812 Bandsaw

Instruction Manual

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IMPORTANT

SAFETY FIRST

ALL MACHINES ARE DANGEROUS

1. Use the correct tool for the job at hand never make a machine do a job it was not designed for.

2. Never force the tool in the machine it will do the quicker and safer at the correct rate.

3. Always use clamps or vices to secure work – your hand is not strong enough!

4. When changing tools or work pieces always disconnect the machine first.

5. Service the machine regularly; a correctly operating machine is a safer machine.

6. Always replace belt covers before starting the machine.

7. Understand the machine fully before operation and always read the manual.

8. Get to know the machines limitations and applications.

9. Ensure that the machine is securely bolted to the bench and that the bench is securely bolted to the ground.

TAKE GREAT CARE WHEN OPERATING THIS MACHINE TO PROTECT YOUR BODY

1. Always wear safety glasses – everyday glasses are not suitable.

2. Dust can be caused when machining certain materials, always wear a mask.

3. Make sure you are not wearing any loose clothing such as ties, rings, bracelets that may get caught in the moving parts of the machine.

4. Keep a proper footing and balance whilst operating the machine.

5. Never leave cleaning rags, etc on or near the machine.

SAFETY FIRST

ELECTRICS

1. All electrical tools must be earthed.

2. Never use electrical tools in damp or wet environment.

3. Make sure the machine is in the off position before switching on at the mains.

4. Always immobilise the machine before servicing or setting up work in the machine.

5. Great care should be taken when using coolant fluid with machine tools.

6. Ensure the machine is correctly connected and a fuse of the proper rating is used.

CHILDREN

1. Keep children away from machines, if necessary fit safety locks to the machine and mains switches.

2. Never use machinery whilst talking to visitors, always concentrate on the job in hand!

REMEMBER ALL MACHINES ARE DANGEROUS IF NOT USED CORRECTLY!

CONTENTS

GENERAL GUIDELINES FOR USE

As with all machinery there are certain hazards involved with the operation and use of the bandsaw. Using the machine with respect and caution will considerably lessen the possibility of person injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.
This machine was designed for certain applications only. We strongly recommend that the machine is not modified, and / or used for any application other than which it was designed. **If you have any questions relative to its application do not use the machine, until you have first been in contact with the supplier or manufacturer.**
The bandsaw may not arrive with a power socket or plug. In the event of this happening, please inform Chester UK on Tel: (01244) 531 631.

SAFETY RULES FOR ALL TOOLS

USER

1. **Wear correct apparel**
   No loose clothing, gloves, rings, bracelets or other jewellery to get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
2. **Always wear eye protection**
   Refer to ANSLZ87.1 standard for appropriate recommendations. Also use face and / or a dust mask if the cutting operation is dusty.
3. **Don't overreach**
   Keep a proper footing and balance at all times.
4. **Never stand on a tool**
   Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
5. **Never leave the tool running unattended**
   Turn power off. Leave tool until it comes to a complete stop.
6. **Drugs, alcohol and medication**
   Do not operate the tool while under the influence of drugs, alcohol or any medication.
7. **Make sure the tool is disconnected from the 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 moving chips.
10. **Shut-off**
    Power and clean the bandsaw and work area before leaving the machine.

USE OF THE MACHINE

1. **Remove adjusting keys and wrenches**
   Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it 'on'.
2. **Don't force the tool**
   It will do the job better and be safer at the rate for which it was designed.
3. **Use the right tool**
   Don't force the tool or attachment to do a job for which it was not designed.

4. **Secure work**
   Use clamps or a vice to hold work when practical. It's safer than using your hands, and frees both to operate the machine.
5. **Maintain tools in top condition**
   Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
6. **Use recommended accessories**
   Consult Chester UK for recommended accessories. The use of improper accessories may cause hazards.
7. **Avoid accidental starting**
   Make sure the switch is in the **'OFF'** position before plugging in power cord.
8. **Direction of 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 the blade guide arm tight**
    A loose blade guide arm will affect the sawing accuracy.
11. **Make sure**
    The 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 vice.
14. **Always**
    Have stock firmly clamped in the vice before starting the cut.
15. **Ground all tools**
    If the tool is equipped with a three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

ADJUSTMENT

Make all adjustments with the power off. When assembling follow the manuals instructions, this will ensure correct instruction and a safe structure.

WORKING ENVIROMENT

1. **Keep the work area clean**
   Cluttered areas and benches invite accidents.
2. **Don't use in a dangerous environment**
   Don't use power tools in damp or wet locations, or expose to rain. Keep the work area well lit.
3. **Keep children etc at a safe distance.**
   All children etc should be kept at a safe distance from the work area.
4. **Don't**
   Install & use this machine in an explosive dangerous environment.

MAINTENANCE

1. **Disconnect**
   Machine from the 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 would 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 the blade tension and blade tracking are properly adjusted.
5. **Re-check**
   Blade tension after the initial cut with a new blade.
6. **To prolong the blade life**
   Release the blade tension at the end of each working day.
7. **Check the coolant level daily**
   A low coolant level can cause foaming and a high blade temperature. Dirty or weak coolant can clog the pump, cause a 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 emulsion (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 prevent**
   The corrosion of machined surfaces when a soluble is used as coolant, pay particular attention to wiping dry the surfaces where fluid accumulates and does not evaporate quickly, such as between the machine bed and vice.

SPECIFIED USAGE

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

NOISE

A weighted sound pressure level: 80 dB.

SAFETY DEVICE

1. Interlock switch on pulley cover. As soon as the pulley cover is open, the machine will come to a stop with the function of this switch. Do not remove this switch from the machine for any reason, and check it's function frequently.
2. Interlock switch on cutting area. As soon as the pulley cover is open, the machine will come to a stop with the function of this switch. Do not remove this switch from the machine for any reason, and check it's function frequently.

SPECIFICATION

Motor		0.55KW (3/4HP), 1HP (Option)		
Blade Size		19.05 x 0.8 x 2362 (Carbon Blade)		
Saw Blade Speed	60Hz (FPM)	98 164 246 328		121 197 265
	(MPM)	29 50 75 100		37 60 81
	50Hz (FPM)	81 135 203 270		101 164 220
	(MPM)	24 41 61 82		31 50 67
Model No. Cutting Capacity		812	812N	812G
90°	O (mm)	200 (8")		
	□ (mm)	178 x 305 (7" x 12")		
45°	O (mm)	127 (5")		
	□ (mm)	120 x 125 (4 3/4" x 4 7/8")		
Dimension LxWxH (mm)		1235 x 430 x 1100		
N.W. / G.W. (kgs)		110 / 130	120 / 145	145 / 170
Packing Measurement LxHxW (mm)		1270 x 470 x 1140		

DELIVERY & INSTALLATION

UNPACKING

1. Transport to the desired location before unpacking, use lifting a lifting jack (Fig. B).
2. Transport after unpacking; please use a heavy-duty fibre belt in order to lift the machine.

FIG. B

TRANSPORT RECOMMENDATIONS

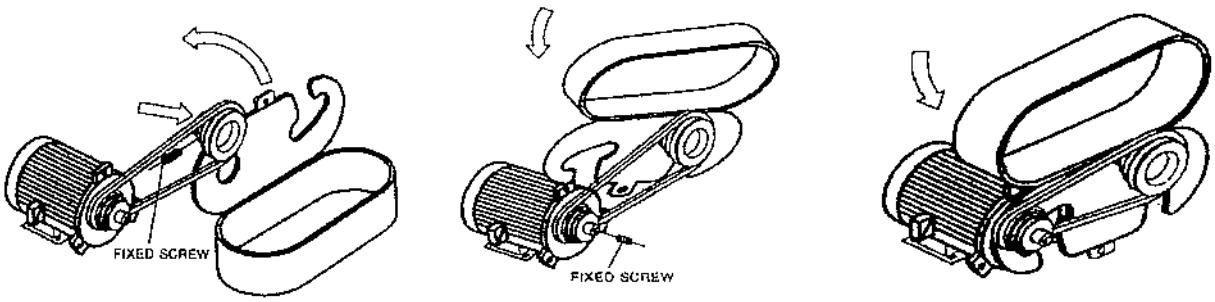
1. Tighten all locks before operating.
2. Always keep a proper footing & balance while moving the bandsaw.
3. Disconnect the power supply, and make sure the machine is properly grounded.
4. Check the blade making sure that it is running in a counter-clockwise direction
5. Keep the bandsaw out of direct sunlight, dust, wet or water.

INSTALLATION

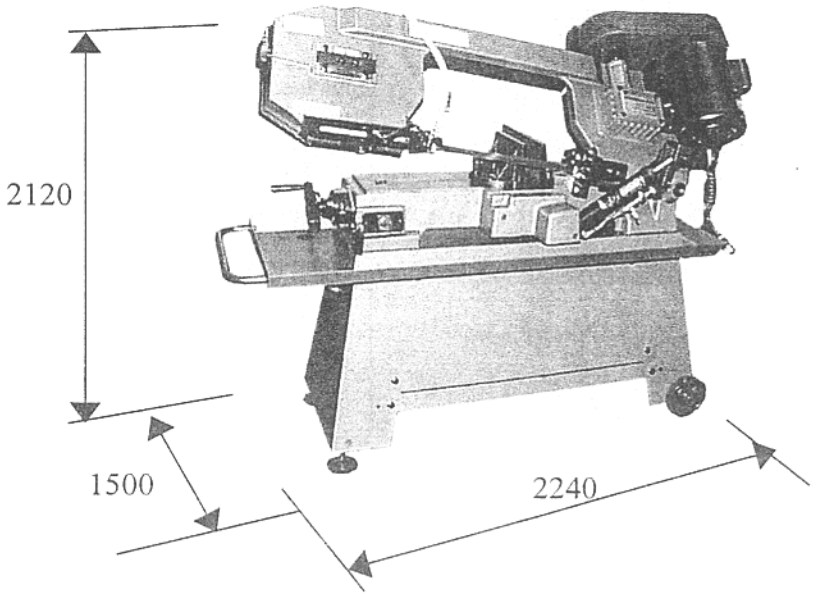
1. The saw may be mounted on a work bench or stand using six bolts.
2. The rear end of the base must be mounted on the rear of the stand or bench to permit the vertical operation for this bandsaw.

INSTALLATION STEPS FOR THE PLASTIC COVER

1. Open the plastic moulded belt cover. Inlay the left indentation to the bottom of the pulley. If the gap is too small, loosen the fixing screws of the pulley, then, move the pulley out slightly.
2. Turn the belt cover counter clockwise, set the indentation into the pulley. Then adjust the pulley until correct.
3. Set the indentation completely into the pulley, and then adjust the pulley until level with the surface. You can now fix all the related screws into place.



MINIMUM ROOM SPACE FOR MACHINE OPERATION



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.

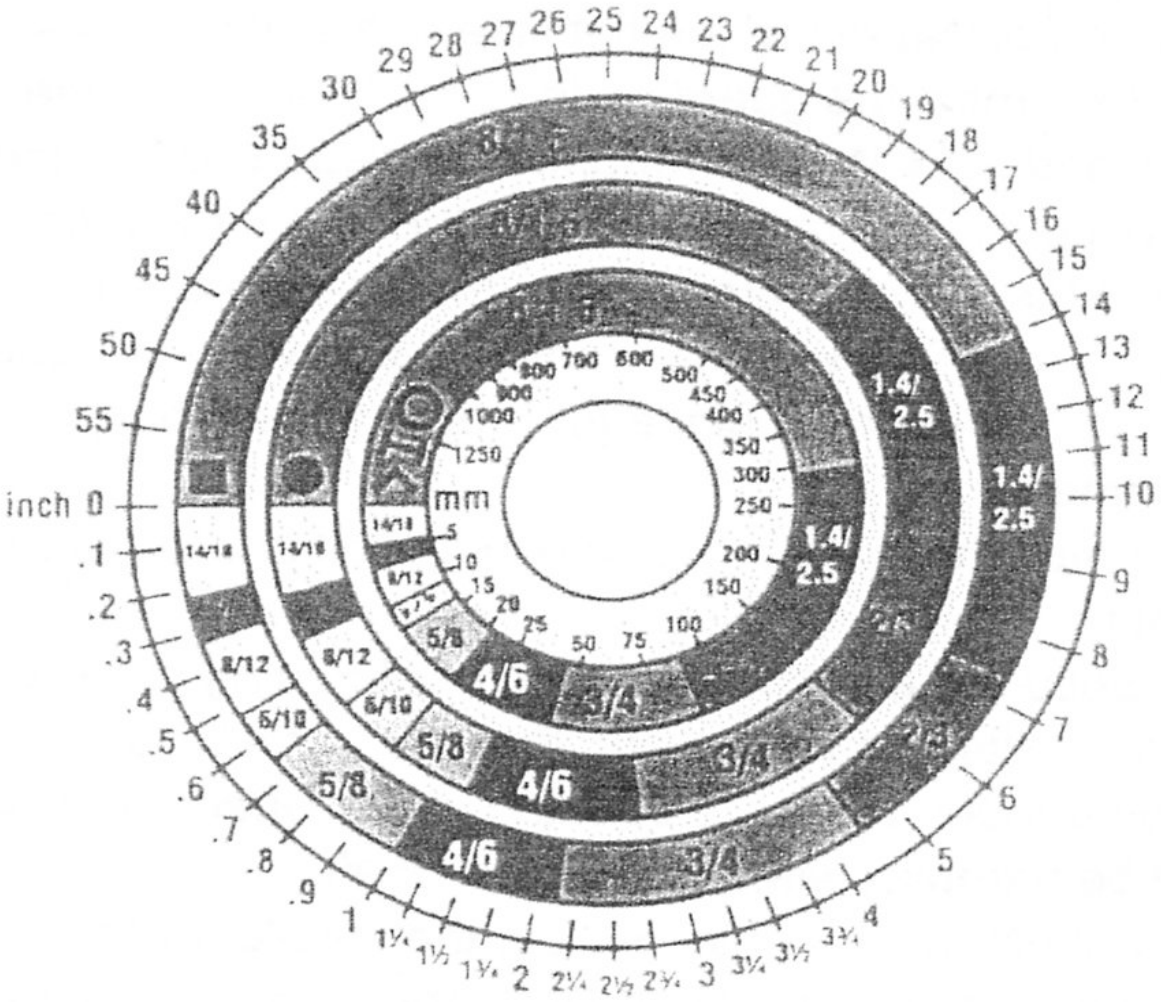
You need to consider:

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

- **Squares, Rectangles, Flats (Symbol: ■)**

Locate the width of the cut on the chart (inches on the outer circle and millimetres on the inner circle). Select the tooth pitch

TOOTH SELECTION



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 Solids (Symbol: •)**

Locate the diameter of your work piece on the chart. Select the tooth pitch on the ring marked with the round shape that aligns with the size of stock you are cutting.
EXAMPLE: 4” (100mm) round, use a ¾” Vari-Tooth.

- **Tubing, Pipe, Structural (Symbol: O H ^)**

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. Locate the average width of the cut on the chart, then, select the tooth pitch on the ring marked with the tubing and structural shape. This aligns with the average width that you are cutting.
EXAMPLE: 4” (100mm) outside diameter, 3” (75mm) inside diameter of the tubing.

4” (100mm) OD = 12.5 sq.in (79cm2)
-3” (75mm) ID = 7.0 sq.in. (44cm2)

Area = 5.5 sq.in. (35cm2)
5.5 sq.in. (35cm2) / 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 meant to be used as a starting point for most applications. For exact cutting parameters consult a saw blade supplier.

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 ¼" (6.4mm) material (10/14 Vari-Tooth)
12% When cutting ¾" (19mm) material (6/10 Vari-Tooth)
10% When cutting 1-1/4" (32mm) material (5/8 Vari-Tooth)
5% When cutting 2-1/2" (64mm) material (4/6 Vari-Tooth)

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

MATERIAL	ALLOY ASTM NO.	BAND SPEED		MATERIAL	ALLOY ASTM NO.	BAND SPEED	
		FT. / MIN	M / MIN			FT. / MIN	M / MIN
Cooper Alloy	173,932	314	96	Ni-Cr-Mo Alloy Steel	8615, 8620,8622	239	73
	330,365	284	87		8640	199	61
	623,624	264	81		E9310	174	53
	230,260,272	244	74				
	280,264,632,655	244	74	Tool Steel	A-6	199	61
	101,102,110,122, 172	234	71		A-2	179	55
					D-2	90	27
	1751,182,220,510	234	71		H-11, H-12, H-13	189	58
	625,706,715,934	234	71	Stainless Steel	420	189	58
	630	229	70		430	149	46
	811	214	65		410, 502	140	43
					414	115	35
Carbon Steel	1117	339	103		431	95	29
	1137	289	88		440C	80	24
	1141, 1144	279	85		304, 324	120	36
	1141 HI	279	85		304L	115	35
	STRESS				347	110	33
	1030	329	100		316, 316L	100	30
	1008, 1015, 1020,	319	97		416	189	58
	1025						
	1035	309	94				
	1018, 1021, 1022	299	91				
	1026, 1513	299	91				
	A36 (SHAPES), 1 ,040	269	82				
	1042, 1541	249	76				
	1044, 1045	219	67				
	1060	199	61				
	1095	184	56				

TELLTALE CHIPS

Chips are the best indicator of correct feed force. Monitor the chip formation and adjust feed accordingly.

Thin or powdered chips – increase the feed rate or reduce the band speed.

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

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

ASSEMBLY

A ¾ H/P, motor, split phase or capacitor-start it recommended for best economical performance. A counter clockwise rotation is required. Note, that following the directions given on the terminal or nameplate can reverse the rotation.

1. Assemble the motor Mounting plate to the head using the long bolt. Note the flat side of the plate faces up.
2. Assemble the guard plate to the head using the screw and Lock Washer. 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, this will achieve a correct speed / belt adjustment.
3. Place the spacer over the Long Bolt and secure it with the nut.
4. Secure the Motor to the Motor Mounting Plate with four bolts and nuts. Note that the Motor Shaft is placed through the large opening in the Guard Plate, and that it must be parallel with the Drive Shaft.
5. Assemble the Motor Pulley (the smaller of the two provided) to the Motor Shaft. Note that 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 the nearest to the bearing.
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 setscrews of both pulleys in this position.
10. Place the belt into a pulley combination for a correct blade speed (see material cut. chart).
11. Adjust the position of the Motor to obtain approximately ½" 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 related amperage slightly greater than the full load amperage of the motor.

OPERATION

WORK SET UP

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

WORK STOP ADJUSTMENT

1. Loosen the thumbscrew holding the work stop casting to the shaft.
2. Adjust the work stop casting to the desired length position.
3. Rotate the work stop, as to 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.

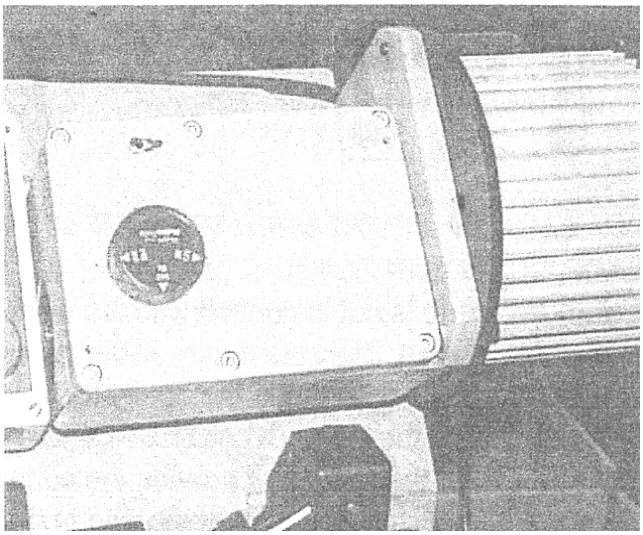
BLADE SPEEDS

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

Material	Speed (MPM)	
	50Hz	60Hz
Tool, Stainless, Alloy Steel, Bearing Bronze	24 MPM	29 MPM
Medium to High Carbon Steels, Hard Brass or Bronze	41 MPM	50 MPM
Low to Medium Carbon Steel Soft Brass	61 MPM	75 MPM
Aluminium, Plastic	82 MPH	100 MPH

MANUAL GEAR TYPE SPEED CHANGING

1. Select the proper cutting speed according to the material of work-pieces, and use the blade selection chart.
2. Turn the speed-changing handle, for the necessary speed.
3. DO NOT change the speed during cutting.
4. Alter the speed when the bandsaw is at a complete stop.
5.

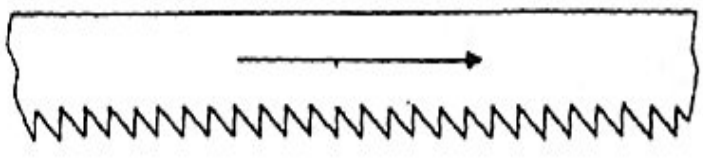


Note:
The oil of the gearbox is between 950cc ~ 1000cc.

DIRECTION OF BLADE TRAVEL

Make sure the blade is attached to the pulleys, so that the vertical edge engages the work piece.

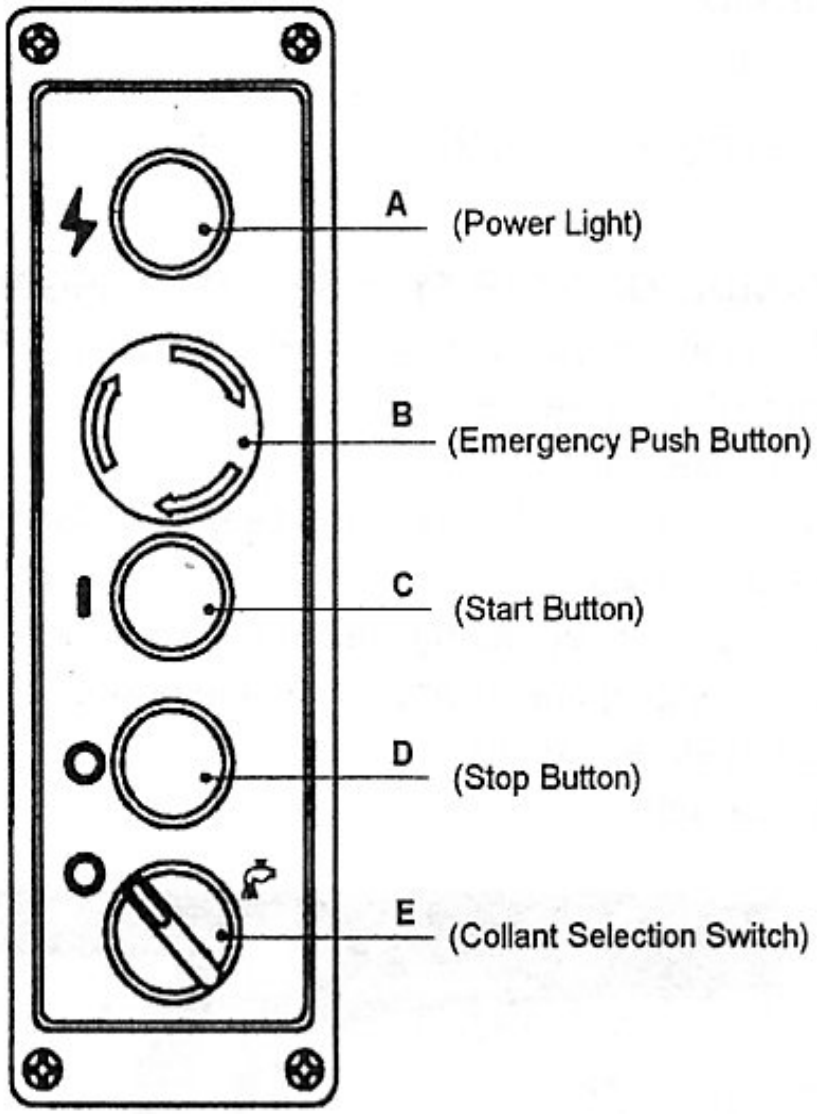
BLADE MOVEMENT.



Blade Direction

STARTING SAW

Switch button function description (FOR CE ONLY)



CAUTION:

Never operate the bandsaw without the guards in position. Make sure the blade is not in contact with the work when the motor is started. Start the motor, allow the saw to reach full speed, then you can begin the cut by letting the head down slowly onto the work. Don't drop or force. Let the weight of the saw head provide the cutting force. The saw automatically shuts off at the end of the cut.

BLADE SELECTION

An 8-tooth per inch general use blade is comes fitted to the bandsaw, additional blades in 4, 6, 10, 14 and 18 tpi are available. The choice of the blade pitch is governed by the thinness of the work that is to be cut.

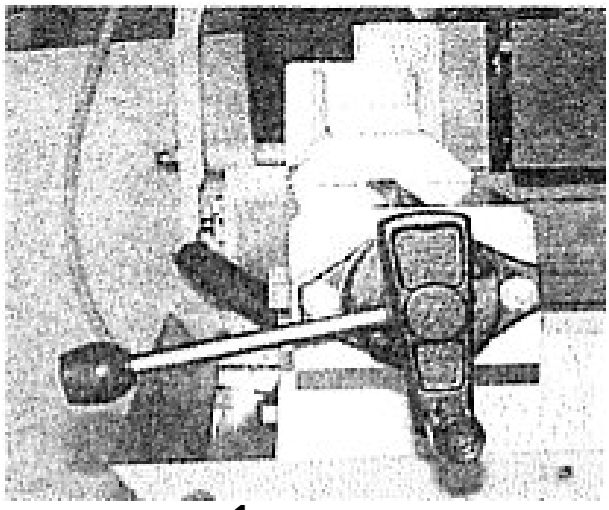
In general, the thinner the work piece, the more teeth are required. A number of three teeth should engage the work piece at all times for proper cutting. If the teeth of the blade are far apart, so that they straddle the material, will cause damage and will affect the end result.

CHANGING BLADE

Raise the saw head to a vertical position and open the blade guards. Loosen the 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. This should be placed at the top of the blade.
4. Remove your left hand from the bottom pulley, and place at the top of the blade to continue the application on the upward pull on the blade.
5. Remove your right hand from the blade and adjust the position of the top pulley. This will permit the 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 in the correct position, so that no blade slippage occurs. Try not to tighten excessively.
7. Replace the blade guards.
8. Place 2-3 drops of oil on the blade.

HOW TO USE THE CHUCK VICE



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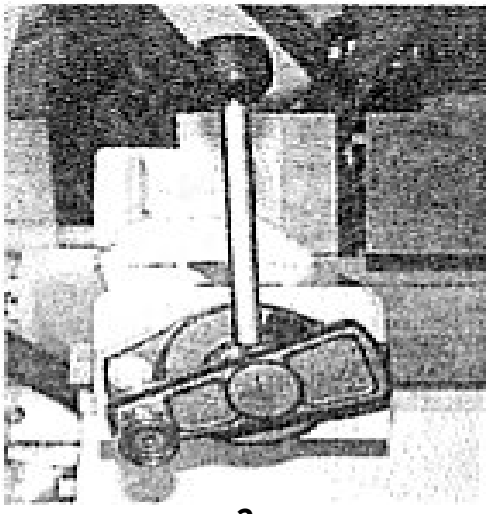

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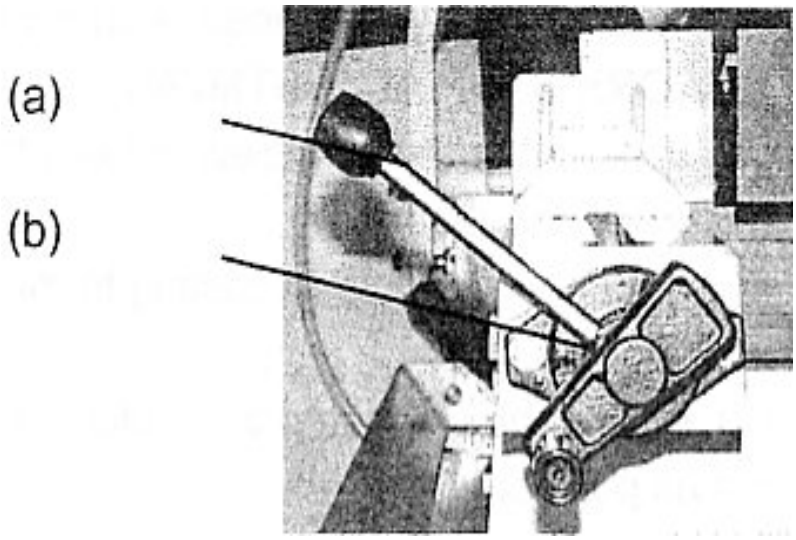


3

1. The position of the vice when tightened.
2. The position of the vice when loosened (completely opened).
3. The position of the vice when loosened (half opened).

TRU-LOCK VICE SYSTEM INSTRUCTIONS

To operate, follow the below instructions:

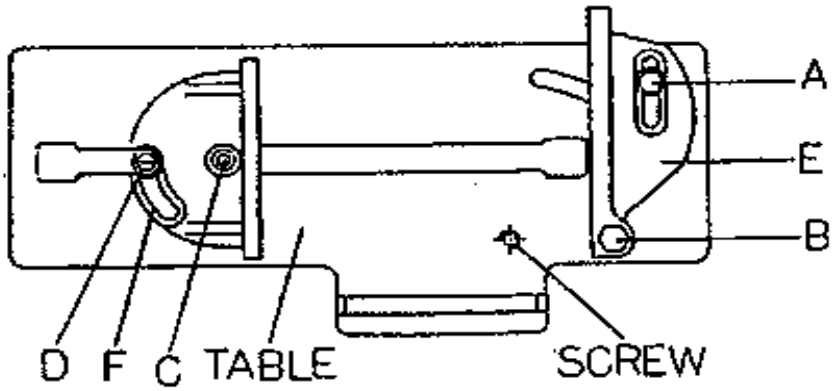
1. Raise the arm 2" above the work piece, and then close the cylinder valve. Doing this will keep the arm stationary.
2. Put your work piece on the table. Move the vice handle (a) upwards to 45 degree angle (half open) to loosen the vice. Move the vice jaw bracket against the work piece by turning the rectangular handle (b). Push down on the vice handle (a) to lock the work piece in position.
3. To loosen the work piece from the vice, hold the work piece and lift the handle (a) to a 90-degree position (completely opened). Then the work piece can be removed.

CONTINUED CUTTING

When you need to cut your work piece allot, raise the vice handle (a) to loosen and adjust the position. Then you can push down on the same handle to tighten.
You can also push the vice handle (a) down first, and then tighten by turning the rectangular handle (b) clockwise. After finishing the cut, you can loosen the work piece by turning the rectangular handle.
This Tru-Lock Vice System has a 3mm tightening the travel when the rectangular handle is completely opened. There is only a 1mm tightening travel necessary for normal metal materials. The operator can tighten the work piece by pushing down the vice handle (a) with a certain amount of pressure, depending on the hardness of the work piece.

A QUICK VICE ADJUSTMENT FOR A ANGLE CUT

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



BLADE GUIDE BEARING ADJUSTMENT

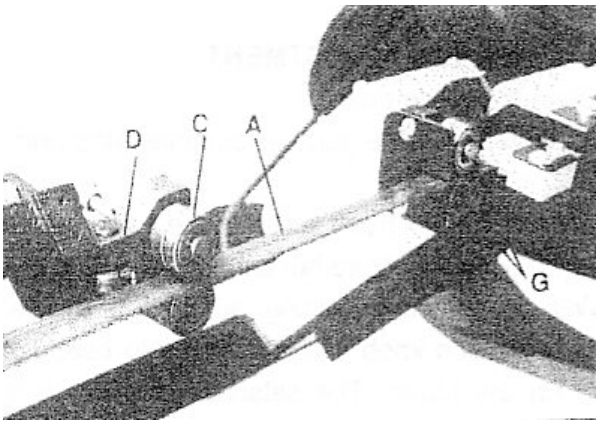
This is the most important adjustment on the saw. It is impossible to get satisfactory work from the saw if the blade guides are not properly adjusted. The blade guide bearings on your metal cutting band saw are adjusted and power tested with several test cuts before leaving the factory. The need for adjustment should rarely occur, providing the saw is used correctly.

If the guides do require adjustment, it is advisable to correct immediately. An incorrect adjustment will make the blade not cut straight, and if it is left to continue it will cause serious blade damage. Guide adjustment is a critical factor in the performance of the saw.

It is always advisable to try a new blade, to see if this corrects poor cutting, before you begin to adjust. If a new blade does not correct the problem, check the blade guides for a correct 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 Allen wrench.
4. Position the eccentric by turning the bolt to the desired position of clearance.
5. Tighten the nut.
6. Adjust the second blade guide bearing in the same manner.

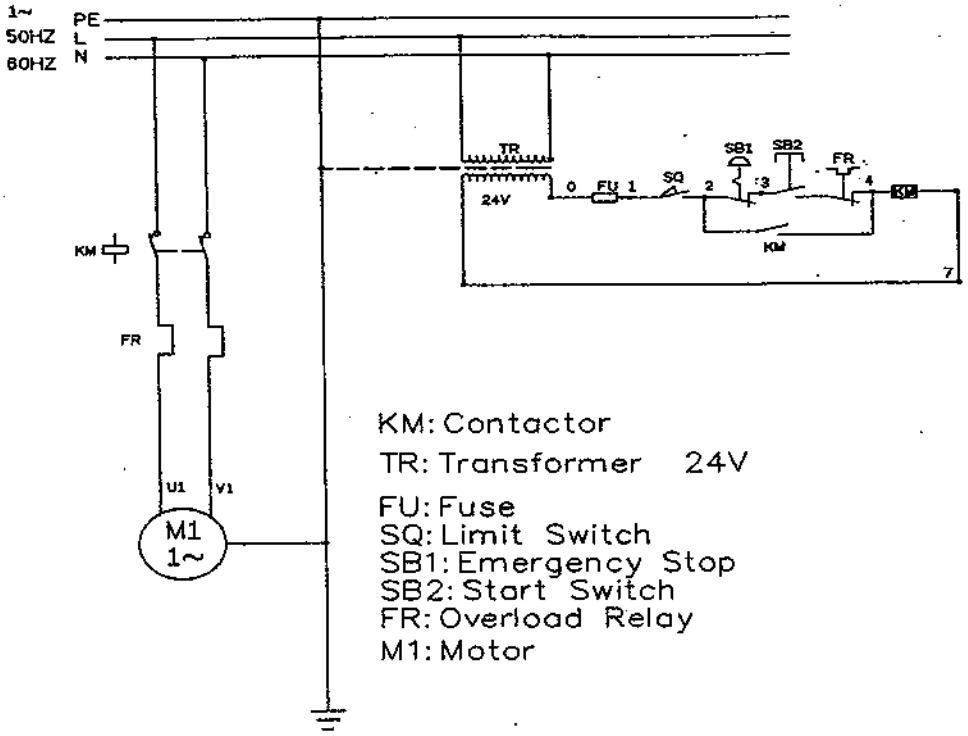
Remark:

1. Adjust the tension of the 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) counter-clockwise. When the bearing (D) touches the saw blade correctly, tighten the nut (E).
4. To adjust, loosen set screw (F) and move the blade adjust up or down until it lightly touches the back of the blade (A).
5. Repeat 1, 2, 3 and 4 to adjust the other side's blade guide bearings (G).
6. Correct the base and blade to a vertical position to the scale. If necessary, loosen set screw (F).
7. Set down the blade frame, correct the jaw vice (H) and blade to a vertical position with a scale then tighten the set screws (I).
8. Loosen set screw (K), move the front jaw vice (J) against the rear jaw vice tightly. Finish correcting by tightening the set screw (K).

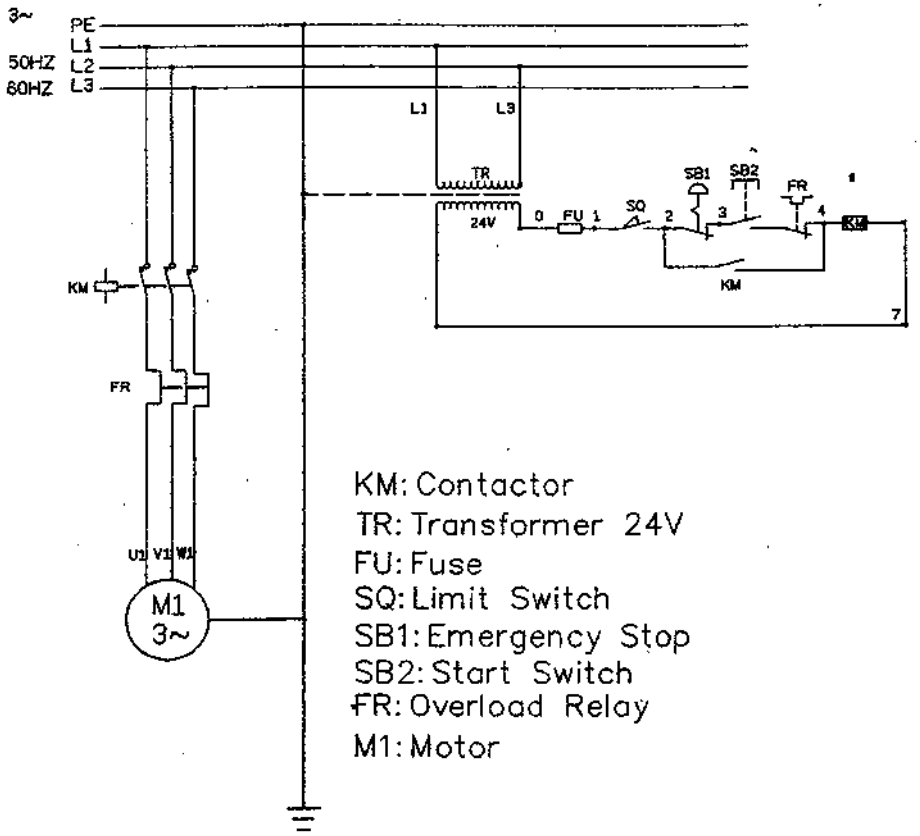
TROUBLE SHOOTING

Symptom	Possible Causes	Corrective Action
Excessive Blade Damage	1. Material is loose in the vice.	1. Clamp work securely.
	2. Incorrect speeds or feed.	2. Adjust the speed or feed.
	3. Blade teeth spacing is too large.	3. Replace with a smaller TPI blade.
	4. Material is too course.	4. Use blade at slower speed & TPI.
	5. Incorrect blade tension.	5. Adjust tension so blade does not slip on the wheel.
	6. Blade is in contact with material before the saw is started.	6. Place blade in contact with work only after the motor has started.
	7. Blade rubs on the wheel flange.	7. Adjust the wheel alignment.
	8. Misaligned guide pivots.	8. Adjust guide pivots.
	9. Blade is too thick.	9. Use a thinner blade.
Premature Blade Dulling	1. Blade teeth are too course.	1. Use a smaller TPI blade.
	2. Too much speed.	2. Reduce the speed.
	3. Inadequate blade tension.	3. Adjust the spring
	4. Hard spots or scale on material.	4. Reduce speed, increase feed pressure.
	5. Blade is twisting.	5. Replace blade, adjust blade tension.
	6. Insufficient blade tension.	6. Tighten blade tension.
	7. Blade is sliding.	7. Tighten blade tension, reduce speed.
Unusual Wear on Side or Back of Blade	1. Blade guides are worn.	1. Replace blade guides.
	2. Blade guide pivots are misaligned.	2. Adjust guide pivots.
	3. Blade guide brackets are loose.	3. Tighten blade guide brackets.
Teeth Ripping from Blade	1. Blade is too course for the work.	1. Use a fine TPI blade.
	2. Too much pressure, speed is too slow.	2. Decrease pressure and increase speed.
	3. Work piece is vibrating.	3. Clamp work more securely.
	4. Blade is too fine for the work.	4. Use a course TPI blade.
Motor Overheating	1. Blade tension is too high.	1. Reduce the blade tension.
	2. Drive belt tension is too high.	2. Reduce the drive belt tension.
	3. Blade is too course.	3. Use a smaller TPI blade.
	4. Blade is too fine.	4. Use a courser TPI blade.
	5. Gears need lubrication.	5. Lubricate gears.
	6. Cut is binding blade.	6. Decrease the feed and speed.
Bad, Crooked or Rough Cuts	1. Feed pressure is too great.	1. Adjust spring to reduce pressure.
	2. Guide pivots are misaligned.	2. Adjust guide pivots.
	3. Inadequate blade tension.	3. Increase blade tension.
	4. Blade is dull.	4. Replace blade.
	5. Incorrect speed.	5. Adjust speed.
	6. Blade guides are spaced out too much.	6. Adjust guide spacing.
	7. Blade guide assembly is loose.	7. Tighten guide assembly.
	8. Blade is too course.	8. Use a finer TPI blade.
Blade is Twisting	1. Cut is binding blade.	1. Decrease feed pressure.
	2. Blade tension is too high.	2. Decrease the blade tension.

CIRCUIT DIAGRAM



KM: Contactor
TR: Transformer 24V
FU: Fuse
SQ: Limit Switch
SB1: Emergency Stop
SB2: Start Switch
FR: Overload Relay
M1: Motor



KM: Contactor
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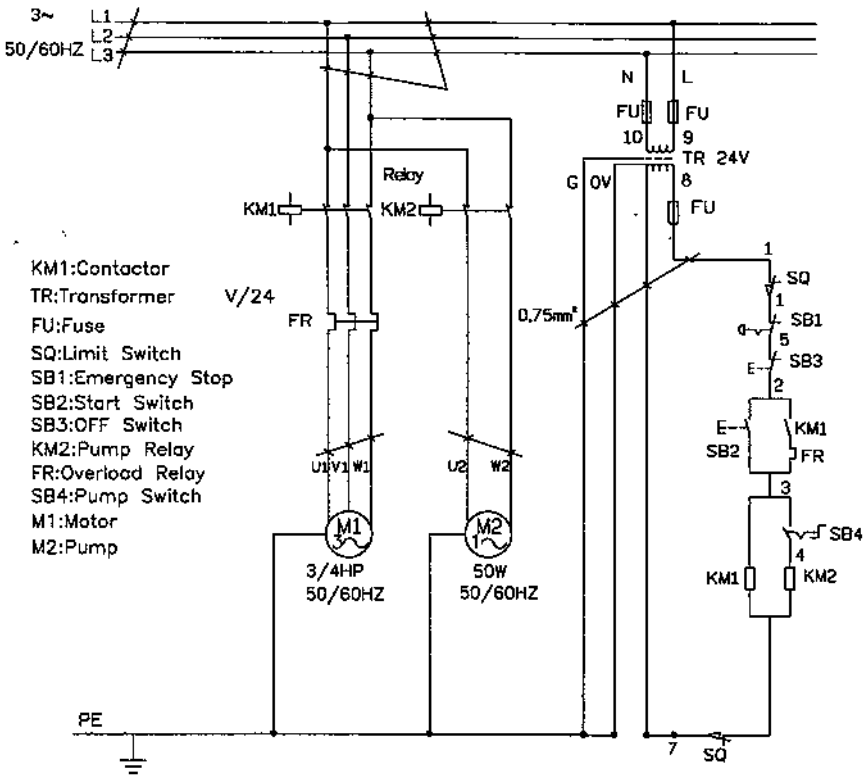
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L2
L3
50/60HZ
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FU
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9
TR 24V
G 0V
8
FU
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KM1
KM2
KM1:Contactor
TR:Transformer V/24
FU:Fuse
SQ:Limit Switch
SB1:Emergency Stop
SB2:Start Switch
SB3:OFF Switch
KM2:Pump Relay
FR:Overload Relay
SB4:Pump Switch
M1:Motor
M2:Pump
FR
0.75mm²
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SQ
1
SB1
5
SB3
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KM1
SB2
FR
3
SB4
4
KM1
KM2
U1 V1 W1
U2 W2
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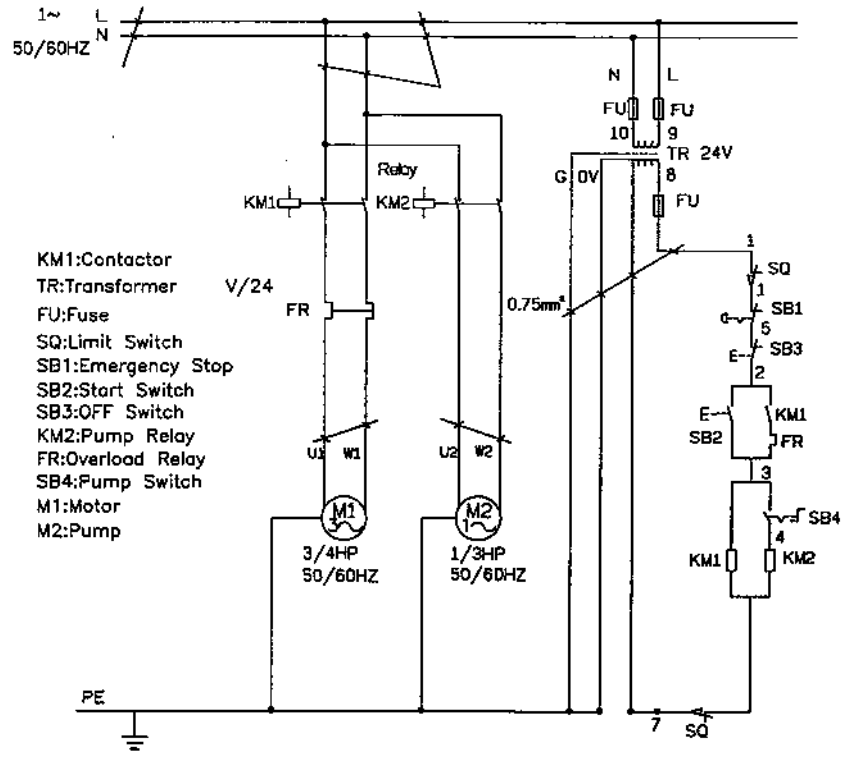
50/60HZ
M2
50W
50/60HZ
PE
7
SQ

CE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FU
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FU
Relay
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KM2
KM1:Contactor
TR:Transformer V/24
FU:Fuse
SQ:Limit Switch
SB1:Emergency Stop
SB2:Start Switch
SB3:OFF Switch
KM2:Pump Relay
FR:Overload Relay
SB4:Pump Switch
M1:Motor
M2:Pump
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SB1
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SB3
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KM1
SB2
FR
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SB4
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KM1
KM2
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U2 W2
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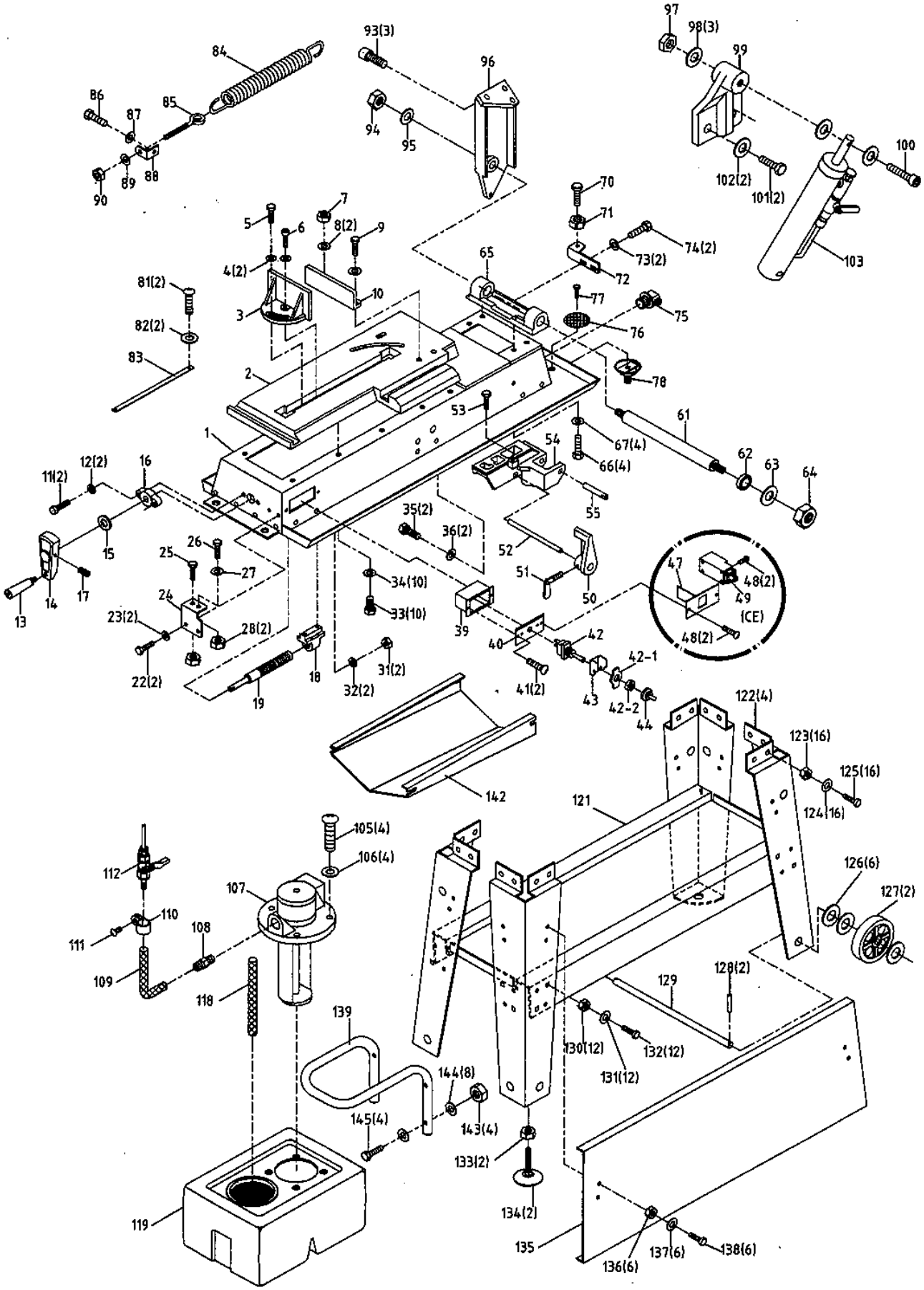
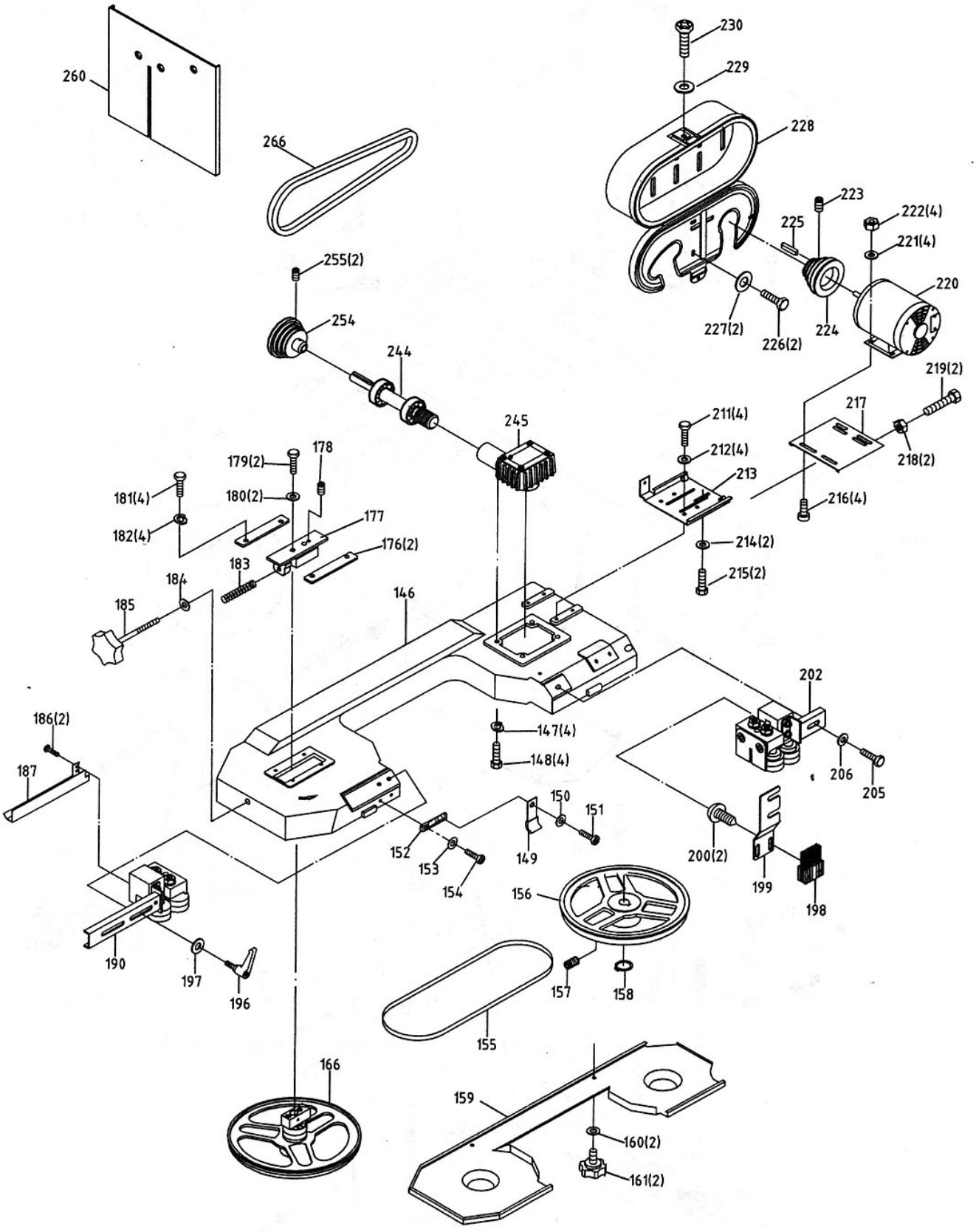
50/60HZ
M2
1/3HP
50/60HZ
PE
7
SQ

CE

PART DIAGRAM 812

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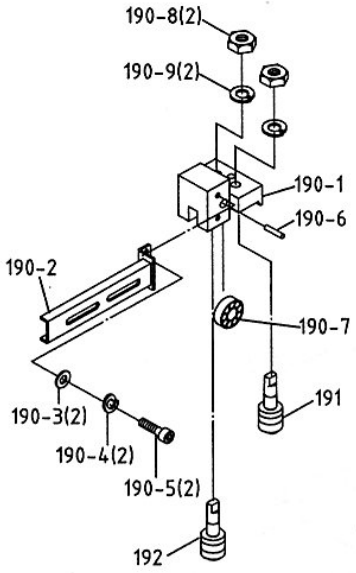
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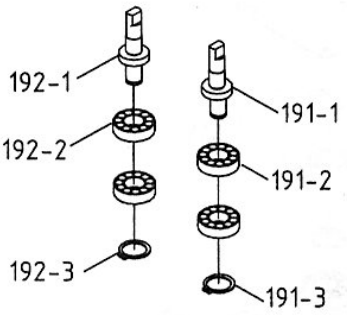
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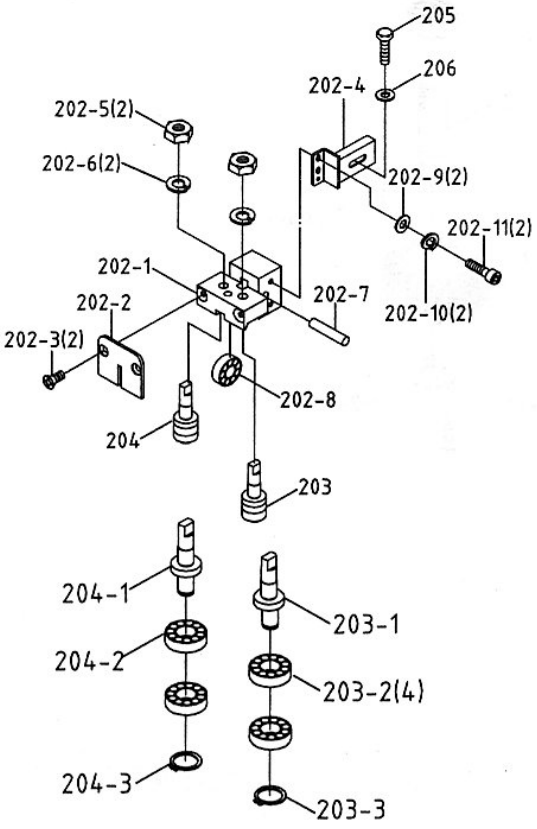
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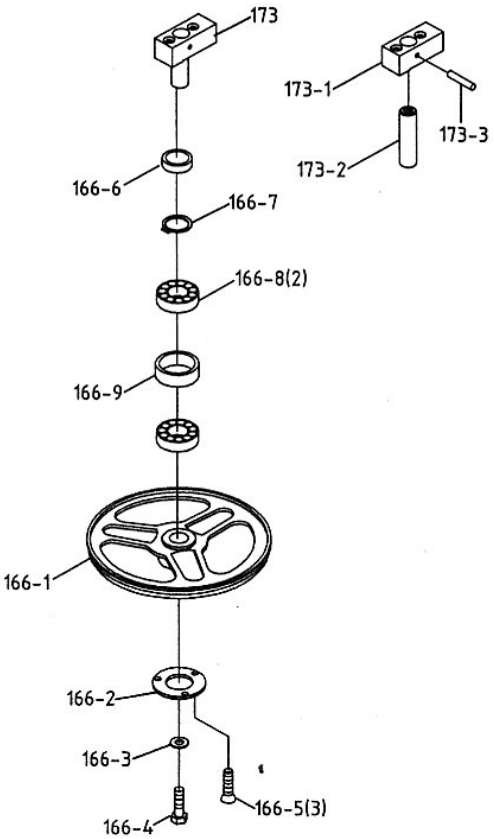
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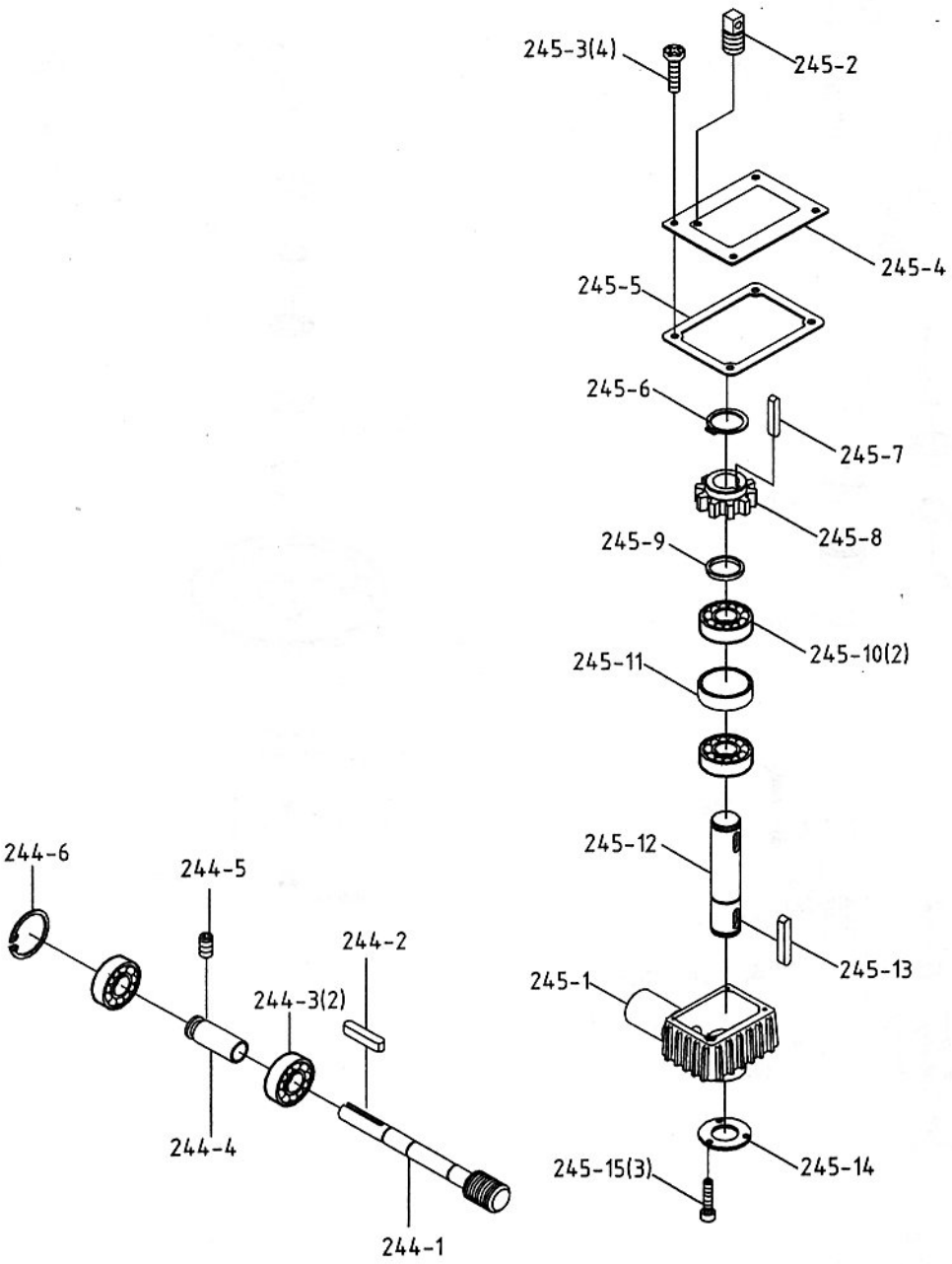
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244-1

PART LIST 812

Code No.	Part No.	Description	Specification	Quantity
1	195016	Base		1
2	195006	Vice Table		1
3	181114	Vice Jaw Bracket (Front)		1
4	W008	Washer	3/8" x 25 x t2	2
5	S012	Hex. Head Screw	3/8" x 1-1/2"	1
6	S410	Hex. Socket Head Screw	3/8" x 1-1/2"L	1
7	N001	Hex. Nut	1/2"	1
8	W002	Washer	1/2" x 28 x t2	2
9	S003	Hex. Head Screw	1/2" x 2"L	1
10	181113-1	Vice Jaw Bracket (Rear)		1
11	S006	Hex. Head Screw	1/4" x 1/2"L	2
12	W017	Washer	5/16"	2
13	3027	Knob		1
14	193057	Knob		1
15	HW007	Washer	M12 x t2	1
16	195005A	Support Lamp		1
17	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	1
18	181138B	Acme Nut		1
19	192009A	Acme Screw		1
22	S064	Hex. Head Screw	5/16" x 5/8"L	2
23	W016	Washer	5/16" x 23 x t3	2
24	195023A	Down Bracket		1
25	S014	Hex. Head Screw	3/8" x 1-3/4"	1
26	S015	Hex. Head Screw	3/8" x 2"	1
27	W013	Washer	3/8" x 20 x t2	1
28	HB810	Net	3/8"	2
31	N003	Hex. Nut	1/4"	2
32	W017	Washer	5/16"	2
33	S022	Hex. Head Screw	5/16" x 3/4"L	10
34	W017	Washer	5/16" x 18 x t1.5	10
35	S013	Hex. Head Screw	3/8" x 1-1/4"	2
36	W017	Washer	5/16" x 18 x t1.5	2
39	ET1930	Electrical Box		1
40	ET1931	Cover		1
41	S708	Cross Round Head Screw	3/16" x 3/8"L	2
42	ET1401	Toggle Switch		1
42-1		Switch Indicator		1
42-2		Hex. Nut		1
43	3131	Switch Cover		1
44	181932	Toggle Switch Cover		1
47	181989	Switch Bracket (For CE Only)		1
48	S708	Cross Round Head Screw	3/16" x 3/8"L	4
49	ET1617	Switch (For CE Only)		1
50	181125	Stop Block		1
51	181130	Thumb Screw		1
52	3021	Stock Stop Rod		1
53	181130	Thumb Screw		1
54	195009A	Cylinder Lower Support		1
55	195024	Cylinder Lower Support		1

Code No.	Part No.	Description	Specification	Quantity
61	192042A	Support Rod		
62	195027	Bushing		1
63	W002	Washer	1/2" x 28 x t2	1
64	N016	Net	1/2"	2
65	195003A	Bracket		2
66	S013	Hex. Head Screw	3/8" x 1-1/4"	1
67	W013	Washer	3/8" x 20 x t2	4
70	S014	Hex. Head Screw	3/8" x 1-3/4"L	4
71	N005	Hex. Nut	3/8"	1
72	181112	Support Plate		1
73	W017	Washer	5/16" x 18 x t1.5	1
74	S022	Hex. Head Screw	5/16" x 3/4"L	2
75	ET2108	Wire Nipple	5/8"	2
76	195019	Filter		1
77	S006	Hex. Head Screw	1/4" x 1/2"L	1
78	195018	Strainer		1
81	S708	Cross Round Head Screw	3/16" x 3/8"L	1
82	W007	Washer	3/16" x 12 x t0.8	2
83	195048	Scale		2
84	195045	Spring		1
85	181118	Spring Adjusting Screw		1
86	S022	Hex. Head Screw	5/16" x 3/4"L	1
87	W016	Washer	5/16" x 23 x t2	1
88	181115	Spring Handle Bracket		1
89	W014	Washer	3/8" x 23 x t2	1
90	N005	Hex. Nut	3/8"	1
93	S476	Hex. Socket Head Screw	3/8" x 1-1/4"L	3
94	HB811	Net	1/2"	1
95	W002	Washer	1/2" x 28 x t2	1
96	195002	Rear Pivot Bracket		1
97	N005	Hex. Nut	3/8"	1
98	W013	Washer	3/8" x 20 x t2	3
99	195010	Cylinder Upper Support		1
100	S412	Hex. Socket Head Screw	3/8" x 2-1/4"L	1
101	S010	Hex. Head Screw	3/8" x 1"L	2
102	W008	Washer	3/8" x 25 x t2	2
103	195036	Cylinder Complete Set		1
105	S701	Cross Round Head Screw	1/4" x 1/2"L	4
106	W004	Washer	1/4" x 19 x t1.5	4
107		Pump		1
108	181852	Coupler	3/8" PT	1
109	181981	Hose	0D12 x ID8 x 2000	1
110	181601	Hose Clip	5/8"	1
111	S708	Cross Round Head Screw	3/16" x 3/8"L	1
112	195033S	Valve Assembly	PT1/8" x 1/8"	1
118	181854	Hose	OD16 x ID13 x 260	1
119	181256	Coolant Tank		1
121	195044	Built-in Shelf		1
122	195043	Stand Leg		4

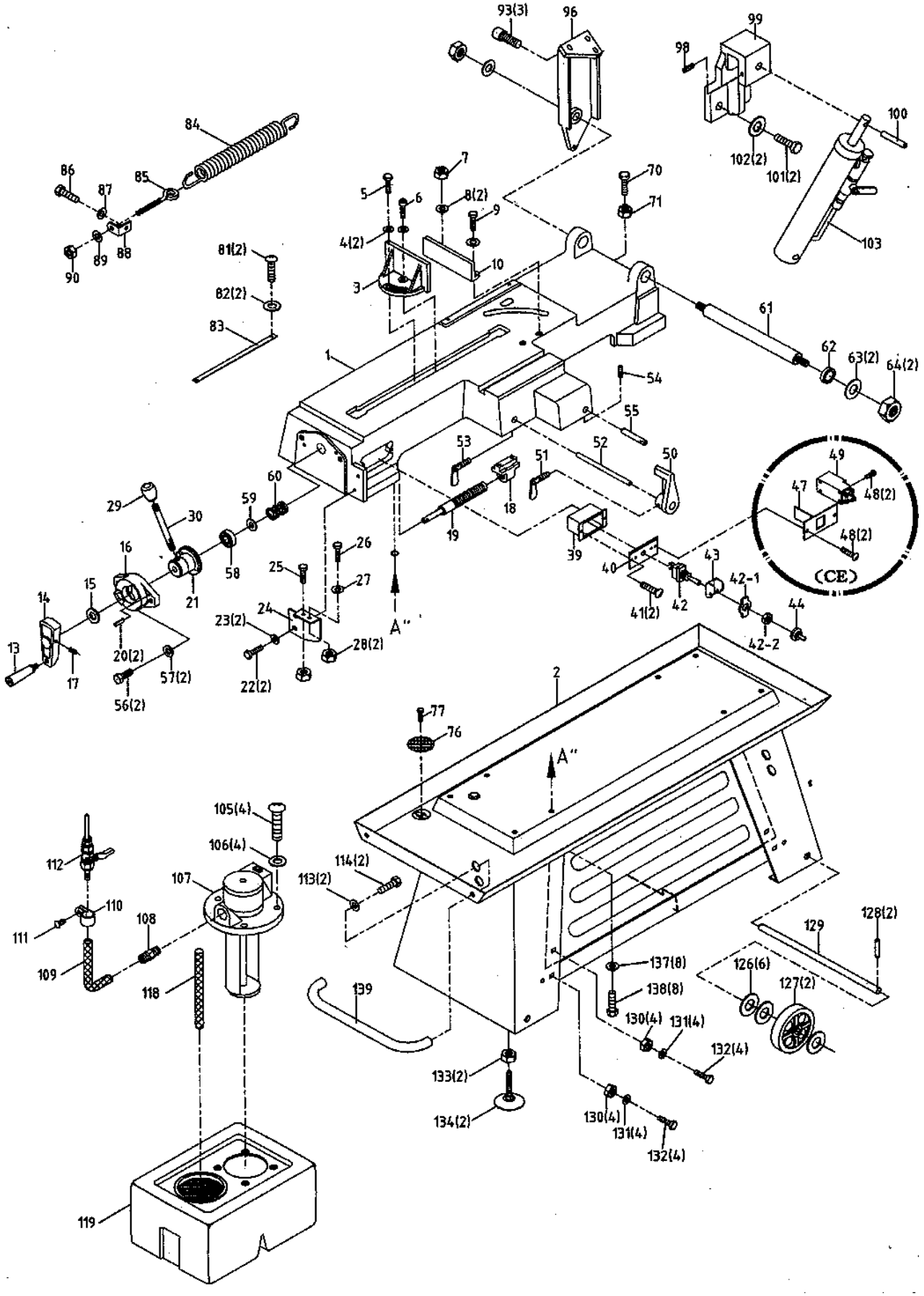
Code No.	Part No.	Description	Specification	Quantity
123	N007	Hex. Nut	5/16"	16
124	W017	Washer	5/16" x 18 x t1.5	16
125	S504	Carriage Screw	5/16" x 3/4"L	16
126	W019	Washer	5/8" x 40 x t3	6
127	181129	Wheel		2
128	HP120	Cotter Pin	ϕ3 x 25L	2
129	195022	Wheel Rod		1
130	N007	Hex. Nut	5/16"	12
131	W017	Washer	5/16" x 18 x t1.5	12
132	S022	Hex. Head Screw	5/16" x 3/4"L	12
133	N001	Hex. Nut	1/2"	2
134	195038	Coaster of Stand	1/2"	2
135	195034	Front Support Plate		1
136	N007	Hex. Nut	5/16"	6
137	W017	Washer	5/16" x 18 x t1.5	6
138	S504	Carriage Screw	5/16" x 3/4"L	6
139	195021	Kond W/Shaft		1
142	195026	Fluid Collection Plate		1
143	N005	Hex. Nut	3/8"	4
144	W014	Washer	3/8" x 23 x t2	8
145	S013	Hex. Head Screw	3/8" x 1-1/4"L	4
146	195001	Body Frame		1
147	W204	Spring Washer	3/8"	4
148	S013	Hex. Head Screw	3/8" x 1-1/4"L	4
149	181240	Switch Cut Off Tip		1
150	W017	Washer	5/16" x 18 x t1.5	1
151	S019	Hex. Head Screw	5/16" x 1-1/2"	1
152	195004	Upper Bracket		1
153	W013	Washer	3/8" x 20 x t2	2
154	S010	Hex. Head Screw	3/8" x 1"	2
155	181894	Blade	0.032" x 3/4" x 93" x 6-10T	1
156	181214-2	Drive Wheel		1
157	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	2
158	HCS13	C-Retainer Ring	S25	1
159	195025	Blade Back Cover		1
160	W005	Washer	1/4" x 16 x t1.5	2
161	181202	Knob		2
166	18123A	Idler Wheel Assembly		1
166-1	181205-2	Idler Wheel		1
166-2	3072-2	Bearing Cover		1
166-3	W017	Washer	5/16" x 18 x t1.5	1
166-4	S022	Hex. Head Screw	5/16" x 3/4"L	1
166-5	S302	Flat Cross Head Screw	3/16" x 3/8"L	3
166-6	181207-1	Bushing		1
166-7	HCR04	C-Retainer Ring	R35	1
166-8	CA6202ZZ	Bearing	6202Z	2
166-9	181245	Bushing		1
173	18122	Shaft Assembly		1
173-1	181208	Sliding Plate Draw Block		1

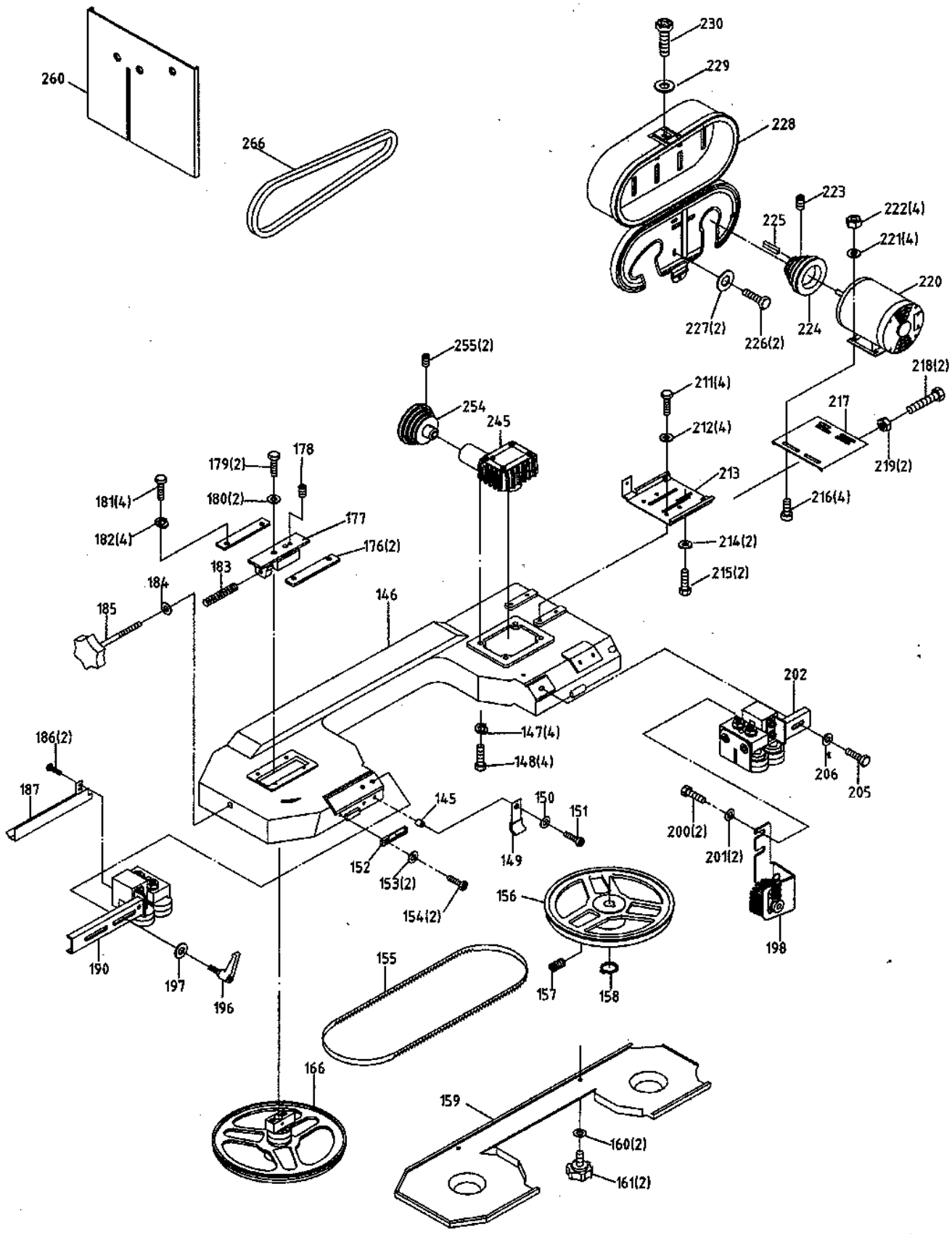
Code No.	Part No.	Description	Specification	Quantity
173-2	181209	Blade Wheel Shaft		1
173-3	HP013	Pin	ϕ4 x 22L	1
176	181210	Sliding Plate		2
177	181211	Blade Tension Sliding Block		1
178	S608	Hex. Socket Headless Screw	5/16" x 3/4"L	1
179	S019	Hex. Head Screw	5/16" x 1-1/2"L	2
180	W015	Washer	5/16" x 12 x t2	2
181	S020	Hex. Head Screw	5/16" x 3/4"L	4
182	W205	Spring Washer	5/16"	4
183	181212	Spring		1
184	W008	Washer	3/8" x 25 x t2	1
185	181213	Blade Adjustable Knob		1
186	S405	Cross Round Head Screw	1/4" x 3/8"L	2
187	195029	Blade Cover		1
190	195015S	Blade Adjustable Asembly		1
190-1	195015	Blade Adjustable		1
190-2	195008	Adjustable Bracket (Front)		1
190-3	W004	Washer	1/4" x 19 x t1.5	2
190-4	W202	Spring Washer	1/4"	2
190-5	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2
190-6	195013	Bearing Pin		1
190-7	CA608ZZ	Bearing	608ZZ	5
190-8	N016	Hex. Nut	5/16"-24"UNF	2
190-9	N007	Spring Washer		2
191	195012S	Eccentric Shaft Assembly		1
191-1	195012	Eccentric Shaft		1
191-2	CA608ZZ	Bearing	608ZZ	2
191-3	HCS01	C-Retainer Ring	S10	1
192	195011S	Bearing Shaft Assembly		1
192-1	195011	Bearing Shaft		1
192-2	CA608ZZ	Bearing	608ZZ	2
192-3	HCS01	C-Retainer Ring	S10	1
196	195041	Grip		1
197	W008	Washer	3/8" x 25 x t2	1
198	181241	Brush		1
199	195035	Brush Support		1
200	S804	Screw	3/16" x 3/8"L	1
202	195014S	Blade Adjustable Assembly (Rear)		1
202-1	195014	Blade Adjustable (Rear)		1
202-2	3069	Deflector Plate		1
202-3	S301	Flat Cross Head Screw	1/4" x 1/2"L	2
202-4	195007	Adjustable Bracket (Rear)		1
202-5	N016	Hex. Nut	5/16"-24"UNF	2
202-6	N007	Spring Washer	5/16"	2
202-7	195013	Bearing Pin		1
202-8	CA608ZZ	Bearing	608ZZ	1
202-9	W004	Washer	1/4" x 19 x t1.5	2
202-10	W202	Spring Washer	1/4"	2
202-11	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2

Code No.	Part No.	Description	Specification	Quantity
203	195012S	Eccertric Shaft Assembly		1
203-1	195012	Eccertric Shaft		1
203-2	CA608ZZ	Bearing	608ZZ	2
203-3	HCS01	C-Retainer Ring	S10	1
204	195011S	Bearing Shaft Assembly		1
204-1	195011	Bearing Shaft		1
204-2	CA608ZZ	Bearing	608ZZ	2
204-3	HCS01	C-Retainer Ring	S10	1
205	S013	Hex. Head Screw	3/8" x 1-1/4"L	1
206	W008	Washer	3/8" x 25 x t2	1
211	S022	Hex. Head Screw	5/16" x 3/4"L	4
212	W016	Washer	5/16" x 23 x t2	4
213	181233A	Motor Mount Bracket		1
214	W018	Washer	5/16" x 23 x t3	2
215	S022	Hex. Head Screw	5/16" x 3/4"L	2
216	S503	Carriage Screw	5/16" x 1"L	4
217	181234A	Motor Mount Plate		1
218	S021	Hex. Head Screw	5/16" x 2"L	2
219	N007	Hex. Nut	5/16"	2
220	195032	Motor		1
221	W016	Washer	5/16" x 23 x t2	4
222	N007	Hex. Nut	5/16"	4
223	S604	Hex Socket Headless Screw	1/4" x 3/8"L	1
224	181235	Motor Pulley		1
225	K008	Key	5 x 5 x 30L	1
226	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	2
227	W004	Washer	1/4" x 19 x t1.5	2
228	181237I	Motor Pulley Cover		1
229	W005	Washer	1/4" x 16 x t1.5	1
230	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	3
244	18138	Worm Gear Shaft Assembly		
244-1	181223	Worm Shaft		1
244-2	K008	Key	5 x 5 x 30L	1
244-3	CA6003LLU	Bearing	6003LLU	2
244-4	181224	Bearing Bushing		1
244-5	S607	Hex. Socket Headless Screw	5/16" x 1/2"L	1
244-6	C002	C-Retainer Ring	R17	1
245	18121	Gear Box Assembly		1
245-1	181216A	Gear Box		1
245-2	3149	Vent Plug	M8 x P1	1
245-3	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	4
245-4	181222-1	Gear Box Cover		1
245-5	3092	Gear Box Gasket		1
245-6	HCS13	C-Retainer Ring	S25	1
245-7	HK025	Key	6 x 6 20L	1
245-8	181220-1	Worm Gear		1
245-9	181-218-1	Bushing		1
245-10	CA6205LLU	Bushing	6205LLU	2
245-11	181217-1	Bushing		1

Code No.	Part No.	Description	Specification	Quantity
245-12	181219-1	Transmission Wheel Shaft		1
245-13	HK025	Key	6 x 6 x 20L	1
245-14	181246	Bearing Cover		1
245-15	S708	Cross Round Head Screw	3/16" x 3/8"L	3
254	181226	Spindle Pulley		1
255	S604	Hex. Socket Headless Screw	1/4" x 3/8"L	2
260	3055A	Vertical Saw Table (Optional)		1
266	181874	Belt	3V x 270	1

PART DIAGRAM 812N

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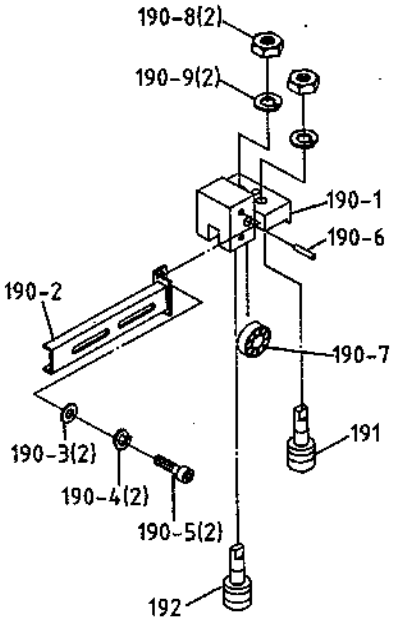
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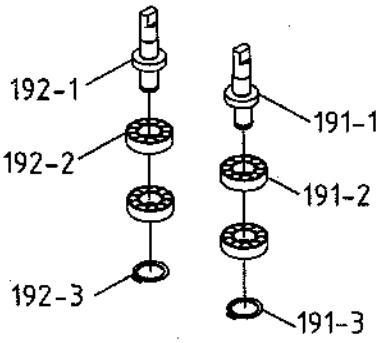
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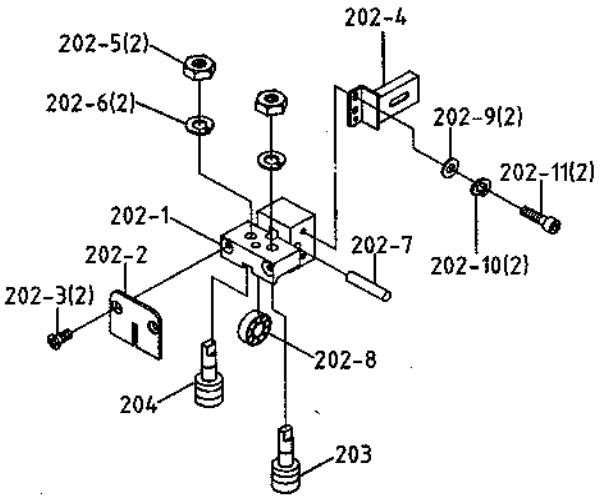
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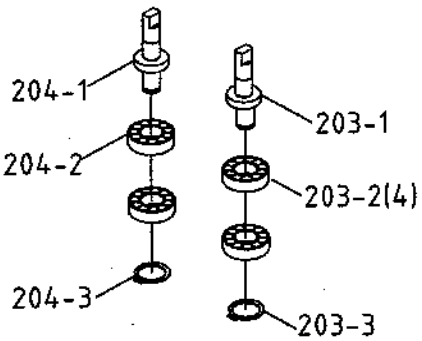
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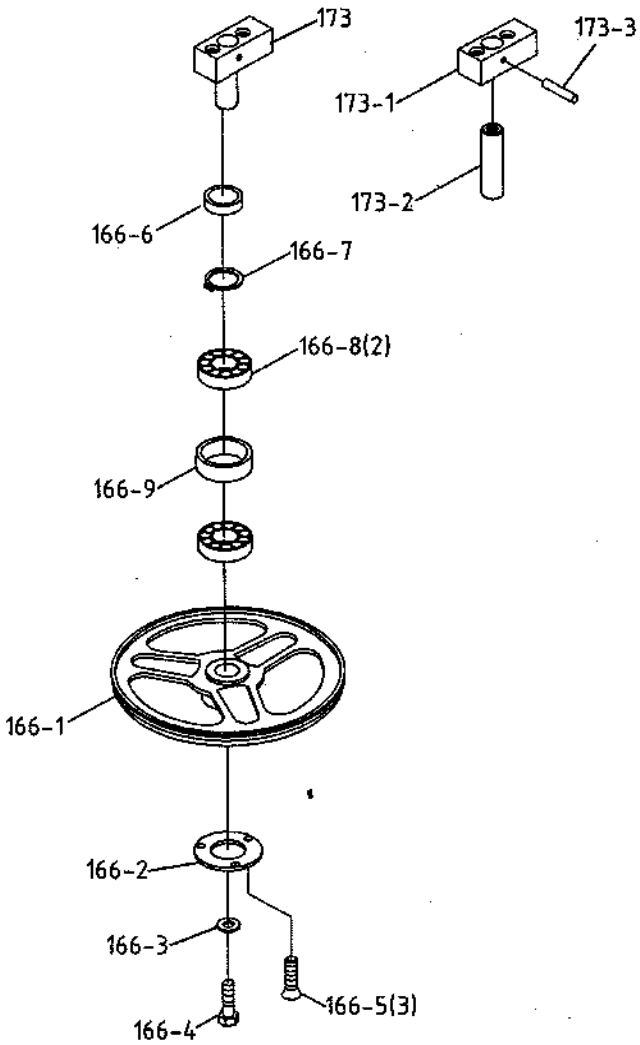
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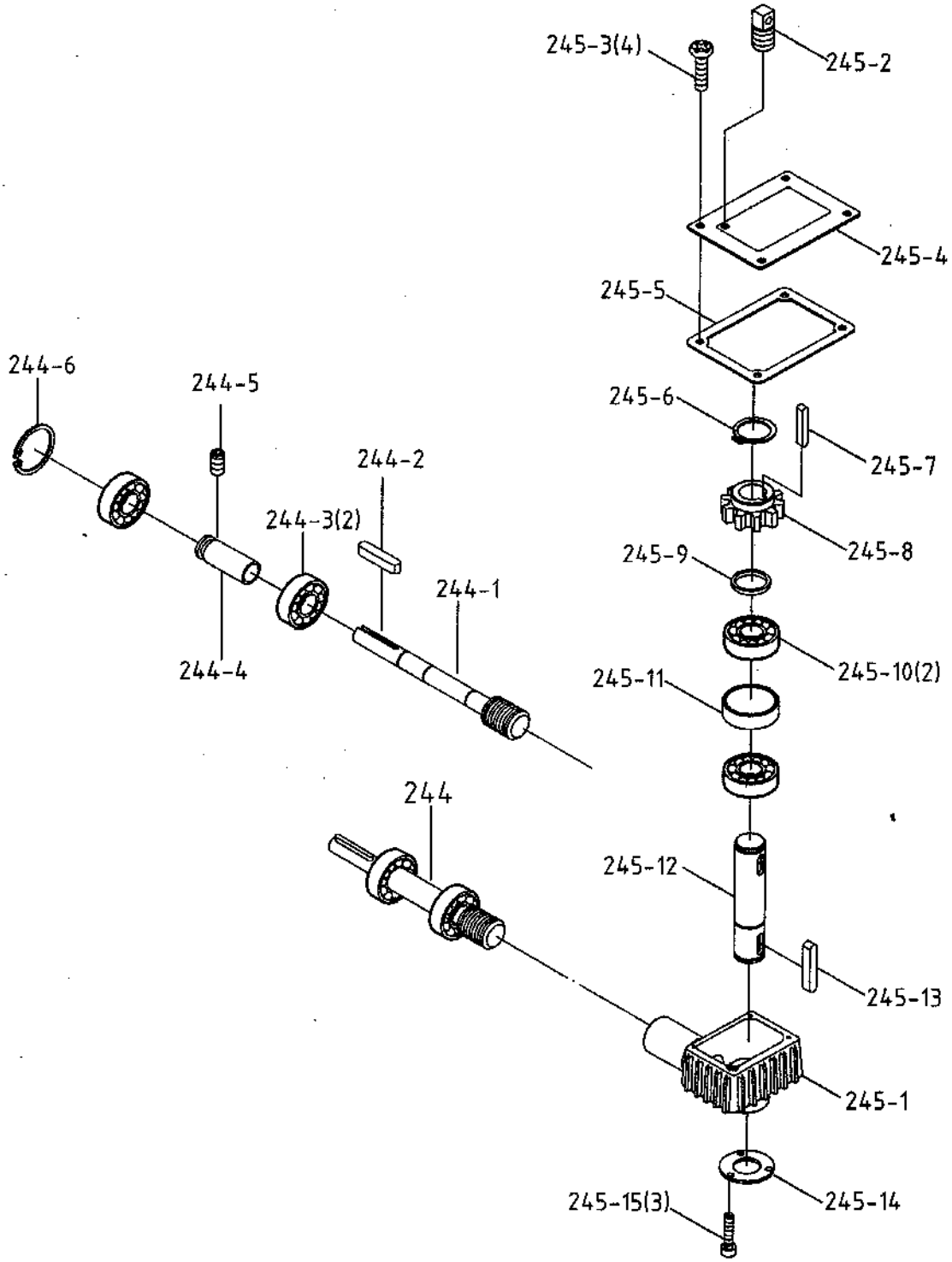
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PART LIST 812N

Code No.	Part No.	Description	Specification	Quantity
1	195006B	Base		1
2	195016B	Stand Complete Assembly		1
3	181114	Vice Jaw Bracket (Front)		1
4	W008	Washer	3/8" x 25 x t2	2
5	S012	Hex. Head Screw	3/8" x 1-1/2"	1
6	S410	Hex. Socket Head Screw	3/8" x 1-1/2"L	1
7	N001	Hex. Nut	1/2"	1
8	W002	Washer	1/2" x 28 x t2	2
9	S003	Hex. Head Screw	1/2" x 2"L	1
10	181113-1	Vice Jaw Bracket (Rear)		1
13	3027	Knob		1
14	193057	Knob		1
15	HW007	Washer	M12 x t2	1
16	193055	Pressure Lump		1
17	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	1
18	181138B	Acme Nut		1
19	192009A	Acme Screw		1
20	HP018	Pin	ϕ5 x 20L	2
21	193056	Pressure Shaft		1
22	S064	Hex. Head Screw	5/16" x 5/8"L	2
23	W016	Washer	5/16" x 23 x t3	2
24	195023B	Down Bracket		1
25	S014	Hex. Head Screw	3/8" x 1-3/4"	1
26	S015	Hex. Head Screw	3/8" x 2"	1
27	W013	Washer	3/8" x 20 x t2	1
28	HB810	Net	3/8"	2
29	290086	Plastic Round Knob		1
30	193059	Knob W/Shaft		1
39	ET1930	Electrical Box		1
40	ET1931	Cover		1
41	S708	Cross Round Head Screw	3/16" x 3/8"L	2
42	ET1401	Toggle Switch		1
42-1		Switch Indicator		1
42-2		Hex. Nut		1
43	3131	Switch Cover		1
44	181932	Toggle Switch Cover		1
47	181989	Switch Bracket (For CE Only)		1
48	S708	Cross Round Head Screw	3/16" x 3/8"L	4
49	ET11617	Switch (For CE Only)		1
50	181125	Stop Block		1
51	181130	Thumb Screw		1
52	3021	Stock Stop Rod		1
53	181130	Thumb Screw		1
54	S632	Hex. Socket Headless Screw	1/4" x 5/8"L	1
55	195024	Cylinder Lower Support		1
56	S013	Hex. Head Screw	3/8" x 1-1/4"L	2
57	W013	Washer	3/8" x 20 x t2	2
58	CA51101	Bearing		1
59	193063	Washer		1

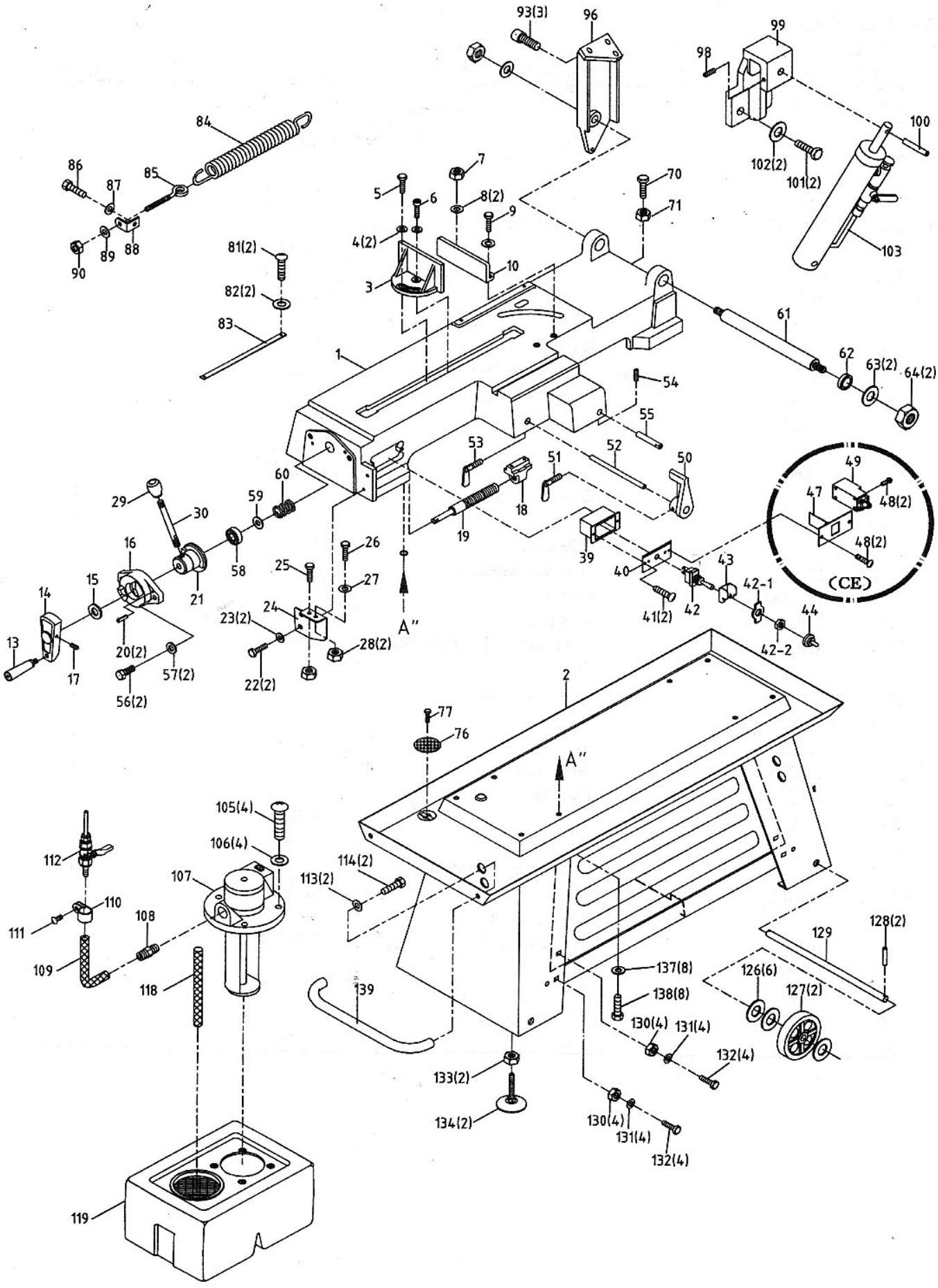
Code No.	Part No.	Description	Specification	Quantity
60	193058	Spring		1
61	192042A	Support Rod		1
62	195027	Bushing		1
63	W002	Washer	1/2" x 28 x t2	2
64	N016	Net	1/2"	2
70	S014	Hex. Head Screw	3/8" x 1-3/4"L	1
71	N005	Hex. Nut	3/8"	1
76	195019	Filter		1
77	S006	Hex. Head Screw	1/4" x 1/2"L	1
81	S708	Cross Round Head Screw	3/16" x 3/8"L	2
82	W007	Washer	3/16" x 12 x t0.8	2
83	195048	Scale		1
84	195045	Spring		1
85	181118	Spring Adjusting Screw		1
86	S022	Hex. Head Screw	5/16" x 3/4"L	1
87	W016	Washer	5/16" x 23 x t2	1
88	181115	Spring Handle Bracket		1
89	W014	Washer	3/8" x 23 x t2	1
90	N005	Hex. Nut	3/8"	1
93	S476	Hex. Socket Head Screw	3/8" x 1-1/4"L	3
96	195002	Rear Pivot Bracket		1
98	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	1
99	195010A	Cylinder Upper Support		1
100	195047	Shaft		1
101	S010	Hex. Head Screw	3/8" x 1"L	2
102	W008	Washer	3/8" x 25 x t2	2
103	195036	Cylinder Complete Set		1
105	S701	Cross Round Head Screw	1/4" x 1/2"L	4
106	W004	Washer	1/4" x 19 x t1.5	4
107		Pump		1
108	181852	Coupler	3/8" PT	1
109	181981	Hose	0D12 x ID8 x 2000	1
110	181601	Hose Clip	5/8"	1
111	S708	Cross Round Head Screw	3/16" x 3/8"L	1
112	195033S	Valve Assembly	PT1/8" x 1/8"	1
113	W014	Washer	3/8" x 23 x t2	2
114	S013	Hex. Head Screw	3/8" x 1-1/4"L	2
118	181854	Hose	0D16 x ID13 x 260	1
119	181256	Coolant Tank		1
126	W019	Washer	5/8" x 40 x t3	6
127	181129	Wheel		2
128	HP210	Cotter Pin	ϕ3 x 25L	2
129	195022A	Wheel Rod		1
130	N007	Hex. Nut	5/16"	8
131	W017	Washer	5/16" x 18 x t1.5	8
132	S504	Carriage Screw	5/16" x 3/4"L	8
133	N001	Hex. Nut	1/2"	2
134	195038	Coaster of Stand	1/2"	2
137	W013	Washer	3/8"	8

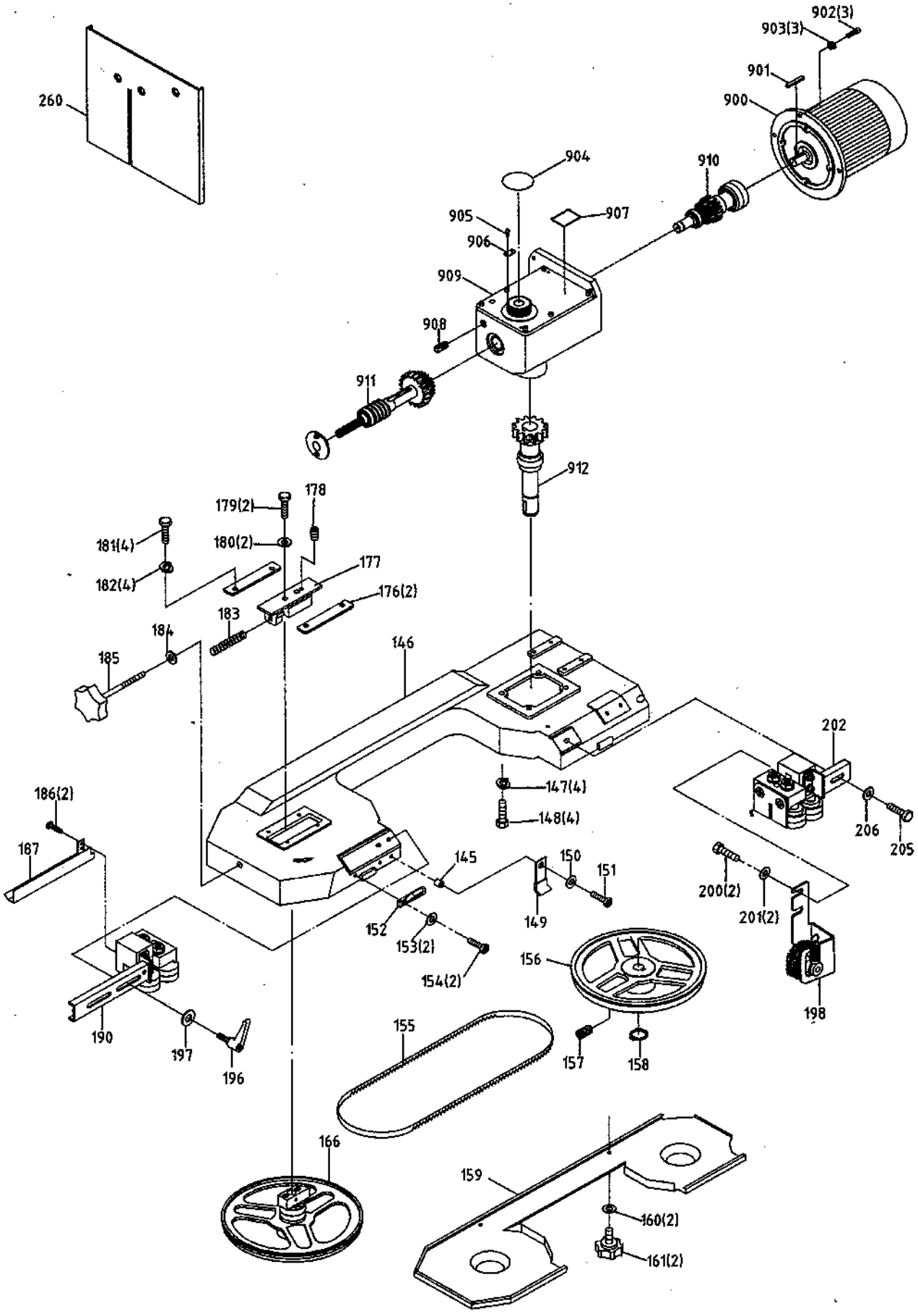
Code No.	Part No.	Description	Specification	Quantity
138	S010	Hex. Head Screw	3/8" x 1"L	8
139	195021A	Kond W/Shaft		1
145	19039	Bushing		1
146	195001	Body Frame		1
147	W204	Spring Washer	3/8"	4
148	S013	Hex. Head Screw	3/8" x 1-14"L	4
149	181240	Switch Cut Off Tip		1
150	W017	Washer	5/16" x 18 x t1.5	1
151	S019	Hex. Head Screw	5/16" x 1-1/2"	1
152	195004	Upper Bracket		1
153	W013	Washer	3/8" x 20 x t2	2
154	S010	Hex. Head Screw	3/8" x 1"	2
155	181894	Blade	0.032" x 3/4" x 93" x 6-10T	1
156	181214-2	Drive Wheel		1
157	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	2
158	HCS13	C-Retainer Ring	S25	1
159	195025	Blade Back Cover		1
160	W005	Washer	1/4" x 16 x t1.5	2
161	181202	Knob		2
166	18123A	Idler Wheel Assembly		1
166-1	181205-2	Idler Wheel		1
166-2	3072-2	Bearing Cover		1
166-3	W017	Washer	5/16" x 18 x t1.5	1
166-4	S022	Hex. Head Screw	5/16" x 3/4"L	1
166-5	S302	Flat Cross Head Screw	3/16" x 3/8"L	3
166-6	181207-1	Bushing		1
166-7	HCR04	C-Retainer Ring	R35	1
166-8	CA620ZZ	Bearing		2
166-9	181245	Bushing		1
173	18122	Shaft Assembly		1
173-1	181208	Sliding Plate Draw Block		1
173-2	181209	Blade Wheel Shaft		1
173-3	HP013	Pin	ϕ4 x 22L	1
176	181210	Sliding Plate		2
177	181211	Blade Tension Sliding Block		1
178	S608	Hex. Socket Headless Screw	5/16" x 3/4"L	1
179	S019	Hex. Head Screw	5/16" x 1-1/2"L	2
180	W015	Washer	5/16" x 12 x t2	2
181	S020	Hex. Head Screw	5/16" x 3/4"L	4
182	W205	Spring Washer	5/16"	4
183	181212	Spring		1
184	W008	Washer	3/8" x 25 x t2	1
185	181213	Blade Adjustable Knob		1
186	S405	Cross Round Head Screw	1/4" x 3/8"L	2
187	195029	Blade Cover		1
190	195015S	Blade Adjustable Assembly		1
190-1	195015	Blade Adjustable		1
190-2	195008	Adjustable Bracket (Front)		1
190-3	W004	Washer	1/4" x 19 x t1.5	2

Code No.	Part No.	Description	Specification	Quantity
190-4	W202	Spring Washer	1/4"	2
190-5	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2
190-6	195013	Bearing Pin		1
190-7	CA608ZZ	Bearing		5
190-8	N016	Hex. Nut	5/16"-24"UNF	2
190-9	N007	Spring Washer	5/16"	2
191	195012S	Eccentric Shaft Assembly		1
191-1	195012	Eccentric Shaft		1
191-2	CA608ZZ	Bearing	608ZZ	2
191-3	HCS01	C-Retainer Ring	S10	1
192	195011S	Bearing Shaft Assembly		1
192-1	195011	Bearing Shaft		1
192-2	CA608ZZ	Bearing	608ZZ	2
192-3	HCS01	C-Retainer Ring	S10	1
196	195041	Grip		1
197	W008	Washer	3/8" x 25 x t2	1
198	195035AS	Brush Assembly		
200	S405	Cross Round Head Screw	1/4" x 3/8"L	2
201	W008	Washer	1/4"	2
202	195014S	Blade Adjustable Assembly (Rear)		1
202-1	195014	Blade Adjustable (Rear)		1
202-2	3069	Deflector Plate		1
202-3	S301	Flat Cross Head Screw	1/4" x 1/2"L	2
202-4	195007	Adjustable Bracket (Rear)		1
202-5	N016	Hex. Nut	5/16"-24"UNF	2
202-6	N007	Spring Washer	5/16"	2
202-7	195013	Bearing Pin		1
202-8	CA608ZZ	Bearing	608ZZ	1
202-9	W004	Washer	1/4" x 19 x t1.5	2
202-10	W202	Spring Washer	1/4"	2
202-11	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2
203	195012S	Eccentric Shaft Assembly		1
203-1	195012	Eccentric Shaft		1
203-2	CA608ZZ	Bearing	608ZZ	2
203-3	HCS01	C-Retainer Ring	S10	1
204	195011S	Bearing Shaft Assembly		1
204-1	195011	Bearing Shaft		1
204-2	CA608ZZ	Bearing	608ZZ	2
204-3	HCS01	C-Retainer Ring	S10	1
205	S013	Hex. Head Screw	3/8" x 1-1/4"L	1
206	W008	Washer	3/8" x 25 x t2	1
211	S022	Hex. Head Screw	5/16" x 3/4"L	4
212	W016	Washer	5/16" x 23 x t2	4
213	181233A	Motor Mount Bracket		1
214	W018	Washer	5/16" x 23 x t3	2
215	S022	Hex. Head Screw	5/16" x 3/4"L	2
216	S503	Carriage Screw	5/16" x 1"L	4
217	181234A	Motor Mount Plate		1
218	S021	Hex. Head Screw	5/16" x 2"L	2

Code No.	Part No.	Description	Specification	Quantity
219	N007	Hex Nut	5/16"	2
220	195032	Motor		1
221	W016	Washer	5/16" x 23 x t2	4
222	N007	Hex. Nut	5/16"	4
223	S604	Hex. Socket Headless Screw	14" x 3/8"L	1
224	181235B	Motor Pulley		1
225	K008	Key	5 x 5 x 30L	1
226	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	2
227	W008	Washer	1/4" x 19 x t1.5	2
228	181237I	Motor Pulley Cover		1
229	W005	Washer	1/4" x 16 x t1.5	1
230	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	3
244	18138	Worm Gear Shaft Assembly		
244-1	181223	Worm Shaft		1
244-2	K008	Key	5 x 5 x 30L	1
244-3	CA6003LLU	Bearing	6003LLU	2
244-4	181224	Bearing Bushing		1
244-5	S607	Hex. Socket Headless Screw	5/16" x 1/2"L	1
244-6	C002	C-Retainer Ring	R17	1
245	18121	Gear Box Assembly		1
245-1	181216A	Gear Box		1
245-2	3149	Vent Plug	M8 x P1	1
245-3	S201	Cross Socket Hex. Head Screw	1/4" x 1/2"L	4
245-4	181222-1	Gear Box Cover		1
245-5	3092	Gear Box Gasket		1
245-6	HCS13	C-Retainer Ring	S25	1
245-7	HK025	Key	6 x 6 x 20L	1
245-8	181220-1	Worm Gear		1
245-9	181218-1	Bushing		1
245-10	CA6205LLU	Bearing	6205LLU	2
245-11	181217-1	Bushing		1
245-12	181219-1	Transmission Wheel Shaft		1
245-13	HK025	Key	6 x 6 x 20L	1
245-14	181246	Bearing Cover		1
245-15	S708	Cross Round Head Screw	3/16" x 3/8"L	3
254	181226B	Spindle Pulley		1
255	S604	Hex. Socket Headless Screw	1/4" x 3/8"L	2
260	3055A	Vertical Slide Table (Optional)		1
266	181874	Belt	3V x 270	1

PART DIAGRAM 812G

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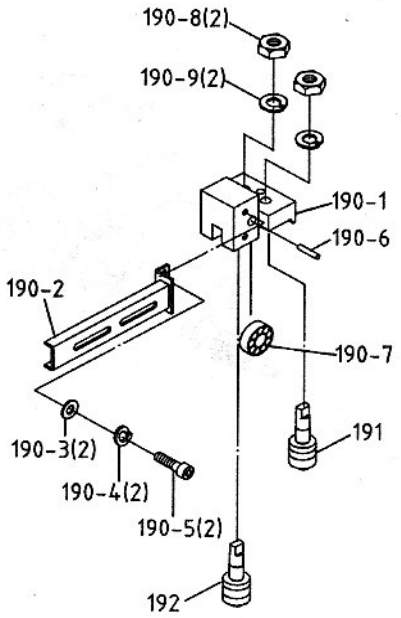
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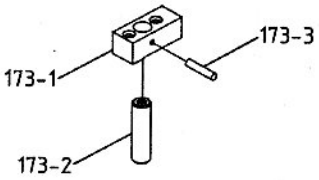
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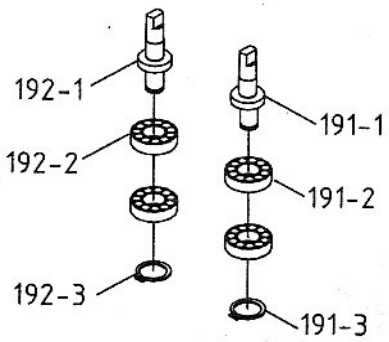
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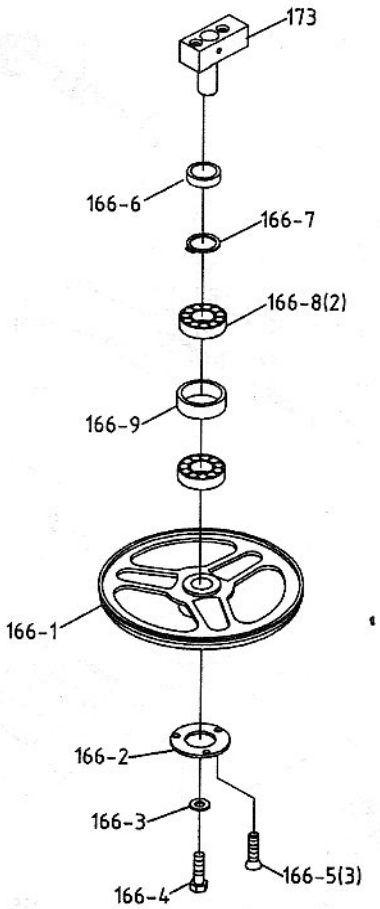
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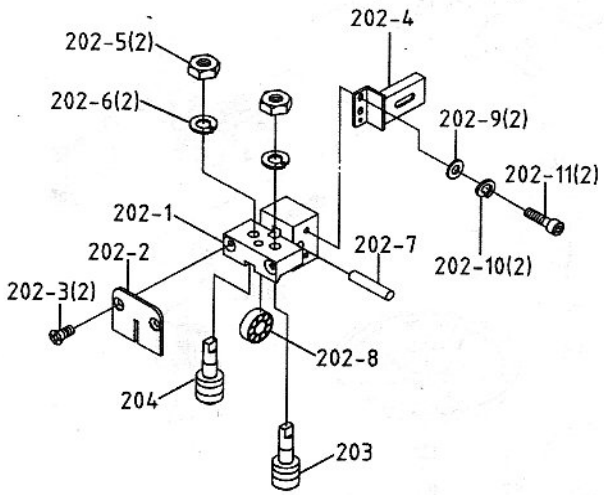
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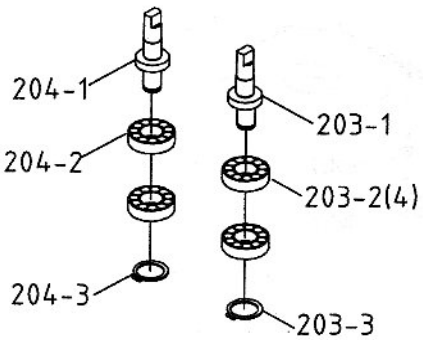
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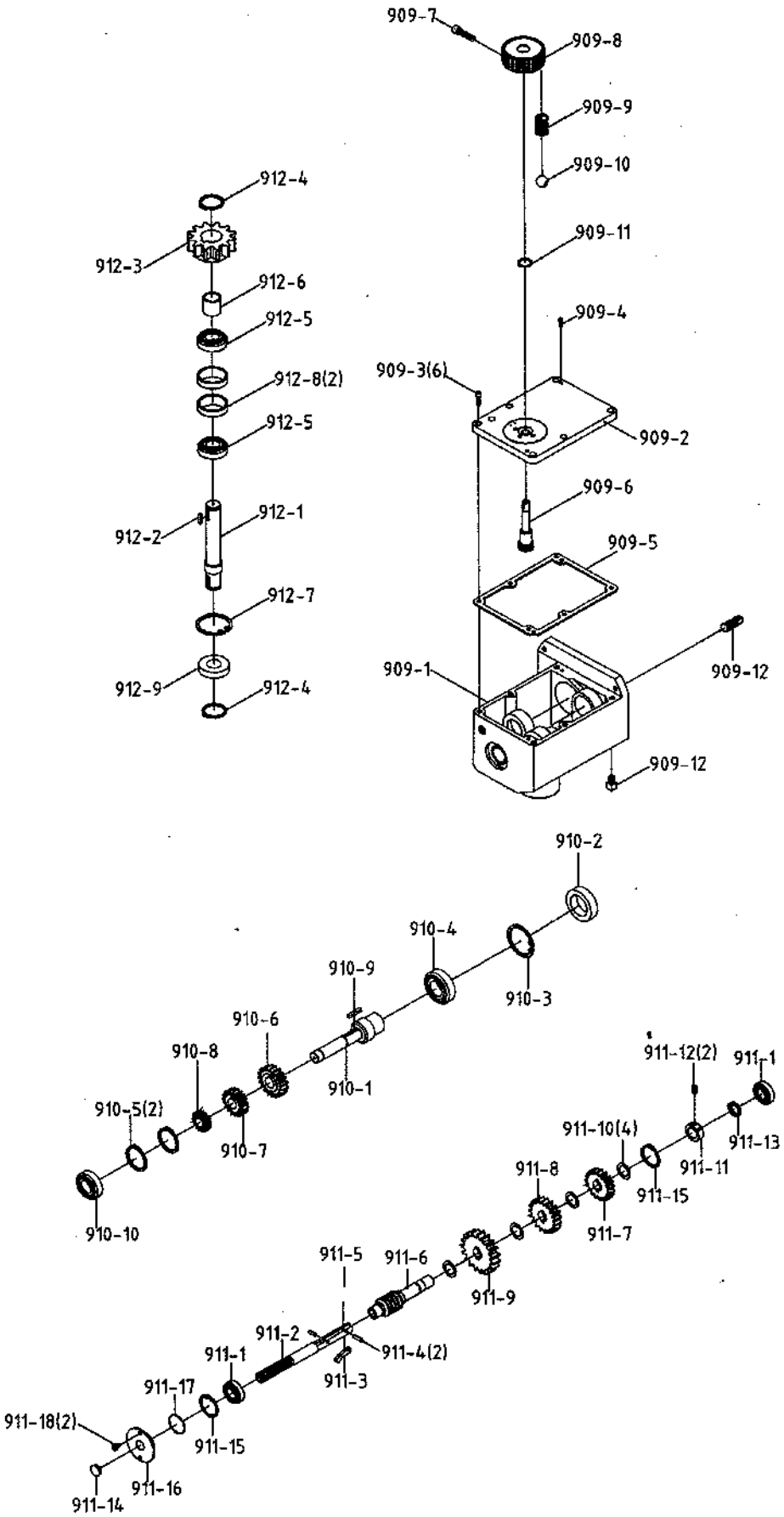
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PART LIST 812G

Code No.	Part No.	Description	Specification	Quantity
1	195006B	Base		1
2	19501B	Stand Complete Assembly		1
3	181114	Vice Jaw Bracket (Front)		1
4	W008	Washer	3/8" x 25 x t2	2
5	S012	Hex. Head Screw	3/8" x 1-1/2"	1
6	S410	Hex. Socket Head Screw	3/8" x 1-1/2"L	1
7	N001	Hex. Nut	1/"	1
8	W002	Washer	1/2" x 28 x t2	2
9	S003	Hex. Head Screw	1/2" x 2"L	1
10	181113-1	Vice Jaw Bracket (Rear)		1
13	3027	Knob		1
14	193057	Knob		1
15	HW007	Washer	Washer	1
16	193055	Pressure Lump		1
17	S601	Hex. Socket Head Screw	1/4" x 1/2"L	1
18	181138B	Acme Nut		1
19	192009A	Acme Screw		1
20	HP018	Pin	ϕ5 x 20L	2
21	193056	Pressure Shaft		1
22	S064	Hex. Head Screw	5/16" x 5/8"L	2
23	W016	Washer	5/16" x 23 x t3	2
24	195023B	Down Bracket		1
25	S014	Hex. Head Screw	3/8" x 1-3/4"	1
26	S015	Hex. Head Screw	3/8" x 2"	1
27	W013	Washer	3/8" x 20 x t2	1
28	HB810	Net	3/8"	2
29	290086	Plastic Round Knob		1
30	193059	Knob W/Shaft		1
39	ET1930	Electrical Box		1
40	ET1931	Cover		1
41	S708	Cross Round Head Screw	3/16" x 3/8"L	2
42	ET1401	Toggle Switch		1
42-1		Switch Indicator		1
42-2		Hex. Nut		1
43	3131	Switch Cover		1
44	181932	Toggel Switch Cover		1
47	181989	Switch Bracket (For CE Only)		1
48	S708	Cross Round Head Screw	3/16" x 3/8"L	4
49	ET1617	Switch (For CE Only)		1
50	181125	Stop Block		1
51	181130	Thumb Screw		1
52	3021	Stock Stop Rod		1
53	181130	Thumb Screw		1
54	S632	Hex. Socket Headless Screw	1/4" x 5/8"L	1
55	195024	Cylinder Lower Support		1
56	S013	Hex. Head Screw	3/8" x 1-1/4"L	2
57	W013	Washer	3/8" x 20 x t2	2
58	CA51101	Bearing		1
59	193063	Washer		1

Code No.	Part No.	Description	Specification	Quantity
60	193058	Spring		1
61	192042A	Support Rod		1
62	195027	Bushing		1
63	W002	Washer	1/2" x 28 x t2	2
64	N016	Net	1/2"	2
70	S014	Hex. Head Screw	3/8" x 1-3/4"L	1
71	N005	Hex. Nut	3/8"	1
76	195019	Filter		1
77	S009	Hex. Head Screw	1/4" x 1/2"L	1
81	S708	Cross Round Head Screw	3/16" x 3/8"L	2
82	W007	Washer	3/16" x 12 x t0.8	2
83	195048	Scale		1
84	195045	Spring		1
85	181118	Spring Adjusting Screw		1
86	S022	Hex. Head Screw	5/16" x 3/4"L	1
87	W016	Washer	5/16" x 23 x t2	1
88	181115	Spring Handle Bracket		1
89	W014	Washer	3/8" x 23 x t2	1
90	N005	Hex. Nut	3/8"	1
93	S476	Hex. Socket Head Screw	3/8" x 1-1/4"L	3
96	195002	Rear Pivot Bracket		1
98	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	1
99	195010A	Cylinder Upper Support		1
100	195047	Shaft		1
101	S010	Hex. Head Screw	3/8" x 1"L	2
102	W008	Washer	3/8" x 25 x t2	2
103	195036	Cylinder Complete Set		1
105	S701	Cross Round Head Screw	1/4" x 1/2"L	4
106	W004	Washer	1/4" x 19 x t1.5	4
107		Pump		1
108	181852	Coupler	3/8"PT	1
109	181981	Hose	0D12 x ID8 x 2000	1
110	181601	Hose Clip	5/8"	1
111	S708	Cross Round Head Screw	3/16" x 3/8"L	1
112	195033S	Valve Assembly	PT1/8" x 1/8"	1
113	W014	Washer	3/8" x 23 x t2	2
114	S013	Hex. Head Screw	3/8" x 1-1/4"L	2
118	181854	Hose	0D16 x ID13 x 260	1
119	181256	Coolant Tank		1
126	W019	Washer	5/8" x 40 x t3	6
127	181129	Wheel		2
128	HP210	Cotter Pin	ϕ3 x 25L	2
129	195022A	Wheel Rod		1
130	N007	Hex. Nut	5/16"	8
131	W017	Washer	5/16" x 18 x t1.5	8
132	S504	Carriage Screw	5/16" x 3/4"L	8
133	N001	Hex. Nut	1/2"	2
134	195038	Coaster of Stand	1/2"	2
137	W013	Washer	3/8"	8

Code No.	Part No.	Description	Specification	Quantity
138	S010	Hex. Head Screw	3/8" x 1"L	8
139	195012A	Kond W/Shaft		1
145	195039	Bushing		1
146	195001	Body Frame		1
147	W204	Spring Washer	3/8"	4
148	S013	Hex. Head Screw	3/8" x 1-1/4"L	4
149	181240	Switch Cut Off Tip		1
150	W017	Washer	5/16" x 18 x t1.5	1
151	S019	Hex. Head Screw	5/16" x 1-1/2"	1
152	195004	Upper Bracket		1
153	W013	Washer	3/8" x 20 x t2	2
154	S010	Hex. Head Screw	3/8" x 1"	2
155	181894-2	Blade	0.032" x 3/4" x 93" x 6-10T	1
156	181214-2	Drive Wheel		1
157	S601	Hex. Socket Headless Screw	1/4" x 1/2"L	2
158	HCS13	C-Retainer Ring	S25	1
159	195025	Blade Back Cover		1
160	W005	Washer	1/4" x 16 x t1.5	2
161	181202	Knob		2
166	18123A	Idler Wheel Assembly		1
166-1	181205-2	Idler Wheel		1
166-2	3072-2	Bearing Cover		1
166-3	W017	Washer	5/16" x 18 x t1.5	1
166-4	S022	Hex. Head Screw	5/16" x 3/4"L	1
166-5	S302	Flat Cross Head Screw	3/16" x 3/8"L	3
166-6	181207-1	Bushing		1
166-7	HCR04	C-Retainer Ring	R35	1
166-8	CA6202Z	Bearing	6202Z	2
166-9	181245	Bushing		1
173	18122	Shaft Assembly		1
173-1	181208	Sliding Plate Draw Block		1
173-2	181209	Blade Wheel Shaft		1
173-3	HP013	Pin	ϕ4 x 22L	1
176	181210	Sliding Plate		2
177	181211	Blade Tension Sliding Block		1
178	S608	Hex. Socket Headless Screw	5/16" x 3/4"L	1
179	S019	Hex. Head Screw	5/16" x 1-1/2"L	2
180	W015	Washer	5/16" x 12 x t2	2
181	S020	Hex. Head Screw	5/16" x 3/4"L	4
182	W205	Spring Washer	5/16"	4
183	181212	Spring		1
184	W008	Washer	3/8" x 25 x t2	1
185	181213	Blade Adjustable Knob		1
186	S405	Cross Round Head Screw	1/4" x 3/8"L	2
187	195029	Blade Cover		1
190	195015S	Blade Adjustable Assembly		1
190-1	195015	Blade Adjustable		1
190-2	195008	Adjustable Bracket (Front)		1
190-3	W004	Washer	1/4" x 19 x t1.5	2

Code No.	Part No.	Description	Specification	Quantity
190-4	W202	Spring Washer	1/4"	2
190-5	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2
190-6	195013	Bearing Pin		1
190-7	CA608ZZ	Bearing	608ZZ	5
190-8	N016	Hex. Nut	5/16-24"UNF	2
190-9	N007	Spring Washer	5/16"	2
191	195012S	Eccentric Shaft Assembly		1
191-1	195012	Eccentric Shaft		1
191-2	CA608ZZ	Bearing	608ZZ	2
191-3	HCS01	C-Retainer Ring	S10	1
192	195011S	Bearing Shaft Assembly		1
192-1	195011	Bearing Shaft		1
192-2	CA608ZZ	Bearing	608ZZ	2
192-3	HCS01	C-Retainer Ring	S10	1
196	195041	Grip		1
197	W008	Washer	3/8" x 25 x t2	1
198	195035AS	Brush Assembly		
200	S405	Cross Round Head Screw	1/4" x 3/8"L	2
201	W005	Washer	1/4"	2
202	195014S	Blade Adjustable Assembly (Rear)		1
202-1	195014	Blade Adjustable (Rear)		1
202-2	3069	Deflector Plate		1
202-3	S301	Flat Cross Head Screw	1/4" x 1/2"L	2
202-4	195007	Adjustable Bracket (Rear)		1
202-5	N016	Hex. Nut	5/16-24"UNF	2
202-6	N007	Spring Washer	5/16"	2
202-7	195013	Bearing Pin		1
202-8	CA608ZZ	Bearing	608ZZ	1
202-9	W004	Washer	1/4" x 19 x t1.5	2
202-10	W202	Spring Washer	1/4"	2
202-11	S404	Hex. Socket Head Screw	1/4" x 3/4"L	2
203	195012S	Eccentric Shaft Assembly		1
203-1	195012	Eccentric Shaft		1
203-2	CA608ZZ	Bearing	608ZZ	2
203-3	HCS01	C-Retainer Ring	S10	1
204	195011S	Bearing Shaft Assembly		1
204-1	195011	Bearing Shaft		1
204-2	CA608ZZ	Bearing	608ZZ	2
204-3	HCS01	C-Retainer Ring	S10	1
205	S013	Hex. Head Screw	3/8" x 1-1/4"L	1
206	W008	Washer	3/8" x 25 x t2	1
260	3055A	Vertical Saw Table		1
900		Motor		1
901	HK027	Key	6 x 6 x 30L	1
902	HS244	Hex. Socket Head Screw	M8 x 30L	3
903	HW005	Spring Washer	M8	3
904	192327	Speed Indicator Dial		1
905	HH001	Rivet	ϕ2 x 4L	2
906	2450060	Scale		1

Code No.	Part No.	Description	Specification	Quantity
907		Warning Mark		1
908	3149	Vent Plug	M8 x P1.0	1
909	192302S	Gear Box Set		1
909-1	192301	Gear Box		1
909-2	192302	Gear Box Cover		1
909-3	HS230	Hex. Socket Head Screw	M6 x 20L	6
909-4	HP018	Pin	ϕ5 x 20L	2
909-5	192303	Gear Box Gasket	151 x 207 x 0.4t	1
909-6	192304	Gear Shaft	14T x 105L	1
909-7	HS220	Hex. Socket Head Screw	M5 x 20L	1
909-8	2450079	Speed Lever	50 x 20t	1
909-9	290089	Spring		1
909-10	HB001	Steel Ball	8mm	1
909-11	HCS02	C-Retainer Ring	S12 x 1t	1
909-12	HD103	Plug	PT1/4" X11L	2
910	192305S	Gear Shaft Set		1
910-1	192305	Gear Shaft	40*155L	1
910-2	HG017	Oil Seal	TC35 x 62 x 10	1
910-3	HCR08	C-Retainer Ring	R62	1
910-4	CA6007ZZ	Bearing	6007ZZ (SKF)	1
910-5	HCS09	C-Retainer Ring	S20	2
910-6	192306	Gear		1
910-7	192307	Gear		1
910-8	192308	Gear		1
910-9	HK095	Key	5 x 5 x 32L	1
910-10	CA6004ZZ	Bearing	6004ZZ	1
911	192310S	Speed-Changing Gear		1
911-1	CA6004ZZ	Bearing	6004ZZ	2
911-2	192309	Speed-Changing Rod	12.5 x 152.5L	1
911-3	2450083A	Speed Changing Key		1
911-4	HP006	Pin	ϕ3 x 10L	2
911-5	2450084B	Twisted Spring		1
911-6	192310	Worm Shaft	M2.5 x 34 x 140L	1
911-7	192311	Gear		1
911-8	192312	Gear		1
911-9	192313	Gear		1
911-10	2450074B	Washer	ϕ30 x 1.5t	4
911-11	2450089A	Bushing Bracket		1
911-12	HS421	Hex. Socket Headless Screw	M6 x 6L	2
911-13		Wave-Washer	6001	1
911-14	HB203	Oil Level Gauge	ϕ19	1
911-15	HCR05	C-Retainer Ring	R42	2
911-16	192314	Cover	64 x 14t	1
911-17	HO030	O Ring	P36 x 3.5mm	1
911-18	HS527	Cross Round Head Screw	M6 x 10L	2
912	192315S	Drive Gear Shaft Set		1
912-1	192315	Drive Gear Shaft	25 x 185L	1
912-2	HK025	Key	6 x 6 x 20L	1
912-3	192316	Worm Gear	M2.5 x 20T x 25	1

Code No.	Part No.	Description	Specification	Quantity
912-4	HCS13	C-Retainer Ring	S25	4
912-5	CA6205ZZ	Bearing	6205ZZ	2
912-6	192317	Bushing	25 x 30 x 30	1
912-7	HCR06	C-Retainer Ring	R52	1
912-8	HG021	Oil Seal	TC25 x 52 x 9	2
912-9	181217-1	Bushing	45 x 51.6 x 17	1

Annex C: (cont.) EC Declaration of Conformity

In accordance with EN 45014:1998

We Chester UK Ltd.

of Clwyd Close, Hawarden Industrial Estate, Manor Lane, Hawarden, Chester, CH5 3PZ, UK

declare that product: 812 Bandsaw
Serial number

is in accordance with:

98/37/EEC	The Machinery Safety Directive and its amending directives
73/23/EC	The Low Voltage Directive and its amending directives
89/336/EEC	The Electromagnetic Compatibility Directive and its amending directives

and has been designed and manufactured to the following specifications:

BS EN ISO 12100-1&2: 2003	Safety of machinery. Basic concepts, general principles for design
BS EN 13128: 2001	Safety of machine tools – Milling machines (including boring machines)
EN 60204-1:1998	Safety of machinery. Electrical equipment of machines. General requirements
EN 61000-6-2:2001	Electromagnetic compatibility (EMC). Generic standards. Immunity for industrial environments
EN 61000-6-4:2001	Electromagnetic compatibility (EMC). Generic standards. Emission standard for industrial environments

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives.

Signed by:
.....

CE05

Name: Michael O'Hare

Position: Managing Director

Done at: Chester