

DAKE DUAL MITERING BANDSAW

SE-1018

INSTRUCTIONAL MANUAL



WARNING!

Read and understand all instructions and responsibilities before operating. Failure to follow safety instructions and labels could result in serious injury.

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DAKE STANDARD LIMITED WARRANTY

Finished Machines

Dake warrants to the original purchaser the finished machine manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within 1 year (12 months) from the delivery date to the end user.

Parts

Dake warrants to the original purchaser the component part manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within 30 days from the delivery date to the end user.

The standard limited warranty includes the replacement of the defective component part at no cost to the end user.

Sale of Service (Repairs)

Dake warrants to the original purchaser the component part repaired by Dake Corporation at the manufacturing facility to be free from defects in material and workmanship under normal use and service within 90 days from the return date to the end user, as it pertains to the repair work completed. The standard limited warranty includes repair of the defective component part, at no cost to the end user.

Warranty Process

Subject to the conditions hereinafter set forth, the manufacturer will repair or replace any portion of the product that proves defective in materials or workmanship. The manufacturer retains the sole right and option, after inspection, to determine whether to repair or replace defective equipment, parts or components. The manufacturer will assume ownership of any defective parts replaced under this warranty.

All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:

Phone: (800) 937-3253

Email: customerservice@dakecorp.com

When contacting Dake, please have the following information readily available:

- Model #
- Serial #
- Sales Order #

Purchasers who notify Dake within the warranty period will be issued a Case number and/or a Return Material Authorization (RMA) number. If the item is to be returned per Dake's request, the RMA number must be clearly written on the exterior packaging. Any item shipped to Dake without an RMA will not be processed.

Warranty Exceptions:

The following conditions are not applicable to the standard limited warranty:

- (a) Part installation or machine service was not completed by a certified professional, and is not in accordance with applicable local codes, ordinances and good trade practices.
- (b) Defects or malfunctions resulting from improper installation or failure to operate or maintain the unit in accordance with the printed instructions provided.
- (c) Defects or malfunctions resulting from abuse, accident, neglect or damage outside of prepaid freight terms.
- (d) Normal maintenance service or preventative maintenance, and the parts used in connection with such service.
- (e) Units and parts which have been altered or repaired, other than by the manufacturer or as specifically authorized by the manufacturer.
- (f) Alterations made to the machine that were not previously approved by the manufacturer, or that are used for purposes other than the original design of the machine.

RETURN & REFUND POLICY

Thank you for purchasing from Dake! If you are not entirely satisfied with your purchase, we are here to help.

Returns

All Dake manufactured / distributed machines, parts and couplings include a 30-day return option. These policies are valid from the date of final shipment to the end user.

To be eligible for a return, the item must be unused and in the same condition as received.

All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:

Phone: (800) 937-3253

Email: customerservice@dakecorp.com

Once the return request has been approved by Customer Service, a representative will supply a Return Material Authorization (RMA) number. The returned item must have the provided RMA number clearly marked on the outside packaging. Any item received without an RMA number clearly visible on the packaging will not be processed.

An RMA number can only be provided by the Dake Customer Service team and must be obtained prior to the return shipment.

Refunds

Once the item has been received and inspected for damages, a representative will notify the requestor referencing the provided RMA number.

If the return is approved, a refund will be issued to the original method of payment, less a 20% restocking fee. The restocking fee may be waived if an order is placed at the time of return with like-value merchandise.

Transportation costs are the responsibility of the end user and will not be credited upon return approval.

Any item that is returned after the initial 30 days or has excessive/obvious use will not be considered for a full refund.

DAKE STANDARD TERMS & CONDITIONS OF SALE

All proposals and quotations for the original sale of our products are subject to the following terms and conditions:

ACCEPTANCE OF ORDER: All orders are subject to acceptance by Dake at its main office in Grand Haven, Michigan.

APPLICABLE LAWS: This quotation or acceptance shall be governed in all respects by the laws of the State of Michigan.

CANCELLATION: We reserve the right to cancel and/or refuse to complete your order if, in our opinion, you have not established credit to promptly meet the payment terms of your order. Any cancellation from the Purchaser may be subject to a 10% cancellation fee for any of our non-standard machinery upon the discretion of Dake. All custom or special quotes will not be eligible for cancellation, nor returns.

DELIVERY: The proposed shipment date is an estimate and is contingent upon causes beyond Dake's control. Under no circumstances shall Dake have any liability for loss of use or for any direct or consequential damages resulting from delay. All shipments from the Dake facilities are F.O.B.

FREIGHT CLAIM: Damage freight claims must be submitted to Dake within thirty (30) days of shipment from Dake's facility. If shipment for order was set up by the Purchaser, Dake is not liable to handle the freight claims.

PERMITS AND COMPLIANCE: Dake shall not be responsible for obtaining any permits, inspections, certifications, or licenses required for the installation or use of the equipment. Dake makes no promise or representation that the equipment or any services to be furnished by Dake will conform to any federal, state, or local laws, ordinances, regulations, codes or standards.

PRICES: Unless otherwise agreed to in writing, all prices are F.O.B. our plant in Grand Haven, Michigan and Grand Prairie, Texas. In any event, the quoted prices for component parts become invalid ten (10) days after date of quotation, and machinery may become invalid sixty (60) days after date of quotation. Unless otherwise specified in Dake's quotation, installation services and final on-site adjustments are not included in the quotation.

TAXES: Prices do not include taxes. If any sales, use or similar tax is payable to Dake in connection with any transaction or part thereof between the Purchaser and Dake with respect to goods delivered, the Purchaser will, upon demand, pay to Dake the amount of any such tax. If you are tax exempt, please include your exemption document when submitting your order.

TERMS OF PAYMENT: Terms of payment are as stated in Dake's quotation subject to credit approval by our home office. Dake will invoice Purchaser when the equipment is completed and ready for shipment. Payment terms run from invoice date. Purchaser may be required to issue a down payment before production of order and shipment, at the discretion of Dake Accounting. For credit card purchases, a 3.5% processing fee may be applicable to the order. The following states are exempt from the 3.5% processing fee: CA, CO, KS, OK, TX, FL, NY, CT, MA, and ME. Dake's preferred method of payment is as follows: ACH Wire and credit card. Checks will be accepted but may cause delay in order processing. Below is our billing address:

1809 Industrial Park Drive, Grand Haven, MI 49417

WARRANTY If, within a period of one (1) year from date of shipment, any part of any equipment sold by Dake is defective in material or workmanship and is so found after inspection by Dake, it will be replaced or repaired at the option of Dake, providing the equipment has been given normal and proper usage and is still the property of the original Purchaser. Purchased components such as Micro Drop mist system or the like, installed as a part of Dake equipment are warranted only to the extent of the original Manufacturer's warranty. Dake is not responsible for any service work performed unless authorized in advance.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE). UNDER NO CIRCUMSTANCES SHALL DAKE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

SPECIFICATIONS

DC MOTOR		2HP/220V/1PH (5A)	
Saw Blade Speed		60Hz	20~80 MPM (65~260 FPM)
Blade Size(mm)		27*0.9*3090*5/8T	
Dimension L x W x H (mm)		1650x620x1055	
Packing	N.W / G.W (kgs)		233 / 263
	Measurement		1740 x 762 x 1143 mm
Cutting Capacity	0°	○(mm/inch)	250 / (10")
		□(mm/inch)	127 x 468 (5" x 18-3/8")
	+ 45°	○(mm/inch)	150 (6")
		□(mm/inch)	175 x 239 (7" x 9-3/8")

In the space provided, record the serial number and model number of the machine. If contacting Dake this information must be provided to assist in identifying the specific machine.

Serial No:	
Model:	
Install Date:	

SAFETY

USER

- 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.
- Always wear eye protection. Refer to ANSLZ87.1 standard for appropriate recommendations. Also use face or dust mask if cutting operation is dusty.
- Do not overreach. Always keep proper footing and balance.
- Never stand on the machine. Serious injury could occur if the machine is tipped or if the cutting blade is accidentally contacted.
- Never leave the saw running unattended. Turn off the power. Do not leave the saw until it comes to a complete stop.
- Do not operate the tool while under the influence of drugs, alcohol, or any medication.
- Make sure the saw is disconnected from the power supply while motor is being mounted, connected, or reconnected.

- Always keep hands and fingers away from the table.
- Stop the machine before removing any chips or debris.
- Shut off power and clean the band saw and work area before leaving machine.

USE OF MACHINE

- Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the saw before turning it on.
- Do not force the saw. It will do a more efficient and safer job at the rate for which it was designed.
- Use correct blade. Do not force blade or attachments to do a job for which it was not designed.
- Secure work. Use clamps or a vise to hold work when practical. It is safer than using your hands.
- Maintain blade is in top condition. Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- Use recommended accessories. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
- Avoid accidental starting. Make sure the switch is in the "OFF" position before plugging in the cord.
- Direction of feed. Feed work into the blade against the direction of rotation of the blade.
- Adjust and position the blade guide arm before starting the cut.
- Keep blade guide arm tight. A loose blade guide arm will affect sawing accuracy.
- Make sure blade speed is set correctly for material being cut.
- Check for proper blade size and type.
- Stop the machine before putting material in the vise.
- Always have stock firmly clamped in vise before starting the cut.
- Ground all tools. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

ADJUSTMENTS

- Make all adjustments with the power off. In order to maintain the machine, precision and correct ways of adjustment while assembling, the user should read the detailed instructions in this manual.

WORKING ENVIRONMENT

- Keep work area clean. Cluttered areas and benches invite accidents.
- Do not use in dangerous environment. Do not use power tools in damp or wet locations or expose them to rain. Keep work area well-lighted.
- Keep children and visitors away. All children and visitors should be kept a safe distance from work area.
- Do not install or use this machine in an explosive, dangerous environment.

MAINTENANCE

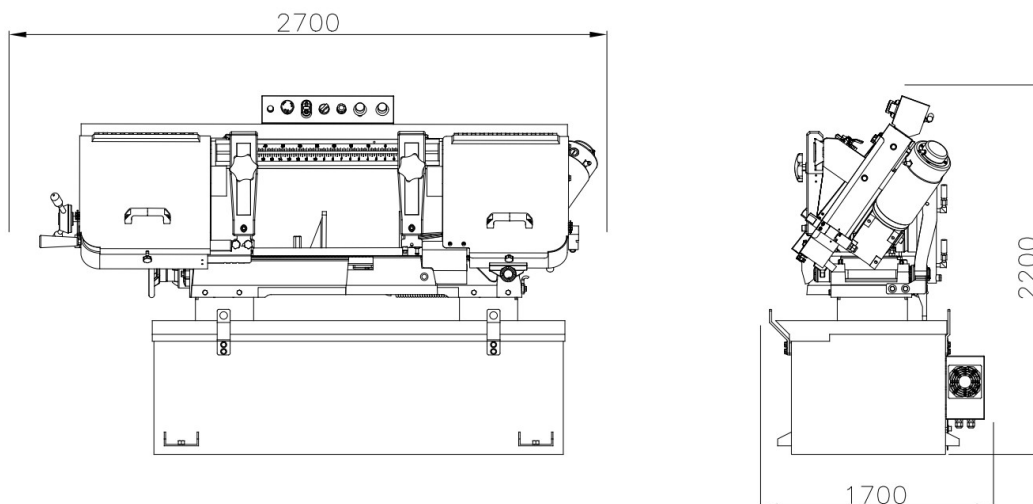
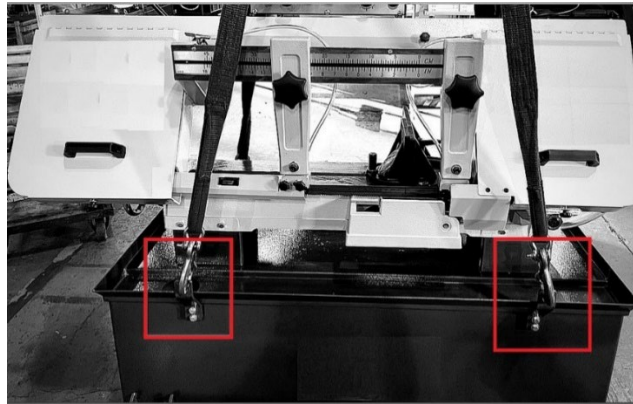
- Disconnect machine from power source when making repairs.

- Check for damaged parts before use of the saw, a guard or other part that is damaged should be replaced immediately 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, and any other condition that may affect the saws operation.
- Disconnect the power before servicing and when changing accessories such as blades, bits, cutters, etc.
- Make sure that the blade tension is properly adjusted.
- Re-check blade tension after initial cut with new blade.
- To prolong blade life always releases blade tension at the end of each work day.

TRANSPORTING MACHINE

1. Before saw is unpackaged transport using a lifting jack.
2. Once packaging has been removed from saw use heavy duty lifting belts to lift machine, pictured below.

NOTE: Make sure all equipment lifting capacities are larger than the weight of the machine.



SET UP

- The electrical rating of your band saw is 230 volt with single phase. Before connecting your machine to an electrical power system, be sure the motor rating must be the same as electrical system. For instructions on how to connect machine to power source, please refer to the electrical wiring diagram on manual.
- Turn off the power before wiring, & be sure machine in proper grounding, overload & circuit breaker is recommended for safety wiring.
- Tighten 4 bolts to base holes after machine in balance.
- Check carefully if the saw blade is running in counter-clock wise direction it not reverse the wiring per circuit diagram then repeat the running test.
- Your machine has been coated with a heavy grease to protect it when shipping. This coating should be completely removed before operating the machine. Commercial degreaser, kerosene or similar solvent may be used to remove the grease from the machine, but avoid getting solvent on belts or other rubber parts.
- After cleaning, coat all bright work with a light lubricant. Lubricate all points in Fig A with a medium consistency machine oil.

SETTING UP THE MACHINE FOR OPERATION

1. Select the proper speed and blade for the type of material you are cutting.
2. Make sure the blade tension is adjusted properly.
3. Raise the saw frame and close the feed on/off knob (B) Fig. 20.
4. Place the stock workpiece Fig. 20, between the vise jaws. Adjust the stock for the desired length of cut and tighten the vise clamping hand wheel (C).
5. Make sure the blade guide arm (D) Fig. 20, is adjusted as close as possible to the workpiece.
6. Turn the machine on and adjust the coolant flow.
7. Turn the feed rate control knob (A) Fig. 20, counterclockwise until the saw blade begins to lower at the desired rate of speed.
8. Proceed to cut through the workpiece. The motor and coolant pump will shut off upon completion of the cut.
9. After adjusting the down speed (A), the saw frame position and down movement are controlled by workpiece on/off knob.

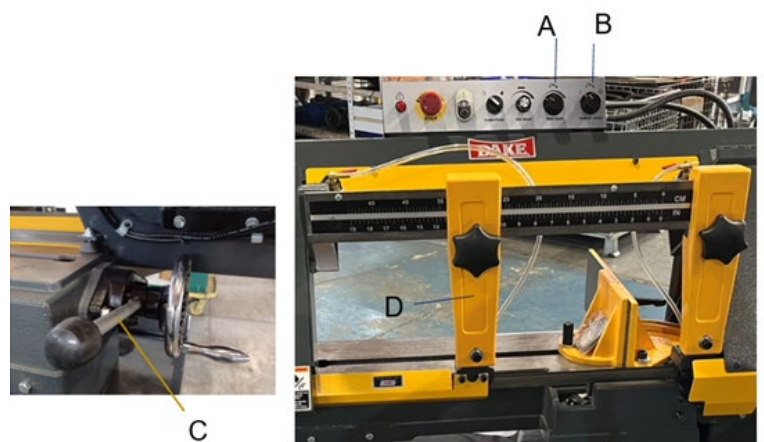


Fig.20

STARTING AND STOPPING MACHINE

1. Raise the saw frame to the up position.
2. The machine is started by pushing the start button (C) (see Fig.2). And it will continue to run until the saw arm is in the down position at the end of the cut, or when the stop button (B) is pushed.
3. When in emergency push button (B) to stop the machine. After removing the trouble, release emergency button, re-start the machine by pushing the start button (C).
4. When using the coolant turn the select button (D) to the right.
5. Set the blade speed with control knob (E).
 - a. Press button H (see Fig. 2). Cutting fluid pump and blade should stop.
 - b. Error Lamp for button (A), please refer to Troubleshooting page for error message.
6. To adjust the feeding rate when in cutting, turn the volume valve (F) clockwise for faster feeding, counterclockwise for slower feeding. When volume valve (F) has been properly adjusted, turn the control valve (G) to handle saw arm action.
7. An automatic shut-off limit switch is provided to stop the motor when the cut is completed. The limit switch (D) is controlled by a lever Fig. 3, which contacts the top of the hydraulic cylinder (E) shutting off the motor and coolant pump.
8. If the motor stops before the cut is completed or continues to run after the cut is completed, the limit switch (D) Fig. 3. Can be adjusted up or down by loosening the two screws (F).

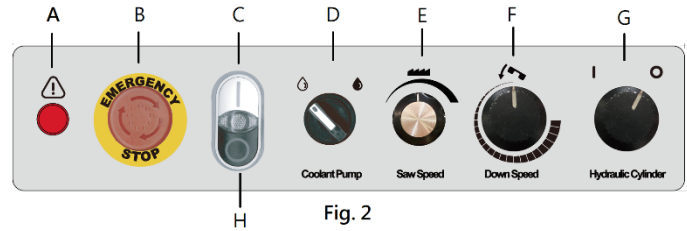


Fig. 2

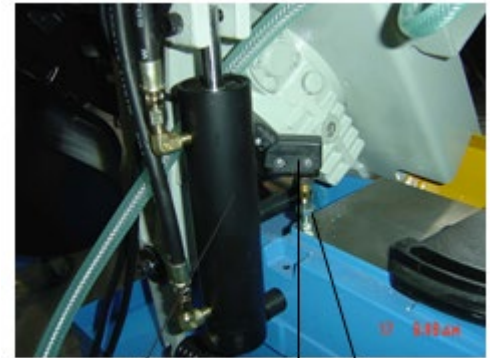


Fig. 3



Fig. 4

ADJUSTING DOWNWARD TRAVEL OF SAW ARM

The downward travel of the saw arm should be adjusted so that when the saw arm is in the extreme downward position, the teeth of the blade are 1/16" below the table surface. If an adjustment is necessary, loosen lock nut (A) Fig. 4 and turn stop screw (B) in or out until the correct adjustment is made. Then tighten lock nut (A).

ADJUSTING BLADE TENSION

To tension the blade, lift up the left wheel cover and turn the blade tension handle (A) Fig. 8, clockwise. A pointer and tension scale (B) is located underneath the wheel. The scale is graduated to indicate blade tension of 20,000, 30,000 and 35,000 pounds per square inch (psi). For car-bon blades (similar to the one supplied with the machine) the blade should be tensioned at 20,000 psi. For bi-metal blades, the blade should be tensioned at 30,000 or 35,000 psi. Always release blade tension at the end of each work day to prolong blade life.



B Fig. 8 A

ADJUSTING BLADE GUIDE SUPPORT ARM

The blade guide support arm (A) Fig. 9, should be set as close to the workpiece as possible. To move the support arm, first loosen clamp knob (B). Move the support arm (A) into relationship with the workpiece. When you are sure the support arm will not interfere with the workpiece, first tighten clamp knob (B).



B A Fig. 9

ADJUSTING FEED RATE

When the feed rate control knob is turned clockwise as far as it will go the saw frame will not move down, but it can be raised to the up position. By turning the feed rate control knob counterclockwise, the flow of oil from the cylinder is regulated and determines the speed at which the saw frame will lower and the blade will feed through the work. Too many factors are involved to make tabulated data practical on feed rates. As a general rule, an even downward pressure without forcing the blade gives best results. Avoid forcing the blade at the start as this may shorten blade life and produce a bad cut. By inspecting the chips while the cut is being made will indicate whether the feed rate is correct. Fine powdery chips indicate the feed rate is too light; the teeth are rubbing over the surface instead of cutting. Burned chips indicate excessive feed, which causes the teeth to break off as the blade overheats. The ideal feed rate is indicated by chips that have a free curl and this will give the fastest cutting time and longest blade life.

ADJUSTING CUTTING PRESSURE OF SAW ARM

The cutting pressure of the saw arm has been set at the factory and should not need further adjustment. If adjustment should ever become necessary, lower the saw arm to the horizontal position. Loosen locknut (A) Fig.11 until the pressure is increased or decreased.



Fig. 11

OPERATING AND ADJUSTING VISE

The workpiece is placed between the vise jaws with the amount to be cut-off extending out past the blade. Your machine is equipped with a "quick action" vise jaw which allows you to instantly position the moveable vise jaw (B) Fig. 12. Simply turn hand wheel (A) counterclockwise 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. The vise can be adjusted to cut any angle from a straight 90 degree cut-off to a 45 degree angle by loosening the two spring-loaded clamp handles (one located on each vise jaw), positioning the vise jaws to the desired angle and tightening the tow spring-loaded handles. The right vise jaw is provided with positive stops to instantly position the jaw at 90 or 45 degrees. To check and adjust the positive stops, proceed as follows:

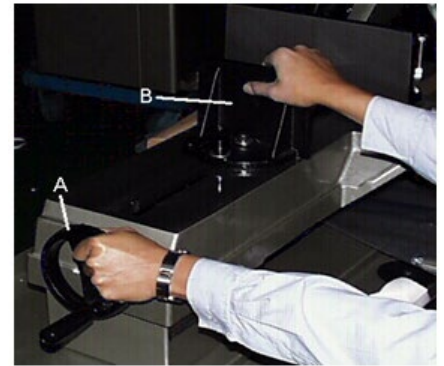


Fig.12



Fig. 13

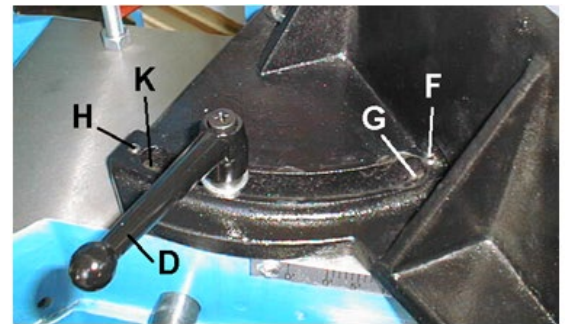


Fig.14

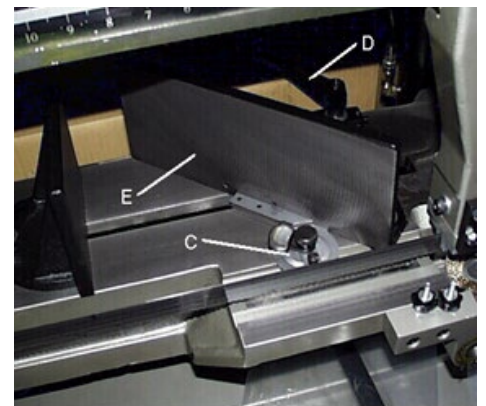


Fig. 15

1. Pivot the right vise jaw (C) Fig. 13. All the way to the right, and lock spring loaded clamp handle (D).
2. Using a combination square (E), place one end of the square against the vise jaw and the other end against the blade as shown in Fig. 13. Check to see if the vise jaw is 90 degrees to the blade.
3. If an adjustment is necessary loosen clamp handle (D) Fig. 14. Loosen set screw (F) and turn adjusting screw (G) until the vise jaw is 90 degrees to the blade. NOTE: Turn screw (G) from the opposite end, through the face of the vise jaw. End of screw (G) should contact stud of clamp handle (D) when vise jaw is 90 degrees to the blade. Then tighten set screw (F).
4. If an adjustment is necessary, loosen clamp handle (D) Fig. 14. Loosen set screw (H) and turn adjusting screw (K) until the vise jaw is 45 degrees to the blade. NOTE: end of screw (K) should contact stud of clamp handle when vise jaw is 45 degrees to the blade. Then tighten set screw (H).
5. Pivot the right vise jaw (C) all the way to the left, as shown in Fig. 15, and lock spring loaded clamp handle (D).
6. Using a combination square (E), place one end of the square against the vise jaw and the other end against the blade, as shown in Fig. 15. And check to see if the vise jaw is at 45 degrees to the blade.

COOLANT SYSTEM

The use of proper cutting fluid is essential to obtain maximum efficiency from a band saw blade. The main cause of tooth failure is excessive heat build-up. This is the reason that cutting fluid is necessary for long blade life and high cutting rates. Cutting area and blade wheels should be kept clean at all time. The rate of coolant flow is controlled by the stop valve lever (B) Fig. 16 which directs the coolant onto the blade at (C). The lever (B) is shown in the off position.



B Fig. 16 C

ADJUSTING WORK STOP

The work stop is used mainly when more than one piece of work is to be cut to the same length. Simply position the stop (A) Fig. 17 the desired distance away from the blade. The stop may be repositioned by loosening lock screw (B) and moving the rod (C) in or out accordingly. Then tighten lock screw, fine adjustment to the stop can be made by loosening nut (D) and turning stop screw (A). To move the stop (A) out of the way, loosen set screw (E) and move arm (F) to the down position.

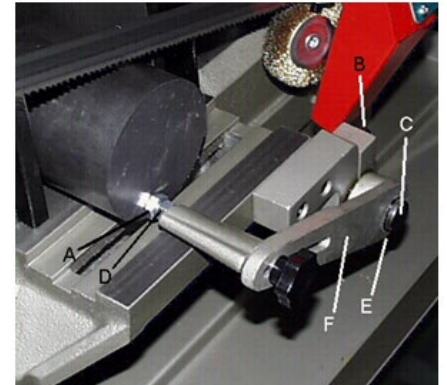


Fig. 17

ADJUSTING BLADE GUIDE ROLLER BEARINGS, CARBIDE BLADE GUIDES & BACK-UP BEARINGS

Before making the following adjustments make sure the blade is tracking and tensioned properly:

1. The back of the blade (A) Fig. 18, should ride against the back-up bearing (B). To adjust, loosen set screw (C) and move the bearing (B) up or down until it lightly touches the back of the blade.
2. The saw blade (A) should also ride between and lightly touch the two blade guide roller bearings (D) and (E) Fig. 18. The front bearing (E) Fig. 18 and 19, is mounted on an eccentric and can easily be adjusted to suit blade thickness by loosening set screw (F) and turning shaft (G) Fig. 19.
3. The carbide blade guides (H) Fig. 18, should also be adjusted so they lightly touch the blade by loosening screws (K).
4. The blade guide roller bearings, carbide blade guides and back-up bearing on holder (L) Fig. 18 and 19 should be adjusted in the same way.

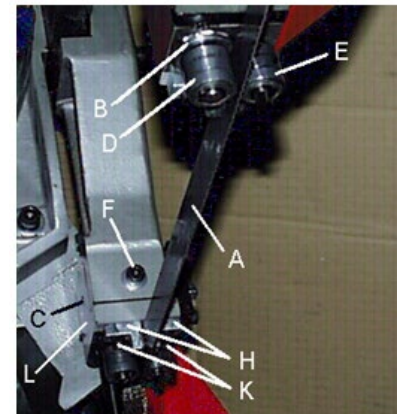


Fig. 18

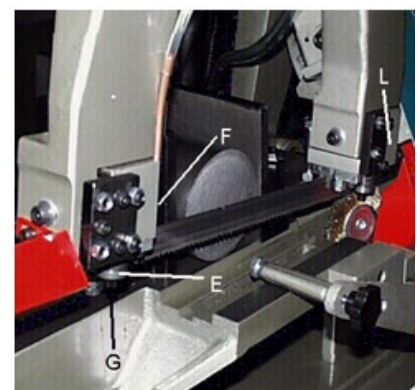


Fig. 19

BLADE CHANGE

1. UNPLUG the machine power source!
2. Raise the saw frame about 6" and close the feed on/off knob (E) Fig 21, by turning it clockwise as far as it will go.
3. Move the blade guide arm (B) to the right, as shown in Fig. 21.
4. Loosen two screws (D) and open upper blade guard (F) Fig. 21.
5. Open both wheel covers (A) Fig. 21, and clean the chips from the machine
6. Release blade tension by turning the blade tension hand wheel (C) Fig. 21 counterclockwise.
7. Remove the blade from both wheels and out of each blade guide.
8. Make sure the teeth of the new blade are pointing in the right direction. If necessary, turn the blade inside out.
9. Place the new blade on the wheels, in the blade guides and adjust blade tension and blade guides.

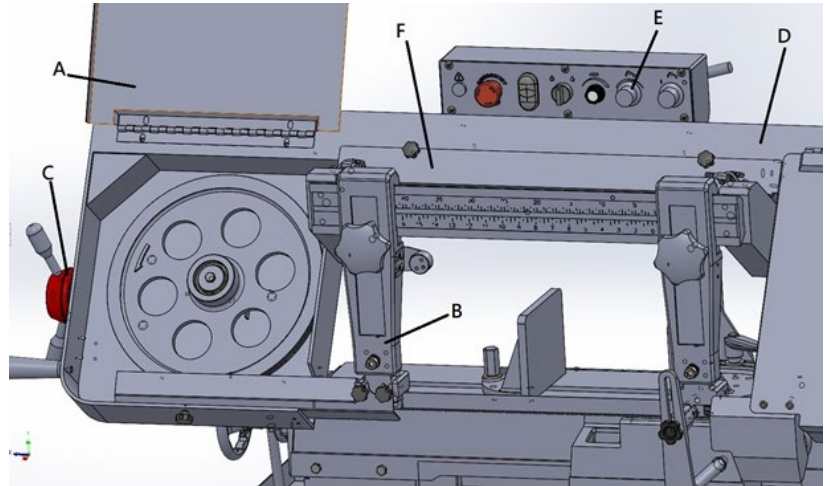
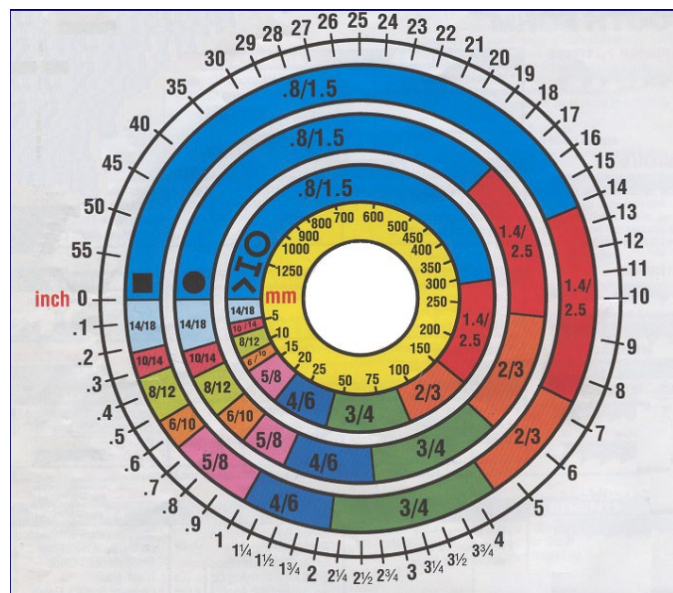


Fig.21

BLADE SELECTION

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 for the material being cut. The material size and shape dictate tooth selection.



You need to consider:

The width of the cut. That is, the distance in the cut that each tooth must travel from the point it enters the work piece until it leaves the work piece, and the shape of the work piece. Use the chart above to assist with tooth selection.

- Squares, Rectangles, Flats (Symbol: ■)

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

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

- Round Solids (Symbol: ●)

Locate the diameter of your work piece on the chart. Select the tooth pitch on the ring marked with the circle which aligns with the size of stock you are cutting.

Example: 4" (100mm) round, use a 3/4 Vari-Tooth.

- Tubing, Pipe, Structural (Symbols: O, H, Λ)

Determine the average width of cut by dividing the area of the work piece by the distance the saw blade must travel to finish the cut. Select the tooth pitch 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.

$$\begin{array}{rcl}
 4"(100\text{mm}) \text{ OD} & = & 12.5 \text{ in}^2 (79 \text{ cm}^2) \\
 3"(75 \text{ mm}) \text{ ID} & = & 7.0 \text{ in}^2 (44 \text{ cm}^2) \\
 \hline
 \text{Area} & = & 5.5 \text{ in}^2 (35 \text{ cm}^2)
 \end{array}$$

$5.5 \text{ in}^2 (35 \text{ cm}^2) / 4" (100\text{mm}) \text{ distance} = 1.38" (35 \text{ mm})$ average width 1.38" (35 mm), use a 4/6 Vari-Tooth.

NOTE: The blade 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.

BLADE SPEED

The band speeds are to be used as a starting point for most application. For exact parameters consult your saw blade supplier.

Material	Speed (FPM)
Tool, Stainless, Alloy Steels, Bearing Bronze	114
Med. to High Carbon Steels, Hard Brass or Bronze	114
Low to Med. Carbon Steel, Soft Brass	230
Aluminum, Plastic	230

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

MATERIAL	ALLOY ASTM NO.	BLADE SPEED	
		FT./MIN	M/MIN
Copper Alloy	173,932	314	96
	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
	811	214	65
Carbon Steel	1117	339	103
	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

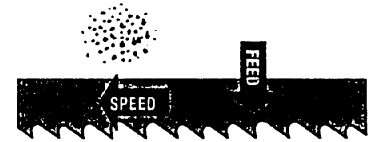
Ni-Cr-Mo Alloy Steel	8615,8620,8622	239	73
	4340,E4340,8630	219	67
	8640	199	61
	E9310	174	53
Tool Steel	A-6	199	61
	A-2	179	55
	A-10	159	49
	D-2	90	27
	H-11,H-12,H-13	189	58
Stainless Steel	420	189	58
	430	149	46
	410,502	140	43
	414	115	35
	431	95	29
	440C	80	24
	304,324	120	36
	304L	115	35
	347	110	33
	316,316L	100	30
	416	189	58

							
S mm.	<50	>50	>3	>3<30	>30		
	4/6	2/3	10/14	3/4	2/3		
Mirfin CARBON	67	38	74	67	38		
Mirfin ALLOY	67	49	75	67	49		
Mirfin STAINLESS	37	26	37	36	26		
Mirfin ALUMINUM	80	80	80	80	80		

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 blade speed.



Burned heavy chips – reduce feed rate and/or blade speed.



Curly silvery and warm chips – optimum feed rate and blade speed.



ERROR LAMP

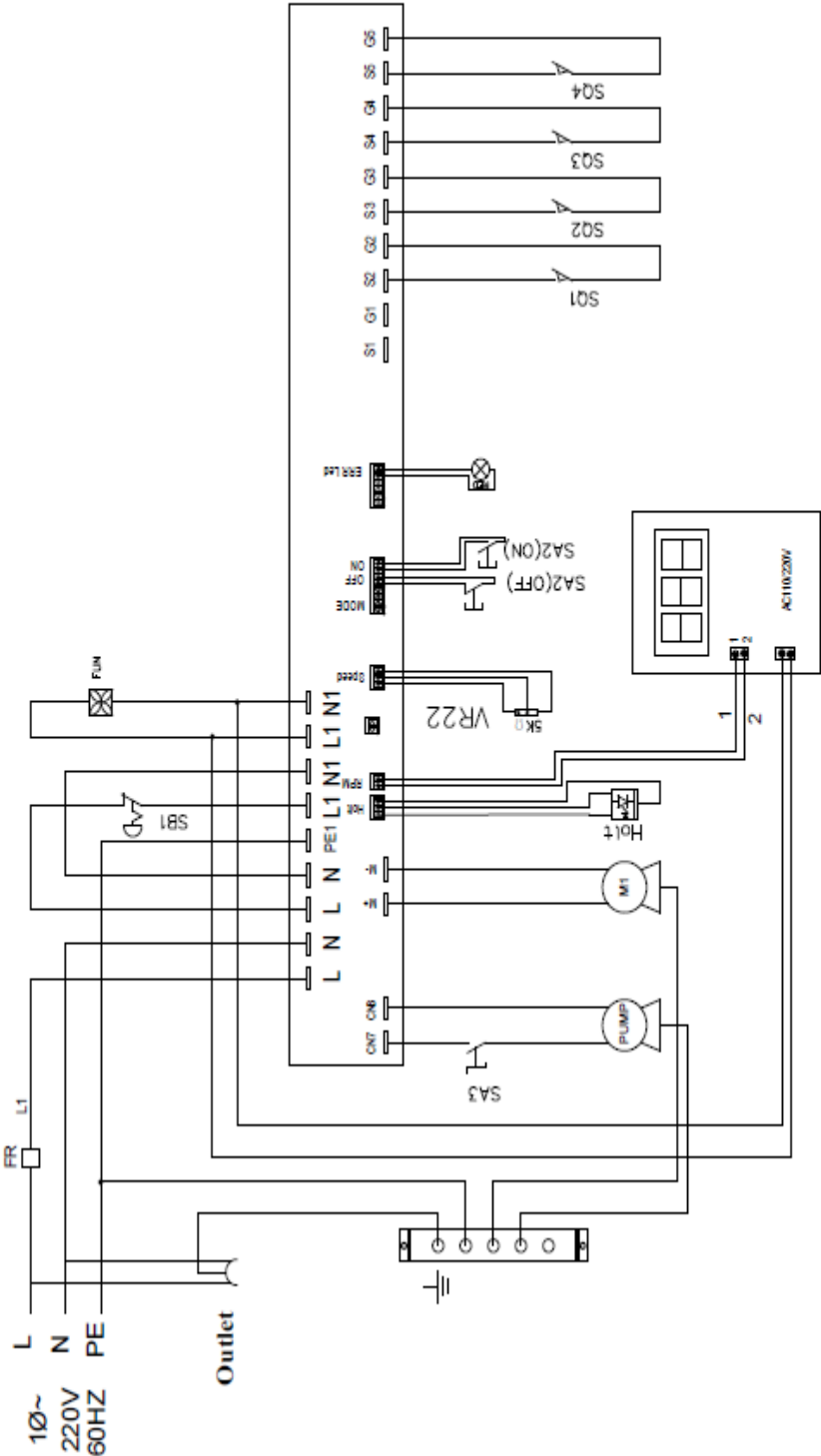
Glint per 0.3 sec. time	Definition	Solution
1 time	Working over current	Saw bow decent speed too high; please try to slow down the saw bow speed.
2 times	Motor speed detect failure	Please contact with dealer for repair service. Check the connection of motor signal wires and wires outward if broken.
3 times	Motor stop	Saw bow drop too fast caused the blade stop and motor stop, please saw bow decent speed.
4 times	Control board failure	Please contact with dealer for repair service.
5 times	Limit switch	Check lower limit switch and saw blade cover limit switch
6 times	Control board failure	Please contact with dealer for repair service.
7 times	Control board failure	Please contact with dealer for repair service.
8 times	Control board failure	Please contact with dealer for repair service.

TROUBLESHOOTING

Symptom	Possible Cause	Corrective Action
Machine cannot be started	<ol style="list-style-type: none"> 1. Power is not plugged; the power light on control panel is not on. 2. Motor can not be started; power was cut by limit switch. 3. Operation button can not be normally operated. 	<ol style="list-style-type: none"> 1. Check the motor specification; connect the power with correct power supply. Make sure the power light in on. 2. Make sure the cover is in correct position. 3. Push the emergency button; return it to original position. Then release the emergency button.
Excessive Blade Breakage	<ol style="list-style-type: none"> 1. Materials loosen 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. Miss-aligned guide bearings 9. Blade too thick 10. Cracking at weld 	<ol style="list-style-type: none"> 1. Clamp work securely 2. Adjust speed or feed 3. Replace with smaller teeth spacing blade 4. Use a blade of slow speed and small teeth spacing 5. Adjust to where blade just does not slip on wheel 6. Place blade in contact with work after motor is started 7. Adjust wheel alignment 8. Adjust guide bearings 9. Use thinner blade 10. Weld again, 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 8. Blade slide 	<ol style="list-style-type: none"> 1. Use finer teeth 2. Decrease speed 3. Decrease spring tension of saw 4. Reduce speed, increase feed pressure 5. Increase feed pressure by reducing spring tension 6. Replace with a new blade, and adjust blade tension 7. Tighten blade tension adjustable knob 8. Tighten blade tension

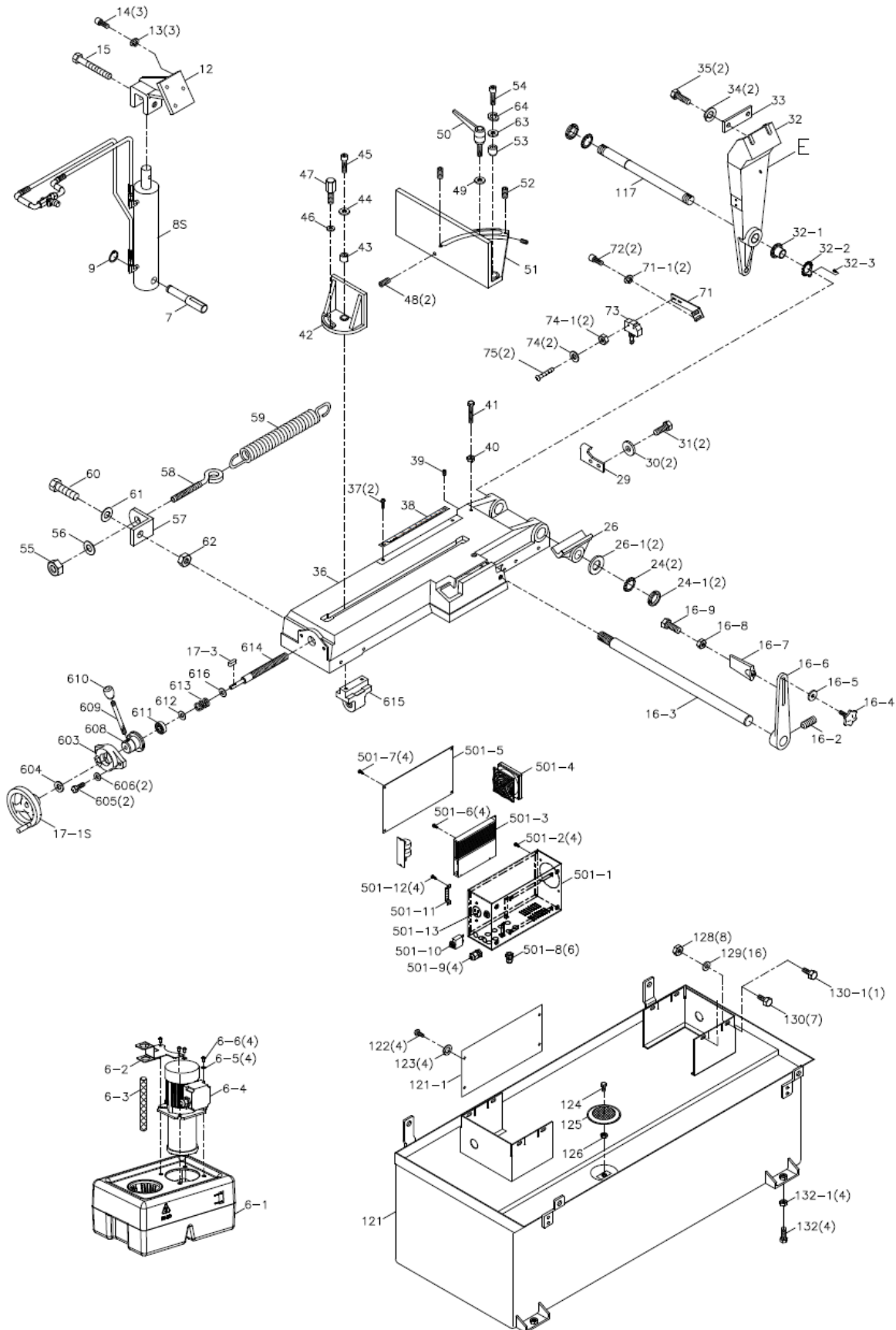
Unusual Wear on Side/Back of Blade	<ol style="list-style-type: none"> 1. Blade guides worn. 2. Blade guide bearings not adjust properly 3. Blade guide bearing bracket is loose 	<ol style="list-style-type: none"> 1. Replace. 2. Adjust as per operators manual 3. Tighten.
Teeth Ripping from Blade.	<ol style="list-style-type: 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 coarser 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. Blade is too coarse for work 4. Blade is too fine for work 5. Gears aligned improperly 6. Gears need lubrication 7. Cut is binding blade 	<ol style="list-style-type: none"> 1. Reduce tension on blade. 2. Reduce tension on drive belt. 3. Use finer blade. 4. Use coarse blade. 5. Adjust gears so that worm is in center of gear. 6. Check oil path. 7. Decrease reed anti speed
Bad Cuts (Crooked)	<ol style="list-style-type: none"> 1. Feed pressure too great. 2. Guide bearings not adjusted properly 3. Inadequate blade tension. 4. Dull blade. 5. Speed incorrect. 6. Blade guides spaced out too much 7. Blade guide assembly loose 8. Blade truck too far away from wheel flanges 	<ol style="list-style-type: none"> 1. Reduce pressure by increasing spring tension on side of saw 2. Adjust guide bearing, the clearance cannot greater than 0.001. 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 reed pressure. 2. Decrease blade tension.

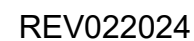
ELECTRICAL DIAGRAM



Parts Number	Item	Designation and Function	Qty
MET1243G	SA2	Pair - Switch	1
MET1245	SB1	Emergency-Stop Switch	1
MET1665	VR22	Variable Resistance	1
MET2147	VR22	Revolution Knob	1
MET1426	ERR LED	Lamp	1
MET1222	SA3	Selector Switches	1
MET2141A	FAN	FAN	1
MET2029E-1	FR	Overload Protective Device	1
MET1615	SQ1	Limit Switch	1
MET1616	SQ2	Limit Switch	1
MET1617	SQ3	Limit Switch	1
MET1630	SQ4	Limit Switch	1
MBS-3-125		DC Motor Drive Substrate	1
MET2144		H Type Plug	1
MET21AK		Plug Protect Cover	1

EXPLODED VIEW & PARTS LIST





Item	Reference No.	Description	Specification	Qty
-	D-303189	Dake Logo – Small	1-1/2" x 5"	1
-	D-81002	Dake Logo – Large	2-13/16" x 7"	1
-	D-76462	Label - Lockout		2
-	D-84605	Label – Safety Instructions		1
-	D-84604	Label – Point of Operation		1
-	D-84395	Label – High Voltage		1
6-1	181256	Coolant Tank	8.4L	1
6-2	187003	Fixed Hose Bracket		1
6-3	HD841-60	PVC Hose	3/4"x600mm	1
6-4	D-304278	Coolant Pump	1/8HP (220V)	1
6-5	W004	Washer	1/4"x19xt1.5mm	4
6-6	HT003	Hex Socket Head Screw	M6-1.0 x 10mm	4
7	189036	Pivot Shaft		1
8S	187065F	Cylinder Assembly	Return Spring Type	1
9	HCS07	C-Retainer	S18	1
12	189025	Cylinder Upper Bracket		1
13	HW105	Spring Washer	M8	3
14	HS244	Hex. Head Cap Screw	M8-1.25Px30L	3
15	HS264	Hex. Head Screw	M10-1.5Px50L	1
16-2	HS422	Hex. Headless Screw	M6-1.0Px10L	1
16-3	189037	Work Stop Rod		1
16-4	198169M	Plum Screw	M6-12L	1
16-5	W004	Washer	1/4"x19xt1.5mm	1
16-6	189038	Work Stop		1
16-7	1966008	Work Stop Bracket		1
16-8	HN006	Hex. Nut	M10-1.5P	1
16-9	HS059	Hex. Head Screw	M10-1.5Px25L	1
17-1S	187055	Handwheel		1
	189055R	Knob		1
17-3	HK007	Key	5x5x15L	1
24	HI901	Bearing Washer	25	2
24-1	1965043	Nut	AN05	2
26	189013	Gap Ring		1
26-1	189085	Washer		2
29	196228	Position Set Bracket		1
30	W016	Washer	5/16"x23xt2	2
31	HS046	Hex. Head Screw	M8-1.25Px20L	2
32	189012A	Rear Pivot Bracket	For DC model use	1
32-1	189069	Eccentric Ring		1
32-2	189070	Positioning Piece		1
32-3	HE501	Cross Tablet Head Screw	M5-0.8Px8L	1
33	191219	Bushing		1
34	HW106	Spring Washer	φ10.2-3t	2
35	HS061	Hex. Head Screw	M10-1.5Px35L	2
36	189002GE	Machine Base	For DC model use	1
37	HE501	Cross Tablet Head Screw	M5-0.8Px8L	2
38	187064	Degree-Meter Ruler		1
39	HS430	Hex. Headless Screw	M8-1.25Px10L	1
40	HN006	Hex. Nut	M10-1.5P	1
41	HS064	Hex. Head Screw	M10x50L	1
42	196208	Vise Jaw Bracket		1
43	191209	Bushing		1
44	HW023	Washer	ø10.5*ø21Xt2mm	1
45	HS261	Hex. Head Screw	M10-1.5Px35L	1
46	HW011	Washer	3/8"x27xt3	1

Item	Reference No.	Description	Specification	Qty
47	181266	Fixed Bolt		1
48	HS434	Hex. Headless Screw	M8-1.25Px30L	2
49	HW025	Washer	ø10.5*ø27Xt3mm	1
50	191210	Knob	M10xP1.5x37L	1
51	1966003	Vise Jaw Bracket (Rear)		1
52	HS422	Hex. Headless Screw	M6-1.0Px10L	2
53	1966004	Bushing		1
54	HS282	Hex. Head Screw	M12-1.75Px40L	1
55	N005	Hex. Nut	3/8"	1
56	W014	Washer	3/8"x23xt2	1
57	192040	Spring Handle Bracket		1
58	181118	Spring Adjusting Rod		1
59	187068A	Tension Spring	For DC model use	1
60	S047	Hex. Head Screw	M8*25L	1
61	W005	Washer	M8	1
62	N005	Hex. Nut	M8	1
63	HW007	Washer	M12	1
64	HW107	Spring Washer	M12	1
71	189034A	Limit Switch Support	For DC model use	1
71-1	HW004	Washer	ø6.5Xø18Xt1.5mm	2
72	HT016	Hex. Head Screw	M6-1.0PX12L	2
73	ET1615	Lower Limit Switch	CM1309 (CANLIE)	1
74	HW307	Gear Washers	M6	2
74-1	HN002	Hex. Nut	M4-0.7P	2
75	HS513	Cross Round Head Screw	M4-0.7P*30L	2
117	187035	Pivot Shaft		1
121	187001	Coolant Pan		1
121-1	187002	Stand Side Cover	410x325x1.2t	1
122	HS527	Cross Round Head Screw	M6*10L	4
123	MHW104	Spring Washer	M6	4
124	HS033	Hex. Head Screw	M6*15L	1
125	191106	Filter		1
126	HN004	Hex. Nut	M6	1
128	301128	Hex. Nut	M8-1.25P	8
129	304275	Washer	8x18-2.0t (M8)	16
130	304276	Hex. Head Screw	M8x25L	7
130-1	304277	Hex. Head Screw	M8-1.25P*40L	1
132	HS093	Hex. Head Screw	M12-1.75P*50L	4
132-1	HN007	Hex. Nut	M12-1.75P	4
200	189023J-Y	Blade Guard (Front)	Yellow	1
201	196504	Blade Direction Label		1
202	103127	Knob	M6-1.0Px10L	2
202-1	HW004	Washer	ø6.5Xø18Xt1.5mm	2
204	HS260	Hex. Head Screw	M10-1.5Px30L	2
205	HW106	Spring Washer	M10	2
206	HW006	Washer	M10	2
207	1965015	Blade Adjustable Knob		2
208	HW023	Washer	ø10.5*ø21Xt2mm	2
209	187020	Arm (Left)		2
210	1965014	Gib		2
211	HCS39	C-Retainer	ø8	4
212	CA6082RS	Bearing	608-2RS	10
213	189018	Eccentric Guide B		2
214	189019	Eccentric Guide A		2
215	HS230	Hex. Head Screw	M6-1.0Px20L	4

Item	Reference No.	Description	Specification	Qty
216	196331	Carbide Guide	S45C	4
217	121061	Bearing Shaft		2
218	HS422	Hex. Headless Screw	M6-1.0Px10L	4
219	189015	Bearing Bracket (Left)		1
220-1	189083	Cooling Pipe Connector		2
220-2	MHD812-60	PU Hose	φ6-600mm	1
220-3	103126-4	Hose Clamp	IDφ12	2
220-4	195075	90° Elbow (Connector)	PT1/8"X1/4(Copper)	2
220-5	181856	On-off Valve	1/8 inner teeth*5/16	2
220-6	189084	Press Piece		2
220-7	HW104	Spring Washer	φ6.1*1.9	4
220-8	HT016	Button Head Screw	M6-1.0P*12L	4
220-9	MHD812-34	PU Hose	φ6-340mm	1
221	189014	Blade Adjustable (Rear)		1
222-1	189022	Brush Support		1
222-2	191334A	Brush		1
222-3	HW004	Washer	ø6.5Xø18Xt1.5mm	2
222-4	HN004	Hex. Nut	M6-1.0P	2
222-5	HS037	Hex. Head Screw	M6-1.0Px35L	1
222-6	HS033	Hex. Head Screw	M6-1.0Px15L	1
225	189021-Y	Blade Guard II (Rear)		1
301	1965052	Knob		2
302	MHS334	Hex. Head Screw	M6X12L	2
302-1	HW004	Washer	M6	6
302-2	HT003	Round Head Screw	M6x10L	4
302-3	131114A	Micro Switch Bracket	CE USE	1
302-4	HN002	Hex. Nut	M4	8
302-5	HD503	Hex. Head Screw	M4x12L	4
302-6	198150MA	Micro Switch Bracket	CE USE	1
302-7	HT001	Round Head Screw	M5-0.8Px10L	4
302-8	ET1617	Limit Switch (Idler Wheel)	QKS8-1A1B-180°	1
302-9	131114	Switch Plate	CE USE	1
302-10	ET1616	Limit Switch (Drive Wheel)	QKS8-1A1B	1
302-11	198150M	Micro Switch Bracket	CE USE	1
303	187027F	Drive Wheel Back Cover		1
304	HW105	Spring Washer	ø8.2-2.5t	4
305	301128	Hex. Nut	M8-1.25P	4
306	187026F	Saw Cover	CE USE	1
306-1	HV001	Songe Pad		2
307	HS046	Hex. Head Screw	M8-1.25Px20L	1
308	121011	Washer	6mm	1
309	CA6205LLU	Bearing	6025	2
309-1	HCR06	C-type Clasp	R52	2
310	105021A	Idler Wheel		1
311	187056	Shaft		1
312	189033	Handle	M10	1
313	MHN006	Hex. Nut	M10	2
314	189010HF	Body Frame		1
314-1	HD841-28	PVC Hose	3/4"x280mm	1
314-2	189087	Screw	M8-1.25P	1
314-3	HW005	Washer	ø8.4*ø17*t1.6mm	1
314-4	301128	Hex. Nut	M8-1.25P	1
314-5	189080	Filter		1
314-6	HT003	Round Head Screw	M6-1.0Px10L	1
315	187021	Beam Cover	Yellow	1

Item	Reference No.	Description	Specification	Qty
315-1	103127	Hex. Head Screw	M6-1.0Px10L	2
316	187039G	Scale	Silver	1
316-1	HH001	Rivet	φ2x5L	2
317	HS278	Hex. Head Screw	M12-1.75P*20L	2
318	1965011	Rail		1
319	HS433	Hex. Headless Screw	M8X25L	4
320	HS058	Hex. Head Screw	M10*20L	1
321	HW106	Spring Washer	M10	1
322	198037	Drive Shaft Washer		1
323	HK044	Key	7x7x30L	1
324	1965027A	Blade	27*0.9*3090*5/8Tmm (Brand: LENOX)	1
325	196304	Drive Wheel	Key 7MM	1
328	131050V	Gear Box	#63,E=1/40,d=28	1
328-1	304276	Hex. Socket Head Screw	M8x25L	4
330	187069	Shaft		1
338	MDV-12515-5C	DC Motor	1018SDC use Cable 2m	1
338-1	HK106	Key	8X7X40L	1
354-2	103125-5	Hose Clamp	IDφ19	1
354-3	HD632	90° Micro Control Block	PT1/4"x1/2"	1
354-4	105173	3-Way Valve		1
354-5	HS232	Hex. Head Screw	M6-1.0Px30L	2
354-6	HD632	90°Micro Control Block	PT1/4"x1/2"	1
354-7	HD846-28	Net Tube	5/16"*280mm	1
354-8	HD650	Straight Connector	PT1/4"x1/4"	1
354-9	HD846-75	Net Tube	5/16"*750mm	1
354-10	HI105	Wire Fixed Clamp		2
354-11	HS527	Cross Round Head Screw	M6*10L	2
354-12	HD656	Hose Clamp	IDφ12	2
355	198051A	Blade Tension Handle		1
355-1	198086J	Knob		2
356	CA51203	Bearing	51203	1
357	189053	Tension Indication Ring		1
358	198093	Spring Washer	φID16.3XφOD31.5XT1.8	18
359	198026	Leadscrew		1
360	189050	Tension Slide		1
360-1	189041	Tension Scale		1
361	HS423	Hex. Headless Screw	M6-1.0Px15L	1
362	189051	Tension Block		1
363	HN008	Hex. Nut	M16XP2	1
364	121011	Washer		1
365	HS242	Hex. Head Screw	M8-1.25PX20L	1
366	189054	Screw		3
367	HW106	Spring Washer	φ10.2-3t	3
368	HS066	Hex. Head Screw	M10-1.5Px60L	3
369	189052	Press Piece		2
370	HW105	Spring Washer	ø8.2-2.5t	4
371	HS240	Hex. Head Screw	M8-1.25Px10L	4
380	198150M	Micro Switch Bracket		1
381	ET1630	Micro Switch		1
382	HS513	Cross Round Head Screw	M4-0.7Px30L	2
383	HW005	Washer	M5	2
384	HS219	Hex. Head Screw	M5X15L	2
386	198170	Scale		1
387	187066	Disconnection Piece		1

Item	Reference No.	Description	Specification	Qty
388	189120	Coupling Flange		1
389	MHS245	Hex. Head Screw	M8X35L	4
390	189125	Drive Shaft		1
391	MHK091	Double Round Key	8x7x50L	1
393	MCA6207LLU	Bearing	35x72x17B	1
394	187087	Spacer	30x46x3t	1
395	198037	Prive Shaft Washer		1
396	HS258	Hex. Socket Head Screw	M10-1.5Px20L	1
397	131050B-1	Reducer Cover		1
398	HS241	Hex. Socket Head Screw	M8x15L	2
500-1	PJNB871136E01	Control Box Label	DC Use	1
500-2	MET1426	Red Overload Lamp	Red 16mm DC 6V	1
500-3	MET1245	Emergency Stop Switch	HY-57B(1B)	1
500-4	MET1243G	Pair Switch	Black / White	1
500-5	MET1222	Pump Switch	NSS-22S2 -1NO	1
500-6	ET2147 + ET1665	VR Knob Set	ET-1665 in back side	1
500-7	187401	DC Control Box	No Screw In The Front	1
500-8	187402	DC Control Box Cover		1
500-9	187403	Back Side Cover		1
500-10	MHT001B	Round Head Screw	M5-0.8Px10L Black	8
500-11	MET2110	Strain Relief	Type-3 PG11	1
500-12	MET2109	Strain Relief	Type-3 PG9	2
500-13	HW004	Washer	M6	2
500-14	HF024	Hex. Head Screw	M6-1.0Px12L	2
500-15	187103	Tachometer Box		1
500-16	MET2511B	Tachometer	Blue Light (FPM)	1
500-17	187102	Tachometer Bracket		1
500-18	MHS625	Round Head Screw	M4x6L	4
500-19	MHT001	Round Head Screw	M5-0.8Px10L	2
501-1	187005	Electrical Box		1
501-2	MHT001B	Round Head Screw	M5-0.8Px10L Black	4
501-3	MBS-3-125	DC Motor Drive Substrate	#105&125 USE	1
501-4	MET2141A	Cooling Fan Set	WITH 230V /9CM	1
501-5	187006	Electrical Box Cover		1
501-6	MHE516B	Round Head Phillips Screw	M4X26L(BLACK)	4
501-7	MHT001B	Round Head Screw	M5-0.8Px10L(BLACK)	4
501-8	MET2109	Strain Relief	Type-3 PG9	6
501-9	MET2110	Strain Relief	Type-3 PG11	4
501-10	MET2029E-1	Overload Protective Device	KLB-15A	1
501-11	M181995	Ground Copper Plate	M4-5 Hole	1
501-12	MHS625	Phillips Pan Head Screw	M4X6	2
501-13	MET2144	H Type Plug	W/MET21AK Cover	1
600S	193055S	Bracket Ring Assembly		1
603	193055	Bracket Ring		1
604	HW007	Washer	φ12*t2	1
605	S013	Hex. Head Screw	3/8"*1-1/4"L	2
605	S012	Hex. Head Screw	3/8"x1-1/2"L	2
606	W013	Washer	3/8"*20*t2	2
608	193056	Pressure Shaft		1
609	193059	Knob Shaft		1
610	290086	Plastic Round Knob		1
611	CA51101	Bearing		1
612	HW007	Washer	φ12*t2	1
613	193058	Spring		1

Item	Reference No.	Description	Specification	Qty
614	187028	Acme Screw		1
615	181138B	Nut	Imperial	1
624	187074K	Tension Rotation Label		1

Please contact factory for current prices.

ORDERING INFORMATION

Parts are available for direct purchase from Dake or through a distributor. When placing a parts order, you will need to provide the part number, name of part, and model number. All parts shipped F.O.B. Factory in Grand Haven, MI.