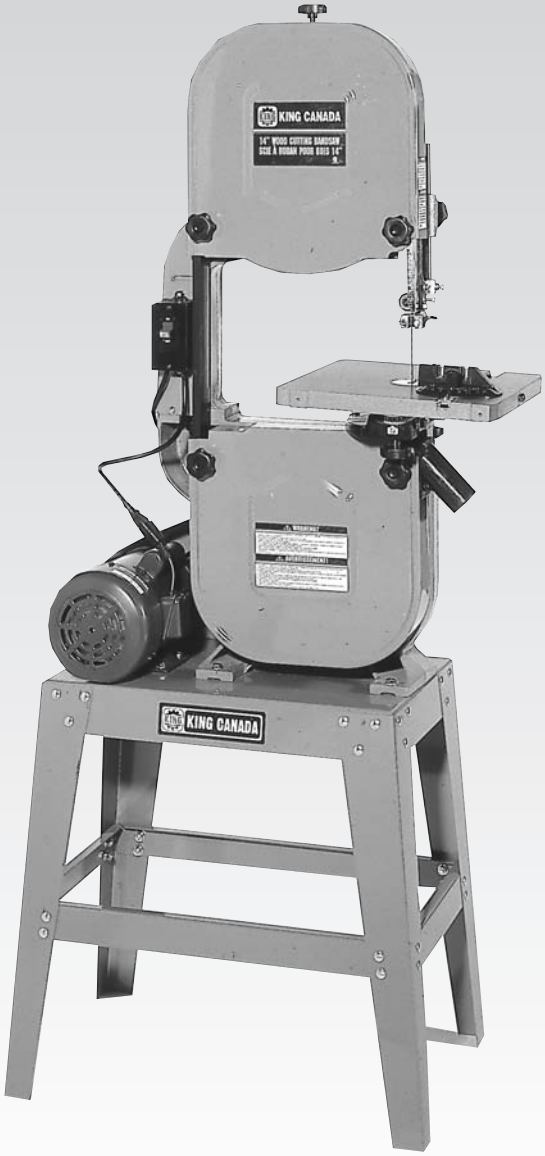
KING CANADA

14" BAND SAW



MODEL: KC-1401HD

INSTRUCTION MANUAL

IMPORTANT INFORMATION

THANK YOU FOR PURCHASING THIS KING CANADA PRODUCT

2-YEAR LIMITED WARRANTY FOR THIS 14" BAND SAW	**KING CANADA TOOLS** OFFERS A 2-YEAR LIMITED WARANTY FOR NON-COMMERCIAL USE.

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

Replacement parts for this tool are available at our authorized KING CANADA service centers across Canada. For servicing, contact or return to the retailer where you purchased your band saw along with your proof of purchase.

LIMITED TOOL WARRANTY

KING CANADA makes every effort to ensure that this product meets high quality and durability standards. KING CANADA warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations and lack of maintenance. KING CANADA shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products. To take advantage of this warranty, the product or part must be returned for examination by the retailer. Shipping and handling charges may apply. If a defect is found, KING CANADA will either repair or replace the product.

PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

1. KNOW YOUR TOOL

Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. GROUND THE TOOL.

This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE.

Keep in good working order, properly adjusted and aligned.

4. REMOVE ADJUSTING KEYS AND WRENCHES.

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery due to wax and sawdust build-up.

6. AVOID DANGEROUS ENVIRONMENT.

Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

7. KEEP CHILDREN AWAY.

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILD-PROOF.

-with padlocks, master switches or by removing starter keys.

9. USE PROPER SPEED.

A tool will do a better and safer job when operated at the proper speed.

10. USE RIGHT TOOL.

Don't force the tool or the attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL.

Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

12. ALWAYS WEAR SAFETY GLASSES.

Always wear safety glasses (ANSI Z87.1). Everyday eyeglasses only have impact resistant lenses, thet are **NOT** safety glasses. Also use a face or dust mask if cutting operation is dusty.

13. DON'T OVERREACH.

Keep proper footing and balance at all times.

14. MAINTAIN TOOL WITH CARE.

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS.

Before servicing, when changing accessories or attachments.

16. AVOID ACCIDENTAL STARTING.

Make sure the swich is in the ''OFF'' position before plugging in.

17. USE RECOMMENDED ACCESSORIES.

Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

18. NEVER STAND ON TOOL.

Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

19. CHECK DAMAGED PARTS.

Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are da -maged should be properly repaired or replaced.

20. NEVER LEAVE MACHINE RUNNING UNATTENDED.

Turn power ''OFF''. Don't leave any tool running until it comes to a complete stop.

SPECIFIC SAFETY INSTRUCTIONS FOR BAND SAWS

Safety is a combination of common sense, staying alert and knowing how your band saw works. Read and understand the following safety rules before operating.

- Adjust the upper guide to just clear workpiece.
- Make sure that the blade is properly adjusted and tensioned before operating.
- Do not remove small jammed pieces until the blade has completely stopped.
- Hold workpiece firmly against the table. Do not saw a workpiece which does not have a flat surface unless it can be supported.
- Turn the machine off if the workpiece is to be backed out of an uncompleted cut.

BEFORE EACH USE:

Inspect your band saw.

- To reduce the risk of injury from accidental starting, turn the switch off, unplug the band saw and remove the switch key before changing the set-up, removing covers, guards or the blade.
- Check the alignment of moving parts, binding of moving parts, breakage of parts, band saw stability and any other conditions that may affect the way the band saw works.
- If any part is missing, bent or broken in any way, or if any electrical parts do not work properly, turn the band saw off and unplug the saw. Replace damaged or missing parts before using the band saw again.

TO REDUCE THE RISK OF INJURY FROM JAMS, SLIPS, THROWN PIECES OR BROKEN BLADES.

Inspect your blade.

- Choose the right blade size, style and cutting speed for the material and the type of cutting you plan to do.
- Make sure the blade teeth point downward, towards the table.
- Make sure the blade guides and thrust bearings are properly adjusted.
- Make sure the blade tension is properly adjusted.
- To reduce the risk of accidental blade contact, minimize blade breakage and provide maximum blade support, always adjust the upper blade guide and blade guard to just clear the workpiece.
- **Caution:** Never cut metals with this band saw, only wood and wood products.

Use extra caution with large, very small or awkward workpieces.

- Use extra supports (tables, blocks, etc...) for any workpieces large enough to tip when not held down to the table top.
- NEVER use another person as a substitute for a table extension, or as additional support for a workpiece that is longer or wider than the basic band saw table, or to help feed, support or pull the workpiece.
- When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade. A piece of molding for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
- Properly support round material such as dowel rods or tubing. They have a tendency to roll during a cut, causing the blade to "bite". To avoid this, always use a "V" block or clamp the work to the miter guage.
- Cut only one workpiece at a time.

WHENEVER THE BAND SAW IS RUNNING.

- Before starting your cut, watch the saw while it runs. If it makes an unfamiliar noise or vibrates a lot, stop immediately. Turn the saw off and unplug. Do not restart until you have found and corrected the problem.

Keep children away.

- Keep all visitors at a safe distance from the band saw.
- Make sure bystanders are clear of the table and the workpiece.

Don't force the tool.

- Let the blade reach full speed before cutting.
- It will do the job better and safer at its designed rate.
- Feed the workpiece into the blade only fast enough to let the blade cut without bogging down or binding.

MOTOR SPECIFICATION AND GROUNDING

WARNING: To reduce the risk of electrical hazards, fire hazards or damage to the tool, use proper circuit protection. Your tool is wired for 110V operation. Connect the tool to a power line with the appropriate voltage and a 15-amp branch circuit. Use a 15-amp time delay type fuse or circuit breaker. To reduce the risk of shock or fire, if the power cord is worn or cut in any way, have it replaced immediately.

The AC motor used for this band saw is a non-reversible type, having the following specifications:

110V MOTOR SPECIFICATIONS	
Horsepower	3/4
Volts	110V
Amps.	7.5A
RPM	1720
Hz	60
Phase	1

GENERAL ELECTRICAL CONNECTION SAFETY

DANGER: To reduce the risk of electrocution:

- Use only identical replacement parts when servicing. Servicing should be performed by an authorized and qualified service technician.
- Do not use in rain or where the floor is wet. **This tool is intended for indoor residential use only.**

WARNING! Do not allow your finger(s) to touch the terminals of the plug when installing or removing the plug to or from the wall outlet.

GROUNDING

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical current. This reduces the risk of electric shock. The plug must be used in a matching outlet that is properly installed and grounded in accordance with all local codes.

Do not modify the plug provided. If it will not fit into the outlet, have the proper outlet installed by a qualified technician, ensuring that it is grounded properly. Use only three wire extension cords with three pronged plugs. Fig.1 illustrates a grounded outlet with a 3-prong plug.

Improper connection of the grounding wire can result in the risk of electric shock. The green wire is the ground wire. If the cord is damaged or worn, repair or replace it before operating. If repair or replacement of the cord is necessary, make sure the ground wire is NEVER connected to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if there is any doubt whether or not the tool is grounded properly.

Only use three wire extension cords that have three prong grounding plugs and a three pole receptacle outlet. (Fig.1)

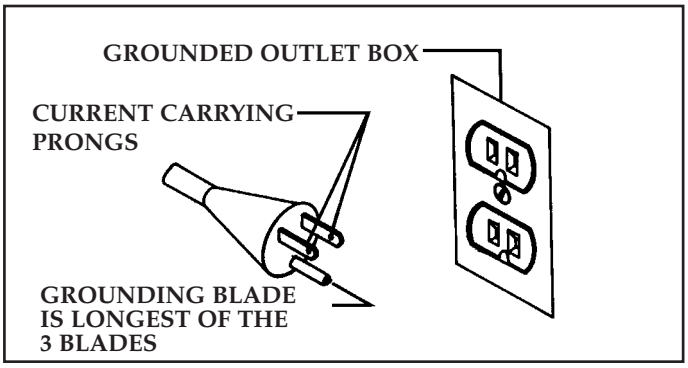
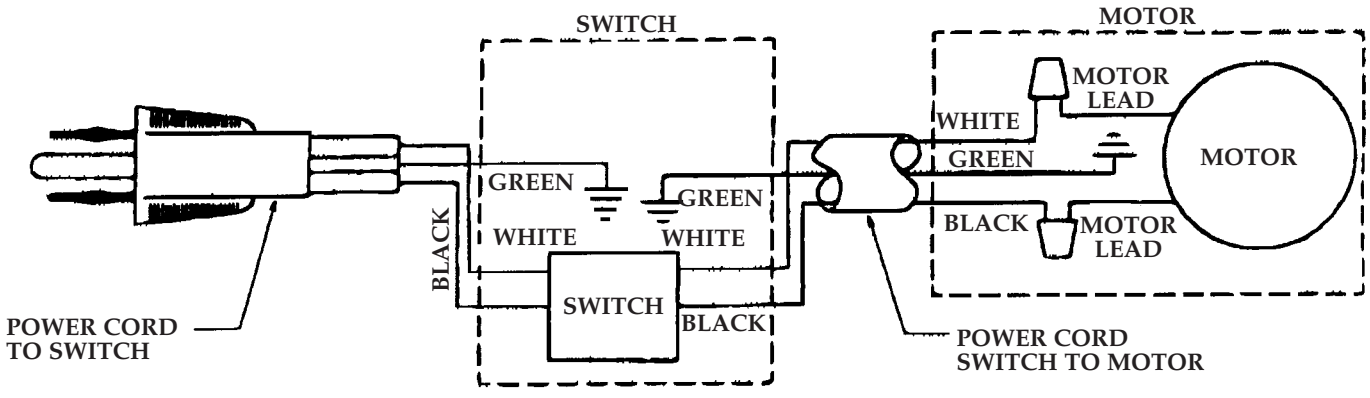


FIGURE 1

WIRING DIAGRAM



UNPACKING

WARNING! Do not plug the machine into the wall or try to operate until the band saw is completely assembled, wired, all belts are aligned and tightened, and the blade is tensioned and tracking properly.

Carefully unpack the contents of the box and check that all items in Fig.2 are not missing. Do not discard any packing material until the band saw is fully assembled and operational.

CONTENTS OF BOX

1. Band saw main frame
2. Pulley (2) and "V" belt
3. Miter gauge
4. Trunnion bracket
5. Table
6. Hardware bag
7. Motor
8. Dust shoot
9. Belt cover
10. Stand top
11. Legs
12. Stiffner (long)
13. Stiffner (short)
14. Support plate

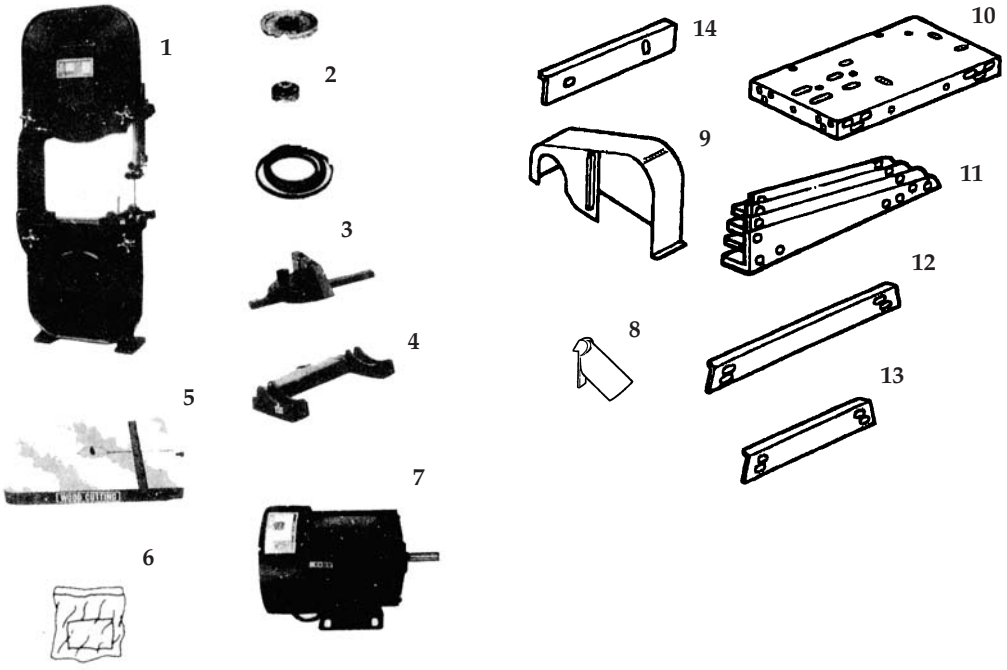


FIGURE 2

The blade, blade guard and upper and lower guide blocks assemblies may or may not be assembled on the band saw main frame and may be loose in the box.

ASSEMBLY

STAND ASSEMBLY

NOTE: It is easier not to tighten the stand bolts until the belts and pulleys are installed and aligned. Finger tighten only. This allows easy adjustment later.

1. Using Fig.3, locate the top of the stand (1) and the four legs (2). It is easier to assemble the stand by placing the top upside-down on a bench or table. Using one round head bolt, a flat washer, lock washer and nut for each hole, bolt the legs to each corner of the top of the stand.

2. Assemble the four brackets (3&4) to the legs of the stand. Again use one round head bolt, a flat washer, lock washer and nut for each hole.

3. Set the stand right side up on a flat surface, and tighten all bolts.

MOTOR INSTALLATION

When bolting the motor to the top of the stand, the motor is mounted to the left of the motor facing the back. Bolt the motor to the stand using the shorter hex. hd. bolts, two flat washers, one lock washer and a nut for each hole. Do not fully tighten the bolts at this point, to allow for adjustment later. This motor comes with a quick connect plug which connects directly to the switch. This will facilitate unplugging the band saw (instead of unplugging directly from the power source). Do not plug to power source at this point.

INSTALLING THE BAND SAW MAINFRAME

The mainframe of the band saw is mounted so the shaft and pulley for the belt drive, face the rear. Align the four holes in the casting with the four holes on the stand. A support bracket is used under the rightmost holes. Bolt the mainframe to the stand using one hex. hd. bolt, two washers, a lock washer and nut for each hole. Do not tighten bolt to allow for adjustment later.

INSTALLING AND ALIGNING PULLEYS AND BELT

1. Remove the tape holding the keystock on the motor shaft. Slide the motor pulley (smaller of the two) onto the shaft. Make sure the keystock sits under the pulley. Tap it into position, a punch or a hammer may be necessary.

2. Align the motor's pulley and the pulley on the back of the saw, so that they are in a straight line. It may be necessary to slide the pulley in or out on its shaft, and shift the saw mainframe and motor to align them in a straight line.

3. When the pulleys are in line, tighten the bolts holding the mainframe to the stand and the set screws on the pulleys.

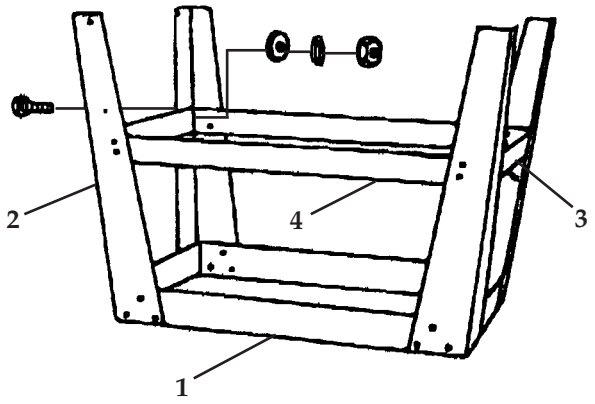


FIGURE 3

4. Loop the belt around both pulleys. Slide the motor away from the mainframe to tension the belt. The belt is tensioned correctly when moderate pressure at the midpoint between the two pulleys deflects the belt 1/2". Tighten the bolts that hold the motor in place.

INSTALLING THE PULLEY GUARD

Bolt the pulley guard over the pulley using three small round head bolts, washers and nuts.

INSTALLING UPPER & LOWER GUIDE BLOCK ASSEMBLY

1. **LOWER GUIDE.** Locate the lower guide block assmbly (A-Fig.4) and the two small hex. hd. bolts. Bolt the block to the mainframe, using the bolts and washers. Adjustment of the guide blocks and bearings will be necessary after the blade is tensioned and tracking properly.

2. **UPPER GUIDE.** Locate the upper guide block assembly. Slide the assembly onto the round post, make sure the bearing is facing upwards and to the front. Align it so that the blade sits in the center of the two guide blocks. Again, it will be necessary to fine tune the guide blocks and bearings after the blade is tensioned and tracking properly.

3. To bolt the blade guard to the side of the upper blade guide assembly, loosen the two bolts on the side (A-Fig.5), slide the guard under the washers and retighten.

INSTALLING THE DUST SHOOT

Open the lower blade guard cover and install the dust shoot. Use bolts and washers supplied. Close the lower blade guard cover. Your dust shoot should now be just as illustrated in Fig.7

INSTALLING THE TABLE

1. Locate the trunnion bracket (A-Fig.6) and bolt it securely to the band saw as shown. The longest bolt (C) is used as a stop to support the table at 90^0 to the blade. To install, thread a nut onto the bolt and turn the bolt into the threaded hole in the left, rear of the trunnion bracket.

2. Thread the saw blade through the slot to the centre of the table, turn the table so the bolts dangling from its underside align with the holes in the trunnion bracket and lower it into place.

Locate the two hand wheels from the hardware bag, install and tighten into place.

3. **Table insert:** Place the table insert (A-Fig.7) in the hole in the table, make sure the pin in the table protrudes through the insert.

4. **Adjusting table:** The table as it sits should slide from side to side, if it does not, the bolts found on either side of the half round bracket (C-Fig.8) should be loosened. Adjust the table so the blade sits in the middle of the slot in the table insert. Retighten the six bolts.

5. **Table top:** Adjust the long bolt that was threaded into the trunnion bracket (C-Fig.6), so that the table rests on it when it is 90^0 to the blade. Lock the bolt in place by tightening the nut down onto the trunnion bracket.

NOTE: This bolt must be removed if the table is tilted to the left.

6. A pin that looks like a bolt with no threads, should be tapped into the hole in the right side of the table.

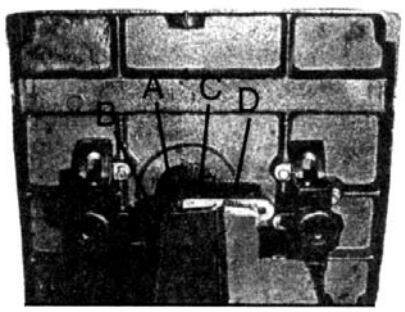


FIGURE 4

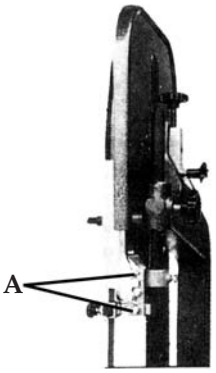


FIGURE 5

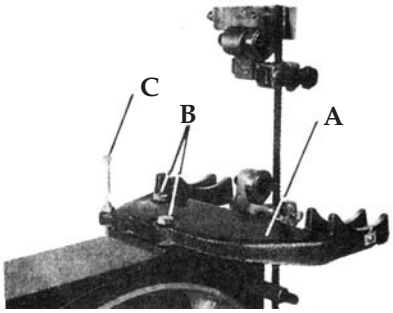


FIGURE 6

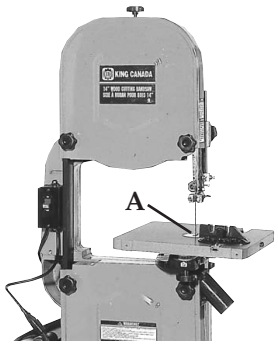


FIGURE 7

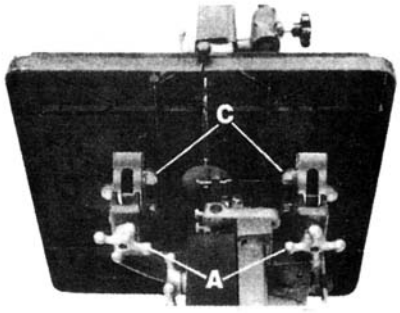


FIGURE 8

ADJUSTMENTS

ADJUSTING THE BLADE TENSION

To tighten the blade, turn the blade tensioning knob (A-Fig.9) clockwise. There is a guide on the block (B-Fig.9) that shows how tight the blade should be, depending on the blade width. A rule of thumb, the blade should deflect 1" when pushed with moderate pressure at the midpoint of the wheels.

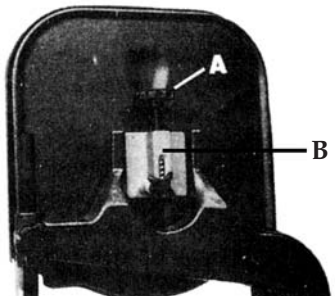


FIGURE 9

TRACKING THE BLADE

WARNING: Never track the blade when the machine is running. Manually turn the wheels.

After tension has been applied to the blade, spin the upper wheel forward by hand and watch the blade. The goal is to have the blade travel in the centre of the upper tire. If the blade creeps toward the front of the wheel, turn the tracking knob (A-Fig.10) clockwise, drawing the blade toward the center. This adjustment is very sensitive, so only turn the knob a small amount at a time. If the blade creeps towards the back, turn the tracking knob counterclockwise. Replace the upper and lower blade guard covers once finished.

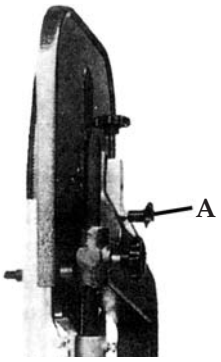


FIGURE 10

ADJUSTING BLADE GUIDES AND BEARINGS

Adjust the blade guides and bearings only after the blade has been tensioned and is tracking properly.

1. **Upper blade guides:** The upper blade guides are held in place by two set screws (B-Fig.11). The blocks should be very close to each side of the blade but not too much as to pinch it. Adjust then tighten the set screws. The blocks should sit back far enough so that the teeth of the blade are out in front of the blocks, this is illustrated in Fig.12. To make this adjustment, loosen bolt A in Fig.11 and slide the bracket holding the blocks, back and forth. The bearing should be adjusted so that it sits 1/16" (approx.) from the back of the blade. Its purpose is to prevent the blade from being pushed back too far into the guide blocks. To adjust, loosen the bolt on the side of the blade guard assembly (D-Fig.11), adjust and retighten bolt.

2. **Lower blade guides:** The lower blade guides are adjusted in the same manner as the upper blade guides, but instead of loosening a bolt on the side, the two bolts on the top of the bracket are loosened to move the guide blocks back and forth. Again, the bearing should sit approximately 1/16" from the back of the blade. It is adjusted by loosening the bolt on the side of the blade guide assembly. Adjust and retighten.

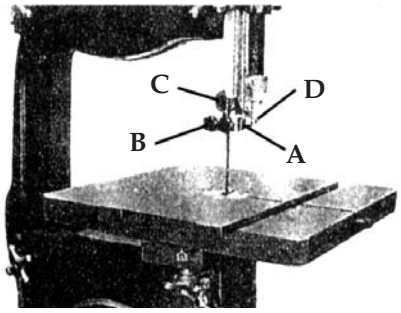


FIGURE 11

BAND SAW BLADES

For first time assembly, the blade is installed on the saw when it arrives, therefore the blade installation step can be skipped. This saw uses a standard 93-1/2" blade, although it will take a maximum of 94" and a minimum of 91-1/2". Blade widths from 1/8" to 3/4" may also be used.

A riser block is available for this band saw. The riser block will increase the capacity between the table and the upper guide from 6" to 12". The saw then uses 105" long blades but will accomodate any blade from 103-1/2" to 106".

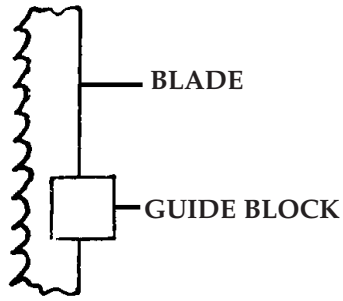


FIGURE 12

CHANGING THE BLADE

Removing the blade:

1. To change the blade, remove the four hand wheels on the front of the saw and take the upper and lower covers off.

2. Remove the table insert from the center of the table, and pull out the table pin from the side of the table.

3. Loosen the blade tension by turning the tensioning knob (A-Fig.13) counter-clockwise.

4. Remove the plastic guard covering the left-hand side of the blade. Remove the blade.

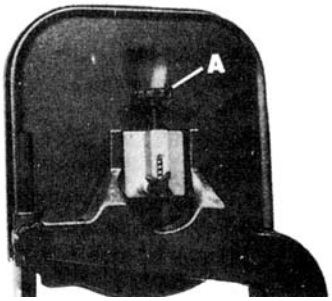


FIGURE 13

Replacing the blade:

When replacing the blade, make sure the blade is put on correctly, with the teeth facing forward and pointing downward. To replace the blade, reverse the steps in section "Removing the blade" but do not put the covers back on until the blade is tensioned and tracking properly.

OPERATING INSTRUCTIONS

WARNING: Do not plug the saw into a power outlet or try to operate until the saw is completely assembled, wired, all belts are aligned and tightened and the blade is tensioned and tracking properly.

UPPER BLADE GUIDE ASSEMBLY

Before operating the saw, always adjust the blade guard so it just clears the piece on which you are working. Not only is it safer, but it will hold the blade in position for more accurate cuts. To adjust, loosen the hand wheel that is found in the back and slide the rod and assembly into position.

TILTING THE TABLE

The table will tilt to make mitered and angled cuts. To tilt the table, loosen the two hand wheels on the underside of the table, tilt the table to the desired angle and retighten the hand wheels.

MAINTENANCE & TROUBLESHOOTING

WARNING: For your own safety, turn the switch "OFF" and remove the plug from the power source before maintaining your band saw.

TIRES

Pitch and sawdust that build up on the tires should be removed with a stiff brush or scrape the sawdust with a piece of wood.
NOTE: To reduce the risk of damaging the tires, do not use a sharp knife or any kind of solvent.

When the tire becomes worn, they should be replaced. When replacing the tires, stretch them around the wheels but do not glue them on.

GENERAL MAINTENANCE

Keep your band saw clean. Remove the sawdust from the inside. Vacuum or blow out frequently.

Do not allow filth to build up on the table, the guides or the back-up bearings. Clean them with gum and pitch remover.

Note: Do not immerse the back-up bearings in the gum and pitch remover. Put a thin coat of paste wax on the table so that the wood slides easily while cutting.

MOTOR

Frequently blow or vacuum out the sawdust from the motor.

CAUTION: To reduce the risk of eye injury from blowing debris, wear safety glasses when blowing out dust.

LUBRICATION

All of the ball bearings are packed with grease at the factory. They require no further lubrication.

TROUBLESHOOTING

PROBLEM	SOLUTION
The motor will not start.	1. Band saw is not plugged in. 2. A household circuit has blown a fuse or an open circuit breaker. 3. Power cord is damaged. Replace. 4. Switch is not in the "ON" position. 5. Motor requires service.
The band saw blade does not move although motor is running.	1. Blade tension knob is not tight. Turn motor off, tighten knob and restart the band saw. 2. Blade has slipped off pulley wheel. Open cover housing and check. 3. Blade is broken. Replace.
The blade will not cut or cuts slowly.	1. Contact has dulled teeth with hardened steels or long usage. Replace. 2. Blade mounted backwards.
Sawdust fills inside the band saw.	1. This is normal, clean out periodically. 2. Remove cover housing. Use vacuum cleaner to remove dust.
Sawdust in motor housing.	1. Use a vacuum cleaner nozzle on air intake and exhaust grilles. 2. Keep workplace cleaner. Clean up excess sawdust frequently.
Unable to get the blade to track in the driver of wheel.	1. Backing bearing is not properly adjusted. 2. Tension wheel is not properly adjusted. 3. Bad blade, replace.