

## Horizontal Metal Bandsaw



# Operator's Manual

Record the serial number and date of purchase in your manual for future reference.

Serial Number: \_\_\_\_\_ Date of purchase: \_\_\_\_\_

For technical support or parts questions, email [techsupport@rikontools.com](mailto:techsupport@rikontools.com) or call toll free at (877)884-5167

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## SPECIFICATIONS

Motor .....	3/4 HP
Motor Speed (no load).....	1,720 RPM
Volts .....	120 V
Amps, Hertz, Phase .....	4.6 A, 60 Hz, 1Ph
Blade Length.....	64-1/2" (1638 mm)
Blade Speeds .....	80/120/180 FPM
Max Depth of Square Cut @ 90°.....	4" x 6" (101 x 152mm)
Max Depth of Square Cut @ 45°.....	2-3/4" (70mm)
Max Depth of Circular Cut @ 90°.....	4-1/2" (114mm)
Max Depth of Circular Cut @ 45°.....	2-3/4" (70mm)
Cutting Angle.....	0-45°
Horizontal Table Size (W x D) .....	9-5/8" x 9-3/8" (245 x 238 mm)
Horizontal Height .....	37-1/2" (953 mm)
Vertical Height .....	54" (1,372 mm)
Width .....	37-1/2" (953 mm)
Depth .....	18-1/4" (464 mm)
Net Weight .....	115lbs (52 kg)

**NOTE:** The specifications, photographs, drawings and information in this manual represent the current model when the manual was prepared. Changes and improvements may be made at any time, with no obligation on the part of Rikon Power Tools, Inc. to modify previously delivered units. Reasonable care has been taken to ensure that the information in this manual is correct, to provide you with the guidelines for the proper safety, assembly and operation of this machine.

# SAFETY INSTRUCTIONS

**IMPORTANT!** Safety is the single most important consideration in the operation of this equipment. **The following instructions must be followed at all times.** Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

There are certain applications for which this tool was designed. We strongly recommend that this tool not be modified and/or used for any other application other than that for which it was designed. If you have any questions about its application, do not use the tool until you have contacted us and we have advised you.

## SAFETY SYMBOLS



**SAFETY ALERT SYMBOL:** Indicates DANGER, WARNING, or CAUTION. This symbol may be used in conjunction with other symbols or pictographs.



Indicates an imminently hazardous situation, which, if not avoided, could 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, could result in minor or moderate injury.

**NOTICE:** Shown without Safety Alert Symbol indicates a situation that may result in property damage.

## GENERAL SAFETY

**KNOW YOUR POWER TOOL.** Read the owner's manual carefully. Learn the tool's applications, work capabilities, and its specific potential hazards.

### BEFORE USING YOUR MACHINE

To avoid serious injury and damage to the tool, read and follow all of the Safety and Operating Instructions before operating the machine.

1. Some dust created by using power tools 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.

2. **READ** the entire Owner's Manual. **LEARN** how to use the tool for its intended applications.

3. **GROUND ALL TOOLS.** If the tool is supplied with a 3 prong plug, it must be plugged into a 3-contact electrical receptacle. The 3rd prong is used to ground the tool and provide protection against accidental electric shock. **DO NOT** remove the 3rd prong. See Grounding Instructions on the following pages.

4. **AVOID A DANGEROUS WORKING ENVIRONMENT.** **DO NOT** use electrical tools in a damp environment or expose them to rain.

5. **DO NOT** use electrical tools in the presence of flammable liquids or gasses.

6. **ALWAYS** keep the work area clean, well lit, and organized. **DO NOT** work in an environment with floor surfaces that are slippery from debris, grease, and wax.

7. **KEEP VISITORS AND CHILDREN AWAY. DO NOT** permit people to be in the immediate work area, especially when the electrical tool is operating.

8. **DO NOT FORCE THE TOOL** to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the tool was intended.

9. **WEAR PROPER CLOTHING. DO NOT** wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. The user must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.

10. **CHILDPROOF THE WORKSHOP AREA** by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.

11. **ALWAYS UNPLUG THE TOOL FROM THE ELECTRICAL RECEPTACLE** when making adjustments, changing parts or performing any maintenance.

# SAFETY INSTRUCTIONS

**12. KEEP PROTECTIVE GUARDS IN PLACE AND IN WORKING ORDER.**

**13. AVOID ACCIDENTAL STARTING.** Make sure that the power switch is in the “OFF” position before plugging in the power cord to the electrical receptacle.

**14. REMOVE ALL MAINTENANCE TOOLS** from the immediate area prior to turning “ON” the machine.

**15. USE ONLY RECOMMENDED ACCESSORIES.** Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the tool. If in doubt, check the instruction manual that comes with that particular accessory.

**16. NEVER LEAVE A RUNNING TOOL UNATTENDED.** Turn the power switch to the “OFF” position. **DO NOT** leave the tool until it has come to a complete stop.

**17. DO NOT STAND ON A TOOL.** Serious injury could result if the tool tips over, or you accidentally contact the tool.

**18. DO NOT** store anything above or near the tool where anyone might try to stand on the tool to reach it.

**19. MAINTAIN YOUR BALANCE. DO NOT** extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.

**20. MAINTAIN TOOLS WITH CARE.** Always keep tools clean and in good working order. Keep all blades and tool bits sharp, dress grinding wheels and change other abrasive accessories when worn.

**21. EACH AND EVERY TIME, CHECK FOR DAMAGED PARTS PRIOR TO USING THE TOOL.** Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions. Check for alignment, binding or breaking of moving parts. A guard or other part that is damaged should be immediately repaired or replaced.

**22. DO NOT OPERATE TOOL WHILE TIRED, OR UNDER THE INFLUENCE OF DRUGS, MEDICATION OR ALCOHOL.**

**23. SECURE ALL WORK.** Use clamps or jigs to secure the work piece. This is safer than attempting to hold the work piece with your hands.

**24. STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL.**

A moment of inattention while operating power tools may result in serious personal injury.

**25. ALWAYS WEAR A DUST MASK TO PREVENT INHALING DANGEROUS DUST OR AIRBORNE PARTICLES,** including wood dust, crystalline silica dust and asbestos dust. Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

**26. USE A PROPER EXTENSION CORD IN GOOD CONDITION.** When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. The table on the following page shows the correct size to use depending on cord length and nameplate amperage rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the larger diameter of the extension cord. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.  
**USE ONLY A 3-WIRE EXTENSION CORD THAT HAS A 3-PRONG GROUNDING PLUG AND A 3-POLE RECEPTACLE THAT ACCEPTS THE TOOL’S PLUG.**

**27. ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from:

- Power Tool Institute  
1300 Summer Avenue  
Cleveland, OH 44115-2851  
[www.powertoolinstitute.org](http://www.powertoolinstitute.org)
- National Safety Council  
1121 Spring Lake Drive  
Itasca, IL 60143-3201  
[www.nsc.org](http://www.nsc.org)
- American National Standards Institute  
25 West 43rd Street, 4th Floor  
New York, NY 10036  
[www.ansi.org](http://www.ansi.org)
- ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor regulations  
[www.osha.gov](http://www.osha.gov)

**28. SAVE THESE INSTRUCTIONS.** Refer to them frequently and use them to instruct others.

# SAFETY INSTRUCTIONS

## ELECTRICAL SAFETY

**⚠ WARNING:** THIS TOOL IS PRE-WIRED FOR 120V CIRCUITS, AND MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

**IN THE EVENT OF A MALFUNCTION OR BREAKDOWN,** grounding provides the path of least resistance for electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and requires a grounding plug (not included). The plug **MUST** be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

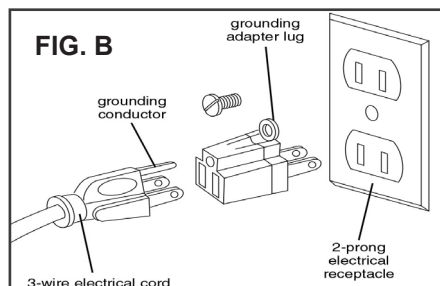
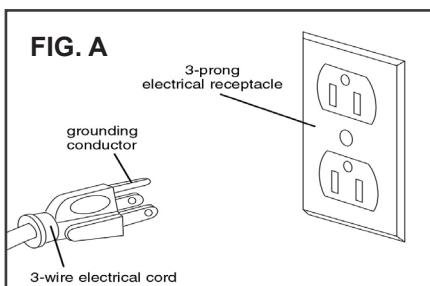
**DO NOT MODIFY ANY PLUG.** If it will not fit the electrical receptacle, have the proper electrical receptacle installed by a qualified electrician.

**IMPROPER ELECTRICAL CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. **DO NOT** connect the equipment grounding conductor to a live terminal if repair or replacement of the electric cord or plug is necessary.

**CHECK** with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded when installing or replacing a plug.

**USE ONLY A 3-WIRE EXTENSION CORD THAT HAS THE PROPER TYPE OF A 3-PRONG GROUNDING PLUG THAT MATCHES THE MACHINE'S 3-PRONG PLUG AND ALSO THE 3-POLE RECEPTACLE THAT ACCEPTS THE TOOL'S PLUG.** \* See Figures A and B.

**REPLACE A DAMAGED OR WORN CORD IMMEDIATELY.**



## EXTENSION CORDS

**⚠ WARNING:** THE USE OF AN EXTENSION CORD WITH THIS MACHINE IS NOT RECOMMENDED. For best power and safety, plug the machine directly into a dedicated, grounded electrical outlet that is within the supplied cord length of the machine.

If an extension cord needs to be used, it should only be for a limited operation of the machine. The extension cord should be as short as possible in length, and have a minimum gauge size of 14AWG.

**⚠ WARNING:** Check extension cords before each use. If damaged replace immediately. Never use a tool with a damaged cord, since touching the damaged area could cause electrical shock, and serious injury.

Use a proper extension cord. Only use cords listed by Underwriters Laboratories (UL). Other extension cords can cause a drop in line voltage, resulting in a loss of power and overheating of tool. When operating a power tool outdoors, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

### MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)

120 VOLT OPERATION ONLY				
	25' LONG	50' LONG	100' LONG	150' LONG
0 to 6 Amps	18 AWG	16 AWG	16 AWG	14 AWG
6 to 10 Amps	18 AWG	16 AWG	14 AWG	12 AWG
10 to 12 Amps	16 AWG	16 AWG	14 AWG	12 AWG

**⚠ WARNING:** Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with your power tool.

\* Canadian electrical codes require extension cords to be certified SJT type or better.

\*\* The use of an adapter in Canada is not acceptable.

# SAFETY INSTRUCTIONS

## SPECIFIC SAFETY INSTRUCTIONS FOR METAL CUTTING SAWS

This machine is intended for the cutting of metal material. The permissible workpiece dimensions must be observed (see Technical Specification). Any other use not as specified, including modification of the machine or use of parts not tested and approved by the equipment manufacturer, can cause unforeseen damage and invalidate the warranty.

**ATTENTION:** Use of this saw still presents risks that cannot be eliminated by the manufacturer. Therefore, the user must be aware that machines producing stone dust are dangerous if not used with care and all safety precautions are adhered to.

1. **READ** and become familiar with the entire Operator's Manual. **LEARN** the tool's application, limitations and possible hazards.
2. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
3. **ALWAYS SECURE WORK FIRMLY** to the saw with the use of the vise.
4. **ALWAYS WEAR EYE PROTECTION.** Wear goggles for protection against projected chips.
5. **USE GLOVES** when handling sharp metal.
6. **NEVER STAND** or have any part of your body in line with the path of the saw blade. Keep your hands out of the saw blade path.
7. **NEVER REACH** behind or over the cutting tool for any reason.
8. The machine must be switched off before inserting material to be cut in the vice or before removing material to be cut from the vice.
9. **NEVER** remove the cutting chips by hand. Use a brush at all times. **DO NOT** use compressed air.
10. **NEVER ATTEMPT TO FREE A STALLED SAW BLADE** without first turning the saw OFF. Turn power switch OFF immediately to prevent kickback and motor damage.
11. **PROVIDE ADEQUATE SUPPORT** to the front and rear of the saw for long workpieces.
12. **WEAR PROPER APPAREL.** Do not wear loose clothing, neckties, rings, bracelets, or other jewelry that may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
13. **AVOID AWKWARD OPERATIONS** and hand positions where a sudden slip could cause your hand to move into the saw blade.
14. **NEVER USE SOLVENTS** to clean plastic parts. Solvents could possibly dissolve or otherwise damage the material. Only a soft damp cloth should be used to clean plastic parts.
15. **DON'T FORCE THE TOOL.** It will do the job better and safer at the rate for which it was designed.
16. **DO NOT** use power tools in the presence of flammable liquids or gases.
17. **NEVER LEAVE THE SAW RUNNING UNATTENDED.** Do not leave the saw until blade comes to a complete stop.

**SAVE THESE INSTRUCTIONS.**  
Refer to them often.

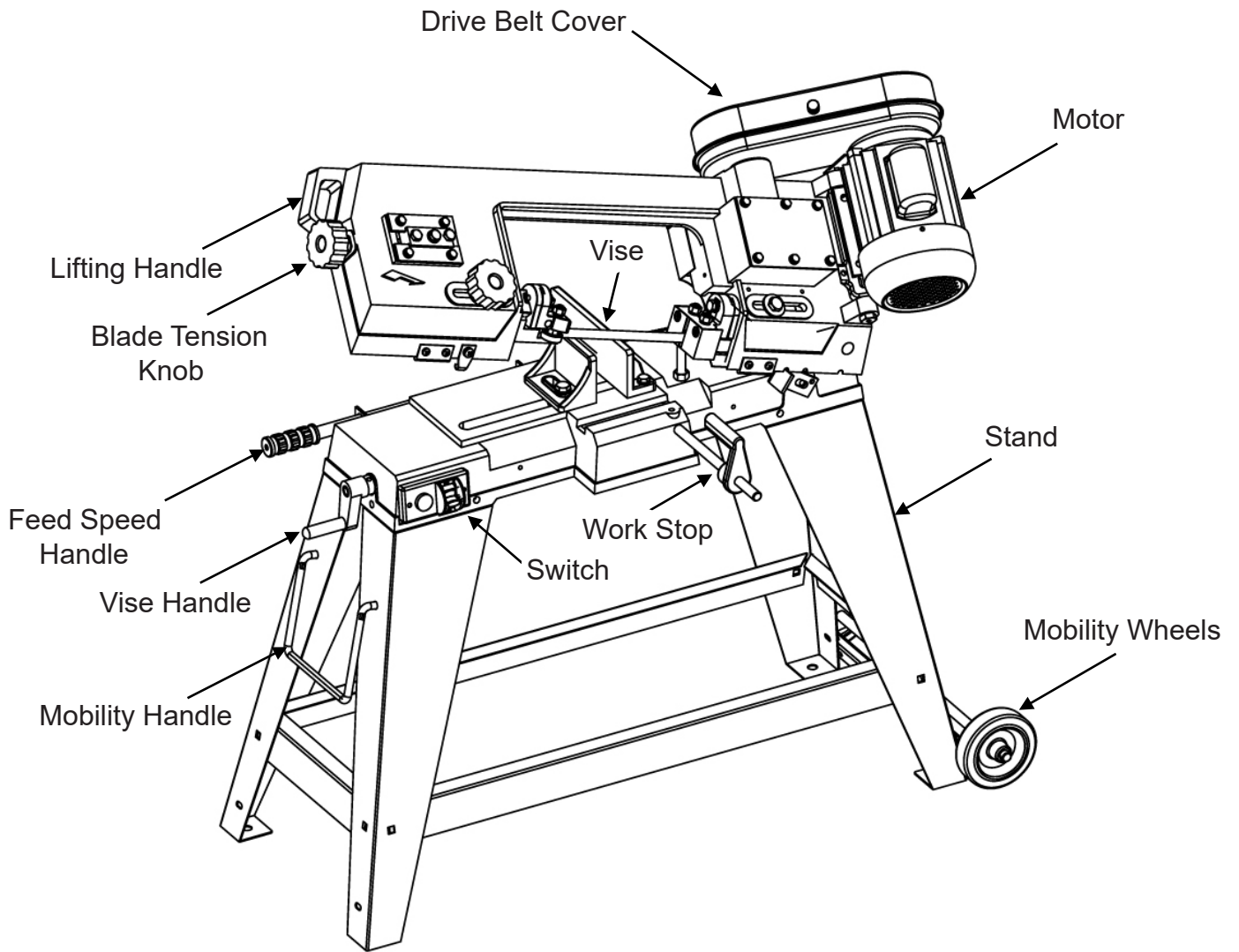
### California Proposition 65 Warning

**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 and birth defects or other reproductive harm. Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

For more detailed information about California Proposition 65 log onto [rikontools.com](http://rikontools.com).

**This owner's manual is not a teaching aid. Use of this owner's manual is intended to show assembly, adjustments, and general use.**

# GETTING TO KNOW YOUR METAL CUTTING SAW

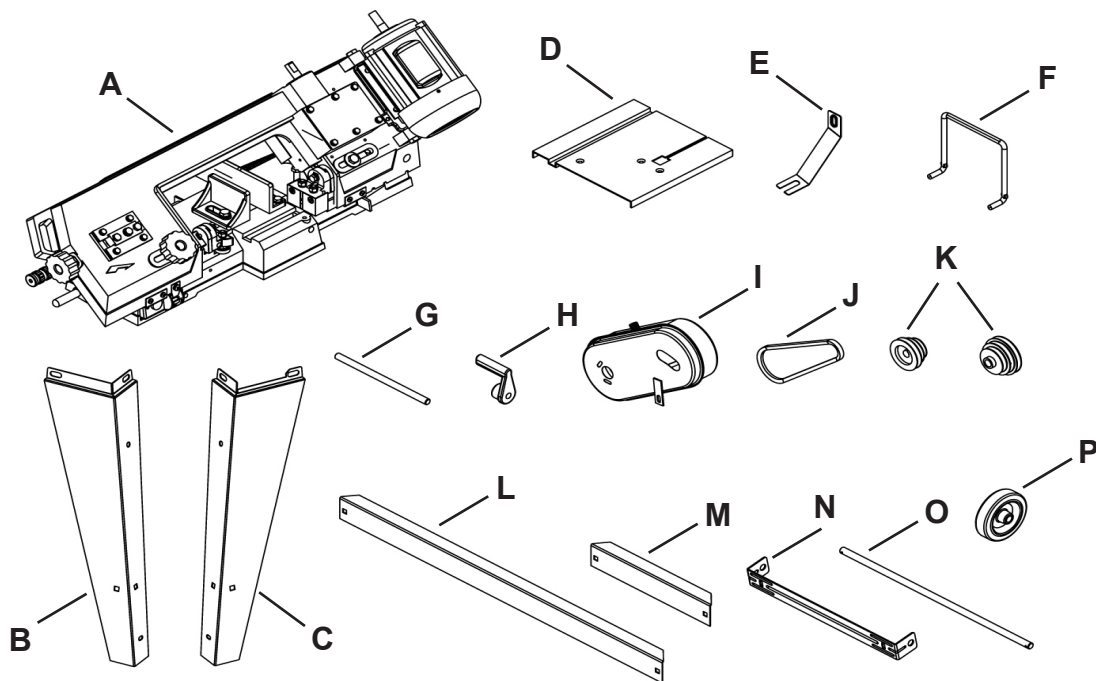


# CONTENTS OF PACKAGE

Model 15-400 4" x 6" Horizontal Metal Cutting Bandsaw is shipped complete in one box.

## Unpacking, Checking Contents & Clean-up

1. Carefully remove all contents from the shipping carton. Compare the contents with the list of contents to make sure that all of the items are accounted for, before discarding any packing material. Place parts on a protected surface for easy identification and assembly. If any parts are missing or broken, please call RIKON Customer Service (877-884-5167) as soon as possible for replacements. DO NOT turn your machine ON if any of these items are missing. You may cause injury to yourself or damage to the machine.
2. Report any shipping damage to your local distributor. Take photos for any insurance claims.
3. With the help of another person, carefully lift the saw from the packaging and place it on a level bench.
4. Clean all rust protected surfaces with ordinary house hold type grease or spot remover. Do not use; gasoline, paint thinner, mineral spirits, etc. These may damage painted surfaces.
5. Apply a coat of paste wax to the table to prevent rust. Wipe all parts thoroughly with a clean dry cloth.
6. Set packing material and shipping carton aside. Do not discard until the machine has been set up and is running properly.



## TABLE OF LOOSE PARTS

A. Bandsaw	E. Table Support	I. Drive Belt Housing	M. Short Brace
B. Stand Legs A	F. Mobility Handle	J. Drive Belt	N. Wheel Bracket
C. Stand Legs B	G. Work Stop Rod	K. Motor & Drive Pulleys	O. Wheel Shaft
D. Table	H. Work Stop	L. Long Brace	P. Wheels



# ASSEMBLY

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

## STAND ASSEMBLY

1. With the help of an assistant, lift the band saw onto a suitable support. Example: Figure 1.
2. Attach the legs to the band saw with M8-1.25 x 25 hex bolts, 8mm flat washers, 8mm lock washers, and M8-1.25 hex nuts.
3. Attach the short braces to the legs with M6-1.0 x 16 carriage bolts, 6mm flat washers, 6mm lock washers and M6-1.0 hex nuts.
4. Lift the band saw onto floor, attach the long braces to legs with the M6-1.0 x 16 carriage bolts, 6mm flat washers, 6mm lock washers and M6-1.0 hex nuts. Figure 2.
5. Use M6 x 12 hex bolts, M6 hex nuts, 6mm lock washers and 6mm flat washers to install the wheel mounting bracket to the legs. Figure 3.

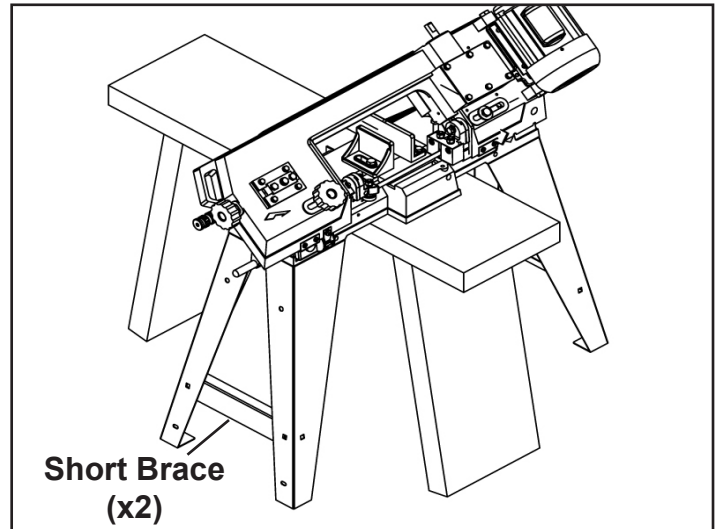


FIGURE 1

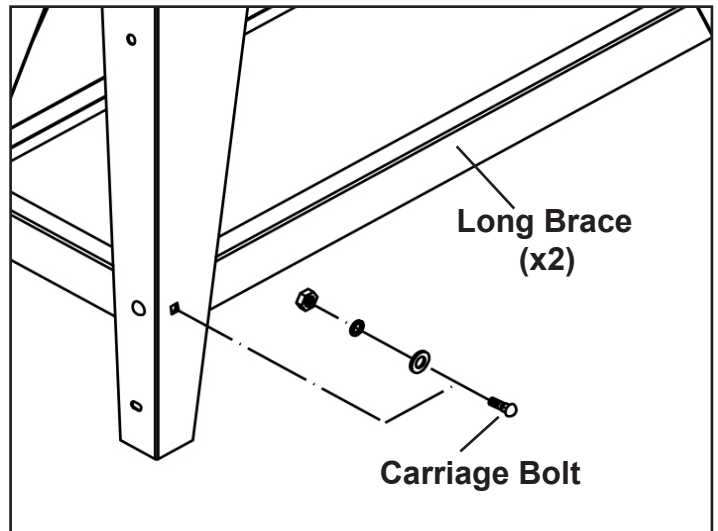


FIGURE 2

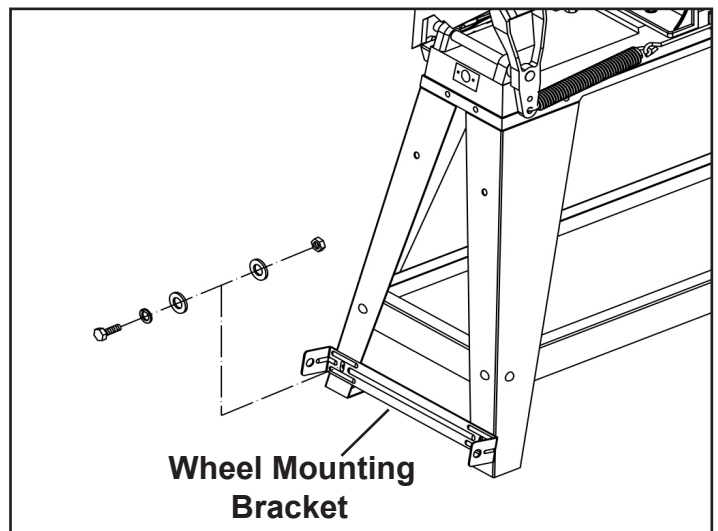


FIGURE 3

STAND ASSEMBLY Continued on page 10.

# ASSEMBLY

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

STAND ASSEMBLY *Continued from page 9.*

- Slide the shaft through the holes in the wheel mounting bracket. Slide the wheels onto the shaft on the outside of the mounting bracket, and secure them with the cotter pins. SEE Figure 4.
- On the opposite stand legs, insert the handle into the pre-drilled holes and secure it with cotter pins. SEE Figure 5.
- Check to see if the bandsaw is level and tighten all the stand nuts.

## INSTALLING THE BELT COVER

- Remove the pre installed screws and washers from the band saw near the gear shaft assembly. Place the belt house over the motor and gear shafts and secure it with the removed screws and washers. SEE Figures 6 & 7.

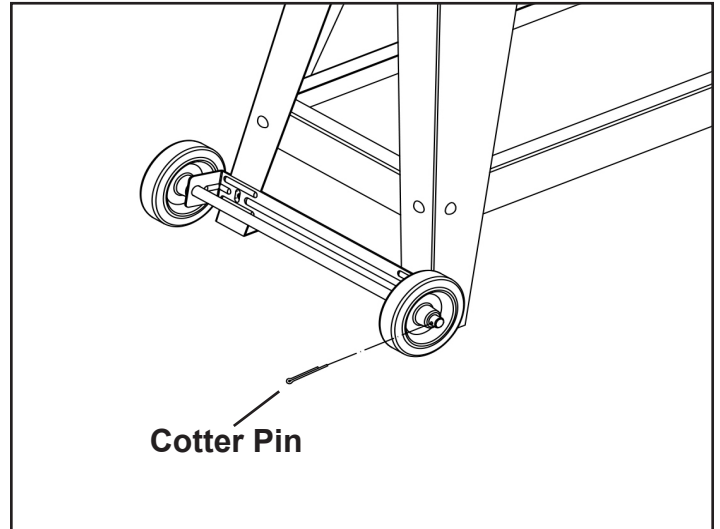


FIGURE 4

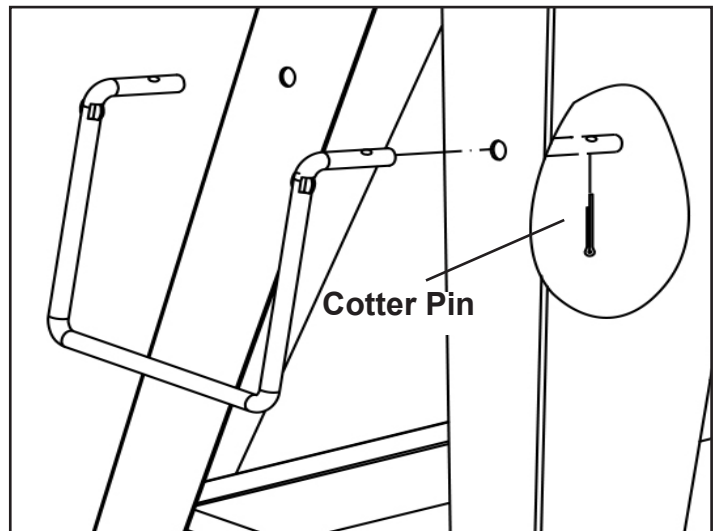


FIGURE 5

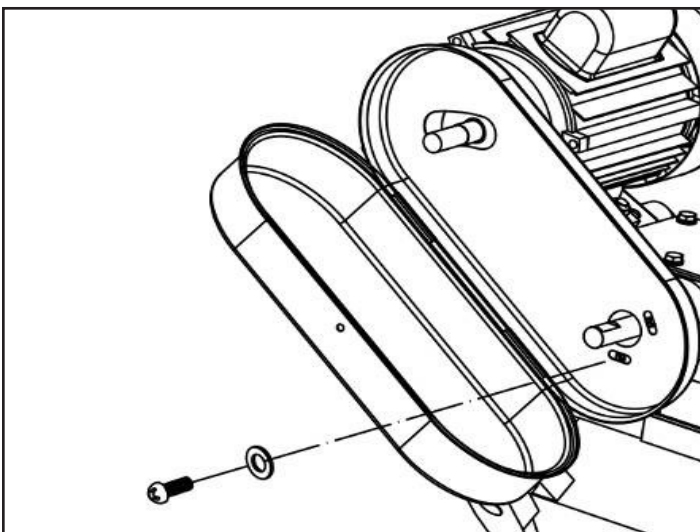


FIGURE 6

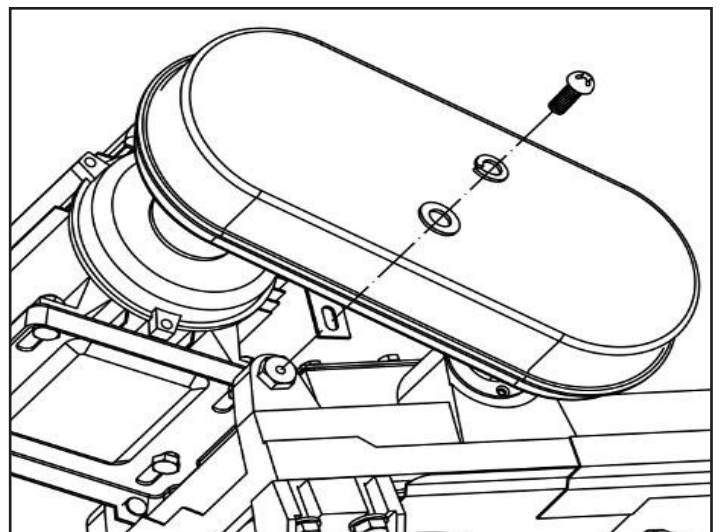


FIGURE 7

# ASSEMBLY

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

## MOTOR & DRIVE PULLEY INSTALLATION

1. Open the pulley cover and slide the motor pulley over the motor shaft. Make sure to engage the motor pulley to the shaft key. Largest pulley step is closest to the motor. SEE Figure 8.
2. Install the drive pulley on the shaft closest to the gear box. Smallest pulley step is facing downward. SEE Figure 8.
3. Use a straightedge to check the alignment of the pulley wheels, and adjust them as needed.
4. When the pulley wheels are aligned, tighten the set screws on both pulleys and install the V-belt.
5. After the V-belt is installed on the desired speed, adjust the tension with the drive belt tension bolt. SEE Figure 9.

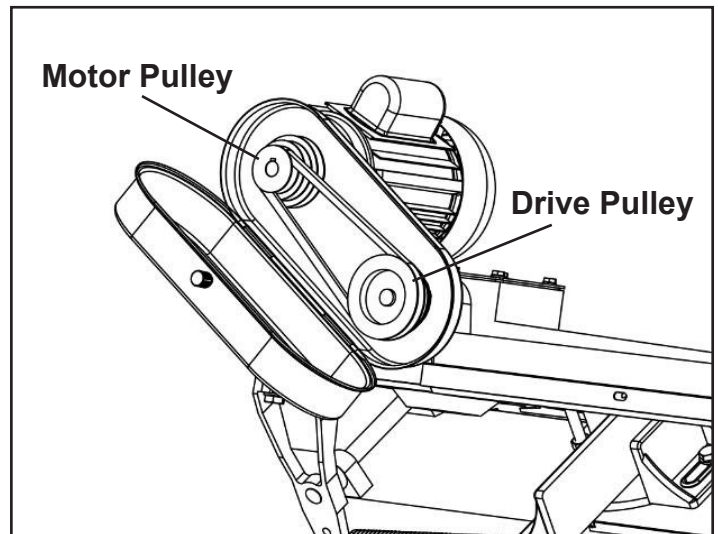


FIGURE 8

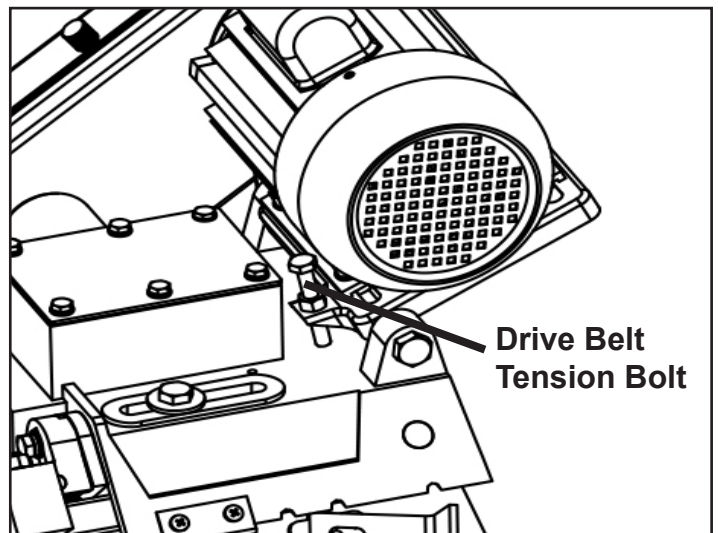


FIGURE 9

## WORK STOP INSTALLATION

1. Install the work stop shaft into the side of the band saw. Lock it in place by tightening the set screw (A-Fig.10).
2. Slide the work stop onto the end of the shaft and clamp it into position with the wing nut and hex head bolt. (B-Fig.10).

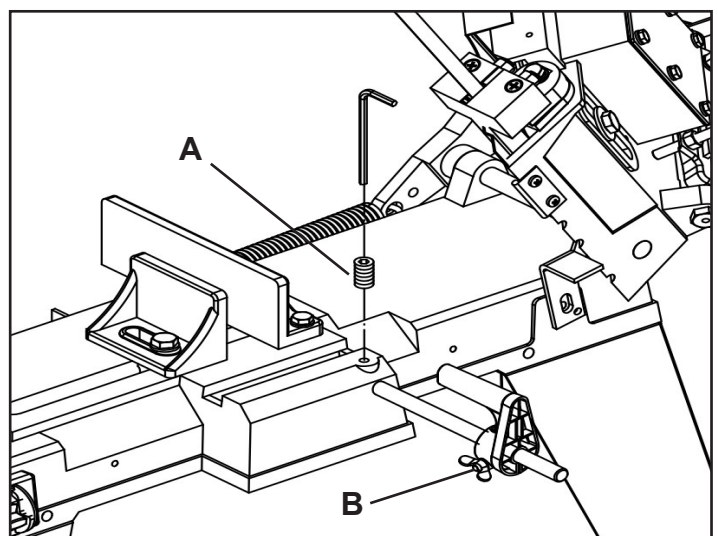


FIGURE 10

# ADJUSTMENTS

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

## VICE ADJUSTMENTS

### For Straight Cuts:

1. Loosen the two hex bolts on the fixed jaw (A-Fig. 11).
2. Position the fixed plate until it reads 0° on the scale (B-Fig.11) and tighten the two hex bolts.
3. Loosen the hex bolt on the slip jaw so the jaw can float (A-Fig. 12). Tighten the slip jaw against the workpiece by turning the vise handle. SEE Figure 13.
4. Tighten the hex bolt (A-Fig. 12) on the slip jaw before starting the cutting operation.

### For Angle Cuts:

1. Loosen the two hex bolts on the fixed jaw (A-Fig. 11).
2. Position the fixed plate until it reads the desired degree angle on the scale (B-Fig.11) and tighten the two hex bolts.
3. Loosen the hex bolt on the slip jaw so the jaw can float (A-Fig. 12). Match the angle of the workpiece. Tighten the slip jaw against the workpiece by turning the vise handle. SEE Figure 13.
4. Tighten the hex bolt (A-Fig. 12) on the slip jaw before starting the cutting operation.

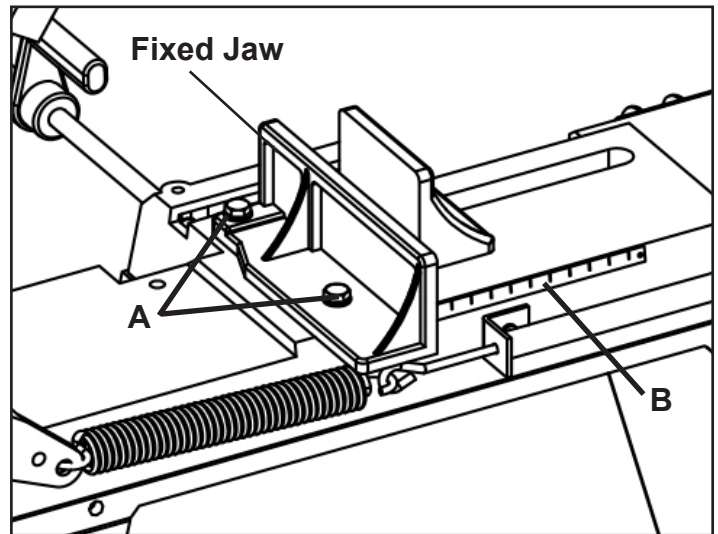


FIGURE 11

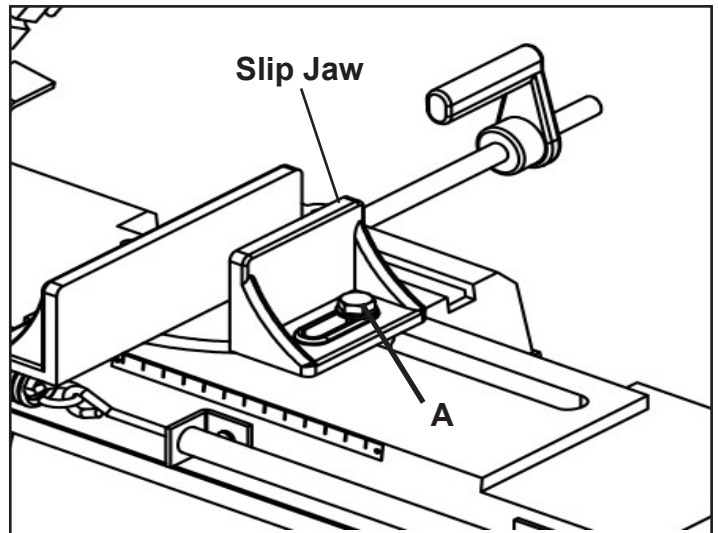


FIGURE 12

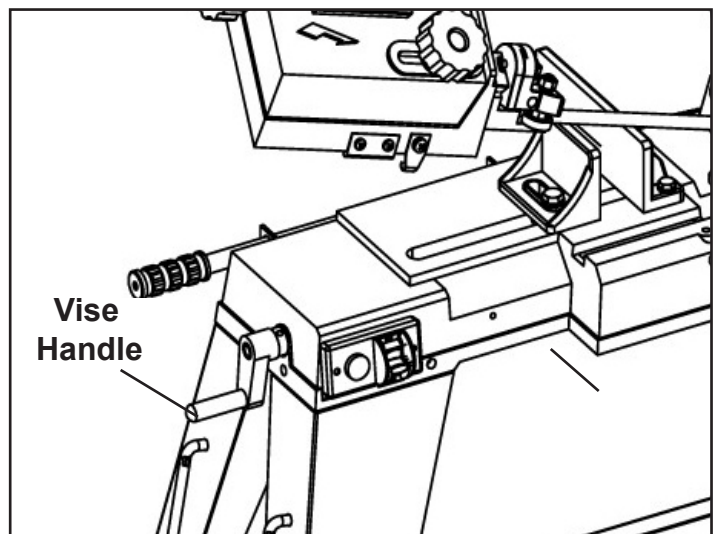


FIGURE 13

# ADJUSTMENTS

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

## ADJUSTING THE BLADE GUIDES

1. Loosen the guide post knob and slide the blade guide as close to the workpiece as possible. SEE Figure 14.
2. Re-tighten the guide post knob before starting the cutting operation.

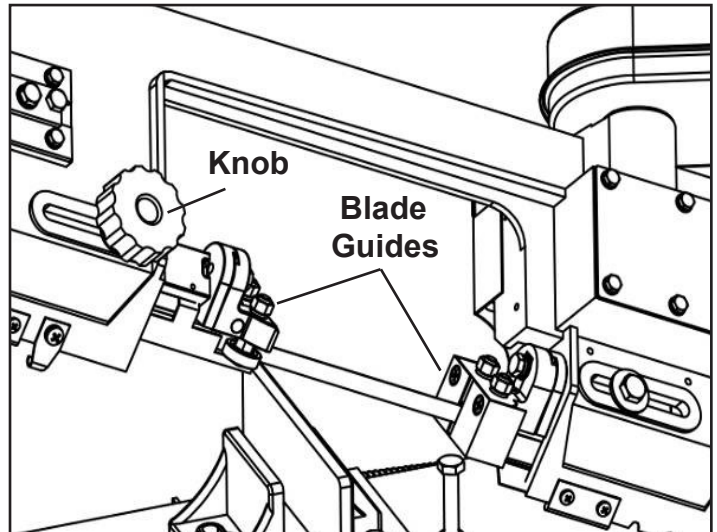


FIGURE 14

## FEED RATE ADJUSTMENT

The rate of descent (feed rate) of the main cutting arm is controlled by the feed speed handle. SEE Figure 15.

To adjust the feed rate:

Slower: Twist the handle clockwise to add tension to the spring.

Faster: Twist the handle counterclockwise to remove tension from the spring.

**NOTE:** Feed rate is one of the most important adjustments on the saw. Incorrect feed rate can result in poor performance including crooked cuts, tooth stripping, motor stalling and the blade coming off the blade wheels.

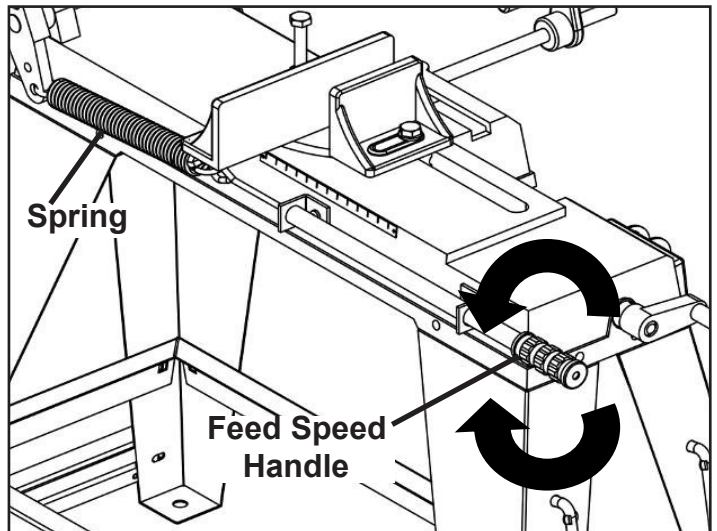


FIGURE 15

## CHANGING BLADE SPEED

Blade speed selection is another important adjustment needed to ensure optimal cutting performance. Similar to correct feed rate above, incorrect blade speed selection can result in poor performance including crooked cuts, tooth stripping, motor stalling and the blade coming off the blade wheels. SEE Figure 16: **Blade Speed Chart**.

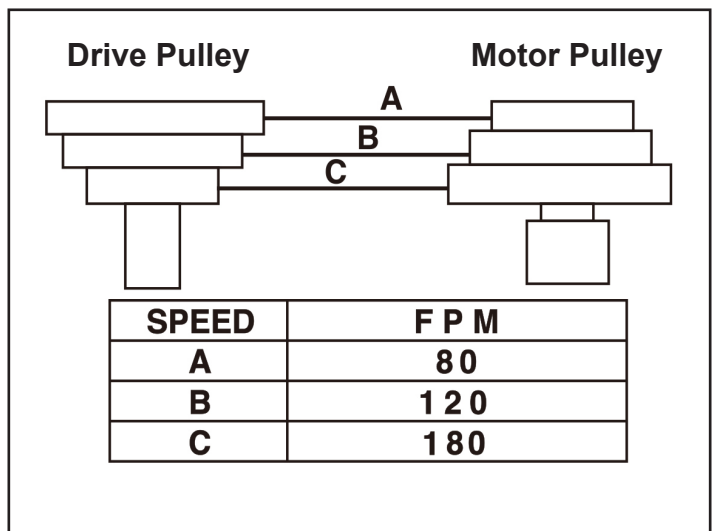


FIGURE 16

*CHANGING BLADE SPEED Continued on page 14.*

# ADJUSTMENTS

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

CHANGING BLADE SPEED Continued from page 13.

1. Open the motor cover. SEE Figure 17.

**NOTE:** The Speed Change Label shown in Figure 16, page 13, can be found inside the motor cover.

2. Loosen the motor lock bolt (A-Fig.18) to allow the motor to pivot. Raise the motor to relieve the belt tension and position the belt in the desired pulley step alignment per the chart shown in Figure 19.

3. Release the motor and let its own weight tension the belt. Tighten the motor lock bolt (A-Fig.18) against the frame of the band saw to retain belt tension.

**NOTE:** Blade speed and performance depend on proper blade selection. Consult your blade manufacturer for the proper blade style and speed required for the material to be cut.

Blade speed differs for each type or grade of metal to be cut. Below is a chart of common materials and the suggested blade speeds. The speeds shown have been reduced by 30% for dry cutting operations. It may be necessary to reduce an additional 15% due to material hardness. Changing blade type/style will also help performance.

METAL TYPE	BLADE SPEED -Ft/Min
Brass Alloys	140-154
Bronze Alloys	80-230
Cast Iron	80-157
Copper Alloys	112-206
Cr-Mo Alloy	136-164
Low/Med Carbon Steel	161-189
Stainless Steel	80-95

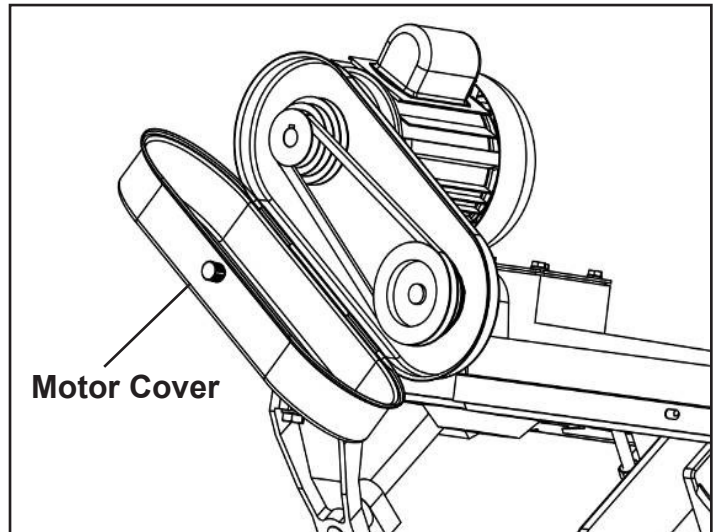


FIGURE 17

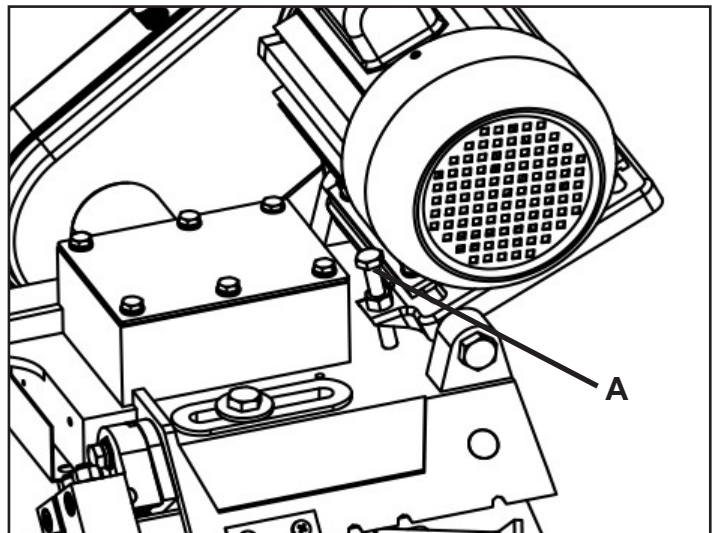


FIGURE 18

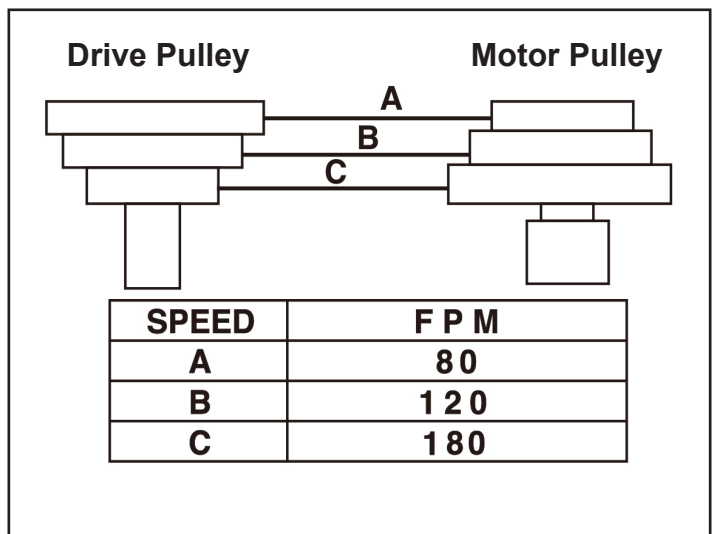


FIGURE 19

## ADJUSTMENTS

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

### HEAD LOCK PIN

The head locking pin safely secures the head (bow) in the down position. To ensure the head does not unexpectedly spring up and tip the band saw over, this locking pin must be properly inserted when the band saw is not in use or before moving it.

To use the head locking pin:

Fully lower the head down, then insert the locking pin through the holes in the head pivot arm and base. SEE Figure 20.

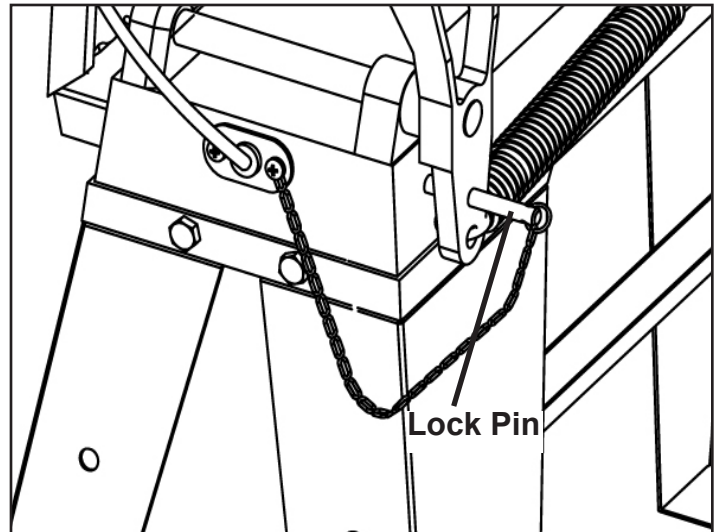


FIGURE 20

## OPERATION

### HORIZONTAL CUTTING

1. Clamp the workpiece firmly in the vise jaws (A-Fig.21) to ensure straight cut through the material. SEE "VISE ADJUSTMENTS" on Page 12.
2. If needed, use the work stop (B-Fig.21) to quickly and accurately cut multiple pieces of stock to the same length.
3. **DO NOT** turn on machine until workpiece is secured and blade has been lowered to just above workpiece.
4. Turn on the saw (C-Fig.21) and let the blade reach full speed before engaging the workpiece. Never start a cut with the blade in contact with the workpiece.
5. When the cutting operation is complete the saw will automatically shut off. The stop tab (Figure 22) will engage the switch, disconnecting power to the motor.

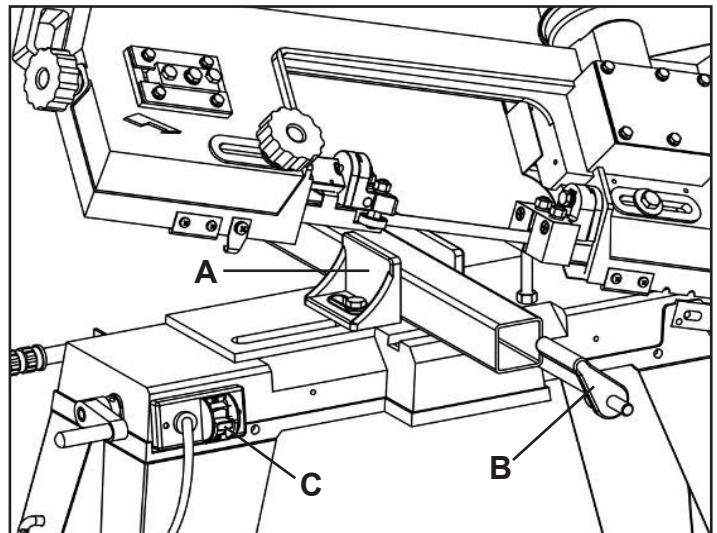


FIGURE 21

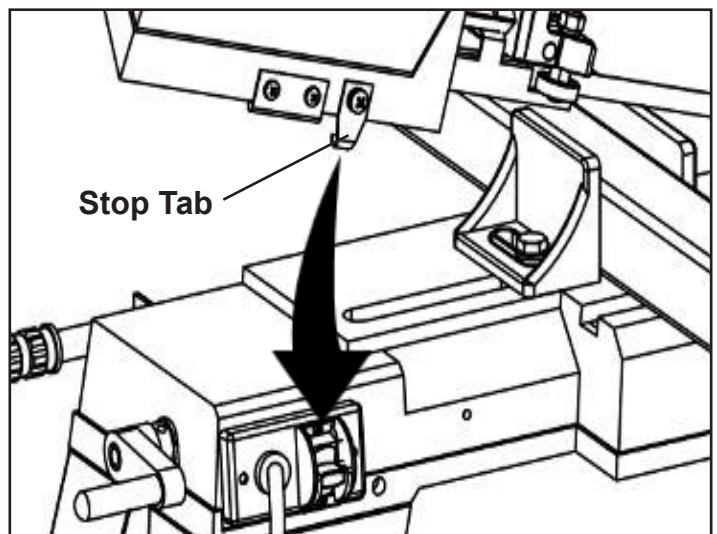


FIGURE 22

**⚠ CAUTION** Use gloves when handling sawn material as the edges can be sharp and very hot!

## OPERATION

**WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

### VERTICAL CUTTING

1. Raise the saw head and engage the safety bracket.
2. Lock the safety bracket in place with the supplied pin (on front of saw) to keep the saw head from falling. SEE Figure 23.

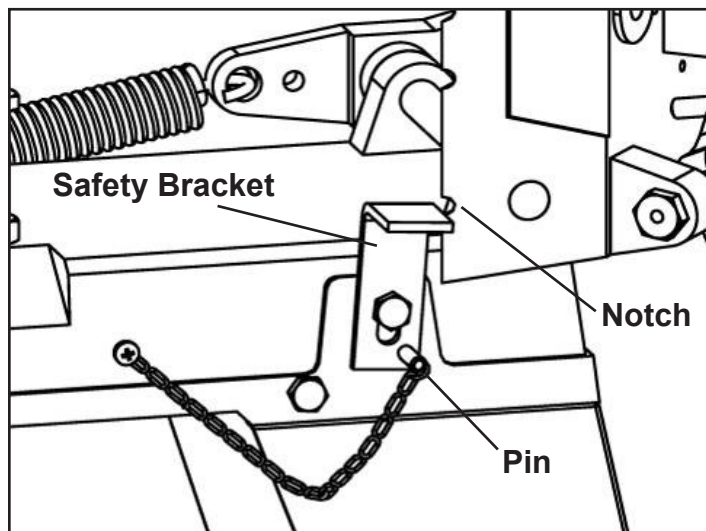


FIGURE 23

3. Remove the two flat head screws and the blade guide cover. SEE Figure 24.

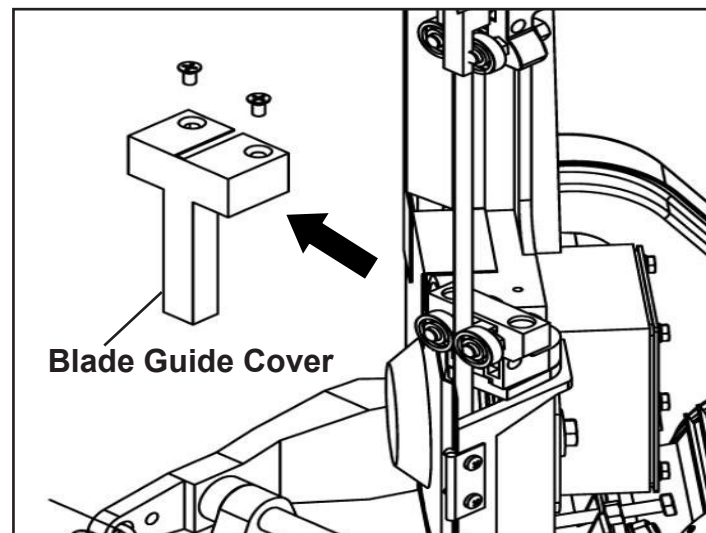


FIGURE 24

4. Install the table in place of the blade guide cover and replace the two screws removed in Step 3.

5. Install the table support (Circled, Fig-25) with the pre installed hex bolt on the saw head (next to the gearbox), M6x16 flat head screw, M6 flat washer and 6mm hex nut.

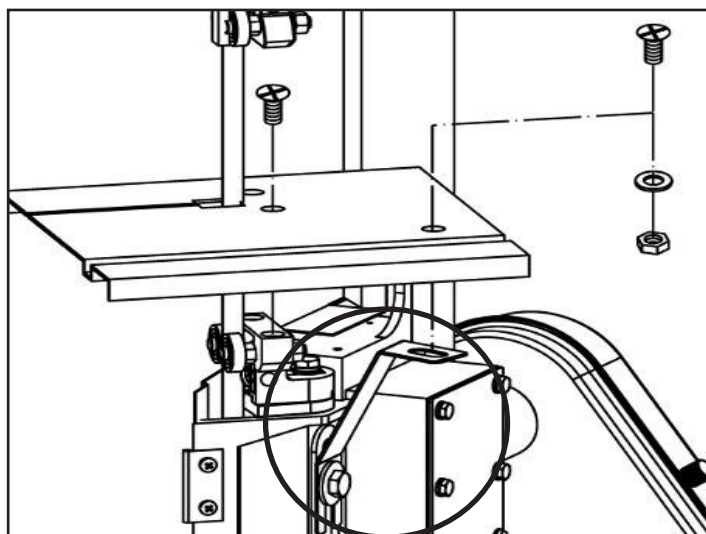


FIGURE 25



# OPERATION

**⚠ WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.

## CHANGING THE SAW BLADE

1. Turn the on/off switch to the OFF position and disconnect saw from power source.
2. Raise the saw head and engage the safety bracket.
3. Lock the safety bracket in place with the supplied pin (on front of saw) to keep the saw head from falling. SEE Figure 26.

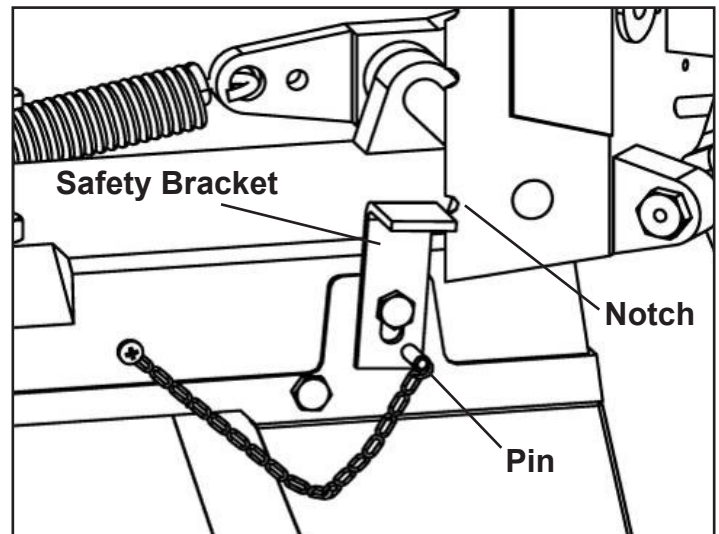


FIGURE 26

**⚠ CAUTION** Take care when handling saw blades, blade teeth are very sharp! Wear gloves.

4. Open the wheel access cover (A-Fig.27).
5. Loosen the tension knob (B-Fig.27) and slip the blade off of the wheels.
6. Install the new blade through both blade guide bearing assemblies and around the bottom wheel.
7. Hold the blade around the bottom wheel with one hand and slip it around the top wheel with the other hand, keeping the blade between the blade guide bearings.
8. Tighten the tension knob and close the wheel access cover before starting the saw. If the blade slips during startup or operation turn off the saw, tighten the tension knob further and restart the saw to test.

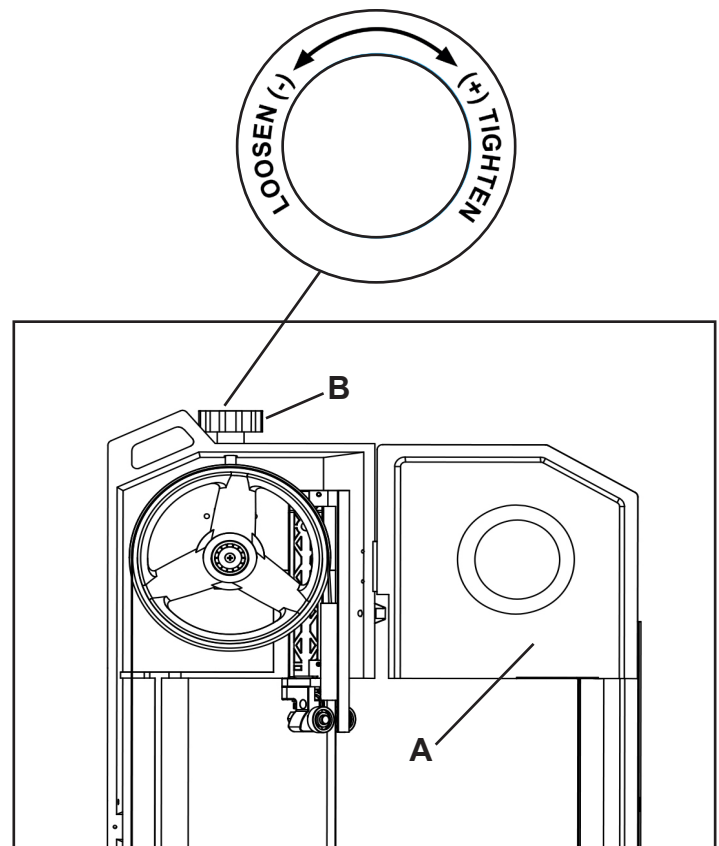


FIGURE 27

## MAINTENANCE

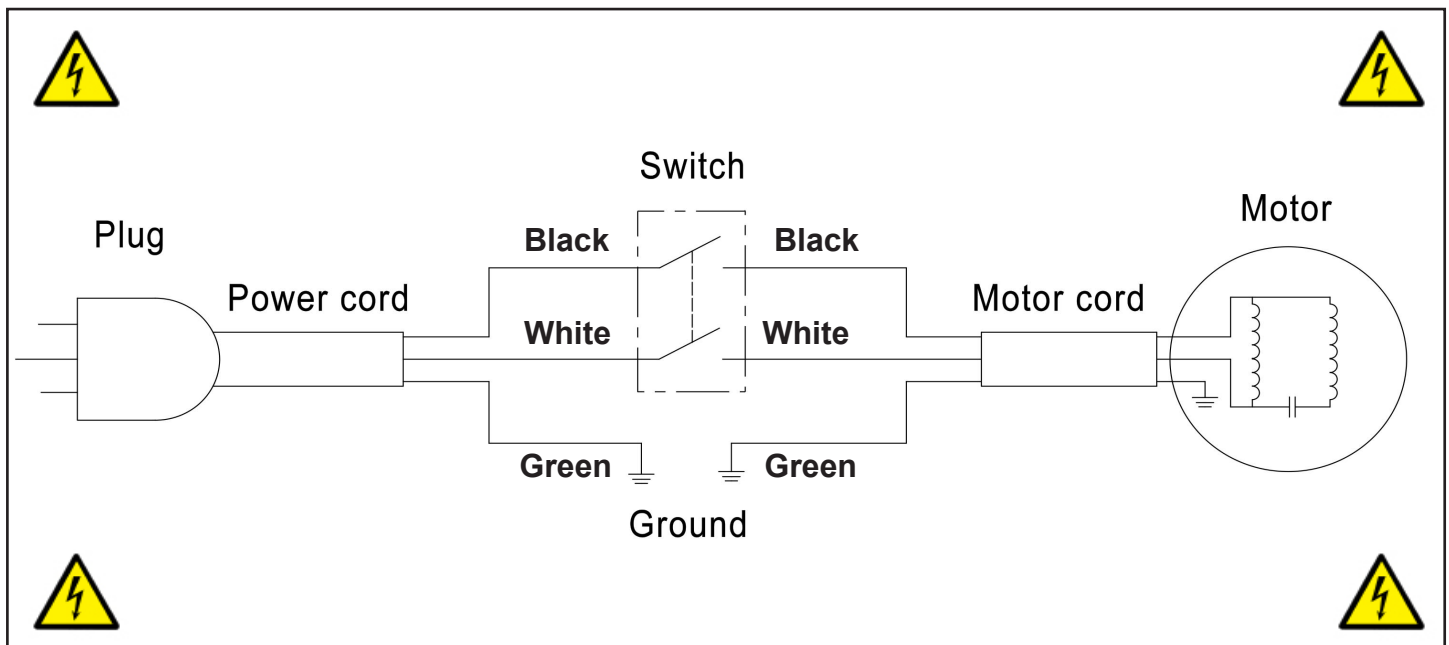
**CAUTION** BEFORE CLEANING OR CARRYING OUT MAINTENANCE WORK, DISCONNECT THE MACHINE FROM THE POWER SOURCE (WALL SOCKET). DO NOT USE COMPRESSED AIR NEAR BEARINGS. REGULAR MAINTENANCE OF THE MACHINE WILL PREVENT UNNECESSARY PROBLEMS.

1. Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.
2. This saw has sealed lubricated bearings in the motor housing that do not require any additional lubrication from the operator.
3. Use a brush and a shop vacuum to remove chips and other debris from the machine.
4. Remove metal filings from the cutting area and the blade guides whenever necessary.
5. Change the gearbox oil with ISO VG 220 weight gear oil after the first 90 days of operation and every 6 months thereafter.
6. Check guide bearings frequently to make sure they are properly adjusted and running freely.
7. Wipe saw down with a clean dry cloth and oil all unpainted surfaces with light machine oil.
8. **Before each use:** Check the power cord and plug for any wear or damage. Check for any loose screws, hardware, locking handles or jigs. Check the area to make sure it is clear of any misplaced tools, cutting remnants, cleaning supplies, etc. that could hamper the safe operation of the machine.

## WIRING DIAGRAM

**WARNING** This machine must be grounded. Replacement of the power supply cable should only be done by a qualified electrician. **DO NOT** perform maintenance if water is present. See page 5 for additional electrical information.

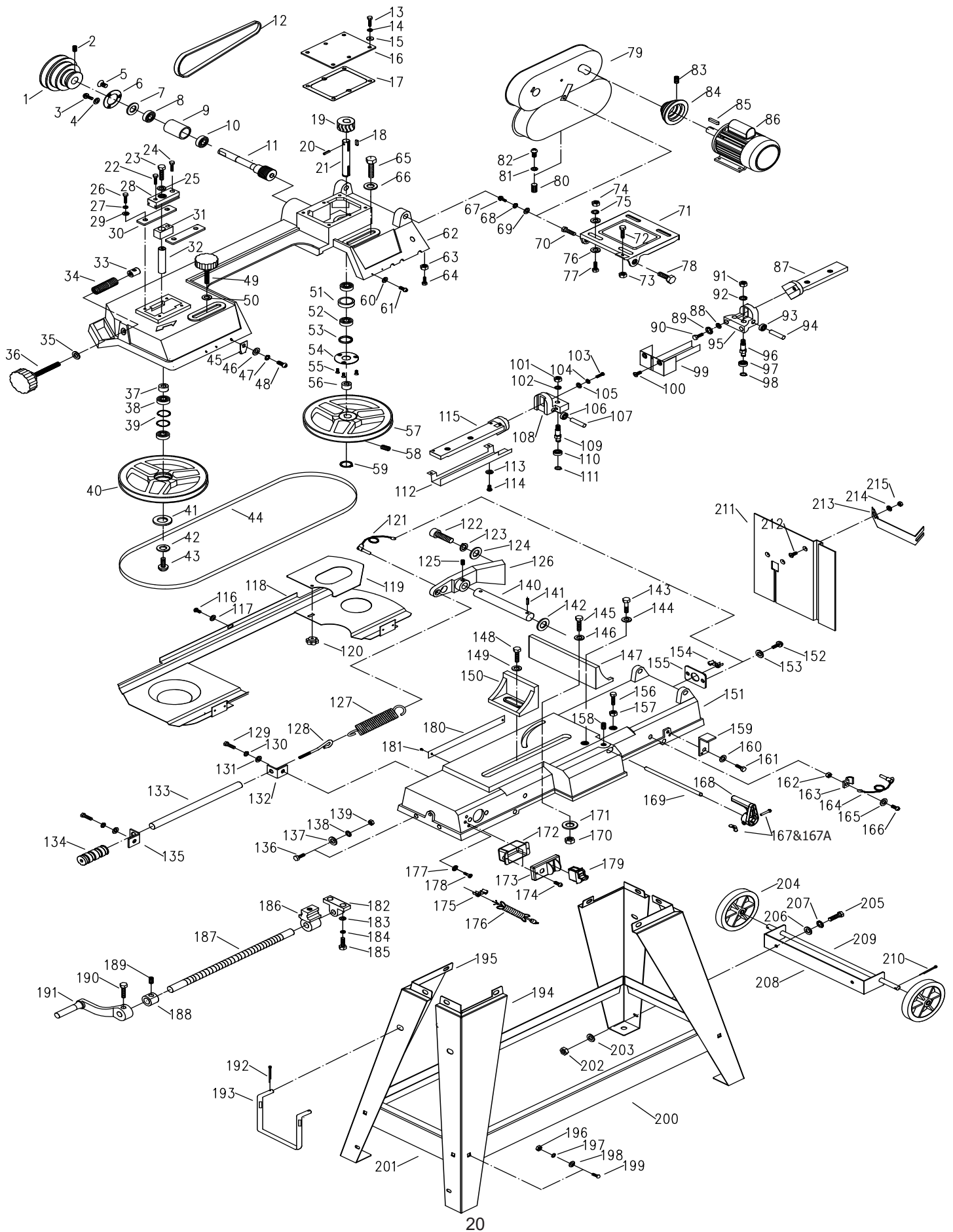
As received from the factory, your Metal Cutting Saw is ready to run at 120V operation.



# TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES	SOLUTIONS
Saw will not start	<ol style="list-style-type: none"> <li>1. Power cord is not plugged in</li> <li>2. Fuse or circuit tripped</li> <li>3. Damaged power cord</li> <li>4. Burnt or failed switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug in saw to power source</li> <li>2. Replace fuse or reset breaker</li> <li>3. Contact Technical Support 877-884-5167 or techsupport@rikontools.com</li> <li>4. Contact Technical Support 877-884-5167 or techsupport@rikontools.com</li> </ol>
Blade is slow or does not come up to speed	<ol style="list-style-type: none"> <li>1. Wrong size extension cord</li> <li>2. Extension cord too long</li> <li>3. Low house voltage</li> </ol>	<ol style="list-style-type: none"> <li>1. See recommended size on page 5</li> <li>2. See recommended length on page 5</li> <li>3. Check household voltage</li> </ol>
Excessive Vibration	<ol style="list-style-type: none"> <li>1. Tile blade damaged or unbalanced</li> <li>2. V-belt worn or loose</li> <li>3. Loose Motor or Drive Pulley</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade</li> <li>2. Inspect/Replace V-Belt</li> <li>3. Inspect/Tighten Pulleys</li> </ol>
Premature blade dulling.	<ol style="list-style-type: none"> <li>1. Blade tpi is too high.</li> <li>2. Incorrect speed - too fast.</li> <li>3. Inadequate feed pressure.</li> <li>4. Hard spots or scale on the workpiece.</li> <li>5. Blade installed backwards.</li> <li>6. Insufficient blade tension.</li> <li>7. Work hardened material especially stainless</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with a smaller tpi blade.</li> <li>2. Reduce speed.</li> <li>3. Increase feed pressure by unscrewing tension bar. This will decrease the spring tension on the arm.</li> <li>4. Reduce speed, increase feed pressure.</li> <li>5. Remove blade, twist inside out and reinstall.</li> <li>6. Increase blade tension.</li> <li>7. Increase feed pressure by reducing spring pressure.</li> </ol>
Motor overheating.	<ol style="list-style-type: none"> <li>1. Blade tension too high.</li> <li>2. Drive belt tension too high.</li> <li>3. Blade too coarse or too fine.</li> <li>4. Gears need lubrication.</li> <li>5. Blade is binding in the cut.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce blade tension.</li> <li>2. Reduce drive belt tension.</li> <li>3. Use a blade more suitable for the workpiece.</li> <li>4. Lubricate the gears.</li> <li>5. Decrease feed and speed.</li> </ol>
Bad, crooked or rough cuts.	<ol style="list-style-type: none"> <li>1. Feed pressure too great.</li> <li>2. Blade guide bearings not properly adjusted.</li> <li>3. Inadequate blade tension.</li> <li>4. Blade is dull.</li> <li>5. Incorrect speed.</li> <li>6. Blade guides are spaced out too far.</li> <li>7. Blade guide assembly is loose.</li> <li>8. Blade is too coarse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed pressure by increasing the spring tension on the arm.</li> <li>2. Adjust blade guide bearing in accordance with manual.</li> <li>3. Increase blade tension a little at a time.</li> <li>4. Replace the blade.</li> <li>5. Check manual for recommended speed.</li> <li>6. Move guides closer to workpiece.</li> <li>7. Tighten the guide assembly.</li> <li>8. Use a finer tooth blade.</li> </ol>
Blade is twisting.	<ol style="list-style-type: none"> <li>1. Blade is binding in the cut.</li> <li>2. Blade tension is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease feed pressure.</li> <li>2. Decrease blade tension.</li> </ol>

# PARTS DIAGRAM



# PARTS LIST

KEY NO.	DESCRIPTION	PART NO.	KEY NO.	DESCRIPTION	PART NO.
1	Worm gear pulley	P15-400-1	55	4-0.7x8mm Flat head screw	P15-400-55
2	8-1.25x8mm Set screw	P15-400-2	56	Bushing	P15-400-56
3	4-0.7x8mm Pan head screw	P15-400-3	57	Front blade wheel	P15-400-57
4	4mm Flat washer	P15-400-4	58	8-1.25x8mm Set screw	P15-400-58
5	4-0.7x8mm Flat head screw	P15-400-5	59	15mm Retaining ring	P15-400-59
6	Bearing cover	P15-400-6	60	4mm Flat washer	P15-400-60
7	Oil seal	P15-400-7	61	4-0.7x6mm Pan head screw	P15-400-61
8	6202zz Ball bearing	P15-400-8	62	Frame	P15-400-62
9	Bearing bushing	P15-400-9	63	6-1.0x25mm Hex head bolt	P15-400-63
10	6202zz Ball bearing	P15-400-10	64	6mm Hex nut	P15-400-64
11	Worm gear	P15-400-11	65	10-1.5x30mm Hex head bolt	P15-400-65
12	V belt O-508	P15-400-12	66	10mm Flat washer	P15-400-66
13	6-1.0x16mm Hex head bolt	P15-400-13	67	6-1.0x10mm Pan head screw	P15-400-67
14	6mm Lock washer	P15-400-14	68	6mm Lock washer	P15-400-68
15	6mm Flat washer	P15-400-15	69	6mm Flat washer	P15-400-69
16	Gear box cover	P15-400-16	70	Hex head bolt	P15-400-70
17	Gear box gasket	P15-400-17	71	Motor support plate	P15-400-71
18	5x28mm Key	P15-400-18	72	8-1.25x55mm Hex head bolt	P15-400-72
19	Worm assembly	P15-400-19	73	8-1.25mm Hex nut	P15-400-73
20	5x26mm Spring pin	P15-400-20	74	8-1.25mm Hex nut	P15-400-74
21	Shaft	P15-400-21	75	8mm Lock washer	P15-400-75
22	8-1.25x30mm Hex head bolt	P15-400-22	76	8mm Flat washer	P15-400-76
23	8-1.25x16mm Hex head bolt	P15-400-23	77	8-1.25x20mm Hex head bolt	P15-400-77
24	8-1.25x30mm Hex head bolt	P15-400-24	78	12-1.75x35mm Hex head bolt	P15-400-78
25	8mm Flat washer	P15-400-25	79	Belt cover	P15-400-79
26	6-1.25x12mm Hex head bolt	P15-400-26	80	Knob	P15-400-80
27	6mm Lock washer	P15-400-27	81	4mm Flat washer	P15-400-81
28	Sliding block	P15-400-28	82	4-0.7x8mm Pan head screw	P15-400-82
29	6mm Flat washer	P15-400-29	83	8-1.25x8mm Set screw	P15-400-83
30	Guide plate	P15-400-30	84	Motor pulley	P15-400-84
31	Shaft block	P15-400-31	85	5x28mm Key	P15-400-85
32	Shaft	P15-400-32	86	Motor	P15-400-86
33	Blade tension nut	P15-400-33	87	Front guide base	P15-400-87
34	Spring	P15-400-34	88	8mm Flat washer	P15-400-88
35	10mm Flat washer	P15-400-35	89	8mm Lock washer	P15-400-89
36	Blade tension knob	P15-400-36	90	8-1.25x30mm Hex head bolt	P15-400-90
37	Bushing	P15-400-37	91	8-1.25mm Hex nut	P15-400-91
38	6202zz Ball bearing	P15-400-38	92	8mm Lock washer	P15-400-92
39	35mm Retaining ring	P15-400-39	93	629zz Ball bearing	P15-400-93
40	Rear blade wheel	P15-400-40	94	Shaft	P15-400-94
41	Washer	P15-400-41	95	Front blade guide	P15-400-95
42	5mm Flat washer	P15-400-42	96	Shaft	P15-400-96
43	5-0.8x16mm Socket head screw	P15-400-43	97	629zz Ball bearing	P15-400-97
44	Blade	P15-400-44	98	9mm Retaining ring	P15-400-98
45	Switch cut off finger	P15-400-45	99	Front blade guard	P15-400-99
46	6mm Flat washer	P15-400-46	100	6-1.0x16mm Flat head screw	P15-400-100
47	6mm Lock washer	P15-400-47	101	8-1.25mm Hex nut	P15-400-101
48	6-1.0x14mm Pan head screw	P15-400-48	102	8mm Lock washer	P15-400-102
49	Rear guide tighten knob	P15-400-49	103	8-1.25x30mm Hex head bolt	P15-400-103
50	10mm Flat washer	P15-400-50	104	8mm Lock washer	P15-400-104
51	Bushing	P15-400-51	105	8mm Flat washer	P15-400-105
52	6202zz Ball bearing	P15-400-52	106	629zz Ball bearing	P15-400-106
53	Oil seal	P15-400-53	107	Shaft	P15-400-107
54	Bearing cover	P15-400-54	108	Rear blade guide	P15-400-108

**NOTE:** Please reference the Manufacturer's Part Number when calling for Replacement Parts. For Parts under Warranty, the Serial Number of your machine is required.

# PARTS LIST

KEY NO.	DESCRIPTION	PART NO.	KEY NO.	DESCRIPTION	PART NO.
109	Shaft	P15-400-109	163	Cord clamp	P15-400-163
110	629zz Ball bearing	P15-400-110	164	Pin with chain	P15-400-164
111	9mm Retaining ring	P15-400-111	165	5mm Flat washer	P15-400-165
112	Rear blade guard	P15-400-112	166	5-0.8x20mm Pan head screw	P15-400-166
113	4mm Flat washer	P15-400-113	167	5-0.8X30mm Hex head bolt	P15-400-167
114	4-0.7x6mm Pan head screw	P15-400-114	167A	5-0.8mm wing nut	P15-400-167A
115	Rear guide base	P15-400-115	168	Work stop	P15-400-168
116	6-1.0x10mm Pan head screw	P15-400-116	169	Work stop rod	P15-400-169
117	6mm Flat washer	P15-400-117	170	8-1.25mm Hex nut	P15-400-170
118	Frame guard	P15-400-118	171	8mm Flat washer	P15-400-171
119	Extension guard	P15-400-119	172	Switch box	P15-400-172
120	Knob	P15-400-120	173	Switch mounting plate	P15-400-173
121	Pin with chain	P15-400-121	174	Thread forming screw	P15-400-174
122	10-1.5x35mm Socket head screw	P15-400-122	175	Strain relief	P15-400-175
123	10mm Lock washer	P15-400-123	176	Power cord	P15-400-176
124	10mm Flat washer	P15-400-124	177	5mm Serrated washer	P15-400-177
125	8-1.25x8mm Set screw	P15-400-125	178	5-0.8x10mm Pan head screw	P15-400-178
126	Pivot block	P15-400-126	179	Switch	P15-400-179
127	Spring	P15-400-127	180	Angle scale	P15-400-180
128	Spring adjusting screw	P15-400-128	181	Rivet	P15-400-181
129	6-1.0x12mm Hex head bolt	P15-400-129	182	Screw support block	P15-400-182
130	6mm Lock washer	P15-400-130	183	6mm Flat washer	P15-400-183
131	6mm Flat washer	P15-400-131	184	6mm Lock washer	P15-400-184
132	Screw support plate	P15-400-132	185	6-1.0x16mm Hex head bolt	P15-400-185
133	Adjusting rod	P15-400-133	186	Vise nut	P15-400-186
134	Knob	P15-400-134	187	Lead screw	P15-400-187
135	Adjusting rod support	P15-400-135	188	Bushing	P15-400-188
136	8-1.25x20mm Hex head bolt	P15-400-136	189	6-1.0x6mm Set screw	P15-400-189
137	8mm Flat washer	P15-400-137	190	6-1.0x12mm Hex head bolt	P15-400-190
138	8mm Lock washer	P15-400-138	191	Crank handle	P15-400-191
139	H8-1.25mm Hex nut	P15-400-139	192	2.5x25mm Cotter pin	P15-400-192
140	Pivoting rod	P15-400-140	193	Transport handle	P15-400-193
141	4x25mm Spring pin	P15-400-141	194	Leg A	P15-400-194
142	16mm Flat washer	P15-400-142	195	Leg B	P15-400-195
143	Hex head bolt	P15-400-143	196	8-1.25mm Hex nut	P15-400-196
144	8mm Flat washer	P15-400-144	197	8mm Lock washer	P15-400-197
145	8-1.25x40mm Hex head bolt	P15-400-145	198	8mm Flat washer	P15-400-198
146	8mm Flat washer	P15-400-146	199	8-1.25x16mm Carriage bolt	P15-400-199
147	Vise jaw	P15-400-147	200	Long brace	P15-400-200
148	10-1.5x25mm Hex head bolt	P15-400-148	201	Short brace	P15-400-201
149	10mm Flat washer	P15-400-149	202	6-1.0mm Hex nut	P15-400-202
150	Sliding vise jaw	P15-400-150	203	6mm Flat washer	P15-400-203
151	Base	P15-400-151	204	Transport wheel	P15-400-204
152	5-0.8x8mm Pan head screw	P15-400-152	205	6-1.0x12mm Hex head bolt	P15-400-205
153	5mm Flat washer	P15-400-153	206	6mm Flat washer	P15-400-206
154	Strain relief	P15-400-154	207	6mm Lock washer	P15-400-207
155	Strain relief mounting plate	P15-400-155	208	Wheel stand	P15-400-208
156	12-1.75x70mm Hex head bolt	P15-400-156	209	Shaft	P15-400-209
157	12-1.75mm Hex nut	P15-400-157	210	2.5x25mm Cotter pin	P15-400-210
158	8-1.25x12mm Set screw	P15-400-158	211	Table	P15-400-211
159	Safety bracket	P15-400-159	212	6-1.0x16mm Flat head screw	P15-400-212
160	8mm Flat washer	P15-400-160	213	Table support	P15-400-213
161	8-1.25x16mm Hex head bolt	P15-400-161	214	6mm Flat washer	P15-400-214
162	5-0.8mm Hex nut	P15-400-162	215	6-1.0mm Hex nut	P15-400-215

**NOTE:** Please reference the Manufacturer's Part Number when calling for Replacement Parts. For Parts under Warranty, the Serial Number of your machine is required.

# RIKON

## POWER TOOLS®

### 5-Year Limited Warranty

RIKON Power Tools Inc. ("Seller") warrants to only the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship for a period of five (5) years from the date the product was purchased at retail. This warranty may not be transferred.

This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs, alterations, lack of maintenance or normal wear and tear. Under no circumstances will Seller be liable for incidental or consequential damages resulting from defective products. All other warranties, expressed or implied, whether of merchantability, fitness for purpose, or otherwise are expressly disclaimed by Seller. This five-year warranty does not cover products used for commercial, industrial or educational purposes. The warranty term for these claims will be limited to a two-year period.

This limited warranty does not apply to accessory items such as blades, drill bits, sanding discs, grinding wheels, belts, guide bearings and other related items.

Seller 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.

To take advantage of this warranty, proof of purchase documentation must be provided which has the date of purchase and an explanation of the complaint.

The Seller reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

To register your machine online, visit RIKON at [www.rikontools.com/warranty](http://www.rikontools.com/warranty)

To take advantage of this warranty, or if you have any questions, please contact us at 877-884-5167 or email [warranty@rikontools.com](mailto:warranty@rikontools.com)



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