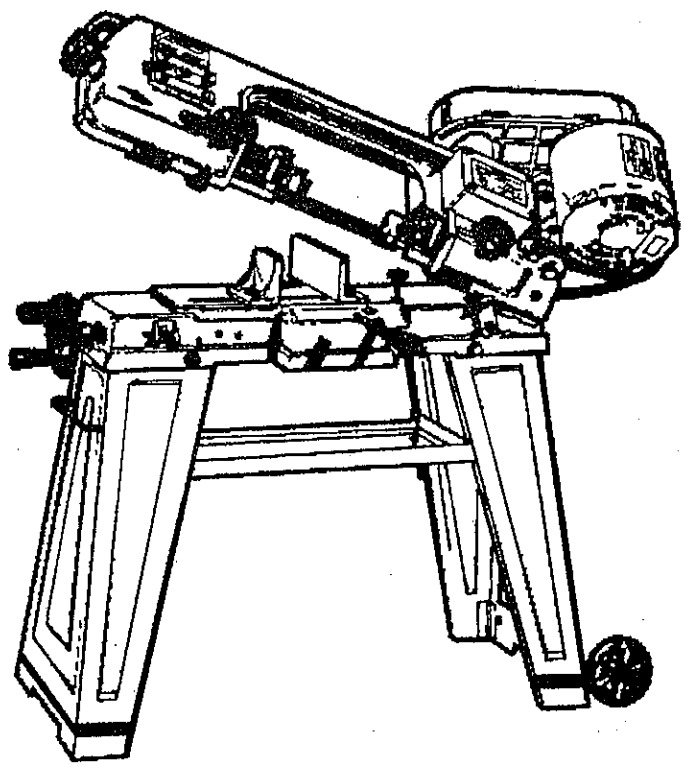
OPERATOR'S MANUAL

JHVB-46 4"x6" HORIZONTAL/VERTICAL METAL CUTTING BANDSAW

#222326



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2 YEAR
LIMITED WARRANTY

JET offers a two year limited warranty on this product

MACHINERY WARRANTY

JET makes every effort to assure that it's products meet high quality standards and warrants to the retail consumer/purchaser of our products that each product is free from defects in material and workmanship as follows: 2 YEAR LIMITED WARRANTY ON THIS JET PRODUCT. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations performed outside our facilities or to a lack of maintenance. To take advantage of this warranty, the product or part must be returned freight prepaid to an authorized service station designated by our Vancouver office. Proof of purchase date and an explanation of the problem must accompany the merchandise. If our inspection discloses a warrantable defect JET will repair or replace the product at our option.

PROOF OF PURCHASE

Please retain your dated sales receipt as proof of purchase to validate the warranty period.

1. This unit is equipped with a three prong (Grounding) plug for your protection against shock hazards and should be plugged directly into a properly grounded three prong receptacle. Where a two prong wall receptacle is encountered, it must be replaced with a properly grounded three prong receptacle in the accordance with the National Electrical Code and Local Codes and Ordinances. This work should be done by a qualified electrician.

2. Replace or repair damaged or worn cord immediately.

3. Keep guards in place and in working order.

4. Remove keys and adjusting 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.

6. Do not use power tools in damp or wet locations.

7. Use safety glasses. Also use face or dust mask if cutting operation is dusty.

8. Maintain tools with care. Keep tools sharp and clean for best and safest performance.

9. Disconnect power before servicing; when changing accessories such as blades, cutter bits.

10. Use the correct tool. Do not force tool or attachment to do a job it was not designed for.

11. Make sure switch is in 'OFF" position before plugging in.

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

MAINTENANCE

1. Be sure to clean the Band Saw after operation. And coat this machine with rustless oil.

2. Using SAE-30 oil to lubricate components.

3. Lubricate the vise lead screw as needed.

4. The drive gears will not require a lubricant change more often than once a year, unless a leak or overheating occurs.

1. Special designed horizontal and vertical Band Saw.
2. Offers three speeds for cutting metal, plastic or wood.
3. Shuts off automatically when material is cut.
4. With scale for the mitring vise.
5. No noise while operating.
6. Casters (optional) quick and easy moving.

SPECIFICATIONS

1.	Capacity	4-1/2" (112.5mm) round 4" x 6" (100mm x 150mm) rectangular
2.	Speeds	80-120-200 FPM 60HZ (65-95-165 FPM 50HZ)
3.	Motor	1/3 HP ~ 3/4 HP 1725 RPM 60HZ (1420 RPM 50HZ)
4.	Blades	1/2" x .025" x 64-1/2" (12.7mm x 0.64 mm x 1638mm)
5.	Blade Wheels	7-3/8" (187mm) High strength flanged cast iron.
6.	Floor Model Dimensions	Length- 40-1/2" (1029mm) Width- 18" (457mm) Height- 38" (965mm) Cut/Off Height- 54-1/4" (1378mm) Vertical
7.	Bench Model Dimensions	Length- 40-1/2" (1029mm) Width- 18" (457mm) Height- 23-1/4" (591mm) Cut/Off Height- 33-1/2" (851mm) Vertical
8.	Packing	38" x 13" x 15" (965mm x 330mm x 381mm)
9.	Net Weight	60 Kgs.
10.	Gross Weight	61 Kgs.

ASSEMBLY

1. Motor 1/3-3/4 HP, 1725 RPM counterclockwise rotation. Note that the rotation of the motor by the direction given on name plate.

a) Secure the motor to the motor mounting plate using four bolts and nuts. Note: that the motor shaft must be parallel with the drive shaft.

b) Assemble the motor pulley, the larger diameter must be closest to the motor. Tighten the set screw.

c) Assemble the driving pulley, the small diameter must be closest to the bearing. Tighten the set screw.

d) Both of the pulley grooves must be parallel.

e) Place the belt into proper pulley combination for proper blade speed.

ASSEMBLY CONTINUED...

f) Adjust the motor position with the left hand so that the belt might obtain the proper depression, and tighten the 1/4" plum screw with the right hand in order to hold the motor mount plate.

2. Band Saw Installation

a) The saw may be mounted on your own bench or stand using six bolts.

b) The rear end of the base must be mounted on the rear of the stand or bench to permit vertical operation for this band saw.

3. Installation for vertical use.

a) Raise the head to the vertical position.

b) Assemble a 9-1/2" x 10" table to the guide bar using the screws provided, and holding with a bracket.

c) Note that the table is vertical to the blade.

4. Blade Speeds

When using your band saw, always change the blade speed to best suit the material being cut. The material cutting chart gives suggested setting for several materials.

MATERIAL CUTTING CHART

Material	Speed (SFM)		Belt Groove Used	
	50 HZ	60 HZ	Motor Pulley	Saw Pulley
Tool, Stainless or Alloy Steel, Bearing Bronzes	65 FPM	80 FPM	Small	Large
Mild steel, Hard Brass or Bronze	95 FPM	120 FPM	Medium	Medium
Soft Brass, Aluminum, other light materials	165 FPM	200 FPM	Large	Small

5. Changing Blades

Raise saw head to vertical position. Loosen blade tension adjustable knob sufficiently to allow the saw blade to slip off the wheels. Install the new blade as follows:

a) Place the blade in between each of guide bearing.

b) Slip the blade around the motor pulley (bottom) with the left hand and hold in position.

c) Hold the blade taut against the motor pulley by pulling the blade upward with the right hand which is placed at the top of the blade.

d) Remove left hand from bottom pulley and place it at the top side of the blade to continue the application on the upward pull on the blade.

e) Remove the right hand from blade and adjust the position of the top pulley to permit the left hand to slip the blade around the pulley using the thumb, index and little finger as guides.

f) Adjust the blade tension knob clockwise until it is just right enough so no blade slippage occurs. Do not tighten excessively.
g) Place 2-3 drops of oil on the blade.
h) Replace the blade guard.

GROUNDING

1. IN THE EVENT OF A MALFUNCTION OR BREAKDOWN, GROUNDING PROVIDES A PATH OF LEAST RESISTANCE FOR ELECTRIC CURRENT TO REDUCE THE RISK OF ELECTRIC SHOCK. THIS TOOL IS EQUIPPED WITH AN ELECTRIC CORD HAVING EQUIPMENT-GROUNDING CONDUCTOR AND A GROUNDING PLUG. THE PLUG MUST BE PLUGGED INTO A MATCHING OUTLET THAT IS PROPERLY INSTALLED AND GROUNDED IN ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
2. Do not modify the plug provided if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
3. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripe is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
4. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
5. Use only 3-wire extensions cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
6. Repair or replace damaged or worn cord immediately.
7. This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A in Figure 1. The tool has a grounding plug that looks like the plug illustrated in Sketch A in Figure 1. A temporary adapter, which looks like the adapter illustrated in Sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green coloured rigid ear, lug, etc., extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

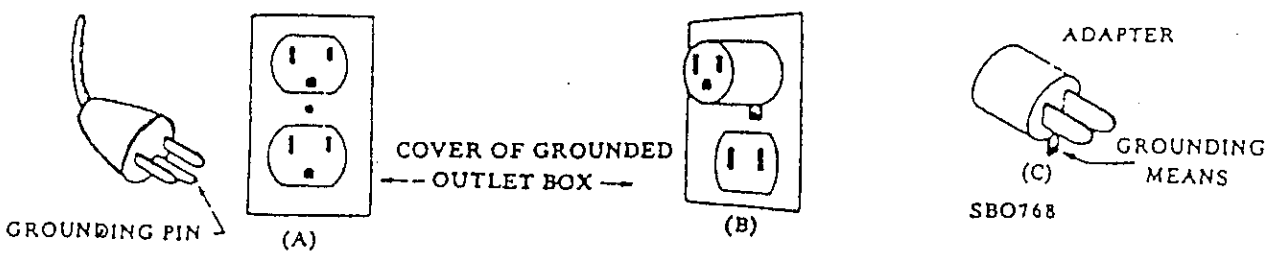


FIGURE 1 GROUNDING METHODS

MACHINE ELEMENTS ADJUSTMENT

VERTICAL ADJUSTMENT OF THE BLADE WHEELS

a) Remove the blade guards.
b) Turn the blade tension adjustable knob counterclockwise so that the blade might loosen a little.
c) Adjust the hex-hole screw in the hole of slide block until the font blade wheel rises backwards a little so that the blade will be kept in position.
d) Tighten the blade tension adjustable knob until the blade obtains the proper tension.
e) Check the tracking by turning on the machine. If the blade slides forward, go back to step d) until the rear blade touches the flange of the blade wheel.
f) Turn off power to the machine.
g) Replace the blade guards.

BLADE GUIDE BEARING ADJUSTMENT

This is the most important adjustment on your saw. It is impossible to get satisfactory work from your saw if the blade guides are not properly adjusted.

The blade guide bearings for your metal cutting Band Saw, are adjusted and power tested with several test cuts before leaving the factory, to insure proper setting. The need for adjustment should rarely occur when the saw is used properly. If the guides do get out of adjustment, it is extremely important to readjust immediately. If proper adjustment is not maintained, the blade will not cut straight and if the situation is not corrected, it will cause blade damage.

Because the guide adjustment is a critical factor in the performance of your saw, it is always best to try a new blade to see if this will correct poor cutting before beginning to adjust the bearings. If a blade becomes dull on one side sooner than the other, for example, it will begin cutting crooked. A simple blade change should correct this problem, the more difficult guide adjustment will not.

If a new blade does not correct the problem, check the blade guides for proper spacing. There should be .001" clearance between the 025" thickness blade and guide bearings. To obtain this clearance, adjust as follows:

1. The inner guide bearing is fixed and cannot be adjusted.
2. The outer guide bearing is mounted to an eccentric bushing and can be adjusted.
3. Loosen the nut while holding the bolt with an allen wrench.
4. position the eccentric by turning the bolt to the desired position of clearance.
5. Tighten the nut.
6. Adjust the second blade guide bearing in the same manner.
7. The back edge of the blade should just touch the lip of the blade guide bearing.

BLADE GUIDE ASSEMBLY ADJUSTMENT

The metal cutting Bandsaw is equipped with two adjustable blade guide assemblies. This feature will permit you to adjust the position of the blade guides for various widths of workpieces.

Blade Guide Assembly Adjustment continued...

To effect the most accurate cut, and prolong the life of the blade, the blade guide assemblie should be adjusted to just clear the piece to be cut. This is done as follows:

1. Place the workpiece in the vise of Bandsaw and clamp tightly.
2. Adjust each blade guide assembly to the desired position by loosening the hand knob and positioning the guides as required.
3. Tighten the hand knobs.

ADJUSTING BLADE TENSION

1. Make sure the motor is shut off.
2. Press the blade lightly with the left hand, make the rear blade against the flange of th blade wheel and test the blade tension.
3. Adjust the blade tension adjustable knob with the right hand until the blade obtains the proper tension.

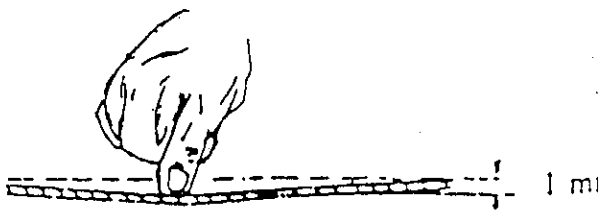


Fig (2) Adjusting Blade Tension.

METHOD OF ADJUSTING BLADE

A. Loosen the screw #11.
B. Adjust the blade adjustable seat #64 to make the blade vertical to bed.
C. Place the square on the bed to check if the blade is vertical, if not, repeat the process of A to C.
D. Tighten the screw #11.

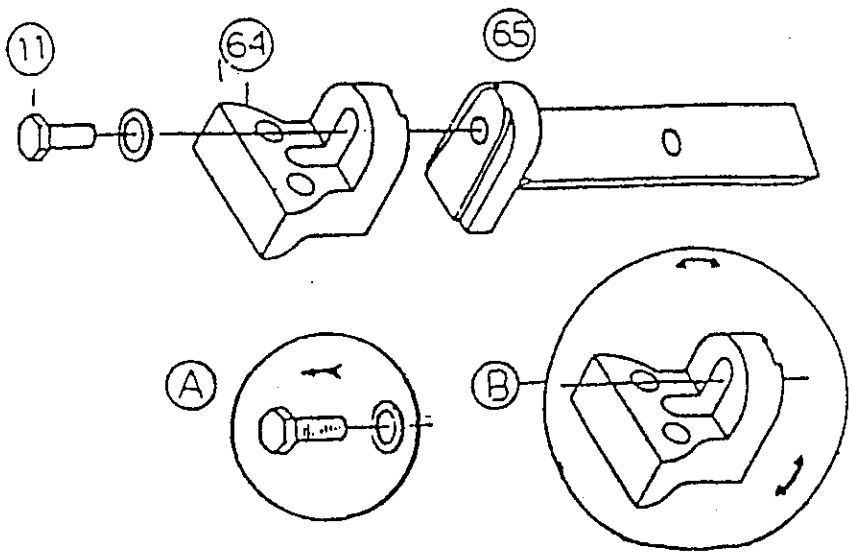


Figure (3) Blade Adjustment

ADJUSTING THE BLADE TRACKING

This adjustment has been completed and power-tested at the factory. The need for adjustment should rarely occur when the saw is used properly. If the tracking goes out of adjustment, the blade will leave the wheel, and damage will result. The method of adjustment is listed below.

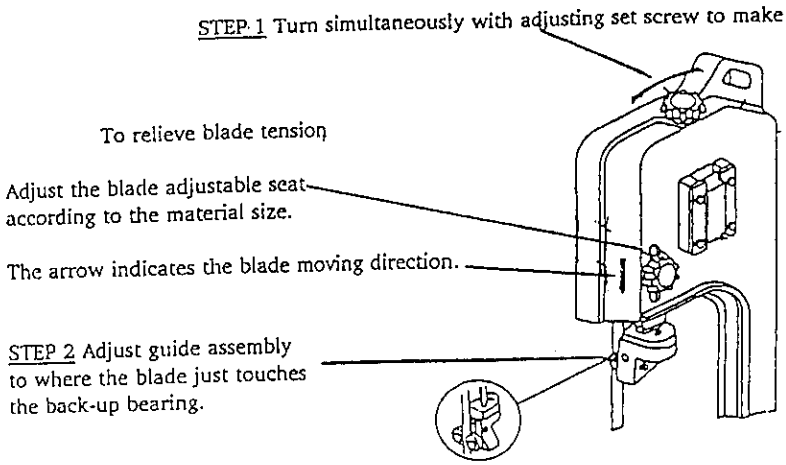


Fig.(4) Adjusting the blade tracking

HORIZONTAL CUTTING OPERATION

Before operating, please read instruction manual and examine every part including speed, blade selection, guide assembly position, etc. Operation is as follows:

Work Set up

1. Raise the saw head to the vertical position.
2. Open the vise to accept the piece to be cut by rotating the wheel at the end of the base (counterclockwise.)
3. Place the workpiece on the saw bed, if the piece is long, support the end.
4. Clamp the workpiece securely in the vise by rotating the hand wheel clockwise.

Cutting

Close switch, letting the head down slowly onto the work. Do not drop or force, let the weight of the saw head provide the cutting force. The saw automatically shuts off at the end of the cut.

LUBRICATION

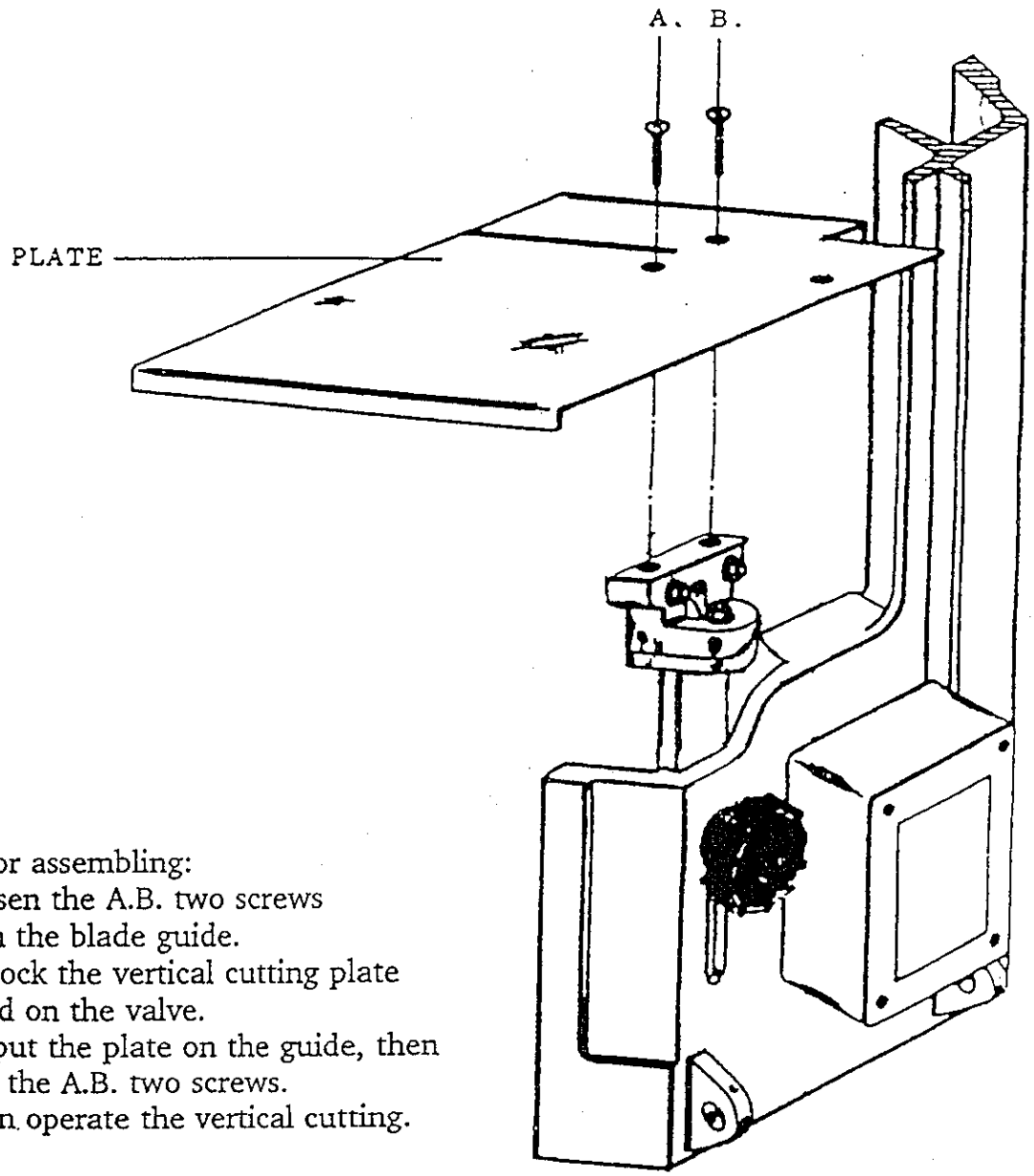
Lubricate the following components using Apone 90 oil as noted.

1. Ball Bearing -None
2. Blade Guide bearing -None
3. Driven wheel bearing -None
4. Vise lead screw -as needed
5. The drive gears run in the oil bath and will both require a lubricant change more often than once a year. When needing a change, first put down the head to a horizontal position, then loosen the 4 screws (#75) of the gear box, and open the cover(#93). Placing a pan under the tight lower corner of the gear box, slowly raise the head until flows out, then lower head. Wipe up excess oil and foreign matter with soft rags.

LUBRICATION Continued...

Then add lubricant into the box until it is full and not flowing over. Close the cover, and tighten the 4 screws.

VERTICAL CUTTING PLATE ASSEMBLY DRAWING



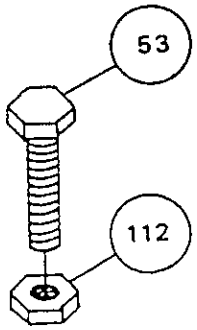
Steps for assembling:

1. Loosen the A.B. two screws from the blade guide.
2. To lock the vertical cutting plate stand on the valve.
3. To put the plate on the guide, then lock the A.B. two screws.
4. Then operate the vertical cutting.

Figure (5)

CAUTION - The use of any other accessories may be hazardous.
CAUTION - Always use push sticks particularly when cutting small pieces.

OPERATION



#53 Hexagon Head Screw should be adjusted in accurate height when machine in cutting and after finished off cutting then #23 switch can be loosened.

Operation Steps

1. Raise the saw head to vertical position.
2. Adjust the motor automatic stop key so the motor might stop just while the workpiece is cut off.
3. Adjust the stock stop to the desired length position.
4. Open vise to accept the workpiece to be cut. If the piece is long, support the end.
5. Rotate the hand wheel to tighten the workpiece.
6. Turn on the switch, and change the blade speed to best suit the workpiece being cut.
7. let the saw head down slowly to touch the workpiece lest the blade should be broken by excessive pressure.
8. Rotate the adjusting rod to obtain the proper pressure.

Helpful Cutting Hints

1. The harder the materials, the slower the cutting speed should be.
2. Use of a cutting oil is recommended when the blade speed is higher.
3. To increase the feed, turn the feed screw adjustment (at left of base) counterclockwise, to decrease, clockwise. Do not adjust more than one turn at a time.

Blade Selection

1. A 14 tooth per inch, general use blade, is furnished with this metal cutting Band Saw. Additional blades in 6, 10, 14, and 18 tooth sizes are available.
2. 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.

Starting Saw

1. Never operate saw without blade guards in place.
2. Be sure the blade is not in contact with the work when the motor is started.
3. Start the motor and allow the saw to come to full speed.
4. Do not drop or force the head, provide the cutting force by letting the head down slowly into the work.
5. Proper feed is important, excessive pressure can break the blade or stall the saw. Insufficient pressure dulls the blade rapidly.
6. Never use a new blade to complete previously started cut.
7. Do not start cutting on a sharp corner.

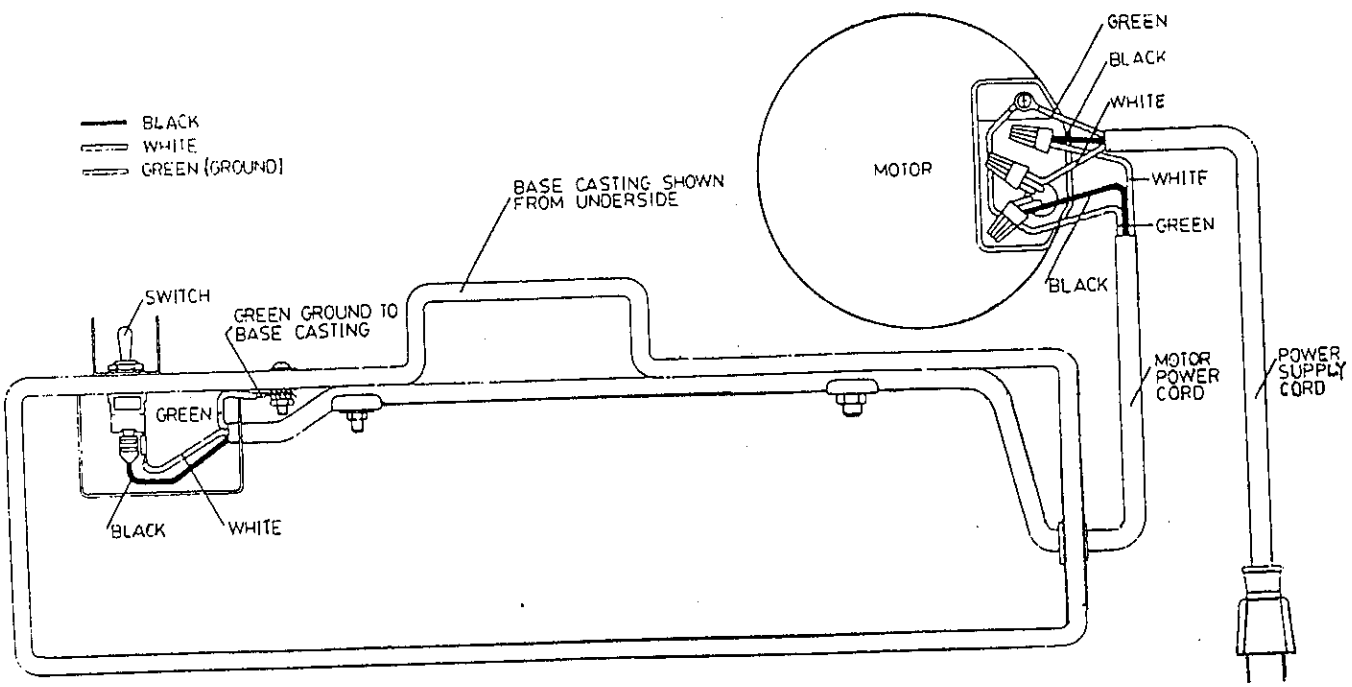
TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Excessive Blade Breakage.	1. Material loose in vise. 2. Incorrect speed or feed. 3. Blade teeth spacing too large 4. Material too coarse. 5. Incorrect blade tension 6. Teeth in contact with material before saw is started. 7. Blade rubs on wheel flange. 8. Misaligned guide bearings 9. Blade too thick 10. Cracking at weld.	1. Clamp work securely. 2. Adjust speed or feed. 3. Replace with smaller teeth spacing blade. 4. Use a blade of slow speed and small teeth spacing. 5. Adjust to where blade does not slip on wheel. 6. Place blade in contact with work after motor is started. 7. Adjust wheel alignment 8. Adjust guide bearings 9. Use thinner blade 10. Weld again, not the weld skill
Premature Blade Dulling.	1. Teeth too coarse 2. Too much speed 3. Inadequate feed pressure 4. Hard spots or scale on material 5. Work hardening of material 6. Blades twists 7. Insufficient blade 8. Blade slide	1. Use finer teeth 2. Decrease speed 3. Decrease spring tension on side of saw 4. Reduce speed, increase feed pressure 5. Increase feed pressure by reducing spring tension 6. Replace with a new blade, and adjust blade tension 7. Tighten blade tension adjustable knob 8. Tighten blade tension adjustable knob, and less speed.
Unusual wear on Side/Back of Blade.	1. Blade guides worn 2. Blade guide bearings not adjusted properly. 3. Blade guide bearing bracket is loose.	1. Replace 2. Adjust as per operator's manual 3. Tighten
Teeth ripping from Blade.	1. Tooth too coarse for work 2. Too heavy pressure, too slow speed 3. Vibrating workpiece 4. Gullets loading.	1. Use finer tooth blade 2. Decrease pressure, increase speed 3. Clamp workpiece securely 4. Use coarser tooth blade or brush to remove chips.
Motor running too hot	1. Blade tensions too high 2. Drive belt tension too high 3. Blade is too coarse for work 4. Blade is too fine for work 5. Gears aligned improperly 6. Gears need lubrication 7. Cut is binding blade	1. Reduce tension on blade 2. Reduce tension on drive belt 3. Use finer blade 4. Use coarser blade 5. Adjust gears so the worm is in centre of gear 6. Check oil bath 7. Decrease feed and speed

Troubleshooting chart continued...

Bad Cuts (Crooked)	1. Feed pressure too great 2. Guide bearings not adjusted properly 3. Inadequate blade tension 4. Dull blade 5. Speed incorrect 6. Blade guides spaced out too much 7. Blade guide assembly loose 8. Blade truck too far away from wheel flanges	1. Reduce pressure by increasing spring tension on side of saw 2. Adjust guide bearing, the clearance can not be greater than .001 3. Increase blade tension by adjusting blade tension 4. Replace blade 5. Adjust speed 6. Adjust guides space 7. Tighten 8. Retrack blade according to operating instructions
Bad Cuts (Rough)	1. Too much speed or feed 2. Blade is too coarse 3. Blade tension loose	1. Decrease speed or feed 2. Replace with finer blade 3. Adjust blade tension
Blade is twisting	1. Cut is binding blade 2. Too much blade tension	1. Decrease feed pressure 2. Decrease blade tension

WIRING DIAGRAM



NO.	DESCRIPTION	Q'TY
1.	HEX. HEAD SCREWS	8
2.	HEX. NUTS	9
3.	WASHERS	18
4.	STAND, RIGHT SIDE	1
5.	.....	--
6.	PINS	4
7.	STAND SHELF	1
8.	.....	--
9.	STAND CASTERS ASSEMBLY	1
10.	.....	--
11.	HEX. HEAD SCREWS	13
12.	HEX. NUTS	10
13.	STAND, LEFT SIDE	1
14.	DRAWING HANDLE, STAND	1
15.	ADJUSTING ROD	1
16.	ELECTRICAL CABLE/PLUG	1
17.	PIVOT ROD	1
18.	SUPPORT PLATE	1
19.	STOCK STOP	1
20.	THUMB SCREW	1
21.	ROD, STOCK STOP	1
22.	CABLE STRAIN RELIEF	1
23.	-----	1
24.	BUSHING	1
25.	ON/OFF SWITCH	1
26.	BLADE GVARD	1
27.	.....	--
28.	HAND WHEEL	1
29.	BLADE COVER, L	1
30.	BLADE COVER, R	1
31.	C-RING	1
32.	LEAD SCREW, VISE	1
33.	VISE NUT	1
34.	CLAMPING PLATE, VISE	1
35.	WASHER	1
36.	HEX. HEAD SCREW	1
37.	CASTING BASE	1
38.	.....	--
39.	SCALE	1
40.	CONDENSER, (MOTOR)	1
41.	HEX, HEAD SCREW	1
42.	HEX, NUT	4
43.	.....	--
44.	ELECTRICAL CABLE	1
45.	NUT PLATES	2
46.	SPRING ADJUSTING SCREW	1
47.	SPRING	1
48.	SCREWS	14
49.	VISE PLATE	1
50.	HEX. HEAD SCREW	1
51.	.....	--
52.	HEX. HEAD SCREW	1
53.	HEX. HEAD SCREW	1
54.	ARM	1
55.	VERTICAL CUT, TABLE	1
56.	BRACKET LOCK, L	1
57.	BLADE GUIDE BRACKET, L	1
58.	PLUM SCREW	1
59.	BLADE COVER	1
60.	C-RING	1
61.	BEARINGS	4
62.	GUIDE PIVOTS	4
63.	BEARING SHAFT PINS	2
64.	BLADE SEATS	2
65.	BLADE GUIDE BRACKET, R	1
66.	BRACKET LOCKS, R	2
67.	WASHERS	2
68.	SCREWS	5
69.	BEARING (608)	2
70.	HEX. NUTS	4
71.	DRIVE BLADE WHEEL	1
72.	BEARING COVERS	2
73.	KEYS	2
74.	SET SCREWS	4
75.	HEX. HEAD SCREW	9
76.	SWITCH CUT OFF TIP	1
77.	IDEL BALDE WHEEL	1
78.	.....	--
79.	TENSION KNOB	1
80.	.....	--
81.	BODY FRAME	1
82.	CONDENSER COVER	1
83.	SET SCREW	2
84.	MOTOR PLATE	1
85.	MOTOR	1
86.	MOTOR PULLEY	1
87.	BALL BEARINGS (6202 Z)	4
88.	BUSHING	1
89.	OIL SEALS	2
90.	TRANSMISSION GFAR SHAFT	1
91.	TRANSMISSION GEAR	1
92.	GASKET, GEAR BOX	1
93.	GEAR BOX COVER	1
94.	WORM GEAR	1
95.	.....	--
96.	BUSHING	1
97.	.....	--
98.	.....	--
99.	.....	--
100.	.....	--
101.	GEAR PULLEY	1
102.	.....	--
103.	BLOCK BLADE TENSION	1
104.	.....	--
105.	.....	--
106.	.....	--
107.	BLADE SHEEL SHAFT	1
108.	C-RING	1
109.	BLADE TENSION GUIDES	2
110.	SPRING WASHER	4
111.	PULLEY CASE LOWER	1
112.	V-BEST (A22)	1
113.	SAWBLADE	1