# **INSTRUCTION MANUAL**

# BS-912 Metal Cutting Band Saw (240V) 305 x 178mm (W x H) Rectangle





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### CAUTION

Install saw blade and blade guard before use. Set proper blade tension to prevent any danger caused by damaged saw blade or work piece.



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

As with all machinery there are certain hazards involved with operation and use of the 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 recommends 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.

Always install the plastic belt cover before operating the machine.

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.

### SAFETY RULES FOR ALL TOOLS

### A. USER:

(1). **WEAR PROPER APPAREL.** No loose clothing, gloves, rings, bracelets, or other jewelry to get caught in moving parts.

Non-slip foot wear is recommended. Wear protective hair covering to contain long hair.

(2). **ALWAYS WEAR EYE PROTECTION.** Refer to ANSLZ87.1 standard for appropriate recommendations.

Also use face or dust mask if cutting operation is dusty.

(3). DON'T OVERREACH. Keep proper footing and balance at all times.

(4). **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

(5). **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

(6). **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drug, alcohol or any medication.

(7). **MAKE SURE TOOL 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 tool before turning it "on".

(2). **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.

(3). **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.

(4). **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand frees both hands to operate tool.

(5). **MAINTAIN TOOLS IN TOP CONDITION**. Keep tools 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 hazards.

(7). **AVOID ACCIDENTAL STARTING.** Make sure switch is in "**OFF**" position before plugging in power cord.

(8). **DIRECTIONOF FEED**. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

(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). **GROUNDALL TOOLS**. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate atwoprong receptacle, the adapter lug must be attached to a known ground. Never removed the third prong.

### C. ADJUSTMENT :

MAKE all adjustments with the power off. In order to obtain the machine. precision 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 tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

(3). **KEEP CHILEREN AND VISITIORS AWAY.** All children and visitors should be kept a 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 tool, 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 TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.

(4). MAKE SURE that blade tension and blade tacking are properly adjusted.

(5). **RE-CHECK** blade tension after initial cut with a new blade.

(6). TO RPOLONG BLADE LIFE ALWAYS release blade tension at the end of each work day.

(7).**CHECK COOLANT DAILY** Low coolant level can cause foaming and high blade temperatures. Dirty or week coolant can clog pump, cause crooked. Cast, 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 any accidental magnesium chip fire. See your industrial coolant supplier for specific coolant recommendations when cutting magnesium.

(9). **TO PRNMT** corrosion of machined surfaces when a soluble on 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. SPECTIFIED USAGE:**

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

### G. NOISE:

A weighted sound pressure level : 80 dB.

### **H. SAFETY DEVICE:**

By the time the saw arm cover is opened, the interlock switch will function to stop the machine. do not remove this switch from machine for any reason, and check it's function frequently.

MOTOR	, ,	3 § (1HP)				1 § (1.5HP)					
Saw Blade Speed	919G (G9743)	60HZ	45	(	56	86	50HZ	38	5	5	72
(MPM)	912B	60HZ	32	60	88	115	50HZ	26	50	73	95
Saw Blade Speed	912G (G9743)	60HZ	148	2	16	282	50HZ	125	1	80	236
(FPM)	912B	60HZ	105	196	288	377	50HZ	85	164	240	312
Blade Size			25 x 0.9 x 2655 mm ( 1"x 0.035" x 104.5")								
Dimension LxWxH (mm)			1325x460x1080(G) 1380x460x1050(B)				)				
N.W/G.W (kgs)		170 / 200(G) 160/185(B)									
		٥°	$O^{\circ}$ (mm) 229(9")								
		0	<b></b> (	mm)			178x30	)5(7"x	12")		
Working Capacity		+15°	○(	mm)			15	0(6")			
		<u> </u>	<b></b> (	mm)	127x150(5"x6")						
Packing Measurement (mm) LxWxH		1450x660x1150(G) 1420x530x1117(B)									
Noise					80 dB	MAX					

### **1.SPECIFICATION**

### **2.TRANSPORTATION OF MACHINE:**

### Unpacking

1. Transportation to desired location before unpacking, please use lifting jack.(Fig. B)

2. Transportation after unpacking, please use heavy duty fiber belt to lift up the machine.



Fig. B

# ALLWAYS KEEP PROPER FOOTING & BALANCE WHILE MOVING THIS MACHINE. Installation:

As this machine weights 155 kg. It is recommended that the machine shall be transported, with help of lifting jack.

### **Transportation Recommendation:**

- (1). Tighten all locks before operation.
- (2). **ALWAYS** Keep proper footing & balance while moving this 155kgs machine, and only use heavy duty fiber belt to lift the machine as Fig. A
- (3). **TURN OFF** the power before wiring, & be sure machine in proper grounding, Overload & circuit breaker is recommended for safety wiring.
- (4). **CHECK** carefully if the saw blade is running in counter-clockwise direction if not , reverse the wiring per circuit diagram then repeat the running test.
- (5). **KEEP** machine always out from sun, dust, wet, raining area.



912(B.G)

### 6. MINIMUM ROOM SPACE FOR MACHINE OPERATION



### 7. MAKE PROPER TOOTH SELECTION

For maximum cutting efficiency and lowest cost per cut, it is important to select the blade with the right number of teeth per inch (TPI) for the material being cut. The material size and shape dictate tooth selection.





### You need to consider:

1. The width of the cut. That is, the distance in the cut that each tooth must travel from the point it enters the workpiece until it leaves the workpiece, and

### 2. The shape of the workpiece.

• Squares, Rectangles, Flats (Symbol : )

Locate the width of cut on the chart. (Inches on the outer circle and millimeters on the inner circle.) Select the tooth pitch on the ring marked with the square shape which aligns with the width of cut.

EXAMPLE: 6" (150mm) square, use a 2/3 Vari-Tooth.

Round Sollds (Symbol : •)

Locate the diameter of your workpiece on the chart. Select the tooth pitch on the ring marked with the round shape which aligns with the size of stock you are cutting. EXAMPLE: 4" (100mm) round, use a 3/4 Vari-Tooth.

### • Tubing, Pipe, Structurals( Symbol : O H ^ )

Determine the average width of cut by dividing the area of the workpiece by the distance the saw blade must travel to finish the cut. Locate the average width of cut on the chart. Select the tooth Ditch on the ring marked with the tubing and structural shape which aligns with the average width you are cutting.

EXAMPLE: 4"(100mm) outside diameter, 3"(75mm) inside diameter tubing.

 $4"(100mm) OD = 12.5 \text{ sq.ln.} (79cm^2)$   $3"(75 mm) ID = 7.0 \text{ sq.ln.} (44cm^2)$ Area = 5.5 sq.ln. (35cm<sup>2</sup>)

5.5 sq.ln. (35cm<sup>2</sup>) / 4" (100mm) distance =1.38(35mm) average width 1.38" (35mm), use a 4/6 Vari-Tooth

**NOTE:** The band speed and cutting rate recommendations presented on this chart are approximations and are to be used as a starting point for most applications. For exact sawing parameters' consult your saw blade supplier.

### 8. BI-METAL SPEEDS AND FEEDS

These figures are a guide to cutting 4"(100mm) material (with a 314 Vari-Tooth) when using a cutting fluid.

Increase Band Speed: 15% When cutting 1/4"(6.4mm) material (10/14 Vari-Tooth) 12% When cutting 3/4"(19 mm) material (6/10 Vari-Tooth) 10% When cutting 1-1/4"(32 mm) material(5/8 Vari-Tooth) 5% When cutting 2-1/2" (64 mm) material(4/6 Vari-Tooth)

Decrease Band Speed: 12% When cutting 8"(200mm) material(2/3 Vari-Tooth)

MATERIAL	ALLOY	BAND	SPEED
	ASTM NO.	FT./MIN	M/MIN
Copper	173,932	314	96
Alloy	330,365	284	87
	623,624	264	81
	230,260,272	244	74
	280,264,632,655	244	74
	101,102,110,122,172	234	71
	1751,182,220,510	234	71
	625,706,715,934	234	71
	630	229	70
C.	811	214	65
Carbon	1117	339	103
Steel	1137	289	88
	1141,1144	279	85
	1141 HI STRESS	279	85
	1030	329	100
	1008,1015,1020,1025	319	97
	1035	309	94
	1018,1021,1022	299	91
	1026,1513	299	91
	A36(SHAPES),1040	269	82
	1042,1541	249	76
	1044,1045	219	67
	1060	199	61
	1095	184	56
Ni-Cr-Mo	8615,8620,8622	239	73

Alloy Steel	4340,E4340,8630	219	67
Ni-Cr-Mo	8640,	199	61
Alloy Steel	E9310	174	53
Tool Steel	A-6	199	61
	A-2	179	55
	A-10	159	49
	D-2	90	27
	H-11,H-12,H-13	189	58
Stainless	420	189	58
Steel	430	149	46
	410,502	140	43
	414	115	35
	431	95	29
	440C	80	24
	304,324	120	36
	304L	115	35
	347	110	33
	316,316L	100	30
	416	189	58

### **TELLTALE 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.



### 9. ASSEMBLY

A 1 HP, motor, split phase or capacitor-start it recommended for best economical performance. Counterclockwise rotation is required. Note that rotation can be reversed by ollowing 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 for proper speed/ belt adjustment.

(3). Place the spacer over the long Bolt and secure it wit the nut .

(4). Secure the Motor to the Motor Mounting plate with the four bolts and nuts. Note, that the motor shaft is placed through the large opening in the Guard plate and must be pareallel 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 of the two provided, to the protruding drive Shaft Note the small diameter must be closest to the bearing.

Do not tighten the set screw.

(7).Place the belt into one of the pulley grooves 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 fullload amperage of the motor.

### **10. OPERATION**

### WORK SET UP

- (1). Raise the saw head to the highest position.
- (2). Open vise to accept the Piece to be cut by rotating the wheel at the end the base.
- (3). Place workpiece on saw bed. If the piece is long, support the end.
- (4). Clamp workpieced securely in vise.

### WORK STOP ADJUSTMENT

- (1). Loosen the thumb screw 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 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 Shirt givers suggested settings for several materials.

	Speed F.P.M				Belt Groove Used		
Material	912G (G9743)			9	12B	.2B	
	60Hz	50Hz	60Hz	50Hz	Motor Pulley	Saw Pulley	
Tool, Stainless Alloy Steels Bearing Bronze	148	125	105	85	Small	Largest	
Medium to High Carbon Steels Hard Brass or Bronze			196	164	Medium	Large	
Low to Medium Carbon Steel Soft Brass	216	180	288	240	Large	Medium	
Aluminum ,Plastic	282	236	377	312	Largest	Small	

### MANUAL OF GEAR TYPE SPEED CHANGING

- (1) Select the proper cutting speed according to the material of work-pieces and blade select chart.
- (2) Turn the speed-changing handle directly for the necessary speed.
- (3) Changing speed during cutting is prohibited.
- (4) But changing speed when machine is stopped and running (before cutting) is available.

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### **BLADE DIRECTION OF TRAVEL**

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

### **BLADE MOVEMENT**

**Blade Direction** 

### **STARTING SAW:**

1.Switch button function description

**\*\***Coolant switch was integrated in with the toggle switch. Coolant function is ON when you start the machine running, If you do not need the coolant function, please turn of the rocker switch on the coolant pump.\*\*

- **A** ↓ Stop button
- **B †** Start button



**Toggle Switch** 

2.Switch button function description. (FOR CE ONLY)



### CAUIION: 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 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.

### **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 blade pitch is governed by the thinness of the work to be cut: the thinner the workpiece, the more teeth advised. A minimum of three (3) teeth should angage 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 Made can result .

### **CHANGING BLADE**

Raise saw head to the highest 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 Made.
- (4). Remove left hand from.bottom pulley and place is at the top aide of the Made 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.

### TRU-LOCK VISE SYSTEM INSTRUCTIONS





(3)

(1) The position of the vise when tightened.

- (2) The position of the vise when loosened. (Half opened).
- (3) The position of the vise when loosened. (Completely opened).

### To operate, proceed as follows:

- 1) Rise the arm 2" above the workpiece, close the cylinder valve to maintain the arm 2" above the workpiece.
- 2) Put your workpiece on the table. Move the vise handle (a) upwards to an angle of 45 degree (a-Half opened) to loosen the vise.

Move the vise jaw bracket against the workpiece by turning the rectangular handle (b). Push down on the vise handle (a) to lock the workpiece in position.

To loosen the workpiece from the vise, hold the workpiece and lift the vise handle (a) to a 90 degree position (completely opened). Remove workpiece.

### **QUICK VISE ADJUSTMENT FOR ANGLE CUT**

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



### **11. 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 bearings 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 though, it is extremely important to readjust immediately. If improper adjustment in 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 gJide adjustment will not. If a new blade does not correct the problem, check the blade

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. Loosen the nut while holding the bolt with an Alien 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.

### <u>REMARK</u>:

- 1. Adjust the tension of blade until the back of the blade(A) against the blade wheel (front) lightly.
- 2. Be sure the nut (E) is tightened.
- 3. Turn the eccentric shaft(B) counterclockwise, when the bearing(D) touches the saw blade properly, tighten the nut(E).
- 4. To adjust, loosen set screw(F) and move the blade adjustable up or down until it lightly touches the back of the blade(A).
- 5. The carbide blade guides(L)Fig.1,should also be adjusted so they lightly touch the blade by loosening screws(M).
- 6. Repeat 1. 2, 3, 4and 5 steps to adjust the other side's blade guide bearings(G).
- 7. Correct the base and blade to be a vertical position with a scale. If necessary, loosen set screw(F).
- 8. Set down the blade frame, correct the jaw vise(H) and blade to be a vertical position with a scale then tighten the set screws(I).
- 9. Loosen set screw(K), move front jaw vise(J) to against rear jaw vise(H) tightly. Finish correcting by tighting set screw(K)





Fig.1

Fig.2

### **12. 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 machanism to a point where it is loose but snug.
- (4). With the machine running, adjust both the set crew and blade tension knob simultaneously to keep constant tension on the blade. The set screw and blade tension knob are always turned in opposite directions, ie, 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, proceed as follows:
  - a. Loosen the set screw and back it out as far as it can go and still remain in the threaded hole.
  - b. Turn the hex head screw clockwise until it stops (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 clade guide assemblies--it may be necessary to loosen the blade tension alightly.
- (8). Adjust the vertical position of blade guide bearing assemblies so that the back side of the blade just touches the ball bearing.
- (9). Make a final run to check tracking. It required, touch up adjustment (See stop 4)
- (10). Replace the blade guards.

### Hydraulic Feed Adjustment

- (1) To adjust the feeding rate when in cutting, Turn the volume valve (A) clockwise for faster feeding, counterclockwise for slower feeding.
- (2) When cutting feed is too fast, raise the saw arm, then slower the feed rate to prevent blade damage.

### **BLADE SPEEDS FOR GEAR BOX:**

When using your Band saw always change the blade speed to best suit the material being cut the material Cutting Sheet givers suggested settings for several materials.

Matorial	Speed M.P.M			
Material	60Hz	50Hz		
Tool Steel				
Stainless steel	45	29		
Alloy Steel	40	30		
Cast-iron steel				
Low-alloy Carbon Steel				
Soft Brass	66	55		
Soft iron				
Aluminum	96	70		
Plastic	00	12		

### MANUAL OF GEAR TYPE SPEED CHANGING

Exactly set the handle to the 3 position

- 1.Disconnect the metal belt saw from the electrical power supply.
- 2.Select the proper cutting speed according to the material of work-pieces and blade select chart.
- 3.Turn the speed-changing handle (A) directly for the necessary speed.
- 4. Changing speed during cutting is prohibited.
- 5.But changing speed when machine is stopped and running (before cutting) is available.



\*\*\*Please make sure the oil of Gear Box is between 950cc ~ 1000cc to maintain the machine in a proper operation.

\*\*\*Let the metal belt saw run for a few minutes before beginning the oil change. This will heat the oil, making it flow more easily out of the outlet hole.

### 13. MAINTENANCE

CAUTION: MAKE CERTAIN THAT THE UNIT IS DISCONNECTED FROM THE POWER SOURCE BEFORE ATTEMPTING TO SE RV ICE 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 out of order.

- (1) Daily Maintenance (by operator)
  - (a) Fill the lubricant before starting machine everyday.
  - (b) If the temperature of spindle caused over-heating or strange noise, stop machine immediately to cheek 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 insufficant, fill it.
- (3) Monthly Maintenance
  - (a) Check if the fixed portion llave been loose.
  - (b) Lubricate bearing, worm, and worm shaft to avoid the wearing.

(4) Yearly Maintenance

- (a) Adjust table to horizontal position for maintenance of accuracy.
- (b) Check electric cord, plugs, switches at least once a year to avoid loosening or wearing.

### 14. 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 require 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 Gptimus No. 6

Gulf Refinery Co Medium Gear Oil

### **15. TROUBLE SHOOTING**

Symptom	Possible Cause(s)	Corrective Action
Excessive Blade	1. Materials loosen in vise.	1. Clamp work securely
Breakage	2. Incorrect speed or feed	2. Adjust speed or feed
	3.Blade teeth spacing too large	3. Replace with a small teeth
		spacing blade
	8. Material too coarse	4. Use a blade of slow speed
		and small teeth spacing
	5. Incorrect blade tension	5. Adjust to where blade just
		does not slip on wheel
	6.Teeth in contact with material	6. Place blade in contact
	before saw is started	with work after motor is
		starred
	7. Blade rubs on wheel flange	7. Adjust wheel alignment
	8. Miss-aligned guide bearings	8. Adjust guide bearings
	9. Blade too thick	9. Use thinner blade
	10 Cracking at weld	10. Weld again, note the weld
	A LINE	skill.
Premature Blade Dulling	1. Teeth too coarse	1. Use finer teeth
	2. Too much speed	2. Decrease speed
	3. Inadequate feed pressure	3. Decrease spring tension on
		side of saw
	4.Hard spots or scale on material	4. Reduce speed, increase feed
		pressure
	5. Work hardening of material.	5. Increase feed pressure by
		reducing spring tension
	6.Blade twist	6. Replace with a new blade,
		and adjust blade tension
	7. Insufficient blade	7. Tighten blade tension
		adjustable knob
	8. Blade slide	8. Tighten blade tension
Unusual Wear on	1.Blade guides worn.	1.Replace.
Side/Back of Blade	2.Blade guide bearings not adjust	2.Adjust as per operators
	properly	manual
	3.Blade guide bearing bracket is	3.Tighten.
	loose	

Teeth Ripping from	1. Tooth too coarse for work	1. Use finer tooth blade.
Blade.	2. Too heavy pressure; too slow	2. Decrease pressure, increase
	speed.	speed
	3. Vibrating work-piece.	3. Clamp work piece securely
	4. Gullets loading	4. Use coarser tooth blade or
		brush to remove chips.
Motor running too hot	1. Blade tension too high.	1. Reduce tension on blade.
	2. Drive belt tension too high.	2. Reduce tension on drive belt.
	3. Blade is too coarse for work	3. Use finer blade.
	4. Blade is too fine for work	4. Use coarse blade.
	5. Gears aligned improperly	5. Adjust gears so that worm is
		in center of gear.
	6. Gears need lubrication	6. Check oil path.
	7. Cut is binding blade	7. Decrease reed anti speed
Bad Cuts (Crooked)	1. Feed pressure too great.	1. Reduce pressure by
		increasing spring tension on
		side of saw
	2. Guide bearings not adjusted	2. Adjust guide bearing, the
	properly	clearance can not greater
	INERT	than 0.001.
	3. Inadequate blade tension.	3. Increase blade tension by
N	A	adjust blade tension
C	4. Dull blade.	4. Replace blade
	5. Speed incorrect.	5. Adjust speed
	6. Blade guides spaced out too much	6. Adjust guides space.
	7. Blade guide assembly loose	7. Tighten
	8. Blade truck too far away from	8. Re-track blade according to
	wheel flanges	operating instructions.
Bad Cuts (Rough)	1. Too much speed or feed	1. Decrease speed or feed.
	2. Blade is too coarse	2. Replace with finer blade.
	3. Blade tension loose	3. Adjust blade tension.
Blade is twisting	1. Cut is binding blade.	1. Decrease reed pressure.
	2. Too much blade tension.	2. Decrease blade tension.





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### PARTS LIST MODEL NO. 912B

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
1	192012A	Swivel Base		1	
2	192009A	Acme Screw		1	
9	181138B	Acme Nut		1	
15	181266	Fixed Bolt		1	
16	W008	Washer	3/8"x25xt2	2	
17	192015	Vise Jaw Bracket(Front)		1	
18	S012	Hex. Head Screw	3/8"x1-1/2"L	1	
19	N001	Hex. Nut	1/2"	1	
20	W002	Washer	1/2"x28xt2	2	
21	S501	Carriage Screw	1/2"x2"L	1	
22	S003	Hex. Head Screw	1/2"x2"L	1	
24	192008	Vise Jaw Bracket(Rear)		1	
25	S708	Cross Round Head Screw	3/16"x3/8"L	2	
26	W007	Washer	3/16"x12xt0.8	2	
27	192044	Scale		1	
28	181117-1	Spring		1	
29	181118	Spring Adjusting Rod		1	
30	192040	Spring Handle Bracket		1	
31	W016	Washer	5/16"x23xt2	1	
32	S022	Hex. Head Screw	5/16"x3/4"L	1	
33	W014	Washer	3/8"x23xt2	1	
34	N005	Hex. Nut	3/8"	1	
35	192051	Bushing		1	
36	192042A	Support Rod		1	
37	P602	Hex. Head Screw	5/16"x3/4"L	1	
38	192003	Pivot Bracket		1	
39	181270	Washer		1	
40	S012	Hex. Head Screw	3/8"x1-1/2"L	2	
41	ET2108	Wire Nipple	5/8"	1	
43	W018	Washer	5/16"x23xt3	1	
44	S022	Hex. Head Screw	5/16"x3/4"L	1	
45	181301-2	Cylinder Lower Support		1	
46	W016	Washer	5/16"x19xt1.5	1	
47	S018	Hex. Head Screw	5/16"x1/2"L	1	
48	181130	Thumb Screw		1	

### PARTS LIST MODEL NO. 912B

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
49	S022	Hex. Head Screw	5/16"x3/4"L	1	
50	3021	Stock Stop Rod		1	
50	3021A	Stock Stop Rod		1	Option
51	181125	Stop Block		1	
56	192011	Fixed Plate		1	
57	W005	Washer	1/4"x16xt1.5	1	
58	S019	Hex. Head Screw	5/16"x1-1/2"L	1	
59	S014	Hex. Head Screw	3/8"x1-3/4"L	1	
60	181112A	Support Plate		1	
61	S022	Hex. Head Screw	5/16"x3/4"L	2	
62	W017	Washer	5/16"x18xt1.5	2	
63	N005	Hex. Nut	3/8"	2	
64	181304B	Cylinder Complete Set	RF-712N	1	
65	S412	Hex. Socket Head Screw	3/8"x2-1/4"L	1	
66	W008	Washer	3/8"x25xt2	1	
67	181302-2	Cylinder Upper Support		1	
68	3076	Switch Cut Off Tip		1	
69	N005	Hex. Nut	3/8"	1	
70	S017	Hex. Head Screw	5/16"x1"L	3	
71	W017	Washer	5/16"x18xt1.5	3	
72S	192045FS	Stand Complete Assembly		1	
73	S017	Hex. Head Screw	5/16"x1"L	7	
74	W017	Washer	5/16"x18xt1.5	7	
75	N007	Hex. Nut	5/16"	7	
76	S013	Hex. Head Screw	3/8"x1-1/4"L	1	
77	N005	Hex. Nut	3/8"	1	
78	191106A	Filter		1	
79	S006	Hex. Head Screw	1/4"-20*1/2"L	1	
83	N007	Hex. Nut	5/16"	1	
84	195022B	Wheel Rod		1	
85	W019	Washer	5/8"x30xt3mm	4	
86	HP210	Cotter Pin	§ 3x25L	2	
87	195038	Coaster of Stand	1/2"	2	
88	N001	Hex. Nut	1/2"-12	2	
89	181129	Wheel		2	

### PARTS LIST

MODEL NO. 912B							
CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE		
93	192039	Hand Rod		1			
94	N007	Hex. Nut	5/16"-18	4			
95	W016	Washer	5/16"x23xt2mm	8			
96	S019	Hex. Head Screw	5/16"-18x1-1/2"L	4			
97S	181256	Coolant Tank		1			
98S		Pump		1			
99	W004	Washer	1/4"x19xt1.5	2			
100	S717	Cross Round Head Screw	1/4"x5/8"L	2			
101	181854	Hose	5/8"x200mm	1			
102	181852A	Coupler	3/8"PTx5/16"	1			
103	W013	Washer	3/8"x20xt2	2			
104	181900	Warning mark		1			
190	101073	3 Way Valve		1			
191	1341089	Tube Clamp	1/4PTx1/4"	2			
192	192056	Hose	OD8xID6x1100L(1/4")	1			
193	S475	Hex. Socket Head Screw	1/4"x1-1/4"L	2			
194	192053	Valve	1/4"PTx5/16"	1			
195	192058	Hose	OD12xID8x1400L(5/16")	1			
196	192057	Hose	OD8xID6x400L(1/4")	1			
197	101079	Hose Bib		2			
198	103126-4	Hose Clamp		2			
200	192001	Body Frame		1			
201	W204	Spring Washer	3/8"	4			
202	S013	Hex. Head Screw	3/8"x1-1/4"L	4			
203	192041	Support Plate		1			
204	W005	Washer	1/4"x16xt1.5	2			
205	S201	Cross Socker Hex. Head Screw	1/4"x5/8"L	2			
206	S022	Hex. Head Screw	5/16"x3/4"L	1			
210	192023A	Switch Cut Off Tip		1			
211	W005	Washer	1/4"x16xt1.5	1			
212	S201	Cross Socker Hex. Head Screw	1/4"x5/8"L	1			
213	1965052	Knob		1			
214	S414	Hex. Socket Head Screw	5/16"x1"L	2			
215	W008	Washer	3/8"x25xt2	1			
216	192038A	Blade Tension Bar		1			

### PARTS LIST

MODEL I	MODEL NO. 912B							
CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE			
218	192037B	Handle Body		1				
219	3027	Knob		3				
223	192052	Blade Tension Sliding Block		1				
224	181210	Sliding Plate		2				
225	192026	Spring		1				
226	S608	Hex. Socker Headless Screw	5/16"x3/4"L	1				
227	W205	Spring Washer	5/16"	4				
228	S020	Hex. Head Screw	5/16"×1"L	4				
229	W015	Washer	5/16"x12xt2	2				
230	S019	Hex. Head Screw	5/16"x1-1/2"L	2				
235S	192016AS	Idler Wheel Set		1				
235-1	192016A	Idler Wheel		1				
235-2	HCR06	C-Retaniner Ring	R52	2				
235-3	CA6205LLU	Bearing	6205LLU	2				
235-4	181245	Bushing		1				
235-6	W018	Washer	5/16"x20xt3	1				
235-7	S022	Hex. Head Screw	5/16"x3/4"L	1				
235-9	193050	Blade Wheel Shaft		1				
235-10	P005	Pin	§ 5x34L	1				
235-11	193052	Sliding Plate Draw Block		1				
240	192050A	Blade	27x0.9x2655x5-8T	1				
241	181237D	Cover		1				
244S	181216-1AS	Gear Box Assembly		1				
244-1	181216A	Gear Box		1				
244-2	181219-1	Transmission Wheel Shaft		1				
244-3	181218-1	Bushing		1				
244-4	181217-1	Bushing		1				
244-5	CA6205LLU	Bearing	6205LLU	2				
244-6	HK025	Кеу	6x6x20L	2				
244-7	HCS13	C-Retainer Ring	S25	1				
244-8	3092	Gear Box Gasket		1				
244-9	181222-1	Gear Box Cover		1				
244-10	S201	Cross Socker Hex. Head Screw	1/4"x5/8"L	4				
244-11	3149	Vent Plug	M8xP1	1				
244-12	181246	Bearing Cover		1				

### PARTS LIST

MODEL NO. 912B						
CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE	
244-13	S708	Cross Round Head Screw	3/16"x3/8"L	3		
244-14	181220-1	Worm Gear		1		
244-15	S607	Hex. Socker Headless Screw	5/16"x1/2"L	1		
245S	192010S	Worm Gear Shaft Assembly		1		
245-1	192010	Worm Shaft		1		
245-2	181224	Bearing Bushing		1		
245-3	CA6003LLU	Bearing	6003LLU	2		
245-4	HCS06	C-Retainer Ring	S17	1		
245-5	K008	Кеу	5x5x30L	1		
245-6	S607	Hex. Socker Headless Screw	5/16"x1/2"L	1		
245-7	193049	Washer		1		
261S		Box		1		
262	181226B	Spindle Pulley		1		
262-1	S604	Hex. Socker Headless Screw	1/4"x3/8"L	2		
263S	ET1924S	Control Box		1		
264	192017A	Drive Wheel		1		
264-1	S604	Hex. Socker Headless Screw	1/4"x3/8"L	2		
265	HCS13	C-Retainer Ring	S25	1		
269	181233A	Motor Mount Bracket		1		
270	W016	Washer	5/16"x23xt2	4		
271	S022	Hex. Head Screw	5/16"x3/4"L	4		
272	W018	Washer	5/16"x23xt3	2		
273	S022	Hex. Head Screw	5/16"x3/4"L	2		
274	181234A	Motor Mount Plate		1		
275	N007	Hex. Nut	5/16"	2		
276	S020	Hex. Head Screw	5/16"x1"L	2		
277	S503	Carriage Screw	5/16"x1"L	4		
278		Motor		1		
279	W016	Washer	5/16"x23xt2	8		
280	N007	Hex. Nut	5/16"	4		
281	181235B	Motor Pulley		1		
281-1	S604	Hex. Socker Headless Screw	1/4"x3/8"L	1		
283	K008	Кеу	5x5x30L	2		
284	181237I	Motor Pulley Cover		1		
285	W202	Spring Washer	1/4"	2		

### PARTS LIST MODEL NO. 912B

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
286	S006	Hex. Head Screw	1/4"x1/2"L	2	
288	3058	Plum handle		1	
290	W008	Washer	3/8"x25xt2	1	
291	S013	Hex. Head Screw	3/8"x1-1/4"L	1	
292S	192004AS	Adjustable Bracket		1	
293S	192021AS	Guide Pivot (Right)		1	
294S	192020AS	Bearing Shaft		1	
308S	181242BS	Brush Assembly		1	
310	S708	Cross Round Head Screw	3/16"x3/8"L	2	
315S	192021AS	Guide Pivot (Right)		1	
316S	192020AS	Bearing Shaft		1	
317S	192005S	Adjustable Bracket(Front) Set		1	
318	W008	Washer	3/8"x25xt2	1	
319	3066-3	Blade Adjustable Knob		1	
320	181231A	Blade Cover(Front)		1	
321	S711	Cross Round Head Screw	5/32"x1/4"L	2	
326	181874	Belt	3Vx270	1	
327	192002B	Blade Back Cover		1	
329	W005	Washer	1/4"x16xt1.5	4	
330	S701	Cross Round Head Screw	1/4"x1/2"L	4	
331	W005	Washer	1/4"x16xt1.5	2	
332	195083	Knob		2	
337	N016	Nut	1/2"	2	
338	W002	Washer	1/2"x28xt2	2	
340	181306	Bracket, For CE Only		1	For CE Only
341	S720	Cross Round Head Screw	M4x5L	2	For CE Only
342	181305	Switch Base		1	For CE Only
343	W023	Washer	M5	2	For CE Only
344	S721	Cross Round Head Screw	M5x10L	2	For CE Only
345	181991	Emergency Switch Bracket		1	For CE Only
345	181998A	Control Base		1	Option
348	S727	Cross Round Head Screw	M6x12L	4	CE / Option
351	S407	Hex. Socket Head Screw	3/16"x3/8"L	2	CE / Option
364	3027-1	Knob		1	
365	193057	Knob		1	

### PARTS LIST MODEL NO. 912B

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
366	S612	Hex. Socker Headless Screw	5/16"-18X1/2"L	1	
367	193055	Presure Lump		1	
368	HW007	Washer	M12xt2	1	
369	S013	Hex. Head Screw	3/8"x1-1/4"L	2	
370	W013	Washer	3/8"x20xt2	2	
372	193056	Presure Shaft		1	
373	193059	Knob W/Shaft		1	
374	290086	Plastic Round Knob		1	
375	CA51101	Bearing		1	
376	HW007	Washer	M12	1	
377	193058	Spring		1	
500		Power Cable		1	
501		Pump-Cable		1	
502		Limit-Cable		1	
503		Moter-Cable	1011515	1	







CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
1	192012A	Swivel Base		1	
2	192009A	Acme Screw		1	
9	181138B	Acme Nut		1	
15	181266	Fixed Bolt		1	
16	W008	Washer	3/8"x25xt2	2	
17	192015	Vise Jaw Bracket(Front)		1	
18	S012	Hex. Head Screw	3/8"x1-1/2"L	1	
19	N001	Hex. Nut	1/2"	1	
20	W002	Washer	1/2"x28xt2	2	
21	S501	Carriage Screw	1/2"x2"L	1	
22	S003	Hex. Head Screw	1/2"x2"L	1	
24	192008	Vise Jaw Bracket(Rear)		1	
25	S708	Cross Round Head Screw	3/16"x3/8"L	2	
26	W007	Washer	3/16"x12xt0.8	2	
27	192044	Scale		1	
28	181117-1	Spring		1	
29	181118	Spring Adjusting Rod		1	
30	192040	Spring Handle Bracket		1	
31	W016	Washer	5/16"x23xt2	1	
32	S022	Hex. Head Screw	5/16"x3/4"L	1	
33	W014	Washer	3/8"x23xt2	1	
34	N005	Hex. Nut	3/8"	1	
35	192051	Bushing		1	
36	192042A	Support Rod		1	
37	P602	Hex. Head Screw	5/16"x3/4"L	1	
38	192003	Pivot Bracket		1	
39	181270	Washer		1	
40	S012	Hex. Head Screw	3/8"x1-1/2"L	2	
41	ET2108	Wire Nipple	5/8"	1	
43	W018	Washer	5/16"x23xt3	1	
44	S022	Hex. Head Screw	5/16"x3/4"L	1	
45	181301-2	Cylinder Lower Support		1	
46	W016	Washer	5/16"x19xt1.5	1	
47	S018	Hex. Head Screw	5/16"x1/2"L	1	
48	181130	Thumb Screw		1	
49	S022	Hex. Head Screw	5/16"x3/4"L	1	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
50	3021	Stock Stop Rod		1	
50	3021A	Stock Stop Rod		1	Option
51	181125	Stop Block		1	
56	192011	Fixed Plate		1	
57	W005	Washer	1/4"x16xt1.5	1	
58	S019	Hex. Head Screw	5/16"x1-1/2"L	1	
59	S014	Hex. Head Screw	3/8"x1-3/4"L	1	
60	181112A	Support Plate		1	
61	S022	Hex. Head Screw	5/16"x3/4"L	2	
62	W017	Washer	5/16"x18xt1.5	2	
63	N005	Hex. Nut	3/8"	2	
64	181304B	Cylinder Complete Set	RF-712N	1	
65	S412	Hex. Socket Head Screw	3/8"x2-1/4"L	1	
66	W008	Washer	3/8"x25xt2	1	
67	181302-2	Cylinder Upper Support		1	
68	3076	Switch Cut Off Tip		1	
69	N005	Hex. Nut	3/8"	1	
70	S017	Hex. Head Screw	5/16"x1"L	3	
71	W017	Washer	5/16"x18xt1.5	3	
72S	192045FS	Stand Complete Assembly		1	
73	S017	Hex. Head Screw	5/16"x1"L	7	
74	W017	Washer	5/16"x18xt1.5	7	
75	N007	Hex. Nut	5/16"	7	
76	S013	Hex. Head Screw	3/8"x1-1/4"L	1	
77	N005	Hex. Nut	3/8"	1	
78	191106	Filter		1	
79	S006	Hex. Head Screw	1/4"-20*1/2"L	1	
83	N007	Hex. Nut	5/16"	1	
84	195022B	Wheel Rod		1	
85	W019	Washer	5/8"x40xt3mm	4	
86	HP210	Cotter Pin	§ 3x25L	2	
87	195038	Coaster of Stand	1/2"	2	
88	N001	Hex. Nut	1/2"-12	2	
89	181129	Wheel		2	
93	192039	Hand Rod		1	
94	N007	Hex. Nut	5/16"-18	4	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
95	W016	Washer	5/16"x23xt2mm	8	
96	S019	Hex. Head Screw	5/16"-18x1-1/2"L	4	
97S	181256	Coolant Tank		1	
98S		Pump		1	
99	W004	Washer	1/4"x19xt1.5	2	
100	S717	Cross Round Head Screw	1/4"x5/8"L	2	
101	181854	Hose	5/8"x200mm	1	
102	181852A	Coupler	3/8"PTx5/16"	1	
103	W013	Washer	3/8"x20xt2	2	
104	181900	Warning mark		1	
190	101073	3 Way Valve		1	
191	1341089	Tube Clamp	1/4PTx1/4"	2	
192	192056	Hose	OD8xID6x1100L(1/4")	1	
193	S475	Hex. Socket Head Screw	1/4"x1-1/4"L	2	
194	192053	Valve	1/4"PTx5/16"	1	
195	192058	Hose	OD12xID8x1400L(5/16")	1	
196	192057	Hose	OD8xID6x400L(1/4")	1	
197	101079	Hose Bib		2	
198	103126-4	Hose Clamp		2	
200	192001	Body Frame		1	
201	W204	Spring Washer	3/8"	4	
202	S013	Hex. Head Screw	3/8"x1-1/4"L	4	
203	192041	Support Plate		1	
204	W005	Washer	1/4"x16xt1.5	2	
205	S201	Cross Socker Hex. Head Screw	1/4"x5/8"L	2	
206	S022	Hex. Head Screw	5/16"x3/4"L	1	
210	192023A	Switch Cut Off Tip		1	
211	W005	Washer	1/4"x16xt1.5	1	
212	S201	Cross Socker Hex. Head Screw	1/4"x5/8"L	1	
213	1965052	Knob		1	
214	S414	Hex. Socket Head Screw	5/16"x1"L	2	
215	W008	Washer	3/8"x25xt2	1	
216	192038A	Blade Tension Bar		1	
218	192037B	Handle Body		1	
218	192037C	Handle Body		1	Option
219	3027	Knob		3	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
223	192052	Blade Tension Sliding Block		1	
224	181210	Sliding Plate		2	
225	192026	Spring		1	
226	S608	Hex. Socker Headless Screw	5/16"x3/4"L	1	
227	W205	Spring Washer	5/16"	4	
228	S020	Hex. Head Screw	5/16"×1"L	4	
229	W015	Washer	5/16"x12xt2	2	
230	S019	Hex. Head Screw	5/16"x1-1/2"L	2	
235S	192016AS	Idler Wheel Set		1	
240	192050A	Blade	27x0.9x2655x5-8T	1	
241	181237D	Cover		1	
261S		Box		1	
263S	ET1924S	Control Box		1	
264	192017A	Drive Wheel		1	
264-1	S604	Hex. Socker Headless Screw	1/4"x3/8"L	2	
265	HCS13	C-Retainer Ring	S25	1	
290	W008	Washer	3/8"x25xt2	1	
291	S013	Hex. Head Screw	3/8"x1-1/4"L	1	
292S	192004AS	Adjustable Bracket		1	
2938	192021AS	Guide Pivot (Right)		1	
294S	192020AS	Bearing Shaft		1	
300		Motor		1	
300-1	HK110	Key	5x5x30L	1	
300-2	HS059	Hex. Head Screw	M10x25L	4	
300-3	HW106	Spring Washer	M10	4	
308S	192027AS	Brush Assembly		1	
310	S708	Cross Round Head Screw	3/16"x3/8"L	2	
315S	192021AS	Guide Pivot (Right)		1	
316S	192020AS	Bearing Shaft		1	
317S	192005S	Adjustable Bracket(Front) Set		1	
318	W008	Washer	3/8"x25xt2	1	
319	3066-3	Blade Adjustable Knob		1	
320	181231A	Blade Cover(Front)		1	
321	S711	Cross Round Head Screw	5/32"x1/4"L	2	
327	192002B	Blade Back Cover		1	
329	W005	Washer	1/4"x16xt1.5	4	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
330	S701	Cross Round Head Screw	1/4"x1/2"L	4	
331	W005	Washer	1/4"x16xt1.5	2	
332	195083	Knob		2	
337	N016	Nut	1/2"	2	
338	W002	Washer	1/2"x28xt2	2	
340	181306	Bracket, For CE Only		1	For CE Only
341	S720	Cross Round Head Screw	M4x5L	2	For CE Only
342	181305	Switch Base		1	For CE Only
343	W023	Washer	M5	2	For CE Only
344	S721	Cross Round Head Screw	M5x10L	2	For CE Only
345	181991	Emergency Switch Bracket		1	For CE Only
345	181998	Control Base		1	Option
348	S727	Cross Round Head Screw	M6x12L	4	CE / Option
351	S407	Hex. Socket Head Screw	3/16"x3/8"L	2	CE / Option
364	3027-1	Knob		1	
365	193057	Knob		1	
366	S612	Hex. Socker Headless Screw	5/16"-18X1/2"L	1	
367	193055	Presure Lump		1	
368	HW007	Washer	M12xt2	1	
369	S013	Hex. Head Screw	3/8"x1-1/4"L	2	
370	W013	Washer	3/8"x20xt2	2	
372	193056	Presure Shaft		1	
373	193059	Knob W/Shaft		1	
374	290086	Plastic Round Knob		1	
375	CA51101	Bearing		1	
376	HW007	Washer	M12	1	
377	193058	Spring		1	
500		Power Cable		1	
501		Pump-Cable		1	
502		Limit-Cable		1	
503		Moter-Cable		1	
800S	192321G4S	Oil Seal		1	
800-1	192321G4	Gear Box		1	
800-2	192322G4	Gear Box Cover		1	
800-3	192324	Speed-Changing Gear Shaft		1	
800-4	2450079	Speed Lever		1	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
800-5	192348	Sprin		1	
800-6	HB001	Steel Ball	<b>§</b> 8	1	
800-7	192327A	Speed Indicator Dial		1	
800-8	HS244	Hex. Socket Head Screw	M5x28L	1	
800-9	192325	Worm Shaft		1	
800-10	192309	Speed-Changing Rod		1	
800-11	2450083A	Speed-Changing Key		1	
800-12	2450084B	Twisted Spring		1	
800-13	HP006	Pin	§ 3x10L	2	
800-14	192329	Gear		1	
800-15	192330	Gear		1	
800-16	192331	Gear		1	
800-17	2450074A	Washer		4	
800-18	2450089A	Bushing Bracket		1	
800-19	HCR04	C-Retainer Ring	R35	2	
800-20	HS421	Hex. Socket Headless Screw	M6x6L	2	
800-21	CA6003LLB	Bearing	6003LLB	2	
800-22	192328	Cover		1	
800-23	192332	Gear Shaft		1	
800-24	192333	Gear		1	
800-25	192334	Gear		1	
800-26	192335	Gear		1	
800-27	HK095	Кеу	5x5x32L	1	
800-28	HCS06	C-Retainer Ring	S17	2	
800-29	CA6003LLB	Bearing	6003LLB	1	
800-30	CA6007LLB	Bearing	6007LLB	1	
800-31	HCR08	C-Retainer Ring	R62	1	
800-33	HG004	Oil Seal	§ 62x § 35x8	1	
800-37	192336	Drive Gear Shaft		1	
800-38	192337	Worm Gear		1	
800-39	HCS13	C-Retainer Ring	S25	2	
800-40	HK025	Кеу	6x6x20L	2	
800-41	CA6205LLB	Bearing	60205LLB	2	
800-42	192340	Bearing Spacer		1	
800-43	192339	Cover		1	
800-44	HO041	O-Retainer Ring	§ 35X § 29x3	2	

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
800-45	HT017	Cross Round Head Screw	M5X12L	3	
800-46	HD106	Plug	PT3/8"	1	
800-47	HS230	Hex. Socket Head Screw	M6x20L	4	
800-48	3149	Vent Plug		1	
800-49	AA10	Scale		1	
800-50	HH001	Rivet	§ 2X4	2	
800-51	181246	Bearing Cover		1	
800-52	HS519	Cross Round Head Screw	M5x10L	3	
800-53	192338B	Gear Box Gasket		1	
800-54	HD103	Plug	PT1/4"	1	
800-55	HB203	Oil level gage	§ 19	1	
800-56	HO046	O-Retainer Ring	P16	1	
800-57	HCR24	C-Retainer Ring	R20	1	

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### PARTS LIST MODEL NO. 912B / 912G(G9743)

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
235-1	192016A	Idler Wheel		1	
235-2	HCR06	C-Retaniner Ring	R52	2	
235-3	CA6205LLU	Bearing	6205LLU	2	
235-4	181245	Bushing		1	
235-6	W018	Washer	5/16"x20xt3	1	
235-7	S022	Hex. Head Screw	5/16"x3/4"L	1	
235-9	193050	Blade Wheel Shaft		1	
235-10	P005	Pin	§ 5x34L	1	
235-11	193052	Sliding Plate Draw Block		1	
292-1	192004A	Adjustable Bracket		1	
292-2	192006A	Blade Adjustable		1	
292-3	W017	Washer	5/16"x18xt1.5	1	
292-4	W205	Spring Washer	5/16"	1	
292-5	S416	Hex. Socket Head Screw	5/16"x1-1/4"L	1	
292-8	CA608ZZ	Bearing	608ZZ	1	
292-9	3063A	Bearing Pin		1	
292-10	103120A	Carbide Guide		2	
292-11	HS229	Hex. Socket Head Screw	M6x16L	2	
292-12	W208	Spring Washer	3/8"	2	
292-13	N006	Hex. Nut	3/8"UNF	2	
293-1	192021A	Guide Pivot (Right)		1	
293-2	CA608ZZ	Bearing	608ZZ	2	
293-3	HCS26	C-Retainer Ring	S8	1	
294-1	192020A	Bearing Shaft		1	
294-2	CA608ZZ	Bearing	608ZZ	2	
294-3	HCS26	C-Retainer Ring	S8	1	
315-1	192021A	Guide Pivot (Right)		1	
315-2	CA608ZZ	Bearing	608ZZ	2	
315-3	HCS26	C-Retainer Ring	S8	1	
316-1	192020A	Bearing Shaft		1	
316-2	CA608ZZ	Bearing	608ZZ	2	
316-3	HCS26	C-Retainer Ring	S8	1	
317-1	192005	Adjustable Bracket(Front)		1	
317-2	CA608ZZ	Bearing	608ZZ	1	
317-3	192007B	Blade Adjustable (Rear)		1	
317-4	3063A	Bearing Pin		1	

### PARTS LIST MODEL NO. 912B / 912G(G9743)

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
317-5	W017	Washer	5/16"x18xt1.5	1	
317-6	W205	Spring Washer	5/16"	1	
317-7	S416	Hex. Socket Head Screw	5/16"x1-1/4"L	1	
317-8	103120A	Carbide Guide		2	
317-9	HS229	Hex. Socket Head Screw	M6x16L	2	
317-10	W208	Spring Washer	3/8"	2	
317-11	N006	Hex. Nut	3/8"UNF	2	
75081	ET1615S	Limit Switch Assembly		1	Option
750-1	S708	Cross Round Head Screw	3/16"x3/8"L	2	Option
750-2	ET1931	Switch COVER		1	Option
750-3	181431	Rubber Plate		1	Option
750-4	ET1615	Switch	MJ1308R	1	Option
750-5	HN002	Hex. Nut	M4	2	Option
750-6	HW305	Star Washer	M4	4	Option
750-7	HS513	Cross Round Head Screw	M4x30L	2	Option
750-8	ET2101	Limit Switch Cover	CB2	1	Option
750-9	HS511	Cross Round Head Screw	M4x20L	2	Option
75082	ET1403S	Toggle Switch Assembly		1	
750-1	181932	Toggel Switch Cover		1	
750-2	3131B	Switch Cover		1	
750-3	ET1403	Toggle Switch Assembly	1 §	1	
750-3	181933	Toggle Switch	3 §	1	
750-4	S805	Screw	3/16"x3/8"L	2	
750-5	ET1931	Cover		1	
750-6	181431	Rubber Plate		1	
750-7	ET1930	Electrical Box		1	
750-8	S807	Screw	5/32"x1/8"L	2	
750-9	ET2108	Wire Nipple	5/8"	2	
750-10	ET2107	Wire Nipple	1/2"	2	
75083	ET1617S	Switch		1	For CE Only
750-1	S708	Cross Round Head Screw	3/16"x3/8"L	2	For CE Only
750-2	181989-1	Switch Bracket		1	For CE Only
750-3	ET1617	Switch		1	For CE Only
750-4	S708	Cross Round Head Screw	3/16"x3/8"L	2	For CE Only
75084	ET1401S	Toggle Switch Assembly		1	Option
750-1	181932	Toggel Switch Cover		1	Option

### PARTS LIST MODEL NO. 912B / 912G(G9743)

CODE NO	PART NO	DESCRIPTION	SPECIFICATION	QTY	NOTE
750-2	3131B	Switch Cover		1	Option
750-3	S805	Screw	3/16"x3/8"L	2	Option
750-4	ET1931	Cover		1	Option
750-5	ET1401	Toggle Switch Assembly	1 §	1	Option
750-5	181933	Toggle Switch Assembly	3 §	1	Option
750-6	ET1930	Electrical Box		1	Option
750-7	S807	Screw	5/32"x1/8"L	2	Option
750-8	ET2107	Wire Nipple	1/2"	1	Option
75085	ET1403AS	Toggle Switch Assembly		1	
750-1	181932	Toggel Switch Cover		1	
750-2	3131B	Switch Cover		1	
750-3	ET1403	Toggle Switch Assembly	1 §	1	
750-3	181933	Toggle Switch	3 §	1	
750-4	S805	Screw	3/16"x3/8"L	2	
750-5	ET1931	Cover		1	
750-6	181431	Rubber Plate		1	
750-7	ET1930	Electrical Box		1	
750-8	S807	Screw	5/32"x1/8"L	2	
750-9	ET2108	Wire Nipple	5/8"	2	
750-10	ET2107	Wire Nipple	1/2"	2	
750-11	181431C	Cover		1	
750S4	ET1401S	Toggle Switch Assembly		1	Option
750-1	181932	Toggel Switch Cover		1	Option
750-2	3131B	Switch Cover		1	Option
750-3	S805	Screw	3/16"x3/8"L	2	Option
750-4	ET1931	Cover		1	Option
750-5	ET1401	Toggle Switch Assembly	1 §	1	Option
750-5	181933	Toggle Switch Assembly	3 §	1	Option
750-6	ET1930	Electrical Box		1	Option
750-7	S807	Screw	5/32"x1/8"L	2	Option
750-8	ET2107	Wire Nipple	1/2"	1	Option
750-9	181431C	Cover		1	Option

## Idler Wheel Set ACCESSORIES (Revised)

CODE NO	PART NO	SPECIFICATION	DESCRIPTION	QTY
235S	192016AS	Idler Wheel Set		1
235-1	192016A	Idler Wheel		1
235-2	HCR06	C-Retaniner Ring	R52	2
235-3	CA6205LLU	Bearing	6205LLU	2
235-4	181245	Bushing		1
235-6	W024	Washer	5/16"x32xt3	1
235-7	S022	Hex. Head Screw	5/16"x3/4"L	1
235-9	193050	Blade Wheel Shaft		1
235-10	P005	Pin	∲ 5x34L	1
235-11	193052	Sliding Plate Draw Block		1





### MANUFACTURER: ADDRESS: SERIAL No.:

PLEASE WRITE DOWN THE SERIAL NO. ON THIS BLOCK FROM THE NAME PLATE AFTER YOU RECEIVE THIS MACHINE.

# **AWARNING** General Machinery Safety Instructions

### Machinery House

requires you to read this entire Manual before using this machine.

- Read the entire Manual before starting machinery. Machinery may cause serious injury if not correctly used.
- 2. Always use correct hearing protection when operating machinery. Machinery noise may cause permanent hearing damage.
- **3. Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
- **4. Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
- 5. Always wear correct respirators around fumes or dust when operating machinery. Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
- **6. Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
- 7. Keep work clean and make sure you have good lighting. Cluttered and dark shadows may cause accidents.
- 8. Personnel must be properly trained or well supervised when operating machinery. Make sure you have clear and safe understanding of the machine you are operating.
- **9. Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
- **10. Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
- **11. Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
- **12. Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
- **13. Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.

- **14. Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
- **15. Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
- **16. Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
- **17. Do not overreach.** Keep proper footing and balance at all times.
- **18. Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
- **19. Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
- **20. Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
- **21. Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
- **22. Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
- **23. Lock mobile bases.** Make sure any mobile bases are locked before using machine.
- **24.** Allergic reactions. Certain metal shavings and cutting fluids may cause an ellergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
- **25. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

MACHINERYHOUSE

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# **Metal Cutting Bandsaw Safety Instructions**

### Machinery House

### requires you to read this entire Manual before using this machine.

- **1. Maintenance.** Make sure the bandsaw is turned off and disconnect from the main power supply and make sure all moving parts have come to a complete stop before any inspection, adjustment or maintenance is carried out.
- **2. Bandsaw Condition.** Bandsaw must be maintained for a proper working condition. Never operate a bandsaw that has damaged or worn parts. Scheduled routine maintenance should performed on a scheduled basis.
- **3. Blade Condition.** Never operate a bandsaw with a dull, cracked or badly worn blade. Before using a bandsaw inspect blades for missing teeth and cracks.
- Replacing Blade. Make sure teeth are facing the correct direction. Wear gloves to protect hands and wear safety glasses to protect your eyes.
- **5. Hand Hazard.** Keep hands and fingers clear from the line of cut of the blade and offcuts workpieces. Hands can be crushed in vice or from falling machine components and cut by the blade.
- 6. Leaving a bandsaw Unattended. Always turn the bandsaw off and make sure all moving parts have come to a complete stop before leaving the bandsaw. Do not leave bandsaw running unattended for any reason.
- 7. Avoiding Entanglement. Blade guard must be used at all times. Remove loose clothing, belts, or jewelry items. Never wear gloves while machine is in operation. Tie up long hair and use the correct hair nets to avoid any entanglement with the bandsaw moving parts.

- 8. Understand the machines controls. Make sure you understand the use and operation of all controls.
- **9. Power outage.** In the event of a power failure during use of the bandsaw, turn off all switches to avoid possible sudden start up once power is restored.
- **10. Work area hazards.** Keep the area around the bandsaw clean from oil, tools, chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.
- **11. Workpiece Handling.** Workpieces must be supported with table, vice, roller conveyor/stands, or other support fixtures. Unsupported workpieces may cause the machine to tip over and fall. Flag long pieces of material to avoid tripping hazards. Never hold a workpiece with your hands during the cut process.
- **12. Hearing protection and hazards.** Always wear hearing protection as noise generated from bandsaw blade and workpiece vibration, material handling, and power transmission can cause permanent hearing loss over time.
- **13. Hot surfaces.** Workpieces, machine surfaces and chips become hot due to friction and can burn you.
- **14. Starting position.** Never turn the bandsaw on when the blade is resting on the workpiece.
- **15. Guards.** Do not operate bandsaw without the blade guard in place or with the doors open.
- **16. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

### MACHINERYHOUSE

PLANT SAFETY PROGRAM

# **NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL**

# **Metal Cutting Bandsaw**

This program is based upon the Australian Worksafe Standard for Plant(NOHSC:1010-1994) Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures

 Item	Hazard	Hazard	Risk Control Strategies
 No.	Identification	Assessment	(Recommended for Purchase / Buyer / User)
 A	ENTANGLEMENT	HIGH	Eliminate, avoid loose clothing / Long hair etc.
 Φ	CRUSHING	LOW	Secure & support Long / heavy material
 C	CUTTING, STABBING,	MEDIUM	Blade guards should always be in the closed position before starting machine.
 	PUNCTURING		Blade guide system should be adjusted to suit material width.
 			Wear gloves when changing blades.
			Isolate main power switch before changing blade, cleaning or adjusting.
			If blade breaks do not open door until both wheels have stopped.
			Check blade tracking before starting.
 D	SHEARING	MEDIUM	Make sure all guards are secured shut when machine is on.
			Isolate power to machine prior to changing belts or maintenance.
 П	STRIKING	LOW	Support long heavy jobs and stand clear of offcuts.
			Stand clear of machine when in operation.
			Remove all loose objects around moving parts.
			Wear safety glasses
 Т	ELECTRICAL	MEDIUM	All electrical enclosures should only be opened with a tool that is not to be kept with the machine.
			Machine should be installed & checked by a Licensed Electrician.
 0	OTHER HAZARDS, NOISE.	LOW	Wear hearing protection as required.
			I N
		Plant Safety Proc	gram to be read in conjunction with manufactures instructions

Revised Date: Aug-08

Authorised and signed by: Safety officer: Manager: 

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