	Steel
Frame.....	Steel
Body	Steel
Wheels	Cast Iron
Paint Type/Finish.....	Powder Coated

Additional Information:

Wheel Size	10 in.
Track Extensions.....	39-3/8 in.
Track Leveling	Adjustable Feet
Number of Dust Ports	1
Dust Port Size	4 in.

Other Specifications:

Country of Origin.....	Taiwan
Warranty.....	1 Year
Approximate Assembly & Setup Time.....	5 Hrs.
Serial Number Location.....	ID Label

Features:

- 13" Maximum Log Diameter and Width of Cut
- Ceramic Blade Guides
- Manual Lift System Raises 0.2" per Revolution
- Low-to-the-Ground Bed
- Two Adjustable Log Supports and Two Log Clamps
- Included 84-7/16" x 3/4" x 0.025" 3 TPI Blade



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.



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



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



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



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 loose clothing, gloves, neckties, 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 Sawmills

WARNING

Serious cuts, amputation, or death can occur from contact with the moving saw blade during operation or if blade breakage occurs. Serious injury or death can also occur from getting fingers, hair, or clothing entangled in moving parts if the machine is operated while the covers are open or guards are removed. To reduce these risks, anyone operating this machine **MUST** completely heed the hazards and warnings below.

OPERATING POSITION. Keep hands and feet away from all moving parts and do not reach over or across sawmill during operation. Never support lumber by hand during operation. Use non-skid safety shoes and hard hat as needed.

AMPUTATION/ENTANGLEMENT. Do not operate this sawmill without blade covers in place. Loose clothing, jewelry, long hair, and work gloves can be drawn into working parts.

OPERATING AREA. Only operate sawmill on a reasonably flat and level surface with space to work around the machine. Be aware of potential hazards in the work area such as other machinery, lumber, and power lines above or below the ground. Operating in a confined space increases risk of injury.

WORKPIECE SUPPORT. Always support/secure workpieces with log clamps and log supports before operation.

CLEARING SLABS & CANTS. Always turn machine **OFF** before clearing cut lumber and returning carriage to start position.

BLADE SPEED. Cutting workpiece before blade is at full speed could cause blade to grab workpiece and break blade. Allow blade to reach full speed before starting cut. **DO NOT** start machine with workpiece contacting blade.

BLADE CONTROL. To avoid risk of injury due to blade contact, always allow blade to stop on its own. **DO NOT** try to stop or slow blade with your hand or the workpiece.

BLADE CONDITION. Do not operate with dull, cracked, or badly worn blade. Inspect blades for cracks and missing teeth before each use. When replacing blades, always shut off machine, wear gloves to protect hands and safety glasses to protect eyes, and ensure blade is installed with teeth oriented in correct direction.

CORRECT USE. Do not mill lumber that exceeds machine capacity or attempt to saw any material other than lumber. Distribute load evenly using approved supports and clamps to prevent machine from tipping or lumber from rolling off track. Excess or improper material increases the risk of injury.

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

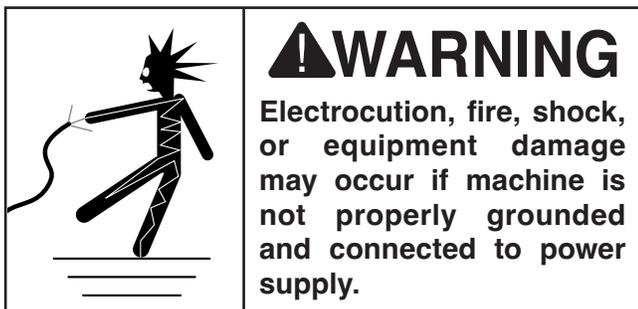
No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or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



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.



Full-Load Current Rating

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

Full-Load Current Rating at 110V 14 Amps
Full-Load Current Rating at 220V 7 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.

Circuit Information

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.)



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.*

Circuit Requirements for 110V

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

Nominal Voltage 110V, 115V, 120V
Cycle 60 Hz
Phase Single-Phase
Power Supply Circuit 20 Amps
Plug/Receptacle NEMA 5-15

Circuit Requirements for 220V

This machine can be converted to operate on a power supply circuit that has a verified ground and meets the requirements listed below. (Refer to **Voltage Conversion** instructions for details.)

Nominal Voltage 208V, 220V, 230V, 240V
Cycle 60 Hz
Phase Single-Phase
Power Supply Circuit 15 Amps
Plug/Receptacle NEMA 6-15



Grounding 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.

For 110V operation: This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (see following figure). The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances.

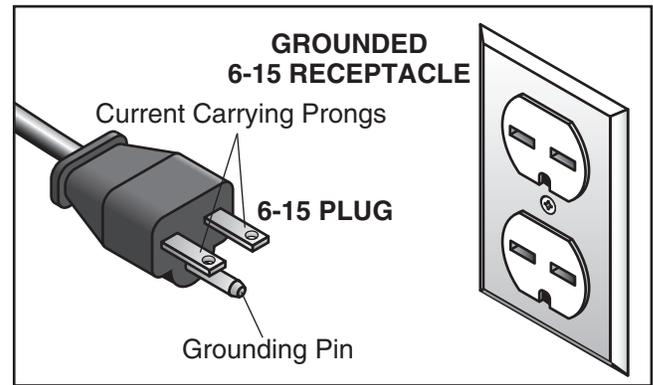


Figure 9. Typical 6-15 plug and receptacle.

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.

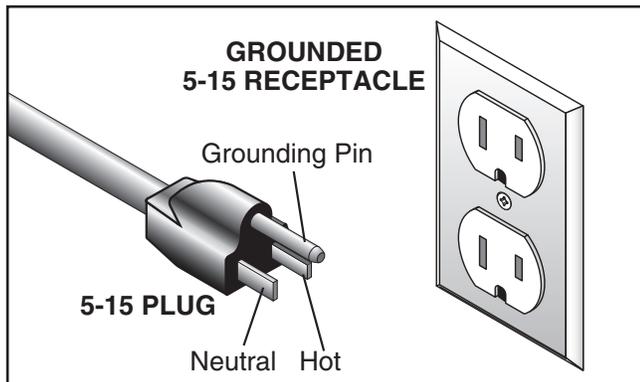


Figure 8. Typical 5-15 plug and receptacle.

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 machine 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.

⚠ 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.

For 220V operation: The plug specified under “Circuit Requirements for 220V” on the previous page has a grounding prong that must be attached to the equipment-grounding wire on the included power cord. The plug must only be inserted into a matching receptacle (see following figure) that is properly installed and grounded in accordance with all local codes and ordinances.

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.

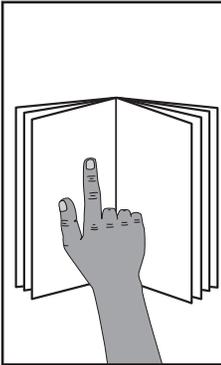
Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

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 (110V)..... 12 AWG**
- Minimum Gauge Size (220V) 14 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

HEAVY LIFT!

Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

Needed for Setup

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

Description	Qty
• Disposable Rags	As Needed
• Cleaner/Degreaser	As Needed
• Disposable Gloves	As Needed
• Another Person	1
• Safety Glasses (for each person).....	1 Pr.
• Lifting Straps (Rated for 675 lbs.).....	2
• Lifting Hooks (Rated for 675 lbs.).....	2
• Forklift or Hoist (Rated for 675 lbs.)	1
• Level.....	1
• Wrenches or Sockets 7, 8, 10, 13, 15, 19mm.....	1 Ea.
• Wrenches or Sockets 17, 30mm.....	2 Ea.
• Open-End Wrenches 10, 19mm	1 Ea.
• Open-End Wrenches 3/4"	2 Ea.
• 90° Square	1
• Measuring Tape.....	1
• Hex Wrenches 2.5, 3mm.....	1 Ea.
• Phillips Head Screwdriver #2	1
• Flat Washers 3/4"	As Needed
• Dust Hose 4"	1
• Hose Clamps 4"	2
• Dust Collection System	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.

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.

Track Inventory (Figure 10)	Qty
A. Track Rails.....	4
B. Log Supports.....	2
C. Adjustable Feet	6
D. Log Bunks	4
E. Rail Brackets	2
F. Log Clamp Shafts.....	2
G. Log Clamp Shaft Brackets	2
H. Log Clamps	2
I. Log Clamp Receivers.....	2

Track Hardware (Not Shown)	Qty
J. Hex Bolts M12-1.75 x 35.....	4
K. Hex Bolts M10-1.5 x 30	48
L. Knob Bolts $\frac{5}{16}$ "-18 x $\frac{5}{8}$ ".....	5
M. Flat Washers $\frac{3}{8}$ ".....	48
N. Hex Nuts $\frac{1}{2}$ "-12	12
O. Lock Nuts M12-1.75	4
P. Flange Nuts M10-1.5	48
Q. Spacers 12 x 17 x 15mm.....	4

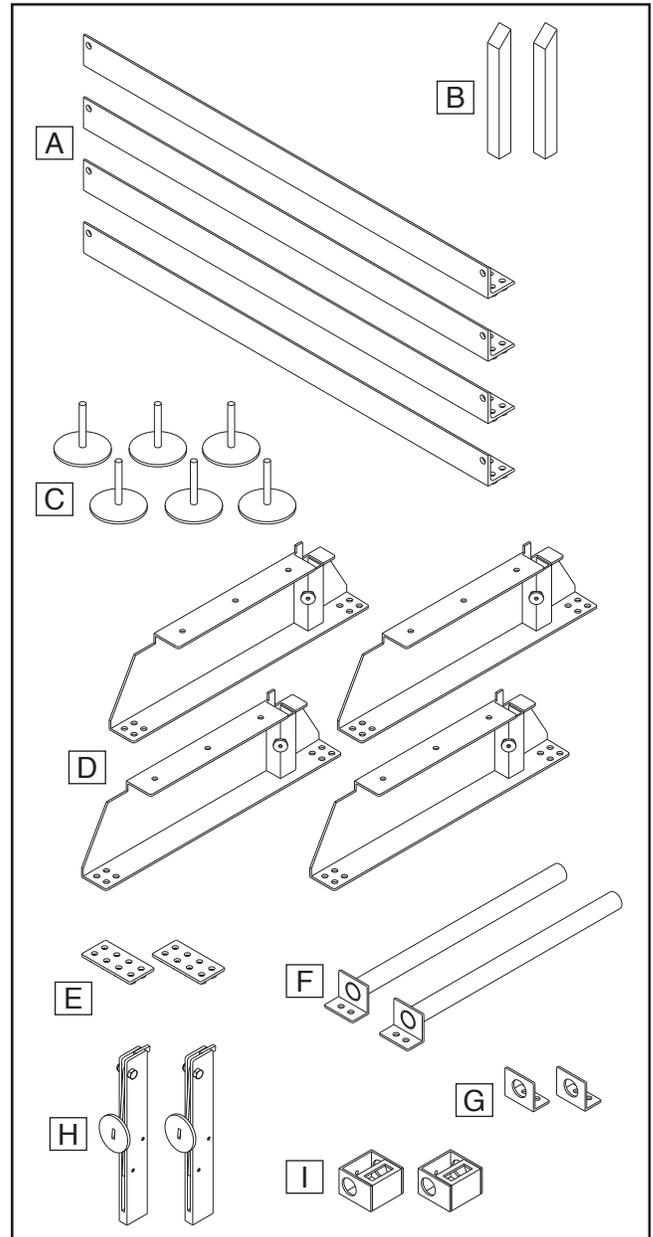


Figure 10. Track inventory.



Carriage Inventory (Figure 11)	Qty
R. Front Posts.....	2
S. Post Sleeves.....	2
T. ON/OFF Switch Box.....	1
U. Scale.....	1
V. Rear Posts.....	2
W. Strain Relief PG13.5.....	1
X. Push Handle.....	1
Y. Cable Pulleys.....	3
Z. Cross Beam.....	1
AA. Carriage Legs.....	2
AB. Switch Panel.....	1
AC. Lift Assembly.....	1
AD. Dust Port 4".....	1
AE. Saw Headstock.....	1
AF. Square Dust Port.....	1
AG. Lift Cable A (77").....	1
AH. Lift Cable B (106").....	1
AI. Square Dust Port Cover.....	1
AJ. Scale Backing Bracket.....	1
AK. Scale Calibration Bracket.....	1
AL. Scale Indicator.....	1
AM. Blade Height Handle.....	1

Carriage Hardware (Not Shown)	Qty
AN. Hex Bolts M12-1.75 x 110.....	3
AO. Hex Bolts M10-1.5 x 80.....	18
AP. Hex Bolts M10-1.5 x 70.....	5
AQ. Hex Bolts M10-1.5 x 16.....	6
AR. Hex Bolts M8-1.25 x 20.....	2
AS. Hex Bolts M6-1 x 30.....	4
AT. Hex Bolts M6-1 x 10.....	6
AU. Button Head Cap Screws M5-.8 x 10.....	4
AV. Button Head Cap Screws M4-.7 x 20.....	2
AW. Knob Bolt 5/16"-18 x 5/8".....	1
AX. Flat Washers 1/2".....	3
AY. Flat Washers 3/8".....	52
AZ. Flat Washers 5/16".....	2
BA. Flat Washers 6.4 x 16 x 1.2mm.....	4
BB. Flat Washers 1/4".....	2
BC. Flat Washers #10.....	2
BD. Hex Nuts M12-1.75.....	3
BE. Hex Nuts M10-1.5.....	23
BF. Hex Nuts M6-1.....	6
BG. Hex Nuts M5-.8.....	4
BH. Hex Nuts M4-.7.....	2
BI. Spacer 12 x 19 x 19.5mm.....	1
BJ. Spacers 12 x 19 x 23mm.....	2
BK. Cable Clamps.....	4

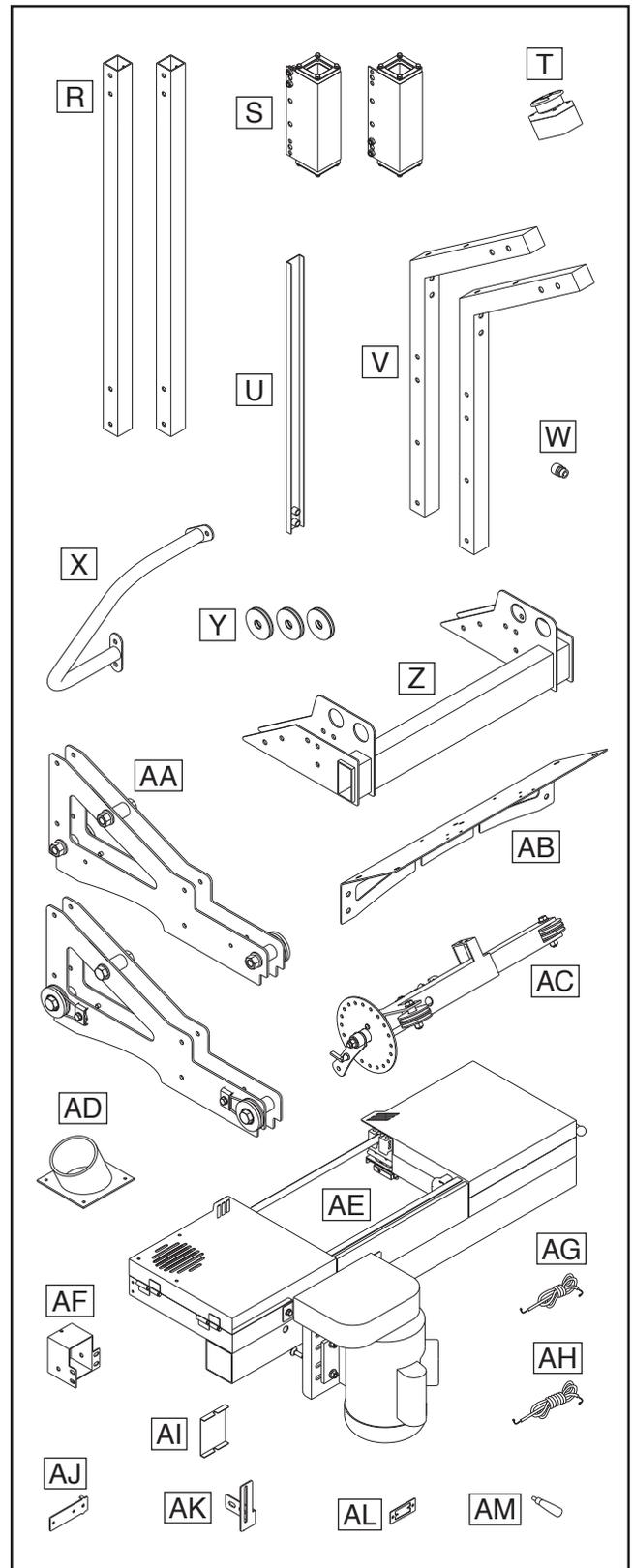


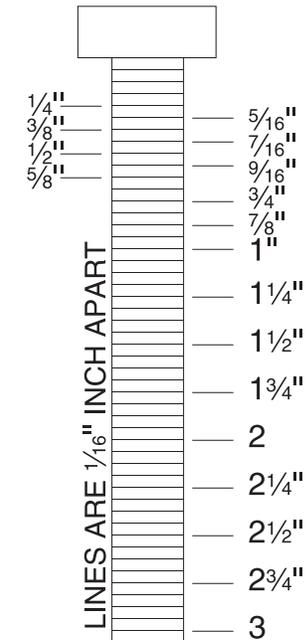
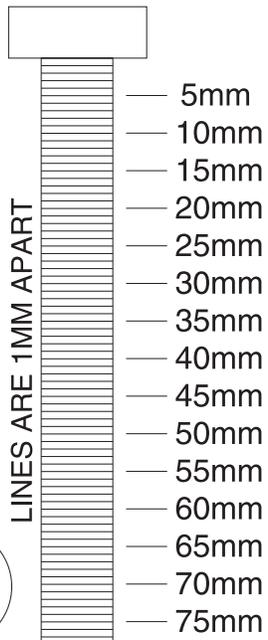
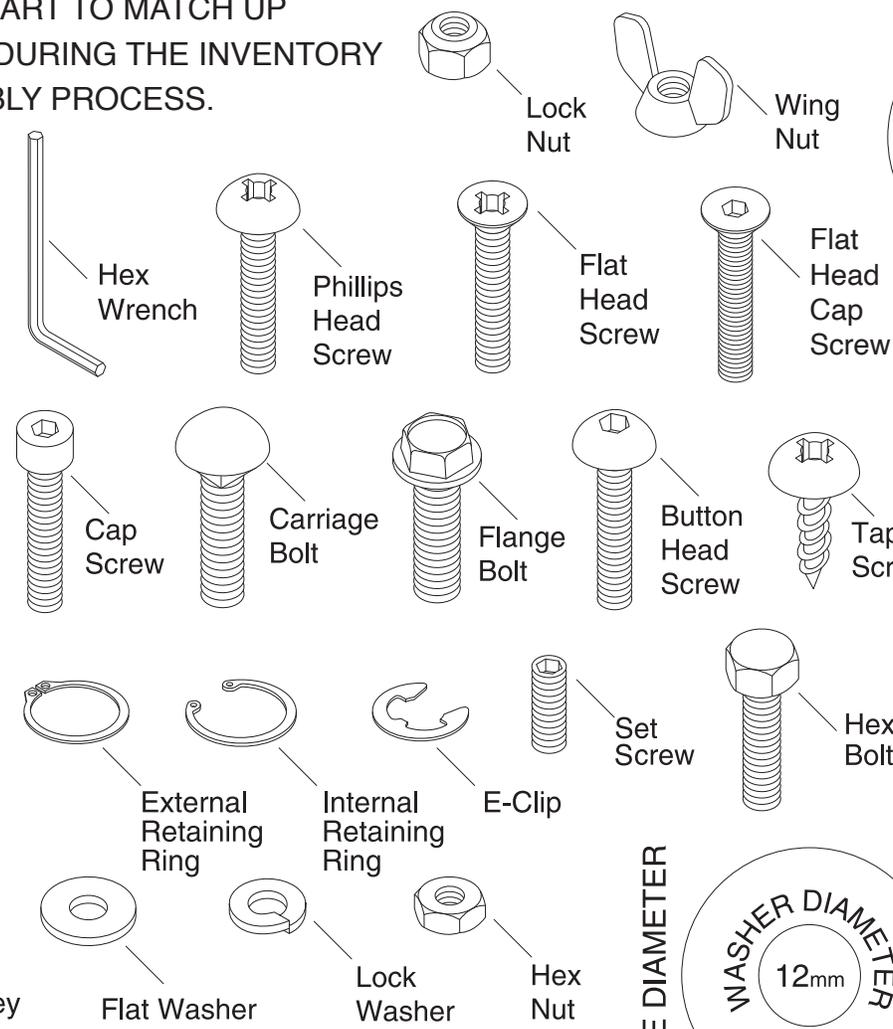
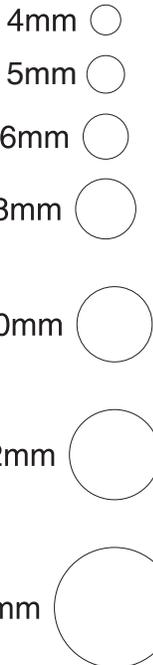
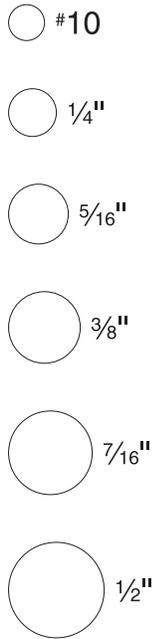
Figure 11. Carriage inventory.



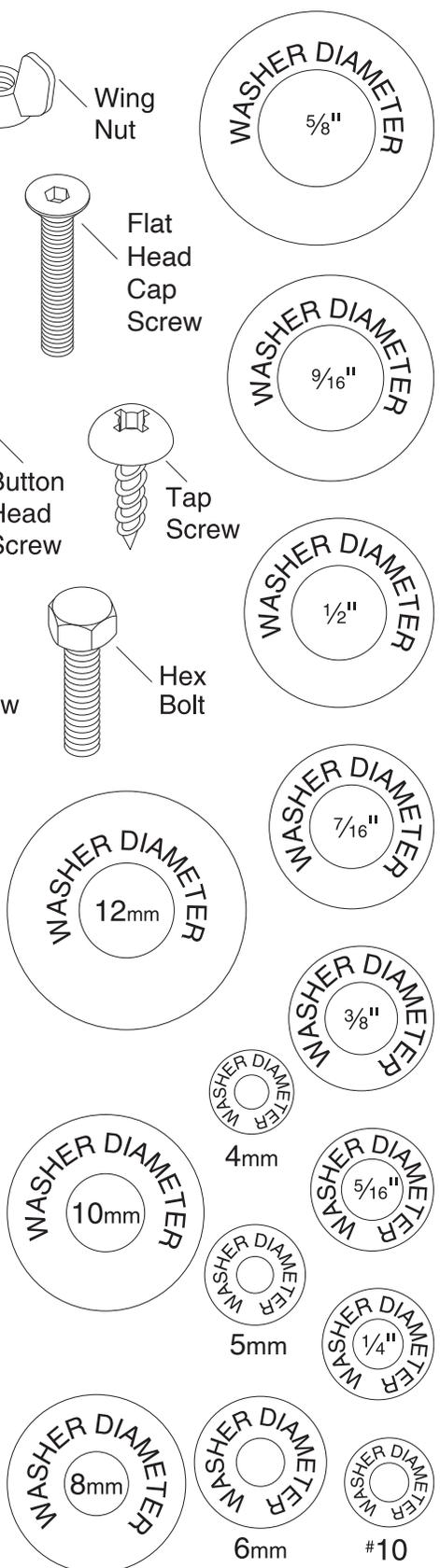
Hardware Recognition Chart

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

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE



WASHERS ARE MEASURED BY THE INSIDE DIAMETER



Cleanup

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

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

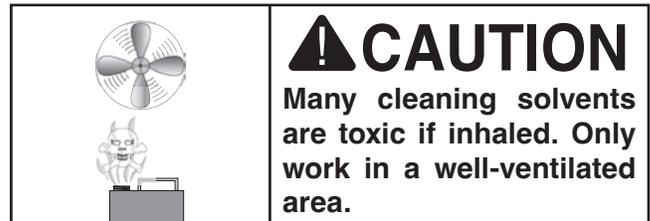
There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

Before cleaning, gather the following:

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

Basic steps for removing rust preventative:

1. Put on safety glasses.
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.



T23692—Orange Power Degreaser

A great product for removing the waxy shipping grease from the *non-painted* parts of the machine during clean up.



Figure 12. T23692 Orange Power Degreaser.



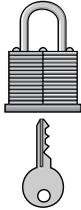
Site Considerations

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.**

	<p>CAUTION</p> <p>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</p>
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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.

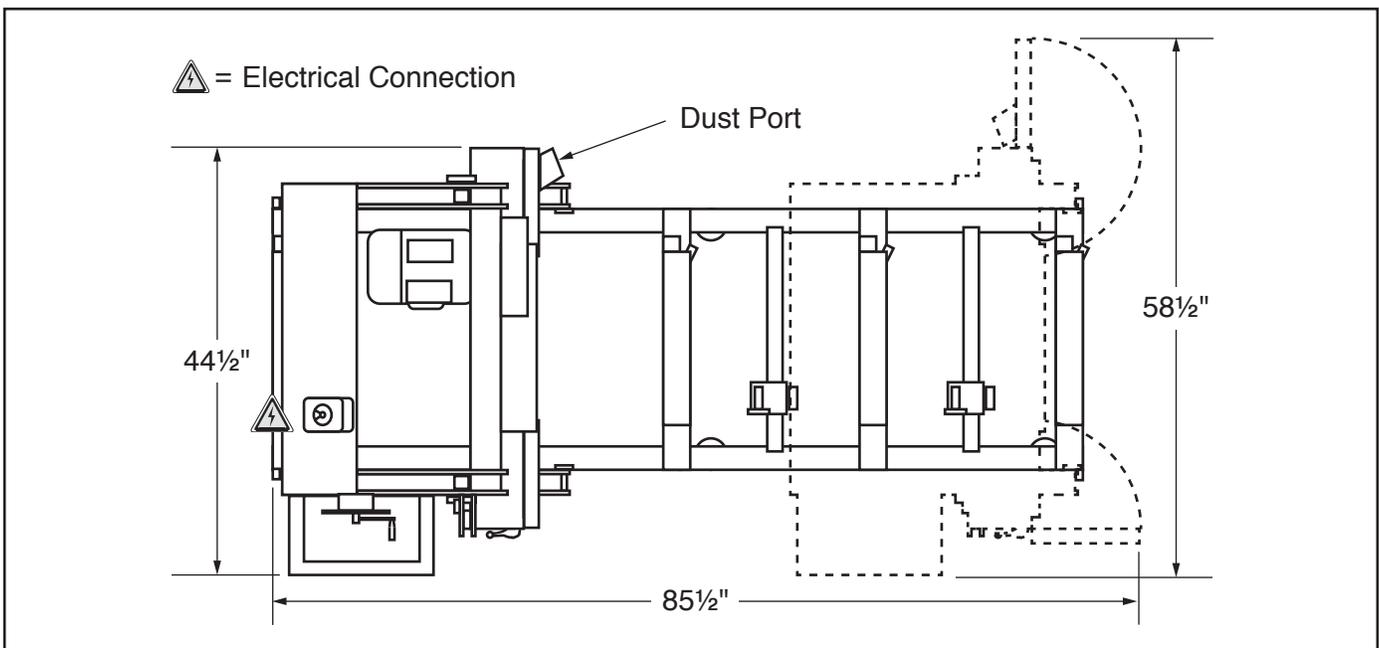


Figure 13. Minimum working clearances.



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 (2) log bunks to (2) track rails with (16) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 14**). Hand-tighten all fasteners until told otherwise later.

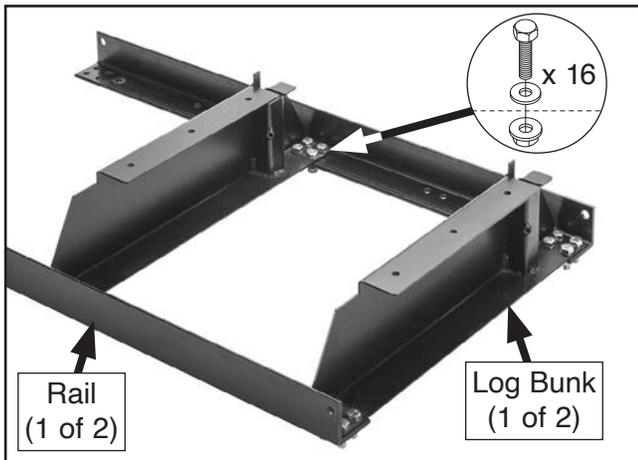


Figure 14. Log bunks attached to track rails.

2. Thread (1) $\frac{1}{2}$ "-12 hex nut halfway onto each adjustable foot.
3. Insert (4) adjustable feet through holes in front rail corners, as shown in **Figure 15**, and secure with (4) $\frac{1}{2}$ "-12 hex nuts.

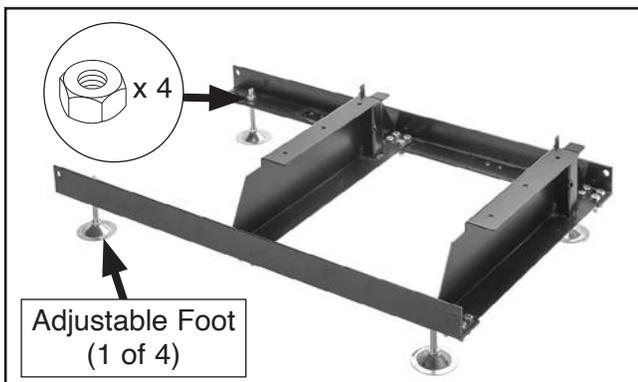


Figure 15. Inserting feet at front rail corners.

4. Install remaining adjustable feet on unattached rear rails with (2) $\frac{1}{2}$ "-12 hex nuts, as shown in **Figure 16**.

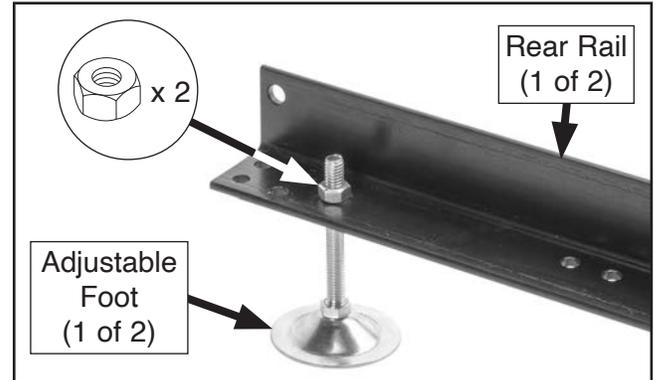


Figure 16. Feet attached to rear rails.

5. Attach (1) rail bracket to front right rail with (2) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 17**).

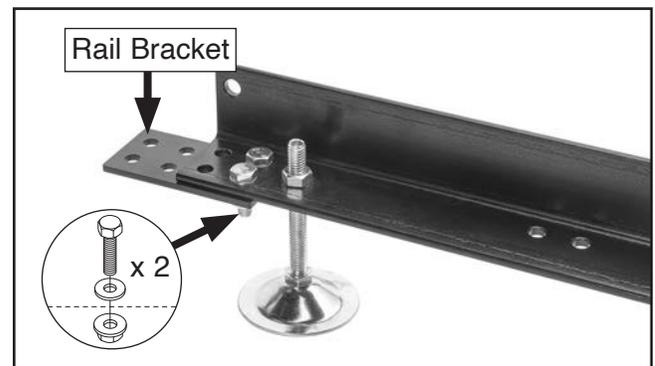


Figure 17. Rail bracket attached to front right rail.

6. Attach rear right rail to rail bracket with (2) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 18**).

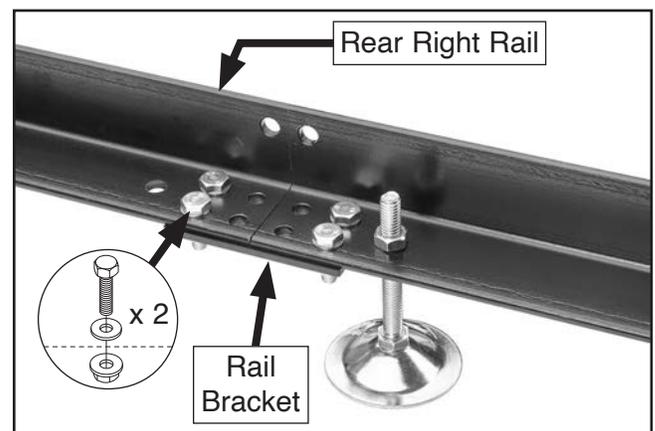


Figure 18. Rear right rail attached to rail bracket.



- Repeat **Steps 5–6** with left front and rear rails.
- On top of rail brackets, install log bunk with (8) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 19**).

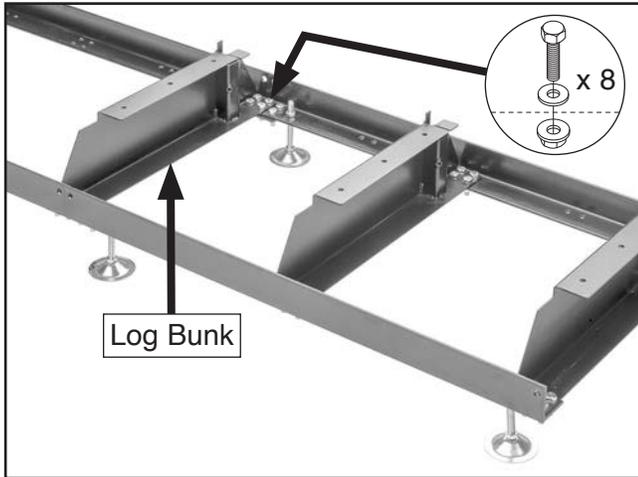


Figure 19. Log bunk installed over rail brackets and rail junctions.

- Install last log bunk on rear rails with (8) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 20**).
- Use 90° square to adjust rear log bunk square to rear rails, then tighten fasteners from **Step 9** (see **Figure 20**).

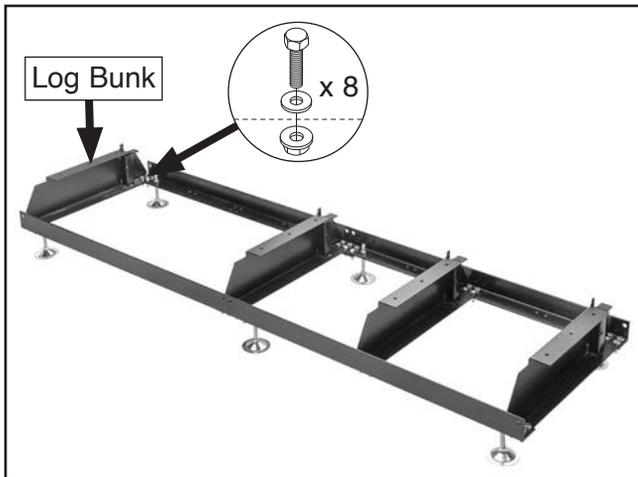


Figure 20. Rear log bunk installed on rails.

- Use 90° square to adjust front log bunk square to front rails, then tighten fasteners securing it to rails.

- Loosen upper hex nuts on all adjustable feet, level rails by adjusting lower hex nuts, then tighten upper hex nuts to secure.
- Tighten all track fasteners.
- Install (2) log clamp shaft brackets at locations shown in **Figure 21** with (4) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts.

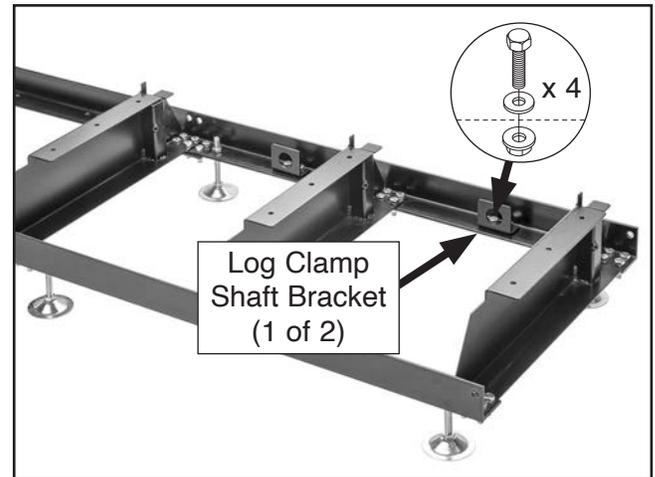


Figure 21. Log clamp shaft brackets installed.

- Slide log clamp receivers onto log clamp shafts, as shown in **Figure 22**.
- Insert ends of log clamp shafts into log clamp shaft brackets, then attach shafts to rails with (4) M10-1.5 x 30 hex bolts, $\frac{3}{8}$ " flat washers, and M10-1.5 flange nuts (see **Figure 22**).

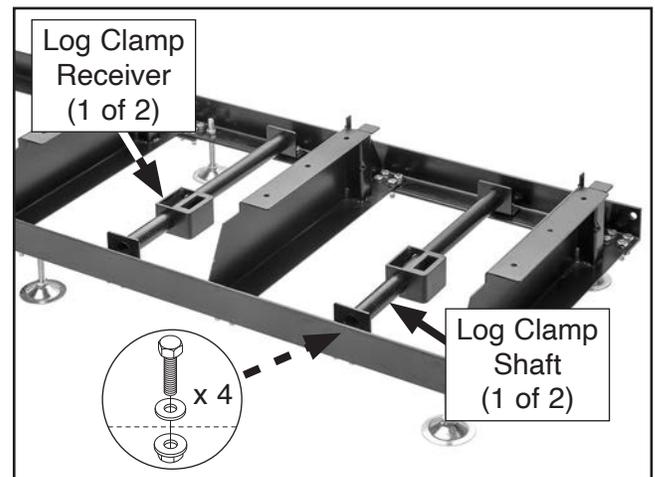


Figure 22. Log clamp shafts installed on rails.



17. Insert log clamps in receivers and secure with (2) $\frac{5}{16}$ "-18 x $\frac{5}{8}$ " knob bolts, as shown in **Figure 23**.

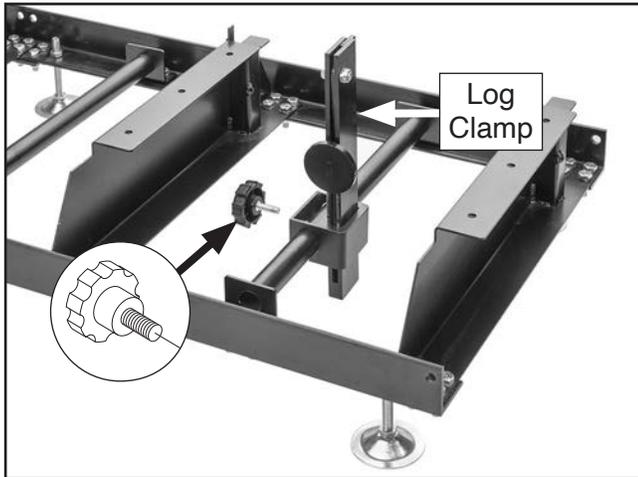


Figure 23. Log clamp installed in receiver.

18. Insert log supports in log bunks and secure with (2) $\frac{5}{16}$ "-18 x $\frac{5}{8}$ " knob bolts, as shown in **Figure 24**.

19. Thread remaining $\frac{5}{16}$ "-18 x $\frac{5}{8}$ " knob bolt into log bunk shown in **Figure 24**.

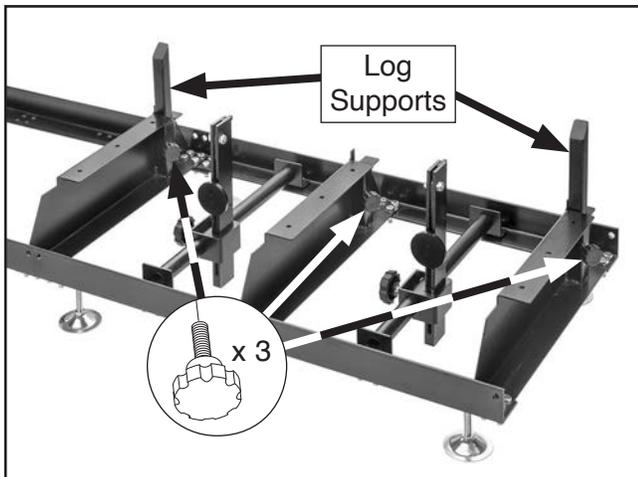


Figure 24. Log supports installed.

20. Install (1) M12-1.75 x 35 hex bolt, 12 x 17 x 15mm spacer, and M12-1.75 lock nut at each rail corner (see **Figure 25**).

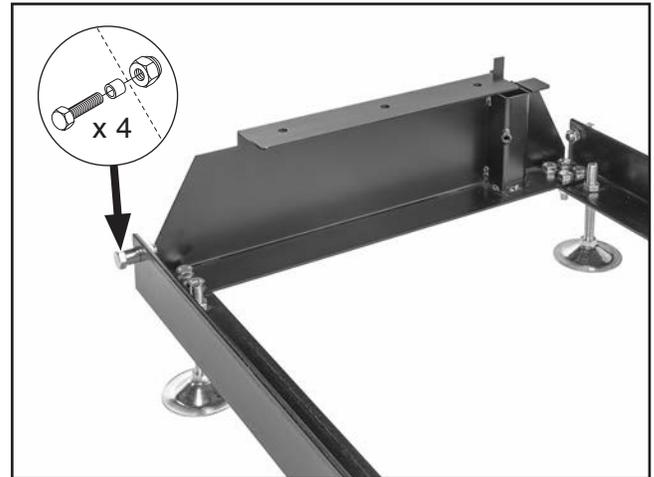


Figure 25. Rail spacer stops installed.

21. Slide front posts through post sleeves, as shown in **Figure 26**.

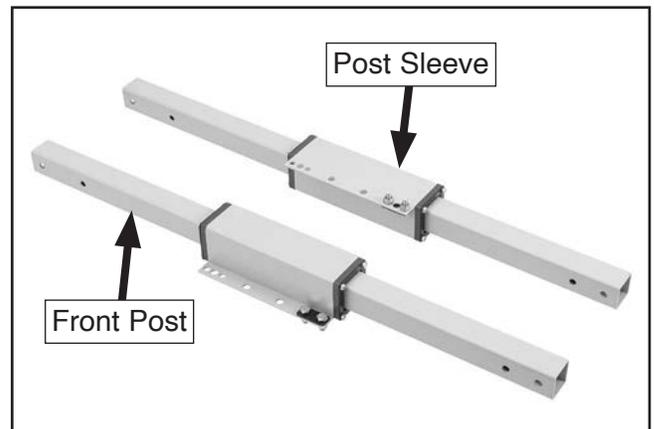


Figure 26. Post sleeves installed on front posts.

22. Attach front posts to carriage legs with (4) M10-1.5 x 80 hex bolts, (8) $\frac{3}{8}$ " flat washers, and (4) M10-1.5 hex nuts, as shown in **Figure 27**. Hand-tighten all fasteners until told otherwise later.

Note: Cable plates on post sleeves should face up and away from wheels of carriage legs (see **Figure 27**).



23. Attach rear posts to carriage legs with (4) M10-1.5 x 80 hex bolts, (8) $\frac{3}{8}$ " flat washers, and (4) M10-1.5 hex nuts, as shown in **Figure 27**.

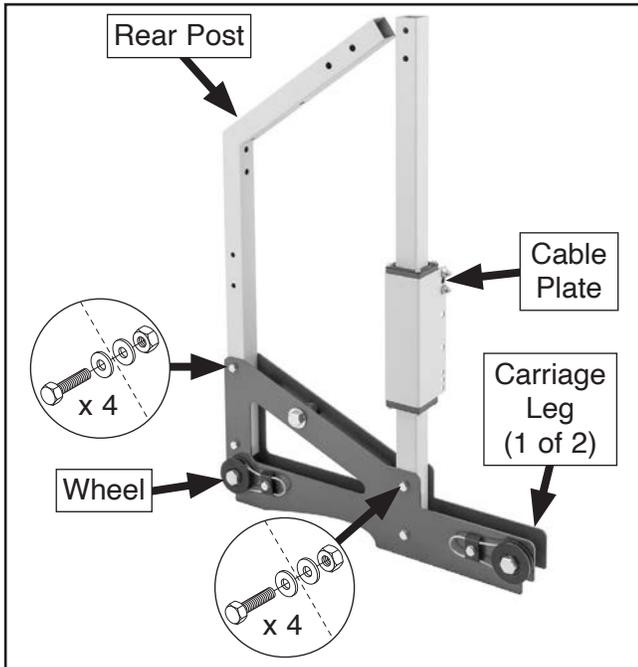


Figure 27. Front and rear post attached to carriage leg.

24. Have assistant hold cross beam while you attach it to front and rear posts with (5) M10-1.5 x 80 hex bolts, (10) $\frac{3}{8}$ " flat washers, and (5) M10-1.5 hex nuts (see **Figure 28**). Hand-tighten all fasteners until told otherwise later.

Note: Carriage leg wheels should face each other (see **Figure 28**).

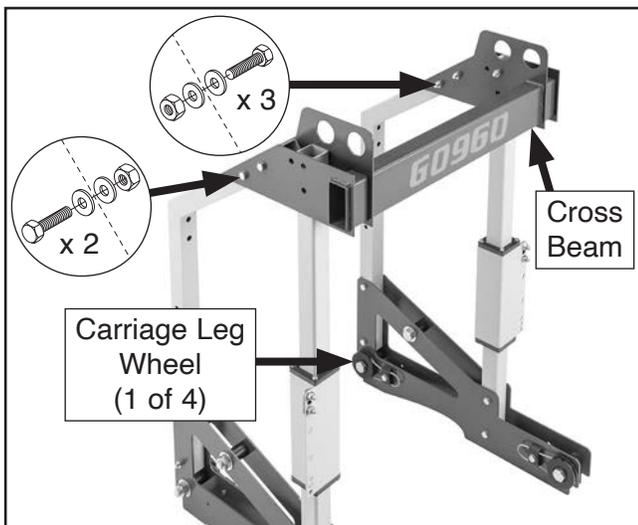


Figure 28. Cross beam attached to posts.

25. Attach scale calibration bracket to cross beam with (2) M10-1.5 x 80 hex bolts, (4) $\frac{3}{8}$ " flat washers, and (2) M10-1.5 hex nuts (see **Figure 29**).

26. Attach (2) cable pulleys to cross beam with (2) M12-1.75 x 110 hex bolts, 12 x 19 x 23mm spacers, $\frac{1}{2}$ " flat washers, and M12-1.75 hex nuts (see **Figure 29**).

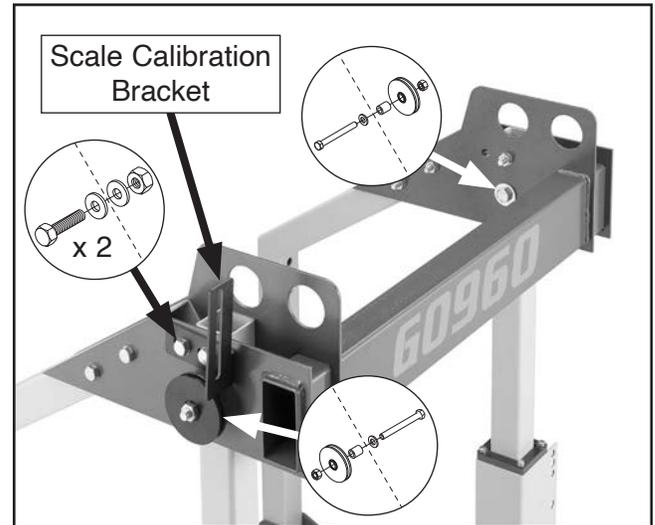


Figure 29. Scale calibration bracket and cable pulleys attached to cross beam.

27. Attach switch panel to rear posts with (5) M10-1.5 x 70 hex bolts, (10) $\frac{3}{8}$ " flat washers, and (5) M10-1.5 hex nuts (see **Figure 30**).

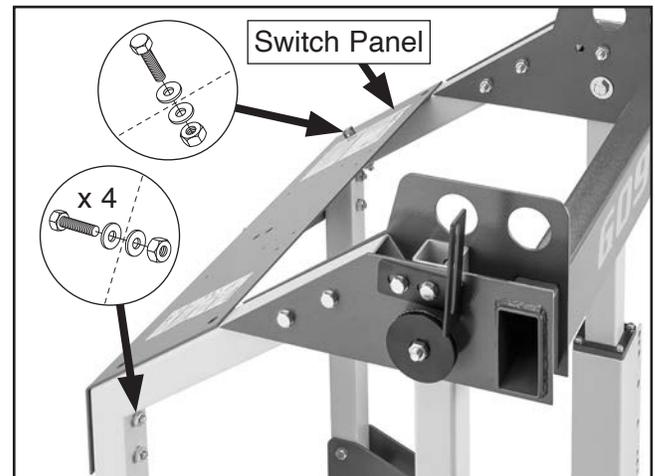


Figure 30. Switch panel attached to rear posts.



28. Attach cable pulley to right rear post with (1) M12-1.75 x 110 hex bolt, 1/2" flat washer, 12 x 19 x 19.5mm spacer, and M12-1.75 hex nut (see **Figure 31**).

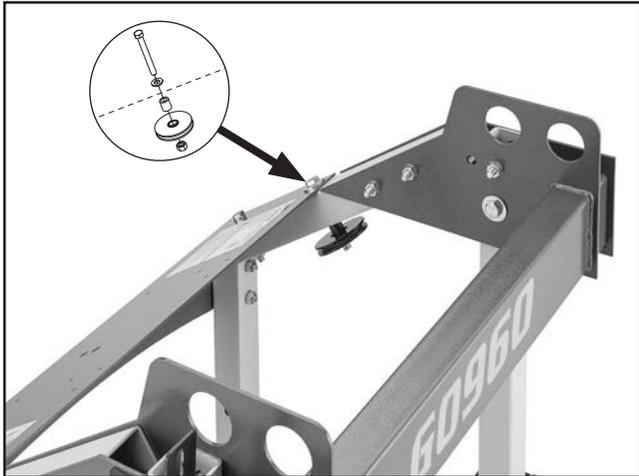


Figure 31. Cable pulley attached to right rear post.

29. Thread blade height handle into blade height crank of lift assembly, as shown in **Figure 32**.
30. Remove hex nut shown in **Figure 32** in order to remove (2) cable pulleys, (4) flat washers, spacer, and hex bolt from lift assembly.

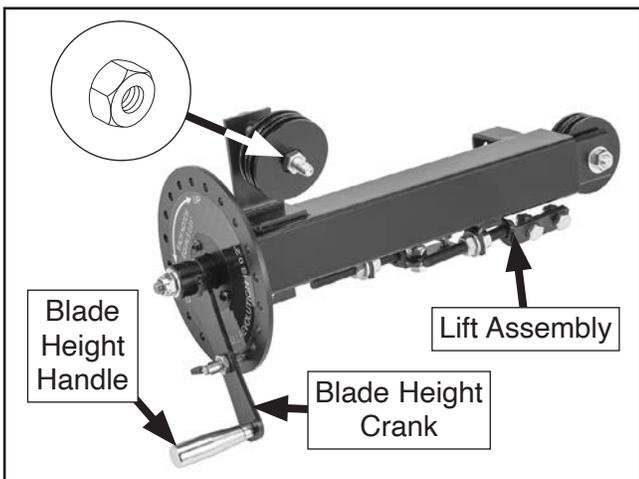


Figure 32. Blade height handle installed in blade height crank and location of hex nut to remove from lift assembly.

31. Have assistant hold lift assembly while you attach it to rear left post with (1) M10-1.5 x 80 hex bolt, (2) 3/8" flat washers, and (1) M10-1.5 hex nut (see **Figure 33**).

32. Attach lift assembly to switch panel with (2) M8-1.25 x 20 hex bolts and 5/16" flat washers (see **Figure 33**).

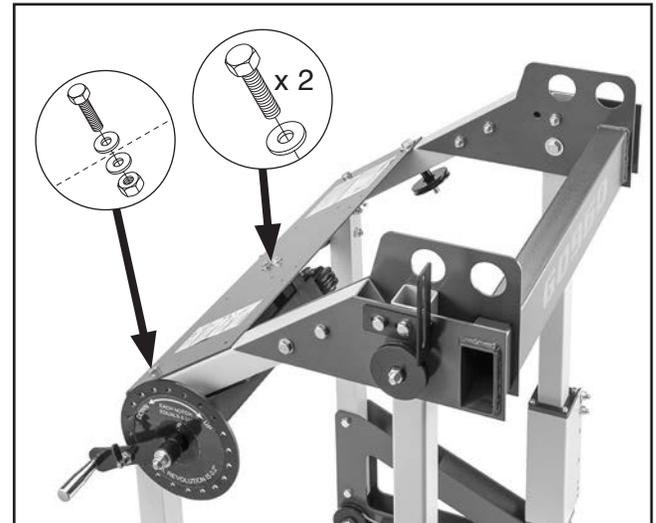


Figure 33. Lift assembly attached to carriage.

33. Attach lift assembly to rear left post with hex bolt, spacer, flat washers, cable pulleys, and hex nut removed in **Step 30** (see **Figure 34**).

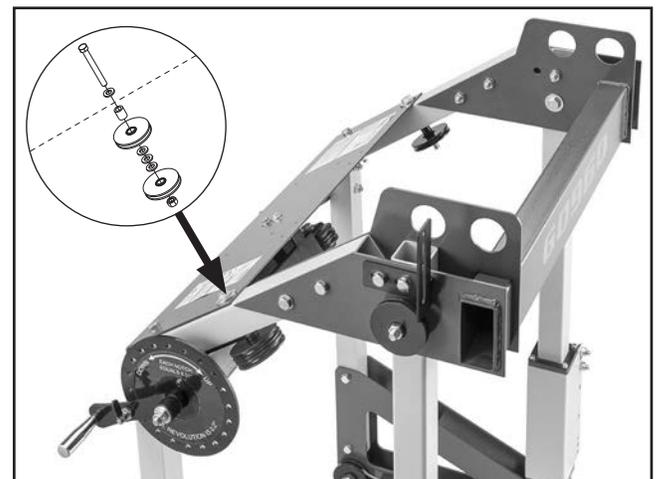


Figure 34. Stationary cable pulleys installed on lift assembly.



34. Have an assistant hold saw head in place while you attach it to post sleeves with (6) M10-1.5 x 16 hex bolts and 3/8" flat washers (see **Figure 35**).

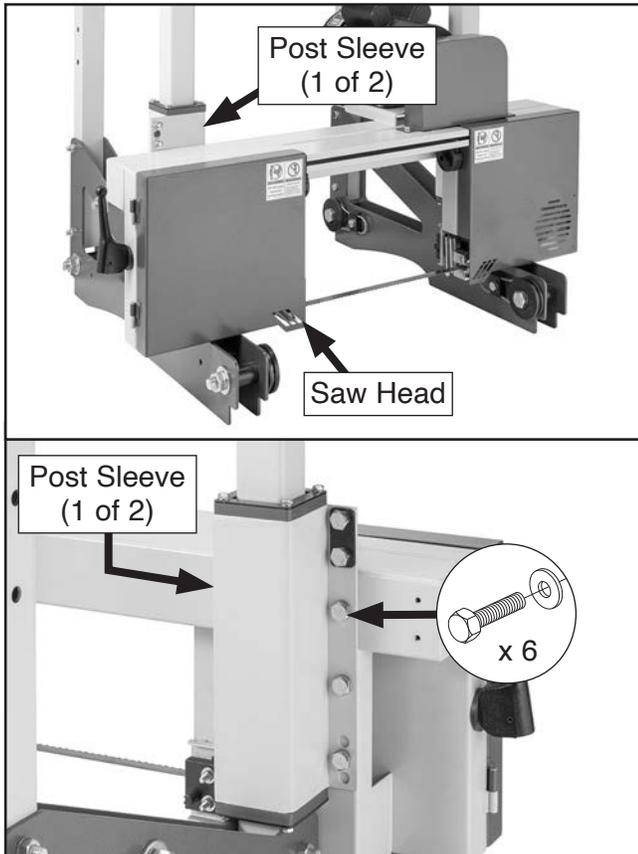


Figure 35. Saw head attached to post sleeves.

35. Loop end of lift cable A around anchoring hex bolt, as shown in **Figure 36**, and secure with (1) cable clamp.

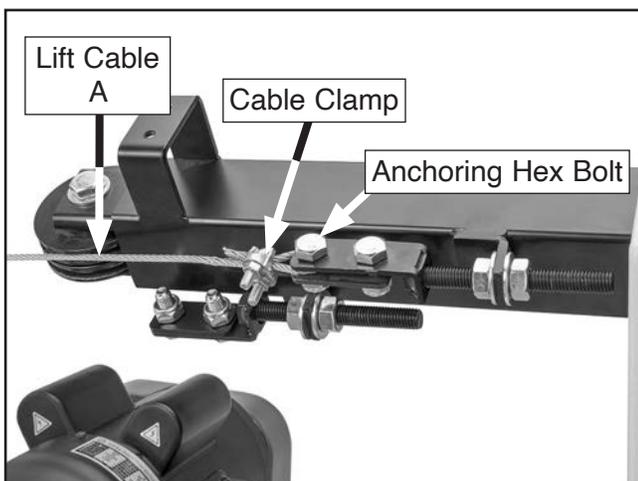


Figure 36. First end of lift cable A secured (switch panel removed for clarity).

36. Route lift cable A around pulley A, pulley B, and pulley C (see **Figure 37**), then loop lift cable end around upper cable plate hex bolt shown in **Figure 38** and secure with (1) cable clamp.

Note: Pulley A and pulley B are upper pulleys on lift assembly.

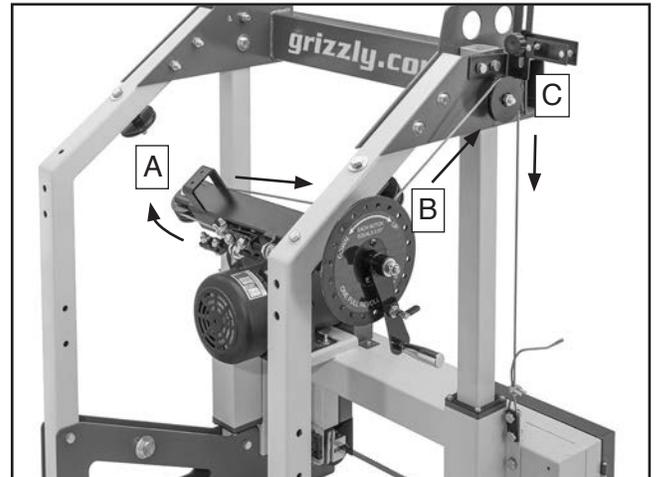


Figure 37. Lift cable A routed around pulleys (switch panel removed for clarity).

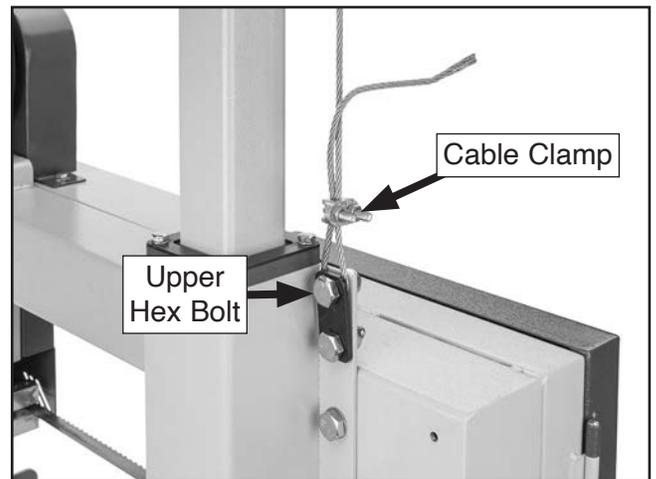


Figure 38. Second end of lift cable A secured.



37. Loop end of lift cable B around anchoring hex bolt, as shown in **Figure 39**, and secure with (1) cable clamp.

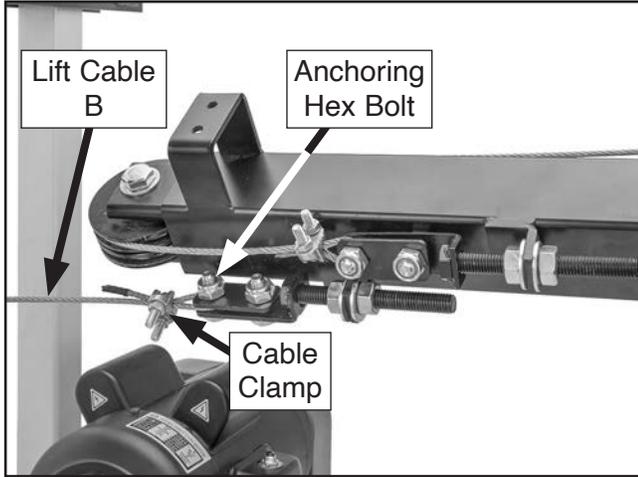


Figure 39. First end of lift cable B secured (switch panel removed for clarity).

38. Route lift cable B around pulley D, pulley E, pulley F, and pulley G (see **Figure 40**), then loop lift cable around upper right cable plate hex bolt and secure with (1) cable clamp.

Note: Pulley D and pulley E are lower pulleys on lift assembly.

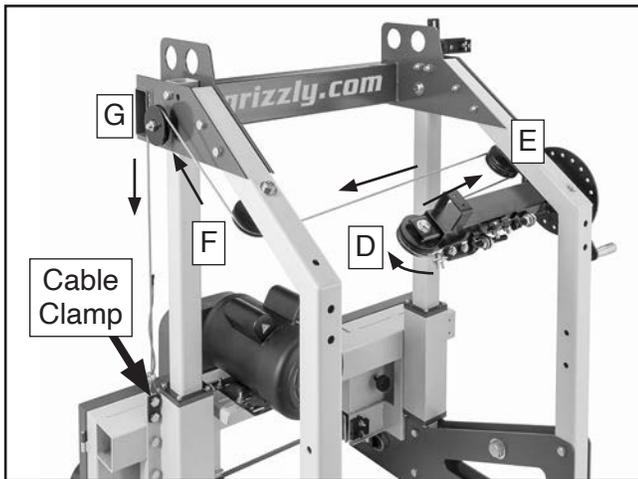


Figure 40. Lift cable B routed around pulleys (switch panel removed for clarity).

39. Tighten (8) lock nuts securing cable end plates.

40. Attach push handle to left rear post with pre-installed fasteners shown in **Figure 41** and (2) M10-1.5 x 80 hex bolts, (4) $\frac{3}{8}$ " flat washers, and (2) M10-1.5 hex nuts.

41. Attach scale to saw head with (2) M6-1 x 30 hex bolts and $\frac{1}{4}$ " flat washers (see **Figure 41**).

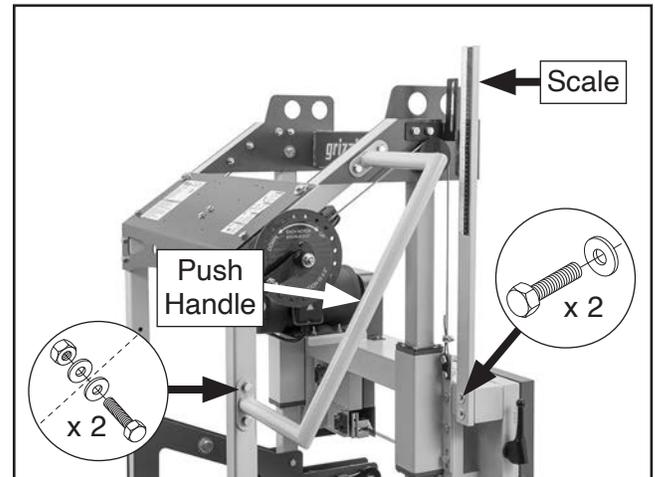


Figure 41. Push handle and scale installed.

42. Attach scale backing bracket to scale calibration bracket with (1) $\frac{5}{16}$ "-18 x $\frac{5}{8}$ " knob bolt (see **Figure 42**).

43. Attach scale indicator to scale backing bracket, around scale, with (2) M6-1 x 30 hex bolts and (6) M6-1 hex nuts (see **Figure 42**).

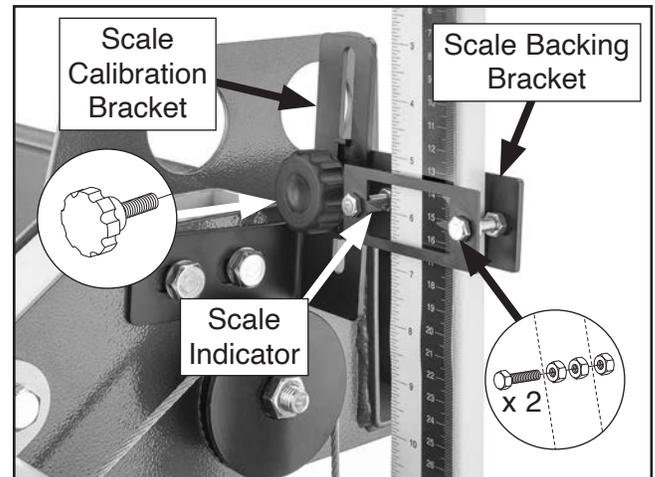


Figure 42. Scale backing bracket and scale indicator installed.



44. Tighten (4) sets of fasteners securing carriage leg wheels (see **Figure 43**).
45. Measure distance between front carriage leg wheels (see **Figure 43**).

Note: Measure from just outside of wheel grooves.

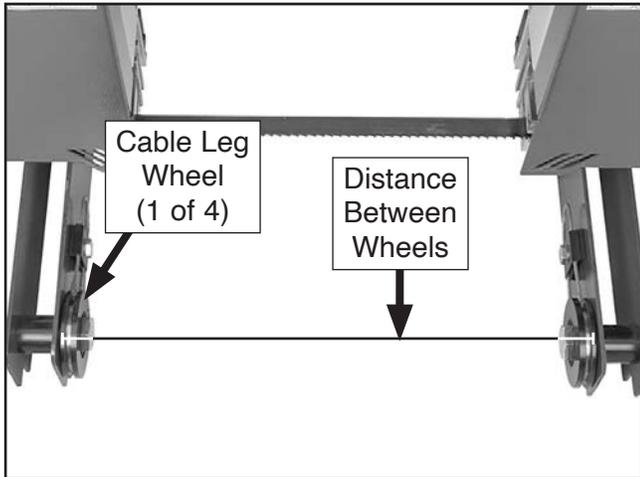


Figure 43. Location of carriage leg wheels (front shown).

- If distance between wheels is 606mm, no adjustment is necessary. Proceed to **Step 46**.
- If distance between wheels is not 606mm, remove or add $\frac{3}{4}$ " flat washers between wheels and leg frames to shim wheels (see **Figure 44**) until distance is 606mm.

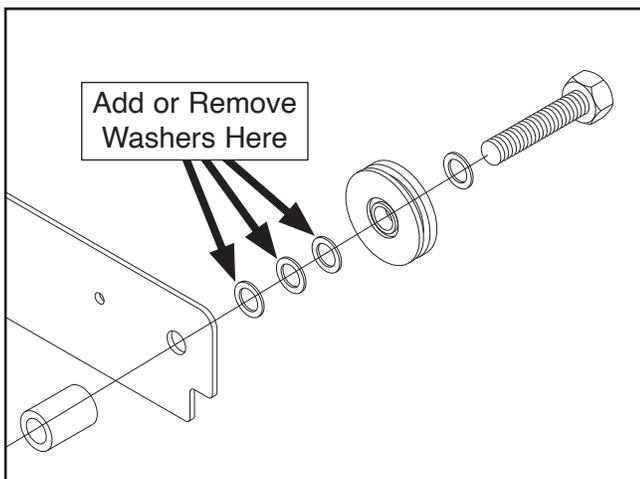
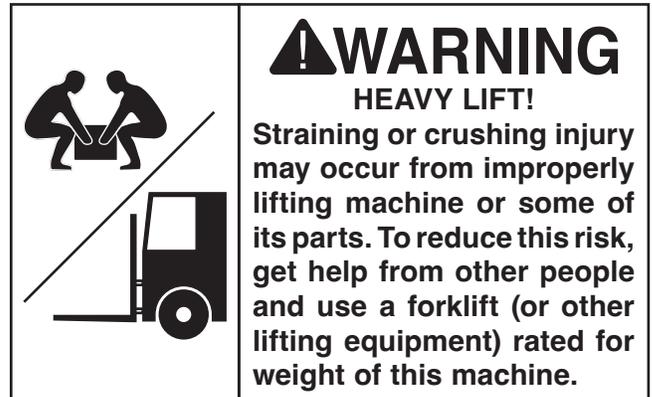


Figure 44. Location of shimming flat washers.

46. Measure distance between rear carriage leg wheels.

- If distance between wheels is 606mm, no adjustment is necessary. Proceed to **Step 47**.
- If distance between wheels is not 606mm, remove or add $\frac{3}{4}$ " flat washers between wheels and leg frames to shim wheels until distance is 606mm.



47. Use forklift or hoist to lift carriage and place it on track.

Note: Lifting hooks or straps can be secured to lifting holes in cross beam shown in **Figure 45**.

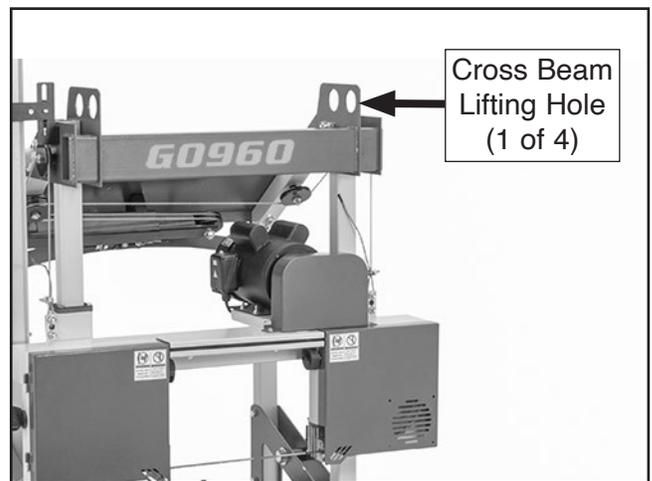


Figure 45. Location of cross beam lifting holes.



Note: Carriage must face forward for log supports and log clamps to function (see **Figure 46**). Log clamps are attached to front rail section.

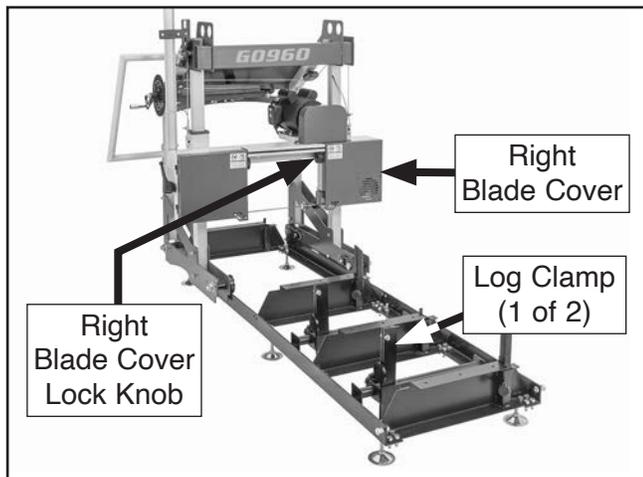


Figure 46. Carriage placed on track and location of right blade cover and lock knob.

- 48. Confirm that all carriage leg wheels are aligned with rails, then tighten all carriage fasteners. Take extra care to tighten cable clamps so they do not come loose once saw head is lifted.
- 49. Turn right blade cover lock knob clockwise to open right blade cover (see **Figure 46**).
- 50. Attach 4" dust port to right blade cover with (4) M5-.8 x 10 button head cap screws and M5-.8 hex nuts (see **Figure 47**).



Figure 47. 4" dust port attached to right blade cover.

- 51. Close right blade cover and secure with lock knob.
- 52. Attach square dust port to saw head with (4) M6-1 x 10 hex bolts and 6.4 x 16 x 1.2mm flat washers (see **Figure 48**).
- 53. Attach square dust port cover to square dust port with (2) M6-1 x 10 hex bolts (see **Figure 48**).

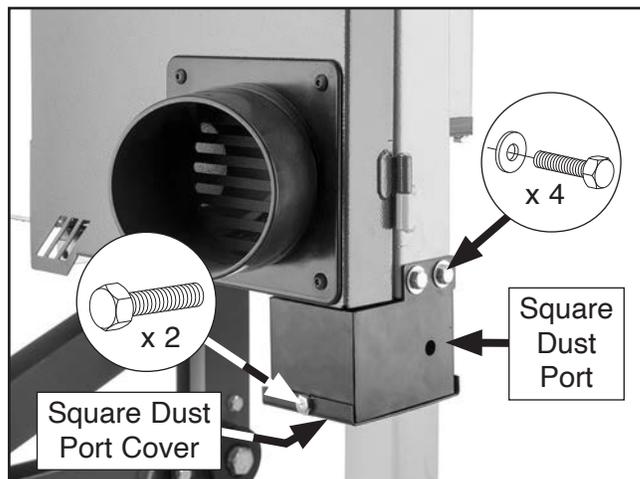


Figure 48. Square dust port and cover attached to saw head.

- 54. Remove (1) nut from strain relief, then use nut to install strain relief on switch panel as shown in **Figure 49**.
- 55. Insert motor cord through strain relief on switch panel (see **Figure 49**).

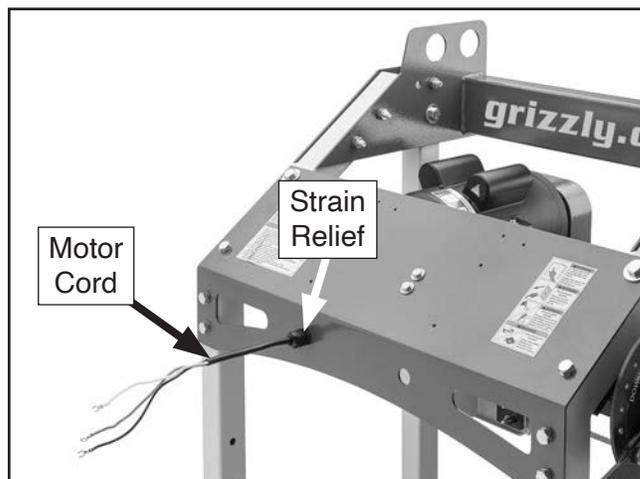


Figure 49. Motor cord inserted through switch panel strain relief.



- 56. Remove (4) Phillips head screws shown in **Figure 50** to remove ON/OFF switch cover.
- 57. Loosen strain relief shown in **Figure 50**.

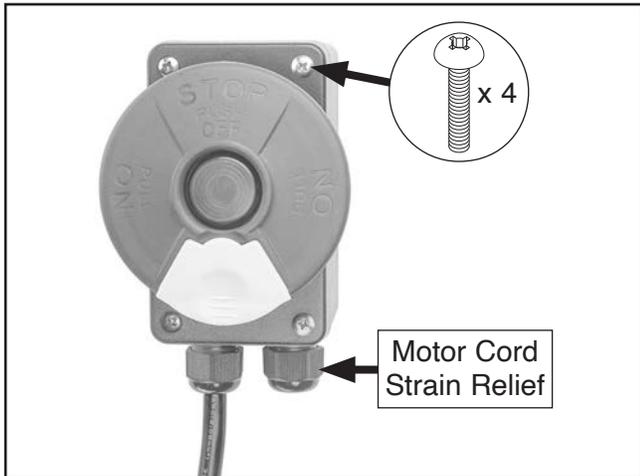


Figure 50. Location of ON/OFF switch cover and motor cord strain relief.

- 58. Attach ON/OFF switch box to switch panel with (1) M4-.7 x 20 button head cap screw, #10 flat washer, and M4-.7 hex nut (see **Figure 51**).

Note: Switch can be installed on either left or right side of switch panel.

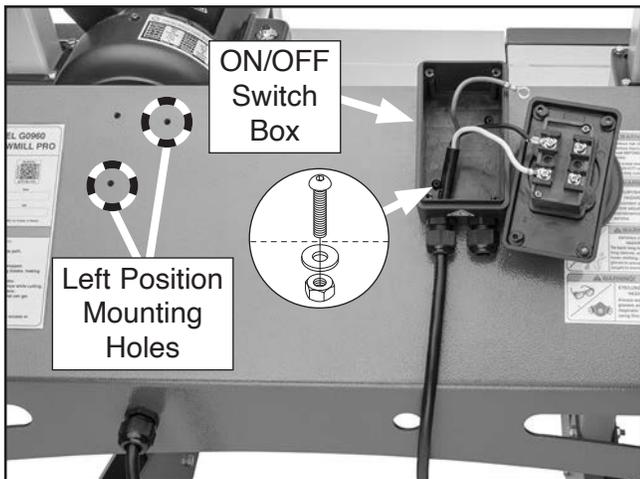


Figure 51. ON/OFF switch attached to switch panel (shown installed on right side of panel).

- 59. Insert motor cord through empty strain relief on ON/OFF switch box.
- 60. Use remaining M4-.7 x 20 button head cap screw, #10 flat washer, and M4-.7 hex nut to attach ON/OFF switch box to switch panel and ground both green wires against switch box (see **Figure 52**).

⚠ WARNING

Both ground wires MUST be secured with same grounding screw to be grounded correctly to reduce risk of electric shock.

- 61. Connect black motor wire to A1 terminal of ON/OFF switch (see **Figure 52**).
- 62. Connect white motor wire to A3 terminal of ON/OFF switch (see **Figure 52**).

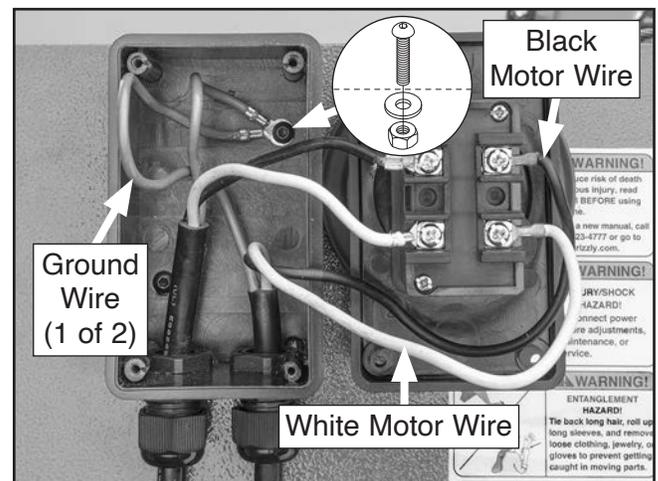


Figure 52. Motor cord wires correctly connected.

- 63. Tighten ON/OFF switch box strain relief, then install switch box cover with screws removed in **Step 56**.



64. Turn blade height handle (see **Figure 53**) clockwise until blade is higher than log bunks, log supports, and log clamps.

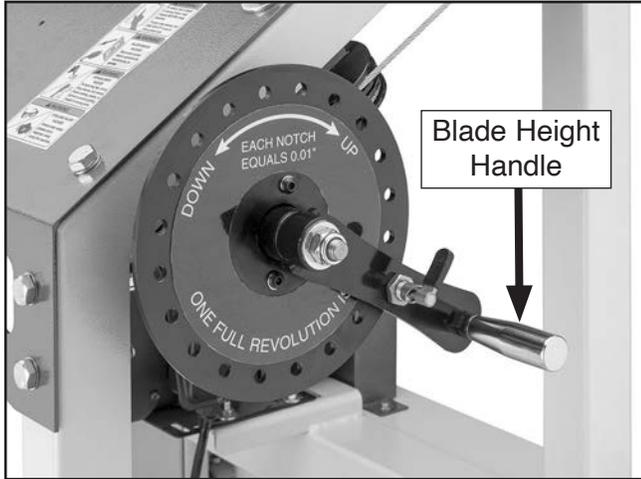


Figure 53. Location of blade height handle.

65. Move carriage so blade is above log bunk.
66. Measure distance between back of blade and top of log bunk near each blade guide (see **Figure 54**).

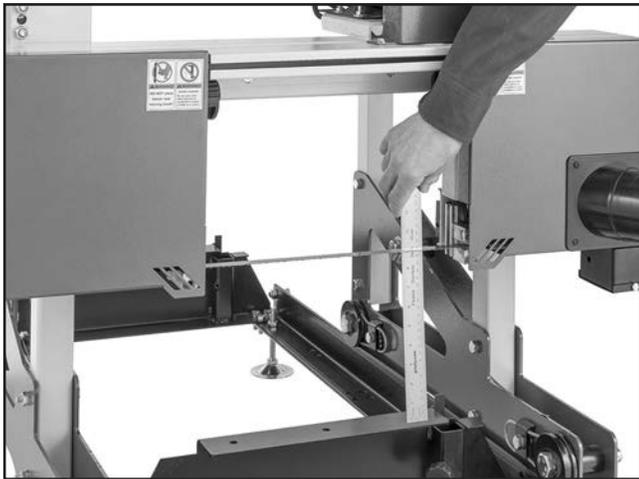


Figure 54. Measuring distance between blade and log bunk (right side shown).

- If distances between back of blade and log bunk *are* equal, no adjustment is necessary. Proceed to **Step 68**.
- If distances between back of blade and log bunk *are not* equal proceed to **Step 67**.

67. Adjust nuts shown in **Figure 55** to adjust left or right side of saw head up or down until back of blade is same distance from log bunk on either side.

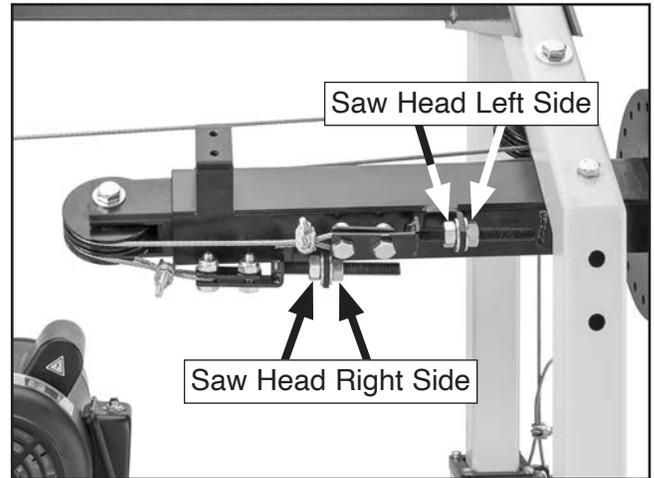


Figure 55. Location of saw head leveling bolts (switch panel removed for clarity).

- Turn nuts clockwise to raise side of saw mill.
 - Turn nuts counterclockwise to lower side of saw mill.
68. Refer to **Calibrating Blade Height Scale** on **Page 55** to adjust scale indicator before proceeding to **Test Run**.



Converting Voltage to 220V

Complete entire **Assembly** before converting voltage for the Model G0960. The voltage conversion **MUST** be performed by an electrician or qualified service personnel.

The voltage conversion procedure consists of rewiring the motor, replacing the circuit breaker, and installing the correct plug. A wiring diagram is provided on **Page 60** for your reference.

Items Needed	Qty
• Phillips Head Screwdriver #2	1
• Electrical Tape.....	As Needed
• Wire Cutters/Stripper.....	1
• Open-End Wrench 14mm.....	1
• Circuit Breaker 10A (#P09602057-12X).....	1
• NEMA 6-15 Plug.....	1

To convert machine to 220V operation:

1. DISCONNECT MACHINE FROM POWER!
2. Cut off existing 5-15 plug.
3. Open motor junction box, then replace pre-installed 20A circuit breaker (see **Figure 56**) with 10A circuit breaker.

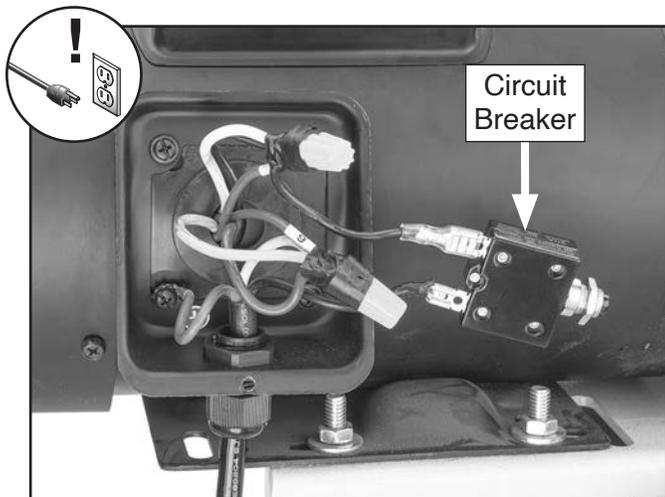


Figure 56. Location of circuit breaker.

4. Loosen two wire nuts indicated in **Figure 57**.

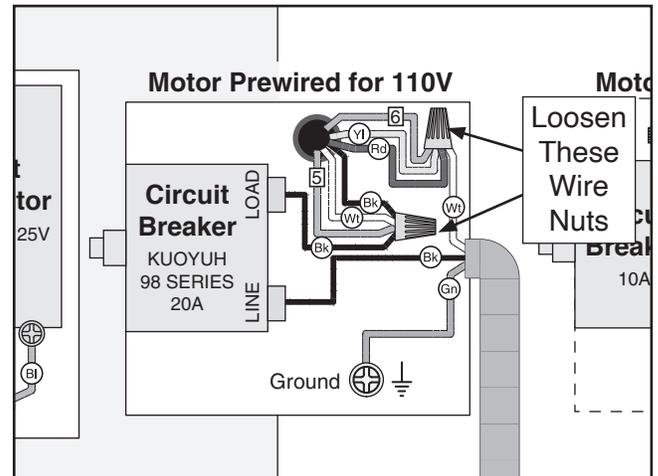


Figure 57. Motor prewired for 110V.

5. Use wire nuts to connect wires as indicated in **Figure 58**. Twist wire nuts onto their respective wires and wrap them with electrical tape so they will not come loose during operation.

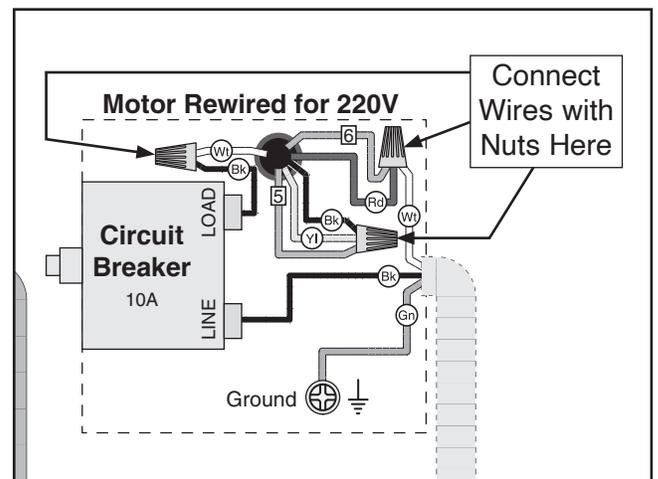


Figure 58. Motor rewired for 220V.

6. Close and secure motor junction box.
7. Install 6-15 plug on power cord, according to plug manufacturer's instructions.
 - If plug manufacturer's instructions are not available, NEMA standard 6-15 plug wiring is provided on **Page 60**.



Dust Collection

If connecting the machine to a dust collector, keep the square dust port cover installed. Removing this cover (see **Figure 59**) will allow saw dust to fall from the dust ports as the saw mill moves along the track for operations where a dust collector cannot be used.



Figure 59. Location of square dust port cover.

Minimum 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 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.

To connect dust collection system to machine:

1. Fit 4" dust hose over dust port and secure in place with hose clamp (see **Figure 60**).

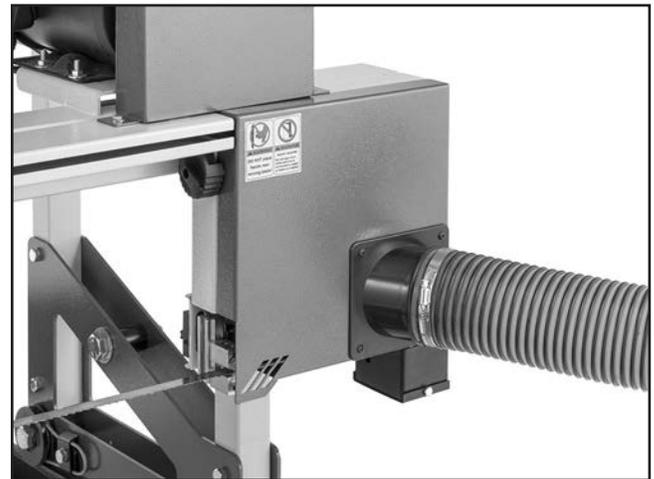


Figure 60. Dust hose attached to dust port.

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

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



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, and
2) the safety disabling mechanism on the switch works 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. Confirm that blade is tensioned correctly (see **Tensioning Blade** on **Page 36**).
 3. Confirm that blade is tracking correctly (see **Adjusting Blade Tracking** on **Page 38**).
 4. Connect machine to power supply.
5. Turn machine **ON** by pulling ON/OFF switch out (see **Figure 61**). Verify motor operation, then turn machine **OFF** by pressing ON/OFF switch in.

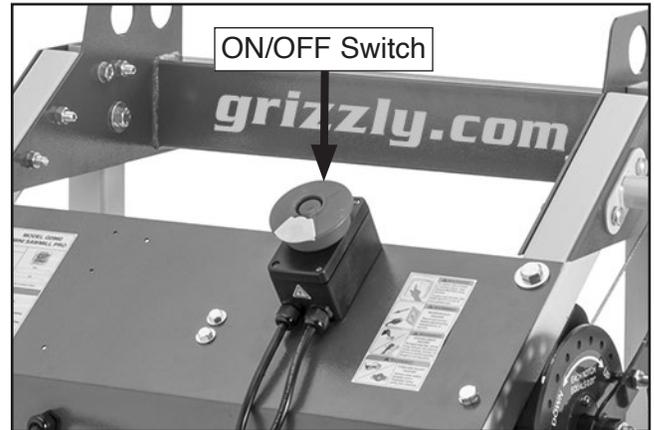


Figure 61. Location of ON/OFF switch.

6. Remove switch disabling key, as shown in **Figure 62**.

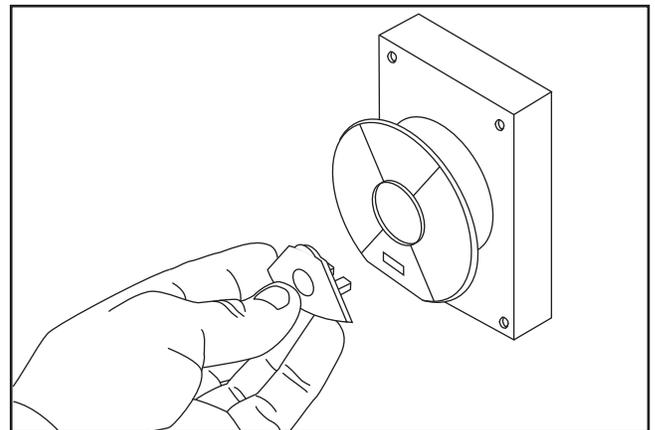


Figure 62. Example of removing disabling key from ON/OFF switch.

7. Try to start machine with ON/OFF switch. Machine should not start.
 - If machine *does not* start, switch disabling feature is working correctly.
 - If machine *does* start, immediately stop machine. Switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

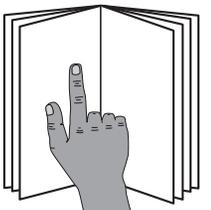


SECTION 4: OPERATIONS

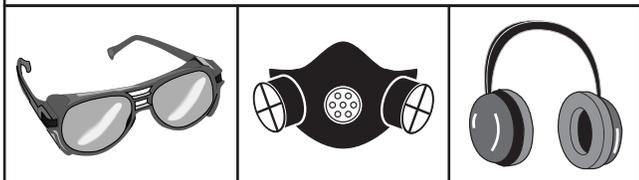
Operation Overview

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.

	<p>! WARNING To reduce your risk of serious injury, read this entire manual BEFORE using machine.</p>
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<p>! 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.</p>		
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	<p>! CAUTION Raw lumber can be heavy, slippery, sharp, or contain sharp objects. Wear gloves when handling to reduce risk of injury.</p>
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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. Secures log to track with log supports and log clamps and ensures supports and clamps are positioned to be clear of the cut.
3. Checks workspace around machine to ensure sufficient operating room.
4. Checks blade tension.
5. Adjusts blade height to desired thickness.
6. Puts on safety glasses, hearing protection, and respirator.
7. Starts machine, allows blade to reach maximum speed, then pushes carriage slowly until blade passes through entire length of log.
8. Turns machine **OFF** and allows blade to slow to a stop.
9. Removes sawn lumber from log and moves lumber out of sawmill work area.
10. Raises blade enough to pull carriage back to start position without hitting workpiece.
11. Adjusts blade height for desired thickness.
12. Repeats **Steps 7–11** as needed.



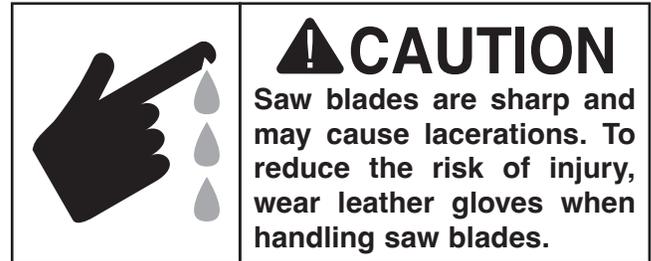
Workpiece Inspection

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 wood logs only. The maximum diameter of log that can be sawn is 13". This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a sawmill may lead to injury and machine/blade damage.
- **Debarking:** Bark can trap and hide foreign objects, such as tramp metal or hidden nails, and can cause excessive blade wear. Consider debarking your logs for increased safety and longer blade life.
- **Branches and Uneven Logs:** Use a chain saw or other saw to remove any branches that prevent the log from lying evenly against the track and log supports. Similarly, uneven burls protruding from the log may need to be removed before the log can be sawn.

Changing Blade

Blade changes entail removing the existing blade, installing the new blade, then properly adjusting the blade tension, tracking, and guides.



Removing Blade

1. DISCONNECT MACHINE FROM POWER!
2. Release blade tension by lifting lever or turning blade tension lever counterclockwise (see **Figure 63**).
3. Turn blade cover lock knobs clockwise to open blade covers (see **Figure 63**).

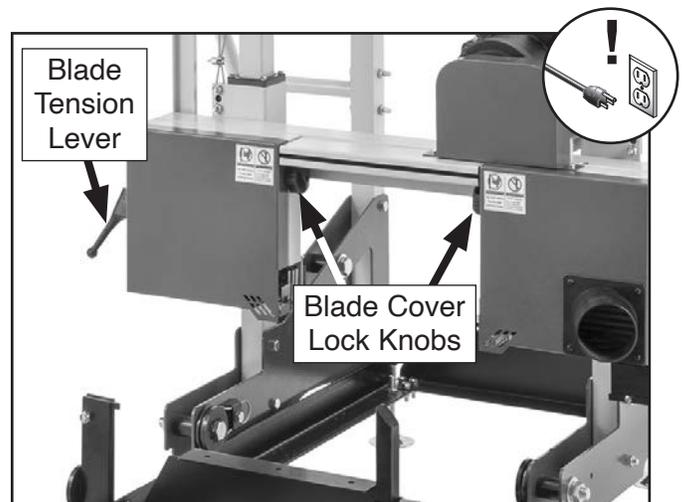


Figure 63. Location of blade tension lever and blade cover lock knobs.

4. Remove blade from blade wheels and guides.



Installing Blade

1. DISCONNECT MACHINE FROM POWER!
2. Hold blade on each side and position it in front of wheels so blade teeth are facing front of machine and pointing toward dust port.
3. Slide blade into blade guides, then slide blade over each wheel (see **Figure 64**).

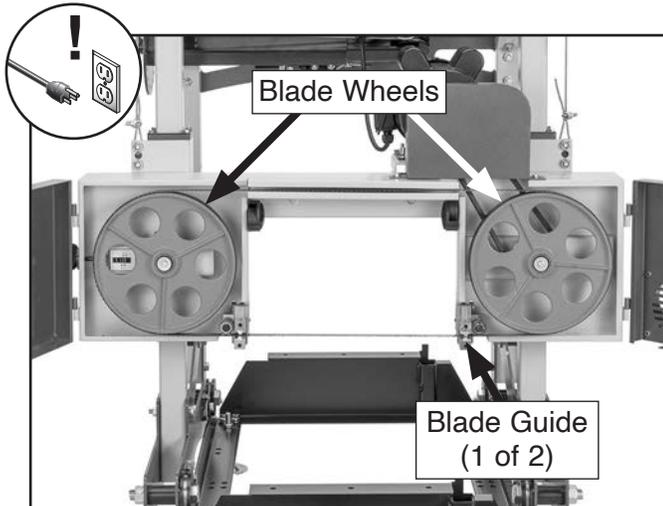


Figure 64. Blade installed in guides and around wheels.

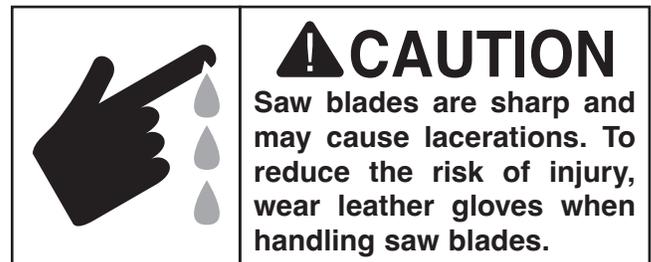
4. Adjust blade tension (see **Tensioning Blade**), blade tracking (see **Adjusting Blade Tracking** on **Page 38**), then adjust guides (see **Adjusting Blade Guides** on **Page 39**).
5. Close blade covers and secure with lock knobs.

Tensioning Blade

A properly tensioned blade is essential for making accurate cuts, maximizing blade life, and making other adjustments. However, a properly tensioned blade will not compensate for cutting problems caused by excessive feed rate, hardness variations between workpieces, and improper blade selection.

An over-tensioned blade increases the chance of the blade breaking or wheel misalignment. Under-tensioned blades wander excessively while cutting and will not track properly during operation.

IMPORTANT: Always release blade tension when storing machine. Storing the blade with high blade tension for an extended time period can deform blade and weaken tensioning spring, reducing the durability and accuracy of the machine.



To tension blade:

1. DISCONNECT MACHINE FROM POWER!



2. Turn blade cover lock knobs clockwise to open blade covers (see **Figure 65**).

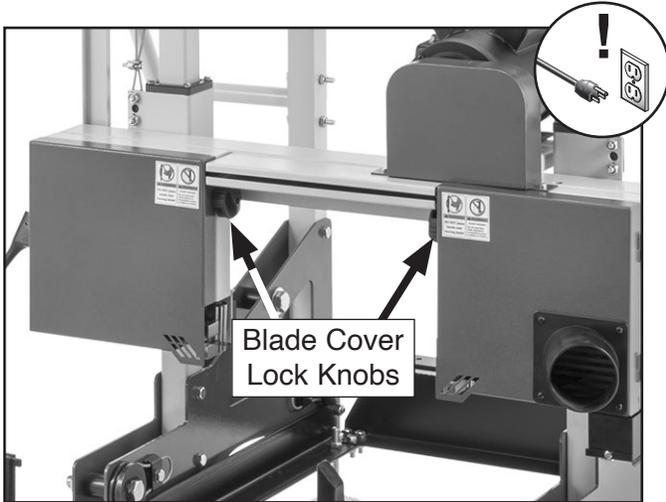


Figure 65. Location of blade cover lock knobs.

3. Push blade tension lever down to engage tension if not already done (see **Figure 66**), then turn lever clockwise to tension blade, watching blade until proper tension is achieved. If blade shifts or does not sit squarely on blade wheels during step, release tension, reposition blade, then re-tension.

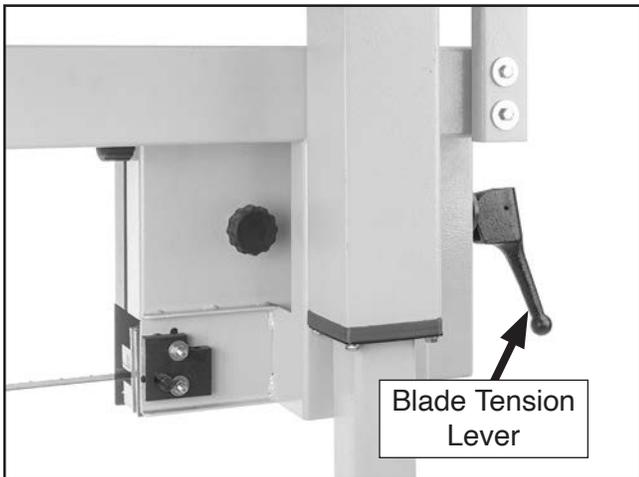


Figure 66. Blade tension lever in down position.

Note: Refer to blade tension scale shown in **Figure 67** to adjust blade tension for installed blade width.

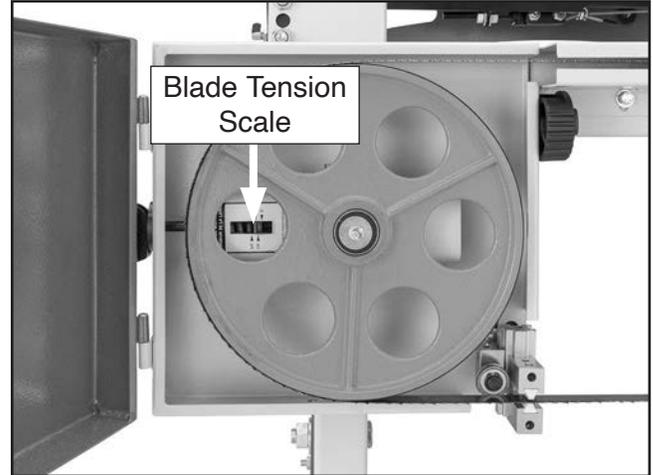


Figure 67. Location of blade tension scale.

4. Close blade covers and secure with lock knobs.



Adjusting Blade Tracking

Checking Blade Tracking

"Tracking" refers to how the blade rides on the sawmill wheels. Proper tracking is important for achieving correct blade tension and cutting accuracy. Improper tracking reduces cutting accuracy, causes excess vibration, and places stress on the blade and other components. The orientation of the wheels in relation to each other determines how the blade tracks.



CAUTION
Saw blades are sharp and may cause lacerations. To reduce the risk of injury, wear leather gloves when handling saw blades.



WARNING
Wear safety glasses when handling blade.

To check blade tracking:

1. DISCONNECT MACHINE FROM POWER!
2. Turn blade cover lock knobs clockwise to open blade covers (see **Figure 68**).

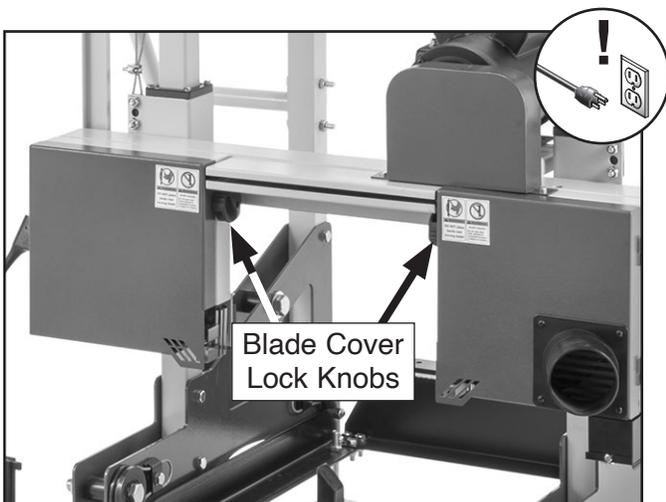


Figure 68. Location of blade cover lock knobs.

3. Center blade on wheels, then tension blade (see **Tensioning Blade** on **Page 36**).
4. Rotate wheels by hand and observe blade position. Blade should track in center of wheels and blade gullets should track about $\frac{1}{64}$ " in front of blade guides (see **Figure 69**).

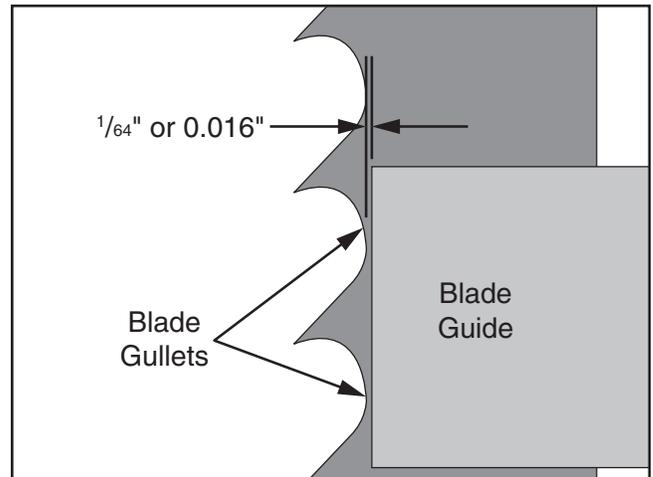


Figure 69. Blade guide positioned $\frac{1}{64}$ " behind blade gullets.

- If blade *does* remain centered on wheels, and blade gullets *do* remain $\frac{1}{64}$ " in front of blade guides, no adjustment is necessary.
- If blade *does not* remain centered on wheels, or blade gullets *do not* remain $\frac{1}{64}$ " in front of blade guides, proceed to **Adjusting Blade Tracking**.

Adjusting Blade Tracking

If blade tracking is out of alignment, the left wheel shaft can be adjusted.

If adjusting the wheel shaft does not improve blade tracking, adjust the blade guides, as blade guides out of adjustment can make the blade wobble or wander. If the blade is properly tensioned, the blade guides have been properly adjusted, and adjusting the wheel shaft still does not improve blade tracking, replace the blade. A worn blade can become "bell mouthed" and throw off wheel coplanarity just enough to cause problems.

Tools Needed	Qty
Hex Wrench 3mm.....	1
Open-End Wrench $\frac{1}{2}$ ".....	1



To adjust blade tracking:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen blade guide assembly adjustment screws on each blade guide (see **Figure 70**) so you can slide blade guides away from blade so they will not interfere in the following steps.



Figure 70. Location of blade guide assembly adjustment screw.

3. Turn blade tension lever counterclockwise one full turn (see **Figure 71**).
4. Loosen jam nut on blade tracking knob (see **Figure 71**), then turn blade tracking knob to adjust tracking.

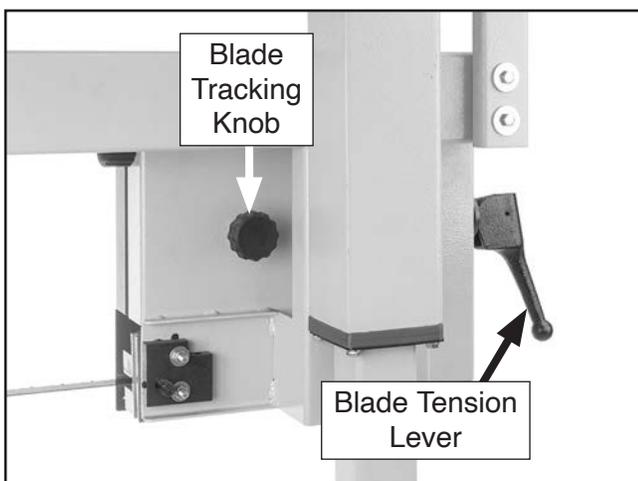


Figure 71. Location of blade tension lever and blade tracking knob.

- Turn tracking knob clockwise to adjust blade backward on left blade wheel.
- Turn tracking knob counterclockwise to adjust blade forward on left blade wheel.

Note: Adjust blade tracking knob in 1/2 turn increments, then tension blade and recheck blade tracking as described in **Checking Blade Tracking on Page 38**.

5. Once blade tracking has been adjusted correctly, tighten blade tracking jam nut to secure.
6. Refer to **Adjusting Blade Guides** to adjust blade guides to blade.

Adjusting Blade Guides

The blade guides can be adjusted top-to-bottom and front-to-back relative to the blade. Properly adjusted blade guides firmly support the blade position along the cutting section of the blade. After changing the blade, or if milling operations produce inconsistent cuts, adjust the ceramic blade guides and support bearings as described in the following sections.

IMPORTANT: To ensure best results while cutting, make sure the blade is tracking and tensioned correctly before performing these procedures (see **Tensioning Blade on Page 36** and **Adjusting Blade Tracking on Page 38**).

Adjusting Blade Guide Assemblies

When properly adjusted, there is about 0.016" between the blade gullets and the front of the blade guides.

Items Needed	Qty
Calipers	1
Hex Wrench 3mm.....	1



To adjust blade guide assemblies:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen blade guide assembly adjustment screw (see **Figure 72**) so you can slide blade guide assembly forward and backward.

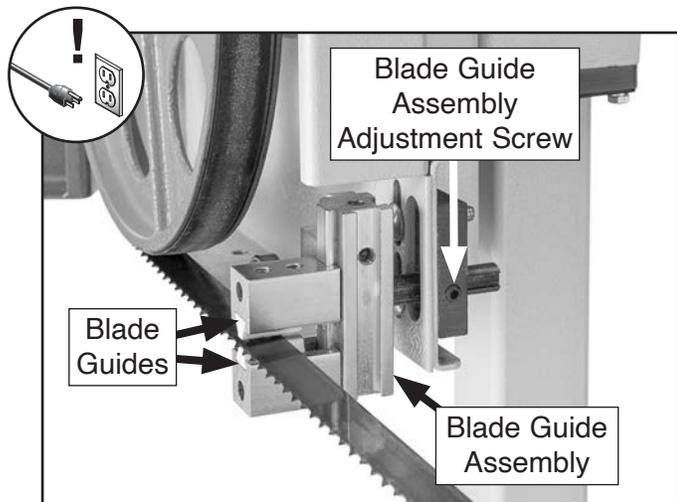


Figure 72. Location of blade guide assembly and adjustment screw.

3. Adjust blade guide assembly until there is about 0.016" between front of blade guide and blade gullets (see **Figure 73**).

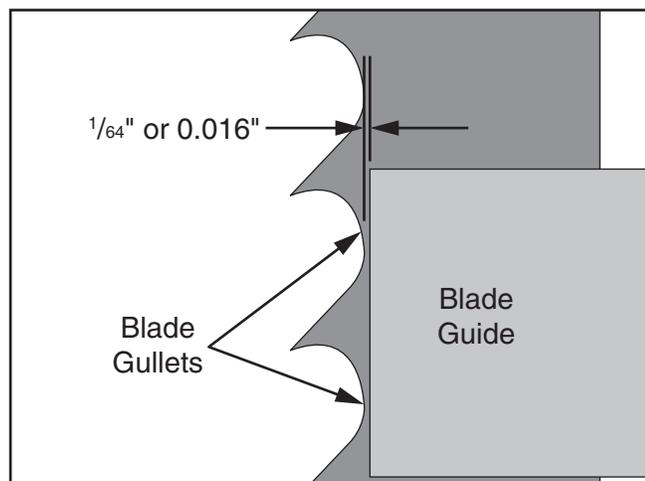


Figure 73. Blade guide positioned 0.016" behind blade gullets.

4. Tighten blade guide assembly adjustment screw to secure.
5. Repeat **Steps 2–4** on second blade guide assembly.

Adjusting Blade Support Bearings

When properly adjusted, there is about 0.016" between the blade support bearings and the blade.

Items Needed	Qty
Feeler Gauge 0.4mm (0.016")	1
Hex Wrench 3mm.....	1

To adjust blade support bearings:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen support bearing adjustment screw on blade guide (see **Figure 71**) so you can slide bearing forward and backward.

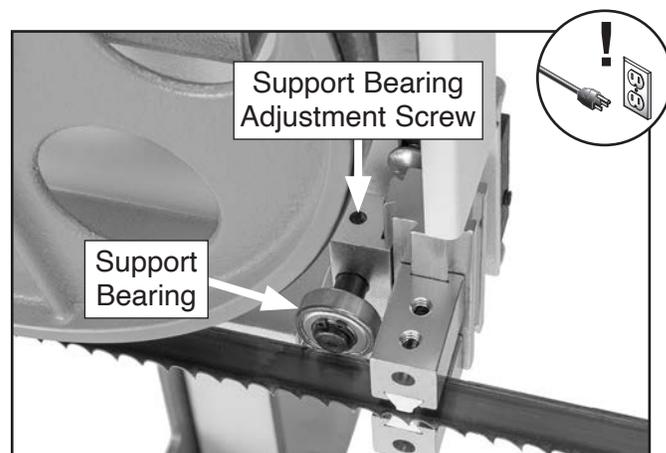


Figure 74. Location of support bearing and adjustment screw.

3. Adjust support bearing until there is about 0.016" between front of support bearing and back of blade (see **Figure 75**).

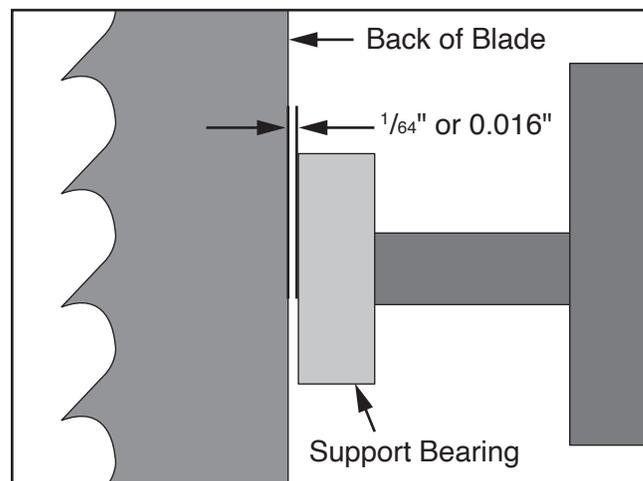


Figure 75. Support bearing positioned 0.016" behind back of blade.



4. Tighten support bearing adjustment screw to secure.
5. Repeat **Steps 2–4** on second blade guide assembly.

Adjusting Blade Guides

The blade guides should sit about 0.010" on either side of the blade.

Items Needed	Qty
Hex Wrench 3mm.....	1
Feeler Gauge 0.25mm (0.010")	1

To adjust blade guides:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen blade guide adjustment screws shown in **Figure 76**.
3. Adjust blade guides until there is about 0.010" between them and either side of blade (about the thickness of sheet of paper) (see **Figure 76**).

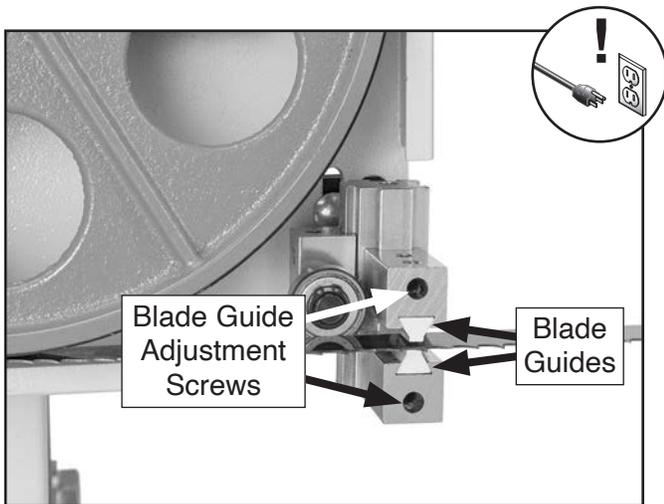


Figure 76. Location of blade guides and adjustment screws.

4. Tighten blade guide adjustment screws to secure.
5. Repeat **Steps 2–4** on second blade guide assembly.

Types of Lumber

The orientation of the woodgrain on a piece of wood has a large impact on the attributes of the lumber. Whether it is for structural, aesthetic, or economic reasons, it is important for a sawyer to know the output of their labors.

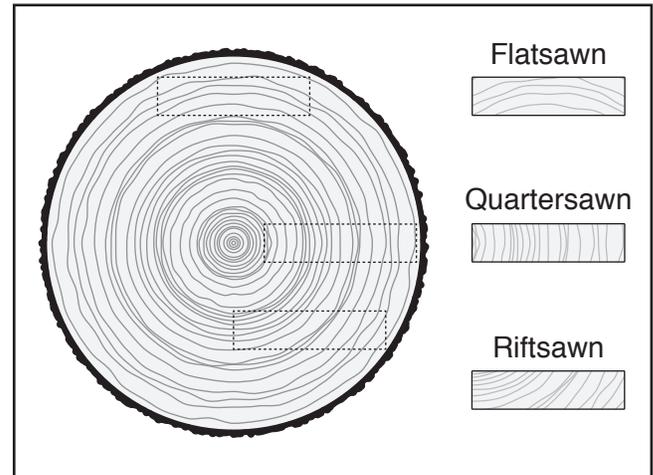


Figure 77. Types of lumber taken from a log.

Flatsawn Lumber (Plainsawn)

Flatsawn lumber is characterized by woodgrain that is less than 45° to the face of the lumber, called "tangential grain."

This often results in unique cathedral patterns on the face of the lumber. However, the tangential grain contributes to more cupping and twisting during drying. Because flatsawn lumber is fastest and most plentiful to produce, it is the most affordable lumber on the market. The majority of construction quality lumber is flatsawn.

Quartersawn Lumber

Quartersawn lumber is characterized by woodgrain nearly perpendicular to the board. By some definitions, quartersawn lumber has grain more than 45° to the face of the lumber. In this manual, quartersawn refers to lumber with grain between 75°–90° to the face.



Quartersawn lumber is less likely to cup or twist when dried. However, producing perfectly quarter sawn lumber is typically time consuming and wastes a large volume of wood.

Some types of wood, such as white oak, show ray flecks on the surface of the board when quarter-sawn, which is highly sought after by woodworkers. Taking the time to produce more quarter sawn lumber can pay off, but it is important to know what you are sawing and how the lumber will be used before putting in the extra work.

Riftsawn Lumber

Sometimes classified as a type of quartersawn lumber, riftsawn lumber is characterized by woodgrain between 45°–70° to the face of the lumber. It will never have perfectly perpendicular woodgrain or show ray flecks.

Riftsawn lumber is often the by-product of quarter sawing methods. Many sawyers consider riftsawn lumber to be a happy medium between structural integrity and milling time.

Cants

Cants are sawn logs with at least one finished side. Cants with four finished sides are often used in construction or resawn into smaller pieces of dimensional lumber.



Figure 78. Example of live sawing a cant into dimensional lumber.

Drying Lumber

Before cutting your first log, have a plan for drying your lumber. Depending on the species of wood, a green log might have anywhere from 60%–180% moisture content, and needs to be dried to approximately 6%–11% before it can be finished and used.

With the moisture loss, lumber will shrink and warp. Depending on the drying conditions and species of wood, air-drying can take anywhere from several weeks to many months.

The most common method is air-drying, in which freshly cut lumber is stacked outdoors with stickers and weights and the ends are sealed with latex paint. Weighing down the stack and sealing the board ends help to minimize warping as the wood shrinks. When the lumber reaches approximately 20% moisture content, the stack is moved indoors until drying is complete.

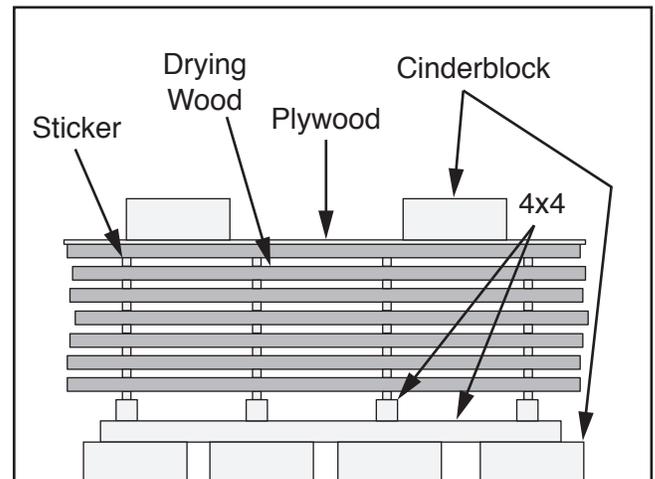


Figure 79. Side view of an air-drying stack.

Tracking moisture content can be done by regularly weighing and recording several of the drying boards. When the rate of weight loss slows or stops, the wood has stopped drying. Moisture meters (see **Page 48**) provide a fast and accurate alternative to weight tracking.

Due to the many variables involved in drying lumber, it is important to research and plan for your specific needs. Understand the drying environment and type of wood in order to ensure the end product meets your needs.



Cant Sawing

Sawing a log into a square cant is a fundamental sawing operation for any sawyer. When sawing a cant, slabs are removed from four sides of the log, leaving a square beam.

To saw a cant:

1. Inspect log and determine size of cant to be produced. Mark planned cuts on end of log.
2. Load log on track bed and secure with log supports and clamps.
3. Cut slab from top of log and remove it (see **Figure 80**).

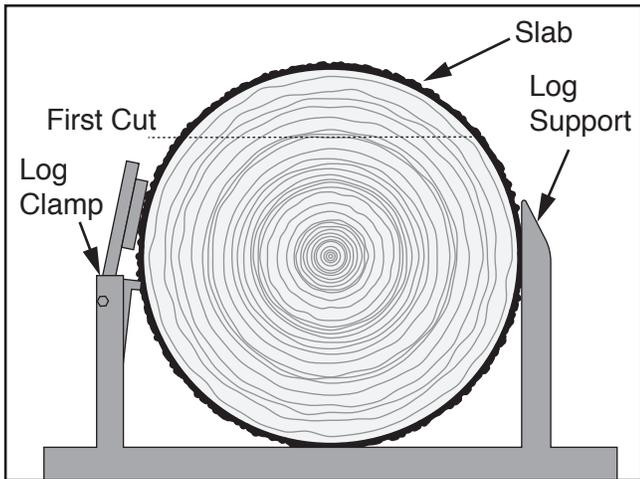


Figure 80. First cut to saw a cant.

4. Rotate cant 90° and secure against log supports with log clamps to ensure cant is square to track (see **Figure 81**).

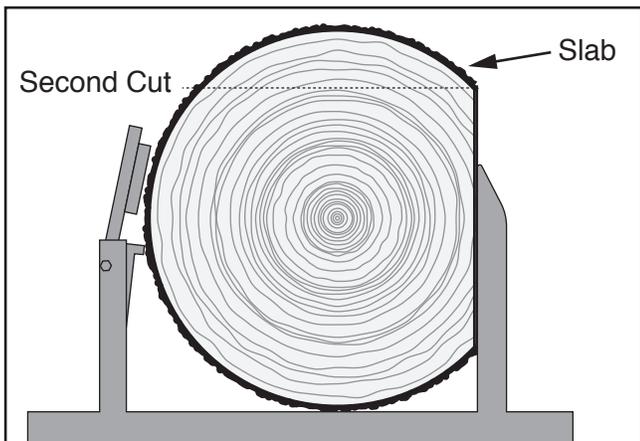


Figure 81. Cant rotated for second cut.

Note: It is essential that cut face of cant is secured perpendicular to track on first rotation. When first (2) cuts are perpendicular, remaining sides will be easy to square to log supports.

5. Cut slab from top of log to remove second slab.
6. Remove log supports from bunks so cant corner can press flush against support blocks shown in **Figure 82** when secured with log clamps for remaining cuts.

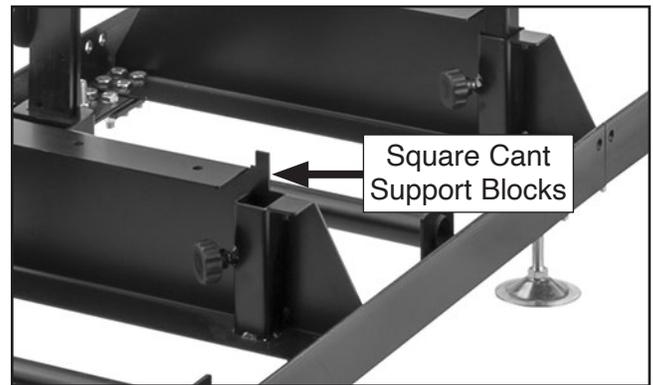


Figure 82. Location of square cant support blocks.

7. Rotate cant 90° and secure against log support blocks with log clamps (see **Figure 83**).

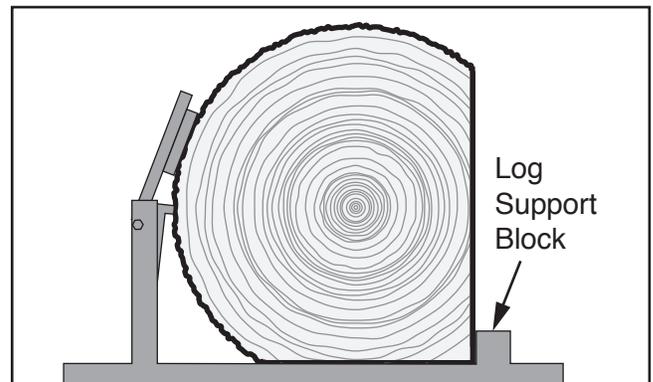


Figure 83. Example of cant secured against log support blocks.

8. Cut slab from top of log to remove third slab.
9. Repeat **Steps 7–8** to remove final slab from cant.
10. If square cant was goal of operation, congratulations, you are finished! To cut cant into dimensional labor, proceed to **Live Sawing**.



Live Sawing

Live sawing is a method of sawing logs that is fast and produces very little wasted wood. In a live sawing procedure, the log is cut from top to bottom and is rarely rotated more than once.

Lumber produced when live sawing will range from flatsawn (cuts made near the top and bottom) to quartersawn (cuts made near the middle of the log). Because no specific type of lumber is prioritized, live sawing maximizes the amount of board feet produced per log.

To live-saw a log:

1. Inspect log and outline a sawing plan. Consider orientation of log on track and where to start cutting to produce the best lumber. Mark planned cuts on end of log.
2. Load log on track bed and secure with log supports and clamps.
3. Make first cut, then remove slab from log (see **Figure 84**).
4. Lower blade the desired thickness of lumber and cut first flitch (see **Figure 84**).

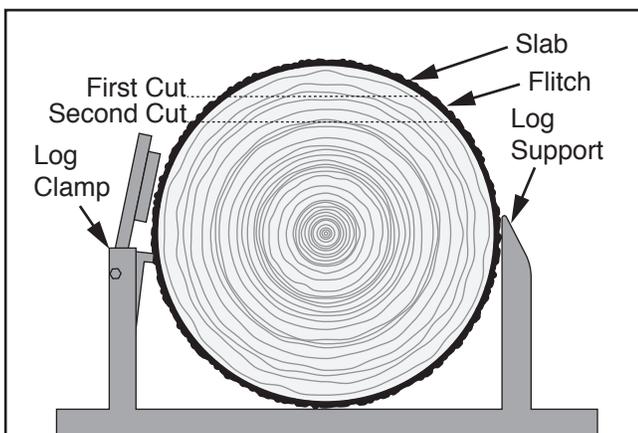


Figure 84. First cuts to live saw a log.

5. Rotate log 180° and secure with log supports and clamps (see **Figure 85**).

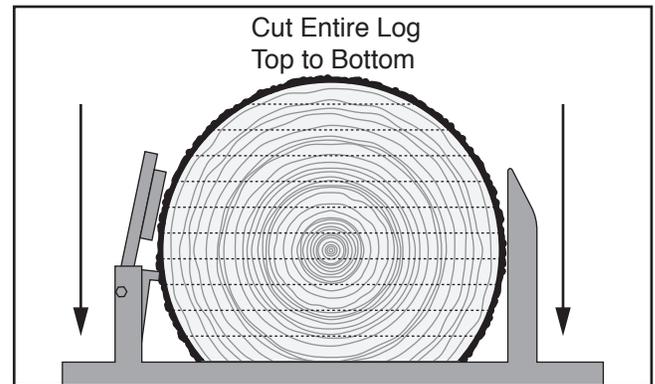


Figure 85. Log rotated 180° for live sawing.

Note: Logs can be live sawn from top to bottom without being rotated, but rotating once provides stable base to saw rest of log.

6. Continue to cut flitches from top to bottom until log is fully used. Adjust log supports and clamps throughout process to keep them below blade and to keep log secured.
7. Edge flitches as needed.
 - If available, an edger can be used to quickly and easily edge lumber.
 - Without an edger, sawmill can be used. Refer to **Edging** on **Page 45**.

Note: Live-sawing square cant will produce lumber that does not need to be edged. However, it typically produces more waste than live-sawing log and edging it.



Edging

Edging a flitch involves removing the natural or wane edges, turning it into lumber with four finished sides. Using an edger is the quickest and simplest way of edging, but edging can also be done with a sawmill. For many sawyers running singe-mill operations, using a mill for edging is the default.

To edge flitches using a sawmill:

1. Clamp multiple flitches to track bed, using log supports to ensure flitches are perpendicular to track (see **Figure 86**). Take care that log clamps hold flitches tight against supports.
2. Cut to remove bark from the tallest flitches. Cut as many flitches as possible without wasting excessive lumber (see **Figure 86**).

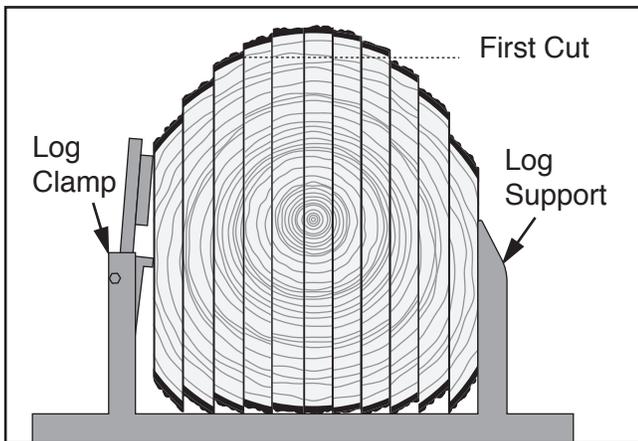


Figure 86. Flitches secured to track bed for edging.

3. Remove edged flitches, then secure the rest (see **Figure 87**).

4. Repeat **Steps 2–3** until all flitches have been edged once (see **Figure 87**).

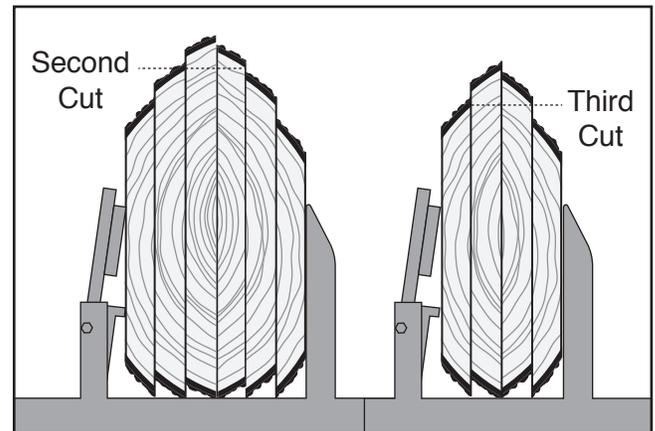


Figure 87. Tallest flitches to be removed after each cut.

5. Clamp single-edged flitches to track bed, using flat edges and log supports to ensure flitches are perpendicular to track (see **Figure 88**).

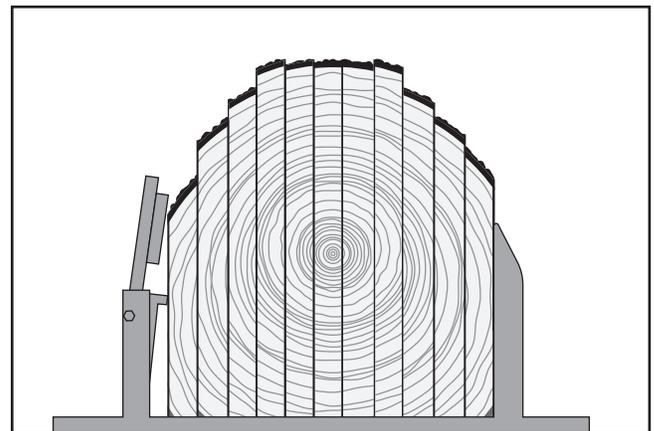


Figure 88. Flitches secured to track in preparation for second edging.

6. Repeat **Steps 2–3** until all flitches have been edged on both sides.



Quarter Sawing

Quarter sawing is any method of milling a log that produces primarily quartersawn lumber. In general, this produces a mixture of quartersawn and riftsawn lumber. Producing only quartersawn lumber can be time-consuming and leaves a lot of scrap.

The method below is relatively simple and produces quartersawn and riftsawn lumber. Many other methods exist—all with unique benefits and downsides. A sawyer should choose a method based on the log used, lumber needed, and personal preference.

To quarter-saw a log:

1. Inspect log and outline a sawing plan. Consider orientation of log on track and where to start cutting to produce the best lumber. Mark planned cuts on end of log.
2. Load log to track bed and secure with log supports and clamps.
3. Cut a thick slab and remove it from log (see **Figure 89**). Set slab aside for now.
4. Rotate log 180° and secure it. Cut a slab about the same size as the first one (see **Figure 89**). To reduce waste, make sure the distance between cuts—the height of the resulting cant—is divisible by the thickness of lumber to be produced. Set slab aside for now.

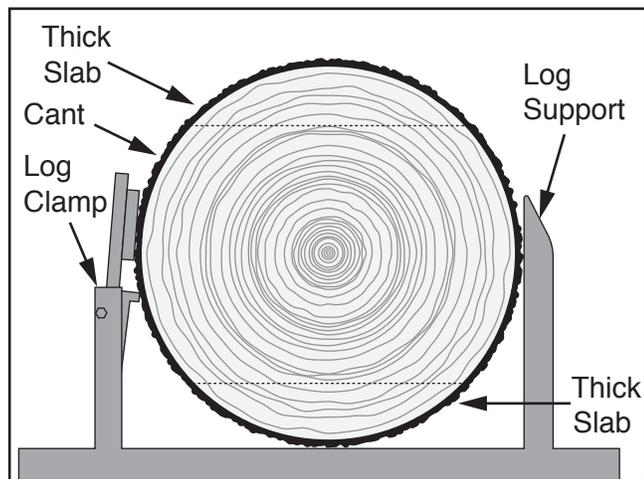


Figure 89. Thick slabs to be removed from log.

5. Rotate cant 90° and clamp to track bed, using log supports to ensure cant is perpendicular to track (see **Figure 90**). Take care that log clamps hold cant tight against supports.
6. Cut a thin slab and remove it from cant (see **Figure 90**). Discard slab.

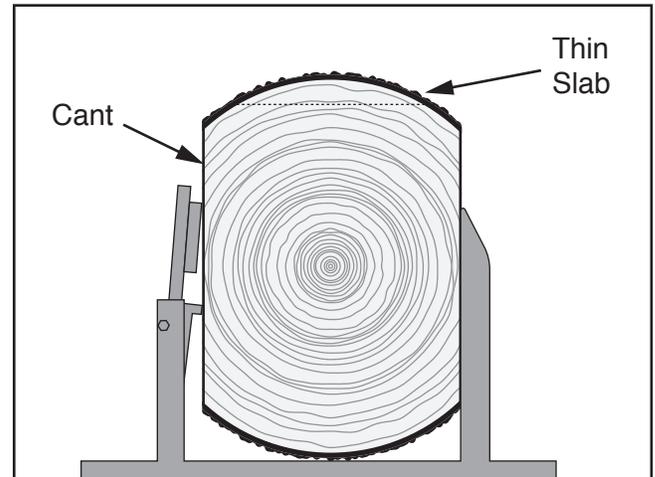


Figure 90. Thin slab to be removed from cant.

7. Rotate cant 180° and secure it.
8. Cut a thin slab and remove it from cant (see **Figure 91**). Discard slab.
9. Cut above pith, then remove top cant from the cant secured to the track (see **Figure 91**). Set top cant aside for now.
10. Cut below pith. To reduce waste, cut a board that is a usable thickness when cutting below pith. Remove board with pith from cant (see **Figure 91**). Set board aside for now.

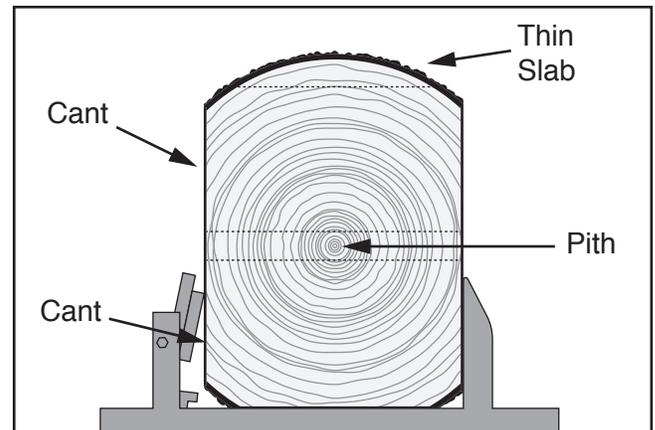


Figure 91. Two rectangular cants and pith to be removed.



11. Rotate cant 90° and secure it.
12. Cut from top to bottom until cant is fully used (see **Figure 92**). Adjust log supports and clamps throughout process to keep them below blade and to keep log secured.

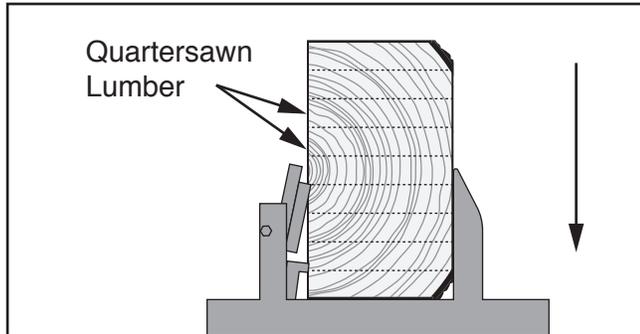


Figure 92. Quartersawn lumber to be cut from cant.

13. Load second cant to track bed, and secure with log supports and log clamps.
14. Repeat **Step 12** with second cant.
15. Clamp board with pith to track bed, using log supports to ensure board is perpendicular to track (see **Figure 93**).
16. Cut just above pith, then remove resulting quartersawn board from board secured to track (see **Figure 93**).
17. Cut just below pith. Remove and discard pith (see **Figure 93**).

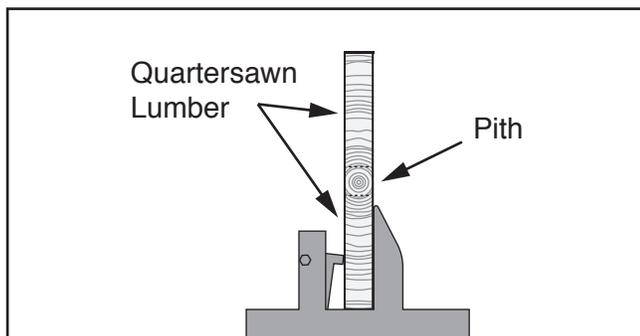


Figure 93. Pith to be removed from board.

18. Load slab from **Step 3** or **4** to track bed, using log supports to ensure slab is perpendicular to track (see **Figure 94**). Take care that log clamps are holding slab tight against supports.

19. Inspect end of slab and determine which portion is suitable for quartersawn lumber. Evaluate the width of the resulting lumber, as well as the angle of the grain. Cut slab where quartersawn quality wood begins (see **Figure 94**).

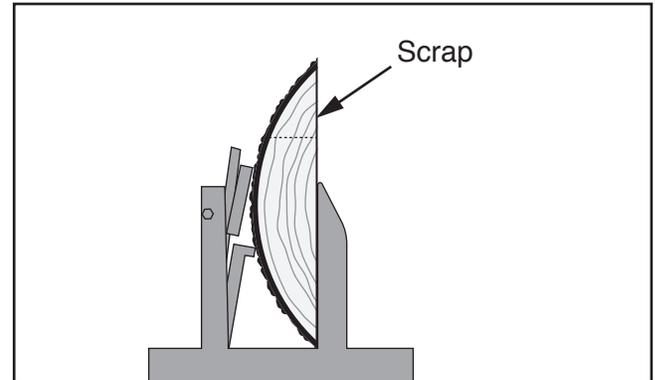


Figure 94. Scrap wood to be cut from slab.

20. Rotate slab 180° and secure it.
21. Cut slab where quartersawn quality wood begins, then continue to cut flitches from top to bottom until slab is fully used (see **Figure 95**).

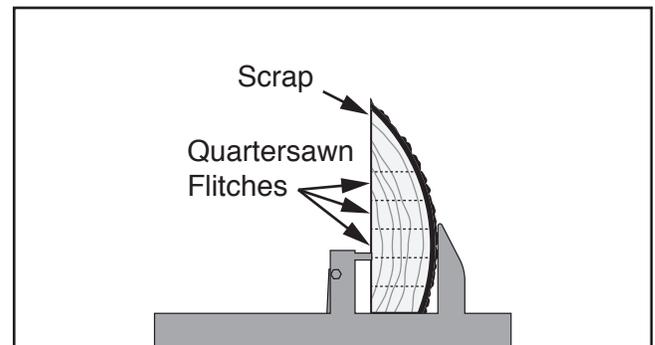


Figure 95. Quartersawn flitches to be cut from slabs.

22. Repeat **Steps 18–21** on remaining slab.
23. Edge all flitches and waney boards.
 - If available, an edger can be used to quickly and easily edge lumber.
 - Without an edger, the sawmill can be used. See **Edging** on **Page 45**.



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.

T30855—AccuMASTER XT Moisture Meter

T30904—AccuMASTER Duo Pro Moisture Meter

These easy-to-use moisture meters are ideal for measuring moisture content in logs and lumber. The XT and Duo Pro also work with brick, concrete, drywall, plaster, and carpet so you can find moisture before it becomes a costly problem.



Figure 96. T30904 AccuMASTER Duo Pro Pin & Pinless Moisture Meter.

T27630—Lumber Rack 6-Shelf System

T31725—Lumber Rack 3-Shelf System

Keep materials organized and accessible with these lumber shelf systems. Easy to install into a sturdy wall and each shelf can hold up to 100 lbs.



Figure 97. Lumber Rack Shelf Systems.

T33224—3 Ft. Bed Extension Rails

These modular track extensions can be quickly connected to your existing track to increase your sawing capacity in 3' increments, allowing for practically any length lumber that you need to mill.

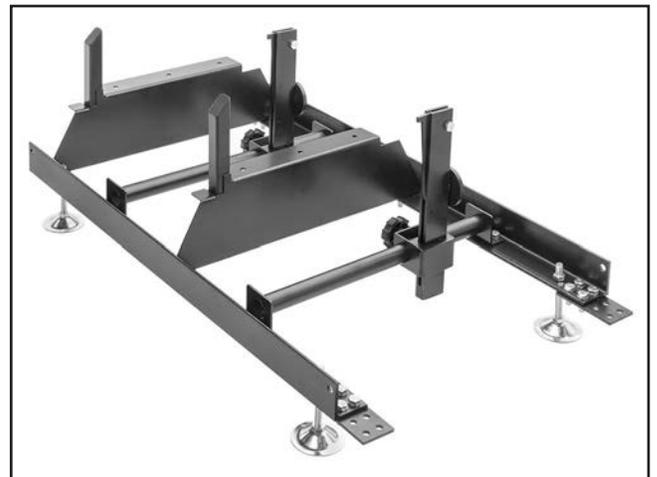
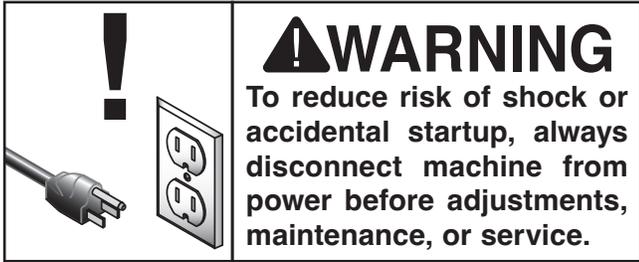


Figure 98. T33224 3 Ft. Bed Extension Rails.

order online at www.grizzly.com or call 1-800-523-4777



SECTION 6: MAINTENANCE



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.
- Dull or damaged saw blade.
- Wood chip and sawdust buildup.
- Frayed lift cables.
- Worn or damaged wires.
- Any other unsafe condition.

Weekly Maintenance

- Lubricate blade height thrust bearings.

Monthly Check

- V-belt tension, damage, or wear.

Cleaning

Cleaning the Model G0960 is relatively easy and should be done whenever the machine operation is finished for the day. 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

Most of the bearings on this machine are sealed and permanently lubricated. Leave these bearings alone until they need to be replaced. Do not lubricate them.

Apply lubricant to the blade height thrust bearings described below every 40 hours of use, before storage, or as needed.

Items Needed

	Qty
Wrench or Socket 19mm	1
Hex Wrench 4mm	1
Light Machine Oil	As Needed

To lubricate machine:

1. Completely lower headstock so it is supported on carriage legs.
2. Remove lock nut, (2) button head cap screws, and (3) flat washers shown in **Figure 99** to remove blade height handle and handwheel.

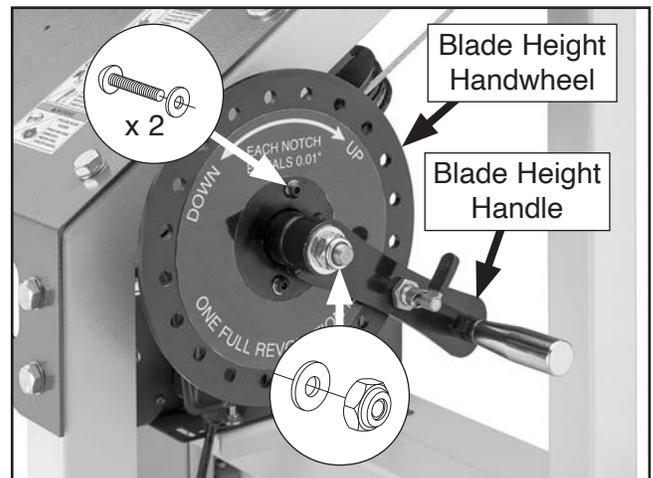


Figure 99. Location of blade height handwheel fasteners.

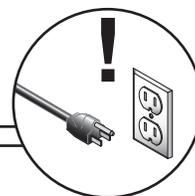
3. Apply light machine oil to thrust bearings behind blade height handwheel, then install handwheel.
4. Align blade height handle keyway with key, then install handle.



SECTION 7: SERVICE

Review the troubleshooting 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. **Note:** *Please gather the serial number and manufacture date of your machine before calling.*

Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start, or power supply breaker immediately trips after startup.	<ol style="list-style-type: none"> 1. Switch disabling key removed. 2. Machine circuit breaker tripped or at fault. 3. Incorrect power supply voltage or circuit size. 4. Plug at fault/wired incorrectly. 5. Power supply circuit breaker tripped or fuse blown. 6. Motor wires connected incorrectly. 7. Start capacitor at fault. 8. Centrifugal switch adjustment/contact points at fault. 9. Wiring broken, disconnected, or corroded. 10. ON/OFF or circuit breaker switch at fault. 11. Motor or motor bearings at fault. 	<ol style="list-style-type: none"> 1. Install switch disabling key. 2. Reset circuit breaker. 3. Ensure correct power supply voltage and circuit size (Page 12). 4. Test for good contacts; correct wiring (Page 60). 5. Ensure circuit is free of shorts. Reset circuit breaker or replace fuses. 6. Correct motor wiring connections (Page 60). 7. Test/replace if at fault. 8. Adjust centrifugal switch/clean contact points. Replace either if at fault. 9. Fix broken wires or disconnected (Page 60)/corroded connections. 10. Replace switch/circuit breaker. 11. Replace motor.
Machine stalls or is underpowered.	<ol style="list-style-type: none"> 1. Dull blade. 2. Feed rate too fast. 3. Workpiece moves/not secure on track. 4. Machine undersized for task. 5. Blade slipping on wheels or not properly tensioned. 6. Belt slipping/pulleys misaligned. 7. Motor wires connected incorrectly. 8. Plug at fault/wired incorrectly. 9. Pulley slipping on shaft. 10. Motor overheated, tripping machine circuit breaker. 11. Run capacitor at fault. 12. Extension cord too long. 13. Centrifugal switch adjustment/contact points at fault. 14. Motor or motor bearings at fault. 	<ol style="list-style-type: none"> 1. Sharpen/replace blade. 2. Decrease feed rate. 3. Secure log against supports; remove branches or lumps that prevent even positioning. 4. Use correct blade/reduce feed rate or depth of cut. 5. Adjust blade tracking (Page 38) and tension (Page 36). 6. Clean/tension (Page 53)/replace belt (Page 54); ensure pulleys are aligned. 7. Correct motor wiring connections (Page 60). 8. Test for good contacts; correct wiring (Page 60). 9. Tighten/replace loose pulley/shaft. 10. Clean motor, let cool, and reduce workload. Reset breaker. 11. Test/repair/replace. 12. Move machine closer to power supply; use shorter extension cord. 13. Adjust centrifugal switch/clean contact points. Replace either if at fault. 14. Replace motor.
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> 1. Excessive sawdust buildup inside saw headstock. 	<ol style="list-style-type: none"> 1. Vacuum excess chips and sawdust.



Motor & Electrical (Cont.)

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> 2. Motor or component loose. 3. Track feet not adjusted correctly. 4. Workpiece moves/not secure on track. 5. Blade weld at fault/teeth broken. 6. V-belt worn, loose, pulleys misaligned or belt slapping cover. 7. Pulley loose. 8. Wheel bearings at fault. 9. Motor fan rubbing on fan cover. 10. Centrifugal switch needs adjustment/at fault. 11. Motor bearings at fault. 	<ol style="list-style-type: none"> 2. Replace damaged or missing bolts/nuts or tighten if loose. 3. Adjust track feet to stabilize track and machine. 4. Secure log against supports; remove branches or lumps that prevent even positioning. 5. Replace blade. 6. Inspect/replace belt (Page 54). Realign pulleys if necessary. 7. Secure pulley on shaft. 8. Replace wheel bearings. 9. Fix/replace fan cover; replace loose/damaged fan. 10. Adjust/replace if at fault. 11. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Operation

Symptom	Possible Cause	Possible Solution
Finished workpieces are wavy, crooked or uneven.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Excessive feed rate/pressure. 3. Track is not level. 4. Log not parallel to track or cant not square to log supports. 5. Blade tracking is incorrect. 6. Wrong blade type or TPI for cut type. 7. Dull or damaged blade, or blade installed backwards. 8. Blade guides or support bearings worn or misadjusted. 	<ol style="list-style-type: none"> 1. Adjust blade tension (Page 36). 2. Reduce feed rate/pressure. 3. Tighten track fasteners; adjust track feet until track is level. 4. Secure log against supports; remove branches or lumps that prevent even positioning. 5. Adjust blade tracking (Page 38). 6. Use correct blade for cutting type. 7. Replace blade or re-install blade (Page 36). 8. Adjust blade guides or support bearings for correct blade support (Page 39).
Finished workpieces have rough surface.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Excessive feed rate/pressure. 3. Blade tracking is incorrect. 4. Wrong blade type or TPI for cut type. 5. Blade has missing or bent teeth or faulty weld. 	<ol style="list-style-type: none"> 1. Adjust blade tension (Page 36). 2. Reduce feed rate/pressure. 3. Adjust blade tracking (Page 38). 4. Use correct blade for cutting type. 5. Replace blade.
Blade dulls prematurely.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Excessive feed rate/pressure. 3. Wrong blade type or TPI for cut type. 4. Hard spots in material. 5. Blade installed inside-out. 6. Blade is twisted or damaged. 7. Foreign objects or tramp metal in log. 	<ol style="list-style-type: none"> 1. Adjust blade tension (Page 36). 2. Reduce feed rate/pressure. 3. Use correct blade for cutting type. 4. Increase feed pressure. 5. Re-install blade (Page 36). 6. Replace blade (Page 36). 7. Check log for foreign objects or tramp metal. Use different log if necessary.
Blade tension scale is inaccurate.	<ol style="list-style-type: none"> 1. Blade tension spring is worn or damaged. 	<ol style="list-style-type: none"> 1. Replace spring. Release blade tension when not in use and do not over-tension blade.
Sawdust buildup inside saw headstock.	<ol style="list-style-type: none"> 1. Clogged dust port. 2. Dust collection CFM is too low. 	<ol style="list-style-type: none"> 1. Clean dust port. 2. Use dust collector with higher CFM (Page 32).



Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Blade tracks incorrectly or comes off wheels.	<ol style="list-style-type: none"> 1. Blade tracking is incorrect. 2. Blade is not properly tensioned. 3. Excessive feed rate/pressure. 4. Wrong blade type or TPI. 5. Belt is worn. 6. Dull or damaged blade. 7. Blade wheels are not coplanar. 8. Blade guides too tight against blade. 9. Wheel tire(s) damaged or worn. 	<ol style="list-style-type: none"> 1. Adjust blade tracking (Page 38). 2. Adjust blade tension (Page 36). 3. Reduce feed rate/pressure. 4. Use correct blade. 5. Replace belt (Page 54). 6. Replace blade (Page 36). 7. Adjust wheels to be coplanar (Page 56). 8. Adjust blade guides (Page 39). 9. Replace wheel tire(s).
Blade or teeth break during operation.	<ol style="list-style-type: none"> 1. Log is loose. 2. Foreign objects or tramp metal in log. 3. Blade is not properly tensioned. 4. Excessive feed rate/pressure. 5. Blade teeth clogged. 6. Wrong blade type or TPI. 7. Blade tracking is incorrect. 8. Dull or damaged blade. 9. Wheel tires worn or incorrectly installed. 10. Bad bearings on wheels. 	<ol style="list-style-type: none"> 1. Secure log against supports; remove branches or lumps that prevent even positioning. 2. Check log for foreign objects or tramp metal. Use different log if necessary. 3. Adjust blade tension (Page 36). 4. Reduce feed rate/pressure. 5. Clean blade. 6. Use correct blade. 7. Adjust blade tracking (Page 38). 8. Replace blade (Page 36). 9. Replace or re-install tire. 10. Replace wheel bearings.
Blade slows when cutting.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Excessive feed rate/pressure. 3. Dull or damaged blade. 4. Blade installed backwards. 5. V-belt is loose or slipping. 6. Belt is worn. 7. Blade guides worn or misadjusted. 8. Blade wheels are not coplanar. 	<ol style="list-style-type: none"> 1. Adjust blade tension (Page 36). 2. Reduce feed rate/pressure. 3. Replace blade (Page 36). 4. Re-install blade (Page 36). 5. Tension V-belt (Page 53). 6. Replace belt (Page 54). 7. Adjust blade guides for correct blade support (Page 39). 8. Adjust wheels to be coplanar (Page 56).
Blade does not cut.	<ol style="list-style-type: none"> 1. Dull or damaged blade. 2. Blade installed backwards. 	<ol style="list-style-type: none"> 1. Replace blade (Page 36). 2. Re-install blade (Page 36).
Blade is twisting during cut.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Excessive feed pressure. 3. Dull or damaged blade. 	<ol style="list-style-type: none"> 1. Adjust blade tension (Page 36). 2. Reduce feed pressure. 3. Replace blade (Page 36).
Last board is tapered or narrow in middle.	<ol style="list-style-type: none"> 1. Track is not level. 2. Saw headstock and blade are not parallel to log bunks. 	<ol style="list-style-type: none"> 1. Level track. 2. Adjust saw headstock and blade parallel to log bunks (Page 30).



Tensioning/ Replacing V-Belt

The V-belt transfers power from the motor to the wheels. The blade and V-belt must be tensioned properly to ensure proper operation. It is essential that the V-belt is free of cracks, fraying, and wear. V-belt condition and tension should be checked at least every 3 months—more often if the sawmill is used daily.

To replace the V-belt, you must remove the blade. After installation, you must re-tension the V-belt.

⚠ CAUTION

V-belt and pulleys will be hot after operations. Allow them to cool before checking tension or handling V-belt.

Checking V-Belt Tension

To ensure optimum power transmission from the motor to the blade, the V-belt must be properly tensioned.

Items Needed	Qty
Wrench or Socket 10mm.....	1
Open-End Wrench 1/2".....	1
Another Person	1

To check V-belt tension:

1. DISCONNECT MACHINE FROM POWER!
2. Remove (2) hex bolts and flat washers shown in **Figure 100** to remove V-belt cover.

3. Turn right blade cover lock knob clockwise to open right blade cover (see **Figure 100**).

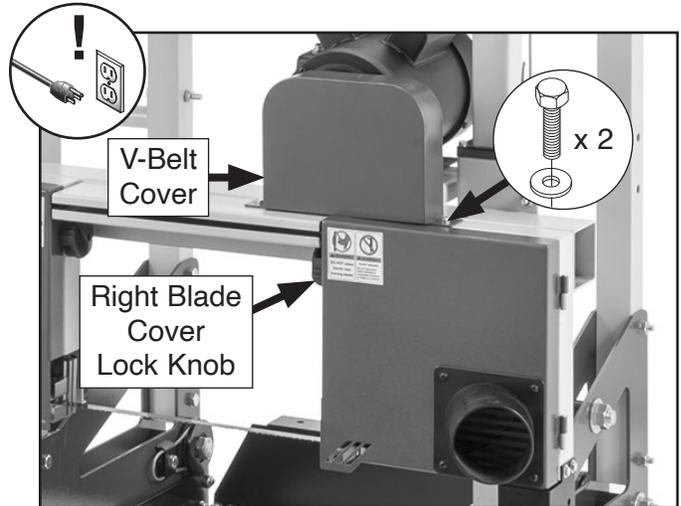


Figure 100. Location of right blade cover lock knob, V-belt cover, and fasteners.

4. Inspect V-belt (see **Figure 101**); if it is damaged or glazed, replace it (see **Page 54**).

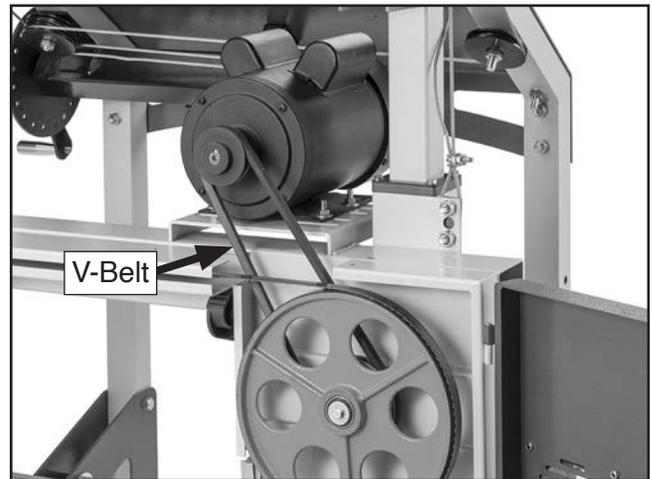


Figure 101. Location of V-belt.



5. Check V-belt tension by applying moderate pressure between pulleys (see **Figure 102**).
 - If deflection is approximately $\frac{1}{4}$ ", no adjustment is necessary.
 - If deflection is *not* approximately $\frac{1}{4}$ ", belt is not correctly tensioned. Proceed to **Step 6**.

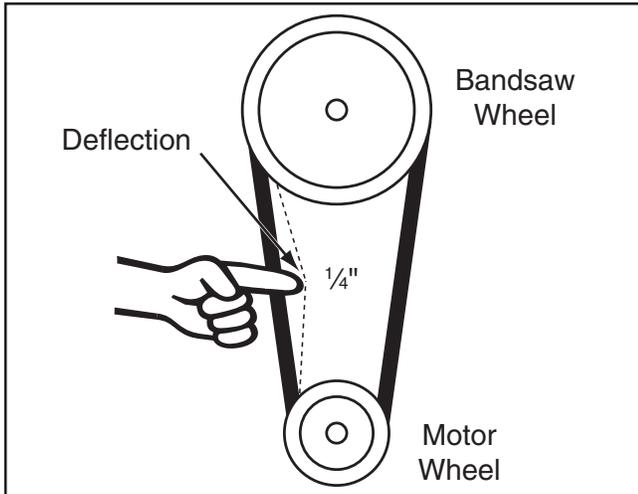


Figure 102. V-belt deflection.

6. Loosen (4) motor mounting hex nuts (see **Figure 103**).

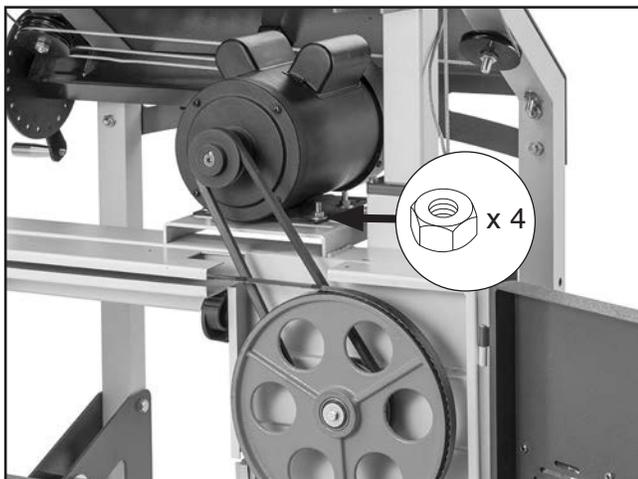


Figure 103. Location of motor mounting hex nuts.

7. Have assistant adjust motor position until deflection is approximately $\frac{1}{4}$ ", then tighten hex nuts from **Step 6**.
8. Close and secure right blade cover and install V-belt cover.

Replacing V-Belt

Items Needed	Qty
Wrench or Socket 10mm.....	1
Protective Gloves	1 Pr.
Safety Glasses	1 Pr.
Open-End Wrench $\frac{1}{2}$ ".....	1
Replacement V-Belt (#P09602059).....	1
Another Person	1

To replace V-belt:

1. DISCONNECT MACHINE FROM POWER!
2. Remove (2) hex bolts and flat washers shown in **Figure 104** to remove V-belt cover.

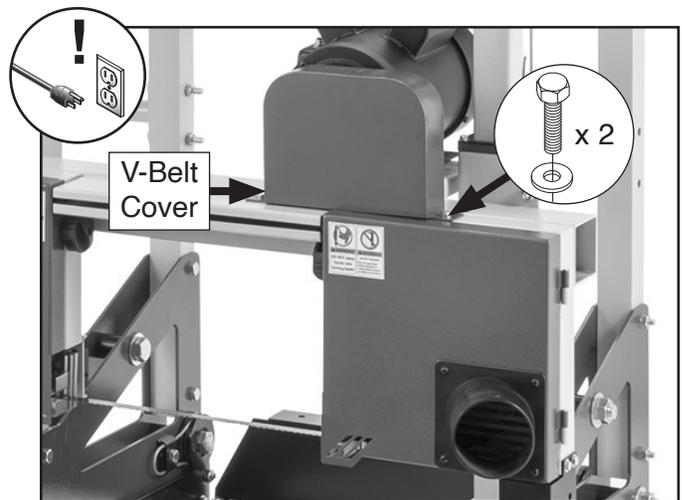


Figure 104. Location of V-belt cover and fasteners.

3. Perform **Steps 2–4 of Removing Blade** on **Page 36** to remove blade from wheels.

	<p>CAUTION</p> <p>Saw blades are sharp and may cause lacerations. To reduce the risk of injury, wear leather gloves when handling saw blades.</p>
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	<p>WARNING</p> <p>Wear safety glasses when handling blade.</p>
--	---



- Loosen (4) motor mounting hex nuts (see **Figure 105**) to release belt tension.

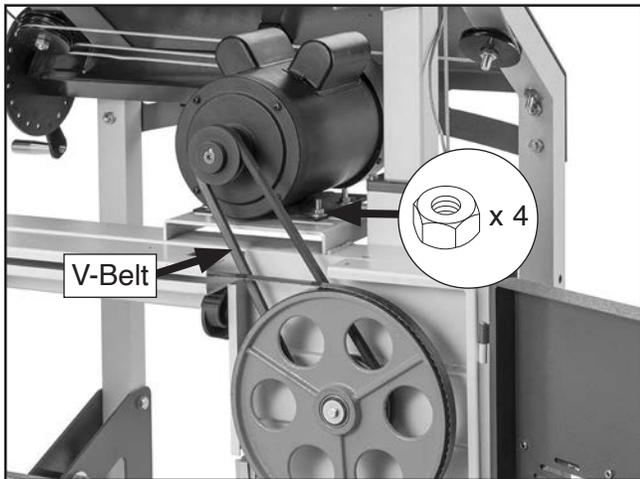


Figure 105. Location of V-belt and motor mounting hex nuts.

- Slip old V-belt off pulleys, then install new belt in its place.
- Have assistant adjust motor position until deflection is approximately $\frac{1}{4}$ " (see **Figure 106**), then tighten hex nuts from **Step 4**.

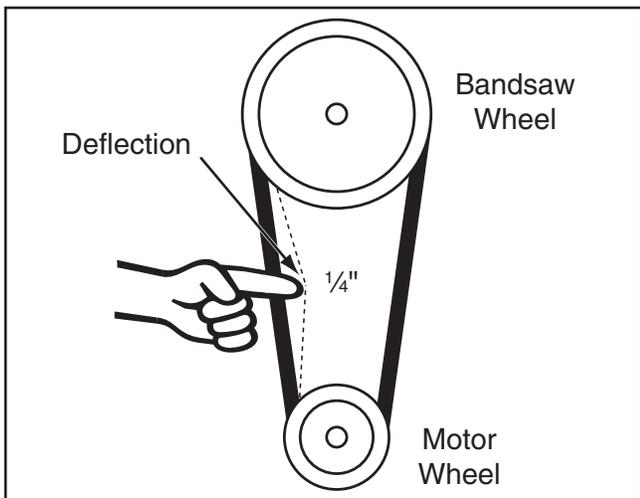


Figure 106. V-belt deflection.

- Perform **Steps 2–5** of **Installing Blade** on **Page 36** to install blade.
- Install V-belt cover.

Calibrating Blade Height Scale

Use the following steps to adjust the scale indicator so it is equal to the distance between the blade and the log bunks.

Item Needed	Qty
Measuring Tape.....	1

To calibrate blade height scale:

- DISCONNECT MACHINE FROM POWER!
- Confirm that blade tension (**Page 36**) and blade guides (**Page 39**) have been adjusted correctly.
- Confirm saw head is level by performing **Steps 63–65** of **Assembly** on **Page 30**.
- Measure distance between back of blade to top of log bunk.
 - If distance between back of blade and log bunk *is* equal to value shown on scale, no adjustment is necessary.
 - If distance between back of blade and log bunk *is not* equal to value shown on scale, proceed to **Step 5**.
- Loosen knob shown in **Figure 107**, adjust indicator to value measured in **Step 4**, then tighten knob to secure.

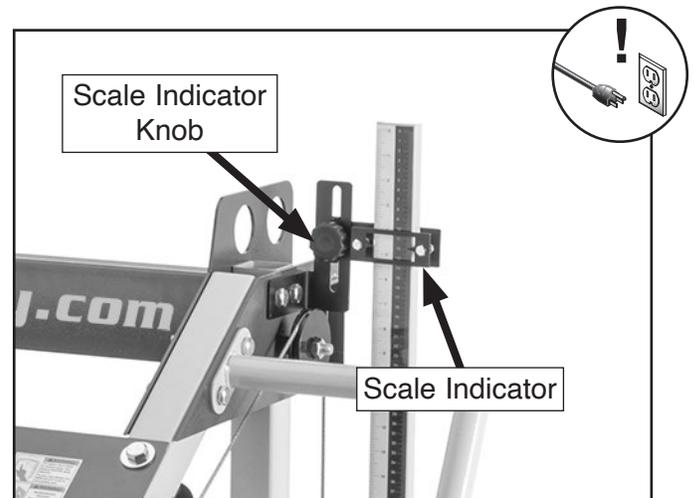


Figure 107. Location of scale indicator knob.



Adjusting Wheel Alignment

The following adjustment was performed at the factory and should not need to be performed unless there is a wheel alignment problem, or one or more wheels are replaced.

When wheels are coplanar (see **Figure 108**), the saw mill is more likely to cut straight without wandering; and vibration, heat, and blade wear are considerably decreased because the blade is automatically balanced on the wheels.

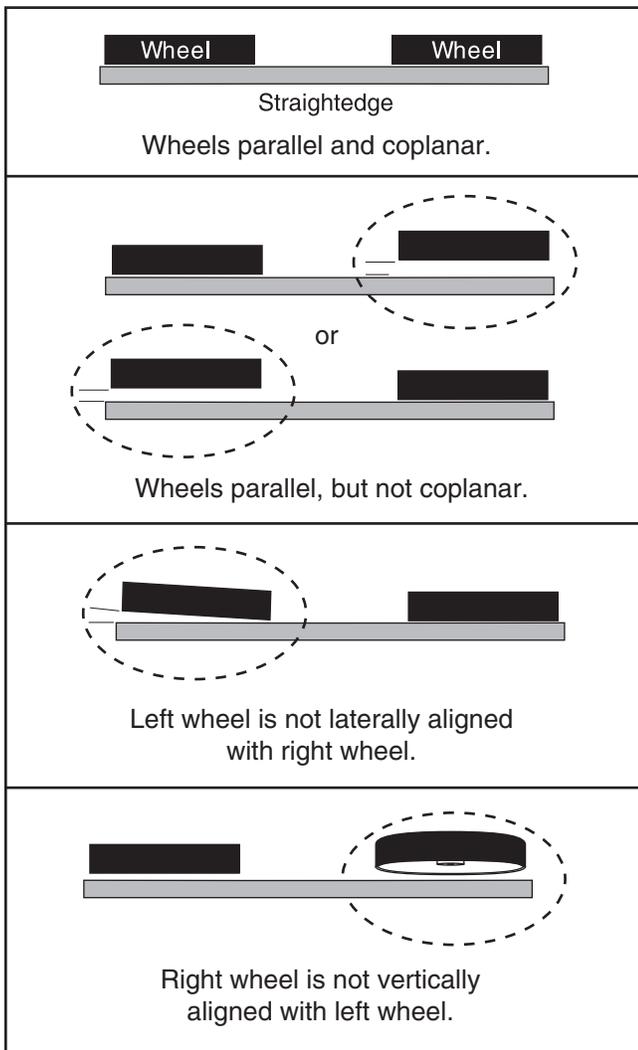


Figure 108. Wheel alignment illustration.

Bringing the wheels into alignment may require a combination of shimming a wheel and adjusting the position of the left wheel shaft.

Checking Wheel Alignment

Tool Needed	Qty
Straightedge 3'	1

To check wheel alignment:

1. DISCONNECT MACHINE FROM POWER!
2. Turn blade cover lock knobs clockwise to open blade covers (see **Figure 109**).

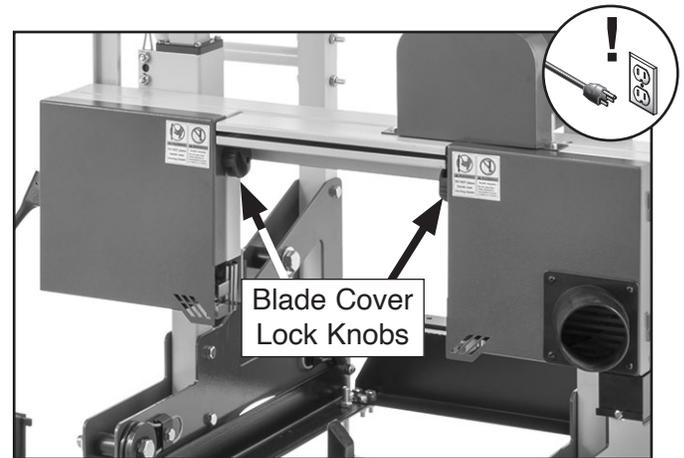


Figure 109. Location of blade cover lock knobs.

3. Place straightedge up against both wheels in positions shown in **Figure 110**. Make sure straightedge fully extends across rims of both wheels.

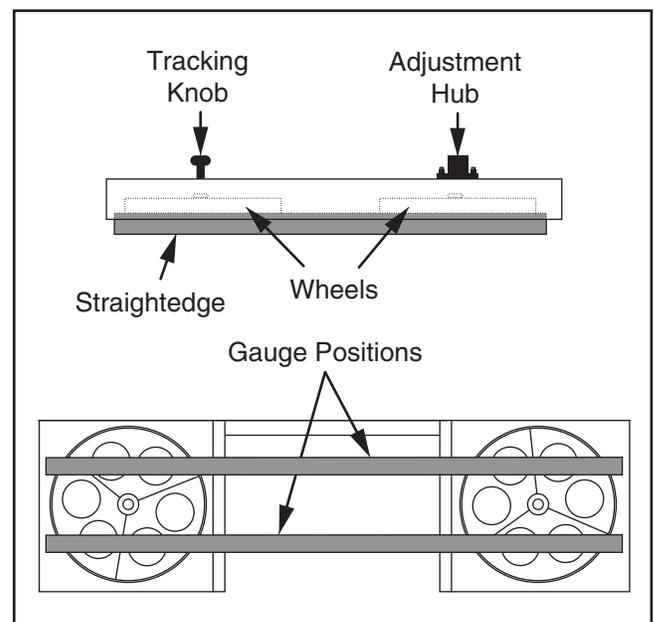


Figure 110. Illustrations of using straightedge to check wheel alignment.



4. Check wheel alignment and adjust tracking knob to bring both wheels into alignment as much as possible. If wheels cannot be adjusted coplanar, use **Figure 111** to determine how to proceed with alignment adjustments.

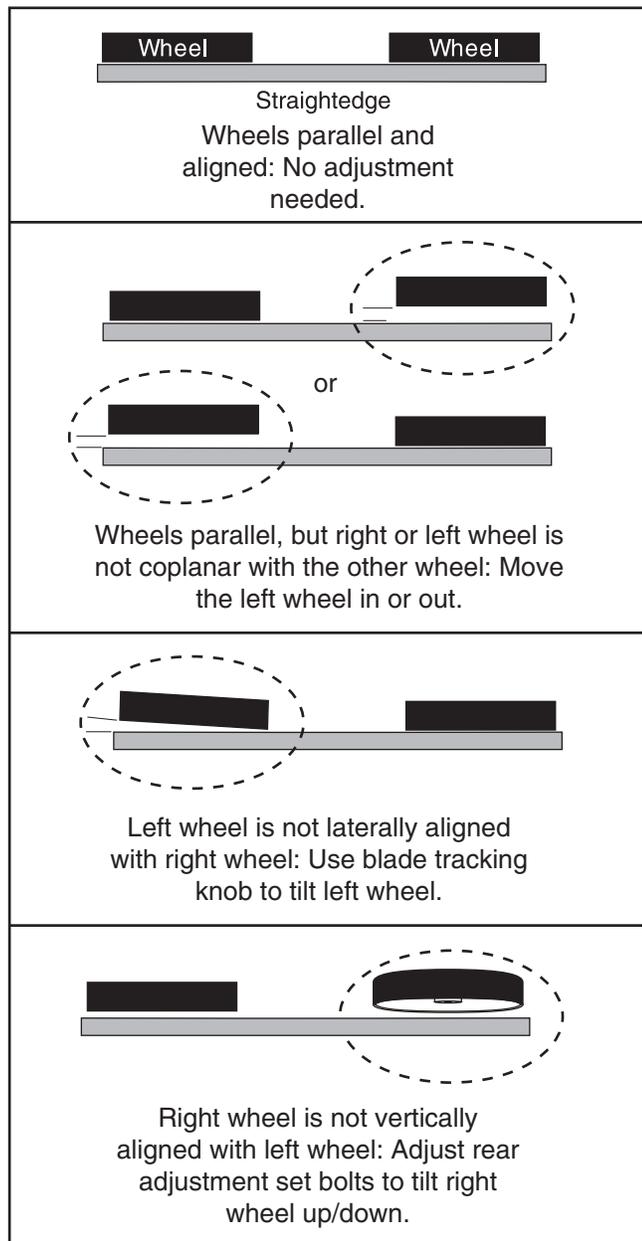


Figure 111. Wheel alignment illustration with solutions to misalignment problems.

Shimming a Wheel

When the wheels are parallel but not coplanar, one of the wheels must be shimmed out to bring it into the same plane as the other wheel.

Tip: *Standard washers work well for shimming a wheel because they can easily be stacked to get the desired depth.*

Items Needed

Qty

Straightedge 3'	1
Fine Ruler	1
Shims.....	As Needed
Wrench or Socket 10mm	1

To shim a wheel:

1. DISCONNECT MACHINE FROM POWER!
2. Adjust left wheel tracking so that it is parallel with right wheel.
3. With straightedge touching both rims of wheel that does not need to be shimmed, measure distance away from other wheel with fine ruler (see **Figure 112**). Distance measured with ruler is distance wheel must be shimmed.

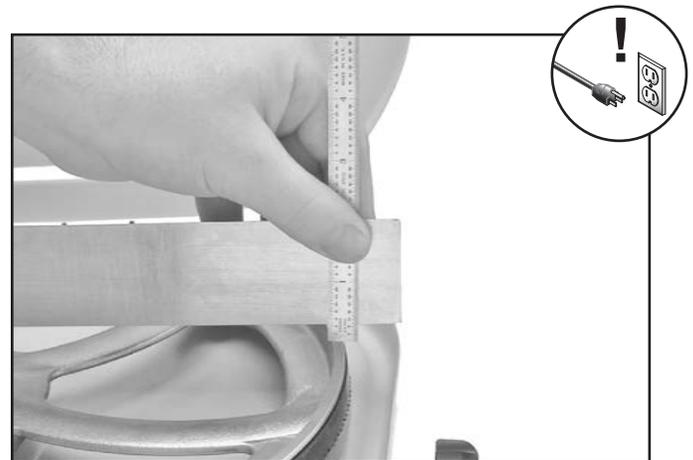
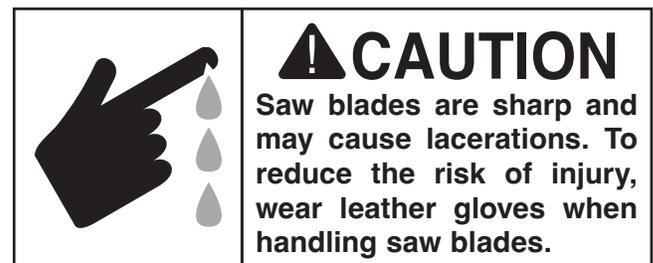


Figure 112. Example of measuring distance to shim wheel to make it coplanar with other wheel.



4. Close blade covers, detension blade, then open blade covers and remove blade from wheels.



- Remove hex bolt, lock washer, and flat washer shown in **Figure 113** to remove blade wheel to be shimmed.

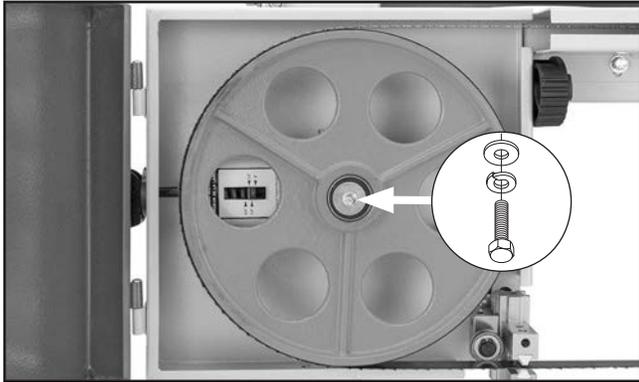


Figure 113. Location of blade wheel fasteners.

- Place as many shims as necessary to correct gap measured in **Step 3** onto wheel shaft.
- Install wheel.
- Install, tension, and track blade.
- Perform previous **Checking Wheel Alignment** procedure, beginning on **Page 56**, and adjust wheels as necessary to make them parallel and coplanar.

Tip: After adjusting wheels coplanar, place mark on each wheel where you held coplanarity gauge, then use this position again if you ever need to repeat the procedure. This assures repeated accuracy.

- If right wheel is tilted in relation to left wheel, proceed to **Adjusting Right Wheel Shaft Position**.

Adjusting Right Wheel Shaft Position

If the right wheel is tilted in relation to the left wheel, perform the following procedure to make it coplanar with the left wheel.

Note: If you make a mistake during the following procedure, it can be very difficult to correct. Therefore, it is important to double check the wheel alignment (see **Page 56**), and troubleshoot all other possible solutions (see **Troubleshooting** beginning on **Page 50**) prior to adjusting the right wheel shaft position.

There are four adjustment set screws with hex nuts in the right wheel adjustment hub, shown in **Figure 114**. These adjust the wheel tilt from side to side and up and down.

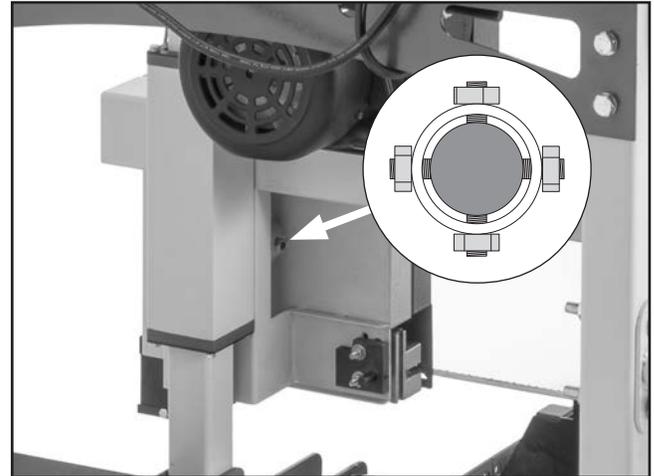


Figure 114. Location of right wheel shaft adjustment components.

Tools Needed

	Qty
Open-End Wrench 13mm.....	1
Hex Wrench 4mm.....	1
Straightedge 3'	1

To adjust right wheel shaft position:

- DISCONNECT MACHINE FROM POWER!
- Loosen jam nuts on right wheel adjustment hub (see **Figure 114**).
- Loosen one tilt adjustment set screw, then tighten opposing set screw approximately an equal amount.
- Check wheels with straightedge and repeat **Step 3** as needed until right wheel is parallel and coplanar with left wheel.
- Tighten jam nuts to lock tilt adjustment set screws in position.
- Perform previous **Checking Wheel Alignment** procedure, beginning on **Page 56**, and adjust wheels as necessary to make them parallel and coplanar.



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 after-market 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

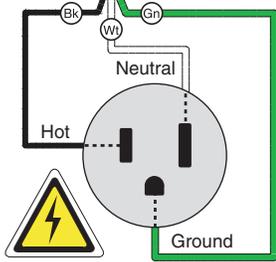
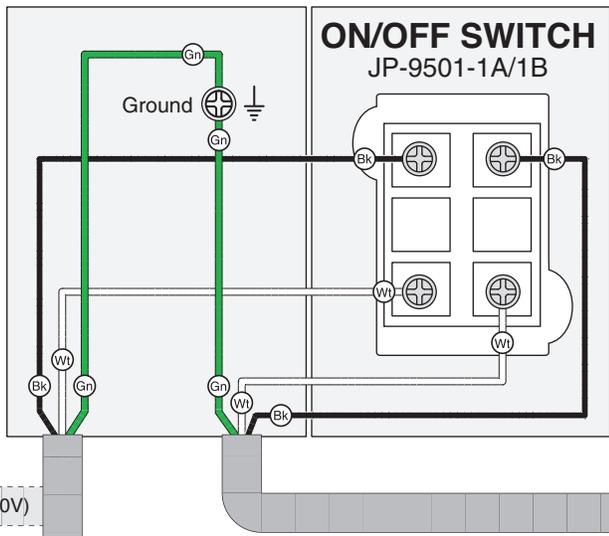
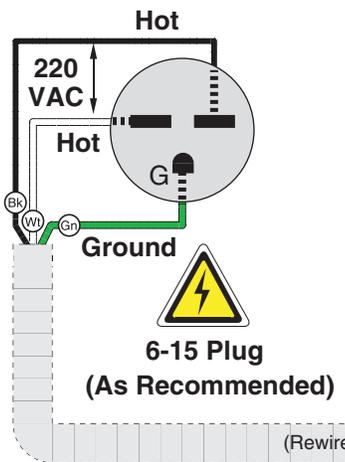
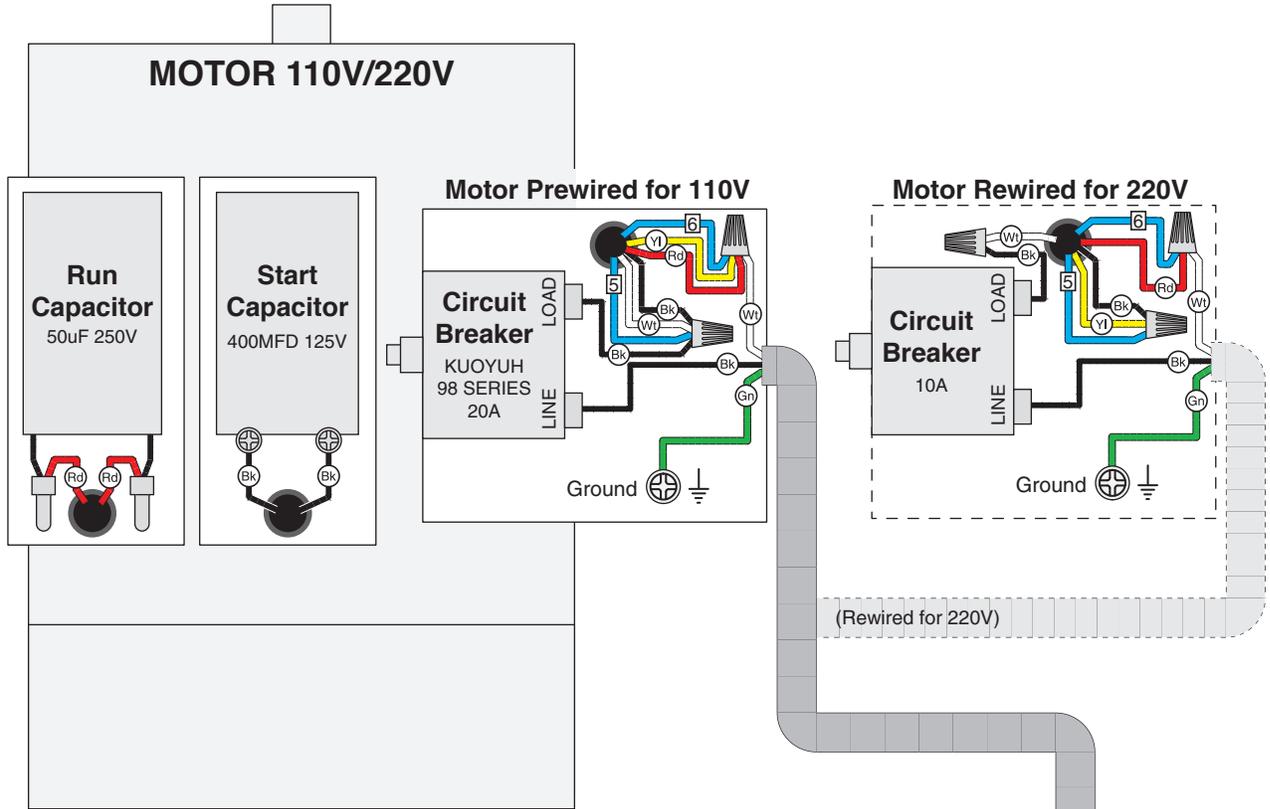
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

COLOR KEY

BLACK 	BLUE 	YELLOW 	LIGHT BLUE 
WHITE 	BROWN 	YELLOW GREEN 	BLUE WHITE 
GREEN 	GRAY 	PURPLE 	TURQUOISE 
RED 	ORANGE 	PINK 	



Wiring Diagram



⚠️ WARNING!
SHOCK HAZARD!
Disconnect power
before working on
wiring.

Electrical Component Photos



Figure 115. Motor junction box wiring (110V shown).



Figure 117. Capacitor wiring.

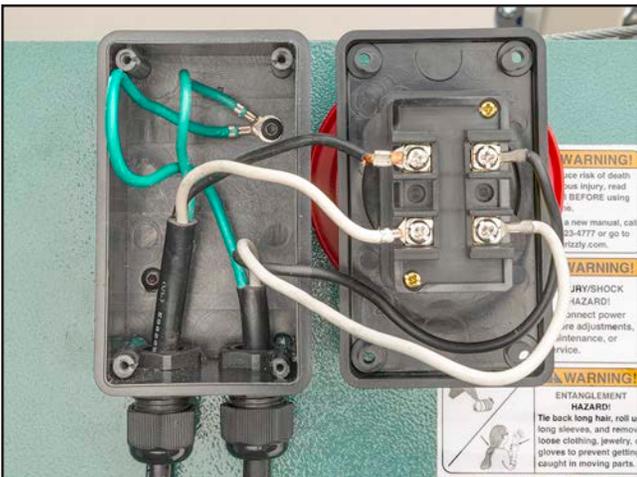
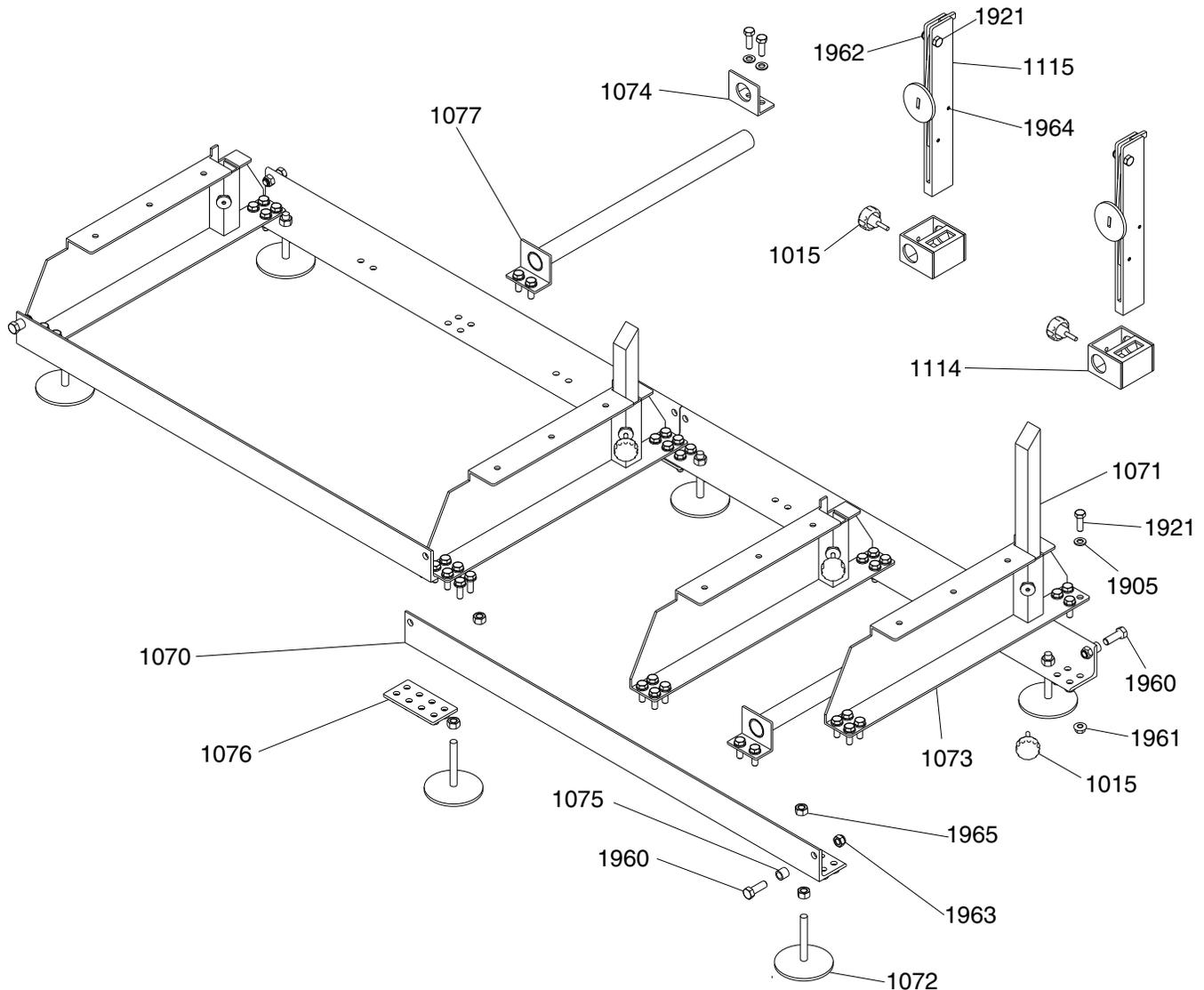


Figure 116. ON/OFF switch wiring.

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.

Track

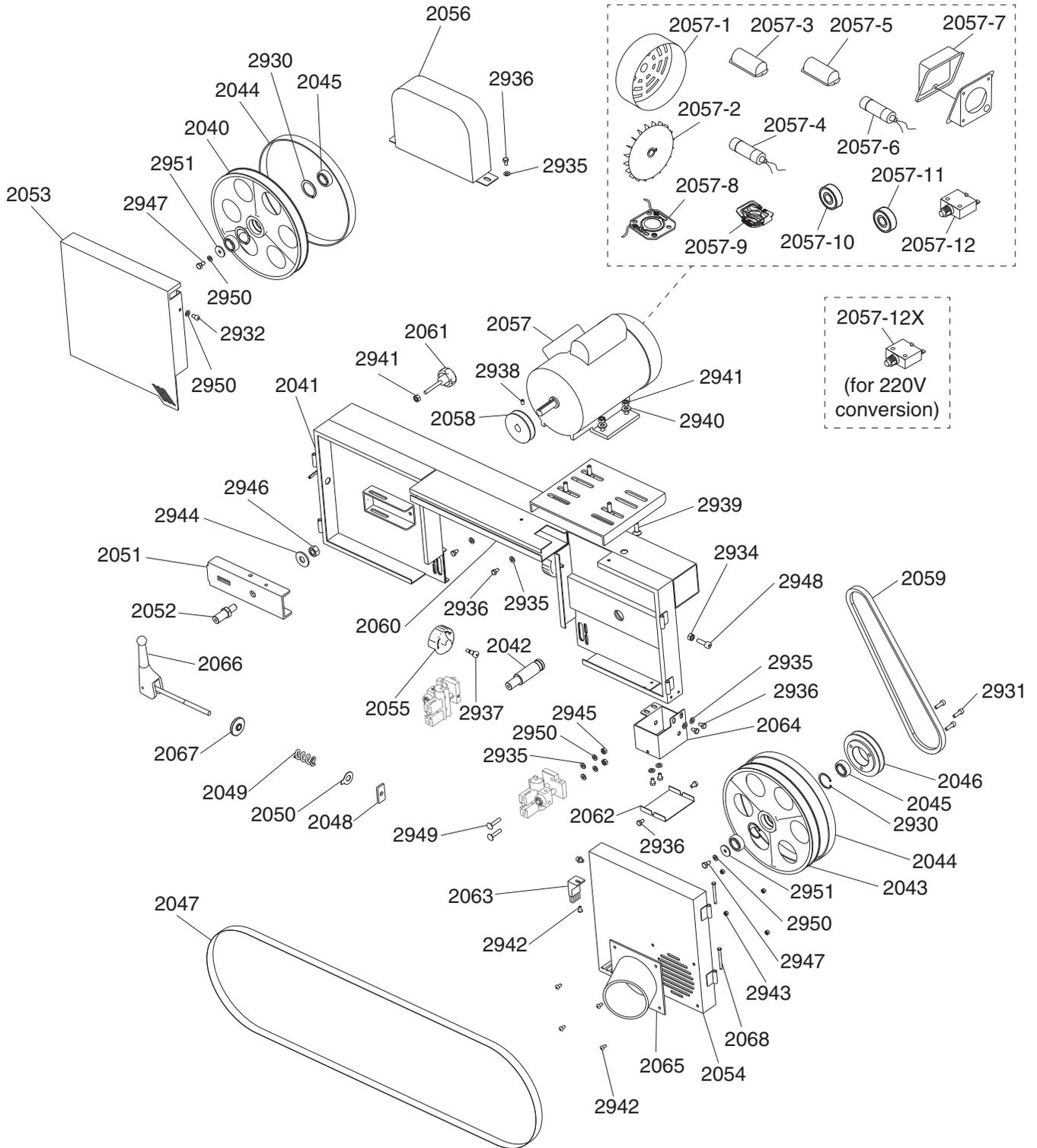


REF	PART #	DESCRIPTION
1015	P09601015	KNOB BOLT 5/16-18 X 5/8, 12-LOBE, D39
1070	P09601070	TRACK RAIL
1071	P09601071	LOG SUPPORT
1072	P09601072	FOOT 1/2-13 X 4
1073	P09601073	LOG BUNK
1074	P09601074	LOG CLAMP SHAFT BRACKET
1075	P09601075	SPACER 12 X 17 X 15MM
1076	P09601076	RAIL BRACKET
1077	P09601077	LOG CLAMP SHAFT
1114	P09601114	LOG CLAMP RECEIVER

REF	PART #	DESCRIPTION
1115	P09601115	LOG CLAMP
1905	P09601905	FLAT WASHER 3/8
1921	P09601921	HEX BOLT M10-1.5 X 30
1960	P09601960	HEX BOLT M12-1.75 X 35
1961	P09601961	FLANGE NUT M10-1.5
1962	P09601962	LOCK NUT M10-1.5
1963	P09601963	LOCK NUT M12-1.75
1964	P09601964	ROLL PIN 6 X 18
1965	P09601965	HEX NUT 1/2-12



Saw Head



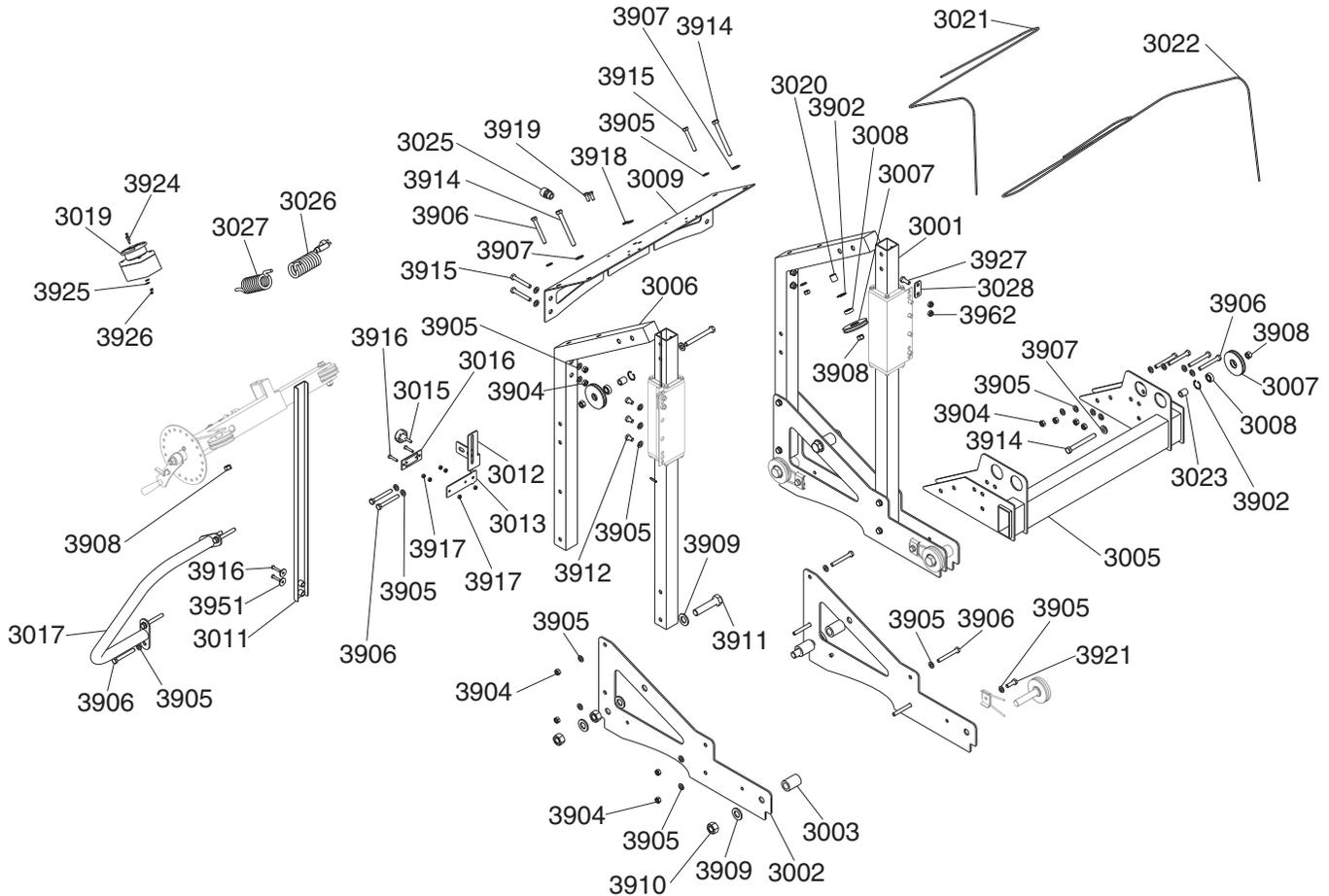
Saw Head Parts List

REF	PART #	DESCRIPTION
2040	P09602040	WHEEL (LEFT)
2041	P09602041	BODY
2042	P09602042	WHEEL SHAFT (RIGHT)
2043	P09602043	WHEEL (RIGHT)
2044	P09602044	TIRE (RUBBER)
2045	P09602045	BALL BEARING 6003ZZ
2046	P09602046	WHEEL PULLEY
2047	P09602047	SAW BLADE 84-7/16 X 3/4 X 0.025 X 3 TPI
2048	P09602048	TENSION NUT 3/8-16
2049	P09602049	COMPRESSION SPRING 5 X 24 X 50
2050	P09602050	BLADE TENSION POINTER
2051	P09602051	WHEEL BRACKET (LEFT)
2052	P09602052	WHEEL SHAFT (LEFT)
2053	P09602053	WHEEL DOOR (LEFT)
2054	P09602054	WHEEL DOOR (RIGHT)
2055	P09602055	WHEEL DOOR LOCK KNOB
2056	P09602056	PULLEY COVER
2057	P09602057	MOTOR 2HP 110V 1-PH
2057-1	P09602057-1	MOTOR FAN COVER
2057-2	P09602057-2	MOTOR FAN
2057-3	P09602057-3	R CAPACITOR COVER
2057-4	P09602057-4	R CAPACITOR 50M 250V 1-9/16 X 2-3/4
2057-5	P09602057-5	S CAPACITOR COVER
2057-6	P09602057-6	S CAPACITOR 400M 125V 1-3/4 X 3-3/8
2057-7	P09602057-7	JUNCTION BOX
2057-8	P09602057-8	CONTACT PLATE 27 X 69 INT, CPT 6MM
2057-9	P09602057-9	CENTRIFUGAL SWITCH 3/4 1720
2057-10	P09602057-10	BALL BEARING 6205-2RS (FRONT)
2057-11	P09602057-11	BALL BEARING 6203-2RS (REAR)
2057-12	P09602057-12	CIRCUIT BREAKER KUOYUH 98 20A 110V
2057-12X	P09602057-12X	CIRCUIT BREAKER KUOYUH 88 10A 220V
2058	P09602058	MOTOR PULLEY

REF	PART #	DESCRIPTION
2059	P09602059	V-BELT A33
2060	P09602060	BLADE COVER
2061	P09602061	KNOB BOLT 5/16-18 X 2, 12-LOBE, D40
2062	P09602062	DUST PORT COVER (SQUARE)
2063	P09602063	BRUSH
2064	P09602064	DUST PORT (SQUARE)
2065	P09602065	DUST PORT 4"
2066	P09602066	TENSION LEVER
2067	P09602067	FLAT WASHER 10 X 40 X 5
2068	P09602068	HINGE PIN
2930	P09602930	INT RETAINING RING 35MM
2931	P09602931	CAP SCREW M6-1 X 20
2932	P09602932	CAP SCREW 1/4-20 X 3/8
2934	P09602934	HEX NUT M8-1.25
2935	P09602935	FLAT WASHER 1/4
2936	P09602936	HEX BOLT M6-1 X 10
2937	P09602937	SHOULDER SCREW M6-1 X 5, 7 X 362
2938	P09602938	SET SCREW 1/4-20 X 3/8
2939	P09602939	CARRIAGE BOLT 5/16-18 X 1
2940	P09602940	FLAT WASHER 5/16
2941	P09602941	HEX NUT 5/16-18
2942	P09602942	BUTTON HD CAP SCR M5-.8 X 10
2943	P09602943	HEX NUT M5-.8
2944	P09602944	FLAT WASHER 1/2
2945	P09602945	HEX NUT 1/4-20
2946	P09602946	LOCK NUT 1/2-12
2947	P09602947	HEX BOLT 1/4-20 X 1/2
2948	P09602948	CAP SCREW M8-1.25 X 25
2949	P09602949	CARRIAGE BOLT 1/4-20 X 1-1/4
2950	P09602950	LOCK WASHER 1/4
2951	P09602951	FLAT WASHER 1/4



Carriage

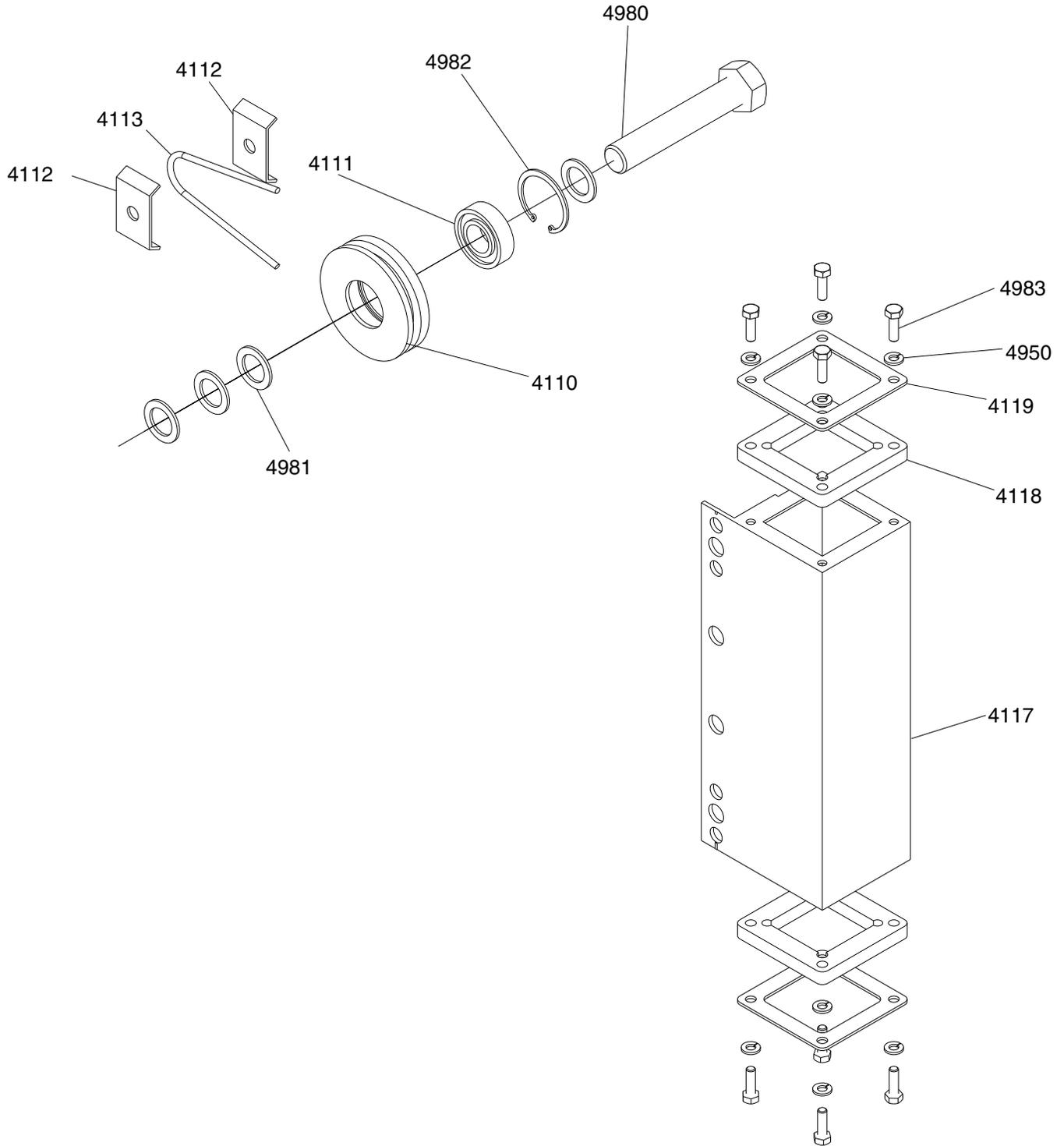


REF	PART #	DESCRIPTION
3001	P09603001	FRONT POST
3002	P09603002	CARRIAGE LEG SLIDE PLATE
3003	P09603003	SPACER
3005	P09603005	CROSS BEAM
3006	P09603006	REAR POST
3007	P09603007	CABLE PULLEY
3008	P09603008	BALL BEARING 6001-2RS
3009	P09603009	SWITCH PANEL
3011	P09603011	SCALE
3012	P09603012	SCALE CALIBRATION BRACKET
3013	P09603013	SCALE BACKING BRACKET
3015	P09603015	KNOB BOLT 5/16-18 X 5/8, 12-LOBE, D39
3016	P09603016	SCALE INDICATOR
3017	P09603017	PUSH HANDLE
3019	P09603019	ON/OFF SWITCH JP-9501-1A/1B
3020	P09603020	SPACER 12 X 19 X 19.5
3021	P09603021	LIFT CABLE A 77"
3022	P09603022	LIFT CABLE B 106"
3023	P09603023	SPACER 12 X 19 X 23
3025	P09603025	STRAIN RELIEF TYPE-3 PG13.5
3026	P09603026	POWER CORD 14G 3W 70" 5-15P
3027	P09603027	MOTOR CORD 14G 3W 45"
3028	P09603028	PLATE

REF	PART #	DESCRIPTION
3902	P09603902	INT RETAINING RING 28MM
3904	P09603904	HEX NUT M10-1.5
3905	P09603905	FLAT WASHER 3/8
3906	P09603906	HEX BOLT M10-1.5 X 80
3907	P09603907	FLAT WASHER 1/2
3908	P09603908	HEX NUT M12-1.75
3909	P09603909	FLAT WASHER 3/4
3910	P09603910	HEX NUT M20-2.5
3911	P09603911	HEX BOLT M20-2.5 X 90
3912	P09603912	HEX BOLT M10-1.5 X 16
3914	P09603914	HEX BOLT M12-1.75 X 110
3915	P09603915	HEX BOLT M10-1.5 X 70
3916	P09603916	HEX BOLT M6-1 X 30
3917	P09603917	HEX NUT M6-1
3918	P09603918	FLAT WASHER 5/16
3919	P09603919	HEX BOLT M8-1.25 X 20
3921	P09603921	HEX BOLT M10-1.5 X 30
3924	P09603924	BUTTON HD CAP SCR M4-.7 X 20
3925	P09603925	FLAT WASHER #10
3926	P09603926	HEX NUT M4-.7
3927	P09603927	HEX BOLT M10-1.5 X 25
3951	P09603951	FLAT WASHER 1/4
3962	P09603962	LOCK NUT M10-1.5



Carriage Leg Roller & Post Sleeve

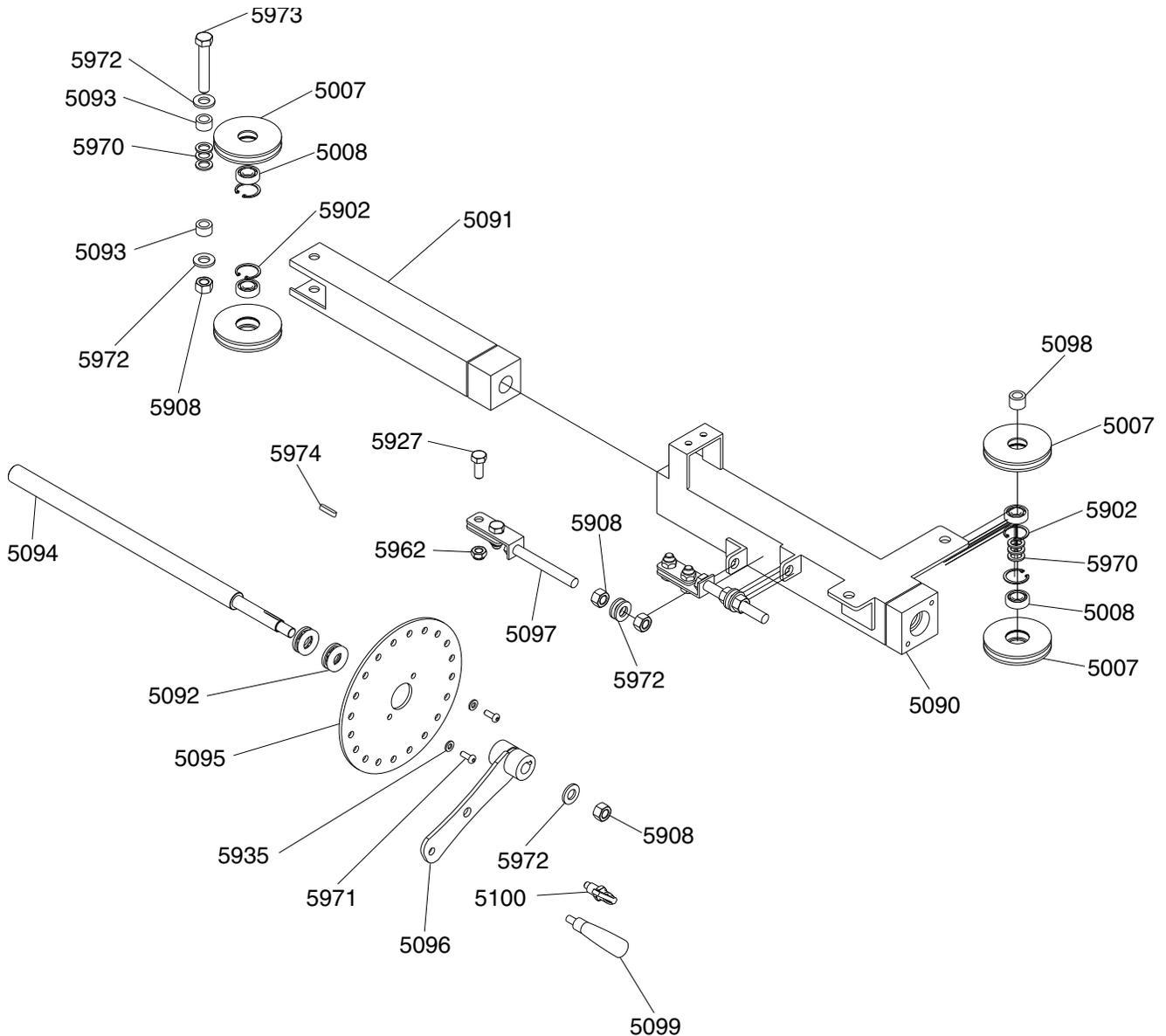


REF	PART #	DESCRIPTION
4110	P09604110	TRACK ROLLER
4111	P09604111	BALL BEARING 6004-2RS
4112	P09604112	WHEEL SWEEP BRACKET
4113	P09604113	SWEEP CABLE 250MM
4117	P09604117	POST SLEEVE
4118	P09604118	SPACER (NYLON)

REF	PART #	DESCRIPTION
4119	P09604119	LOCKING PLATE
41950	P09604950	LOCK WASHER 1/4
41980	P09604980	HEX BOLT M20-2.5 X 90
41981	P09604981	FLAT WASHER 3/4
41982	P09604982	INT RETAINING RING 42MM
41983	P09604983	HEX BOLT M6-1 X 20



Lift Assembly

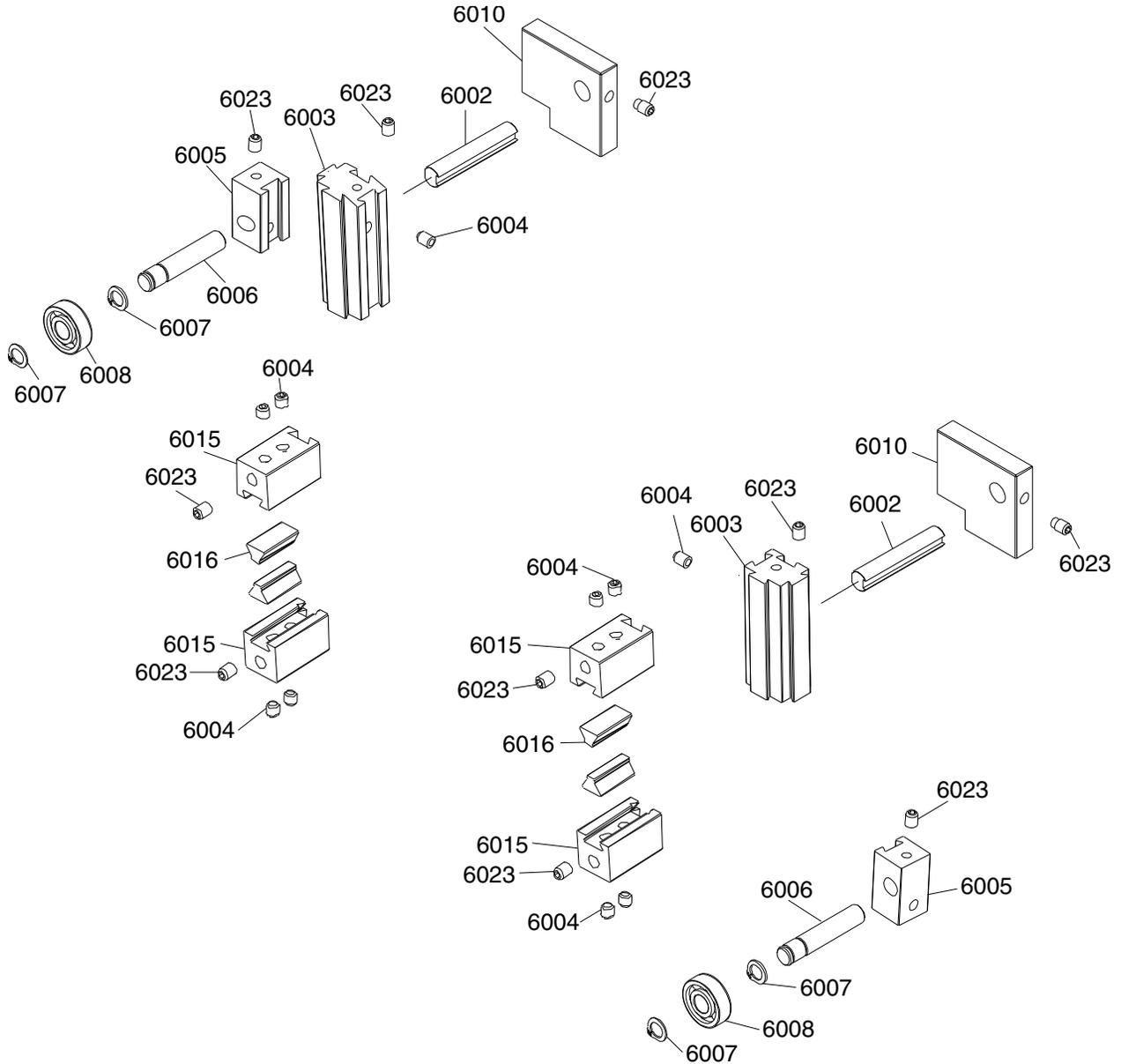


REF	PART #	DESCRIPTION
5007	P09605007	CABLE PULLEY
5008	P09605008	BALL BEARING 6001-2RS
5090	P09605090	LIFT HOUSING
5091	P09605091	LIFT EXTENSION ARM
5092	P09605092	THRUST BEARING 51202
5093	P09605093	SPACER
5094	P09605094	LIFT SHAFT
5095	P09605095	LIFT HANDWHEEL
5096	P09605096	CRANK
5097	P09605097	CABLE HOOK
5098	P09605098	SPACER
5099	P09605099	FIXED HANDLE 22 X 80, M10-1.5 X 14

REF	PART #	DESCRIPTION
5100	P09605100	INDEX PLUNGER
5902	P09605902	INT RETAINING RING 28MM
5908	P09605908	HEX NUT M12-1.75
5927	P09605927	HEX BOLT M10-1.5 X 25
5935	P09605935	FLAT WASHER 1/4
5962	P09605962	LOCK NUT M10-1.5
5970	P09605970	FLAT WASHER 1/2
5971	P09605971	BUTTON HD CAP SCR M6-1 X 16
5972	P09605972	FLAT WASHER 1/2
5973	P09605973	HEX BOLT M12-1.75 X 80
5974	P09605974	KEY 5 X 5 X 15 RE



Blade Guides



REF	PART #	DESCRIPTION
6002	P09606002	GUIDE ASSEMBLY SHAFT
6003	P09606003	DOVETAIL BLOCK
6004	P09606004	SET SCREW 1/4-20 X 1/4
6005	P09606005	BEARING SLIDING BLOCK
6006	P09606006	BEARING SHAFT
6007	P09606007	EXT RETAINING RING 10MM

REF	PART #	DESCRIPTION
6008	P09606008	BALL BEARING 6001-2RS
6010	P09606010	BASE
6015	P09606015	GUIDE BLOCK
6016	P09606016	CERAMIC GUIDE
6023	P09606023	SET SCREW 1/4-20 X 1/2



Labels & Cosmetics (Front)

grizzly.com

7006

Grizzly Industrial
MODEL G0960
MINI SAWMILL PRO

Specifications

Motor: 2 HP, 110V/220V, 1-Ph, 60 Hz
Power/Voltage: 110V
Full-Load Current Rating at 110V: 14A
Full-Load Current Rating at 220V: 7A
Maximum Log Length: 53-5/8"
Min/Max Log Diameter: 4"-13"
Maximum Width of Cut: 17"
Maximum Depth of Cut: 6-1/2"
Minimum Height Above Bed: 31-1/4"
Blade: 84-7/16" x 3/4" x 0.025"
Blade Speed: 2000 FPM
Weight: 430 lbs.

WARNING!
To reduce risk of serious personal injury when using this machine:
1. Read and understand owner's manual before operating.
2. Never touch moving blade and always keep hands out of blade path.
3. Always wear approved eye protection and a respirator.
4. Only plug power cord into a grounded outlet.
5. Only remove lumber and scrap from track bed when blade is stopped.
6. Always turn motor OFF and disconnect power before changing blades, making adjustments, or servicing.
7. Maintain proper adjustment of blade tension, tracking, and guides.
8. Secure workpiece firmly to track bed with log supports and cleave while cutting.
9. Only run machine with wheel covers closed and all guards in place.
10. DO NOT wear loose clothing, gloves, jewelry, or other articles that can get entangled. Tie back long hair and roll up sleeves.
11. DO NOT operate under influence of drugs or alcohol, or if tired.
12. Prevent unauthorized use by children or untrained users, restrict access or disable machine when unattended.



7007

7001

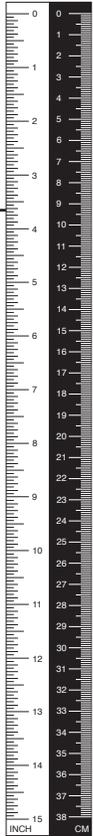
7003

WARNING!
To reduce risk of death or serious injury, read manual BEFORE using machine.
To get a new manual, call (800) 523-4777 or go to www.grizzly.com

WARNING!
HAZARD!
Disconnect power before adjustments, maintenance, or service.

WARNING!
HAZARD!
The back long hair, roll up long sleeves, and remove loose clothing, jewelry or gloves to prevent getting caught in moving parts.

WARNING!
EYE/EAR INJURY HAZARD!
Always wear safety glasses and a respirator when using this machine.



7004

DOWN

EACH NOTCH EQUALS 0.01"

UP

ONE FULL REVOLUTION IS 0.2"

REF	PART #	DESCRIPTION
7001	P09607001	GRIZZLY.COM LABEL
7002	P09607002	SCALE LABEL
7003	P09607003	COMBO WARNING LABEL
7004	P09607004	HEIGHT UP/DOWN LABEL

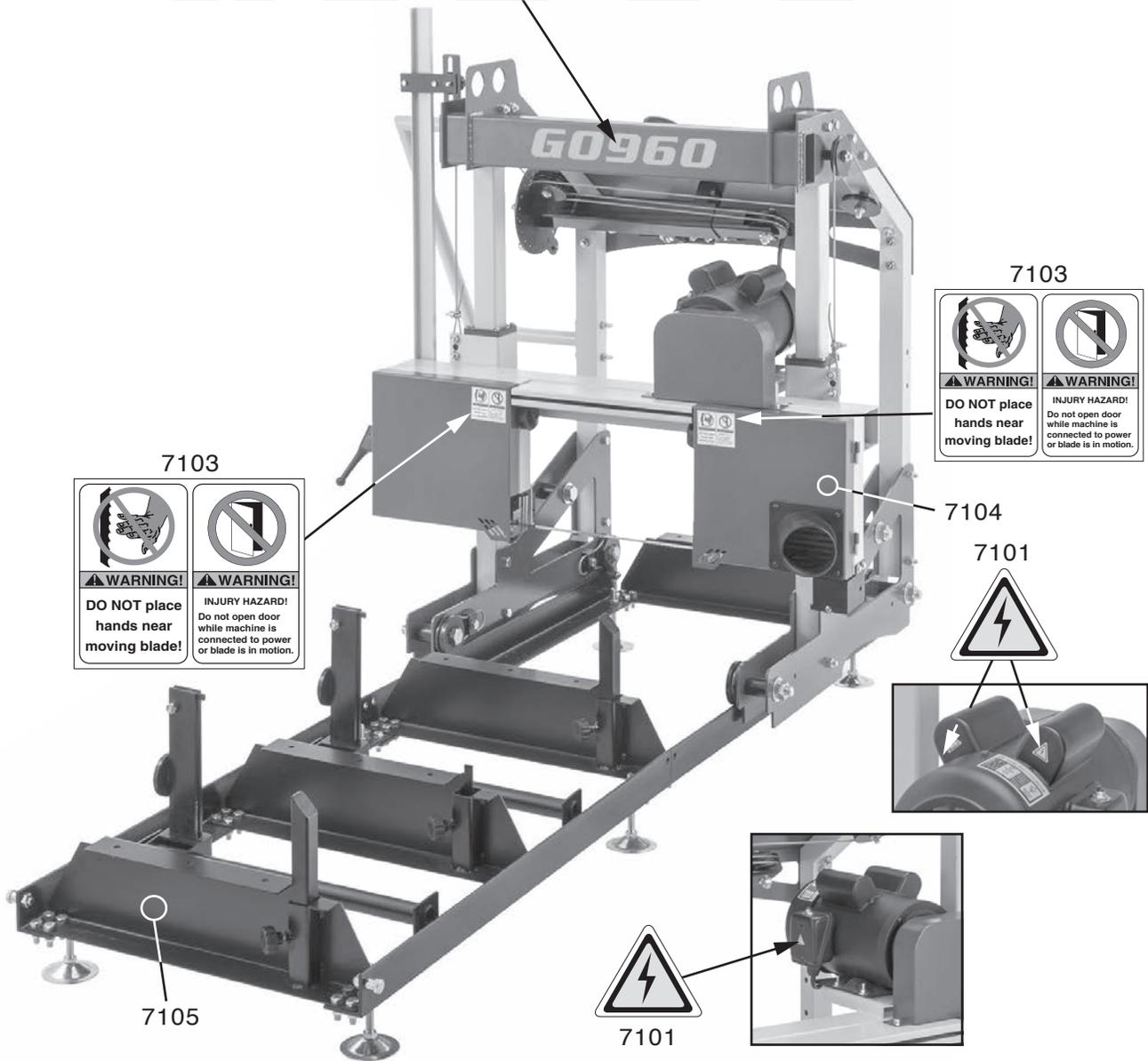
REF	PART #	DESCRIPTION
7005	P09607005	ELECTRICITY LABEL
7006	P09607006	MACHINE ID LABEL
7007	P09607007	TOUCH-UP PAINT, GRIZZLY BEIGE



Labels & Cosmetics (Rear)

7102

G0960



REF	PART #	DESCRIPTION
7101	P09607101	ELECTRICITY LABEL
7102	P09607102	MODEL NUMBER LABEL
7103	P09607103	BLADE WARNING LABEL

REF	PART #	DESCRIPTION
7104	P09607104	TOUCH-UP PAINT, GRIZZLY GREEN
7105	P09607105	TOUCH-UP PAINT, BLACK

⚠ WARNING

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or www.grizzly.com.







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.

For further information about the warranty, visit <https://www.grizzly.com/forms/warranty> or scan the QR code below to be automatically directed to our warranty page.



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