



# **W - 20 VERTICAL BAND SAW MANUAL**

- **OPERATION**
- **SAFETY**
- **MAINTENANCE**
- **PARTS LIST**

**Wellsaw®**

2829 N. Burdick, Kalamazoo, MI 49004  
Telephone: 616-345-1132  
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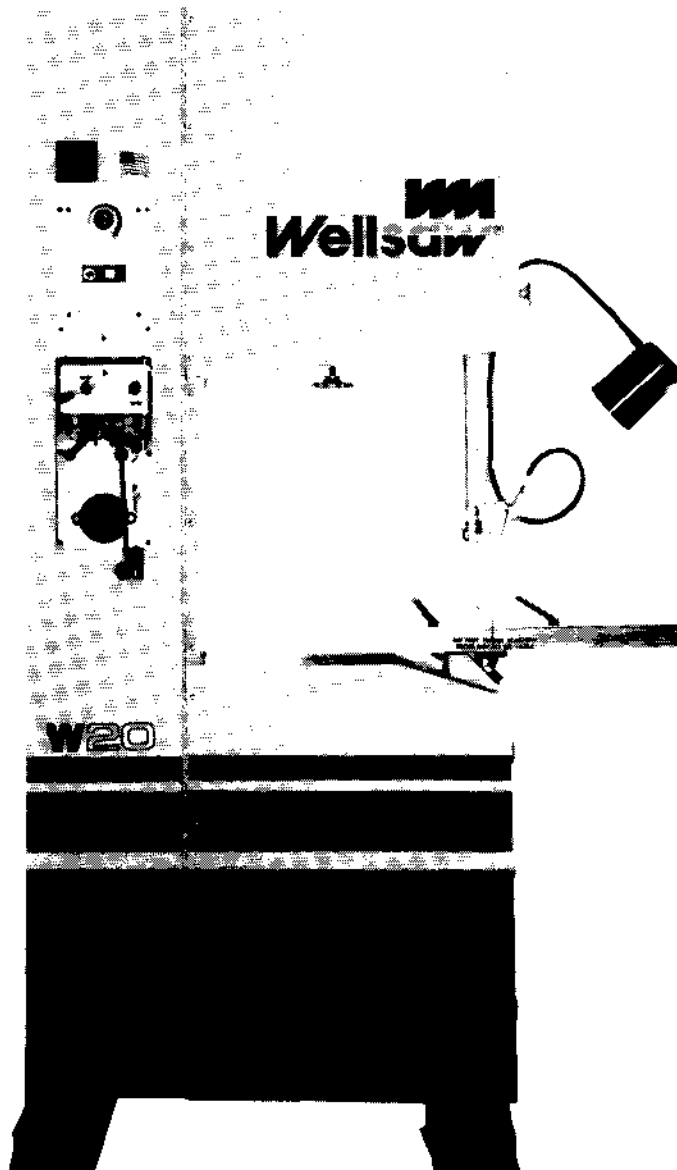
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# Wellsaw

**PLEASE READ THIS  
MANUAL CAREFULLY  
IT WAS PREPARED  
TO HELP YOU**

# **W-20 VERTICAL BAND SAW MANUAL**

**(INSTRUCTIONS AND PARTS)**



## **W-20 SPECIFICATIONS**

### **Capacity:**

Throat depth ..... 20"

Throat height ..... 16"

Blade sizes: ..... 3/16" up to 3/4" x 15 ft.

Motor control ..... solid state

Motor develops ..... 1-1/2 Hp  
(Permanent magnet type — 115 volt)

Drive ..... 10 to 1 worm gear reduction

Speed F.P.M. infinitely variable 0 to 500  
(Factory set 60 to 500 cutting range for utility use)

Dimension of work table ..... 26" x 26"

### **Table tilt**

Right ..... 45°

Left ..... 5°

Height ..... 83-1/2"

Floor space ..... 48" x 28"

Shipping weight (approx.) ..... 700 lbs.

Specifications Subject to Change Without Notice!

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## **SECTION I—OPERATING INSTRUCTIONS**

### **ALWAYS USE PROPER SAFETY PROCEDURES**

Know your machine—its' safe and proper use.

Be certain power to saw is off before opening cover.

Prevent accidental contact with the blade. Use auxillary work holding devices for small workpieces.

### **CUTTING TIPS**

1. Select blade and speed for material being cut. Use the coarsest tooth blade suitable for the workpiece while providing for at least two teeth cutting at all times. Use fastest suitable band speed and minimum feed force adequate to produce good cutting action. With work hardening steels, maintain a steady feed; do not let teeth rub without cutting.
2. Keep blade guide as close to workpiece as possible.
3. If teeth wear off unusually fast, use a slower speed.

### **INSTALLING BLADE ON SAW**

1. Disconnect electrical supply.
2. Open front cover, swing blade guard aside and move tie bar at front bottom of table aside.
3. Hold blade carefully while loosening blade tension screw, and remove blade.
4. Uncoil new blade. Make certain that blade teeth point in direction of travel, down toward table. If not, turn the blade inside out to have proper tooth direction.
5. Place new blade on the band wheels and in the saw guides. Carefully hold band in position while tightening the tension screw until the indicator shows proper tension. Turn the band wheel by hand to verify proper band tracking on wheels and guides. (If changing blade sizes, adjust both the upper and lower side guides.)
6. Reposition the blade guard and table tie bar, and close and latch the front cover.
7. Start the saw at slow speed to check proper blade installation before cutting.

## SWITCHES

**ALWAYS PRESS THE STOP SWITCH TO TURN OFF THE SAW DRIVE BEFORE OPENING THE COVER**

A three position toggle switch is mounted on the saw frame inside the covers.

Center position is OFF

Up is WELDER (optional)

Down is SAW

The saw drive control on the front cover has an ON-OFF Switch, START Button, and blade speed dial.

Restarting is required after the saw automatically stops from power interruption (undervoltage protection) or overloading.

## BLADE GUIDES

When changing blade sizes, adjust the guides to the blade. The side guides should contact the blade without rubbing and be recessed behind the toothed portion of the blade. Each side guide is mounted on an eccentric stud secured by a set screw, providing adjustment for both sideways and tooth clearance. Back up guides are set for blade tracking on the wheels and should not require adjustment.

## BLADE BRUSH

Keep the brush positioned so the bristles contact the toothed portion of the blade.

## TABLE

To adjust the angle of the table to the blade, loosen the table pivot clamp screw under the rear of the table, pivot the table to the desired angle and tighten the clamp screw.

## **SECTION II—MAINTENANCE**

### **LUBRICATION**

Lubricated for life components are used throughout on this machine, including the gearhead motor. The tension screw and slide should be oiled and greased occasionally for ease of operation.

### **MOTOR BRUSHES**

Motor brushes may be interchanged for extended life, but should be replaced when less than 1/2" (12mm) long.

### **WHEEL PITCH**

If the blade tends to run off the front of the top (idle) wheel, loosen the locknuts on the back of the slide block, tighten set screws in 1/4 turn and reset the locknuts.

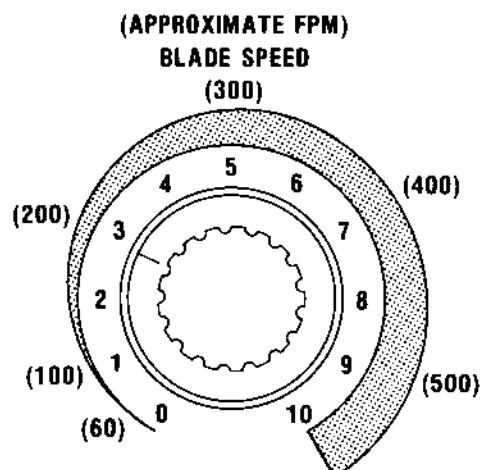
To make a similar adjustment on the lower (drive) wheel, loosen the lower pair of capscrews on the wheel mounting plate, loosen the corresponding pair of setscrews one turn and tighten the capscrews.

After making a pitch adjustment, turn the wheel several times by hand to confirm proper blade tracking.

## FOR GREATER SERVICE AND EFFICIENCY CAREFUL OPERATION—BLADE CONSIDERATION

DIFFICULTY	REASON	REMEDY
<b>Cutting out of line</b>	Too heavy a feed, or worn blade.	Reduce feed or replace the blade. Replace worn guide bearings when they begin showing excessive wearing.
	Guides in wrong position.	Set as close to work as possible.
	Guides out of alignment.	Follow adjustment instructions.
	Set worn on one side of blade.	Keep brushes clean.—Avoid teeth rubbing in cut by applying enough feed so that each tooth is cutting a good chip.
	Starting cut on odd shapes where blade does not contact flat surface.	Retard feed until blade has a good start in the material.
<b>Stripping Teeth</b>	Blade teeth too coarse.	Be sure that two or more teeth in contact with the material being cut.
	Hard spots in material being cut.	Rotate stock if possible. Do not put a new blade in cut at same angle.
<b>Breaking</b>	Guides out of alignment	Follow adjustment instructions.
	Blade twisting	Adjust guides as close to work as possible. Be sure materials to be cut is held firmly at all times.
	Improper blade tension.	Always keep blade properly tensioned.
<b>Excessive Wear</b>	Blade speed too fast.	Follow recommended cutting speeds.

**Always Use A Light Feed on New Blades**



ITEM	REQD.	PART NO.	DESCRIPTION	ITEM	REQD.	PART NO.	DESCRIPTION
1	1	210023	Frame, Saw (Weldment)	81	1	210057-1	Stud
2	2	100030-9	Washer, 5/8 Flat S.A.E	82	1	210058-1	Pin, Upper Guide
3	1	210015	Bracket, Band Wheel & Drive Motor	83	2	210022-1	Guide, Blade-Carter #500-3
4	4	100004-62	Screw, 5/16-18 x 1-1/8 Hex Hd. Cap	84	1	210061	Retainer, Saw Guide
5	14	100025-2	Lockwasher, 5/16	85	1	210058-2	Pin, Lower Guide
6	8	100034-26	Screw, 1/4-20 x 3/4 Soc. Hd. Set Cup Pt.	86	1	210065	Retainer, Blade Guide
7	1	210019-1	Motor, Gear - DC (210019-2 Brush)	87	1	100406-1	Bearing, Ball
8	10	100004-63	Screw, 5/16-18 x 3/4 Hex Hd. Cap	88	1	100000-21	Screw, #10-32 x 7/8 Rd. Hd. Mach.
9	2	210018	Wheel, Band	89	1	210009	Shaft, Brush
10	1	210013	Shaft, Lower Band Wheel	90	1	100133-2	Brush
11	2	210014	Spacer	91	1	370483	Arbor, Brush (Includes 2-370629 Bushings)
12	4	100068-5	Ring, Snap	92	2	370629	Bushing
13	4	100414-6	Bearing, Ball	93	32	100131-7	Pop Rivet
14	1	100029-8	Washer, 5/8 Flat	94	1	370482	Collar, Brush
15	2	100019-16	Nut, 5/8-18 Hex Jam	95	1	100034-9	Screw, #10-32 x 1/4 Soc. Hd. Set Cup Pt.
16	1	100065-7	Nut, 5/8-18 Hex	96	1	100019-7	Nut, 5/8-11 Hex Jam
17	1	100141-1	Pulley, Timing Belt	97	4	100131-6	Pop Rivet
18	1	100056-37	Key, 3/16 x 3/16 x 2	98	1		Blade, 15'-0 (3/16 Min. 3/4 Max.)
19	2	100034-25	Screw, 1/4-20 x 3/8 Soc. Hd. Set Cup Pt.	99	1	210081	Cover, Front
20	1	100140-1	Belt, Timing	100	1	210082	Cover, Rear
21	1	210089	Housing, Blower Upper	101	1	210083	Hinge, Machined
22	1	210090	Housing, Blower Lower	102	1	100138-2	Trim, Door
23	4	100138-1	Clip	103	7	100004-4	Screw, 1/4-20 x 1/2 Hex Hd. Cap
24	1	210021-1	Hose, Duct	104	2	100142-1	Latch
25	1	210091	Adapter, Hose	105	2	100142-2	Catch
26	1	210016	Blower	106	4	100139-2	Knob
27	7	100004-7	Screw, 1/4-20 x 3/4 Hex Hd. Cap	107	1	210077	Control, Motor Speed
28	5	100029-2	Washer, 1/4 Flat	108	4	100080-2	Screw, #10 x 1/2 Sheet Metal
29	4	100017-1	Nut, 1/4-20 Hex	109	1	100218-6	Clamp, Tubing
30	1	210003	Support, Table Pivot	110	1	210034	Lampholder, Modified
31	1	210001	Table	111	1	100781-5	Reflector
32	1	210002	Pivot Table	112	1	210035	Ring, Retaining
33	4	100008-19	Screw, 3/8-16 x 3/4 Soc. Hd. Cap	113	1	210036	Bracket
34	1	100004-37	Screw, 1/2-13 x 1-1/2 Hex Hd. Cap	114	1	100807-2	Terminal
35	1	100029-6	Washer, 1/2 Flat	115	1	100578-2	Lamp
36	1	210006	Protractor, Table	116	1	210076	Guard, Chip
37	3	100000-24	Screw, 1/4-20 x 3/8 Rd. Hd. Mach.	117	1	100605-2	Connector, 1/2 Straight
38	1	210007	Pointer, Table	118	1	100604-7	Connector, 1/2-45
39	13	100025-1	Lockwasher, 1/4	119	1	100607-10	Conduit, 1/2 x 50"
40	1	210005	Plate, Throat	120	3	100507	Connector
41	2	100001-3	Screw, #10-32 x 1/2 Flat Hd. Mach.	121	1	100814-1	Cord and Plug Assembly
42	1	2100004	Plate, Table Tie	122	1	100674-3	Switch, Toggle
43	2	100034-3	Screw, 5/16-18 x 3/8 Soc. Hd. Set Cup Pt.	123	1	100796-10	Screw, Grounding
44	1	210029	Slide, Tension	124	2	100025-3	Lockwasher 3/8
45	1	210012	Spring Plate & Upper Band Wheel Shaft Assy.	125	4	100131-5	Washer, Pop Rivet
46	2	100034-31	Screw, 5/16-18 x 1-3/4 Soc. Hd. Set Cup Pt.	126	1	100143-1	Relief, Strain
47	2	100017-2	Nut, 5/16-18 Hex	127	1	100815-1	Cord, Lamp
48	2	F-203	Spring	128	2	100743-1	Terminal
49	1	210010	Pin, Spring Plate Hinge	129	1	100560-4	Joint, Wire
50	2	210027	Way, Tension Slide	<p align="center"><b>ASSEMBLIES</b></p> <p>210074 Saw Guard and Hinge Assembly Includes Items 77, 78 (2) and 79 (6).</p> <p>105335-1 Hand Wheel and Screw Assembly Includes Items 74, 75 and 76.</p> <p>210031 Tension Adjusting Screw Assembly Includes Items 51, 52 and 53.</p> <p>210040 Wheel Assembly Complete - Drive End Includes Items 2, 9, 10, 11, 12 (2), 13 (2), and 15.</p> <p>210042 Wheel Assembly Complete - Idle End Includes Items 9, 11, 12 (2), 13 (2), and 63.</p>			
51	1	210028	Screw, Tension Adjusting				
52	1	101166	Handwheel, Tension				
53	1	100053-5	Roll Pin, 3/16 x 1				
54	1	210072	Spring, Blade Tension				
55	1	210026	Sleeve, Tension				
56	1	100410-1	Bearing, Ball Thrust				
57	2	210025	Collar, Tension Adj. Screw				
58	10	100034-4	Screw, 5/16-18 x 1/2 Soc. Hd. Set Cup Pt.				
59	1	210024	Plate, Tension Indicator				
60	10	100000-18	Screw, #10-32 x 3/8 Rd. Hd. Mach.				
61	1	210053	Shoe, Wood Brake				
62	2	100004-68	Screw, 1/4-20 x 1-1/4 Hex Hd. Cap				
63	1	210044-1	Tire, Wheel				
64	1	210060	Bracket, Saw Guide				
65	4	100004-102	Screw, 1/4-20 x 2 Hex Hd. Cap				
66	5	100029-1	Washer, 3/16 Flat (1/4 Hole)				
67	1	210062	Arm, Saw Guide				
68	1	210066	Spring, Constant Force				
69	2	210084	Plate, Saw Guard Hinge				
70	4	100004-27	Screw, 3/8-16 x 1 Hex Hd. Cap				
71	1	210064	Retainer, Guide Lower				
72	1	210063	Retainer, Guide Upper				
73	2	100004-53	Screw, 1/4-20 x 1 Hex Hd. Cap				
74	1	105336	Handwheel				
75	1	106221-1	Screw				
76	1	100053-21	Roll Pin				
77	1	210073	Guard, Saw				
78	2	105550	Hinge, Spring Loaded				
79	6	100131-3	Pop Rivet				
80	1	100139-1	Knob				

# Wellsaw Model W-20 Vertical Band Saw

