

# 5" X 6" DUAL SWIVEL METAL CUTTING BANDSAW



**MODEL: KC-129DS** 

# **INSTRUCTION MANUAL**

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#### WARRANTY INFORMATION

2-YEAR
LIMITED WARRANTY
FOR THIS METAL CUTTING BANDSAW

KING CANADA TOOLS
OFFERS A 2-YEAR LIMITED WARRANTY
FOR COMMERCIAL USE.

#### PROOF OF PURCHASE

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

#### **REPLACEMENT PARTS**

Replacement parts for this product are available at our authorized King Canada service centers across Canada.

#### 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, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, 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 limited warranty, return the product at your expense together with your dated proof of purshase to an authorized King Canada service center. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

#### **PARTS DIAGRAM & PARTS LISTS**

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

#### **WARNING!**

#### THIS MACHINE IS FOR METAL CUTTING ONLY!

IT IS NOT APPROVED FOR CUTTING WOOD. KING CANADA ACCEPTS NO RESPONSIBILITY FOR ANY MACHINE WHEN USED FOR CUTTING WOOD AND WILL VOID THE ABOVE WARRANTY.

KING CANADA INC. DORVAL, QUÉBEC, CANADA H9P 2Y4

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# GENERAL & SPECIFIC SAFETY INSTRUCTIONS



#### **GENERAL SAFETY INSTRUCTIONS**

#### 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.

Use padlocks, master switches or remove 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 machine 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, they 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 switch 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 damaged 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 METAL CUTTING BANDSAWS

- 1. **DO NOT OPERATE THIS MACHINE UNTIL** it is assembled and installed according to the instructions in this manual.
- OBTAIN ADVICE from your supervisor, instructor, or another qualified person if you are not familiar with the operation of this machine.
- BLADE CONDITION. Do not operate this bandsaw with a dull, cracked or badly worn blade. Inspect blades for cracks and missing teeth before each use, replace if necessary.
- 4. **BLADE REPLACEMENT.** When replacing blades, make sure teeth face toward the workpiece and that the back of the blade rests against the shoulder of the blade wheels. Wear gloves to protect hands and safety glasses to protect eyes.
- WORKPIECE HANDLING. Always support the workpiece with table, vise, or some type of support fixture. Flag long pieces to avoid a tripping hazard. Never hold the workpiece with your hands during a cut.

- FIRE HAZARD. Use EXTREME CAUTION if cutting magnesium.
   Using the wrong cutting fluid will lead to chip fire and possible explosion.
- CUTTING FLUID SAFETY. Always follow manufacturer's cutting fluid safety instructions. Pay particular attention to contact, contamination, inhalation, storage and disposal warnings.
- HOT SURFACES. Be careful! Due to friction, the workpiece, chips, and some machine components can be hot enough to burn you, especially after operating the bandsaw repetedly during a long peroid of time.



#### **ELECTRICAL INFORMATION**

#### **WARNING!**

ALL ELECTRICAL CONNECTIONS MUST BE DONE BY A QUALIFIED ELECTRICIAN. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY! ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE MACHINE DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

#### KC-129DS POWER SUPPLY (120V-1 PHASE)

**WARNING:** YOUR KC-129DS (120V) MUST BE CONNECTED TO A 120V, 15-AMP, BRANCH CIRCUIT. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

#### **120V OPERATION**

As received from the factory, your bandsaw is wired for 120V operation. This bandsaw is intended for use on a circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

#### **GROUNDING**

This bandsaw must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This bandsaw must be equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

**WARNING:** IF NOT PROPERLY GROUNDED, THIS BANDSAW CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

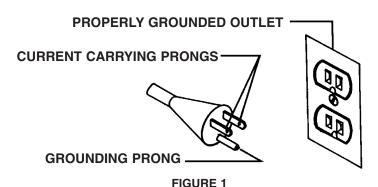
**WARNING:** TO MAINTAIN PROPER GROUNDING OF YOUR BANDSAW, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

**WARNING:** DO NOT USE A TWO-PRONG ADAPTOR FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

#### **EXTENSION CORDS**

The use of any extension cord will cause some loss of power. Use the following table to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord. Use only extension cords which accept the tool's plug.

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the motor. Refer to Fig.2 for wire length and size.



Tool's	Cord Size in A.W.G.				Wire Sizes in mm <sup>2</sup>			
Amperage Rating	Cord 25	Len 50	gth in 100	Feet 150	Cord 15	Leng 30	th in 60	Meters 120
3-6	18	16	16	14	.75	.75	1.5	2.5
6-8	18	16	14	12	.75	1.0	2.5	4.0
8-10	18	16	14	12	.75	1.0	2.5	4.0
10-12	18	16	14	12	1.0	2.5	4.0	-
12-16	14	12	-	-	-	-	-	-

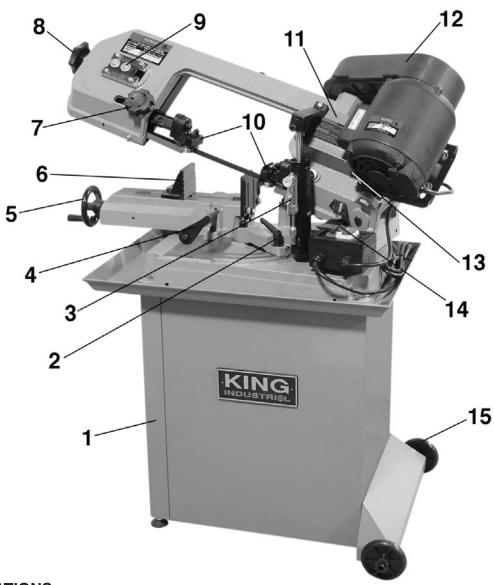
FIGURE 2

# GETTING TO KNOW YOUR DUAL SWIVEL METAL CUTTING BANDSAW



#### GETTING TO KNOW YOUR DUAL SWIVEL METAL CUTTING BANDSAW

- 1) Cabinet stand
- 2) Swivel head lock handle
- 3) Hydraulic cylinder with adjustable feed rate dial
- 4) Cast iron work stop
- 5) Vise clamp handwheel
- 6) Adjustable vise jaw
- 7) Blade guide lock knob
- 8) Blade tension knob
- 9) Blade tracking adjustment gauge
- 10) Blade guides
- 11) Gear Box
- 12) Pulley cover
- 13) Belt tension lock knob
- 14) Auto shut-off push button switch (upon completion of the cut)
- 15) Cabinet wheels



#### **BANDSAW SPECIFICATIONS**

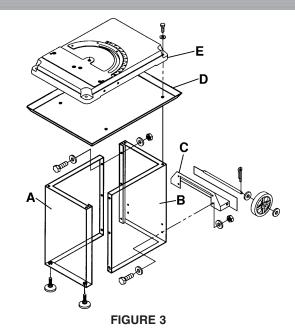
MODEL	KC-129DS
Cutting capacity at 90°	Rect. 5" x 6"
Cutting capacity at 45°	Rect. 4" x 2-15/16" ● Diam. 3-3/4"
Speeds	3 (80, 120, 200) FPM
Blade	64 1/2" x 1/2" x .025"
Motor	6 Amp.
Voltage	110V, 1 phase, 60 Hz
Table height from floor	27 1/2"
Dimensions (LxWxH)	39" x 23" x 43"
Weight	180 LBS



# ASSEMBLY & SETUP INSTRUCTIONS BEFORE OPERATING BANDSAW

#### Assembling Cabinet Stand, Wheels and Wheel Bracket (Fig.3)

- 1) Assemble the cabinet stand panels (A & B) Fig.3 together using 6 hex. bolts, 12 washers and 6 hex. nuts as shown.
- 2) The next step is to assemble the wheels and wheel shaft to the wheel base (C). Insert the wheel shaft through the wheel base, place a large washer, a wheel, another large washer at each end of the wheel shaft secure both wheels in place with cotter pins as shown.
- 3) Assemble the wheel base assembly to the cabinet panel (B) using 4 hex. bolts, 8 washers and 4 hex. nuts as shown.
- 4) Turn the cabinet stand assembly upside down and screw 2 rubber feet into the cabinet stand panel (A) as shown.
- 5) Place cabinet stand back to upright position and place the chip tray (D) on top of the cabinet stand as shown in Fig.3 and line up the mounting holes.
- 6) It is now necessary to lift the machine assembly (E- shows base only for illustration purposes) and to place it onto the chip tray. Do not try to lift the machine by yourself, risk of back injury! It is recommended to get another person to help you or to use a chain hoist if available. Line up the mounting holes of the machine base (E), chip tray (D) and cabinet stand and secure them together using 4 hex. bolts and large washers as shown.



#### **Unbolting Shipping Bracket**

For transportation purposes, this bandsaw comes with the head bolted to the machine base, see shipping bracket (A) Fig.4. Remove both bolts and bracket. Do not throw these parts away, in case you need to ship your machine.

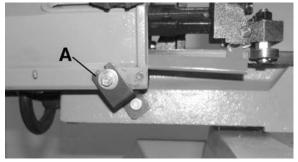


FIGURE 4

#### **Setting Height of Feed Stop Bolt**

Now the head stop bolt (A) Fig.6 and hex. nut (B) must be adjusted. This feed stop bolt will determine how low the head will go (normally below the table surface). Adjust the bolt height so that the blade teeth are just below the table surface when the cut is complete. Make sure to retighten the hex. nut once the adjustment has been made.

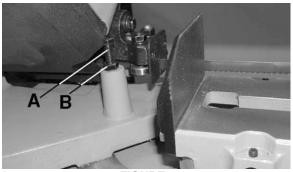


FIGURE 6

### ASSEMBLY & SETUP INSTRUCTIONS BEFORE OPERATING BANDSAW



#### Assembling and Installation of the Work Stop

The work stop assembly can be assembled to either side of the table to suit your needs and is usually used for repitious cuts of the same length. To assemble the work stop;

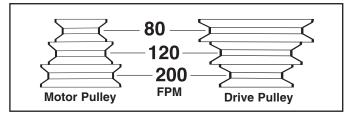
- 1) Slide the work stop (A) Fig.7 onto the work stop shaft (B) and fix it into place by tightening the work stop set screw (C).
- 2) Insert the work stop shaft into the side of the table as shown in Fig.7 and fix it into place by tightening the table set screw (D).



To install the belt and pulley cover;

1) Place the belt and pulley cover fixing plate (A) Fig.8 around the pulleys as shown in Fig.8 and fix it into place with 2 hex. bolts (B).

This bandsaw comes with 3 blade speeds, the blade speed is determined by the position of the belt on both pulleys. See chart below for belt position and resulting blade speed.



To install the belt around the pulleys;

- 1) First step is to unscrew the belt tension knob (A) Fig.9 in order to bring the motor assembly/motor pulley (B) Fig.10 closer to the drive pulley (C) Fig.10.
- 2) Then slide the belt (A) Fig.10 around the appropriate pulleys that will give you the required blade speed, see chart above.
- 3) Finally, tighten the belt tension knob (A) Fig.9 to tension the belt. The proper belt tension is achieved when the belt has a 1/2" deflection when pressed in the center.
- 4) Close belt cover and lock it closed with tapping screw and washer.

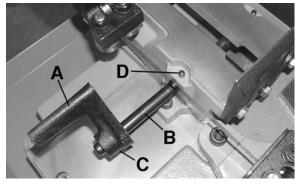


FIGURE 7

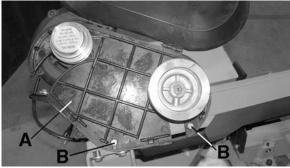


FIGURE 8

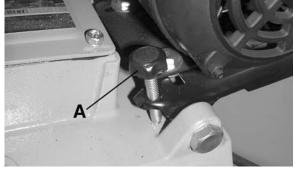


FIGURE 9

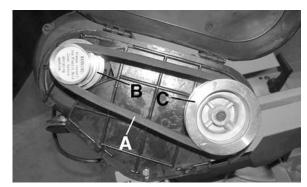


FIGURE 10



# SETUP & OPERATION INSTRUCTIONS BEFORE OPERATING BANDSAW

#### **Adjusting Auto Stut-off Off Switch**

The Off button lever stop bolt must be adjusted, so the bandsaw shuts off automatically when a cut is complete. To adjust the Off button lever stop bolt;

- 1) With the cutting head is completely in the down position, loosen stop bolt (A) Fig.11 and hex. nut (B).
- Push down on the Off button lever (C) so that the Off button is completely depressed.
- 3) Unscrew stop bolt until its head touches the Off button lever.
- 4) Tighten the hex. nut against the stop bolt bracket (D).

#### **Squaring Table to Blade**

To ensure that the bandsaw will make cuts that match the degree scale angle, you must make sure to square the table to the blade;

- 1) Unlock the swivel base lock handle (A) Fig.12 and pivot cutting head until the pointer reads "0" on scale (B).
- 2) Loosen the 2 table cap screws (C) on both sides of the table.
- 3) Using a square (D), adjust the table so that it is square with the blade, retighten the table cap screws once the adjustment is done.

#### **Adjusting Blade Guides**

The blade guides side bearings support and twist the blade straight so the blade will enter the workpiece perpedicular to the table surface. The blade guide support bearings prevent blade twist by stopping the blade from being pushed back during a cut. Both adjustments are important for correct saw operation. Keep in mind that this adjustment must be done to both the right and left blade guides, to adjust the blade guides;

- 1) Adjust the blade guide housing (A) Fig.13 by loosening the housing hex. bolt (B) so the support bearing rests against the rear of the blade.
- 2) Loosen the outer side bearing eccentric hex. nut (C) and rotate the eccentric bearing shaft until both bearings have a bearing-to-blade clearance of 0.000" to 0.001". Do not pinch the blade and remember that the blade must be perpendicular to the table.
- 3) Retighten the outer side bearing eccentric hex. nut.
- 4) Before every operation, unlock the right side bearing guide lock knob (D) and slide the left side bearing guide assembly (E) as close to the workpiece so the blade is supported and will not twist during the cut. Retighten the left side bearing guide lock knob.

#### Setting Up for 45° Miter Cuts to the Right & 60° Miter Cuts to the Left

This bandsaw has a dual swivel miter base and can cut up to a  $45^{\circ}$  miter to the right and a  $60^{\circ}$  miter to the left.

To set up for a  $0^{\circ}$ -  $45^{\circ}$  miter cut to the right, first make sure the table (A) Fig.14 is positioned as shown. Loosen miter base lock handle (B) and pivot miter base by pushing the motor towards the rear until the desired angle is obtained, retighten miter base lock handle. You are now ready for a  $0^{\circ}$ -  $45^{\circ}$  miter cut to the right.

To set up for a  $0^{\circ}$ -  $60^{\circ}$  miter cut to the left, first make sure the table (A) Fig.15 is positioned as shown. Normally the table is positioned for  $45^{\circ}$  cuts to the right, but for  $60^{\circ}$  cuts to the left, the table must be reinstalled on the other side of the machine base as shown in Fig.15. Simply remove cap screws (C), reposition table and secure into place using the same 2 cap screws. Loosen miter base lock handle (B) and pivot miter base by pulling the motor towards the front until the desired angle is obtained, retighten miter base lock handle. You are now ready for a  $0^{\circ}$ -  $60^{\circ}$  miter cut to the left.

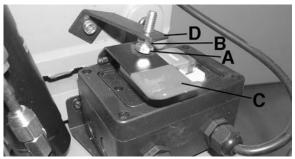


FIGURE 11

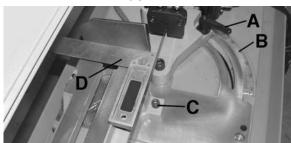


FIGURE 12

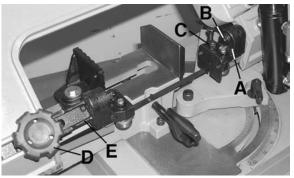


FIGURE 13

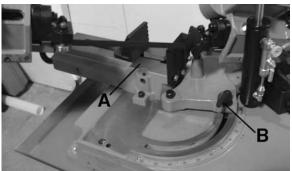


FIGURE 14

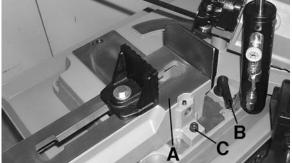


FIGURE 15

# SETUP & OPERATION INSTRUCTIONS BEFORE OPERATING BANDSAW



#### **Blade Selection**

- 1) A 14 tooth per inch, general-use blade is furnished with this metal cutting band saw.
- The choice of blade pitch is governed by the thickness of the work to be cut.
- 3) The thinner the workpiece, the more teeth advised.
- 4) If the teeth of the blade are too far apart, it can result in severe damage to the workpiece and to the blade.

Material	Speed (FPM)	Belt groove used		
Material	60Hz	Motor pulley	Drive pulley	
Tool, stainless or alloy steel, bearingbronzes.	80	Small	Large	
Mild steel, hard brass or bronze.	120	Medium	Medium	
Soft brass, aluminum, other light metals.	200	Large	Small	

FIGURE 16

#### Suggested Blade Speeds for Material to Cut

When using your bandsaw, always change the blade speed to best suit the material to cut. The material cutting chart Fig.16 suggests settings for several materials.

#### Feed Rate/ Hydraulic Cylinder

The feed rate of the blade into the workpiece is controlled by a hydraulic cylinder. To set the feed rate:

- 1) Turn the feed rate dial (A) Fig.17 clockwise until it bottoms out.
- 2) Lift the cutting head above the workpiece (which must be clamped into the vise).
- 3) With the appropriate blade installed and the blade speed selected, turn the saw on by pushing the On button.
- 4) Slowly turn the feed rate dial counterclockwise until the blade starts to cut the workpiece. Observe the chips that exit the cut and adjust the feed rate accordingly. If the chips are the width of the blade tooth, thin and curled, you have reached the proper feed rate. If the chips are silvery, thin, small or powdery, increase the feed rate. If the chiped are large, curled, blue or brown, or smoking, decrease the feed rate.
- 5) If you wish to stop and restart the down feed of the cutting head without stopping the saw, lift the hydraulic cylinder shut-off valve (B) to a horizontal position to lock the head into position and lower it again to continue the cut at the same feed rate.
- 6) The bandsaw will turn off automatically once the cut is complete.

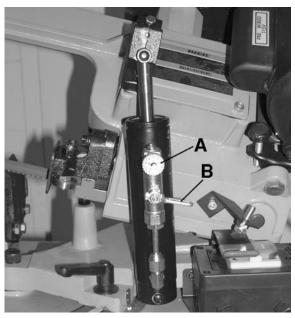


FIGURE 17



### REPLACING/ADJUSTING BLADE & GENERAL MAINTENANCE

#### Replacing/Changing Blade

Blades should be changed when they become dull or damaged or when you are cutting materials that require a blade of a certain type or a specific number of teeth. To replace/change blade;

- 1) Make sure the bandsaw is disconnected from the power source.
- 2) Lift the cutting head to its most vertical position and lock it into place using the hydraulic cylinder shut-off valve.
- 3) Remove the blade guard lock knob (A) Fig.18 and the 2 round head screws (B) which hold the blade guard (C) in place and remove blade guard.
- 4) Loosen the blade guides, then loosen the blade tension knob (A) Fig.19 counterclockwise and slip the blade off the wheels.
- 5) Install the new blade through both blade guides and around the bottom wheel. Make sure the blade teeth point downwards and that the back of the blade rests against the shoulder of the bottom blade wheel.
- 6) Hold the blade around the bottom wheel with one hand and slip it around the top wheel with the other hand, keeping the blade between the blade guides.
- 7) Once the blade is around both wheels, position the back of the blade against the shoulders of the wheels.
- 8) Tighten the blade tension knob enough to tension the blade so the blade does not fall off the wheels during start-up. Spin the wheels by hand until the blade resumes the previous tracking. If the blade drifts away from the shoulder of the wheels, adjust the tracking of the blade, see following instructions.

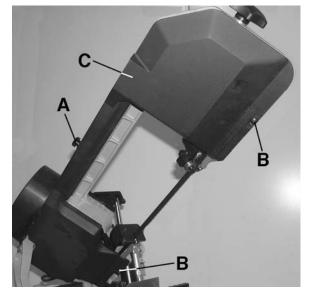


FIGURE 18

#### Adjusting the Tracking of the Blade

The blade tracking has been set at the factory and will rarely need to be adjusted if the bandsaw is used correctly. To adjust the tracking of the blade;

- 1) Turn the blade tension knob (A) Fig.19 counterclockwise so that the blade loosens a little.
- 2) Loosen but do not remove the wheel tilting mechanism hex. bolt (B).
- 3) Adjust the tracking of the blade by adjusting the set screw (C). Tightening this set screw will move the blade closer to the shoulder of the wheel. Loosening this set screw will move the blade away from the wheel shoulder.
- 4) Tension the blade to the appropriate tension. Turn the wheel by hand and observe the blade tracking. If the blade tracks along the shoulder without rubbing, the blade is tracking properly. If the blade drifts away from the wheel shoulder, repeat step 3.
- 5) Once the blade is tracking properly, replace the blade guard and adjust the blade guides.

#### Maintenance

It is easier to keep this bandsaw in good condition or at best performance by means of maintaining it than having to remedy it after it is out of order. Keep work area clean; release vise, release blade tension to prolong blade life, disconnect from power source, remove chips and dust away and follow instructions for lubrication or coating rust proof oil before leaving. On a monthly basis, lubricate guide bearings. Also check electric cord, plug, switches to make sure they are operating correctly.

#### Lubrication

Your machine has been coated heavily with grease to protect it in shipping. This coating should be completely removed before operating. Commercial degreaser, kerosene or similar solvent may be used to remove the grease from the machine, but avoid getting solvent on the belts or other rubber or plastic parts.



FIGURE 19

- 1) Be sure to clean the bandsaw after operation. Coat it with rust-proof oil.
- 2) Use SAE-30 oil to lubricate the components.
- 3) Lubricate the vise lead screw as needed.
- 4) The drive gears in the gear box soak in an oil bath, they will not require a lubricant change more than once a year, unless leakage or overheating occur. When replacing the gear box oil, use SAE 80W90 differential oil.

# TROUBLESHOOTING GUIDE



PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION		
Excessive blade breakage	<ol> <li>Materials loose in vise.</li> <li>Incorrect speed or feed.</li> <li>Blade teeth spacing too large.</li> <li>Material too coarse.</li> <li>Incorrect blade tension.</li> <li>Teeth in contact with material before saw is started.</li> <li>Blade rubs on wheel flange.</li> <li>Miss-aligned guide bearings.</li> <li>Blade too thick.</li> <li>Cracking at weld.</li> </ol>	<ol> <li>Clamp work securely.</li> <li>Adjust speed or feed.</li> <li>Replace with a small teeth spacing blade.</li> <li>Use a blade of slow speed and small teeth spacing.</li> <li>Adjust to where blade just does not slip on wheel.</li> <li>Place blade in contact with work after motor is started.</li> <li>Adjust wheel alignment.</li> <li>Adjust guide bearings.</li> <li>Use thinner blade.</li> <li>Weld, note the welding skill.</li> </ol>		
Premature blade dulling	<ol> <li>Teeth too coarse.</li> <li>Too much speed.</li> <li>Inadequate feed pressure.</li> <li>Hard spots or scale on material.</li> <li>Hardening of work material.</li> <li>Blade twist.</li> <li>Insufficient blade.</li> <li>Blade slide.</li> </ol>	<ol> <li>Use finer teeth.</li> <li>Decrease speed.</li> <li>Decrease hydraulic cylinder feed rate.</li> <li>Reduce speed, increase feed pressure.</li> <li>Increase feed pressure by opening feed rate dial.</li> <li>Replace with a new blade, and adjust blade tension.</li> <li>Replace.</li> <li>Tighten blade tension.</li> </ol>		
Unusual wear on Side/Back of blade	<ol> <li>Blade guides worn.</li> <li>Blade guide bearing not adjusted properly.</li> <li>Blade guide bearing bracket is loose.</li> </ol>	Replace.     Adjust as per instruction manual.     Tighten.		
Teeth ripping from blade.	<ol> <li>Teeth too coarse for work.</li> <li>Too heavy a pressure; too slow a speed.</li> <li>Vibrating workpiece.</li> <li>Gullet loading.</li> </ol>	<ol> <li>Use finer tooth blade.</li> <li>Decrease pressure, increase speed.</li> <li>Clamp workpiece securely.</li> <li>Use coarser tooth blade or brush to remove chips.</li> </ol>		
Motor running too hot	<ol> <li>Blade tension too high.</li> <li>Drive belt tension too high.</li> <li>Blade is too coarse for work.</li> <li>Blade is too fine for work.</li> <li>Gears aligned improperly.</li> <li>Gears need lubrication.</li> <li>Cut is binding blade.</li> </ol>	<ol> <li>Reduce tension on blade.</li> <li>Reduce tension on drive belt.</li> <li>Use finer blade.</li> <li>Use coarse blade.</li> <li>Adjust gears so that worm is in center of gear.</li> <li>Check oil level, refill using SAE 80W90 differential oil.</li> <li>Decrease feed speed.</li> </ol>		
Bad cuts (Crooked)	<ol> <li>Feed rate too high.</li> <li>Blade guides not adjusted properly.</li> <li>Inadequate blade tension.</li> <li>Dull blade.</li> <li>Incorrect speed.</li> <li>Blade guides spaced out too much.</li> <li>Blade guides assembly loose.</li> <li>Blade too far away from wheel flanges.</li> </ol>	<ol> <li>Reduce feed rate using cylinder feed rate dial.</li> <li>Adjust blade guides; the clearance cannot be greater than 0.001".</li> <li>Increase blade tension by adjusting blade tension.</li> <li>Replace blade.</li> <li>Adjust speed.</li> <li>Adjust guide space.</li> <li>Tighten.</li> <li>Readjust blade tracking.</li> </ol>		
Bad cuts (Rough)	<ol> <li>Too much speed or feed.</li> <li>Blade is too coarse.</li> <li>Blade tension loose.</li> </ol>	Reduce blade speed or the feed rate using cylinder feed rate dial.     Replace with finer blade.     Adjust blade tension.		
Blade is twisted	Cut is binding blade.     Too much blade tension.	Reduce feed rate using cylinder feed rate dial.     Decrease blade tension.		