



128M Bandsaw

Operation Manual



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WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

As all machinery has certain hazards involved with operation and use of machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. We strongly recommend that this machine NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the machine until you contact with us and we have advised you. Your machine might not come with a power socket or plug. Before using this Machine, please do ask your local dealer to install the socket or plug on the Power cable end.

GENERAL SAFETY RULES

A. USER:

1. **WEAR PROPER APPAREL.** No loose clothing, gloves, rings, bracelets, or other jewelry to get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
2. **ALWAYS WEAR EYE PROTECTION.** Refer to ANSLZ87.1 standard for appropriate recommendations.
3. **DON'T OVERREACH.** Keep proper footing and balance at all times.
4. **NEVER STAND ON TOOL.** Serious injury could occur if the machine is tipped or if the cutting machine is accidentally contacted.
5. **NEVER LEAVE MACHINE RUNNING UNATTENDED. TURN POWER OFF.** Don't leave machine until it comes to a complete stop.
6. **DRUGS, ALCOHOL, MEDICATION.** Do not operate machine while under the influence of drug, alcohol or any medication.
7. **MAKE SURE MACHINE IS DISCONNECTED FROM POWER SUPPLY.** While motor is being mounted, connected or reconnected.
8. **ALWAYS** keep hands and fingers away from the blade.
9. **STOP** the machine before removing chips.
10. **SHUT-OFF** power and clean the BAND SAW and work area before leaving the machine.

B. USE OF MACHINE:

1. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from machine before turning it "on".
2. **DON'T FORCE MACHINE.** It will do the job better and safer at the rate for which it was designed.
3. **USE RIGHT MACHINE.** Don't force machine or attachment to do a job for which it was not designed.
4. **SECURE WORK.** Use clamps or a vise to hold work piece when operating. It's safer than using your hand frees both hands to operate machine.
5. **MAINTAIN MACHINE IN TOP CONDITION.** Keep blade sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
6. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazard.
7. **AVOID ACCIDENTAL STARTING.** Make sure switch is in OFF position before plugging in power cord.
8. **DIRECTION OF FEED.** Feed work piece into a blade or cutter against the direction before plugging in power cord.
9. **ADJUST AND POSITION** the blade guide arm before starting the cut.
10. **KEEP BLADE GUIDE ARM TIGHT.** A loose blade guide arm will affect sawing accuracy.
11. **MAKE SURE** blade speed is set correctly for material being cut.
12. **CHECK** for proper blade size and type.
13. **STOP** the machine before putting material in the vise.
14. **ALWAYS** have stock firmly clamped in vise before starting cut.
15. **GROUND ALL MACHINES.** If machine is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate at two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

C. ADJUSTMENT:

MAKE ALL ADJUSTMENTS WITH THE POWER OFF. In order to obtain precise and correct ways of adjustment while assembling, the user should read the detailed instruction in this manual.

D. WORKING ENVIRONMENT:

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
2. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power machine in damp or wet locations, or expose them to rain. Keep work area well lighted.
3. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept at safe distance from work area.
4. **DON'T** install & use this machine in explosive, dangerous environment.

E. MAINTENANCE:

1. **DISCONNECT** machine from power source when making repairs.
2. **CHECK DAMAGED PARTS.** Before further use of the machine, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
3. **DISCONNECT MACHINE** before servicing and when changing accessories such as blades, bits, cutters, etc.
4. **MAKE SURE** that blade tension and blade tracking are properly adjusted.
5. **RE-CHECK** blade tension after initial cut with a new blade.
6. **TO Prolong BLADE LIFE ALWAYS** release blade tension at the end of each workday.
7. **CHECK COOLANT DAILY** Low coolant level can cause foaming and high blade temperatures. Dirty or weak coolant can clog pump, cause crooked. Rust, low cutting rate and permanent blade failure. Dirty coolant can cause the growth of bacteria with ensuing skin irritation.
8. **WHEN CUTTING MAGNESIUM NEVER** use soluble oils or emulsions (oil-water mix) as water will greatly intensify and accidental magnesium chip fire. See your industrial coolant supplier for specific coolant recommendations when cutting magnesium.
9. **TO PREVENT** corrosion of machine's surfaces when a soluble is used as coolant, pay particular attention to wiping dry the surfaces where fluid accumulates and does not evaporate quickly, such as between the machine bed and vise.

F. SPECIFIED USAGE:

This machine is used only for general metals cutting within the range of cutting capacity.

G. NOISE: A weighted sound power level: 80dB.

H. SAFETY DEVICE:

1. Interlock switch on pulley cover.
As soon as the pulley cover is open, machine will stop with the function of this switch. Do not remove this switch from machine for any reason, and check its function.
2. Interlock switch on cutting area as soon as the cover of cutting area is open, machine will stop at once with the function of this switch. Do not remove his switch. Do not remove this switch from machine for any reason, and check its function frequently.

I. TRANSPORTATION OF MACHINE

As this machine weights 145kgs it is recommended that the machine be transported with help of lifting jack.

Transportation Recommendation:

1. Tighten all locks before operating.
2. **ALWAYS** keep proper footing & balance while moving this machine, and only use heavy-duty fibre belt to lift up the machine.
3. **TURN OFF** the power before wiring & be sure machine is properly grounded. Overload & circuit breaker are recommended for safety wiring.
4. **CHECK** carefully if main shaft is running in clockwise direction while running test. If not, reverse the wiring per wiring diagram. Then, repeat the test until spindle direction is correct.
5. **KEEP** machine always out from sun, dust, and wet or raining area.

SPECIFICATION:

Model		128M
Motor		375W 1/2HP (3PH),550W 3/4HP (1PH)
Blade size		13x0.6x1638mm
Blade speed	60Hz(MPM)	24,47,61
	50Hz(MPM)	20,29,50
90°	0 (mm)	128mm (5")
	□ (mm)	128x150mm (5"x6")
60°	0 (mm)	44mm (1.75")
	□ (mm)	44x56mm (1.75"x2.19")
45°	0 (mm)	95mm (3.75")
	□ (mm)	75x95mm (3"x3.7")
Dimension (mm)		980x385x1060
N.W./G.W. (kg)		109/140 112/145
Packing size (cm)		96x54x61

FEATURES

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 mitering vise.
5. No noise while operating.
6. Casters (optional) quick and easy moving.
7. Quick positioning vise provides easy clamping on work piece.
8. Built-in shelf for storing tools.
9. Both floor & bench have wheels for easy movement.

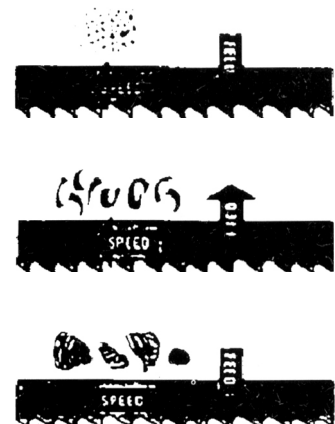
TELL TALE CHIPS

Chips are the best indicator of correct feed force. Monitor chip information and adjust feed accordingly. Thin or powdered chips- increase feed rate or reduce band speed.

Burned heavy

Chips-reduce feed rate and/or band speed.

Curly silvery and warm chips-optimum
Feed rate and band speed.



ASSEMBLY

A 3/4 or 1/2 HP motor split phase or capacitor start is recommended for best economical performance. Counter clockwise rotation is required. Note that rotation can be reversed by following directions given on terminal or nameplate.

1. Assemble the motor Mounting plate to the head using the long bolt. Note that the flat side of the plate faces up.
2. Assemble the guard plate to the head using the screw and lock washer and the carriage bolt. Washer and wing nut are used to secure the motor mounting plate to the guard plate through the slotted hole in the guard plate. These components also serve to position and lock the motor in place or proper speed/belt adjustment.
3. Place the spacer over the long bolt and secure it with the nut.
4. Secure the motor to the motor mounting plate with the four volts and nuts. Note that the motor shaft is placed through the large opening in the guard plate and must be parallel with the drive shaft.
5. Assemble the motor pulley, the smaller of the two provided to the motor shaft. Note the larger diameter must be closest to the motor. Do not tighten the set screw.
6. Assemble the driven pulley, the larger off the two provided to the protruding drive shaft. Note the smaller diameter must be closest to the bearing. Do not tighten the set screw.
7. Place the belt into one of the pulley groove and the other end into the respective grooves of the second pulley.
8. Line up the belt and both pulleys so that the beft is running parallel in the pulley grooves.
9. Tighten the set screws of both pulleys in this position.
10. Place the belt into proper pulley combination for proper blade speed. See material cutting chart.
11. Adjust the position of the motor to obtain approximately 1/2" depression in the belt when applying pressure with your thumb.
12. Tighten the head screw holding the motor mounting plate to the gl\ard plate.
13. Connect the electrical harness to the motor terminal box. The motor should be protected with a time delay fuse or circuit breaker with a rated amperage slightly greater than the full-load amperage of the motor.

OPERATION

WORK SETUP

1. Raise the saw head to vertical position.
2. Open vise to accept the piece to be cut by rotating the wheel at the end of the base.
3. Place work piece on saw bed. If the piece is long support the end.
4. Clamp work piece securely in vise

WORK STOP ADJUSTMENT

1. Loose the thumb holding the work stop casting to the shaft.
2. Adjust the work stop casting to the desired length position.
3. Rotate the work stop as close to the bottom of the cut as possible.
4. Tighten thumbscrew.
5. Do not allow the blade to rest on the work while the motor is shut off.

BLADE SPEEDS

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

4 SPEED MATERIAL CUTTING CHART

Material	Speed MPM		Belt Groove Used	
	60Hz	50Hz	Motor pulley	Saw pulley
Tool, Stainless alloy Steels, bearing bronze	24	19	Small	Large
Mild steel, hard brass or bronze	36	28	Medium	Medium
Aluminum plastic	60	50	Large	Small

BLADE DIRECTION OF TRAVEL BLADE MOVEMENT

Be sure the blade is assembled to the pulleys so that the vertical edge engages the work piece first.

STARTING SAW

Switch button function description (FOR CE ONLY)

CAUTION: NEVER OPERATE SAW WITHOUT BLADE GUARDS IN PLACE.

Be sure the blade is not in contact with the work when the motor is started. Start the motor, allow the saw to come to full speed, and then begin the cut by left 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.

BLADE SELECTION

An 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. The choice of the blade pitch is governed by the thickness of the work to be cut; the thinner the work piece, the more teeth advised. A minimum of three teeth should engage the work piece at all times for proper cutting. If the teeth of the blade are so far apart that they straddle the work, severe damage to the work piece and to the blade can result.

CHANGING BLADE

Raise saw head to vertical position and open the blade guards. Loosen tension screw knob sufficiently to allow the saw blade to slip off the wheels. Install the new blade with teeth slanting toward the motor as follows:

1. Place the blade in between each of the guide bearings.
2. Slip the blade around the motor pulley (bottom) with the left hand and hold in position.
3. 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.
4. 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.
5. Remove right hand from blade and adjust the position of the top pulley to permit left hand to slip the blade around the pulley using the thumb index and little finger as guides.
6. Adjust the blade tension knob clockwise until it is just right enough so no blade slippage occurs. Do not tighten excessively.
7. Replace the blade guards.
8. Place 2-3 drops of oil on the blade.

BLADE GUIDE BEARING ADJUSTMENT

ATTENTION: 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 is daring on your metal. Cutting Band Saw is 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 improper adjustment is maintained, the blade will not cut straight, and if the situation is not corrected it will cause serious blade damage.

Because 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. If a blade becomes dull on one side or the other, for example, it will begin cutting crooked. A blade change will correct this problem, the guide adjustment will not. If a new blade does not correct the problem, check the blade and guides for proper spacing.

NOTE: There should be from 000 Uust touching) 001 clearance between the blade and guide bearings, to obtain this clearance adjusts 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. Loose 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.

ADJUSTING BLADE TENSION

1. Make sure the motor is shut off.
2. Press the blade lightly with left hand, make the rear blade against the flange of blade wheel and test the blade tension.



Adjusting Blade Tension

3. Adjust the blade tension adjustable knob with the right hand until the blade obtain the proper tension.

ADJUSTING THE BLADE TRACKING

This adjusting has been completed and power-tested at the factory. The need for adjusting should rarely occur when the saw is used properly. If the tracking goes out of adjusting is listed below:

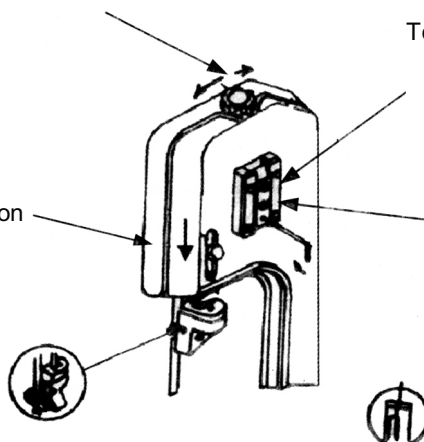
Step 1: Turn simultaneously with adjusting set screw to make the blade track against the shoulder of the pulley.

To relieve blade tension

Step 5: Adjust the blade adjustable seat according to the material size.

The arrow indicates the moving direction

Step 6: Adjust guide assembly to where the blade just touches the back-up bearing.



To increase blade tension

Step 2: Loosen this hex. Head screw before turning the adjusting set screw.

Step 4: Tighten after adjusting

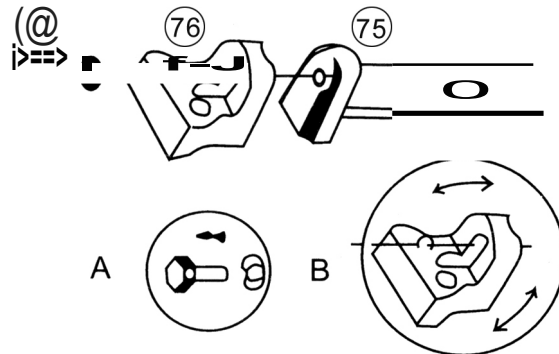
Step 3: Turn simultaneously with blade tension knob to make blade track against shoulder of pulley

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 end of the cut.

Method of adjusting blade:

- A. Loosen the screw #65.
- B. Adjust the blade adjustable seat #76 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 A to C.
- D. Tighten the screw #65.



Adjusting the blade

MAINTENANCE

CAUTION: MAKE CERTAIN THAT THE UNIT IS DISCONNECTED FROM THE POWER SOURCE BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT!

That's easier to keep machine in good condition or best performance by means of maintaining it at any time than remedy it after it is of order.

1. Daily maintenance (by operator)
 - a. Fill the lubricant before starting machine every time.
 - b. If the temperature of spindle caused over-heating or strange noise, stop machine immediately to check it for keeping accurate performance.
 - c. Keep work area clean; release vise, cutter, work-piece from table, switch off power source, take chip or dust away from machine and follow instructions lubrication or coating rust proof oil before leaving.
2. Weekly maintenance
 - a. Clean and coat the leading screw with oil.
 - b. Check to see if sliding surface and turning parts lack of lubricant. If the lubricant is insufficient, fill it.
3. Monthly maintenance
 - a. Check if the fixed portion was loose.
 - b. Lubricate bearing, worm, and worm shaft to avoid the wearing.
4. Yearly maintenance
 - a. Adjust the table to horizontal position for maintenance of accuracy.
 - b. Check electric cord, plugs, switches at least once a year to avoid loosening or wearing.

LUBRICATION

Lubricate the following components using SAE-30 oil as noted.

1. Ball-bearing none.
2. Driven pulley bearing 6-8 drops a week.
3. Vise lead screw as needed.
4. The drive gears run in an oil bath and will not required a lubricant change more often than once a year, unless the lubricant is accidentally contaminated or a leak occurs because of improper replacement of the gear box cover. During the first few days of operation, the worm gear drive will run hot. Unless the temperature exceeds 200F, there is no cause for alarm.

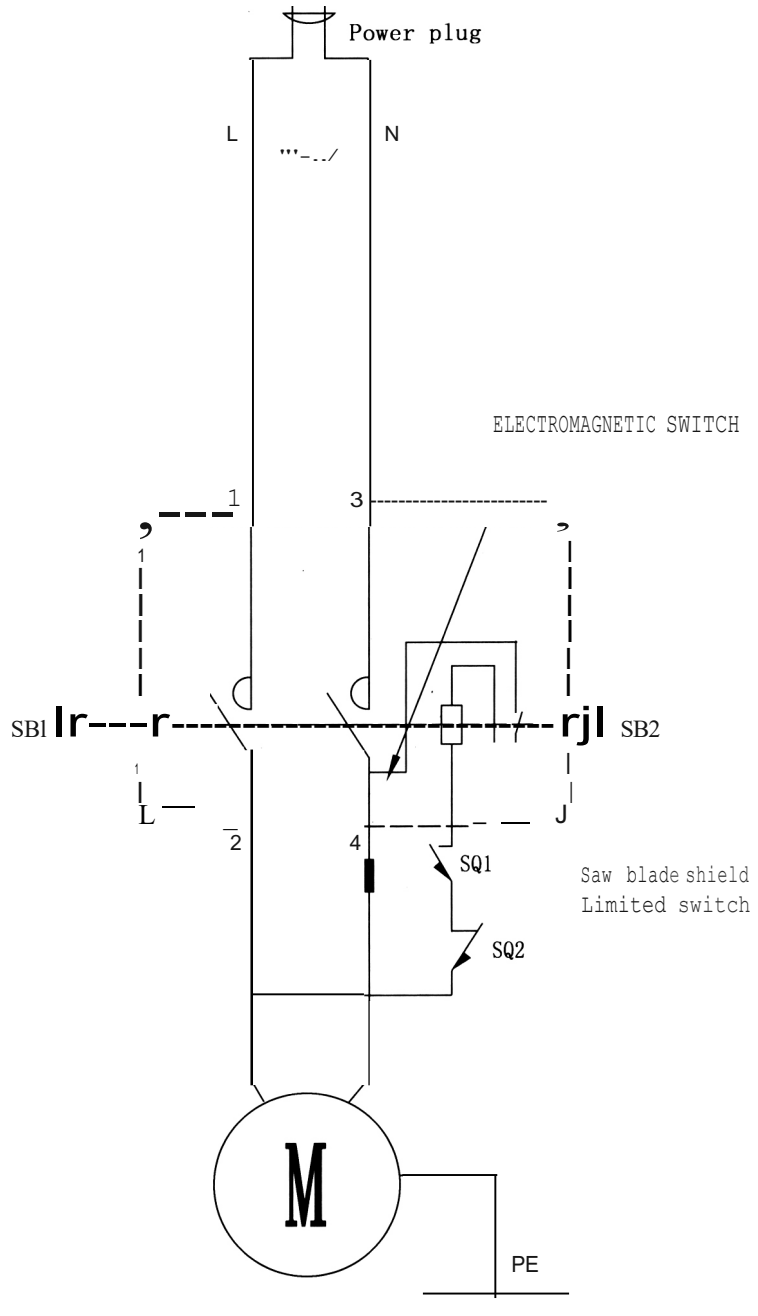
The following lubricants may be used for the gear box:

Atlantic Refinery Co., Mogul Cyl. Oil
Cities Service Optimus No.6
Gulf Refinery Co Medium Gear Oil
Pure Oil co. Park Clipper

TROUBLE SHOOTING CHART

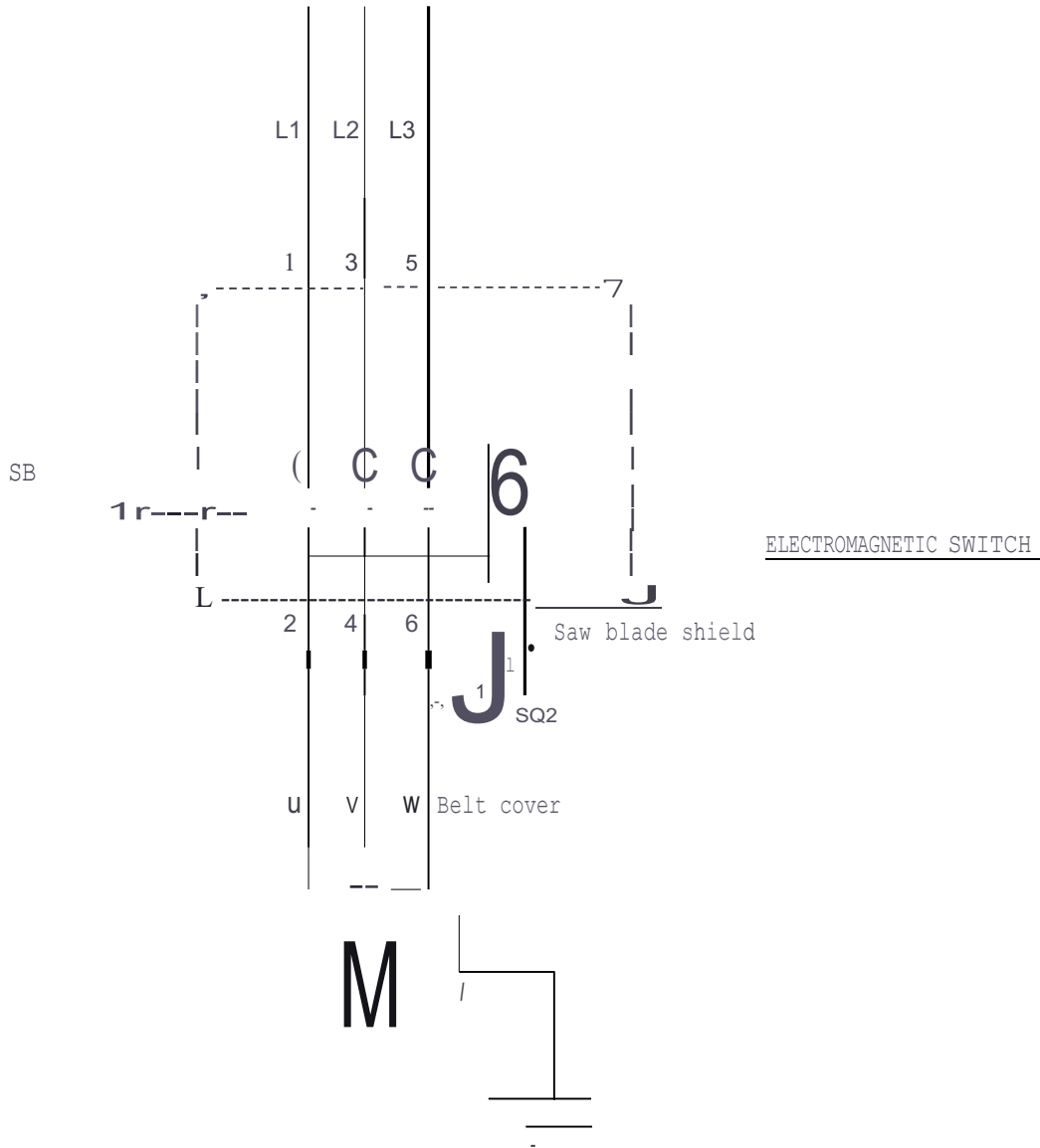
Symptom	Possible Cause (s)	Corrective Action
Excessive Blade Breakage	<ol style="list-style-type: none"> 1. Material loose in vise 2. Incorrect speed or feed 3. Blade teeth spacing too large 4. Material too coarse 5. Incorrect blade tension 6. Teeth in contact with material before saw is started 7. Blade rubs on wheel flange 8. Misaligned guide bearings 9. Cracking at weld 	<ol style="list-style-type: none"> 1. Clamp work securely 2. Adjust speed or feed 3. Replace with a small teeth spacing blade 4. Use a blade of slow speed and small teeth spacing 5. Adjust where blade just does not slip on wheel 6. Place blade in correct with work after motor is started 7. Adjust wheel alignment 8. Adjust guide bearings 9. Weld again, note the weld skill
Premature Blade Dulling	<ol style="list-style-type: none"> 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. Blade twist 7. Insufficient blade 	<ol style="list-style-type: none"> 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
Unusual Wear on Side/Back of Blade	<ol style="list-style-type: none"> 1. Blade guides worn 2. Blade guide bearings not adjusted properly 3. Blade guide bearing bracket is loose 	<ol style="list-style-type: none"> 1. Replace 2. Adjust as per operators manual 3. Tighten
Teeth Ripping from Blade	<ol style="list-style-type: none"> 1. Tooth too coarse for work 2. Too heavy pressure, too slow speed 3. Vibrating work piece 4. Gullets loading 	<ol style="list-style-type: none"> 1. Use finer tooth blade 2. Decrease pressure, increase speed 3. Clamp work piece securely 4. Use coarse tooth blade or brush to remove chips
Motor running too hot	<ol style="list-style-type: none"> 1. Blade tension too high 2. Drive belt tension too high 3. Gears need lubrication 4. Cut is binding blade 5. Gears aligned improperly 	<ol style="list-style-type: none"> 1. Reduce tension on blade 2. Reduce tension on drive belt 3. Check oil bath 4. Decrease feed and speed 5. Adjust gears so that worm is in center of gear
Bad Cuts	<ol style="list-style-type: none"> 1. Feed pressure too great 2. Guide bearing not adjusted properly 3. Inadequate blade tension 4. Dull blade 5. Speed incorrect 6. Blade guide spaced out too much 7. Blade guide assembly loose 8. Blade truck too far away from wheel flanges 	<ol style="list-style-type: none"> 1. Reduce pressure by increasing spring tension on side of saw 2. Adjust guide bearing, the clearance can not be greater than 0.001mm 3. Increase blade tension by adjust blade tension 4. Replace blade 5. Adjust speed 6. Adjust guides space 7. Tighten 8. Re-track blade according to operating instructions
Bad Cuts (Rough)	<ol style="list-style-type: none"> 1. Too much speed or feed 2. Blade is too coarse 3. Blade tension loose 	<ol style="list-style-type: none"> 1. Decrease speed or feed 2. Replace with finer blade 3. Adjust blade tension
Blade is twisting	<ol style="list-style-type: none"> 1. Cut is binding blade 2. Too much blade tension 	<ol style="list-style-type: none"> 1. Decrease feed pressure 2. Decrease blade tension

240V/230V/220V/110V 1PH



6		Metal Cutting Band Saw 128HDR 128DR	Drawn
5			Checked
4			
3		Circuit diagram	Diagram No. _____
2			
1			

3ph

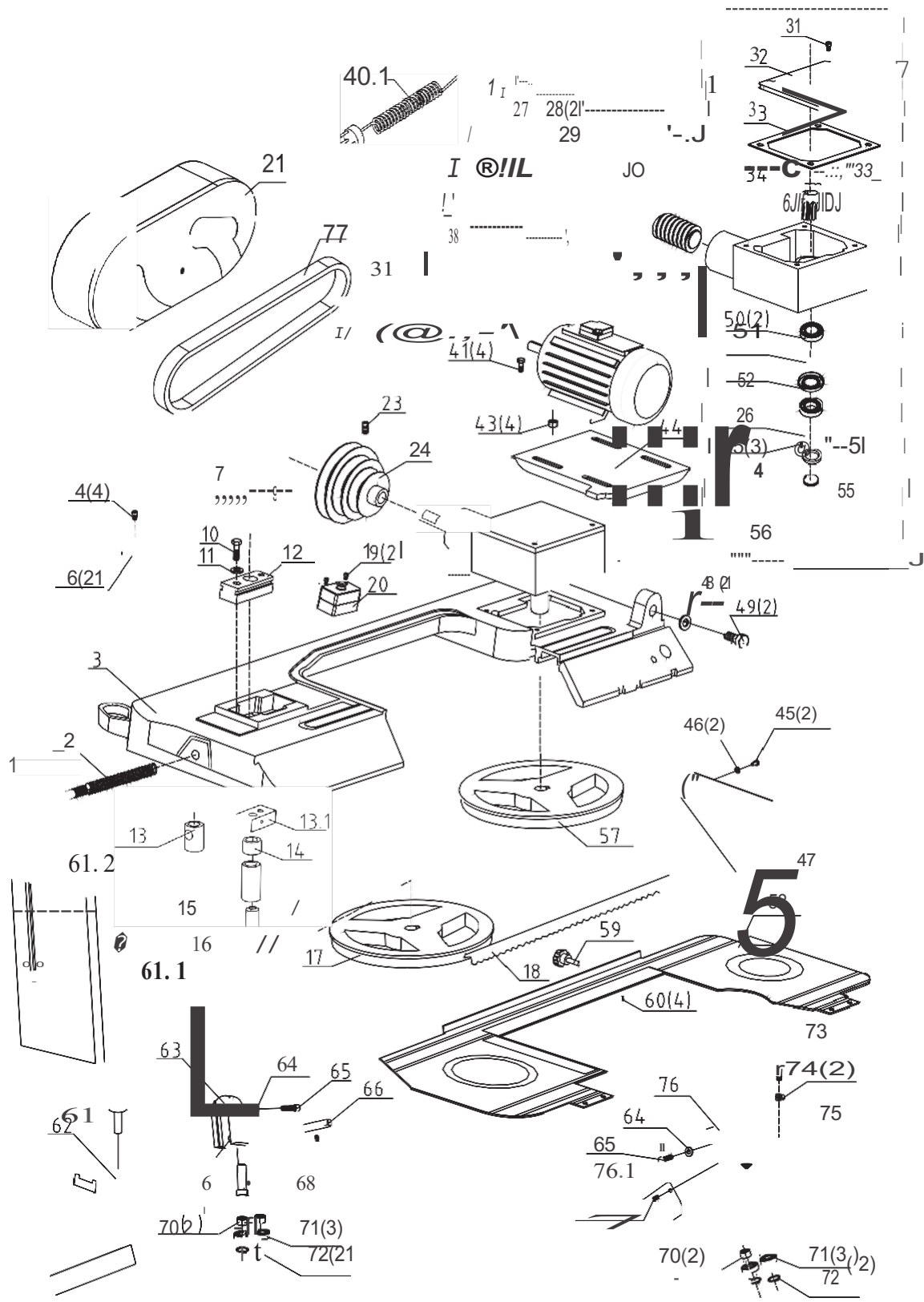


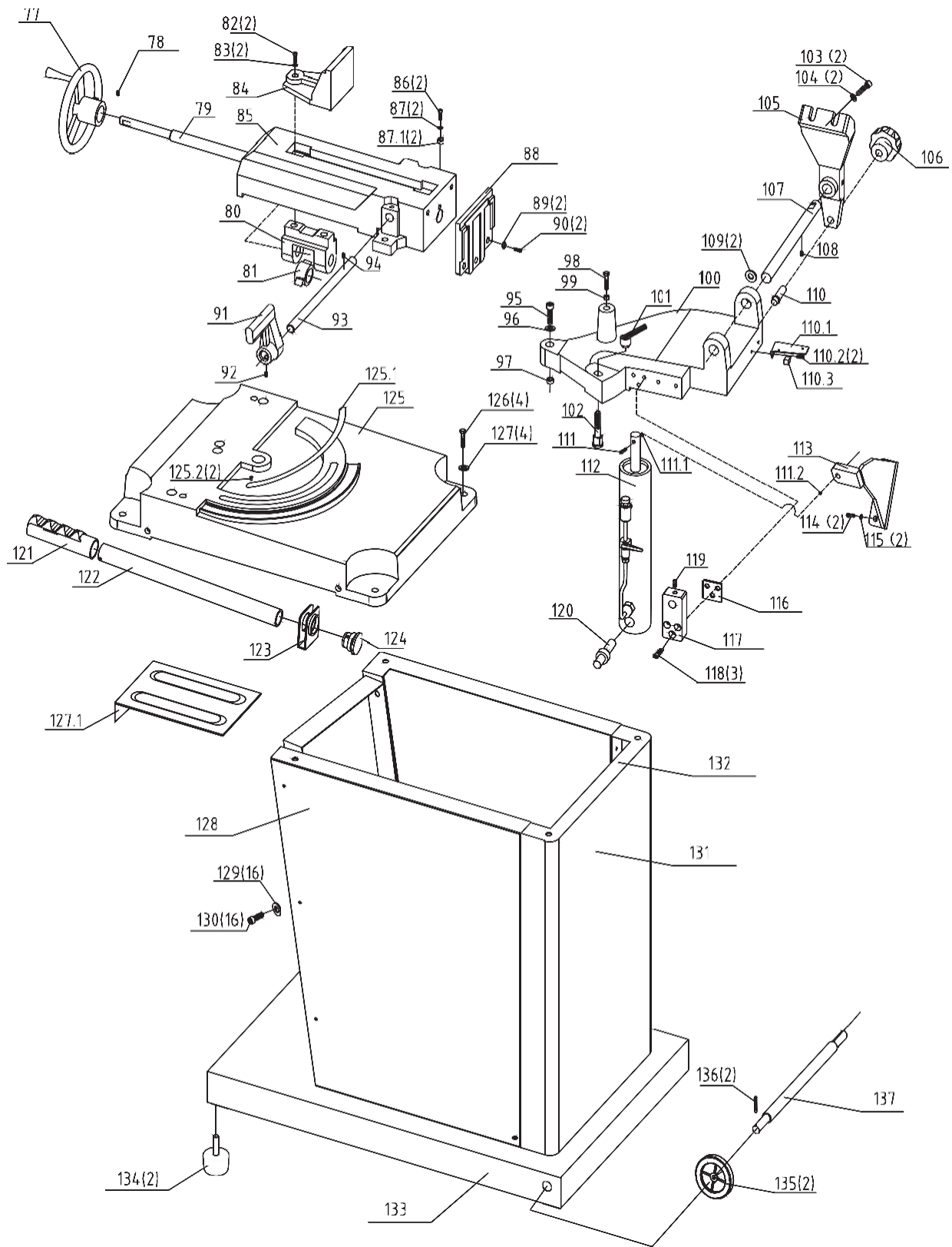
6		Metal Cutting Band Saw 128HDR 128DR	Drawn
5			Checked
4			
3		Circuit diagram	Diagram No.
2			
1			

PARTS LIST

Part No.	Description	Qty.	Part No.	Description	Qty.
1	Star handle $\Phi 80(M10X98)$	1	45	Screw M6X20	2
2	Spring	1	46	Washer 6	2
3	SawBow	1	47	Triangle plate	1
4	Screw M6X16	4	48	Washer 12	2
5	Washer 6	8	49	Bolt M12X35	2
6	Plate	2	50	Bearing 6202-2Z	2
7	Bolt M8X20	2	51	Spacer bush	1
8	Washer 8	2	52	Lip seal B15X35X7	1
9	Screw M8X16	1	53	Spacer bush	1
10	Bolt M8x16	1	54	Key 5x25	1
11	Washer 8	1	55	Shaft D	1
12	Slipping block	1	56	Checking ring 15	1
13	Adjustable shaft	1	57	Front wheel	1
13.1	Shaft seat	1	58	Body shield	1
14	Spacer bush	1	59	Handle M6X10	1
15	Bush	1	60	Screw M4X8	4
16	Shaft	1	61	Star andle $\Phi 60(M10X35)$	1
17	Rear wheel	1	61.1	Vertical worktable	1
18	Blade	1	61.2	Stand	1
19	Screw M5X12	2	62	Rear adjusting stand	1
20	Electric. Box	1	62.1	Backplate B	1
21	Belt cover	1	62.2	Screw M5X6	1
22	Belt	1	63	Rear adjusting seat	1
23	Screw M8X16	1	64	Washer 8	4
24	Big belt wheel	1	65	Screw M8X30	2
25	Screw M4X12	6	66	Small shaft	2
26	End cover	1	67	Screw M4X6	2
27	Lip seal B15X35X7	1	68	Shatf A	2
28	Bearing 6202-2Z	2	69	Shaft	2
29	Spacer bush	1	70	Nut M10X1	4
30	Worm	1	71	Bearing 6000-2Z	6
31	Screw M6X16	4	72	Checking ring 10	4
32	Cover plate	1	73	Bolt M10X35	1
33	Asbestos pad	1	74	Washer	2
34	Worm gear	1	75	Front adjusting stand	1
35	Key 5x25	1	76	Front adjusting seat	1
		1	76.1	Backplate	1
37	Small belt wheel	1	76.2	Screw M6X12	2
38	Screw M8X16	1	77	Handle wheel $\Phi 100x\Phi 12$	1
39	Key 5x25	1	78	Screw M6X10	1
40	Motor	1	79	Lead screw	1
40.1	Power line	1	80	Bracket	1
41	Bolt M8X20	1	81	Adjustable nut	1
42	Washer 8	8	82	Screw M8X30	2
43	Nut M8	4	83	Washer 8	2
44	Motor seat	4	84	Moving jaw plate	1

85	Vise	1	111.1	Washer 8	1
86	Screw M8X40	2	111.2	Nut M8	1
87	Washer 8	2	112	Hydraulic cylinder	1
87.1	Bush A	2	113	Bracket of hydraulic cylinder	1
88	Fixed jaw plate	1	114	Screw M6X20	2
89	Washer 8	2	115	Washer 6	2
90	Screw M8X25	2	116	Scaleboard	1
91	locating seat	1	117	Fixed plate of hydraulic cylinder	1
92	Screw M8X10	1	118	Screw M6X20	3
93	Shaft B	1	119	Screw M6X10	1
94	Screw M6X10	1	120	Shaft of hydraulic cylinder	1
95	Screw M12X50	1	121	Bush for handle	1
96	Washer 12	1	122	Handlebar	1
97	Bush B	1	123	U type seat	1
98	Bolt M10X40	1	124	screw head	1
99	Nut M10	1	125	Botton plate	1
100	rotary seat	1	125.1	Angle ruler	1
101	Adjudtable handle M8X16	1	125.2	Rivet 2X5	2
102	Screw	1	126	Bolt M8X35	4
103	Screw M8X30	2	127	Washer 8	4
104	Washer 8	2	127.1	Slippery plate	1
105	slant stand	1	128	Front side plate	1
106	Handle Φ 25XM6	1	129	Washer 6	16
107	Shaft C	1	130	Screw M6X12	16
108	Screw M8X16	1	131	Left/right side plate	1(each)
109	Washer16	2	132	Rear small side board	1
110	Pin shaft	1	133	Bottom plate for stand	1
110.1	fixed plate for switch	1	134	Pad	2
110.2	Screw M6X12	2	135	Foot wheel	2
110.3	Touch stop switch	1	136	Cotter pin	2
111	Screw M8X40	1	137	Wheel shaft	1





Note: This manual is only for your reference. Owing to the continuous improvement of the machine, changes may be made at any time without obligation on notice. Please note the local voltage for operating this electric machine.