RIKON POWER TOOLS

10-351

14” Professional Bandsaw

Intertek 4001824

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 or call toll free at (877)884-5167

TABLE OF CONTENTS

SPECIFICATIONS

Motor	3 HP, TEFC
Motor Speed (no load)	1700 RPM
Volts	220 V
Amps, Hertz	12.9 A, 60 Hz
Blade Length	124” (3150 mm)
Blade Width	1/4” - 1” (6 - 25 mm)
Blade Speeds (2)	2132 ft/min or 4101 ft/min
Table Size	21” x 19” (535 mm x 485 mm)
Table Tilt	Left -10^0 , Right 45^0
Maximum Cutting Width (throat)	13-9/16” (345 mm)
Maximum Cuttng Depth (height)	13-15/16” (356 mm)
Table Height	36-1/4” (921 mm)
Fence Height	4-1/2” (115 mm)
Fence Length	19-3/4” (502 mm)
Dust Ports (2)	4” Diameter (100 mm)
Overall Size	75” x 30” x 29-5/8” (1905 x 762 x 752 mm)

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.

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

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

CAUTION Indicates a potentially hazardous situation, which, if not avoided, 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 workpiece. This is safer than attempting to hold the workpiece 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

- National Safety Council
  1121 Spring Lake Drive
  Itasca, IL 60143-3201
  www.nsc.org

- American National Standards Institute
  25 West 43rd Street, 4th Floor
  New York, NY 10036
  www.ansi.org

- ANSI 01.1 Safety Requirements for
  Woodworking Machines and the
  U.S. Department of Labor regulations
  www.osha.gov

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

SAFETY INSTRUCTIONS

ELECTRICAL SAFETY

⚠ WARNING:

THIS TOOL REQUIRES THE INSTALLATION OF A 220V PLUG (NOT INCLUDED), AND MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

IN THE EVENT OF A MALFUNCTION OR BREAK-DOWN, 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 A 3-PRONG GROUNDING PLUG AND A 3-POLE RECEPTACLE THAT ACCEPTS THE TOOL'S PLUG. *

REPLACE A DAMAGED OR WORN CORD IMMEDIATELY.

This tool is intended for use on a circuit that has a 220 volt electrical receptacle. **FIGURE 1** shows the type of the 220v, 3-wire electrical plug and electrical receptacle that has a grounding conductor that is required.

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

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

EXTENSION CORDS

⚠ 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 a power tool.

⚠ 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, resulting in 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

C ETL CM LISTED US

THIS SYMBOL DESIGNATES THAT THIS TOOL IS LISTED BY THE INTERTEK TESTING SERVICES, TO UNITED STATES AND CANADIAN STANDARDS.

Sample of 220 volt plug required for this machine.

NEMA 6-20P

Consult a qualified electrician if the distance of the machine from the electrical panel is greater than 30 feet.

Figure 1

SAFETY INSTRUCTIONS

SPECIFIC SAFETY INSTRUCTIONS FOR BAND SAWS

1. Always allow the bandsaw blade to stop before removing scrap pieces from table.
2. Always keep hands and fingers away from the blade.
3. Never attempt to saw stock that does not have a flat surface, unless a suitable support is used.
4. Always hold material firmly and feed it into the blade at a moderate speed.
5. Always turn off the machine if the material is to be backed out of an uncompleted cut.
6. Adjust the upper guide about 1/8” to 1/4” above the material being cut.
7. Check for proper blade size and type for thickness and type of material being cut.
8. Make sure that the blade tension and blade tracking are properly adjusted.
9. Make “relief” cuts before cutting long curves.
10. Release blade tension when the saw will not be used for a long period of time.

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.

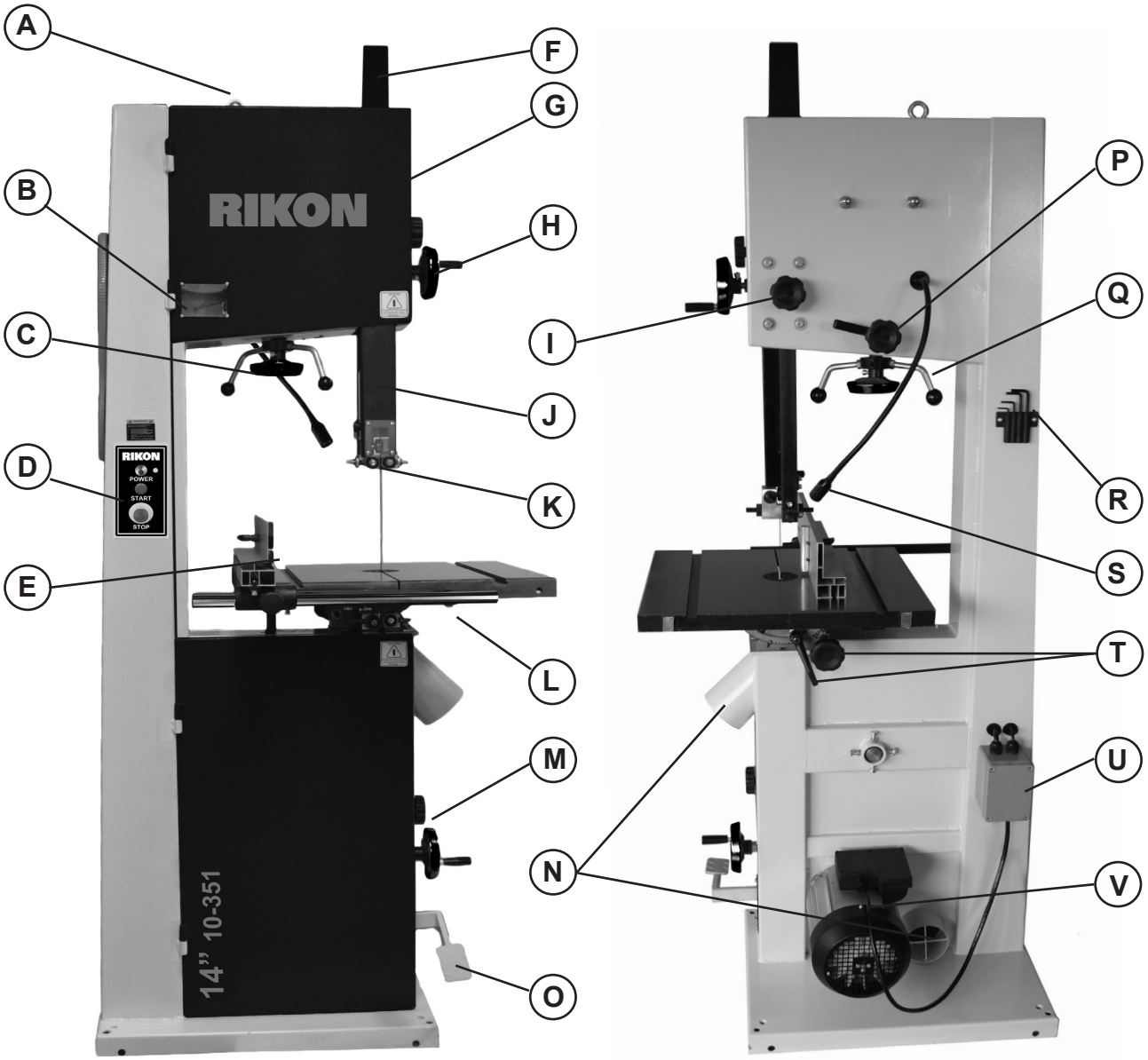
This owner’s manual is not a teaching aid. Use of this owner’s manual is intended to show assembly, adjustments, and general use.

SAVE THESE INSTRUCTIONS.

Refer to them often.

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.

GETTING TO KNOW YOUR MACHINE



A. Hoist Ring
B. Tension Indicator Window
C. Blade Tension Hand Wheel
D. Switch
E. Rip Fence
F. Guide Post Cap
G. Blade Tracking Window
H. Guide Post Rise/Fall Handle
I. Guide Post Lock Knob
J. Hinged Blade Guard
K. Blade Guides
L. Work Table
M. Drive Belt Tension Wheel
N. 4" Dust Ports
O. Foot Break
P. Blade Tracking Knob
Q. Quick Release Lever
R. Tool Holder
S. LED Light
T. Table Tilt & Lock Knobs
U. Power Control Box
V. Motor

CONTENTS OF PACKAGE

Model 10-351 14” Professional Bandsaw is shipped complete in one crate.

Unpacking and Checking Contents

a. Separate all “loose parts” from packaging materials and check each item with “Table of Loose Parts” to make sure all items are accounted for, before discarding any packaging material.

b. Thread hoist ring into threading hole on top of Bandsaw frame. This allows the user to connect a properly secured hoist mechanism to lift the Bandsaw.

c. With the help of another person or by installing hoist ring, unbolt the Bandsaw from the packing pallet. Properly lift the Bandsaw off the packing pallet and place on level floor.

d. Remove protective oil that is applied to the table. Use any ordinary house hold type grease or spot remover.

e. Apply a coat of paste wax to the table to prevent rust. Wipe all parts thoroughly with a clean dry cloth.

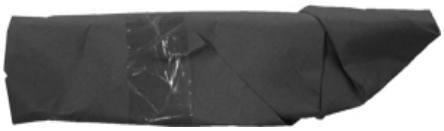
TABLE OF LOOSE PARTS

Item	Part Name
A	Bandsaw Assembly
B	Table with Insert & Fence Rail
C	Owner’s Manual
D	Parts Package 1
E	Parts Package 2

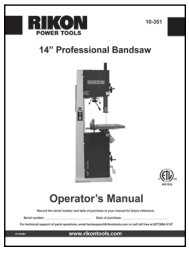
A

B

D



C



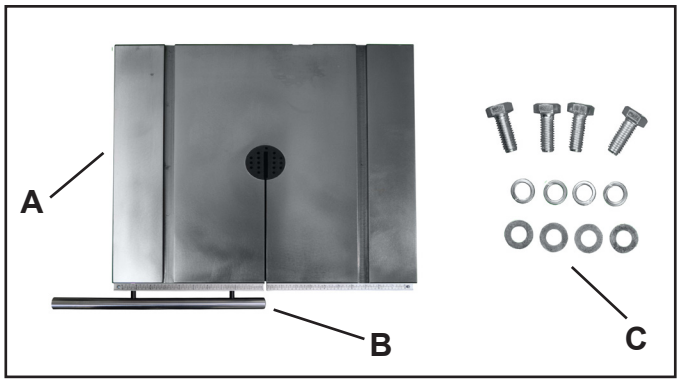
E

CONTENTS OF PACKAGE

LIST OF LOOSE PARTS

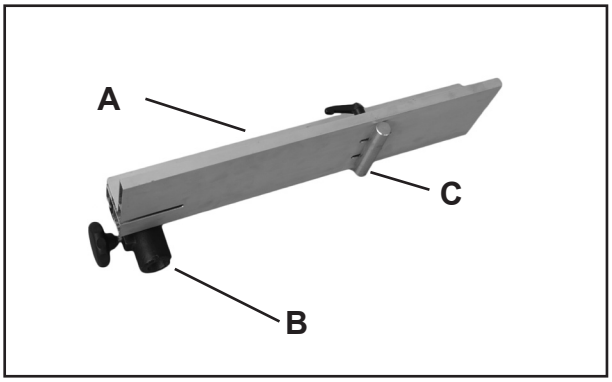
Table Assembly:

A. Table
B. Rip Fence Rail
C. Table Mounting Bolts and Washers



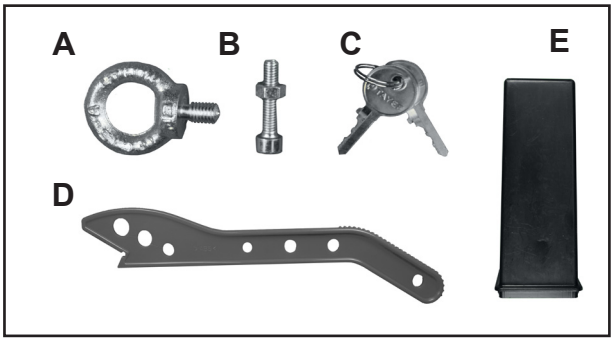
Rip Fence Assembly:

A. Rip Fence
B. Rip Fence Carrier
C. Re-saw Bar



Bandsaw Accessories:

A. Hoist Ring
B. Hex Screw & Nut for Hanging Push Stick
C. Keys for ON/OFF Switch Lock
D. Push Stick
E. Upper Guide Cover



Tools for Assembly & Adjustments:

A. Hex Wrench 3MM
B. Hex Wrench 4MM
C. Hex Wrench 5MM
D. Hex Wrench 6MM
E. 10mm Wrench
F. 13mm Wrench

ASSEMBLY

INSTALLING THE WORK TABLE

NOTE: The table leveling bar is pre-installed at the factory to hold table steady during shipping. It must be removed before assembling the work table to the saw.

The work table is fastened to the upper table trunnion with four M8x20 hex bolts and four M8 flat washers. With the help of another person lift the work table onto the upper trunnion. Slide the blade through the blade slot until the threaded holes of the table align with the through holes in the upper table trunnion. Tighten table in place (Circled, Fig.1) with supplied fasteners using the 13mm wrench provided.

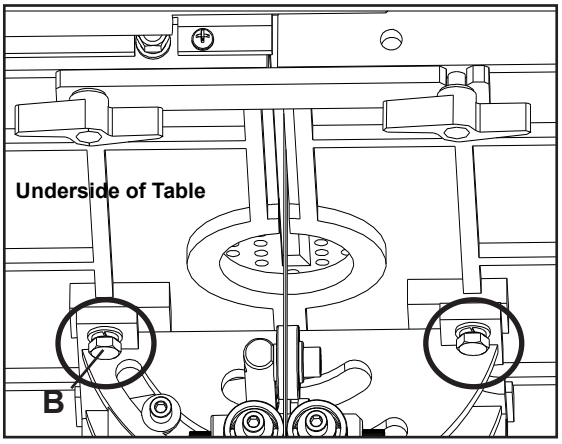


Figure 1

INSTALLING THE TABLE LEVELING BAR

Locate the table leveling bar, two wing knobs and two washers (A-Fig.2 Inset).
Insert a wing knob and washer through the left hole of the table leveling bar and into the threaded hole on the left side of the blade slot (B-Fig.1). Make sure that the opening of the slot on the right side of the table leveling bar faces toward the table trunnion. This will allow the table leveling bar to open outward from the bandsaw.

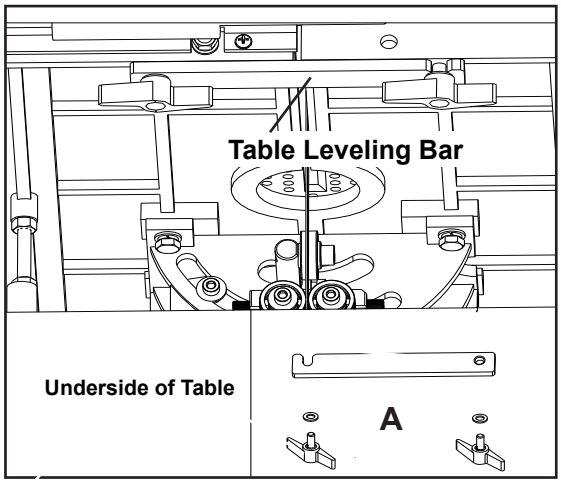


Figure 2

RIP FENCE RAIL

The Rip Fence Rail has been pre-assembled to the work table for shipping. After mounting the work table to the trunnions (see above instructions), the rail should be checked to ensure that it is still properly tightened in place to the table. If adjustments are needed, loosen and/or re-tighten the four hex nuts on the fence bar support shafts that extend through the table's front skirt edge (A-Fig.3). The four nuts will also be used for drift adjustments, described on page 15.
NOTE: It may be necessary to open the table leveling bar to gain access to the right side fence bar stud.

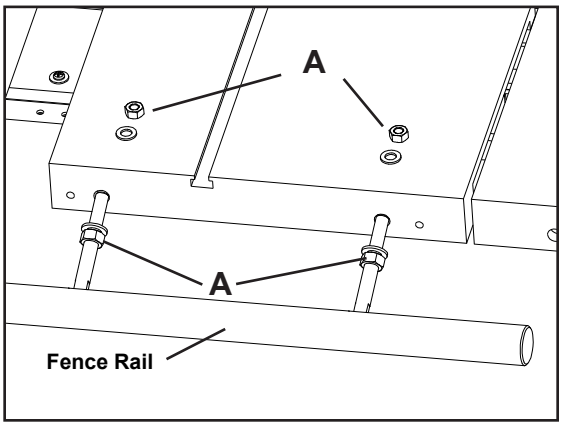


Figure 3

UPPER GUIDE RAIL COVER

Install the plastic Guide Rail Cover (#88) into the square hole on the top of the upper frame. This cap protects the guide post (#195) when it raises above the saw.

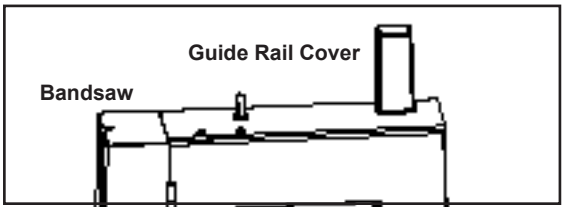


Figure 4

ADJUSTMENTS

TOOL STORAGE

Storage for the “L” Hex Wrenches is provided for quick access when adjustments are needed. Place the (4) wrenches (3mm, 4mm, 5mm and 6mm) in the tool holder on the rear column support (Fig.5).

A Hex Socket Screw and Nut (#34, 35) are provided to hang the push stick. Install this hardware on the left side of the column, in the prepared threaded hole.

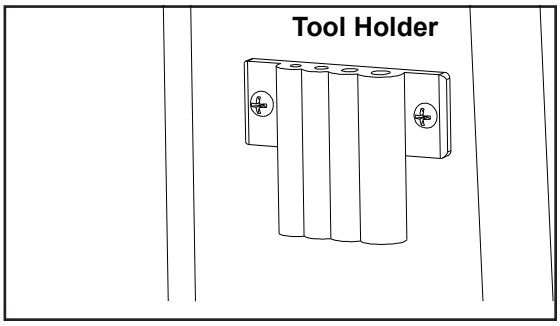


Figure 5

SETTING THE TABLE SQUARE TO SAW BLADE

The table may be set at 90° to the saw blade sides by adjusting the table stop screw (A-Fig.6) under the table. The table stop screw rests on the top of the quick release adjustment stop (B-Fig.6). First loosen the locking nut (C-Fig.6) and set a square between the blade and the work table. Adjust the table stop screw (A-Fig.6) until the table and blade are set at 90°. Retighten the locking nut (A-Fig.6) making sure that the setting is maintained.

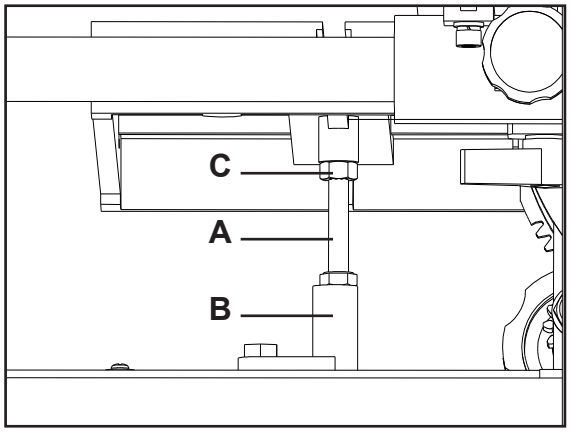


Figure 6

The table may also be set at 90° to the back of the saw blade by adjusting the four trunnion micro adjustment screws found in the base of the lower trunnion (A-Fig.7). Slightly loosen part #134 mounting bolt (refer to parts explosion on page 28 of this manual). Using the 3mm “L” wrench provided, turn the trunnion micro adjusting screws #266, as needed, to achieve desired setting. Turning the screws clockwise will raise the trunnion; counterclockwise will lower. Check table for 90° and tighten part #134.

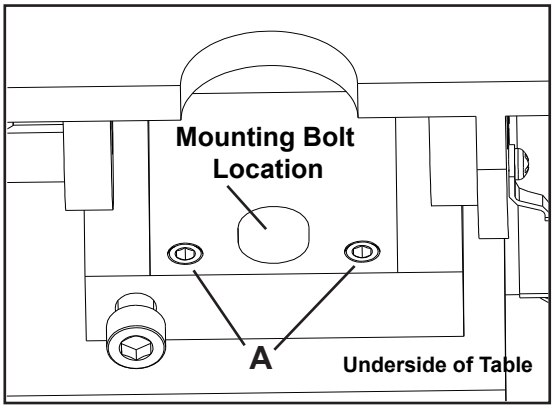


Figure 7

NOTE: The Trunnion (Fig. 7) is shown removed from bandsaw for clarity. Micro adjusting screws are raised to exaggerate their location. Only two of the four micro adjusting screws are shown.

TILTING THE TABLE

Loosen the lock handle (A-Fig.8) on the table trunnion. Turn the table tilting knob (B-Fig.8) to adjust the table to the desired angle. Use the angle indicator scale on the trunnion bracket to find the desired angle. Retighten the lock handle to secure the table.

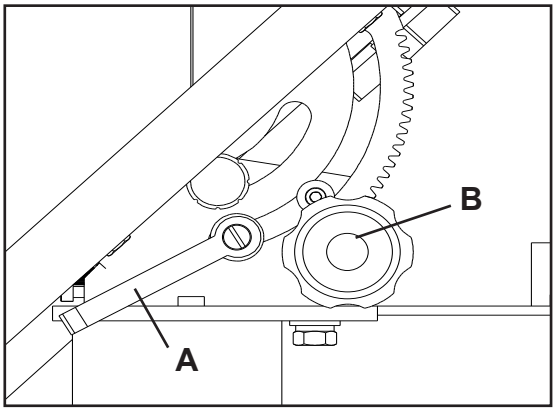


Figure 8

ADJUSTMENTS

TRACKING THE BANDSAW BLADE

⚠ WARNING Unplug the bandsaw. Make sure the upper and lower blade guides are adjusted away from the blade and the tension scale is set to correspond to the width of the blade you are using.

Open both doors. Loosen the lock lever (A-Fig.9) by turning it counter clockwise and turn the blade tracking knob (B-Fig.9) clockwise/counterclockwise while turning the upper wheel by hand at least three rotations or until the blade tracks centered on the wheel. Finally, tighten the lock lever and close the doors.

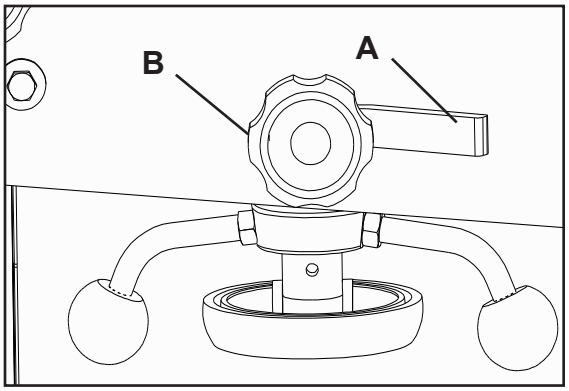


Figure 9

ADJUSTING THE BLADE TENSION

The 10-351 has a Quick Release blade function which allows for fast blade changing and tensioning. The Quick Release Lever is shown in Figure 10.

To loosen the tension of the blade, turn the blade tension hand wheel, or lever, (A-Fig.11) counter clockwise. To tighten the tension of the blade, turn the blade tension hand wheel clockwise. Tension the blade until the tension readings correspond to the width of blade you are using by viewing through the tension indicator window (B-Fig.11).

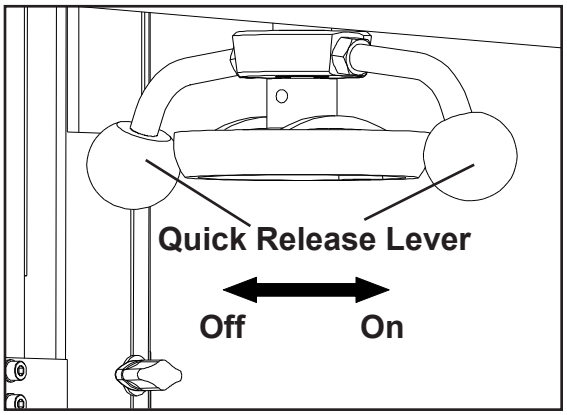


Figure 10

Note: The blade tension scale may read differently due to cut specifications of the blade manufacturer. It might be necessary to increase/decrease tension up/down one size on blade tension scale to achieve proper blade tension.

⚠ CAUTION Always tension the blade with the quick release lever in the “On” position. Failure to do so could result in lack of blade tension or tension failure.

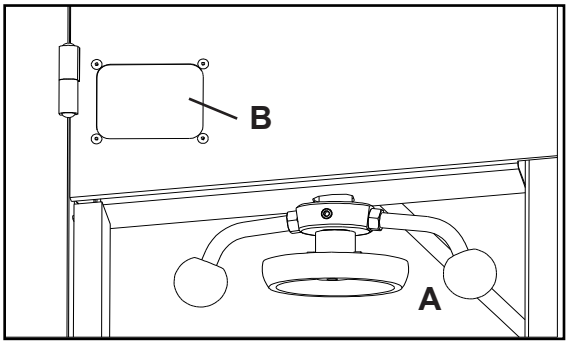


Figure 11

BLADE TENSION INDICATOR ADJUSTMENT

The Blade Tension Indicator arrow should be checked and adjusted the first time the saw is set up and run, and whenever a new blade is installed. The blade tension indicator can also be adjusted for blades made from thicker steel, or cut over/under in length by different manufacturers.
With moderate tension on the blade loosen the two adjusting screws with a Phillips-head screw driver (A-Fig.12). Adjust the blade indicator up/down as needed (B-Fig.12) and re-tighten the two adjusting screws.

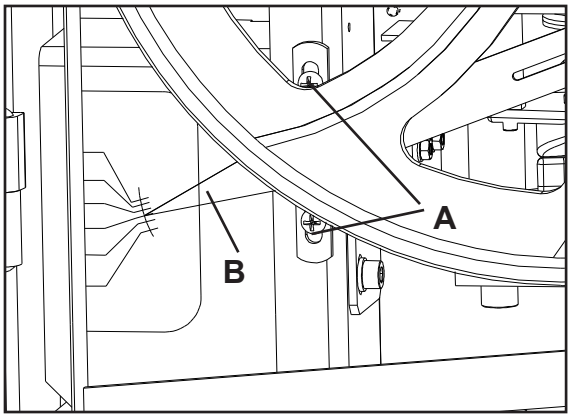


Figure 12

ADJUSTMENTS

CHANGING THE BANDSAW BLADE

⚠ WARNING Unplug the machine from the electrical supply. This ensures that the Bandsaw will not accidentally turn on if the ON/OFF switch is bumped.

a) Open the top and bottom wheel doors by turning the door locking knobs. (A-Fig.13)

b) Release the blade tension by moving the quick release lever (Fig.14) from right to left. Open the hinged door on the blade guard by loosening the wing screw (A-Fig.15). Loosen then open the table leveling bar (A-Fig.16).

c) Remove the saw blade by feeding it through the slot in the table (B-Fig.16), upper and lower blade guides and the slot in the spine of the machine. Be careful not to cut yourself. Wear gloves for protection.

d) When installing the new blade, ensure the blade teeth are pointing downwards and towards you at the position where the blade passes through the table.

e) Center the blade on both wheels.

f) Re-tension the new blade by moving the quick release lever (Fig.14) left to right and check the blade tracking. With your hand, slowly spin the upper wheel clockwise three times. The blade should run in the center of both wheels. Refer to "Tracking the Saw Blade" on the previous page for more details.

g) Set the blade guides as described in the section "Adjusting the Blade Guides" on the next page.

h) Close the hinged door on the blade guard and tighten the wing screw (A-Fig.15). Close the table leveling bar and tighten (A-Fig.16).

i) Close and lock both the wheel doors (A-Fig.14) before reconnecting the power supply.

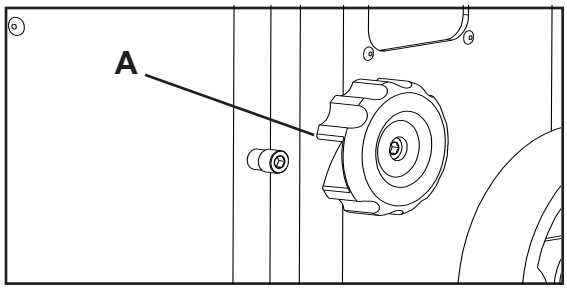


Figure 13

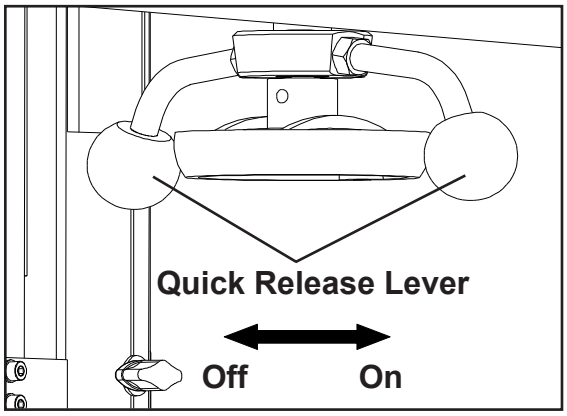


Figure 14

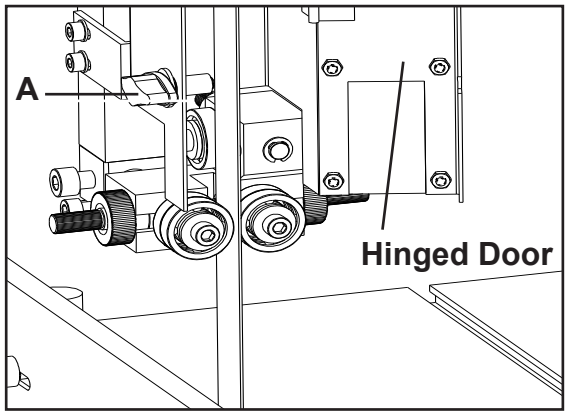


Figure 15

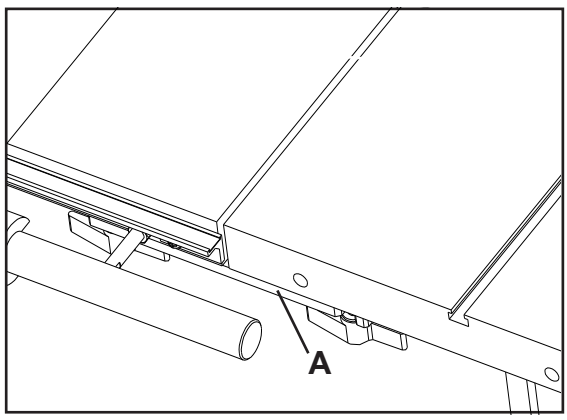


Figure 16

ADJUSTMENTS

ADJUSTING THE BLADE GUIDES

Upper Guides: To adjust the upper blade guides, first position the roller guides relative to the blade by loosening the Allen cap head screw (A-Fig.17) and sliding the guide assembly until the side roller guides are approximately 1/16” behind the gullet of the blade, then re-tighten the Allen cap head screw (A-Fig.17). Next, set the roller guides to within 1/32” of the blade by releasing the lock knob (B-Fig.17) and turning the micro-adjusting knob (C-Fig.17). Do not set the guides too close, as this will adversely affect the life of the blade. When the correct adjustment is reached, lock the guides in position by tightening the lock knob (B-Fig.17). Finally, follow the same steps above to position the rear thrust roller guide.

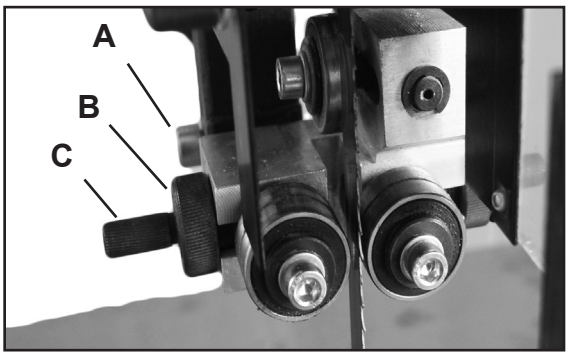


Figure 17

Lower Guides: To adjust the lower blade guides, first loosen the hex nut (A-Fig.18), then move the lower guide support casting to allow the side roller guides to be approximately 1/16” behind the gullets of the blade, and re-tighten the hex nut. Next set the roller guides to within 1/32” of the blade by releasing the lock knob (B-Fig.18) and turning the micro-adjusting knob (C-Fig.18). Do not set the guides too close, as this will adversely affect the life of the blade. When the correct adjustment is reached, lock the guides in position by re-tightening the lock knob (B-Fig.18). Adjust the thrust bearing to be just clear of the back of the blade by unlocking the hex nut (D-Fig.18), and turning adjusting knob on rear of the trunnion. Finally, re-tighten the hex nut (D-Fig.18).

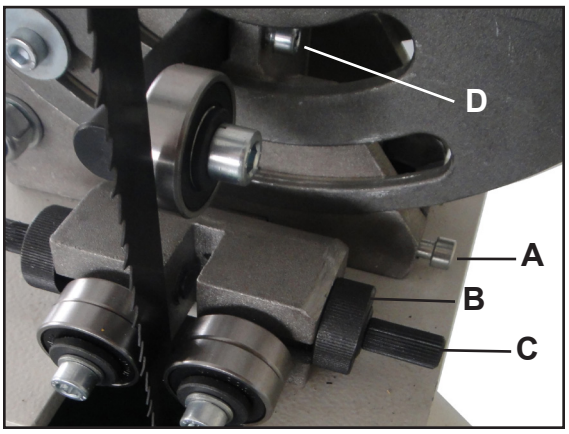


Figure 18

Make sure the doors are closed, turn the bandsaw on and inspect that the upper, lower and thrust bearings are not turning. All bearings should not turn unless pressure from workpiece is applied to the blade. If bearings are turning under no pressure, repeat the steps above to correctly adjust the blade guides.

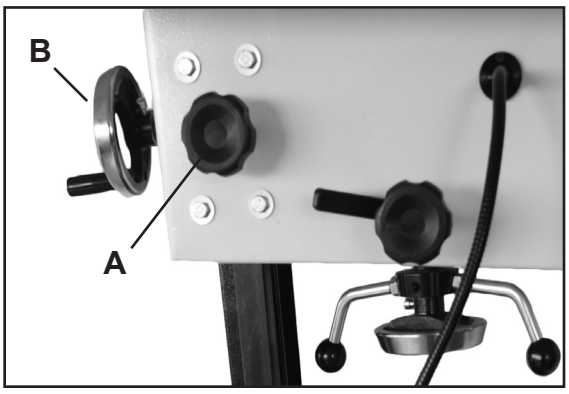


Figure 19

ADJUSTING THE CUTTING HEIGHT

Loosen the guidepost lock knob (A-Fig.19) and turn the guidepost handwheel (B-Fig.19) to raise or lower the guide post/upper blade guide assembly to the desired height. Then tighten the guidepost lock knob.
Note: The bottom edge of the guide bearings should be approximately 1/4” above the top surface of the work piece. (Fig.20)

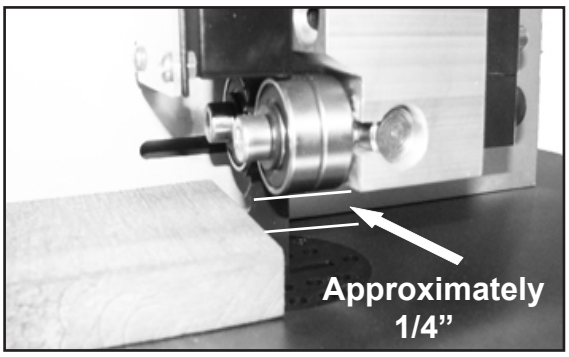


Figure 20

ADJUSTMENTS

CHANGING THE BLADE SPEED PULLEY SETTING

⚠ WARNING Before changing the speed, always make sure the machine has been unplugged from the electrical supply.

The 10-351 has two pulley speed ranges, low speed (2132 ft/min) and high speed (4101 ft/min).

The lower wheel (A-Fig.21) and the motor shaft have twin multi-vee pulleys (B-Fig.21). A flat ribbed “J” belt (C-Fig.21) passes around the wheel pulley, motor pulley and belt tension pulley. The belt tension is released and applied by using the handwheel (D-Fig.21).

For the high speed, the belt should be fitted to the rear pulley on both the motor and the wheel (A-Fig.22). (Large pulley on the motor, small pulley on the wheel)

For the low speed, the belt should be fitted to the front pulley on both the motor and wheel (B-Fig.22). (Small pulley on the motor, large pulley on the wheel)

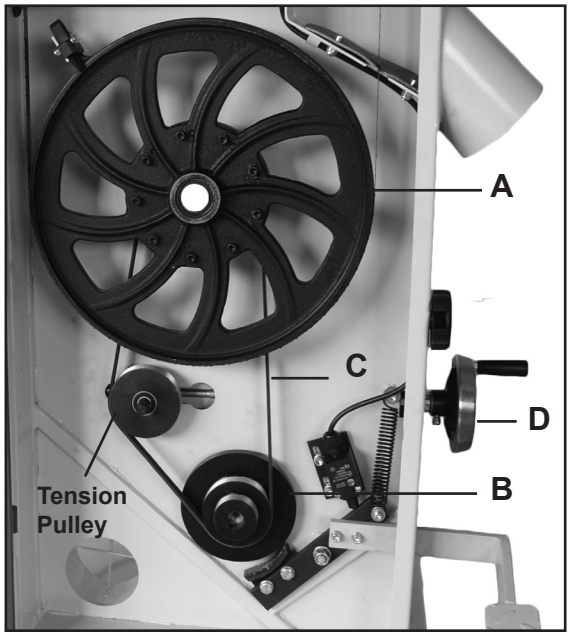


Figure 21

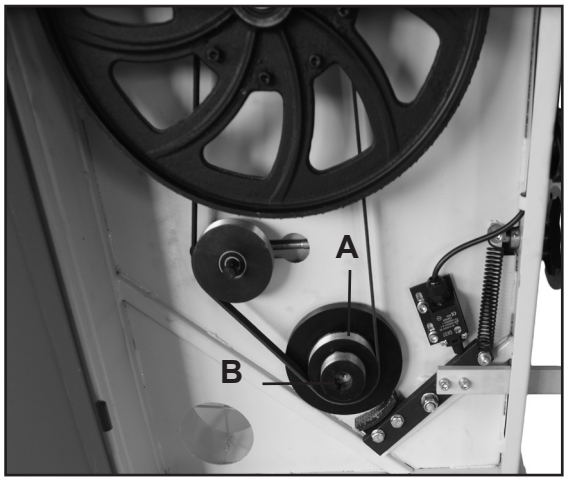


Figure 22

SETTING THE DRIVE BELT TENSION

To properly adjust belt tension, turn the hand-wheel (D-Fig.21) until there is 3/8” to 1/2” deflection in the flat ribbed “J” belt.

ADJUSTING THE RIP FENCE FOR DRIFT

Align the fence assembly, in or out, until it is parallel with the side of the blade by turning the adjustment collars and the fence bolts accordingly (A-Fig.23). If the mounting bolts have been tightened, these will need loosened off before this adjustment can be made. The same adjustment can be made to compensate for blade drift.

Check that the fence is 90 degrees to the table using a suitable square. If no adjustments are needed, fully tighten the nuts that secure the fence rail (bar). If an adjustment is required, raise or lower either side of the fence rail until the fence body is 90 degrees to the table. Once set at 90 degrees, fully tighten the fence rail (bar) nuts.

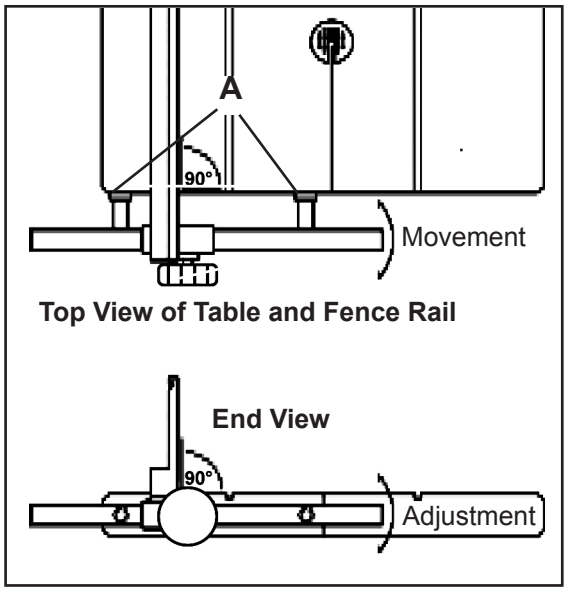


Figure 23

OPERATION

BASIC OPERATION

The blade cuts on a continuous down-stroke. Never start the saw with the workpiece in contact with the saw blade.

With both hands, firmly hold the workpiece down on the table, and feed it slowly towards the blade, putting only light pressure on it, and keeping your hands away from the blade.

Keep your hands/fingers away from the blade. Use a push stick whenever working close to the blade.

For best results the blade must be sharp. A dull blade will not cut correctly, especially when straight cutting, and causes excess pressure to be applied on the rear guide bearings.

Select the right blade for the job, depending on the thickness of the wood and the cut to be made. The thinner and harder the wood, the finer the teeth of the blade should be. Use a fine tooth blade for cutting sharp curves. See page 34 for more information on blades.

The machine is especially suited for cutting curves, but will also make straight cuts. When cutting, follow the design marked out by pushing and turning the workpiece evenly into the blade.

Do not attempt to turn the workpiece without pushing it, as this may cause the workpiece to get stuck, or bend the blade. For straight cuts, use the fence provided to feed the workpiece along the blade slowly and in a straight line. Use a miter gauge for cross-cut or angle cutting.

ON/OFF SWITCH CONTROL STATION

The 10-351 has a key-on safety feature that will lock out unauthorized users such as students, coworkers or employees not trained or qualified to use the bandsaw.

To operate the saw, turn the key (A-Fig.24) to the right to activate the control station. A green light will illuminate (B-Fig.24) showing that the saw is ready for use. Press the green “START” button (C-Fig.24) to turn the saw on. Once work is finished, press the “STOP” button to turn the saw off.

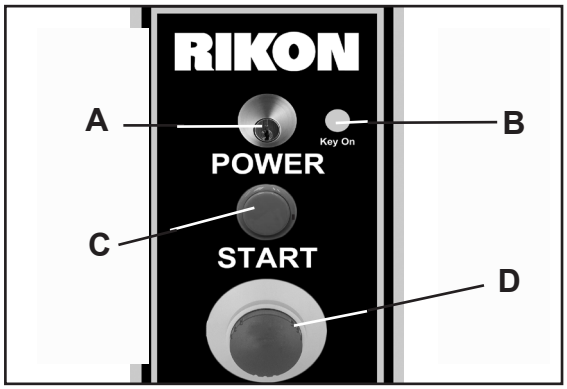


Figure 24

Note: If working with large pieces and not able to reach the “STOP” button simply press the foot brake. There is a switch built into the foot break assembly that will turn the saw off.

FOOT BRAKE

The foot brake (A-Fig. 25), when depressed will slow the blade to a stop, and will also shut off the bandsaw, simultaneously. This is an added safety feature that allows you to handle large workpieces without having to reach back to the switch control station to the main “STOP” button. The foot brake’s lever, when depressed, pivots the break pad (B-Fig.25) against the break disc (C-Fig.25) on the motor pulley.

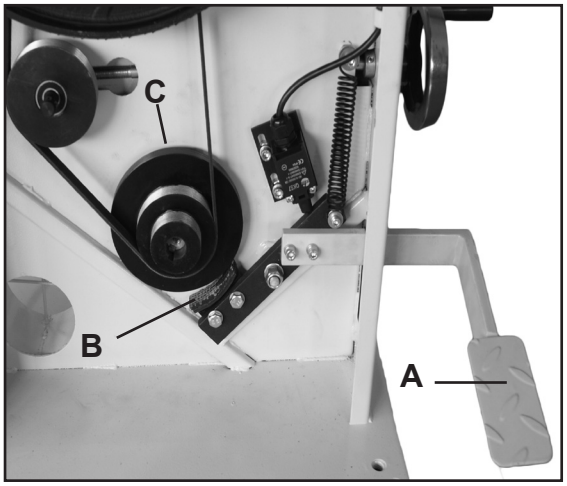


Figure 25

OPERATION

RE-SAWING

A re-saw guide bar is supplied to help correct any blade wandering during certain re-sawing operations.

For re-sawing, attach the re-saw bar to the slot on the fence. Position the re-saw bar so that it is aligned with the front of the blade. Draw a reference line down the workpiece. Use the bar as a pivot point, angling the wood left or right while against the bar, to follow the line through the cut. (Fig.26)

Note: The re-saw bar is not needed for all re-saw operations. Proper blade tension and selection, as well as proper guide set up, will allow re-sawing flat stock against the fence without the use of the re-saw bar.

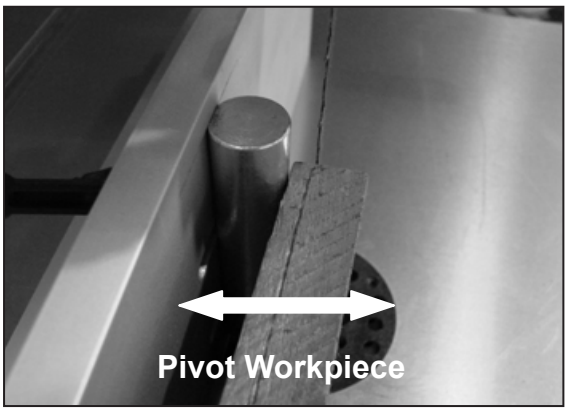


Figure 26

QUICK RELEASE BLADE TENSION LEVER

The tension lever that operates the quick release blade function has two of the most innovative features on the 10-351. (Fig. 27) One feature allows the blade tension to be released from back or front of the saw. The other feature disables the saw from operating if the quick release lever is not engaged with no tension on the blade. This prevents accidental starting while the tension lever is off and will eliminate the possibility of damaging a blade or the saw.

Figure 27

LED WORK LIGHT

The LED work light is built onto a long flexible goose neck giving it the ability to illuminate the work surface on both sides of the blade. To operate the LED work light depress the round button (A-Fig.28). LED lights are very bright and can wash out reference lines on a workpiece. If the light is too bright, move the goose neck away reducing the amount of light cast on the workpiece.

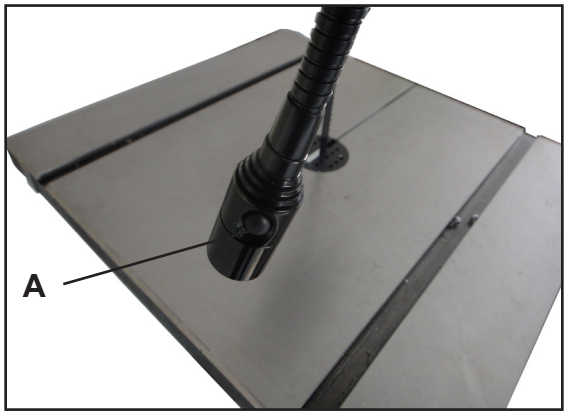


Figure 28

DUAL DOOR SAFETY SWITCHES

Both the upper and lower blade wheel doors are equipped with safety switches that will shut the saw off when opened. (Fig.29) The saw will not operate until the blade wheel doors are closed. If a door is opened while the saw is running, power to the motor will be cut off. The only way to restart the saw is to make sure both band wheel doors are closed before pressing the “START” button.

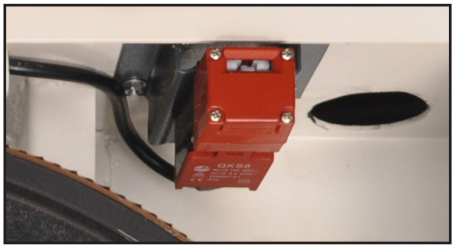


Figure 29

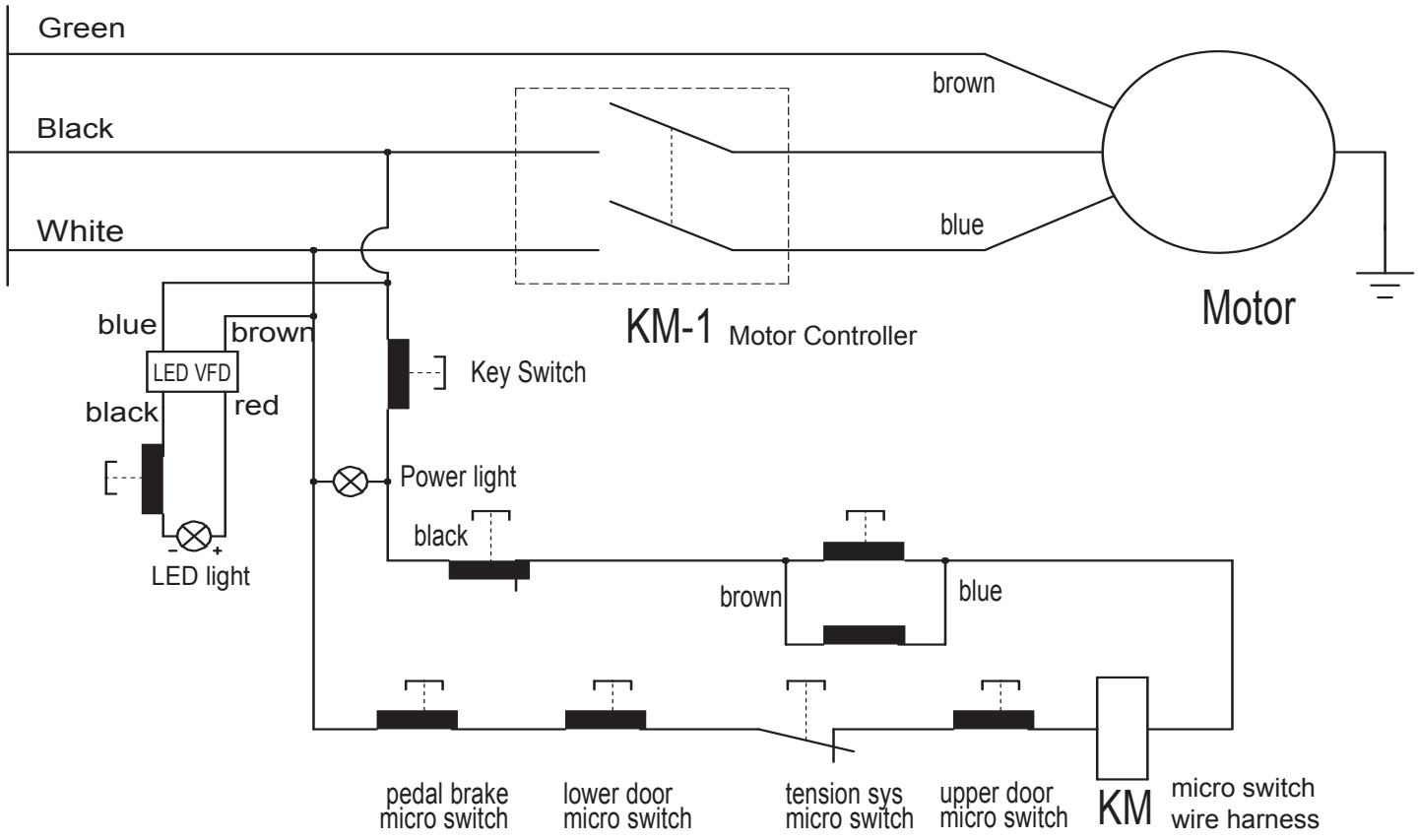
MAINTENANCE

⚠ CAUTION BEFORE CLEANING OR CARRYING OUT MAINTENANCE WORK, DISCONNECT THE MACHINE FROM THE POWER SOURCE (WALL SOCKET). NEVER USE WATER OR OTHER LIQUIDS TO CLEAN THE MACHINE. USE A BENCH BRUSH. DO NOT USE COMPRESSED AIR NEAR BEARINGS. REGULAR MAINTENANCE OF THE MACHINE WILL PREVENT UNNECESSARY PROBLEMS.

1. Keep the table clean to ensure accurate cutting.
2. Keep the outside of the machine clean to ensure accurate operation of all moving parts and prevent excessive wear.
3. Keep the ventilation slots of the motor clean to prevent it from overheating.
4. Keep the inside of the machine (near the saw blade, etc.) clean to prevent accumulation of dust. Use dust collection, if possible.
5. To prolong the life of the blade, when the bandsaw is not in use for extended periods, release the blade tension. Before reusing the bandsaw, ensure that the blade is re-tensioned and tracking is checked.
6. Keep guide bearings free of dust, clean frequently.

WIRING DIAGRAM

⚠ WARNING This machine must be grounded. Replacement of the power supply cable should only be done by a qualified electrician.



TROUBLESHOOTING

⚠ WARNING FOR YOUR OWN SAFETY, ALWAYS TURN OFF AND UNPLUG THE MACHINE BEFORE CARRYING OUT ANY TROUBLESHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
The machine does not work when switched on.	1. No power supply. 2. Defective switch.	Check the cable for breakage. Contact your local dealer for repair.
The blade does not move with the motor running.	1. The quick release lever or blade tension handwheel has not been tightened. 2. The blade has come off one of the wheels. 3. The saw blade has broken. 4. The drive belt has snapped.	Switch off the motor, tighten the quick release lever or blade tension handwheel. Open the hinged door and check. Replace the blade. Replace the belt.
The blade does not cut in a straight line.	1. Fence for cutting not used. 2. Too fast feed rate. 3. The blade teeth are dull or damaged. 4. Blade guides not suitably adjusted.	Use a fence. Put light pressure on the workpiece & make sure the blade does not bend. Use a new blade. Adjust the blade guides (see the section on page 14 and 21).
The blade does not cut, or cuts very slowly.	1. The teeth are dull, caused by cutting hard material or long use. 2. The blade was mounted in the wrong direction.	Replace the blade, use a 6 T.P.I. blade for wood and soft materials. Use a 14 T.P.I. blade for harder materials. A 14 T.P.I. blade always cuts slower due to the finer teeth and the slower cutting performance. Fit the blade correctly.
Sawdust builds up inside the machine.	1. This is normal	Clean the machine regularly. Open the hinged door and remove the sawdust with a vacuum cleaner.
Sawdust inside the motor housing.	1. Excessive dust build-up on the machine exterior components.	Clean the ventilating slots of the motor with a vacuum cleaner. From time to time remove the sawdust to prevent it from being sucked into the housing
The machine does not cut at 45° or 90° angles.	1. The table is not at right angles to the blade. 2. The blade is dull or too much pressure was put on the workpiece.	Adjust the table. Replace the blade or put less pressure on the workpiece.
The blade cannot be properly positioned on the bandwheels.	1. The blade tracking knob hasn't been properly adjusted. 2. Inferior blade. 3. The wheels are not in alignment.	Adjust the tracking knob (see page 12). Replace the blade. Adjust the lower wheel (see pages 22 & 23) Contact Technical Support @ 877-884-5167 or techsupport@rikontools.com.

For parts or technical questions contact: techsupport@rikontools.com or 877-884-5167.

NOTES

Use this section to record maintenance, service and any calls to Technical Support.

TROUBLESHOOTING

CHANGING THE MOTOR DRIVE BELT

(Refer to “Frame Assembly” parts diagram on page 24)

Before changing the belt, make sure that the bandsaw is unplugged from the power source.

Release the saw blade tension from the drive belt by turning the quick release blade tension lever.

Release the drive belt tension by using the blade tension hand wheel (Part #62).

Remove the lower wheel (Wheel Assembly, Part #98) by removing the hex head bolt and washer in the middle of the wheel’s hub. Carefully slide the lower wheel off of the lower wheel shaft, and at the same time remove the saw blade from this wheel.

Remove the old drive belt from the wheel’s pulley, and install the new belt. Make sure that the ribs in the drive belt are seated correctly in the pulley before reassembling and tensioning the drive belt.

Reverse the procedure to re-assemble the saw parts. Tension the drive belt until there is 3/8” to 1/2” of deflection.

TROUBLESHOOTING

ADJUSTING THE UPPER BLADE GUIDE BEARINGS PARALLEL TO THE BLADE

(Refer to “Guide Post Assembly” parts diagram on page 32).

This step may not be necessary, it is factory preset. If adjustment is needed follow the steps below.

First slightly loosen part #226 Hex Bolt M8X20 (4 each) on rear of upper bandsaw housing. This will allow you to adjust the micro adjustment screws #227 in part #224 Gear Bracket.

Next place a 3mm “L” wrench through the sight holes in part #198 Cover. Turning clockwise on the micro adjustment screws in left two holes will adjust the left bearings to the right. Turning clockwise on the micro adjustment screws in the right two holes will adjust the right bearings to the left. Check bearings for parallel.

Lastly tighten parts #226 Hex Bolt (4) on back of bandsaw housing. Repeat steps if the bearings are still not parallel.

ADJUSTING THE UPPER SIDE BEARINGS WHICH WILL NOT TRACK CLOSE TO THE BLADE

(Refer to “Guide Post Assembly” parts diagram on page 32).

If the right or left upper guide bearings do not adjust to within 1/32” of the blade, the Guide Post (part #195) may need adjustment.

First lower the Guide Post (part #195) all the way to the table.

Second slightly loosen parts #226 Hex Bolt M8X20 (4) on the back of the upper bandsaw cabinet housing.

Next, swing the Guide Post (part #195) right or left until side guide bearings are properly spaced on each side of blade, making sure that the blade will strike the center of the rear thrust bearing. Tighten part #226 Hex Bolt M8X20 (4) on the back of the upper bandsaw cabinet housing.

Raise the Guide Post (part #195) seven inches off the table and check alignment. If side guide bearings travel out of alignment repeat steps above. Raise the Guide Post (part #195) to the top of the travel and check final alignment. Repeat steps above if necessary.

CHANGING BANDSAW TIRES

Use a putty knife to get underneath the tire and pull it up and away from the wheel. Work the putty knife all the way around the wheel to loosen the tire. Then, use the putty knife as leverage to flip the tire over and off of the wheel. Clean the inside of the groove, removing any dirt, debris or cement with lacquer thinner.

Soak the replacement tire in warm water to make it more flexible. Dry the tire, and while it is still warm, lay it on top of the wheel. Start by setting the tire into the wheel groove at the top of the wheel. Using a putty knife, work the new tire around the wheel, making sure not to slice the tire. If rubber cement is to be used as a binder, make sure to distribute it evenly. Having high spots between the wheel and the tire will cause a vibration and effect blade tracking.

TROUBLESHOOTING

LOWER WHEEL ADJUSTMENTS

The following instructions will correct common blade issues related to the lower wheel's alignment in relation to the upper wheel. These adjustments will correct the blade position on the lower wheel and blade oscillation (wobble). These are critical adjustments which affect the performance and accuracy of the bandsaw.

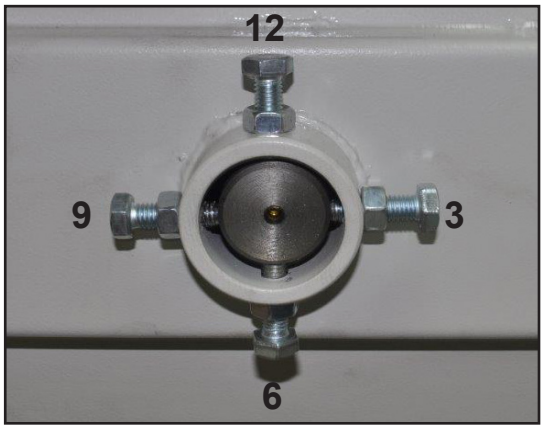
⚠ CAUTION PLEASE READ AND UNDERSTAND THESE STEPS THOROUGHLY BEFORE MAKING ANY ADJUSTMENTS. FAILURE TO DO SO COULD DAMAGE THE MACHINE.

Please contact a tech support representative if you have questions before attempting these adjustments. RIKON Tech Support 877-884-5167 techsupport@rikontools.com

Release the blade tension completely before making any lower wheel adjustments. Pressure must be released on the lower wheel to allow proper adjustments and to avoid damaging the machine.

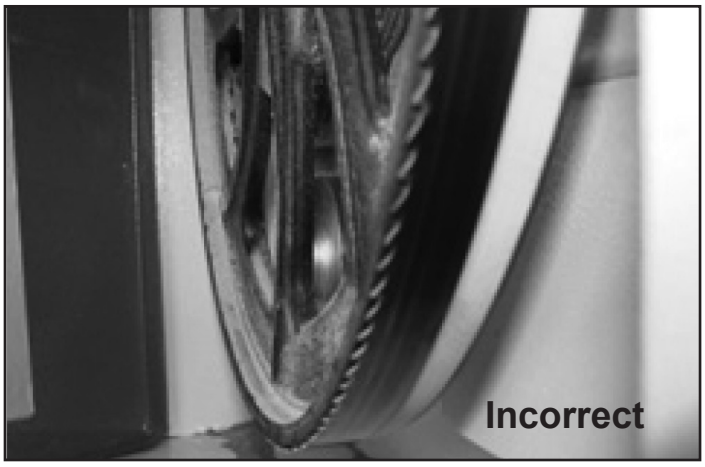
If the blade is not running true, or it is not running on center of the lower wheel but is correct on the upper wheel, then an adjustment to the wheel hub on the rear of the bandsaw is required.

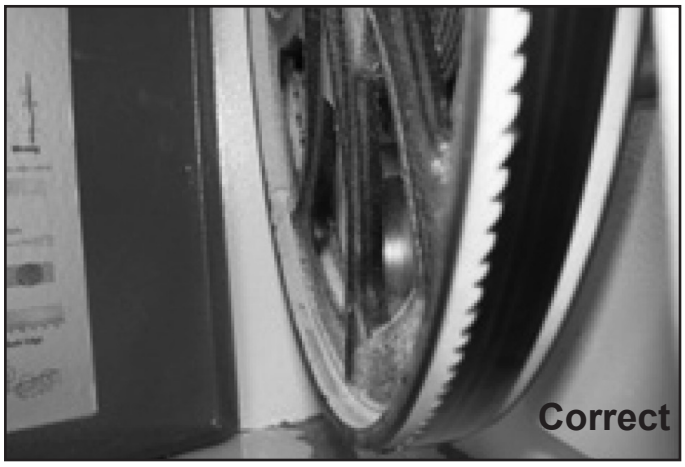
The numbers shown on the rear hub photo represent the positions on a clock face.



If a blade is tracking forward on the lower wheel toward the door, follow these correction steps:

1.) De-tension the saw blade.
2.) Loosen 9 o'clock shaft bolt to take pressure off the shaft.
3.) Loosen 12 o'clock shaft bolt one half rotation.
4.) Tighten the 6 o'clock shaft bolt until the shaft touches the 12 o'clock adjusting bolt.
5.) Lock all three shaft bolts.
6.) Re-tension the saw blade and set the upper wheel to plumb by adjusting the tracking knob. Spin the upper wheel by hand and track the blade.
7.) Repeat if further adjustment is necessary.

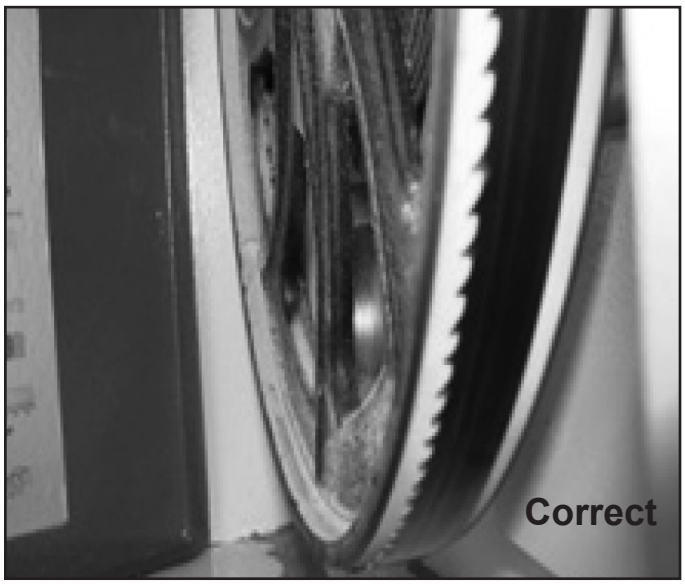




TROUBLESHOOTING

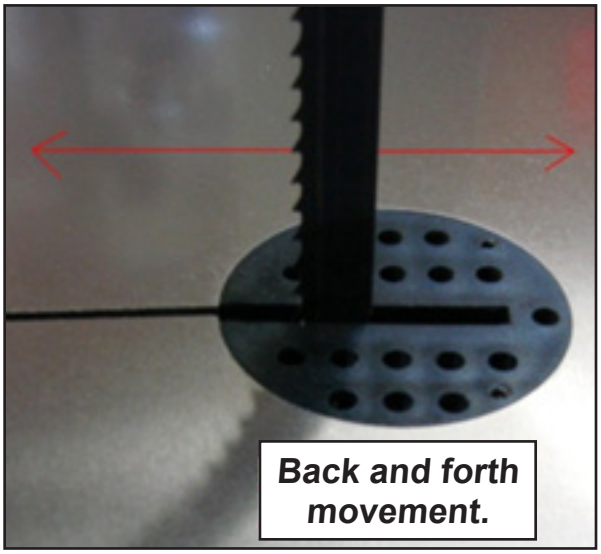
If a blade is tracking on the rear of the lower wheel, away from the door, follow these steps:

1.) De-tension the saw blade.
2.) Loosen 9 o'clock shaft bolt to take pressure off the shaft.
3.) Loosen 6 o'clock shaft bolt one half rotation.
4.) Tighten the 12 o'clock shaft bolt until the shaft touches the 6 o'clock adjusting bolt.
5.) Lock all three shaft bolts.
6.) Re-tension the saw blade and set the upper wheel to plumb by adjusting the tracking knob. Spin the upper wheel by hand and track the blade.
7.) Repeat if further adjustment is necessary.



If a blade is moving back and forth (wobbling) follow these steps:

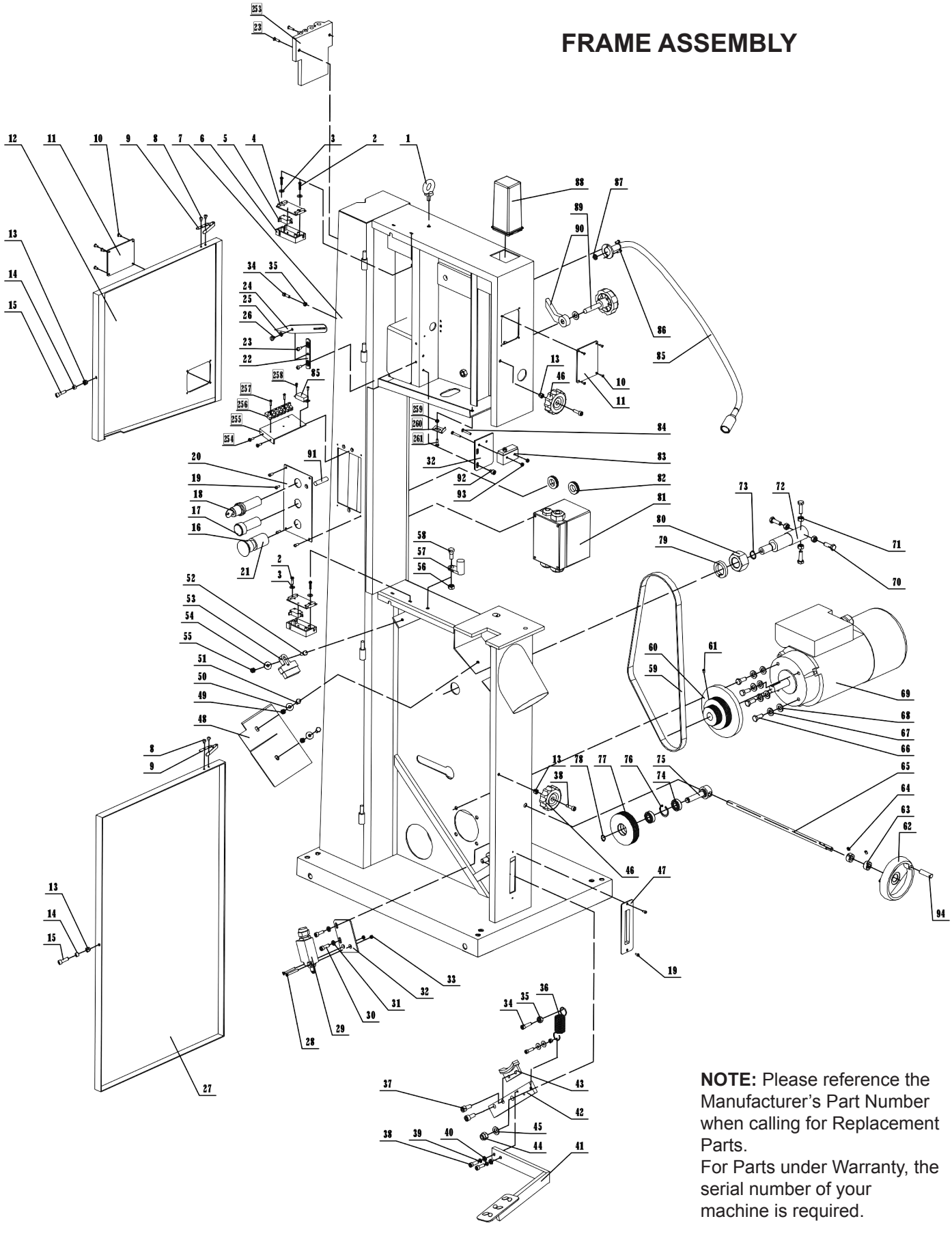
Adjustment to the wheel hub on the rear of the bandsaw is required.



1.) De-tension the saw blade.
2.) Loosen 6 o'clock shaft bolt to take pressure off of the shaft.
3.) Loosen 9 o'clock shaft bolt one half rotation.
4.) Tighten the 3 o'clock shaft bolt until the shaft touches the 9 o'clock adjusting bolt.
5.) Lock all three shaft bolts.
6.) Re-tension the saw blade and set the upper wheel to plumb by adjusting the tracking knob. Spin the upper wheel by hand and track the blade.
7.) Start the bandsaw and check blade movement.
8.) If movement has diminished then continue with the adjustment.
9.) If movement is worse, reverse the adjustments in steps 3 and 4.

PARTS DIAGRAM

FRAME ASSEMBLY



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.

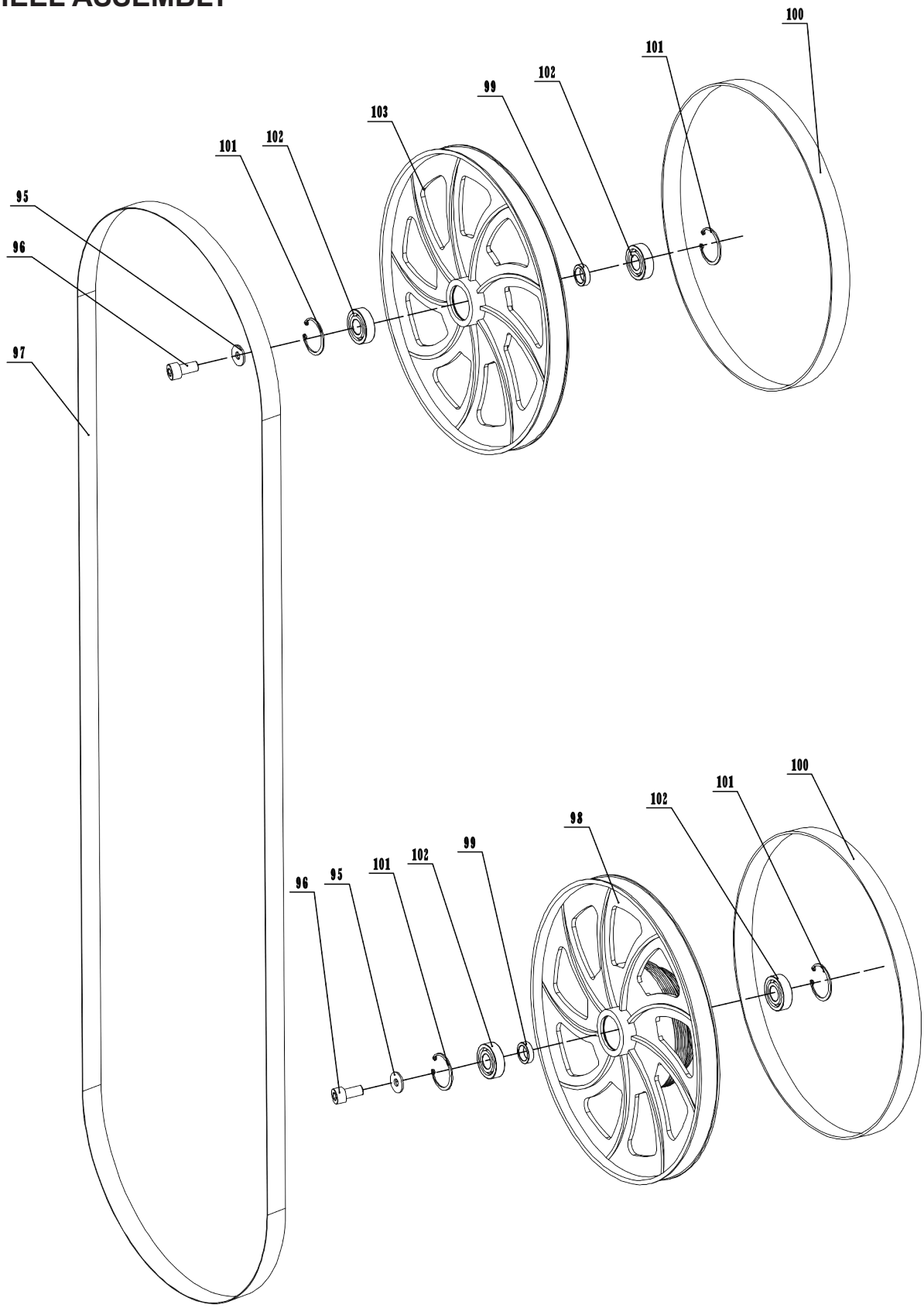
PARTS LIST

FRAME ASSEMBLY

KEY NO.	DESCRIPTION	QTY	MFG. PART NO.
1	Ring	1	P10-351-1
2	Tap Screw	4	P10-351-2
3	Washer	4	P10-351-3
4	Micro-Switch Cap	2	P10-351-4
5	Switch	2	P10-351-5
6	Micro-Switch Cover	2	P10-351-6
7	Frame	1	P10-351-7
8	Rivet	4	P10-351-8
9	Leaf Spring	2	P10-351-9
10	Rivet	8	P10-351-10
11	Clear Window	2	P10-351-11
12	Upper Door Assembly	1	P10-351-12
13	Locking Nut	4	P10-351-13
14	Tube	2	P10-351-14
15	Hex Socket Screw M6X25	4	P10-351-15
16	Stop Switch Box	1	P10-351-16
17	Button	1	P10-351-17
18	Key Switch	1	P10-351-18
19	Pan Head Screw	4	P10-351-19
20	Switch Plate	1	P10-351-20
22	Pointer Plate	1	P10-351-22
23	Pan Head Screw	6	P10-351-23
24	Pointer	1	P10-351-24
25	Flat Washer	2	P10-351-25
26	Pointer Screw	1	P10-351-26
27	Lower Door Assembly	1	P10-351-27
28	Pan Head Screw	2	P10-351-28
29	Micro-Switch	1	P10-351-29
30	Hex Socket Screw M6X16	2	P10-351-30
31	Flat Washer	2	P10-351-31
32	Micro-Switch Plate	2	P10-351-32
33	Nut	2	P10-351-33
34	Hex Socket Screw M6X30	1	P10-351-34
35	Nut	1	P10-351-35
36	Spring	1	P10-351-36
37	Hex Socket Screw M8X16	2	P10-351-37
38	Hex Socket Screw M6X20	4	P10-351-38
39	Spring Washer	2	P10-351-39
40	Flat Washer	2	P10-351-40
41	Pedal	1	P10-351-41
42	Lever	1	P10-351-42
43	Brake Block	1	P10-351-43
44	Locking Nut	1	P10-351-44
45	Flat Washer	1	P10-351-45
46	Knob	2	P10-351-46
47	Side Cover	1	P10-351-47
48	Plate	1	P10-351-48
49	Washer	2	P10-351-49
50	Bolt M6X16	2	P10-351-50
51	Locking Nut	2	P10-351-51
52	Hex Bolt M6X25	1	P10-351-52
53	Brush	1	P10-351-53
54	Washer	1	P10-351-54
55	Hex Nut M6	1	P10-351-55
56	Locking Nut M8	1	P10-351-56
57	Seat Pad	1	P10-351-57
58	Screw Shaft	1	P10-351-58
59	Drive Belt	1	P10-351-59
60	Motor Pulley	1	P10-351-60
61	Hex Screw M8X10	2	P10-351-61
62	Small Hand Wheel	1	P10-351-62
63	Retaining Ring	2	P10-351-63
64	Screw M5X8	2	P10-351-64
65	Thread Rod	1	P10-351-65
66	Hex Screw M8X20	4	P10-351-66
67	Flat Washer	4	P10-351-67
68	Washer	4	P10-351-68
69	3HP Motor	1	P10-351-69
69A	Capacitor (not shown)	1	P10-351-69A
70	Hex Screw M8X25	4	P10-351-70
71	Hex Nut M8	4	P10-351-71
72	Lower Bearing Bolt	1	P10-351-72
73	Retaining Ring	1	P10-351-73
74	Bearing	2	P10-351-74
75	Sliding Shaft	1	P10-351-75
76	Tension Wheel	1	P10-351-76
77	Retaining Ring	1	P10-351-77
78	Retaining Ring	1	P10-351-78
79	Spring Washer	1	P10-351-79
80	Nut M27X2	1	P10-351-80
81	Relay	1	P10-351-81
82	Bushing	4	P10-351-82
83	Micro-Switch	1	P10-351-83
84	Screw M4X30	2	P10-351-84
85	Light	1	P10-351-85
86	Screw M4X15	2	P10-351-86
87	Bushing	1	P10-351-87
88	Upper Guide Cover	1	P10-351-88
89	Thread Handle	1	P10-351-89
90	Adjusting Knob	1	P10-351-90
91	Indicator Light	1	P10-351-91
92	Hex Socket Screw M5X10	2	P10-351-92
93	Nut M4	4	P10-351-93
94	Small Hand Wheel	1	P10-351-94
253	Tool Holder	1	P10-351-253
254	Screw	2	P10-351-254
255	Plate	1	P10-351-255
256	Wire Connector	1	P10-351-256
257	Pan Head Screw	2	P10-351-257
258	Pan Head Screw	2	P10-351-258
259	Hex Nut	1	P10-351-259
260	Bracket	1	P10-351-260
261	Pan Head Screw	1	P10-351-261

PARTS DIAGRAM

WHEEL ASSEMBLY



PARTS LIST

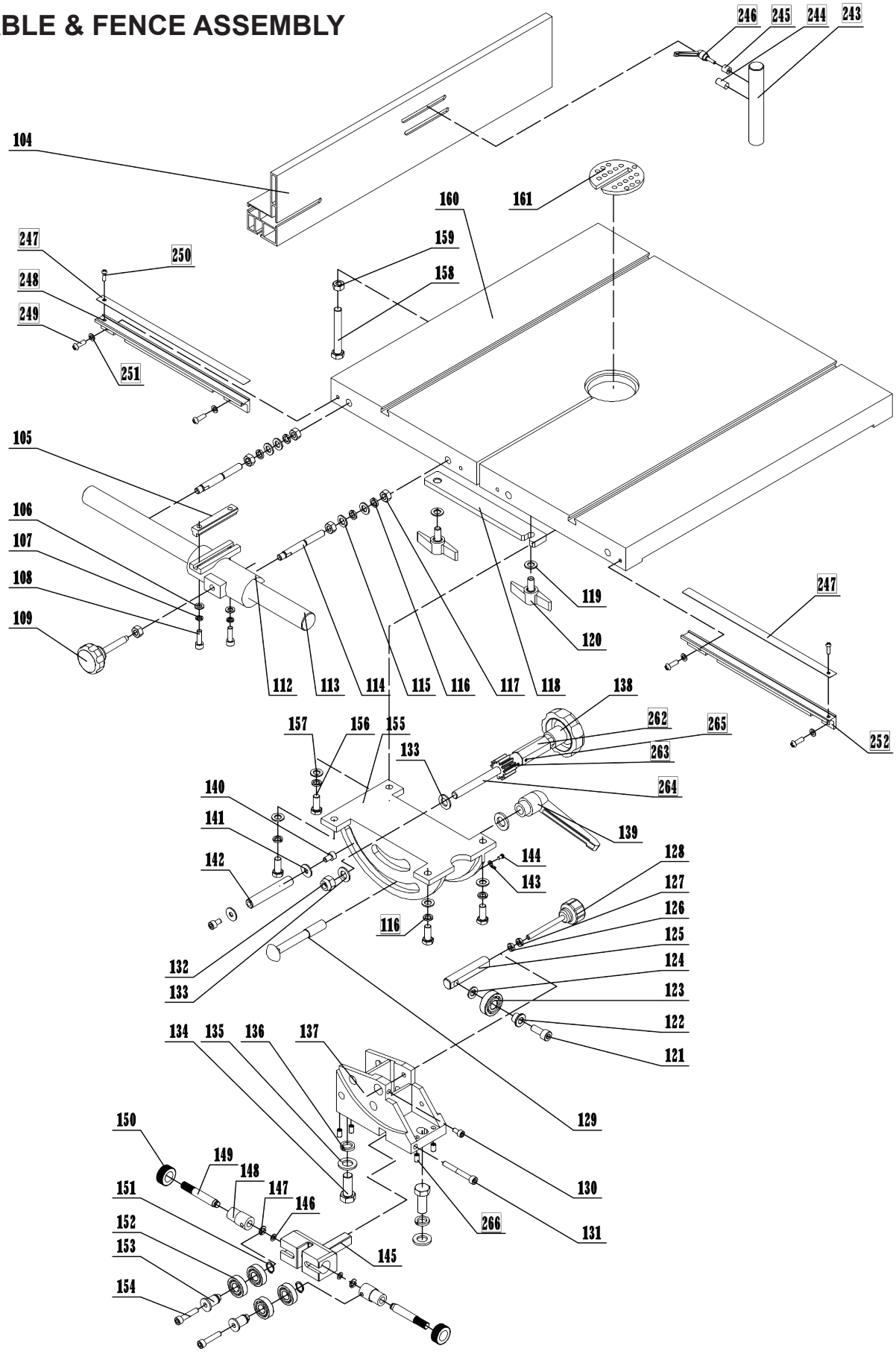
WHEEL ASSEMBLY

KEY NO.	DESCRIPTION		QTY	MFG. PART NO.
95	Washer		2	P10-351-95
96	Hex Socket Screw	M8X16	2	P10-351-96
97	Bandsaw Blade		1	P10-351-97
98	Lower Wheel		1	P10-351-98
99	Bushing		2	P10-351-99
100	Tire		2	P10-351-100
101	Retaining Ring		4	P10-351-101
102	Bearing		4	P10-351-102
103	Upper Wheel		1	P10-351-103

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 DIAGRAM

TABLE & FENCE ASSEMBLY



PARTS LIST

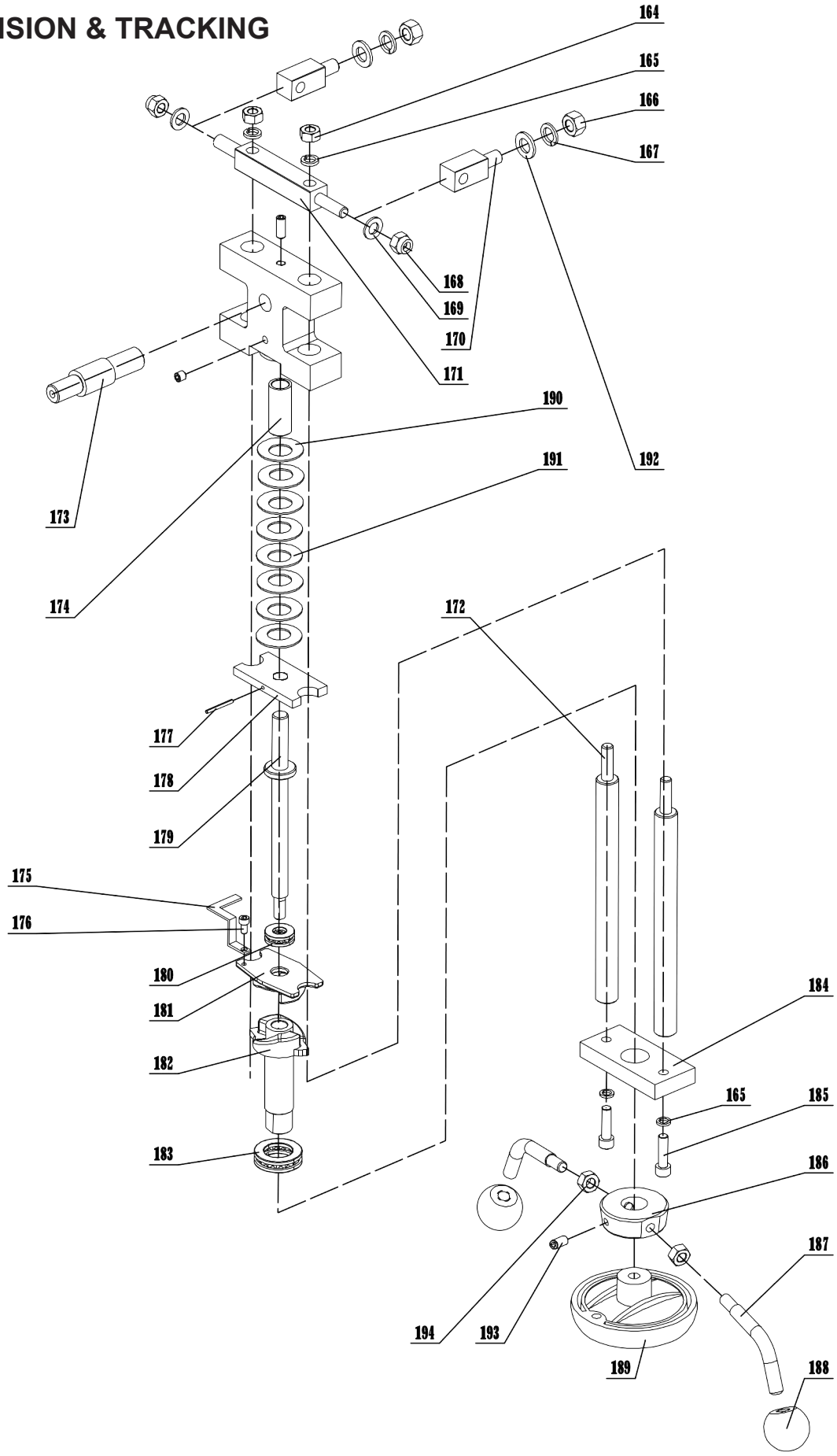
TABLE & FENCE ASSEMBLY

KEY NO.	DESCRIPTION	QTY	MFG. PART NO.
104	Rip Fence	1	P10-351-104
105	Locking Plate	1	P10-351-105
106	Washer	2	P10-351-106
107	Spring Washer	2	P10-351-107
108	Hex Socket Screw M6X16	2	P10-351-108
109	Adjusting Knob Cap	1	P10-351-109
112	Clip	1	P10-351-112
113	Fence Rail	1	P10-351-113
114	Support Shaft	2	P10-351-114
115	Washer	4	P10-351-115
116	Spring Washer	4	P10-351-116
117	Hex Nut M8	4	P10-351-117
118	Support Plate	1	P10-351-118
119	Washer	2	P10-351-119
120	Wing Knob	2	P10-351-120
121	Hex Socket Screw M8X25	1	P10-351-121
122	Bearing Bushing	1	P10-351-122
123	Bearing	1	P10-351-123
124	Washer	1	P10-351-124
125	Support Rod	1	P10-351-125
126	Nut M6	1	P10-351-126
127	Nut M6	1	P10-351-127
128	Adjusting Handle	1	P10-351-128
129	Carriage Bolt M12x90	1	P10-351-129
130	Hex Socket Screw M5X10	1	P10-351-130
131	Hex Socket Screw M5X50	1	P10-351-131
132	Locking Nut	1	P10-351-132
133	Washer	2	P10-351-133
134	Screw M12X30	2	P10-351-134
135	Washer	2	P10-351-135
136	Spring Washer	2	P10-351-136
137	Lower Table Trunnion	1	P10-351-137
138	Locking Handle	1	P10-351-138
139	Locking Handle	1	P10-351-139
140	Hex Socket Screw M6X10	2	P10-351-140
141	Washer	2	P10-351-141
142	Guide Shaft	1	P10-351-142
143	Pointer	1	P10-351-143
144	Pan Head Screw	1	P10-351-144
145	Lower Guide Body	1	P10-351-145
146	Washer	2	P10-351-146
147	Ring	2	P10-351-147
148	Tube	2	P10-351-148
149	Threaded Shaft	2	P10-351-149
150	Lock Plate	2	P10-351-150
151	Retaining Ring	2	P10-351-151
152	Bearing	4	P10-351-152
153	Bushing	2	P10-351-153
154	Hex Socket Screw M6X30	2	P10-351-154
155	Upper Table Trunnion	1	P10-351-155
156	Hex Screw	4	P10-351-156
157	Washer	4	P10-351-157
158	Nut M8	1	P10-351-158
159	Bolt M8X50	1	P10-351-159
160	Table	1	P10-351-160
161	Table Insert	1	P10-351-161
243	Shaft	1	P10-351-243
244	Bolt	1	P10-351-244
245	Bushing	1	P10-351-245
246	Handle Assembly	1	P10-351-246
247	Ruler	2	P10-351-247
248	Ruler Carrier, left	1	P10-351-248
249	Screw	4	P10-351-249
250	Pan Head Screw	2	P10-351-250
251	Flat Washer	4	P10-351-251
252	Ruler Carrier, right	1	P10-351-252
262	Shaft	1	P10-351-262
263	Gear	1	P10-351-263
264	Shaft	1	P10-351-264
265	Pin	2	P10-351-265
266	Set Screw	4	P10-351-266

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 DIAGRAM

BLADE TENSION & TRACKING



PARTS LIST

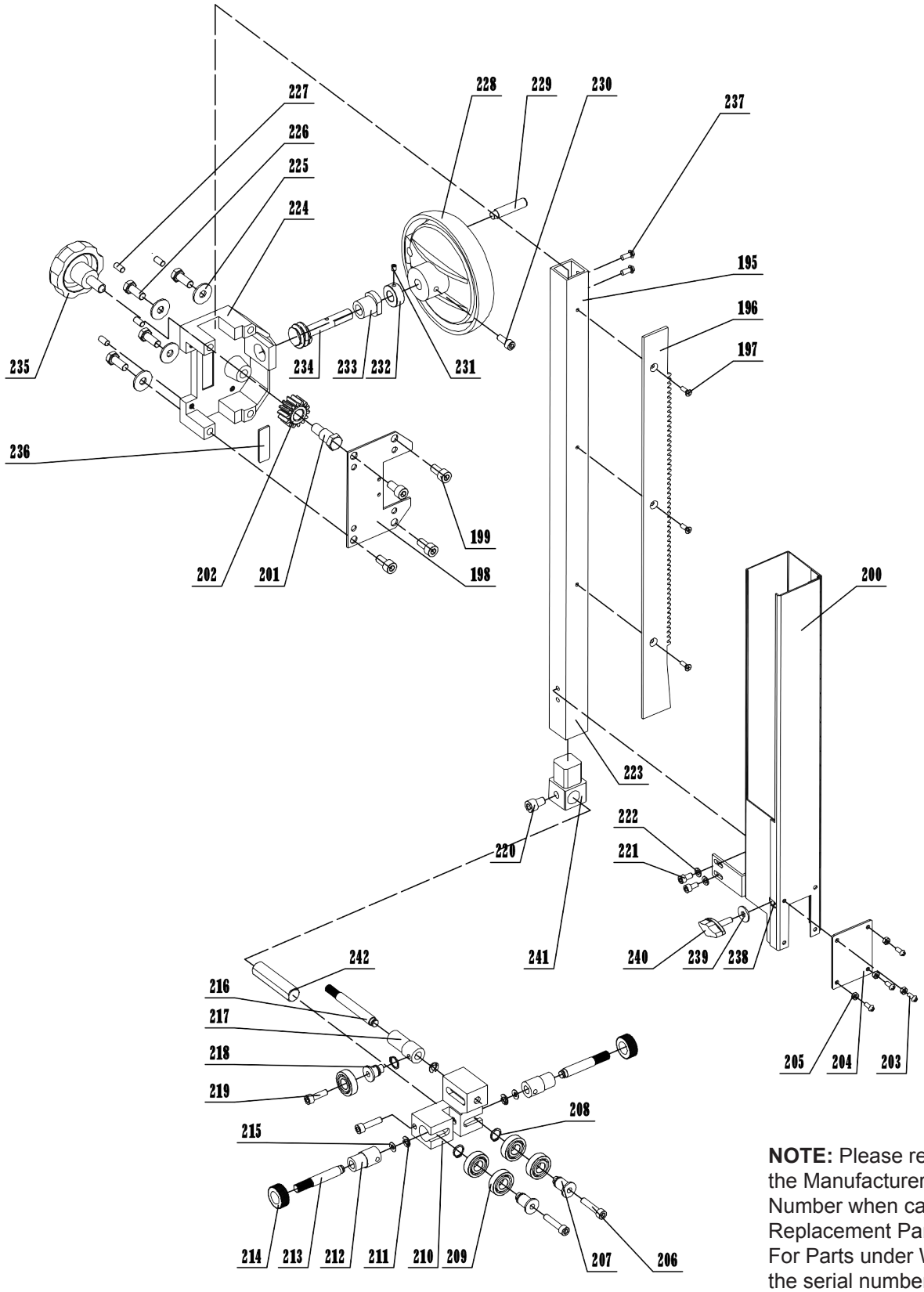
BLADE TENSIONING & TRACKING

KEY NO.	DESCRIPTION	QTY	MFG. PART NO.
164	Hex Nut M10	2	P10-351-164
165	Spring Washer	4	P10-351-165
166	Nut M12	2	P10-351-166
167	Spring Washer	2	P10-351-167
168	Locking Nut	2	P10-351-168
169	Flat Washer	2	P10-351-169
170	Bolt	2	P10-351-170
171	Threaded Rod	1	P10-351-171
172	Slide Rod	2	P10-351-172
173	Upper Wheel Shaft	1	P10-351-173
174	Bushing	1	P10-351-174
175	Switch Plate	1	P10-351-175
176	Hex Socket Screw M5X10	1	P10-351-176
177	Roll Pin	1	P10-351-177
178	Threaded Plate	1	P10-351-178
179	Threaded Rod	1	P10-351-179
180	Bearing	1	P10-351-180
181	Upper Block	1	P10-351-181
182	Lower Block	1	P10-351-182
183	Bearing	1	P10-351-183
184	Support Plate	1	P10-351-184
185	Hex Socket Screw M10X30	2	P10-351-185
186	Knob Bushing	1	P10-351-186
187	Knob Lever	2	P10-351-187
188	Knob	2	P10-351-188
189	Small Hand Wheel	1	P10-351-189
190	Flat Washer	2	P10-351-190
191	Spring	10	P10-351-191
192	Washer	2	P10-351-192
193	Hex Screw M6X12	1	P10-351-193

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 DIAGRAM

GUIDE POST ASSEMBLY



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

GUIDE POST ASSEMBLY

KEY NO.	DESCRIPTION	QTY	MFG. PART NO.
195	Guide Post	1	P10-351-195
196	Rack	1	P10-351-196
197	Pan Head Screw	3	P10-351-197
198	Cover	1	P10-351-198
199	Hex Socket Screw M8X10	4	P10-351-199
200	Blade Cover	1	P10-351-200
201	Screw	1	P10-351-201
202	Gear	1	P10-351-202
203	Pan Head Screw	4	P10-351-203
204	Plastic Window	1	P10-351-204
205	Hex Nut M4	4	P10-351-205
206	Hex Socket Screw M6X30	2	P10-351-206
207	Bushing	2	P10-351-207
208	Retaining Ring	3	P10-351-208
209	Bearing	5	P10-351-209
210	Upper Guide Body	1	P10-351-210
211	Ring	3	P10-351-211
212	Threaded Bushing	2	P10-351-212
213	Threaded Shaft	2	P10-351-213
214	Lock Plate	3	P10-351-214
215	Washer	3	P10-351-215
216	Threaded Shaft	1	P10-351-216
217	Threaded Bushing	1	P10-351-217
218	Bushing	1	P10-351-218
219	Hex Socket Screw M6X20	1	P10-351-219
220	Hex Socket Screw M8X12	2	P10-351-220
221	Washer	2	P10-351-221
222	Hex Socket Screw M5X10	2	P10-351-222
223	Pan Head Screw	1	P10-351-223
224	Gear Bracket	1	P10-351-224
225	Washer	4	P10-351-225
226	Hex Bolt M8X20	4	P10-351-226
227	Screw M6x12	4	P10-351-227
228	Big Hand Wheel	1	P10-351-228
229	Handle Assembly	1	P10-351-229
230	Hex Screw M6X12	1	P10-351-230
231	Hex Screw M5X8	1	P10-351-231
232	Ring	1	P10-351-232
233	Bushing	1	P10-351-233
234	Rod	1	P10-351-234
235	Locking Handle	1	P10-351-235
236	Setting Plate	1	P10-351-236
237	Pan Head Screw	2	P10-351-237
238	Nut M6X15	1	P10-351-238
239	Washer	1	P10-351-239
240	Wing Knob	1	P10-351-240
241	Support Bracket	1	P10-351-241

How-To's for all Band Saw Blades

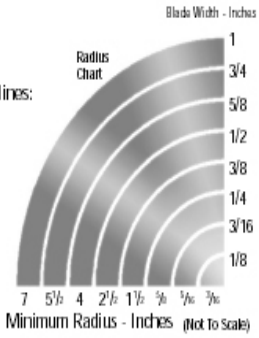
Choosing the Correct Blade Width

Blade width is measured from the tips of the teeth to the back edge of the blade as shown above. The instructions for the particular machine being used should be followed when selecting blade width.

If no such instructions are provided, blade width should be determined with the following guidelines:

For Cut-Off Sawing, the blade should be as wide as the machine will allow. The wider the band is, the straighter the cut will be. Faster feeding can be achieved.

For Contour Sawing, the blade should be as wide as the machine allows, but still narrow enough so that it can cut the desired shape (radius). Minimum dimensions for different cutting radii are shown on the chart at right.



How To Choose The Correct Number Of Teeth Per Inch (TPI)

The number of teeth per inch (TPI) is important in obtaining the finish desired and the proper feed rate. A coarse tooth blade (2, 3 TPI) should be used for resawing wood and cutting thicker stock up to 8". A fine toothed blade (18 to 32 TPI) should be used for thinner metals and plastics under 1/4". For general cutting of 3/4" wood 4 TPI will provide a fast cut and 14 TPI will cut slow, but leave a smoother finish.

When Selecting TPI remember:

- More TPI give a smoother but slower cut
- Fewer TPI allow a faster cut with a slightly rougher finish
- At least three teeth must be in the workpiece—the chart to the right will help you decide.

TPI	Minimum Material Thickness
32	3/32"
24	1/8"
18	5/32"
14	1/4"
10	5/16"
8	3/8"
6	1/2"
4	3/4"
3	1"
2	1-1/2"

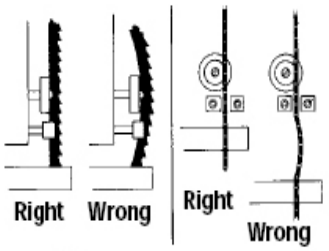
It is important to know the SFM for the various speed settings of your band saw, so that you can select the proper speed for cutting wood or other materials. Check the operator's manual of your band saw to determine the SFM or use the following procedure:

1. Determine the RPM: check the operator's manual or clock the revolutions per minute of the wheels with a tachometer or revolution counter.
2. Measure the diameter of the drive wheel in inches and multiply by .262 to obtain the wheel circumference. The RPM times circumference equals the surface speed of the blade. RPM x diameter in inches x .262 = SFM.

Note: Spring Steel Wood Cutting Band Saw Blades should never be operated at surface speeds above 3000 SFM. Carbon Hard Edge Flexible Back Band Saw Blades may be run up to 8000 SFM.

Installing your Band Saw Blade

1. Unplug the saw, then loosen the tension on the upper wheel. With all the blade guides backed off, slip the new blade around the wheels and then tension it.
2. When you have tensioned the blade enough to keep it on the wheels, track it by turning the upper wheel with one hand while adjusting the tilt of the wheel's axis with the other hand. The blade should ride in the middle of the rim. **Never track the blade with the motor running and the cover open.**
3. Next, adjust the blade guides; first the thrust bearings: upper and lower, then the left had side guides.
4. Use a square to make sure you are not pushing the blade out of line and place a piece of white paper between the blade guide and the blade to allow for clearance.



Diagnosing Problems

1. Premature and Excessive Tooth Wear

- Feed pressure too light, increase it.
- Lower band velocity.
- Improper tooth selection, use a finer pitch.
- Improper break-in with new band. Velocity and feeding should be reduced the first few cuts.
- Teeth are running the wrong direction. Be sure teeth are pointing in proper direction.
- Incorrect saw guide insert size for the band, allowing them to strike teeth

2. Blade Vibration

- Increase or decrease band velocity.
- Increase tension of band.
- Teeth too coarse for workpiece.
- Increase feed pressure.
- Material not securely held.

3. Gullets Loading

- Teeth too fine for workpiece - use a coarser pitch.
- Decrease band velocity.

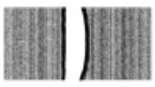
4. Band Stalls in Work

- Feed pressure too great - decrease feed.
- Teeth too coarse, use finer tooth blade

5. Premature Blade Breakage

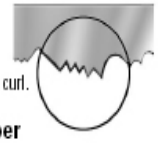
- Thickness of blade too heavy for diameter of wheels and speed of machine
- Increase or decrease velocity
- Check wheels for defects
- Teeth too coarse for workpiece –use a finer pitch
- Decrease blade tension
- Decrease feeding force
- Brittle weld – increase annealing period, decreasing heat gradually
- Check for proper adjustment of band guides, saw guides, saw guide inserts, and back-up bearings.

6. Blade Making Belly-Shaped Cuts



- Increase tension.
- Adjust guides closer to workpiece.
- Teeth too fine – use a coarse pitch.
- Decrease feed force.
- Teeth dull.

7. Tooth Strippage



- Teeth too coarse for workpiece.
- Material not securely held.
- Too much feed pressure –reduce for good chip curl.
- Band velocity too low – increase speed.

8. Band Develops a Negative Camber

- Band is riding on saw guide backup bearing too heavily. Adjust band for alignment on top and bottom wheels.
- Check band wheel alignment.

9. Blade Not Running True Against Saw Guide Backup Bearing

- If clicking noise against saw guide backup bearing, remove burr on band.
- Check band wheel alignment.
- Check saw guide backup bearing for wear, replace if necessary
- Weld not in proper alignment. Reweld blade straight and true.

10. Cutting Rate Too Slow

- Increase band velocity.
- Increase feed pressure.
- Use a coarser pitch.

11. Blade Leading In Cut

- Reduce feed pressure or rate.
- Check adjustments and wear of saw guides or rollers.
- Lack of band tension.
- Tooth set damage.

12. Premature Loss of Set

- Improper width selection - check chart for correct width for radius cutting.
- Reduce band velocity.

13. Band Develops Positive Camber

- Decrease force.
- Use a coarser pitch to increase tooth penetration.
- Adjust saw guides closer to work.

14. Band Develops Twist

- Wrong width for radius being cut – choose a narrower blade.
- Binding in cut – decrease feed pressure.
- Decrease band tension.
- Adjust saw guides further from workpiece.

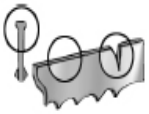
15. Finished Cut Surface Too Rough

- Improper tooth selection – choose a finer pitch.
- Increase band velocity.
- Decrease feed rate.

16. Band Scoring (side wear or grooving)

- Check for wear on saw guide inserts.
- Too much pressure on saw guide inserts.
- Check alignment of saw guides – be sure they are square to front vise. Replace or clean guides.

17. Burring or Mushrooming of Blade Back Edge



- Increase tension and adjust guides.
- Check contact between blade and back edge rollers.
- Reduce feed pressure.
- Use coarser pitch blade.
- Use finishing stone.

WARRANTY

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 warranty does not cover products used for commercial, industrial or educational purposes.

This limited warranty does not apply to accessory items such as blades, drill bits, sanding discs, grinding wheels or belts 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, which includes date of purchase and an explanation of the complaint, must be provided.

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 take advantage of this warranty, please fill out the enclosed warranty card and send it to:
RIKON Warranty
16 Progress Rd.
Billerica, MA 01821

The card must be entirely completed in order for it to be valid. If you have any questions please contact us at 877-884-5167 or warranty@rikontools.com.

RIKON
POWER TOOLS

For more information:
16 Progress Rd
Billerica, MA 01821

877-884-5167 / 978-528-5380
techsupport@rikontools.com