

BAXTER

VERTICUT MITERCUT SAW

Model No: 115 B

Serial No:

Operation Manual




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BANDSAW MACHINES



**VERTICUT
Model 115C
Instruction Manual
Serial Numbers: 6325, 6326,
6327, 6328, 6329, 6330, 6331,**



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1. Forward:

Verticut model 115-B has been designed and built to meet the cutting needs of the majority of shops. Care has been taken to ensure the quality of all parts and components so that the machine will provide you with years of use.

This manual will provide all specifications, dimensions and maintenance procedures.

2. Notes:

- Before operating the machine you must read the manual thoroughly to familiarize yourself with the machine.
- Machine must be electrically connected through a fused electrical disconnect, fused to the rating on the name plate and conforming to all local electric codes. The work must be done by a qualified electrician.
- For information, general inquiries or the name of the nearest dealer please call
Baxter Verticut Inc.
27 Kenhar Drive
Weston (Toronto), Ontario
Canada M9L 1M9
tel (416) 741-7100
fax (416) 741-7114
email Info@verticut.com
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3. Safety Instructions:

This machine is a powerful metal cutting saw it would have no problem to cut you. You as the operator must treat the machine with respect to avoid any injuries.

BE CAREFUL! WORK SAFELY!

1. Do not operate this machine until you have read the manual and been instructed on all standard shop safety precautions.
2. Keep away from all moving parts. Including but not limited to the following; saw blade, blade wheels, pulleys, v-belts, motor, etc.
3. Never operate the machine unless all guards are in place.
4. The machine is designed for use by only one operator, do not let two people work on the machine at the same time.
5. Always keep the machine and your work area clean and remove all obstacles.
6. Never load, unload stock or remove cut parts from the machine while the blade is running.
7. Support long or heavy stock in the front and rear of the machine.
8. Always clamp the stock securely before operating the machine.
9. When changing the blade always wear gloves and safety glasses. Do not throw the blade into the air to uncoil. If you do not know how to uncoil the blade get instructions from your blade supplier.
10. Do not wear jewelry, gloves, loose clothing or have long hair unconfined while operating this machine.
11. When performing maintenance work on the bandsaw machine always disconnect the power supply.
12. Use the proper speeds, feeds and coolant as required. More information on this is the subsequent chapters.



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4. Machine Specifications:

Cutting Capacity		
Round @90°	10"	255 mm
Round @90° 8 1/2" length limit	13"	330 mm
Round @ 45°	7 1/2"	190 mm
Square	10"	330 x 255 mm
Blade Dimensions	1/4" to 3/4" x 10'	6 mm to 19 mm x 3050 mm
Blade Speed	75, 130, 215, 350 ft/min	22, 40, 66, 107 m/min
Blade Tension	30,000 psi	
Blade Guides	Hardened Rollers	
Wheel Diameter	15 1/4"	387 mm
Blade Drive	3/4 hp	0.5 kW
Voltage	115 volts, 1 phase	
Table Height	30"	762 mm
Work Table	1" x 18" x 30" ground	25 mm x 457 mm x 762 mm
Material Clamping Vise	c-clamp 4" diameter	
Miter Cutting	+/- 45°	
Machine Weight	1,000 lbs.	460 kg
Maximum Work Load	1,500 lbs.	680 kg
Overall Dimensions	34"W x 48" D x 68"H	860 x 1220 x 1730 mm

5. Views of Machine:

5.1.1 Front View

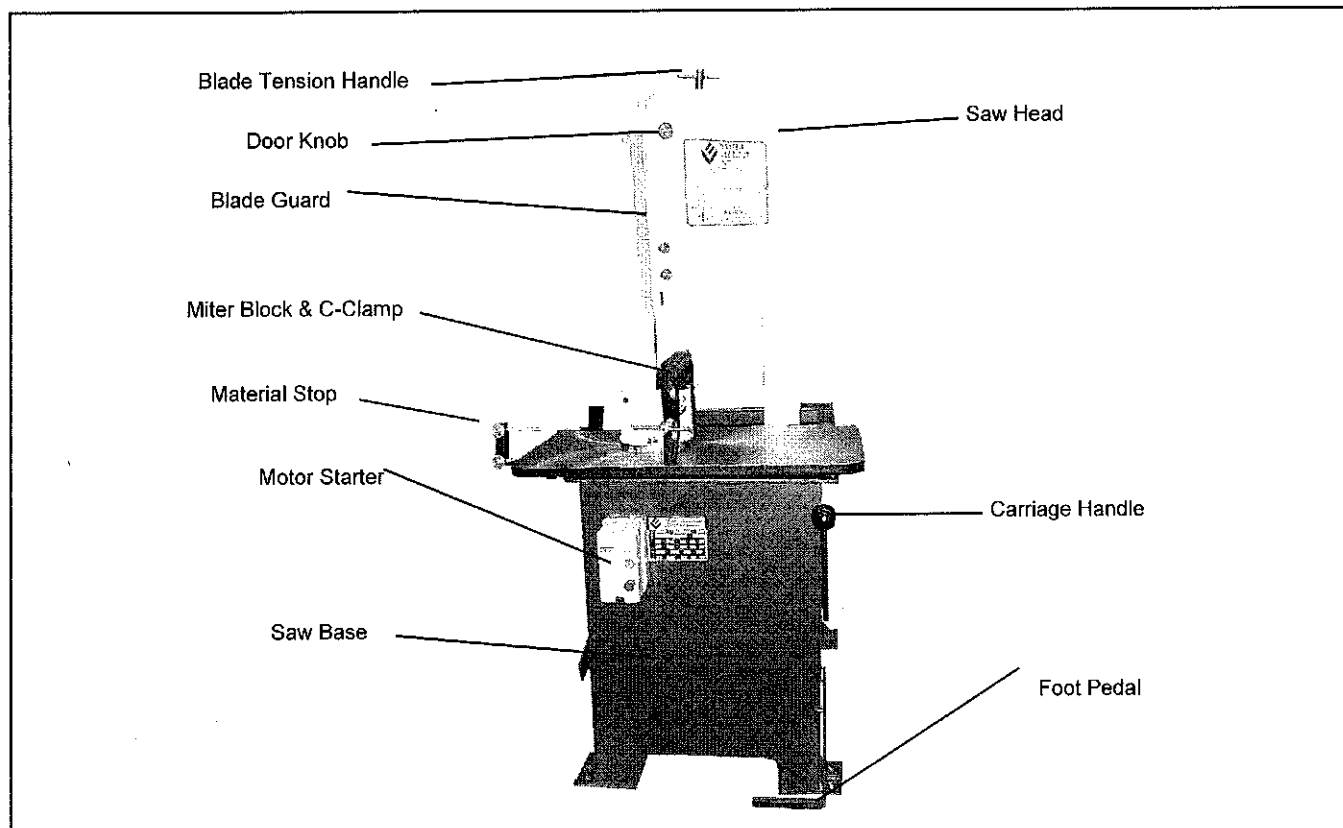


Figure 1—Front View



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5.1.2 Left Side View

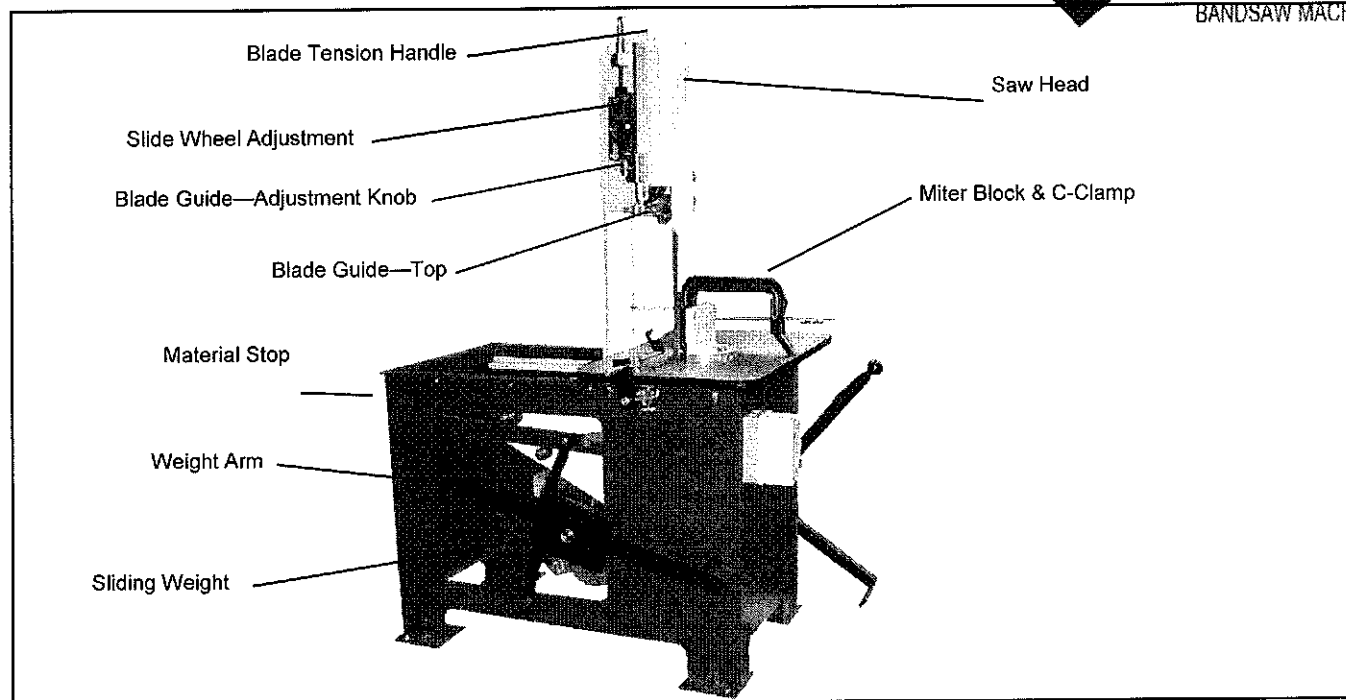


Figure 3—Left Side View

6. Installation Instructions:

To insure maximum productivity and minimum problems with your new bandsaw machine the following procedure must be carefully followed regarding the installation and adjustment of this sawing machine.

When the machine arrives unpack the machine and remove the protective coating from the table and all exposed metal surfaces. Oil all moving surfaces with a general machine oil.

Position the machine where desired. Level the saw from the bed and securely anchor all four corners.

Check the blade. During transportation the blade may have been damaged if this has occurred contact your cartage company. The Blade should be tensioned to 30,000 psi. Now check to see if the blade is square to both the table and the miter block. To do this use an accurate machinist square. If either the blade or the vise are not square the machine must be aligned which is described in section 18.

Have the power connection done by a qualified electrician through a fused disconnect box as required by local codes.

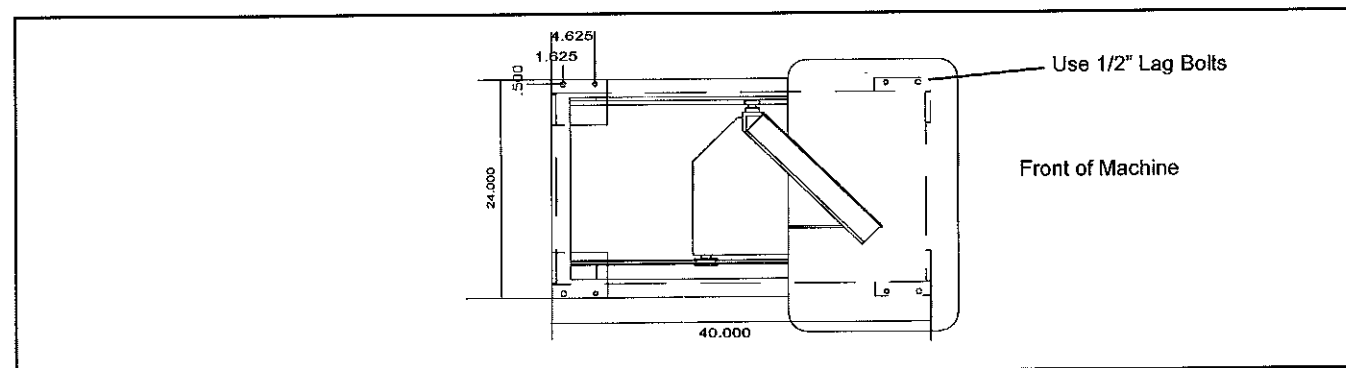


Figure 4—Anchoring Layout

7. Operating Instructions:

7.1 Electric Control

7.1.1 Electric Control Panel View

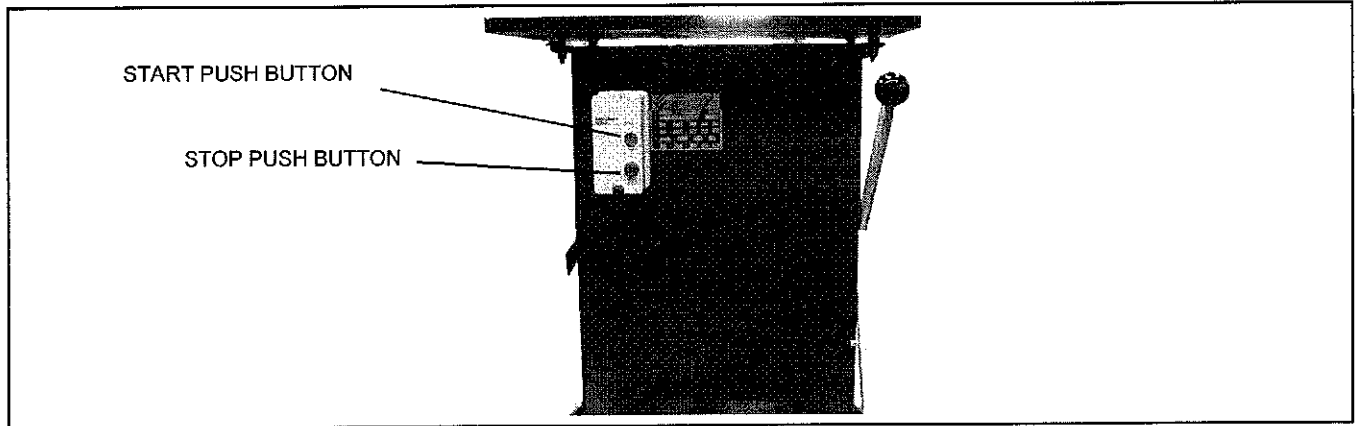


Figure 5—Electric Control Panel

7.1.2 Electrical Operation

- The machine must be electrically hooked up to an appropriately fused electrical supply through an adequate supply cord.
- For 115 volt single phase a minimum 14 gauge supply cord. The supply should be fused for 15 amps.
- The machine shown is equipped with a magnetic starter. This will prevent the machine from restarting if the power is temporarily interrupted.
- The on and off push buttons are located as shown above.
- Caution should be used when turning the machine on. The blade should be clear of any obstructions or personnel. When the on button is depressed the saw blade will start.
- When the off button is depressed the saw blade will stop.

7.2 Material Clamping

7.2.1 Work Table View

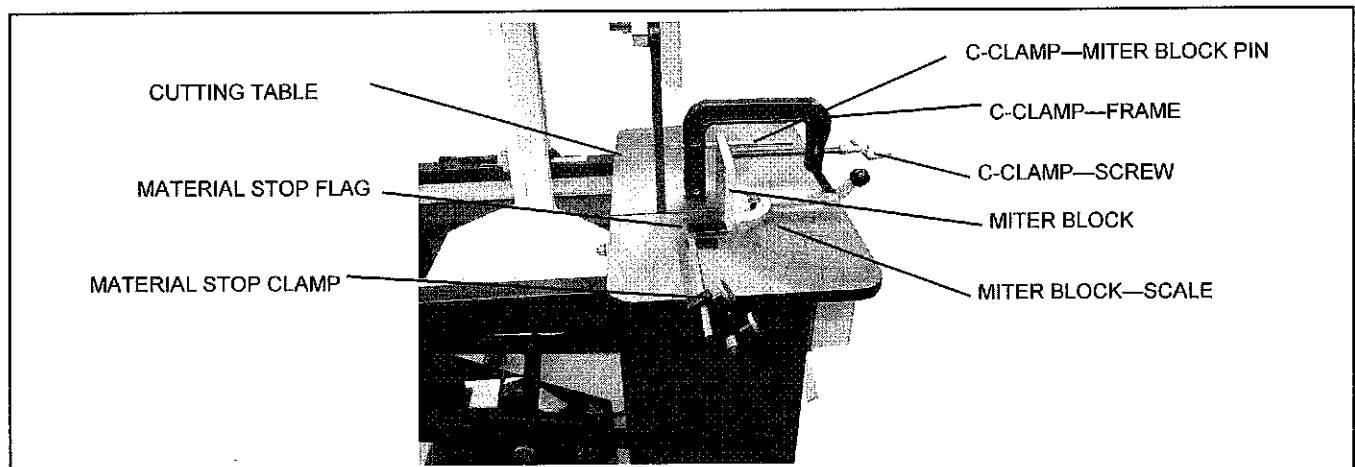


Figure 6—View of Work Table



7.2.2 Miter Block

- The miter block is used to brace the material to be clamped.
- The miter block can be set at 0° or between ±45° for miter cutting.
- The scale is on the miter block and the zero is punched onto the work table.
- The miter block is held in place with a dowel pin and a bolt. A 9/16" wrench is required to loosen the bolt.

7.2.3 C-Clamp

- The c-clamp is used to hold clamp the material against the work vise.
- The c-clamp can be located on either side of the saw blade and is located by pushing the pin through the miter block.
- The c-clamp can clamp material up to 4" in diameter.

7.2.4 Material Stop

- The material clamp is used to do repetitive cutting.
- The distance is set by clamping the material flag to the desired distance.
- The material clamp assembly is held in a block under table.

7.3 Saw Carriage Movement

7.3.1 Carriage Handles View

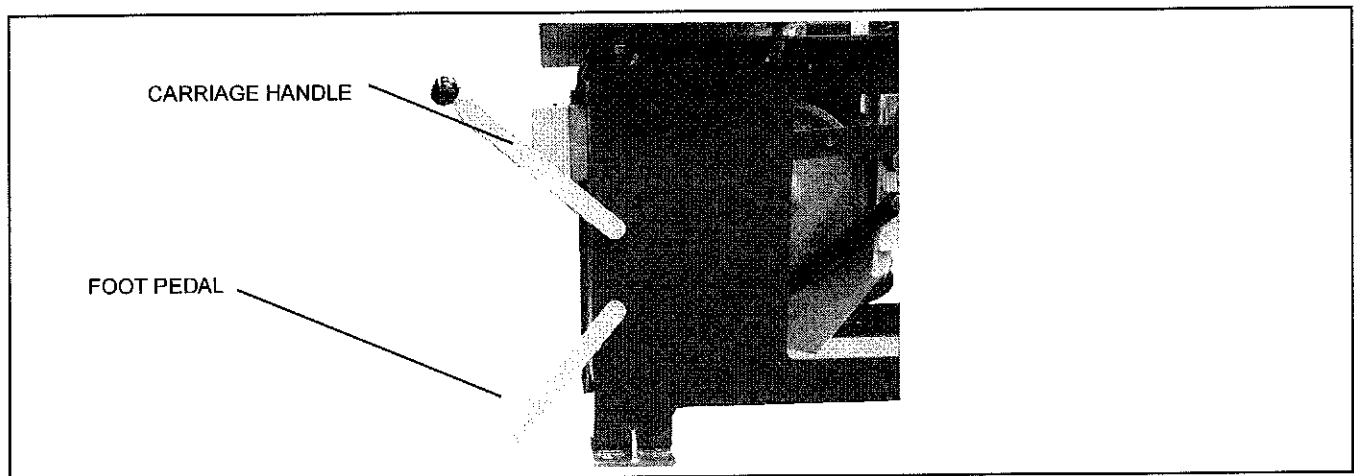


Figure 7—View of Carriage Handles

7.3.2 Carriage Handle

- The carriage handle is used to move the saw carriage.
- With the handle pressed down the saw carriage retracts and the handle toggles into place.
- When lifting the saw handle slowly move the carriage forward so that it does not rush forward.

7.3.3 Foot Pedal

- The foot pedal is used to retract the saw carriage 4".
- The use of this pedal is for repetitive cutting of small diameters.
- Slowly release the foot pedal so that saw carriage does not rush forward.

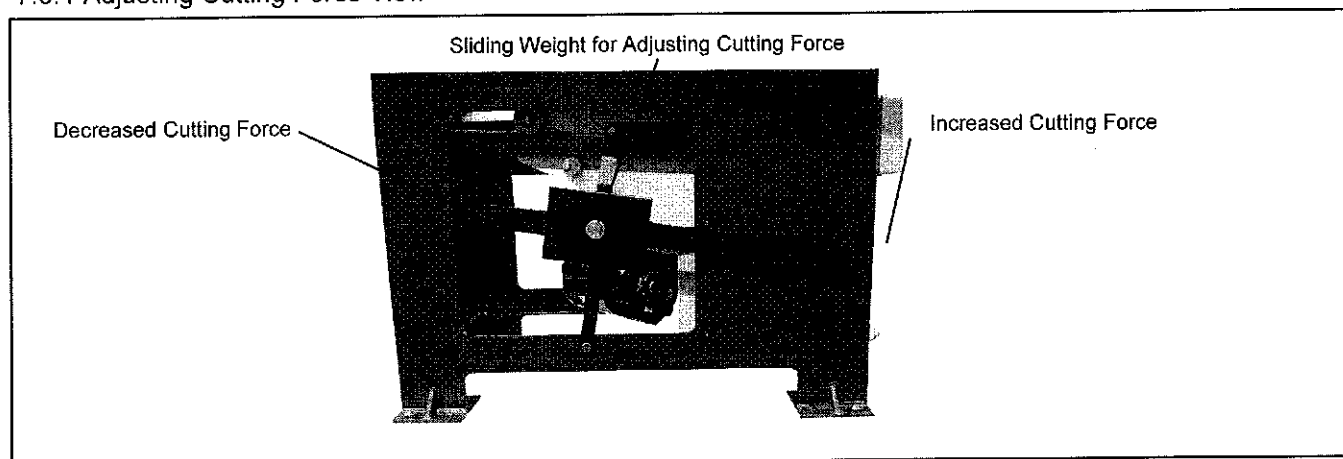


7.4 Saw Operation

- Clamp material firmly making certain that the material is level and square with the machine.
- To assure good blade life, use a blade that has at least three teeth in contact with the material at all times.
- Start the saw.
- Advance the saw blade do not release the handle until the cut has begun. Lack of care at this point could result in loss of blade alignment.
- The counter weight on the left side of the machine will adjust the cutting pressure to suit the thickness of material and the blade size.
- When the saw cut is finished press the stop button to turn the machine off.

7.5 Cutting Force

7.5.1 Adjusting Cutting Force View



7.5.2 Cutting Pressure Adjustment

Figure 8—Hydraulic Control Panel View

The cutting pressure is adjusted by positioning the weight on the weight cross arm. Position the weight to the front on the machine for a greater cutting pressure, while towards the back decreases the cutting pressure.

Low cutting pressure is used for soft materials such as aluminum, while higher pressure are used for tool, and machinery steels and materials which work harden.

7.6 Saw Travel Adjustment

7.6.1 Travel Adjustment Limit Setting View

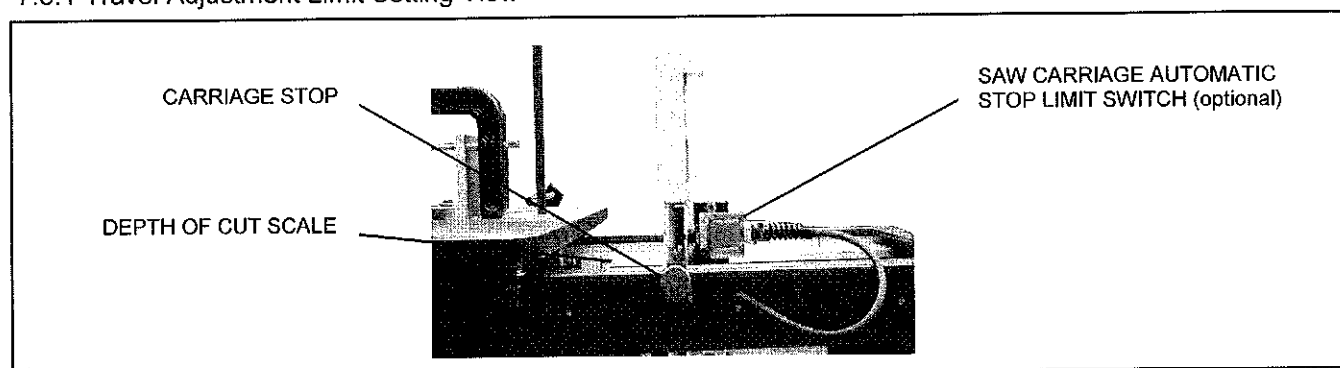


Figure 9—Travel Limit Switches View

7.6.2 Carriage Travel

The carriage travel can be set to stop the carriage from cutting all the way through the material, used for notching blocks. This is accomplished by moving carriage stop clamp. The depth of cut is shown on the scale mounted on the saw base.

To contour cut the saw head is locked in the front position. To do this move the carriage to the front, undo the stop clamp and remove it from the base rail, reposition the stop clamp so that it is behind the saw carriage and then tighten the screw, thereby locking it into place.

If the saw is equipped with the automatic shut off the saw will stop whenever the carriage strikes the stop clamp. Also the head can not be locked in the forward position because the stop clamp will interfere with the limit

8. Blade Information:

8.1 Blade Size

Blade Size **1/4" to 3/4" x 10'**

As a bandsaw machine manufacturer Baxter Verticut has found that to achieve the best cutting results only premium quality blades should be used. The machine comes from the factory equipped with a premium quality blade.

8.2 Blade Tensioning

The blade should be tensioned to 30,000 psi.

This can be determined by deflecting the saw blade in the middle of the throat. The blade should deflect approximately 1/2" using a 15 lb pull.

8.3 Blade Installation

When uncoiling the blade always wear safety glasses and gloves. Do not throw the blade into the air to uncoil it! Besides being extremely dangerous this can also damage the blade teeth. If you do not know how to uncoil the blade get instructions from your blade supplier.

1. Turn power off.
2. Retract saw carriage and lock head in back position by using carriage stop clamp.
3. Remove tension in blade, unscrew handle but do not remove.
4. Push blade out of guides.
5. Remove old blade.
6. Clean machine.
7. Install blade onto machine, teeth must point so as to cut when the wheels turn in the counterclockwise direction.
8. Lightly tension blade.
9. Twist blade and slide into each blade guide.
10. Tension blade as described in section 8.2.
11. Jog machine and turn ON and OFF quickly.
12. Visually inspect to make certain the blade is seated against the wheel shoulders.
13. If everything is correct the machine is ready.
14. Blade break-in procedure should now be done.

8.4 Blade Break-In Instructions

- Blade break-in is very important if the maximum blade life is going to be achieved. Blade break-in procedure is similar to a lapping action on the blade teeth removing the sharp edges.

The following steps should be followed for break-in procedure.

(Continued on page 10)



(Continued from page 9)

1. Select the proper cutting speed for the material to be cut.
2. Cut a 25% of the normal cutting pressure setting for 10 minutes
3. Increase cutting pressure to 50% of normal setting and cut for 10 minutes
4. Increase cutting pressure to 75% of normal setting and cut for 10 minutes.
5. Increase cutting pressure to 100% of normal and proceed to cut.

Check with you blade supplier for specific instructions.

The blade equipped on the machine from the factory has already been broken-in for your convenience.

9. Cutting Speed:

9.1 Machine Speeds

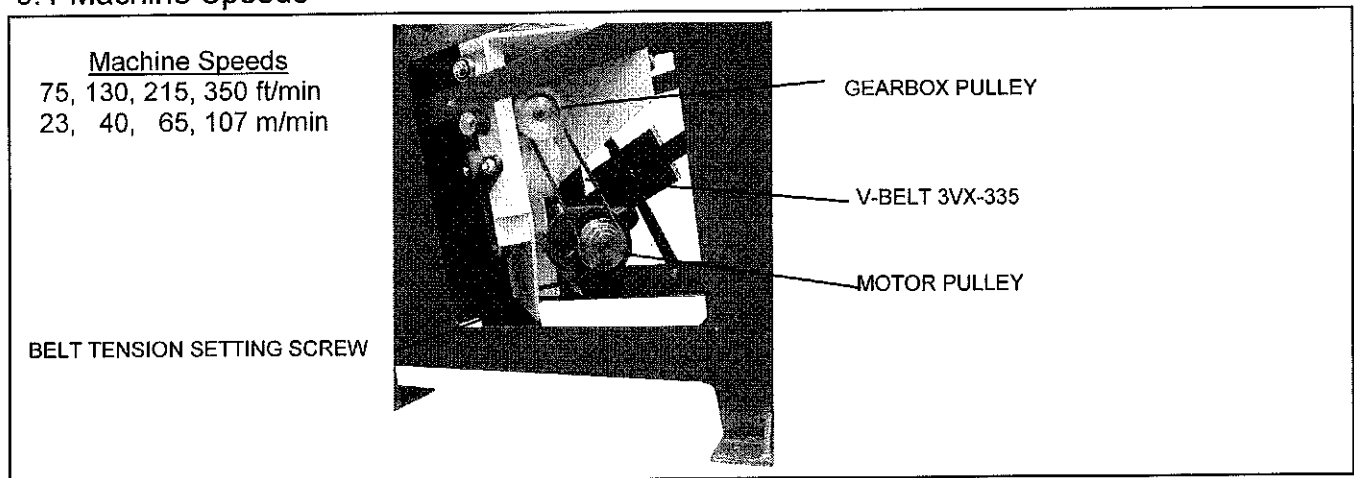


Figure 10—Drive Pulleys

9.2 Adjusting Blade Speed

1. Turn machine off and lock out.
2. Move carriage forward.
3. Lift up motor and move belt to desired speed. Belt must be on pulley steps which are in line with each other.
4. Lower motor.
5. Machine is ready.

9.3 Blade Speed Chart (for bimetal blades)

MATERIAL	SPEED (FEET PER MINUTE)
CARBON STEEL—LOW & MEDIUM	130—215
CARBON STEEL—HIGH	75—130
STRUCTURAL STEEL	130—215
FREE CUTTING MATERIAL	215
DIE STEEL	75
TOOL STEEL	75
HOT WORK STEEL	75—130
STAINLESS STEEL	75
CAST IRON	130
ALUMINUM	350



10. Cutting Trouble-Shooting Guide:

PROBLEM	PROBABLE CAUSE	SOLUTION
excessive blade breakage	teeth too coarse	use finer pitch
	misalignment of guides	adjust blade guides
	excessive tension	adjust blade tension
	blade speed too fast	lower speed
	excessive feed	reduce feed
not cutting square	vise not square	square vise
	material not square	clamp material correctly
	excessive pressure	reduce feed pressure
	improper blade tension	adjust tension
	blade dull	change blade
blade twisting	excessive blade pressure	adjust feed pressure
	blade jamming in cut	decrease feed pressure
	blade not in alignment with guide	check guide for wear and adjust
teeth stripping	material not clamped securely in vise	clamp material firmly
	gullets filling	use coarser pitch
	3 teeth not in contact with material	use finer pitch
	excessive feed	reduce feed
early tooth wear	excessive speed	decrease speed
	blade too coarse	use finer pitch
	feed too low	increase feed
blade will not cut	blade teeth pointing in the wrong direction	remove blade, turn blade inside out, teeth must point in direction of travel
motor fails to develop full power, overload	low voltage	correct supply voltage
	power line overload	reduce load on line trips
	under size wire	increase wire size and or diameter
	air circulation to motor is restricted	clean air vents in motor

11. Warranty:

The machine is warranted to be free from failure resulting from defective material and workmanship under proper use and service for a period of one year, single shift use, from the date of shipment to the end user. Baxter Verticut's sole obligation under this warranty is limited to repair or replacement without charge of any part which our inspection discloses to be defective, all work is done at Baxter Verticut's factory. A return goods authorization number must be first obtained and return freight must be prepaid.

The warranty does not cover maintenance and wear items, including but not limited to:, saw blade, belts, filters, oil, etc.

Electric motor, pumps, electric components, hydraulic components, hoses and any other items used in the construction of the machine, but not made by Baxter Verticut are subject to the warranty of the original equipment makers warranty.

Liability and or obligation by Baxter Verticut for damages, whether general, special or for negligence and expressly including any incidental and consequential damages is hereby disclaimed. Baxter Verticut's sole obligation to repair or replace shall be the limit of its liability under this warranty. Baxter Verticut Inc. is not responsible for any consequential damage resulting from the failure of our machine, regardless of the cause.

This is the only warranty which applies.

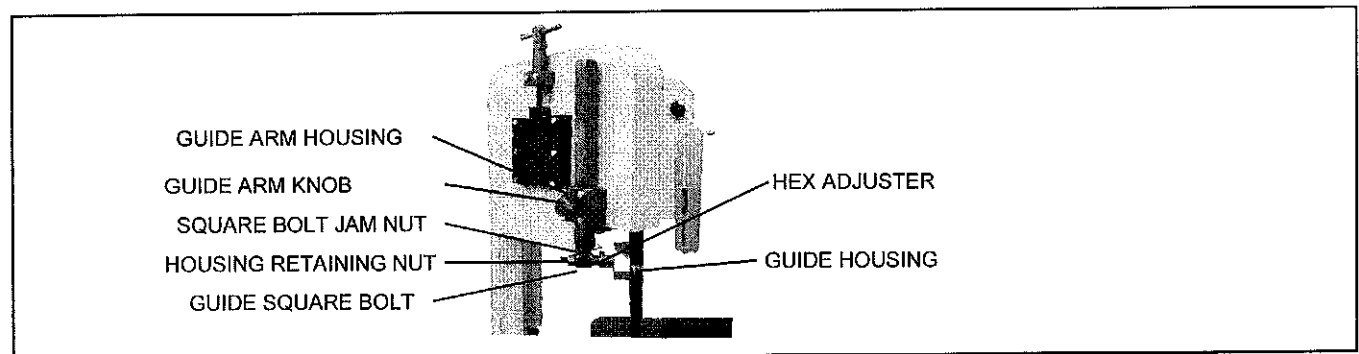
12. Lubrication:

ITEM	LUBRICANT	QUANTITY	FREQUENCY
Gearbox	Argon EP1	1 Kilogram	Yearly
General	Oil ESSO Febis K68	As required	Daily

13. Blade Alignment:

A new premium quality blade must be used.

Check to see if the blade is square to both the table and the miter block. If either the blade with the bed or the vise are not square the blade alignment must be reset.



13.1 Blade Alignment—Guide Housing with Blade

Figure 11—Top Blade Guide Assembly

1. Turn off saw.
2. Set the miter block to zero.
3. Raise the upper saw guide to 12" above the table
4. Inspect for contact between the blade guide rollers and the blade. The blade should be flat against the lower roller on the top guide and the top roll on the lower guide assembly.
5. If required loosen housing retaining nut and rotate housing until the roller just presses up against the blade. Note that only the inside roller needs to press 100% flat against the blade.
6. The housings should at approximately at a 40° angle clockwise from the vertical looking from the front of the machine.
7. Tighten the housing retaining nut.



13.2 Blade Alignment—Blade with Table

1. Turn off saw.
2. Set the miter block to zero.
3. Move the saw carriage to the forward position.
4. Raise the upper saw guide to 12" above the table.
5. Check to see if the blade is square to the table.
6. If not square release the square bolt jam nut and rotate the guide square bolt until the blade is square to the table.
7. Tighten jam nut.

13.3 Blade Alignment—Blade with Miter Block

1. Turn off saw.
2. Set the miter block to zero.
3. Move the saw carriage to the forward position.
4. Raise the upper saw guide to 12" above the table.
5. Check to see if blade is square to the miter block.
6. Readjust miter block to make square.
7. Hold square on miter block and against blade. Retract carriage and see if movement is parallel to square.
8. If still not square start over as described in section 13.1 and 13.2.
9. If problems still exist contact the factory for further assistance.

14. Assembly Drawings:

14.1 Table, Clamp, Material Stop—Assemblies:

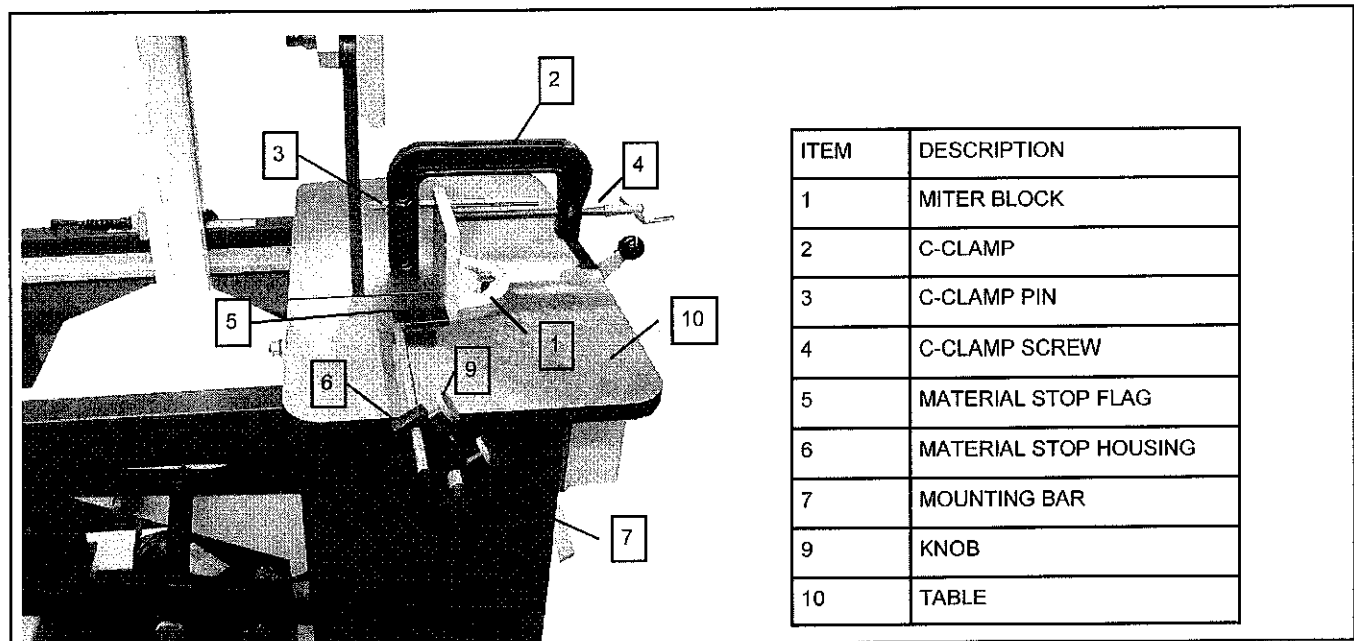


Figure 12—Table Assembly



14.2 Blade Guide Assembly

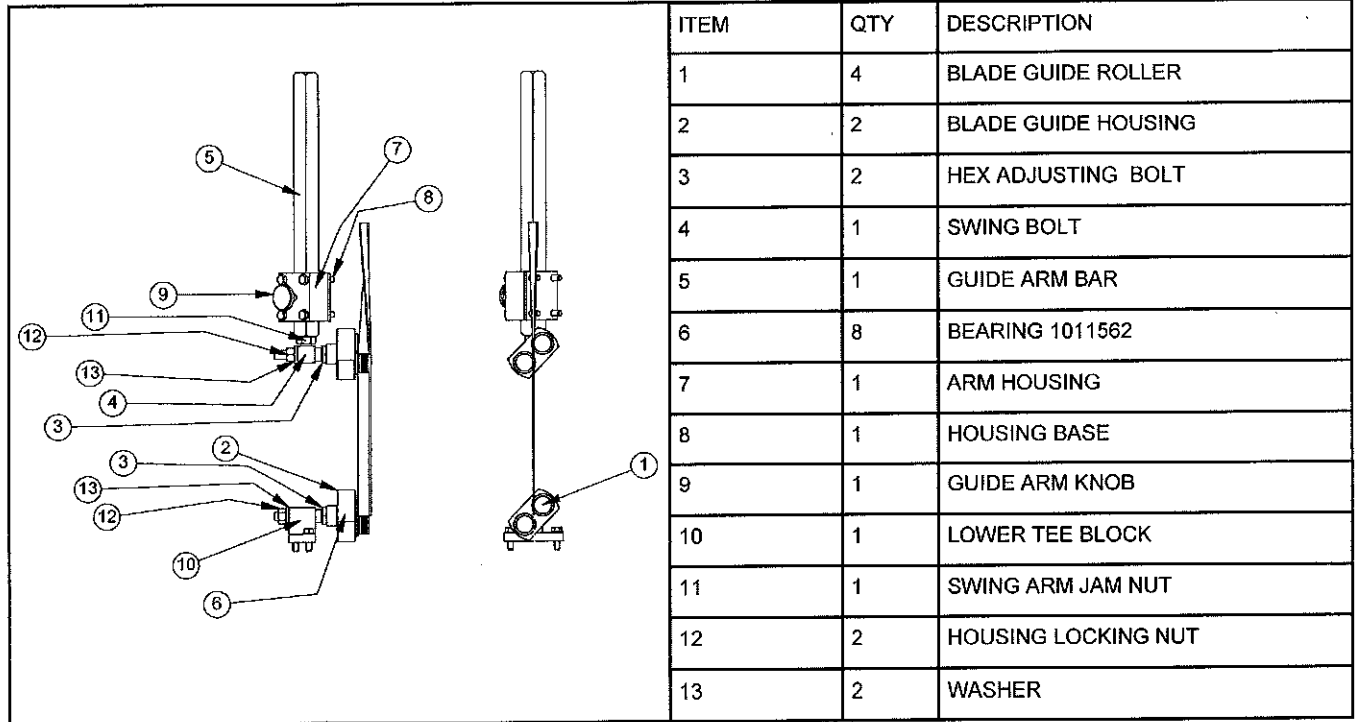


Figure 13—Blade Guide Assembly

14.3 Slide Assembly:

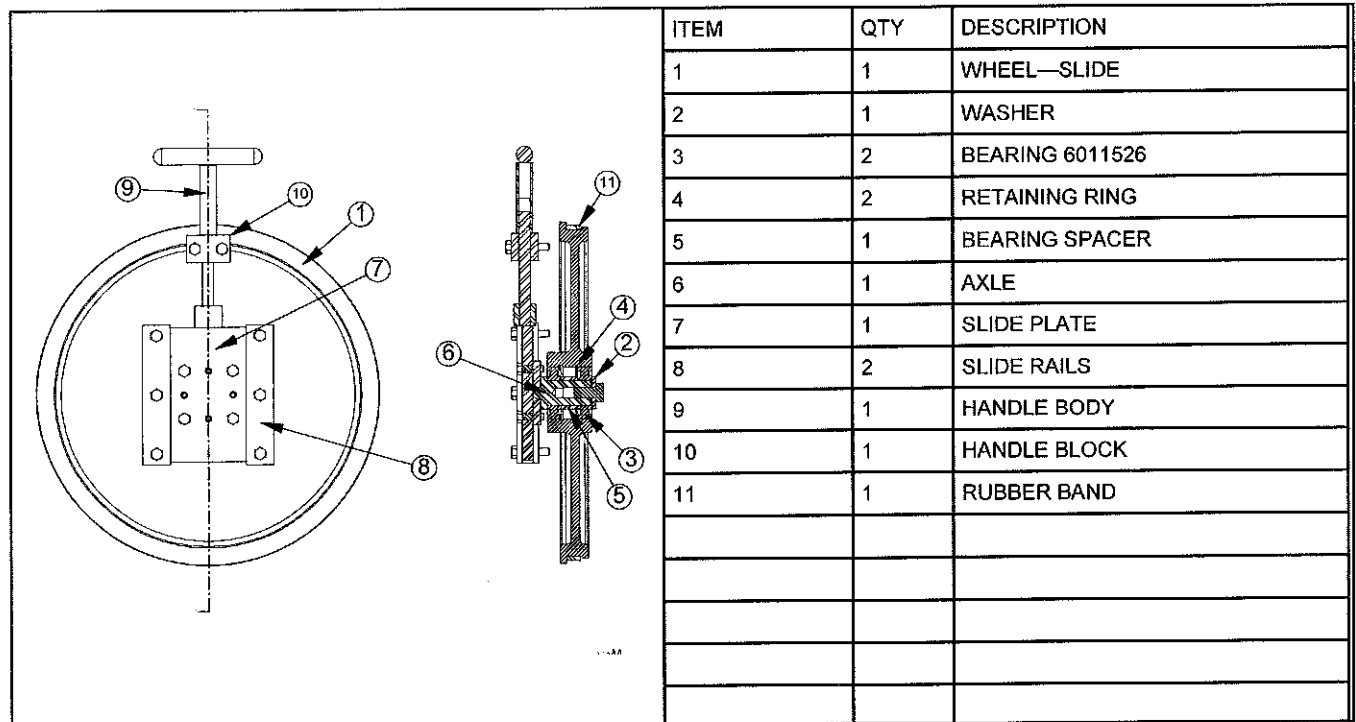
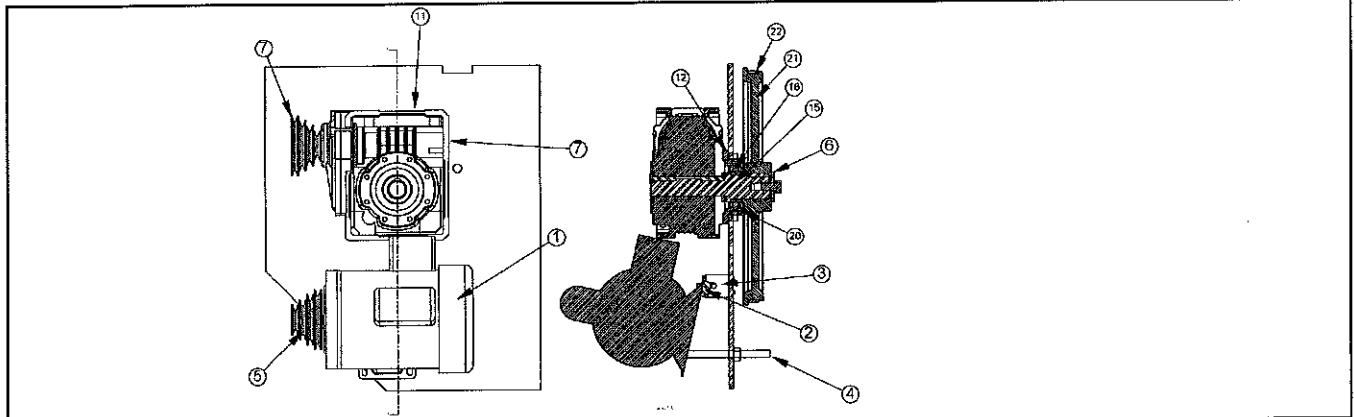


Figure 14—Slide Assembly



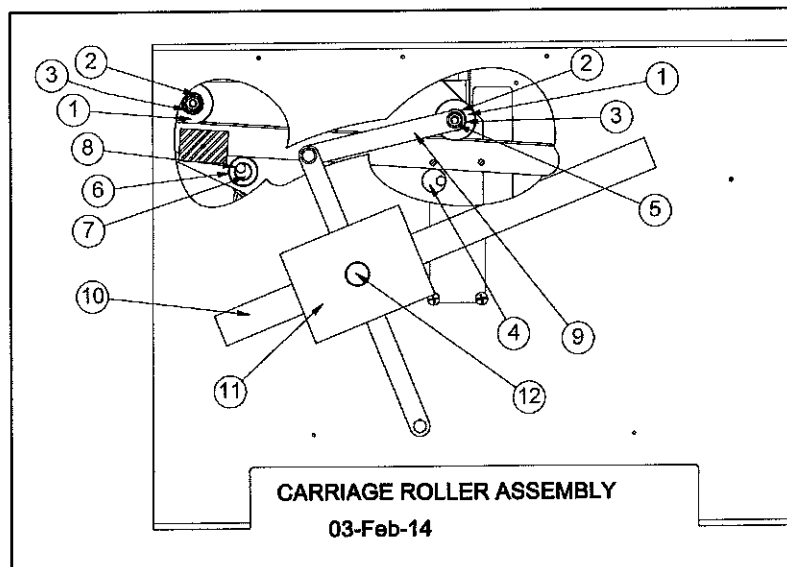
14.4 Drive Assembly:



ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	MOTOR 3/4 HP	13		
2	1	MOTOR BASE	14		
3	2	MOTOR BASE BRACKET	15	1	OUTPUT SHAFT
4	1	MOTOR TENSION SCREW	16	1	BEARING 8011526
5	1	PULLEY 4-STEP-MOTOR	17	1	
6	1	WHEEL WASHER	18	1	
7	1	PULLEY 4-STEP-GEARBOX	19	1	
8	1	VEE BELT (NOT SHOWN)	20	1	RETAINING RING—LARGE
9			21	1	WHEEL—DRIVE
10			22	1	WHEEL RUBBER BAND
11	1	GEARBOX HOUSING	23		
12	1	BEARING HOUSING	24		

Figure 15—Drive Assembly

14.5 Carriage Roller Assembly:



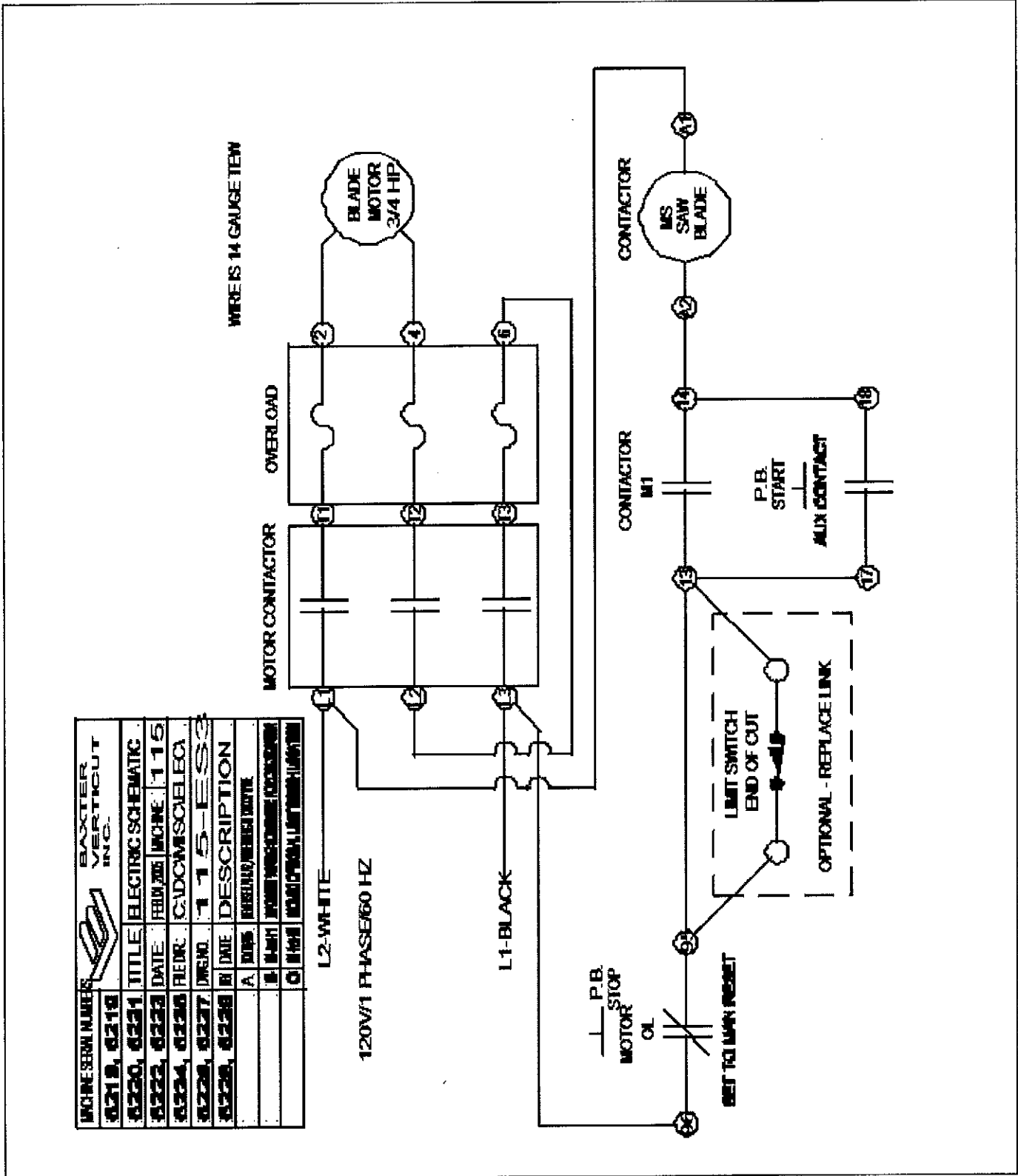
ITEM	QTY	DESCRIPTION
1	2	VEE ROLLER
2	2	BEARING 3011506
3	2	RETAINING RING
4	1+1	ECCENTRIC ADJUSTER
5	1	HUB WASHER
6	1	BEARING 5011506
7	1	ECCENTRIC AXLE
8	1	ECCENTRIC RET. RING
9	1	WEIGHT ARM-SHORT
10	1	WEIGHT ARM-LONG
11	1	WEIGHT
12	1	KNOB—WEIGHT

Figure 16—Carriage Roll Assembly

14.6 Electric Schematic-Single Phase-115/1/60



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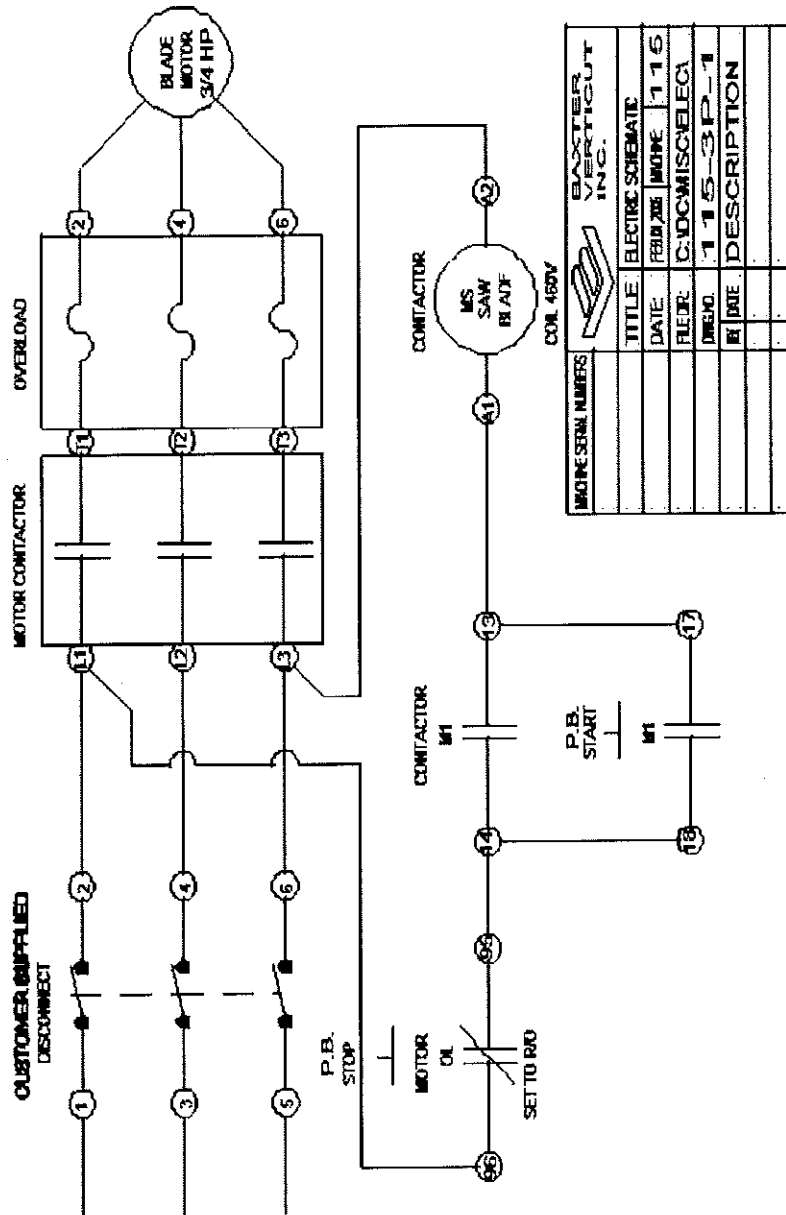


ENGINE NUMBER	BAXTER VERTICUT INC.
0219, 0219	
0220, 0221	ELECTRIC SCHEMATIC
0222, 0223	DATE: FEB 205 MACHINE: 115
0224, 0225	REPR. C.V.D.C.M.S.O.E.L.C.A.
0226, 0227	DWG. NO. 115-ES3
0228, 0229	REVISION DESCRIPTION
	A. 0000 REVISION DATE
	B. 0000 REVISION DATE
	C. 0000 REVISION DATE

14.7 Electric Schematic-Three Phase



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ENGINEER'S NUMBERS	BAXTER VERTICUT INC.	
	TITLE	ELECTRIC SCHEMATIC
	DATE	REVISION
	DATE	1 1 6
	FILE NO.	C:DCMISCELEA
	DRAWING NO.	1 1 5-3 P-1
	REVISION	DESCRIPTION

14.7 Electric Schematic-Single Phase 230/1/60



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