

7"X12" HORIZONTAL & VERTICAL BAND SAW Model: BS-712N

Specifications

Cutting Capacity: 7" Round (180mm)

7"X12" Rectangle (180x300mm)

Blade Speed: 86-132-178-260 FPM 60Hz

72-110-148-217 FPM 50Hz

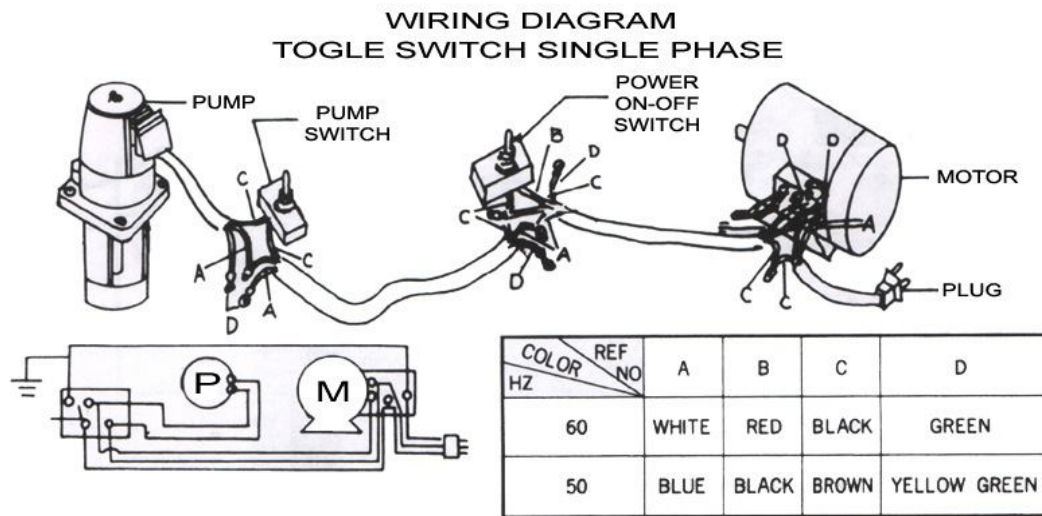
Blade Size: 3/4"x0.032"x93" (19X0.09X2360mm)



SAFETY

1. Know your bandsaw. Read the operator's Manual carefully. Learn the operations, applications and limitation as well as the specific potential hazards peculiar to this band saw.
2. This unit is equipped with a three prong (grounded) plug for your protection against shock hazards and should be plugged directly into a property grounded three prong receptacle. Where a two prong wall receptacle is encountered. It must be replaced with a properly grounded three prong receptacle in accordance with the
3. Use only 3-wire extension cords which have 3-prong grounding type plugs.
4. Replace or repair damage or worn cord immediately.
5. Keep guards in place and in working order.
6. Be especially careful when using bank saw in vertical position to keep fingers and hands out of path of path of blade.
7. Wear ear protection if exposed to long periods of very noisy shop operations.
8. Use safety goggles, hard hat and safety shoes. Also use face or dust mask if cutting operation is dusty.
9. Wear proper apparel. No loose clothing or jewelry to get caught in moving parts. Do not wear a tie or gloves.
10. Don't overreach. Keep your proper footing and balance at all times.
11. Secure work. Always use the vise to hold work. Clamp securely. Never hand-hold the work with saw in horizontal position.
12. Keep work area clean. Cluttered areas and benches invite accidents.
13. Avoid dangerous environment. Don not use the band saw in damp or wet location. Keep work area well illuminated.
14. Don't force tool. It will do the job better and safer at in the rate for which it was designed.
15. Disconnect power cord before adjusting and servicing and before changing blade.
16. Safety is combination of operator common sense and alertness at all times when the saw is being used.
17. Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
18. Check damaged parts. Before further use of the tools, a guard or other parts that it will operate to assure that it will operate properly
19. and perform its intend 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.

20. When moving the saw, ALWAYS have the head lowered to the horizontal position.



IMPORTANT:

Coolant pump motor voltage must always be the same as machine motor voltage.

ASSEMBLY

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

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 such that the belt 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 guard 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.

INSTALLATION

The saw may be mounted on your own bench or stand. The rear end of the saw must be mounted flush with the rear of the stand or bench to permit vertical operation for this band saw. A steel your dealer for this band saw. This stand has punched holes to effect easy assembly to the base using eight standard bolts.

OPERATION

WORK SET UP

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 workpiece on saw bed. If the piece is long support the end.
4. Clamp workpiece 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 to as close to the bottom of the cut as possible.
4. Tighten thumb screw.
5. Do not allow the blade to rest on the work while the motor is shut off.

CONVERTING FOR VERTICAL USE

Nothing, slitting, contour work may be done with the saw in the vertical position in the following manner:

1. Rotate the head to the vertical position.
2. Assemble a 10"x10" table (an option that may be purchased from your dealer to the guide bar using the screws provided and the guide bar knob.)

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 F.P.M. | | Belt Groove Used | |
|---|--------------|------|------------------|------------|
| | 60Hz | 50Hz | Motor pulley | Saw pulley |
| Tool, Stainless alloy Steels, bearing bronze | 86 | 72 | Small | Largest |

| | | | | |
|---|-----|-----|---------|--------|
| Medium to high carbon | 132 | 110 | Medium | Large |
| Low to medium carbon Steels soft brass | 178 | 148 | Large | Medium |
| Aluminum plastic | 260 | 217 | Largest | Small |

BLADE DIRECTION OF TRAVEL

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



STARTING SAW

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, then begin the cut by left the head down slowly onto the work. **DO NOT DROP OR FOR.** Let the weight of the saw head provide the cutting force. The saw automatically shuts off the end of the cut.

BLADE SELECTION

A 8-tooth per inch, general-use blade is furnished with this metal cutting band saw. Additional blades in 4,6,8 and 10 tooth sizes are available. The choice of the blade pitch is governed by the thickness of the work to be cut; the thinner the workpiece, the more teeth advised. A minimum of three teeth should engage the workpiece 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 workpiece and to the blade can result.

CHANGING BLADE

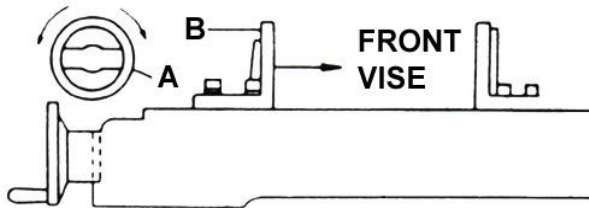
Raise saw head to vertical position and open the blade guards. Loosen tension screw knob sufficiently to allow the saw blade to slip off the wheels. Install the new blade with teeth slanting toward the motor as follows:

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 aide 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.

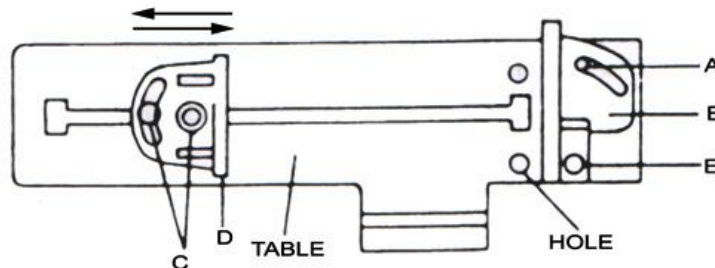
USAGE OF THE QUICK VISE

Your machine is equipped with a quick than action vise jaw which allows you to instantly position the movable vise jaw (B). Simply turn hand wheel (A) counter clockwise 1/2 turn and move the vise jaw (B) to the desired position. Then tighten the vise jaw (B) against the workpiece by turning hand-wheel clockwise.



QUICK VISE ADJUSTMENT FOR ANGLE CUT

1. Loosen the A.B.C. Screw.
2. Adjust rear vise to the threaded hole position. (E)
3. Set the scale to the desired angle.
4. Adjust the front vise (D) to parallel the rear vise (E).
5. Tighten the A.B.C. Screw.



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 dragging on 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 read just 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 sooner than 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 (just touching) 001 clearance between the 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. 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.

BLADE TRACK ADJUSTMENT

1. Open the blade guard.
2. Remove the blade guide assemblies (top and bottom)
3. Loosen the hex head screw in the tilting mechanism to a point where it is loose but snug.
4. With the machine running, adjust both the set screw and blade tension knob simultaneously to keep constant tension on the blade. The set screw and blade tension knob are always tuned in opposite directions, when one is turned clockwise the other is turned counterclockwise. The blade is tracking properly when the back side just touches the shoulder of pulley or a slight gap appears near the center line of the pulley. Care should be taken not to over tighten the saw blade since this will give a false adjustment and limit life of the blade.
5. Tighten the hex head screw in tilting mechanism **IMPORTANT:** Sometimes in trying to make this critical adjustment it is possible to cause the basic setting to be misaligned. Should this occur, proceeds as follows:
 - a. Loosen the set screw and back it out as far as it can go and still remain in the threaded hold.
 - b. Turn the hex head screw clockwise until it stop (do not tighten).
 - c. Turn the set screw clockwise until it bottoms, then continue for half a turn and check the tracking by turning on the machine.
 - d. If further adjustment is required, go back to step 4.
6. Turn off power to the machine.
7. Replace the blade guide assemblies – it may be necessary to loosen the blade tension a lightly.
8. Adjust the vertical position of blade guide bearing assemblies so that the back side of the blade just touches the ball bearings.
9. Make a final run to check tracking. If required, touch up adjustment (See step 4)
10. Replace the blade guards.

MAINTENANCE

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

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

SHIPPING CONTAINER CONTENTS

| | |
|------------------------|---|
| Saw | 1 |
| Wheel axis | 2 |
| Wheel | 4 |
| Split pin | 4 |
| Material stop bar | 1 |
| Material stop | 1 |
| Belt cover | 1 |
| Vertical cutting plate | 1 |

Tools required for assembly

#2 cross point screwdriver

Pliers

Unpacking and clean-up

1. Finish uncrating the saw. Inspect it for shipping damage. If any damage has occurred, contact your distributor.
2. Unbolt the saw from the skid and place it on a level surface.
3. Clean rust protected surfaces with kerosene, diesel oil, oil a mild solvent. Do not use cellulose based solvents such as paint thinner or lacquer thinner. These will damage painted surfaces.

Assembly

1. Place blocking under the ends of the saw base to allow wheel installation. Caution: Make sure saw is steady while temporarily supported.
2. Slide wheel axles through holes in base.
3. Slide wheel onto axles and fasten with pins. Bend pins to hold in place.
4. Slide material stop bar (A, Fig. 1) into base and secure by tightening bolt (B). Slide material stop (C) onto bar and tighten blot (D).
5. Slide belt cover over pulley assemblies and fasten with screws and washers (A, Fig. 2).
6. Close belt cover and secure with lock knob (B).
7. Remove transportation strap and keep for later use should the saw be moved any distance.

Vertical cutting plate assembly

Note: these steps are only necessary if using the bandsaw in the vertical mode.

Warning

Disconnect bandsaw from the power source before making any repairs or adjustments!

Failure to comply may cause serious injury!

1. Disconnect the bandsaw from the power source.
2. Raise the arm to the vertical position and lock in place by turning the hydraulic cylinder valve to the off position.
3. Remove two screws (A, Fig. 3) and the deflector plate (B).
4. Guide blade through slot in table and fasten with two screws. See Fig. 4.

Coolant tank preparation

Use of a water-soluble coolant will increase cutting efficiency and prolong blade life. Do not use black cutting oil as a substitute. Change cutting oil often and follow manufacturers instructions as to its uses and pr

1. Disconnect machine from the power source.
2. Remove coolant return hose from tank cover.
3. Slide tank out of saw base and carefully remove lid containing coolant pump.
4. Fill tank to approximately 80% of capacity.
5. Place lid back onto tank and place tank assembly back into base.
6. Replace return hose back into hole in tank lid.

Electric Box (For UE-712A)

- A. Part No. A-Emergency stop switch (EMS).
It stop all electric motors including coolant pump.
- B. Part No. B-Start switch.
- C. Part No. C-Stop switch.

There is a relay inside the electric box.

When machine is overloaded and the current is to high. This relay will switch off automatically as protections. It cuts off all electrics and machine stops.

Open the electric box and find this switch in white button. Please reset this white button to function the electrics again.

If this machine gets overloaded too often,

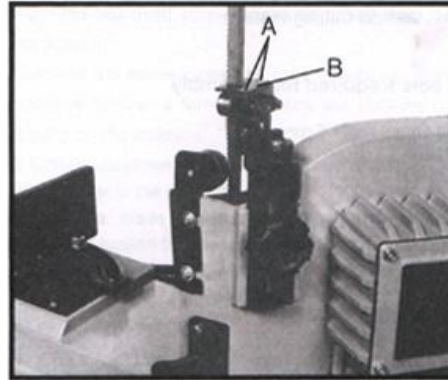


Fig. 3

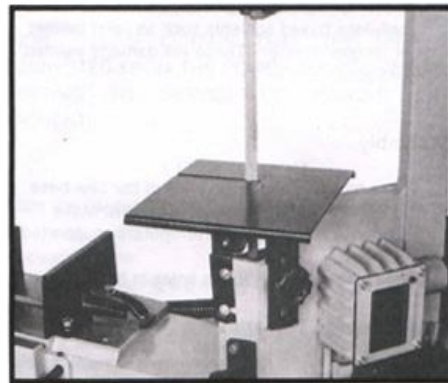


Fig. 4

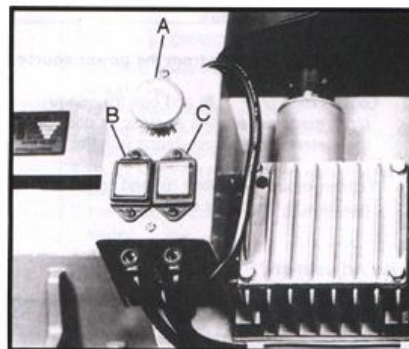


Fig. 5

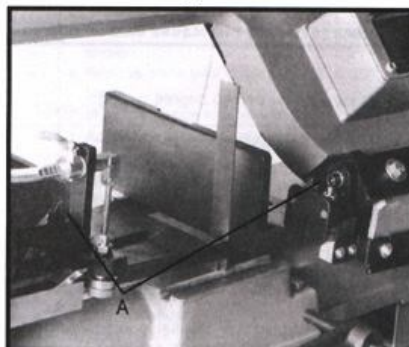


Fig. 6



try to adjust the really-make the setting of current higher.

Adjusting blade square to table

1. Disconnect machine from the power source.
2. Place machinist's square on table next to blade as pictured in Fig. 6.
3. Check to see blade makes contact with square along the entire width of the blade.
4. If adjustment is necessary, loosen bolts (A Fig. 13) and rotate blade guide assemblies slightly in the same direction until blade makes contact with the square along it's entire width.
5. Tighten bolts (A).
6. Connect machine to the power source.

Note: If adjustment to square blade to table is necessary, be sure to check blade adjustments again.

Adjusting blade square to vise

1. Disconnect machine from the power source.
2. Place a machinist's square as pictured in figure 7. Square should lie along entire length of vise and blade without a gap.
3. If adjustment is necessary, loosen bolts holding vise and adjust vise so that square lines up properly. Tighten bolts.
4. Connect machine to the power source.

Adjusting blade guides

1. Disconnect machine from the power source.
2. Loosen knob (A. Fig. 8) and bolt (B).
Slide blade guide assemblies as close as possible to the material without interesting with the cut.
3. Tighten knob (A) and bolt (B) and connect
4. machine to the power source.

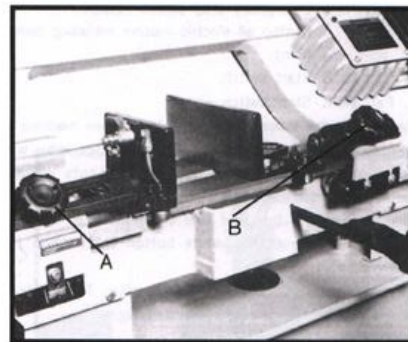


Fig. 8

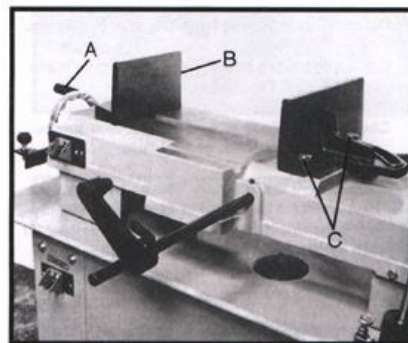


Fig. 9

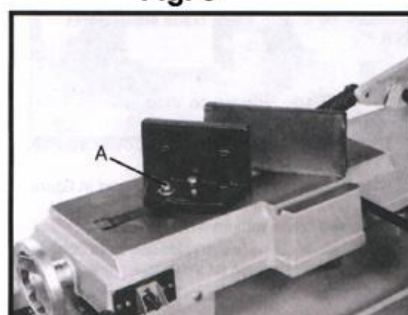
Vise adjustment



Warning

Do not make any adjustments or load/unload material from vise while machine is running! Failure to comply may cause serious injury! To set the vise for 0 to 45 degree cutting:

1. Remove bolt assemblies (C. Fig. 9)
2. Position vise and re-install as pictured in Fig. 10. Pay particular attention to bolt hole location.
3. Set vise to desired angle, re-install



bolts, and lighten nut and bolt assemblies.

- Adjust movable vise parallel to fixed vise by loosening blot (A, Fig. 10), adjusting to parallel and tightening bolt.

To set vise for maximum width of stock cutting:

- Remove nut and bolt assemblies.
- Position vise and re-install bolt assemblies as pictured in Fig 9.

TROUBLE SHOOTING CHART

| Symptom | Possible Cause (s) | Corrective Action |
|---------------------------------|---|---|
| Excessive Blade Breakage | <ol style="list-style-type: none"> Material loose in vise Incorrect speed or feed Blade teeth spacing too large Material too coarse Incorrect blade tension Teeth in contact with material before saw is started Blade rubs on wheel flange Misaligned guide bearings Cracking at weld | <ol style="list-style-type: none"> Clamp work securely Adjust speed or feed Replace with a small teeth spacing blade Use a blade of slow speed and small teeth spacing Adjust where blade just does not slip on wheel Place blade in correct with work after motor is started Adjust wheel alignment Adjust guide bearings Weld again, note the weld skill |
| Premature Blade Dulling | <ol style="list-style-type: none"> Teeth too coarse Too much speed Inadequate feed pressure Hard spots or scale on material Work hardening of material Blade twist Insufficient blade | <ol style="list-style-type: none"> Use finer teeth Decrease speed Decrease spring tension on side of saw Reduce speed, increase feed pressure Increase feed pressure by reducing spring tension Replace with a new blade, and adjust blade tension 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 |
| Symptom | Possible Cause (s) | Corrective Action |
| 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 |

PARTS LIST

| Part No. | Description | Qty. | Part No. | Description | Qty. |
|-----------------|-----------------------|-------------|-----------------|-------------------------|-------------|
| 1 | Bottom pan | 1 | 54 | Retainer | 1 |
| 2 | Leg (left) | 1 | 55 | Spring washer | 1 |
| 3 | Leg (right) | 1 | 56 | Round hd. Screw | 1 |
| 4 | Skirt | 1 | 57 | Hex. Hd. Screw | 2 |
| 5 | Shelf | 1 | 58 | Spring washer | 2 |
| 10 | Switch bracket | 1 | 59 | Support plate | 1 |
| 11 | Toggle switch | 1 | 60 | Stop screw | 1 |
| 12 | Electrical box | 1 | 61 | Nut | 2 |
| 13 | Hex. Hd. Screw | 8 | 62 | Hex. Hd. Screw | 1 |
| 14 | Spring washer | 8 | 63 | Nut | 1 |
| 15 | Washer | 8 | 64 | 90° position support | 1 |
| 16 | Spring washer | 8 | 65 | Nut | 2 |
| 17 | Nut | 8 | 66 | Spring washer | 2 |
| 18 | Hex. Hd. Screw | 6 | 67 | Limit switch | 1 |
| 19 | Nut | 6 | 68 | Limit switch seat | 1 |
| 20 | Cylinder | 1 | 69 | Round hd. Screw | 2 |
| 21 | Hex. Hd. Screw | 1 | 70 | Hex. Hd. Screw | 2 |
| 22 | Washer | 1 | 71 | Hex. Hd. Screw | 1 |
| 23 | Spring washer | 1 | 72 | Thumb screw | 1 |
| 24 | Nut | 1 | 73 | Stop block | 1 |
| 25 | Hex. Hd. Screw | 2 | 74 | Work stop rod | 1 |
| 26 | Spring washer | 2 | 75 | Fiber hex. Nut | 2 |
| 27 | Support rod | 1 | 76 | Washer | 2 |
| 28 | Set screw | 1 | 77 | Bearing bushing (front) | 1 |
| 29 | Bottom support | 1 | 78 | Rubber cover | 1 |
| 33 | Washer | 4 | 79 | Washer | 2 |
| 34 | Wheel | 4 | 80 | Support shaft | 1 |
| 35 | Wheel shaft | 2 | 81 | Pivot arm | 1 |
| 36 | Cutter pin | 4 | 84 | Plate | 1 |
| 37 | Toggle switch | 1 | 85 | Spring bracket | 2 |
| 39 | Table | 1 | 86 | Hex. Hd. Screw | 2 |
| 40 | Hex. Hd. screw | 5 | 87 | Spring | 1 |
| 41 | Washer | 5 | 88 | Adjustable spring rod | 1 |
| 42 | Spring washer | 5 | 89 | Spring bracket | 1 |
| 43 | Nut | 5 | 90 | Hex. Hd. Screw | 1 |
| 44 | Filter | 1 | 91 | Nut | 2 |
| 45 | Round hd. Screw | 2 | 92 | Spring washer | 1 |
| 46 | Electric box assembly | 1 | 93 | Nut | 1 |
| 47 | Handle wheel | 1 | 94 | Front vise | 1 |
| 48 | Set screw | 1 | 95 | Rear vise | 1 |
| 49 | Key | 1 | 96 | Vise thrust shaft | 1 |
| 50 | Lead screw | 1 | 96-1 | Spring washer | 2 |
| 51 | Nut seat | 1 | 96-2 | Washer | 1 |
| 52 | Acme nut | 1 | 97 | Hex. Hd. Screw | 1 |
| 53 | Button | 1 | 98 | Hex. Hd. Screw | 1 |
| 98-1 | Electric cord cover | 2 | 142 | Vertical cutting plate | 1 |

| | | | | | |
|-------|------------------------------|---|-------|-----------------------------|---|
| 98-2 | Rubber ring | 1 | 143 | Adjustable blade seat | 1 |
| 99 | Electric cord | 1 | 144 | Hex. Hd. screw | 2 |
| 100 | Nut plate | 1 | 145 | Top support | 1 |
| 101 | Spring adjusting screw | 1 | 146 | Spring washer | 2 |
| 101-1 | Spring | 1 | 147 | Nut | 2 |
| 102 | Screw | 1 | 148 | Round hd. screw | 2 |
| 103 | Mitering vise plate | 1 | 149 | Washer | 2 |
| 104 | Hexagon head screw | 4 | 150 | Brush holder | 1 |
| 105 | Washer | 1 | 151 | Hex. Hd. screw | 2 |
| 107 | Coolant tank | 1 | 152 | Nut | 2 |
| 108 | Hose fitting | 1 | 153 | Brush | 1 |
| 109 | Hose clamp | 1 | 154 | Hex. Hd. screw | 3 |
| 110 | Hose | 1 | 154-1 | Spring washer | 3 |
| 111 | Saw bow | 1 | 155 | Magnetic switch | 1 |
| 112 | Tapping screw | 4 | 156 | Nozzle | 1 |
| 113 | Vent plug | 1 | 157 | Set screw | 1 |
| 114 | Gear box cover | 1 | 158 | Nozzle support | 1 |
| 115 | Gear box gasket | 1 | 159 | Valve | 1 |
| 116 | Worm gear | 1 | 160 | Round hd. screw | 2 |
| 117 | Key | 1 | 161 | Hex. Soc. Screw | 1 |
| 118 | Ball bearing | 3 | 161-1 | Spring washer | 1 |
| 119 | Hex. Hd. screw | 1 | 163 | Adjustable bracket (front) | 1 |
| 119-1 | Spring washer | 1 | 164 | Blade guard | 1 |
| 119-2 | Washer | 1 | 164-1 | Round hd. screw | 2 |
| 120 | Oil seal | 1 | 165 | Hex. Hd. screw | 4 |
| 121 | Bear box | 1 | 166 | Sliding guide plate | 2 |
| 122 | Spring washer | 4 | 167 | Set screw | 1 |
| 123 | Hex. Hd. screw | 4 | 168 | Hex. Hd. screw | 2 |
| 123-1 | Adj. Screw | 2 | 169 | Blade tension sliding block | 1 |
| 124 | Blade wheel (rear) | 1 | 170 | Hex. Hd. screw | 1 |
| 125 | Bearing bushing | 1 | 170-1 | Spring washer | 1 |
| 126 | Hex. Soc. Screw | 3 | 170-2 | Washer | 1 |
| 127 | Blade | 1 | 171 | Sliding draw block | 1 |
| 128 | Blade back cover | 1 | 172 | Bracket | 1 |
| 129 | Wheel cover | 1 | 173 | Bearing bushing (rear) | 1 |
| 130 | Plum screw | 2 | 174 | Ball bearing | 2 |
| 130-1 | Washer | 2 | 175 | Blade wheel (front) | 1 |
| 131 | Adjustable guide knob | 2 | 176 | Washer | 1 |
| 132 | Adjustable bracket (rear) | 1 | 176-1 | Spring washer | 1 |
| 133 | Ball bearing | 2 | 177 | Hex. Hd. screw | 1 |
| 134 | Adjustable blade seat (rear) | 1 | 178 | Round hd. screw | 2 |
| 135 | Bearing pin | 2 | 179 | Washer | 2 |
| 136 | Eccentric shaft assembly | 2 | 180 | Washer | 1 |
| 136-1 | Center shaft assembly | 2 | 181 | Blade adjustable handle | 1 |
| 137 | Nut | 4 | 182 | Vertical cutting plate | 1 |
| 137-1 | Spring washer | 4 | 183 | Belt | 1 |
| 138 | Washer | 2 | 184 | Worm pulley | 1 |
| 139 | Spring washer | 2 | 185 | Motor pulley | 1 |
| 140 | Hex. Soc. Screw | 1 | 186 | Set screw | 3 |
| 141 | Hd. screw | 2 | 187 | Hex. Hd. screw | 2 |
| 188 | Washer | 2 | 202 | Bearing bushing | 1 |
| 189 | Pulley cover | 1 | 203 | Worm shaft | 1 |
| 190 | Plum screw | 1 | 204 | Hex. Hd. screw | 2 |
| 191 | Key | 1 | 205 | Washer | 2 |
| 192 | Motor | 1 | 206 | Support plate | 1 |
| 193 | Hex. Hd. screw | 4 | 207 | Limit switch rack | 1 |
| 194 | Motor mount plate | 1 | 208 | Hex. Hd. screw | 1 |
| 195 | Washer | 4 | 209 | Nut | 1 |
| 196 | Spring washer | 4 | 210 | Washer | 1 |
| 197 | Nut | 4 | 211 | Spring washer | 1 |

| | | | | | |
|-----|--------------|---|-----|----------------|---|
| 198 | C-ring | 1 | 212 | Hex. Hd. screw | 1 |
| 199 | Ball bearing | 3 | 213 | Nut | 1 |
| 200 | Block plate | 1 | 214 | Hex. Hd. screw | 1 |
| 201 | Oil seal | 1 | 217 | C-ring | 2 |

