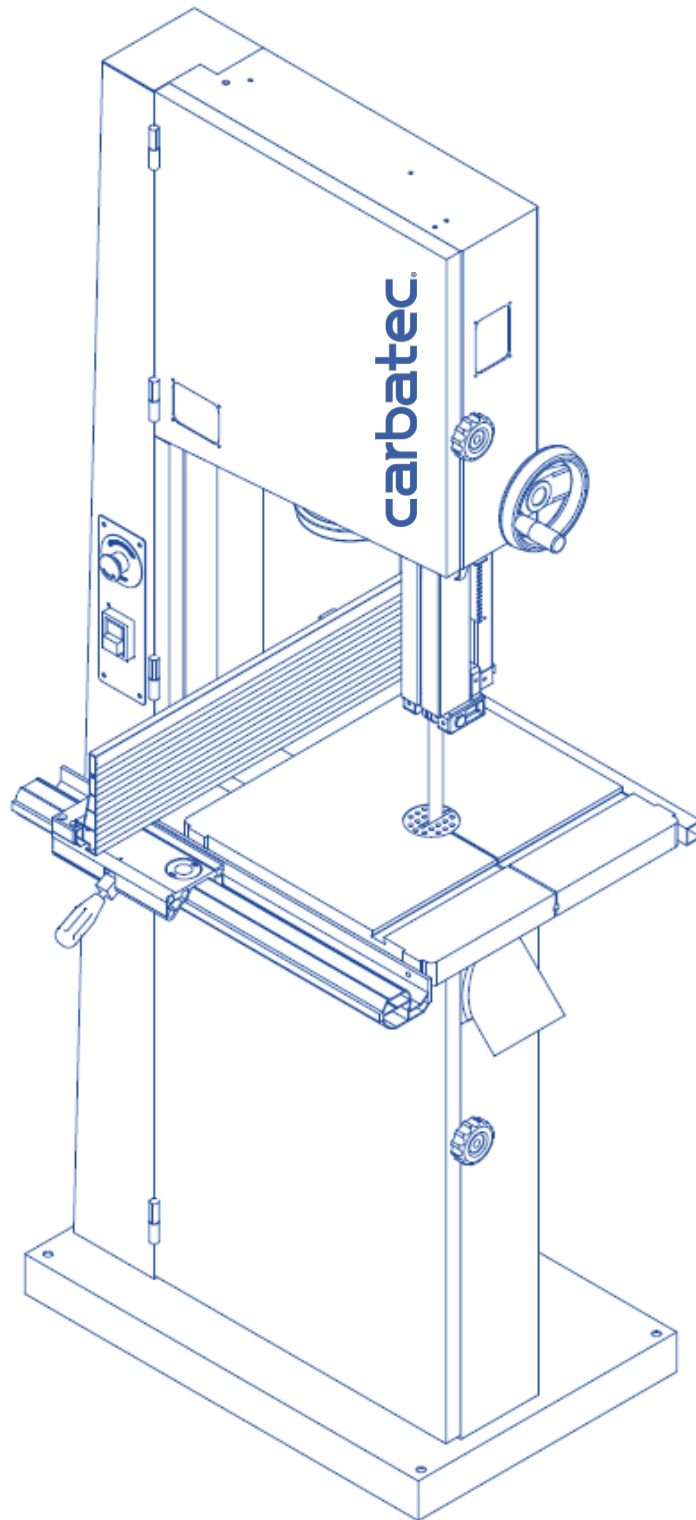


carbatec



3YR
WARRANTY

OWNERS MANUAL

PROFESSIONAL 2200W - 530MM BANDSAW

BS-530C

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FEATURES:

The 21”(530mm) bandsaw is a well designed industrial machine that provide variety of wood work functions to meet your higher need of a bandsaw. Followings are the basic functions you will find in this machine:

1. *Quick Changed Saw Blade System* gives you an easy way to replace saw blade to cut different quality wood materials.
2. *Adjustable Rip Fence* can assist you to cut desired shapes.
3. *Effective Ball Bearing Guide System* will let the band saw blade run smoother.
4. *Humanized Dust Chutes* collect extra wood-chips and give you a better working environment.
5. *Extended 12” Height Space* provides you a bigger working space to cut wider and higher wood selections.

1. SPECIFICATIONS

Horse Power	3HP
Power Requirement	230V, 1PH, 50HZ
Switch	CE and Emergency Stop Switch
Cutting Height	12"(300mm)
Max. Cutting Width	20-1/4"(514mm)
Max. Cutting (with Rip Fence)	18-5/8"(474mm)
Saw Blade (L)	152"/3865mm
Saw Blade (W)	3/8" to 1" (Standard 3/4")
Saw Blade Speed	1220/580 M/min
Table Size	21" x 21"(534x544mm)
Table Tilting	Left-10° / Right-20°
Wheel Size	21"(530mm)
Table Height From Ground	37-1/2"(950mm)
Dust Chute Diameter	φ 4" x 2
Braking System	Mechanical brake
N.W./G.W.	200 / 224.24 KGS
Appearance	1020 x 790 x 2040 mm
Packing Size (L x W x H)	930 x 540 x 2200 mm

2. WARNINGS



WARNING

- Misuse of this machine can cause serious injury.
- For safety, machine must be set up, used and serviced properly.
- Read, understand and follow instructions in the operator and parts manual which was shipped with your machine.

When setting up machine:

- Always avoid using machine in damp or poorly lighted work areas.
- Always be sure machine is securely anchored to the floor.
- Always keep machine guards in place.
- Always put start switch in "OFF" position before plugging in machine.

When using machine:

- Never operate with machine guards missing.
- Always wear safety glasses with side shields.
- Never wear loose clothing or jewelry.
- Never overreach - you may slip and fall into the machine.

- Never leave machine running while you are away from it.
- Always shut off the machine when not in use.

When servicing machine:

- Always unplug machine from electrical power while servicing.
- Always follow instructions in operators and parts manual when changing accessory tools or parts.

You - the stationary power tool user - hold the key to safety.

Read and follow these simple rules for best results and full benefits from your machine. Use properly, this machine is among the best in design and safety. However, any machine used improperly can be rendered inefficient and unsafe. It is absolutely mandatory that those who use our products be properly trained in how to use them correctly. Should read and understand the Operators and Parts Manual as well as all labels affixed to the machine. Failure in following of these warnings can cause serious injuries

MAHINERY GENERAL SAFETY WARNINGS

1. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields. Not using eye wear which could result in severe injury from breakage of eye protection.
2. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Rubber soled footwear is recommended for best footing.
3. Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or cause your clothing to get caught - pulling you into the machine.
4. Keep guards in place and in proper working order. Do not operate the machine with guards removed.
5. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit. Special electrics should be used when working on flammable materials.
6. Avoid accidental starts by being sure the start switch is "OFF" before plugging in the machine.
7. Never leave the machine running while unattended. Machine shall be shut off whenever it is not in operation.
8. Disconnect electrical power before servicing. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
9. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
10. Machinery must be anchored to the floor.
11. Secure work. Use clamps or a vise to hold work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
12. Never brush away chips while the machine is in operation.
13. Keep work area clean. Cluttered area invite accidents.
14. Remove adjusting keys and wrenches before turning machine on.
15. Use the right tool. Don't force a tool or attachment to do a job it was not designed for.
16. Use only recommended accessories and follow manufacturer's instructions pertaining to them.
17. Keep hands in sight and clear of all moving parts and cutting surfaces.
18. All visitors should be kept at a safe distance from the work area. Make workshop completely safe by using padlocks, master switches, or by removing starter keys.
19. Know the tool you are using - its application limitations, and potential hazard.

GENERAL ELECTRICAL CAUTIONS

This saw should be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The saw should be grounded to protect the user from electrical shock.

Caution: For circuits which are far away from the electrical service box, the wire size must be increased in order to deliver ample voltage to the motor. To minimize power losses and to prevent motor overheating and burnout, the use of wire sizes for branch circuits or electrical extension cords according to the following table is recommended.

3. SAFETY INSTRUCTION FOR MACHINERY

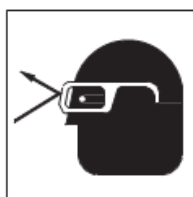
<ol style="list-style-type: none"> 1. Always wear leather gloves when handling saw blade. The operator shall not wear gloves when operating the machine. 2. All doors shall be closed, all panels replaced, and other safety guards in place prior to the machine being started or operated. 3. Be sure that the blades are not contact with the workpiece when the motor is started. The motor shall be started and you should allow the saw to come up to full speed before bringing the saw blade into contact with the workpiece. 4. Keep hands away from the blade area. See Figure A. 5. Remove any cut off piece carefully while keeping your hands free of the blade area. 6. Saw must be stopped and electrical supply must be cut off before any blade replacement or adjustment of blade support mechanism is done, or before any attempt is made to change the drive belts or before any periodic service or maintenance is performed on the saw. 7. Remove loose performed on the unnecessary workpieces from area before staring machine. 8. Bring adjustable saw guides and guards as close as possible to the workpiece. 	<ol style="list-style-type: none"> 9. Always wear protective eye wear when operating, servicing, or adjusting machinery. Eyewear shall be impact resistant, protective safety glasses with side shields. Not using eye wear which could result in severe injury from breakage of eye protection. See Figure B. 10. Nonslip footwear and safety shoes are recommended. See Figure C. 11. Wear ear protectors (plugs or muffs) during extended periods of operation. See Figure D. 12. Wear mask to operate machine. See Figure E. 13. Do not smoke during operating machine. See Figure F. 14. The workpiece, or part being sawed, must be securely clamped before the saw blade enters the workpiece. 15. Remove cut off pieces carefully, keeping hands away from saw blade. 16. Saw must be stopped and electrical supply cut off or machine unplugged before reaching into cutting area. 17. Avoid contact with coolant, especially guarding your eyes.
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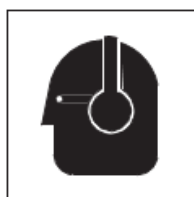
A



B



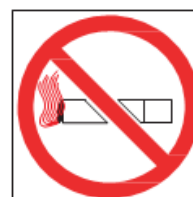
C



D



E



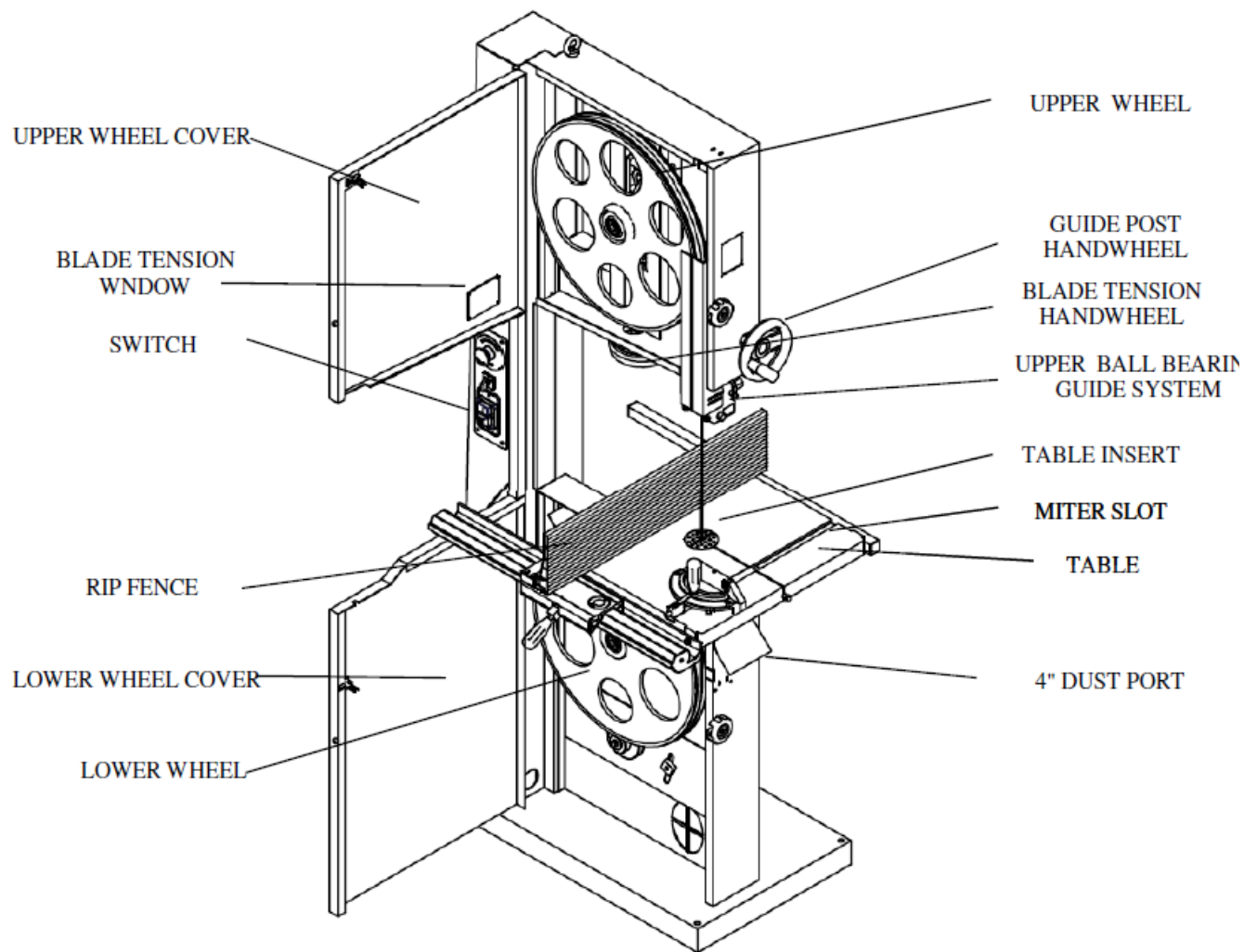
F

4. IDENTIFICATION

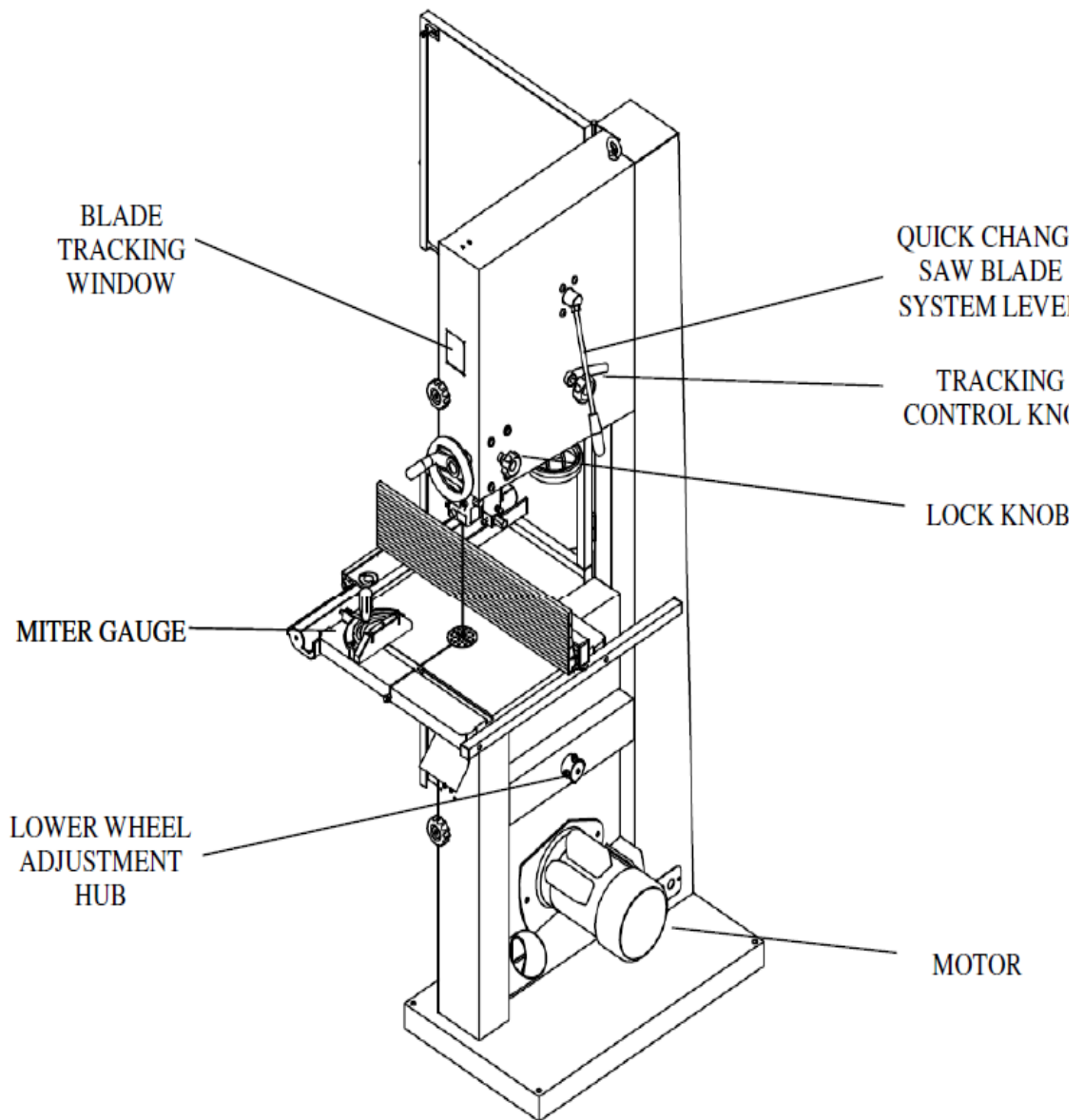
Throughout this document, we make reference to various systems and components on the saw. The two illustrations on these pages will provide you with an overall frame of reference for the location and position of the various components.

Where detailed illustrations for various subsystems will be helpful, you will find these illustrations accompanying the specific test for each subsystem and its components.

FRONT SIDE OF BAND SAW



REAR OF BAND SAW



5. OPERATING INSTRUCTION

LIFTING AND PLACING

1. Place lifting hook through eye bolt. (see Figure 1)
2. Use a 2,000KGS wrecker to hang up the machine to suitable place.
3. To ensure the safety and sufficient upright stability of the machine, you need to bolt the machine to floor on M10 screw.

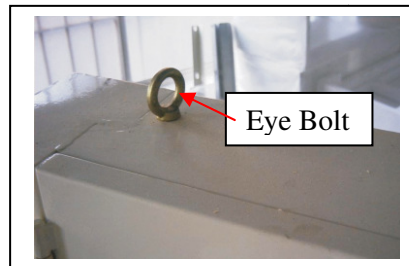


Figure 1

ASSEMBLING

1. Attach the hand wheel (see Figure 2) to the machine.
2. Slide the table slot to the saw blade and slowly move to the center of the table. Adjust the table until the saw blade is in the center of table insert.
3. Install table insert. Then, install table gap screw assembly and secure the table pin.
4. Make sure the table is in the center. Then, secure table to trunnion. Please use (1) M8 flat washer (2) M8 spring washer, and (3) M8x16 hex head bolt to secure. (see Figure 4)

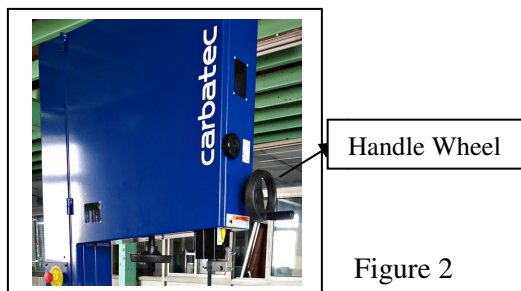


Figure 2



Figure 3



Figure 4

TABLE TILT

1. Before adjusting, please disconnect from power.
2. Loosen the lock lever.
3. Use the table tilt adjustment lever to adjust the angle of the table.
4. After adjusting, please secure the table with the lock lever before operating.

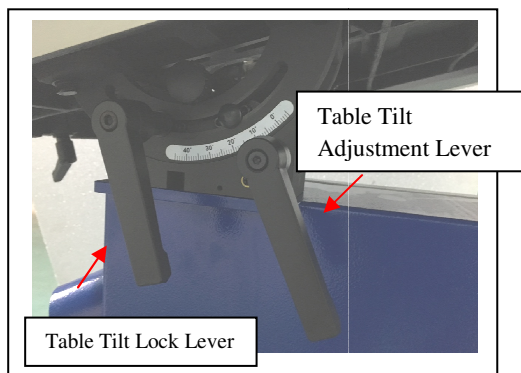


Figure 5

ASSEMBLING RIP FENCE

1. Install the fence rail to the table. Use (1) two M6 spring washers (2) two M6 hex head bolts (3) two M6 flat washers.(see Figure 6)
2. Place fence base on fence rail. Slide the fence on its guides until it is the required distance from the blade. Push lock lever down to secure fence in place.(see Figure 6)
3. Fix the fence face to the fence base.(see Figure 6)
4. Check the scale. Make sure the distance between the edge of the miter slot and both front and rear of the rip fence. Adjust to let both distances equal.

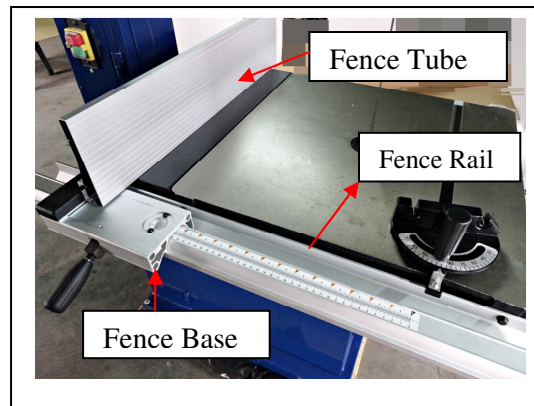


Figure 6

CHANGING BLADES

1. Unplug power cord.
2. Remove the table insert and table pin.
3. Open upper and lower wheel cover.
4. Loosen the upper and lower blade guide system and bearing.
5. Loosen quick change saw blade system lever on rear of bandsaw.(see Figure 7)
6. Remove the blade and guide new blade through table slot. Place blade in upper and lower ball bearing guides system.
7. Replace blade in the MIDDLE of the upper and lower wheel. If the blade is not in the right position, you must relax the fixed handle and adjust the tracking control knob.(see Figure 7)
8. Replace the table insert and table pin.
9. Adjust the blade tension and blade tracking if the blade width is different.

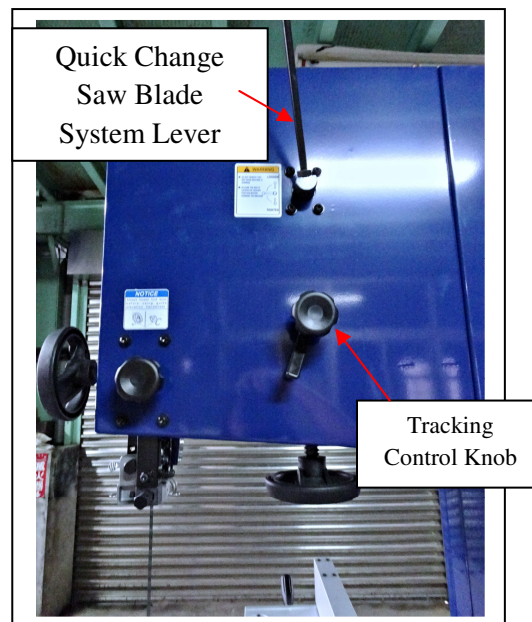


Figure 7

ADJUSTING THE TENSION OF BLADE

Blade tension is set by a spring loaded tension mechanism on the upper wheel. Check the level of the tension device before cutting. The tension for various blade widths as indicated on the window of upper wheel cover.

Turn the blade tension hand wheel (see Figure 8) and see the saw tension instruction (see Figure 9) indicated on the window of upper wheel cover.



Figure 8

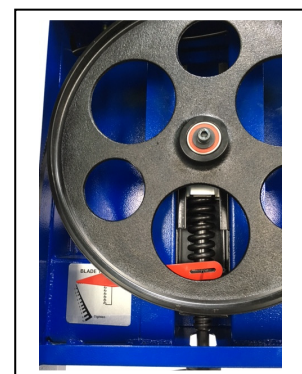


Figure 9

ADJUSTING UPPER BLADE GUIDE ASSEMBLY

1. Set the bearing of upper and lower blade guide within approx. 0.5mm of the blade. Make sure the bearing and the back of the blade approx. 0.5mm. (see Figure 10 and Figure 11)
2. Do not set the bearing too close. The friction generates heat, which may have an adverse effect on the bearings and the saw blade.

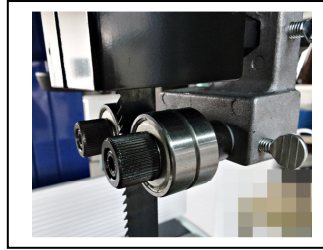


Figure 10

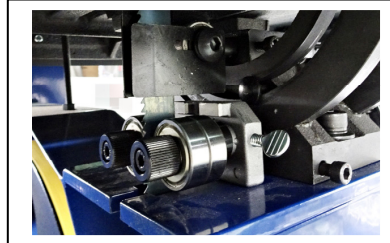


Figure 11

DUST COLLECTION

The band saw is recommended to be connected to dust collect. There are two 4" dust ports (see Figure 12) to attach with 4" steel clamping.



Figure 12

SETTING THE CUTTING HEIGHT

The upper blade guide should always be set as close practical against the work. To adjust, loosen the hand wheel (see Figure 13) at the side of housing and see the blade guide to the required height. Then, tighten after setting.

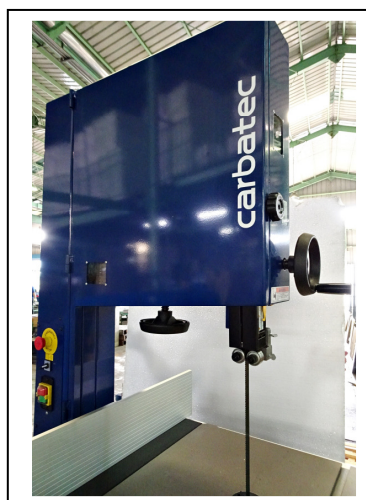


Figure 13

SAFETY DEVICE

1. Limit switch (see Figure 14) inside the machine body for cutting off the power while door opening during operation.

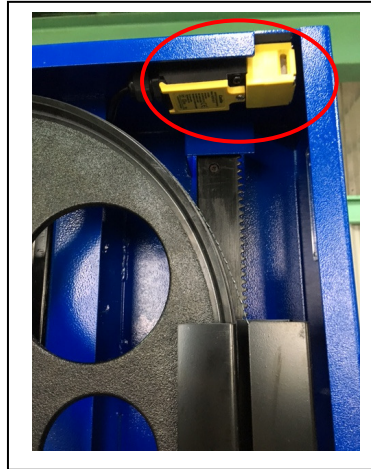


Figure 14

2. The emergency stop (see Figure 15) can help you stop the machine immediately once dangerous situation happens.



Figure 15

REMINDER

Once completing assembly, please test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, please stop the machine immediately. Disconnect the machine from power and fix the problem before operating the machine again.

MECHANICAL BRAKE SWITCH OPERATING INSTRUCTION

1. To start the machine: turn the switch to “2” position, press “ON” button to start the machine.



2. To change the saw blade: turn machine off, turn the switch to “1” position to change the blade.



3. To lock the machine: turn the switch to “0” position, to lock the machine and wheel.



For emergency situation, press the emergency switch to stop machine at any time.



TABLE PARALLEL ADJUSTMENT

1. Insert table pin into the table groove.(Figure 16)

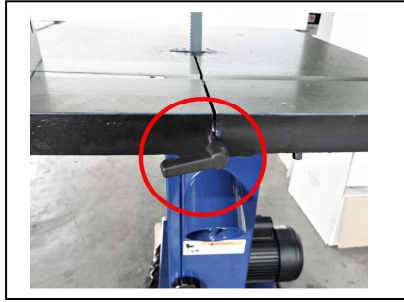


Figure 16

2. Use the ruler gauge to put it on the table. (Figure 17) Adjust the position of table pin (adjust the depth of the pin) and adjust the parallel of the table by using the feller gauge. Tolerance for the table parallel is within 0.4mm.

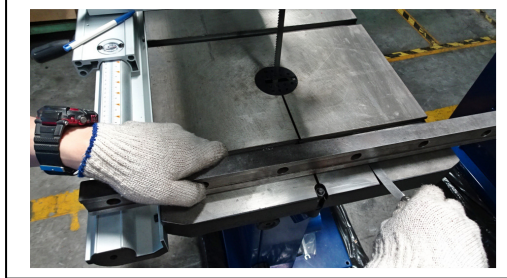


Figure 17

3. When adjusting the table, the table edge can higher than the middle position about 0.4mm which is acceptable. (Figure 18& Figure 19) Edge can not lower than the middle part of the table.

Note: Insert the table pin deeper, the middle part of the table will be lower.



Figure 18

4. Follow above steps to finish the table parallel adjustment.

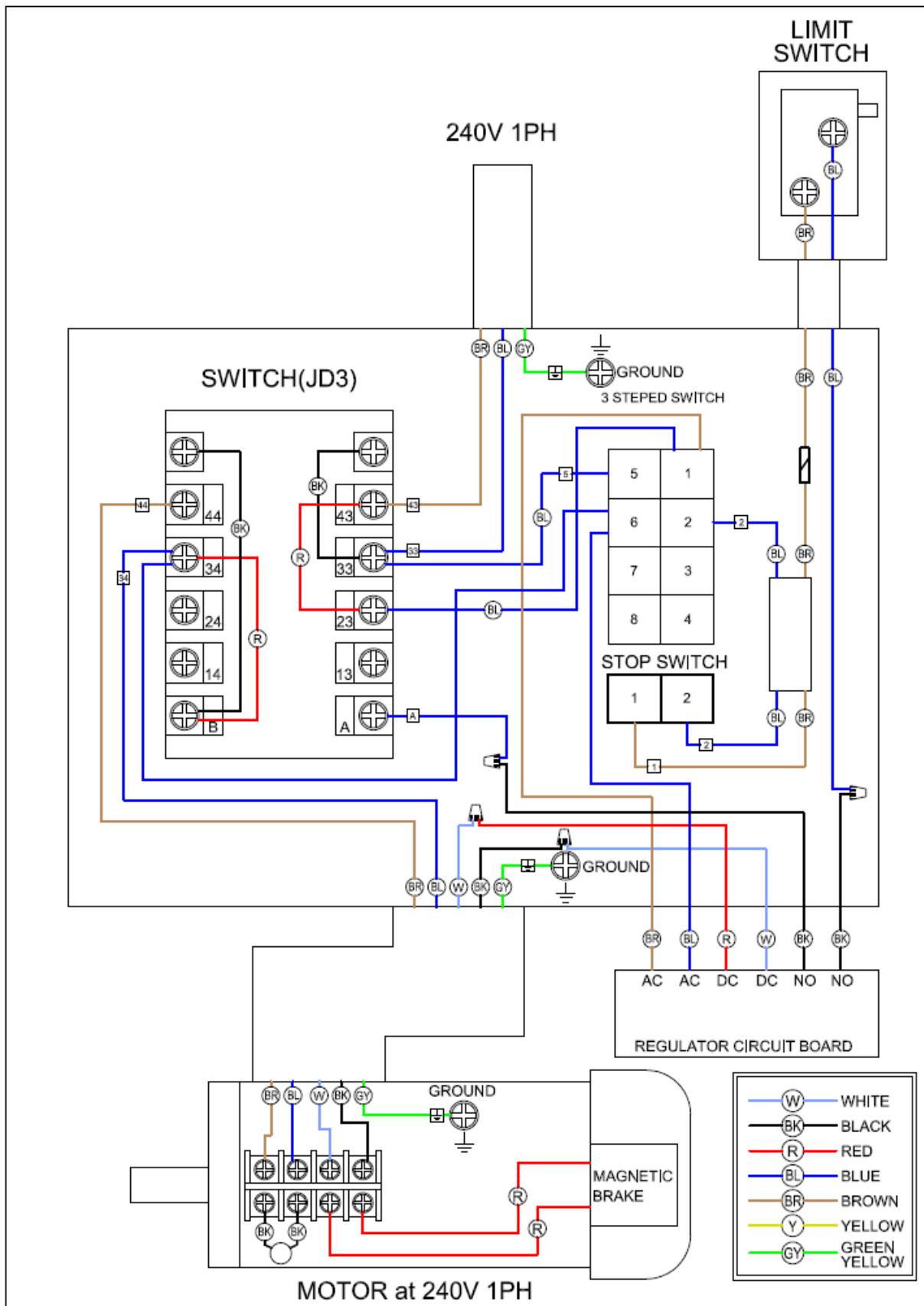


Figure 19

Trouble Shooting:

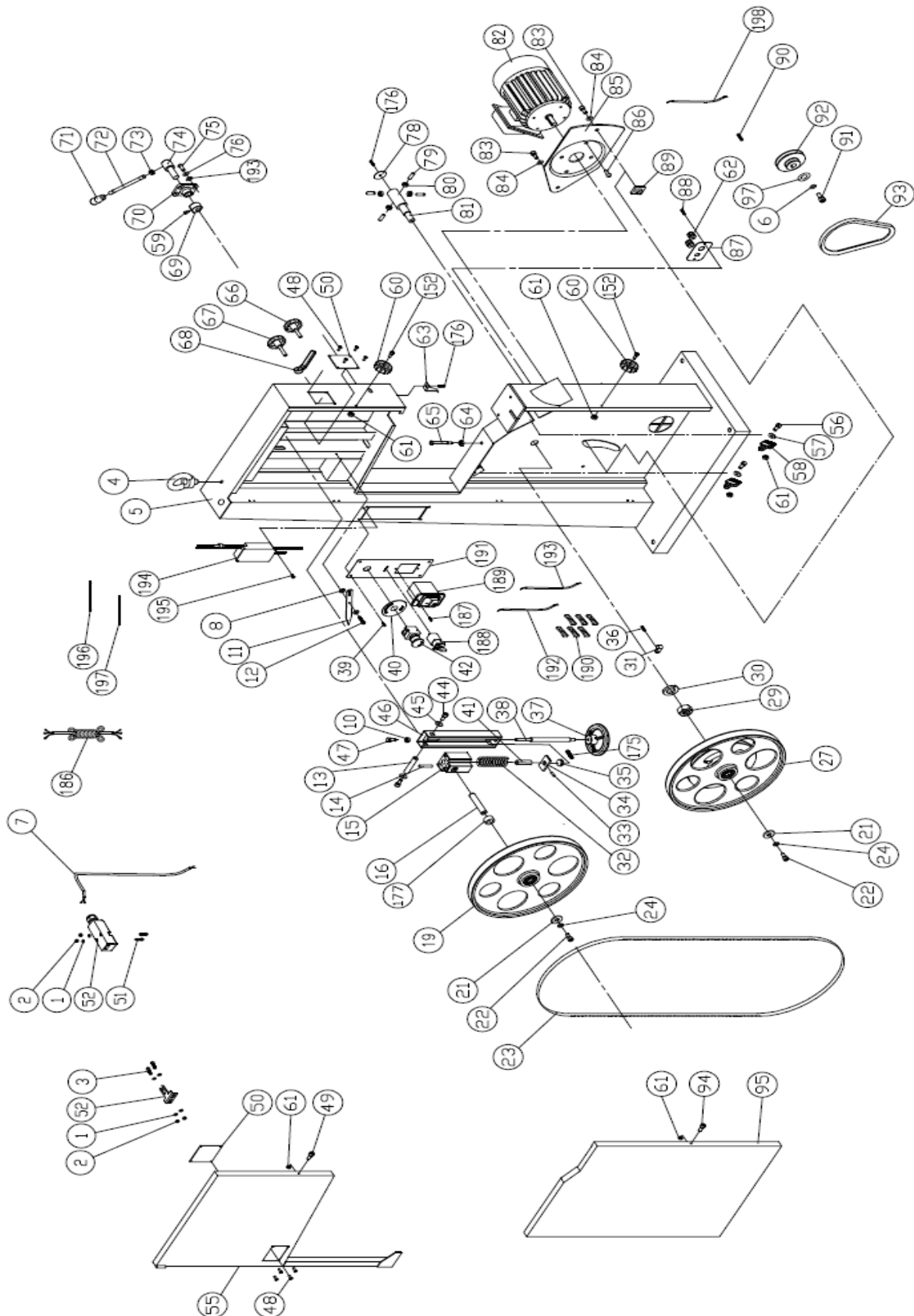
If the table pin gets stuck, it's because you push it too deep. Use a round bar $\varnothing 5\text{mm} \sim \varnothing 8\text{mm}$ and a soft hammer to knock the table pin out from inside of the table. Please be aware of your fingers!

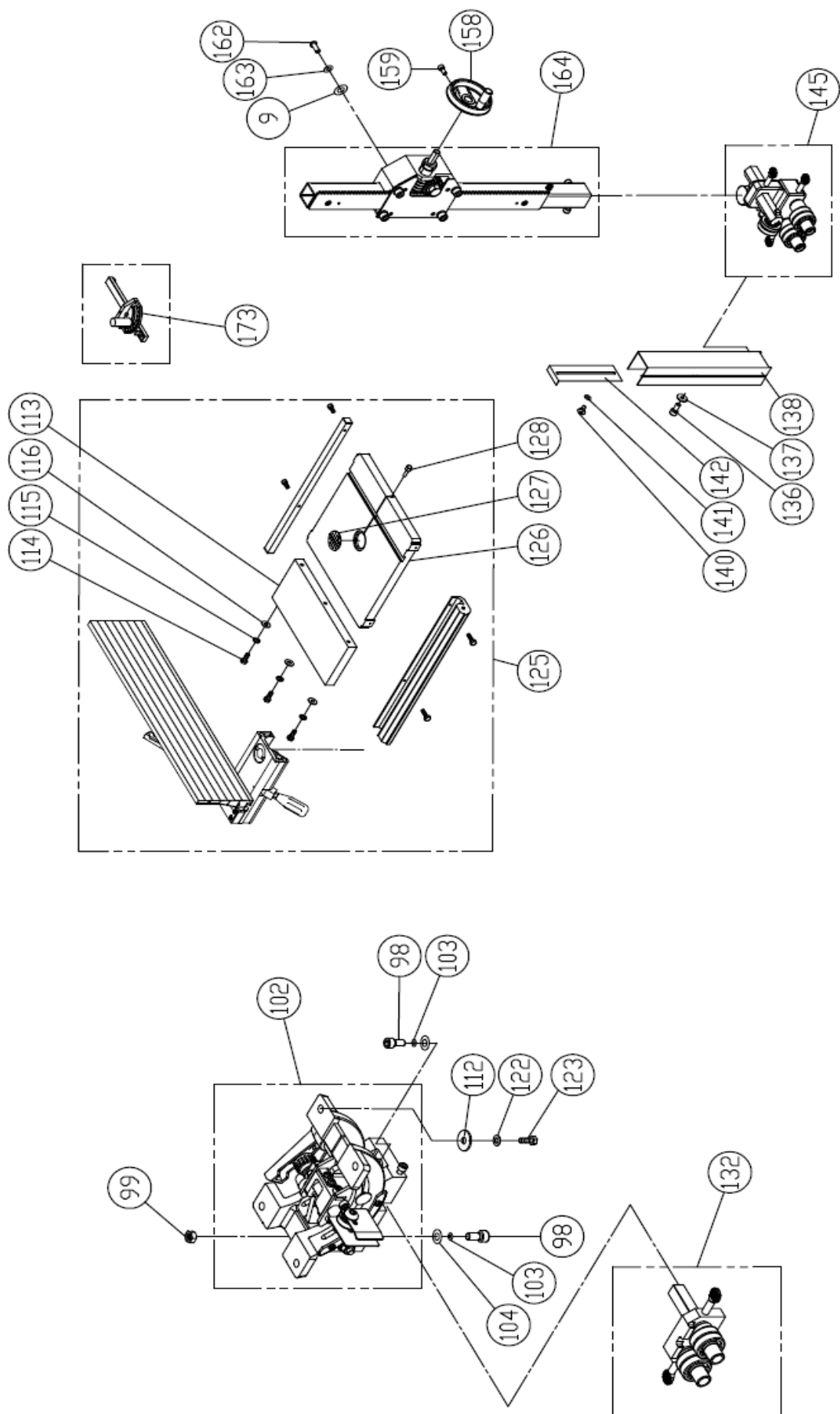
6. WIRING DIAGRAM



7. PARTS LIST

MODEL NO. BS-530C





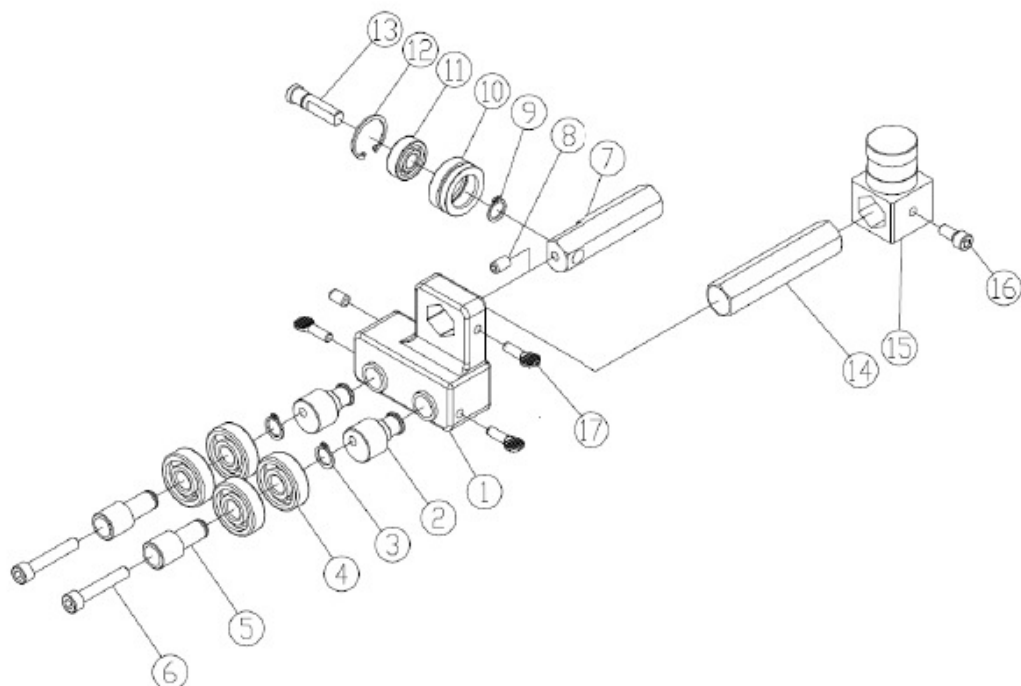
ITEM	PART NO.	PARTS NAME	SIZE	Q`TY	NOTE
1	WF040808	FLAT WASHER	M4x ψ 8	6	
2	NH040700	NUT	M4	4	
3	SP040200	PAN HEAD SCREW	M4x8	2	
4	995101	RING	M10	1	
5	136585A	MACHINE BODY		1	
6	WS080000	SPRING WASHER	M8	1	
7	IC135025	SWITCH CORD		1	
8	WF061310	FLAT WASHER	M6x ϕ 13	2	
9	WF081818	FLAT WASHER	M8x ϕ 18	4	
10	NH061000	NUT	M6	1	
11	135040	POINTER		1	
12	135073	STEP SCREW		1	
13	135012	UPPER SHAFT		1	
14	PS053600	SPRING PIN	ϕ 5x36	1	
15	135017	UPPER WHEEL SHAFT HINGE		1	
16	135066	UPPER WHEEL SHAFT		1	
19	AB136046T	Upper Wheel Asm.		1	
21	WF083030	FLAT WASHER	M8x ϕ 30	2	
22	SR089400	HEX SOCKET BOLT	M8x16	2	
23	136039	SAW BLADE	152"/3861 \pm 4.2x3/4"x0.5mm	1	
24	WS080000	SPRING WASHER	M8	2	
27	AB136048T	Lower Wheel Asm.		1	
29	NH633801	NUT	1"-14UNF	1	
30	WS630000	SPRING WASHER	1"	1	
31	998625	CORD CLAMP		1	
32	135032	SPRING		1	
33	PS031600	PIN	ϕ 3x16	1	
34	135042	LOCATE BLOCK		1	
35	994301	BEARING	51201	1	
36	ST040200	TAPPING SCREW	M4x10L	1	
37	135002	HANDLE WHEEL		1	
38	136037	ADJUSTING BOLT		1	
39	SF059200	PAN HEAD BOLT W/FLANGE	M5x8	4	
40	LM002004	EMERGENCY SWITCH LABELING		1	
41	135067	BUSHING		1	
42	994509	EMERGENCY SWITCH	ψ 22	1	
43	SF059300	PAN HEAD BOLT W/FLANGE	M5x12	2	
44	SR089400	HEX SOCKET BOLT	M8x16	2	
45	WF083030	FLAT WASHER	M8x ϕ 30	2	
46	135016	UPPER WHEEL SLIDING BRACKET		1	
47	SR061000	HEX SOCKET BOLT	M6x50	1	
48	BR000041	RIVET	ϕ 3.2x6	8	

ITEM	PART NO.	PARTS NAME	SIZE	Q`TY	NOTE
49	SR060200	HEX SOCKET BOLT	M6x10	1	
50	135004	LIMPID PIECE		2	
51	SF040700	PAN HEAD BOLT W/FLANGE	M4x35	2	
52	136457	DOOR LATCH SWITCH(ASM)	AZD-S11	1	
55	136203	UPPER WHEEL COVER		1	
56	SH060500	HEX SOCKET BOLT	M6x25	2	
57	WF061310	FLAT WASHER	M6xφ13	2	
58	135051	BRUSH		2	
59	SR060500	HEX SOCKET BOLT	M6x25	1	
60	135041	KNOB		2	
61	NL061000	NYLON NUT	M6	6	
62	709416	STRAIN RELIEF	M16	2	
63	135011	HEIGHT POINTER		1	
64	NH081300	NUT	M8	1	
65	SH081800	HEX HEAD BOLT	M8x90L	1	
66	135022	KNOB SCREW		1	
67	135020	KNOB SCREW		1	
68	135028	LOCATE HANDLE	M10	1	
69	135030	CAM		1	
70	135038	LOCATE BLOCK		1	
71	620021	KNOB		1	
72	620020	LEVER ROD		1	
73	NH121900	NUT	M12	1	
74	135036	SHAFT		1	
75	SJ080400	HEX SOCKET BOTTOM HEAD SCREW	M8x20L	4	
76	WS080000	SPRING WASHER	M8	4	
78	135013	COVER		1	
79	SS080400	SET SCREW	M8x20L	4	
80	NH081300	NUT	M8	4	
81	135005	LOWER WHEEL SHAFT		1	
82	ABMH135020E	MOTOR	2.25KW/230V/50HZ/1~	1	
83	SR100500	HEX HEAD BOLT	M10x25L	2	
84	WS100000	SPRING WASHER	M10	2	
85	135064	MOTOR BRACKET		1	
86	SJ080400	HEX SOCKET BOTTOM HEAD SCREW	M8x20L	4	
87	135081	PLATE		1	
88	ST040200	TAPPING SCREW	M4x10L	2	
89	135065	LOCATE BLOCK		1	
90	KS050535	KEY	5x5x35	1	
91	SH080402	HEX HEAD BOLT	M8x20(L.H)	1	
92	135008	MOTOR PULLEY		1	
93	LA440000	V-BELT	A44	1	

ITEM	PART NO.	PARTS NAME	SIZE	Q`TY	NOTE
94	SR060200	HEX SOCKET BOLT	M6x10L	1	
95	136036	LOWER WHEEL COVER		1	
97	WF083030	FLAT WASHER	M8xφ30	1	
98	SR100700	HEX SOCKET BOLT	M10x35L	2	
99	NH101700	NUT	M10	1	
102	AB135250	TRUNNION SUPPORT BRACKET(ASM)		1	
103	WS100000	SPRING WASHER	M10	2	
104	WF102325	FLAT WASHER	M10xφ23	2	
112	WF081820	FLAT WASHER	M8xφ18	4	
113	136045	EXTEND TABLE		1	
114	SH080400	HEX HEAD BOLT	M8x20	3	
115	WS080000	SPRING WASHER	M8	3	
116	WF081818	FLAT WASHER	M8xφ18	3	
122	WS080000	SPRING WASHER	M8	4	
123	SH089400	HEX HEAD BOLT	M8x16	4	
125	QF198032A	FENCE SET(ASM)		1	
126	136044	TABLE	21"x21"	1	
127	135010	TABLE INSERT		1	
128	100038	TABLE PIN		1	
132	AB135095C	LOWER BLADE GUIDE SUPPORT(ASM)		1	
136	SR050200	HEX SOCKET BOLT	M5x10	2	
137	WF051210	FLAT WASHER	M5xφ12	2	
138	135034	PROTECT COVER(ASM)		1	
140	135073	STEP SCREW		1	
141	135054	FIBER WASHER	φ13x6x1.2	1	
142	135037	SLIDING PLATE		1	
145	AB135092B	UPPER BLADE GUIDE SUPPORT(ASM)		1	
152	SR060400	HEX SOCKET BOLT	M6x20L	2	
158	135006	HANDLE WHEEL		1	
159	SR060400	HEX SOCKET BOLT	M6x20L	1	
162	SJ080400	HEX SOCKET BOT OM HEAD SCREW	M8x20	4	
163	WS080000	SPRING WASHER	M8	4	
164	AB135050	GUIDE BRACKET(ASM)		1	
173	AB198101	MITER GAUGE ASS'Y		1	
175	SS069300	SET SCREW	M6x10	1	
176	SF050200	PAN HEAD BOLT W/FLANGE	M5x10L	2	
177	612112	BUSHING		1	
186	IC130472	POWER CORD	1.5x3Cx2.2M(SAA)	1	
187	ST039304	TAPPING SCREW	M3.5x12(AB)	2	
188	135108	MULTIFINGER SWITCH		1	
189	170245B	CE SWITCH	KJD-11(JD3) 230V	1	
190	136019	WIRE CONNECTOR	224-201	6	

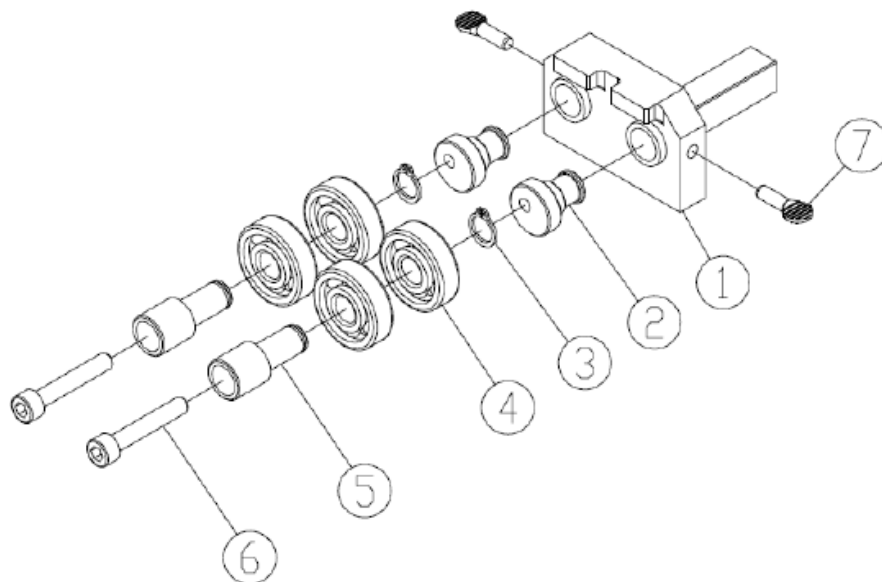
ITEM	PART NO.	PARTS NAME	SIZE	Q`TY	NOTE
191	130481A	SWITCH PLATE		1	
192	IC130486	EMERGENCY SWITCH CORD	0.75x2Cx1M	1	
193	IC136022	CONNECTING CORD	1.5x3Cx1.2M	1	
194	136374	FIRM ELECTRONIC IC	DC90V	1	
195	ST039200	TAPPING SCREW	M3.5x8	1	
196	IC136019	CONNECTING CORD		1	
197	IC136020	CONNECTING CORD		1	
198	IM136004	MOTOR CORD		1	

AB135092B NEW UPPER BLADE GUIDE ASSEMBLIES



ITEM	PART NO.	PARTS NAME	SIZE	Q'TY	NOTE
1	135091	UPPER BLADE GUIDE SUPPORT		1	
2	135090	BIAS SHAFT		2	
3	RS120000	ERTAINING RING	S12	2	
4	BB620102A	BALL BEARING	6201ZZ	4	
5	130374	HANDLE BUSHING		2	
6	SR060703	HEX SOCKET BOLT	M6x35	2	
7	130371	SPACING SLEEVE		1	
8	SS069100	SET SCREW	M6x6	2	
9	RS080000	ERTAINING RING	S8	1	
10	130373	LOCATE SET		1	
11	BB608002A	BALL BEARING	608ZZ	1	
12	RR220000	ERTAINING RING	R22	1	
13	130372	ADJUST SHAFT		1	
14	135053	ADJUST BAR		1	
15	135057	UPPER GUIDE SUPPORT BLOCK		1	
16	SR069300	HEX SOCKET BOLT	M6x12	1	
17	150013	THUMB SCREW	M6x16	3	

AB135095C NEW LOWER BLADE GUIDE ASSEMBLIES



ITEM	PART NO.	PARTS NAME	SIZE	Q`TY	NOTE
1	135125	LOWER BLADE GUIDE SUPPORT		1	
2	135124	BIAS SHAFT		2	
3	RS120000	ERTAINING RING	S12	2	
4	BB620102A	BALL BEARING	6201ZZ	4	
5	130374	HANDLE BUSHING		2	
6	SR060700	HEX SOCKET BOLT	M6x35	2	
7	150013	THUMB SCREW	M6x16	2	



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