

426-01-651-0002 DATED IM 9-15-71 PM-1886

## **ROCKWELL DELTA** 10" BAND SAW



IO'' BAND SAW SHOWN WITH STAND, MOTOR AND SWITCH ROD



### INTRODUCTION

Your new Band Saw will accurately perform all the usual woodworking band saw operations; straight cutting, curve cutting, cutting plastics and light aluminum, etc. In addition, by using the Cat. No. 28-810 Sanding Attachment in place of the blade, you can sand irregular curved work previously cut on the band saw to add that professional finished look to your work.





### CLEANING THE BAND SAW

Remove the protective coating from the machined surfaces of the band saw. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover all unpainted surfaces with a light film of good machine oil.

### ASSEMBLING STAND

If you purchased the 50-328 Stand, assemble it as shown in Fig. 2. Make sure the lower shelf is fastened to the upper set of bolt holes in the legs as shown. Note the relationship of the holes and slots in both the upper and lower shelves, as shown in Fig. 2, to make sure the shelves are assembled properly.

### ASSEMBLING SAW TO STAND

Assembling the saw to the top shelf of the stand using the four holes (A) Fig. 2. The front of the saw will be toward the end of the top shelf marked (B) Fig. 2.

### ASSEMBLING MOTOR, MOTOR PULLEY AND V-BELT

Motors recommended for use with your band saw are the #60-020-1/3 HP motor with a 1/2" shaft, #60-220-1/2" HP motor with a 1/2" shaft and the #62-413-1/3 HP motor with a 5/8" shaft. If you purchased one of these motors, assemble it to the stand as follows:

1. Fasten the motor to the lower shelf using the four slots (C) Fig. 2, with the shaft end of the motor to-ward the end of the shelf marked (D).

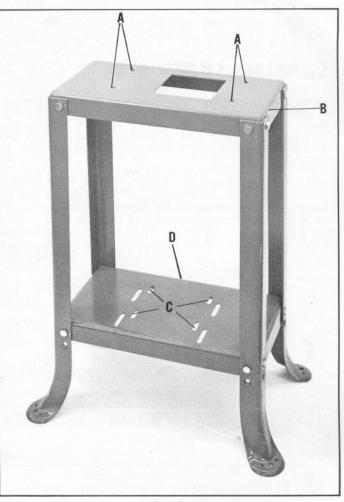


Fig. 2.

2. Make sure the four rubber washers (A) are positioned between the motor and the shelf as shown in Fig. 3.

3. If you are using a motor with a 1/2" shaft it is necessary to place the sleeve (B) and key (C) on the motor shaft, as shown in Fig. 3, before assembling motor pulley.

4. Assemble the Cat. No. 41-033 5/8" bore motor pulley (D) to the motor shaft, as shown in Fig. 3.

5. Make sure the motor pulley (D) Fig. 3, is in alignment with the band saw pulley and assemble the #49-130 V-belt (E) to the two pulleys.

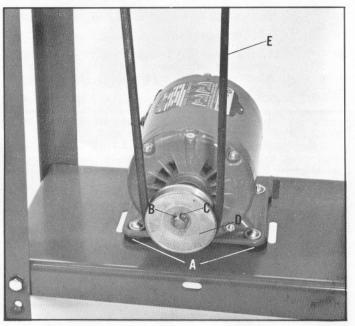


Fig. 3.

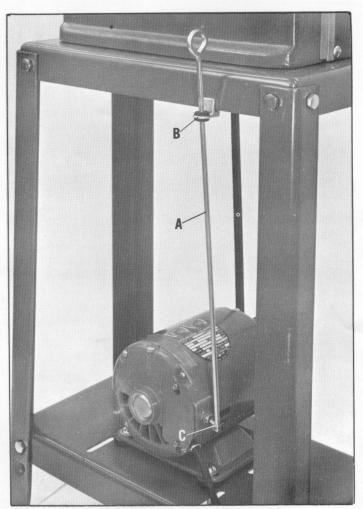
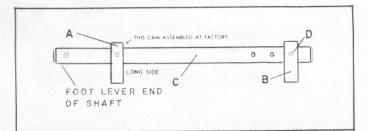


Fig. 4.

### **ASSEMBLING RETRACTABLE CASTER ATTACHMENT**



ASSEMBLING SWITCH ROD

If you have purchased the #51-334 switch rod, insert

the rod (A) through the hole in the bracket (B) and assemble the end of the switch rod to the toggle switch (C) using the cotter pin supplied. Then fasten the bracket (B) to the upper shelf as shown in Fig. 4.

Fig. 5.

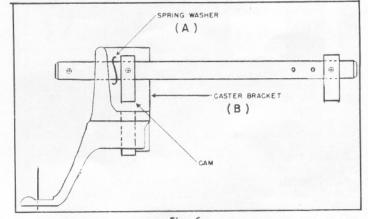
4. Assemble spring washer (A) and caster mount bracket (B) on each shaft, as shown in Fig. 6.

If you have purchased the #49-363 Retractable Caster Attachment for use on the steel stand, assemble it to the stand as follows:

1. Before assembling caster set to stand, determine which side of the stand would be most convenient for the foot levers. The foot lever end of the shaft has a cam (A) Fig. 5, assembled in place at the factory.

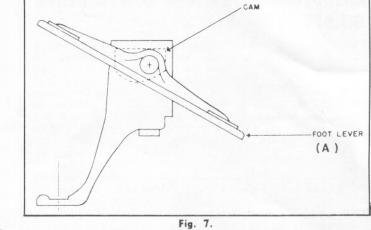
2. The shafts should be fitted across the narrow side of the steel stand.

3. Assemble the cams (B) on both shafts (C) at hole (D) Fig. 5. Assemble one cam on each shaft. Cams on each shaft must match when assembled, as shown in Fig. 5.



5. Assemble foot lever (A) Fig. 7, to the end of the shaft using the pin supplied. Foot lever is assembled to each shaft in the same manner, as shown in Fig. 7.

6. Tilt the steel stand by placing a  $2 \times 4$  under it so that the legs will be off the floor about 2 inches.



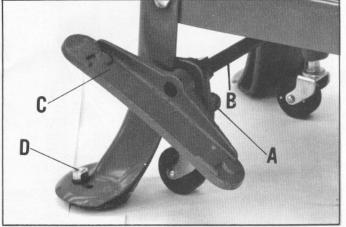


Fig. 8.

7. Place caster mount bracket (A) Fig. 8, with shaft (B) and foot lever (C), inside and under steel stand leg and place flat head machine screw through the holes in the steel leg and bracket, from the bottom, and fasten in place with washer and nut (D) Fig. 8. Do not tighten nut (D) too securely at this time.

8. Place spring washer, fibre washer and caster mount bracket on opposite end of shaft (B) Fig. 8. Place bracket on inside of steel leg and fasten in place with flat head machine screw, washer and nut. Now tighten both nuts securely.

9. This same method of application is to be followed in assembling shaft to opposite pair of steel legs.

NOTE: The fibre washers are to be used as shims. These washers can be placed on the shaft end opposite the foot lever and between the spring washer and caster mount.

### **OPERATING ADJUSTMENTS**

Although your band saw is checked and adjusted at the factory, it may have come out of adjustment during transit. To check and adjust the band saw, proceed as follows:

### ADJUSTING BLADE TENSION

1. Move the upper blade guide (A) Fig. 9 to the highest position.

2. Turn the tension adjusting screw (B) Fig. 9, clockwise to increase or counterclockwise to decrease blade tension.

3. Proper blade tension is obtained when the blade has a flex of approximately 1/4" in a 6" span.

4. When the band saw is not in use it is good practice to release tension to prolong the life of the blade.

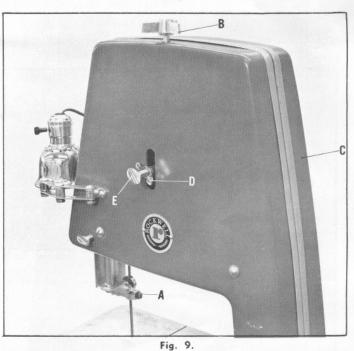
### TRACKING THE BLADE

For accurate work and maximum blade life, it is important that the blade be centered on the upper wheel. When this adjustment has been properly made, the blade will "track". That is, it will run steadily in the same line. Before the tracking adjustment is made, both the upper and lower blade guides must be moved away from the blade. To "track" the blade, proceed as follows:

1. Disconnect the band saw from the power source and make sure the correct blade tension is applied to the blade.

2. Remove the front guard (C) Fig. 9, and revolve the upper wheel slowly by hand to determine if the blade is riding in the center of the wheel.

3. If the blade is not riding in the center of the wheel, loosen locknut (D) Fig. 9, and while turning the wheel by hand, turn the adjusting screw (E) slightly to the left. You will notice that the blade will move to either side of the wheel.



4. When the blade is on the center of the upper wheel, tighten locknut (D) Fig. 9.

5. Connect the machine to the power source and jog the motor switch on and off to be certain that proper tracking is being maintained.

6. Then make any minor final adjustments that may be necessary at operating speed.

# ADJUSTING UPPER AND LOWER BLADE GUIDES

The upper and lower blade guides are adjusted only after the blade is tensioned and tracking properly. To adjust the guides, proceed as follows:

1. The upper bracket (A) Fig. 10, is held to the underneath of the guide post by a cap screw. Loosen the cap screw and move the guide bracket (A) in or out until the front edge of the guides (B) are just behind the "gullets" (bottom of saw teeth).

2. The lower bracket (C) Fig. 10, is mounted directly on the base casting by a square head bolt. Loosen the bolt and move the guide bracket (C) in or out until the front edge of the guides (D) are just behind the "gullets" (bottom of the saw teeth).

3. The guides (B) and (D) Fig. 10, are held in the guide brackets with set screws (E). Loosen set screws (E) and adjust guides as close as possible to the side of the blade being careful not to pinch the blade.

4. IMPORTANT: Set both guides simultaneously so as not to deflect blade.

### **ADJUSTING BLADE SUPPORT BEARINGS**

The support bearings (F) and (G) Fig. 10, prevent the blade from being pushed too far to the back which could damage the set in the saw teeth. The support bearings (F) and (G) should be set about 1/64" behind the blade, as follows:

1. Loosen thumb screw (H) Fig. 10 and move upper support bearing (F) 1/64" behind the back edge of the blade and tighten thumb screw (H).

2. Loosen set screw (J) and move lower support bearing (G) 1/64" behind the back edge of the blade and tighten set screw (J).

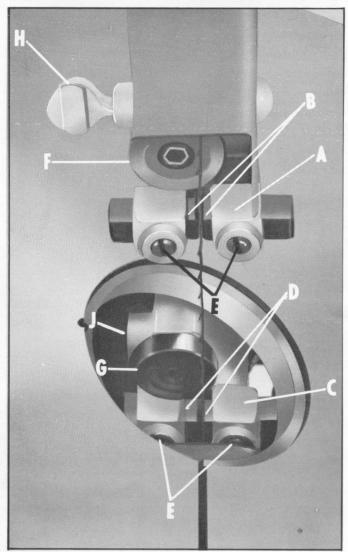
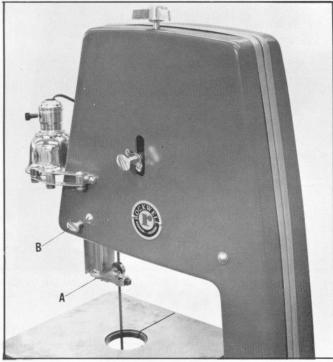


Fig. 10.



#### Fig. 11.

### ADJUSTING UPPER BLADE GUIDE ASSEMBLY

The upper blade guide assembly (A) Fig. 11, should always be set as close as possible to the top surface of the material being cut by loosening thumb screw (B) Fig. 11, and moving the guide assembly (A) to the desired position.

### TABLE ADJUSTMENTS

The table tilts 45 degrees to the right and about 10 degrees to the left. To tilt the table, loosen hand knob (A) Fig. 12, tilt table to desired angle and tighten hand knob (A). A stop screw (C) is provided to position the table 90 degrees to the blade. Loosen locknut (B) Fig. 12, and turn stop screw (C) in or out so that it contacts the frame when the table is .90 degrees to the blade.

If necessary to tilt the table a small amount to the left, remove the stop screw (C) and locknut (B) Fig. 12.

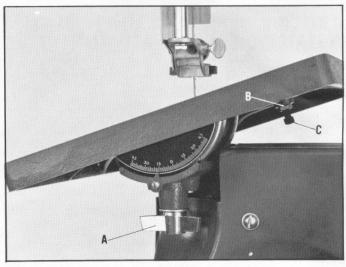


Fig. 12.

#### BLADES

Always use a sharp blade. Keep it free of gum and pitch. Keep the rubber tires free of sawdust, gum and pitch accumulation. Clean frequently with a stiff fiber brush.

Narrow blades are used for cutting small circles or curves while the wider blades are best suited for straight cutting such as ripping.

Neither this band saw nor the blades are recommended for cutting iron or steel.

Due to the low cost of Rockwell blades it is advisable to purchase newblades rather than attempt to have them sharpened.

Make sure the blade guides are always adjusted properly as outlined previously.

Do not force or twist the blade around a curve or very short radius.

Feed the work uniformly allowing the blade to cut - do not feed too fast.

Do not apply excessive tension on blades. The tension is only necessary to drive the blade without slipping on the wheels. Narrow blades require more tension than wide blades.

### **INSTALLING THE BLADE**

- 1. Disconnect band saw from power source.
- 2. Remove front cover of the band saw.
- 3. Remove table insert and table alignment screw.
- 4. Release blade tension and remove blade.

5. Check new blade to make sure teeth are pointing in the right direction. If not, turn blade inside out.

6. Place blade on wheels and adjust tracking, tension and guides as previously outlined.

7. Replace insert and table alignment screw.

### LUBRICATION

The upper band saw wheel runs on needle bearings. Lubricate  $\infty$  casionally through oiler, reference #44, of parts drawing, using light machine oil.

The drive shaft runs on bronze bearings. Lubricate occasionally through oiler, reference #64 of parts drawing, using light machine oil.

The blade support bearings are prelubricated and do not require further lubrication.

The sliding ways of the upper wheel assembly and the trunnions on the table should be oiled occasionally so that they operate freely.

### INSTALLING SANDING ATTACHMENT

If you purchased the 28-810 Sanding Attachment, assemble it to your machine, as follows:

1. Remove the four knurled knobs (A) Fig. 13, and washers, and remove the front cover from the band saw.

2. Remove the table insert and table alignment screw.

3. Release blade tension and remove saw blade from the machine.

4. Remove the lower blade guide bracket (B) Fig. 13, from the machine.

5. Loosen screws (C) Fig. 13, and remove upper blade guides (D).

6. Loosen thumb screw (E) Fig. 13 and push back up bearing (F) to the rear position.

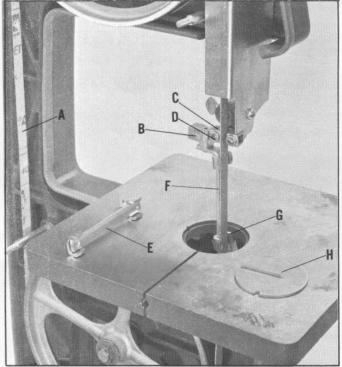


Fig. 14.

### INSTALLING LAMP ATTACHMENT

If you purchased the 40-882 Lamp Attachment, it can be mounted on your band saw after drilling two holes in the back cover, as shown in Fig. 15. Attach the lamp attachment with the two screws which are furnished with the attachment.

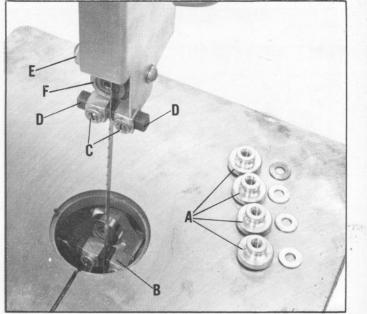


Fig. 13.

7. Install sanding belt (A) Fig. 14, to the two wheels. The arrow on the back of the sanding belt indicates the direction of rotation for the belt.

8. Apply light tension and track the belt on the wheels.

9. Assemble the mounting bracket (B) Fig. 14, to the blade guide bracket (C) as shown, and tighten set screw (D).

10. Assemble either the flat platen (E) or the curved platen (F) to the mounting bracket (B) as shown in Fig. 14.

11. Lower the blade guide bracket (C) so that the end of the platen (G) Fig. 14, is just below the table surface.

12. Place the table insert (H) Fig. 14, in place.

13. Replace the table alignment screw and replace the front cover.

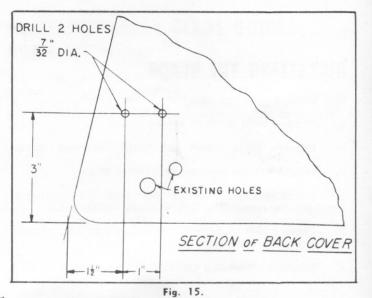
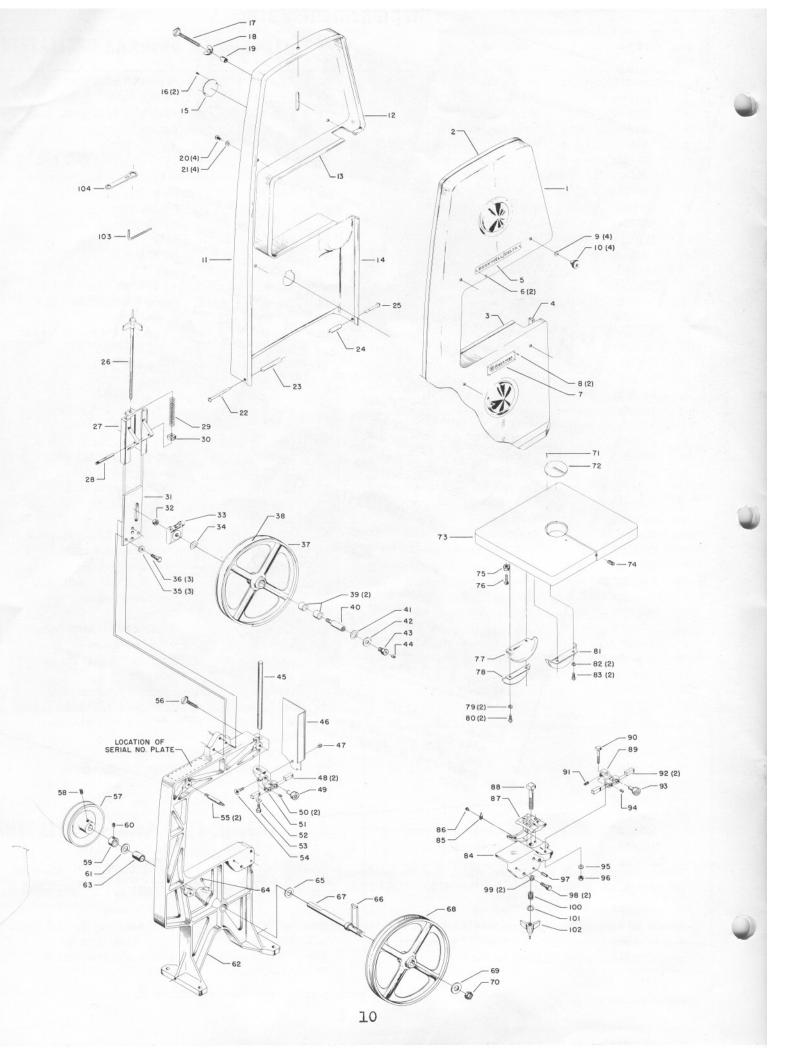


TABLE 3 Lead may be remedied by honing as shown in Fig. 3. WORK the other (lead), making it necessary for the operator to adjust the feed accordingly. leads to the right, making it necessary to swing the feed hand to the right in order to follow a straight line. Lead is caused mainly by two things: (1) Im-1 200 202 Proper setting of guides, (2) Improper set of saw blade. After checking No. 1, the fault can be reasonably laid to EFFECT 2 No. 2. Sawing along the side of a nail, EAD riding one side of the blade deep and tight in the guides, or poor filing will Fig. 2 shows the effect of lead. result in a saw blade which is dull and Effect of Lead. If a piece of wood is pushed squarely into the saw blade, it should be cut in a straight line at right angles to the blade. Often, how-FUNDAMENTALS OF CUTTING ever, the blade will pull to one side or RADU MINIMUM TANGEN A BLADE 5 VA BLADE BREAK UP SHORT CURVES: When it VE BLADE is necessary to make a wide blade go 4 BLADE is necessary to make a ware plaae go around a short curve, break the cut into W6 BLADE around a snort curve, oreak the cut into a number of shorter tangent cuts, or, diminate twicting starting between (4) a number of snorter tangent cuts, or, eliminate twisting strain by the use of VEBLADE USE THE RIGHT BLADE: Use this USE INE RUGEI DLAUE: Use this table. For example, a <sup>3</sup> inch blade cannot entre circle loss than 136 in character I uoue. For example, a x-mon ouace cannot cut a circle less than 1% inch radius. In cut a circle less than 124-men raams. In actual work, it is best to work one size radial cuts. smaller.

There are numerous operations which can be performed on your Band Saw. We show you how simple these operations are in our publication No. 4705, "GETTING THE MOST OUT OF YOUR BAND SAW AND SCROLL SAW".

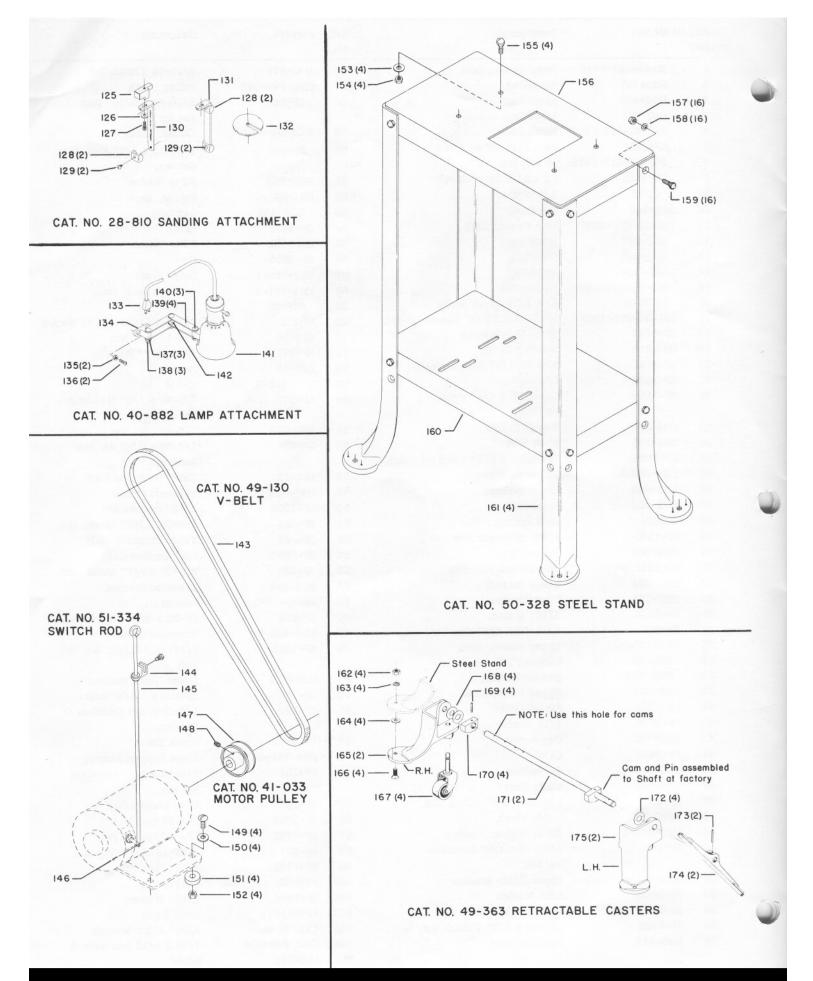
Above is only one page from this book. It contains hundreds of illustrations, charts and many helpful hints.



# **Replacement Parts**

No.	Part No.	Description	Ref. Part No. No.		Description
	426-01-331-0005	Front Cover, incl:	56	HSS-532	5/16-18 Thumb Scr.
2	HBS-847	Moulding	57	Cat. #41-083	Pulley, incl:
	HBS-848	Moulding	58	SP-206	5/16-18 x 5/16" Hex. Soc
	HBS-849	Moulding			Set Scr.
	960-02-012-1420	Nameplate	59	NCS-35-S	Collar, incl:
	SP-2250	#4 x 3/16 Drive Screw	60	SP-205	5/16-18 x 1/4" Hex, Soc.
	960-02-012-1419	Nameplate			Set Scr.
	SP-2252	#2 x 3/16 Drive Screw	61	HBS-722	Fiber Washer
	SP-1603	1/4 Washer	• 62	HBS-801-S	Frame, incl:
0	HBS-844	Handknob	63	HDP-130	Bearings
1	426-01-331-0006	Rear Cover, incl:	64	SP-2486	Oiler
2	HBS-847	Moulding	65	HBS-722	Fiber Washer
		0	66	SP-2605	Key
3	HBS-848	Moulding			Drive Shaft
4	HBS-849	Moulding	67	HBS-809-S	
5	960-02-012-0037	Nameplate	68	HBS-721-S	Lower Wheel, incl:
6	SP-2250	#4 x 3/16 Drive Screw	38	SBS=23	Rubber Tire
7	901-04-261-4005	5/16-18 x 2 1/2" Tracking Scr.	69	FJ-316	41/64 x 1 1/4 x . 109 Wash
B	SP-1403	5/16-18 Wing Nut	70	SBS-19	5/8-18 Jam Nut
9	HBS 819	Spacing Collar	71	SP-6711	1/8 x 3/8" Roll Pin
0	SP-514	1/4-20 x 3/8 Mach. Scr.	72	LBS-56	Insert
L	SP-1603	1/4 Washer	73	HBS-802-R	Table
2	SP-7533	1/4-20 x 2 1/2" Truss	74	SP-107	3/8-16 x 1/2" Headless
		Hd. Scr.			Set Scr.
3	HBS-832	2 1/4" Spacer	75	SP-1029	1/4-20 Hex Nut
4	HBS-843	1" Spacer	76	SP-306	1/4-20 x 3/4" Sq. Hd.
5	SP-7531	1/4-20 x 1 1/2" Truss Hd . Scr.			Set Scr.
6	HBS-806-R	Adjusting Screw	77	LBS-52	Table Trunnion Half
7	HBS-803	Hinge Bracket	78	HSS-807	Tilt Index Plate
8	HBS-808	Pivot Pin	79	SP-1702	1/4" Lockwasher
9	SBS-14	Coil Spring	80	SP-514	1/4-20 x 3/8" Mach. Scr.
0	SP-1303	5/16-18 Square Nut	81	LBS-52	Table Trunnion Half
1	HBS-805	Guide Plate	82	SP-1702	1/4" Lockwasher
					1/4-20 x 3/8" Mach. Scr.
2	SP-1270	3/8-24 Hex Jam Nut	83	SP-514	Trunnion Bracket
3	HBS-804	Hinge Bracket	84	HBS-836	
4	HBS-724	Fiber Washer	85	MH-3417-1	Pointer
5	SP-1604	5/16" Washer	86	SP=569	#8-32 x 3/16" Mach. Scr.
6	SP-607	5/16-18 x 3/4" Cap Scr.	87	HBS-815-S	Trunnion Clamp
7	HBS-720-S	Upper Wheel, incl:	88	SP-7852	7/16-14 x 2 1/4" Sq. Hd.
8	SBS=23	Rubber Tire			Bolt
9.	HBS <b>-7</b> 53	Needle Bearing	89	HBS-712	Lower Guide Bracket
0	HBS-807	Upper Wheel Shaft	90	SP-2373	1/4-20 x 1 1/4" Bolt
1	HBS-724	Fiber Washer	91	SP-102	1/4-20 x 3/8 Headless
2	SP-1606	7/16 Washer			Set Scr.
3	HBS-730	Cap Screw	92	1085921	Guide Block
4	SP-2486	Oiler	93	HBS-755-S	Blade Support Bearing
5	HBS-810	Guide Post	94	SP-101	1/4-20 x 1/4" Headless
3	HBS-826	Blade Guard			Set Scr.
7	SP-502	1/4-20 x 1/4" Mach. Scr.	95	SP-1603	1/4" Lockwasher
3	1085921	Guide Block	96	SP-1029	174-20 Hex Nut
9	HBS-755-S	Blade Support Bearing	97	SP-6721	1/4 x 7/8 Roll Pin
)	SP-101	1/4"-20 x $1/4$ " Headless	98	SP-607	5/16-18 x 3/4 Cap Scr.
	01-101	Set Scr.	99		5/16" Lockwasher
	LIDC-711			SP-1703	
L	HBS-711	Upper Guide Bracket	100	NCS-33	Coil Spring
2	SP-1603	1/4" Washer	101	SP-1606	7/16" Washer
3	SP-612	1/2-20 x 5/8" Cap Scr.	102	SP-3610	Hand Knob
4	SP-1505	1/4-20 x 1/2" Thumb Scr.	103	Cat. #194	5/32" Allen Wrench
5	HBS-813	Shoulder Stud	104	Cat. #40-526	7/16 x 9/16 Box Wrench
				LBS-532	Blade

Replacement bearings are furnished oversize and must be reamed to fit. Not shown.



# **Replacement Parts**

Ref. No.	Part No.	Description	Ref. No.	Part No	Description
	Cat. #23-810	Sanding Attachment, incl:		Cat. #50-328	Steel Stand, incl:
125	LBS-230	Mounting Block	149	SP-834	5/16-18 x 3/4" Carr. Bolt
126	SP-1603	1/4" Washer	150	SP-1605	3/8 x 7/8 x 1/16 Steel
127	SP-559	#10-32 x 1/2" Rd, Hd,			Washer
		Mach. Scr.	151	L3S-279	Motor Mount
128	SBS-51	Retaining Clip	152	SP-1300	5/16-18 Hex Nut
129	SP-551	#10-32 x 1/4" Rd. Hd.	153	SP-1605	3/8 x 7/8 x 1/16" Steel
		Mach. Scr.			Washer
130	SBS-53	Curved Platen	154	SP-1300	5/16-18 Hex Nut
131	SBS-52	Flat Platen	155	SP-602	5/16-18 x 1 1/4" Hex Hd, Ca
132	LBS-261	Insert			Scr.
	Cat. #40-882	Lamp Attachment, incl:	156	436-02-115-0086	Top Shelf
133	SP-2447	Cord	157	SP-1206	5/16-24 Hex. Nut
134	S-6	Mounting Bracket	158	SP-1750	5/16 Int, Tooth Lockwasher
135	SP-1203	#10-32 Hex Nut	159	MS-62	Spec. 5/16-24 Hex Hd. Scr.
136	SP-559	#10-32 x 1/2" Rd. Hd.	160	436-02-115-0083	Bottom Shelf
		Mach. Scr.	161	436-02-066-0019	Leg
137	SP-1702	1/4" Lockwasher		Cat. #49-363	Retractable Casters, incl:
138	SP-1029	1/4-20 Hex Nut	162	SP-1300	5/16-18 Hex Nut
139	S-3	Steel Link	163	SP-1703	5/16" Lockwasher
140	S-5	Spec. 1/4-20 x 15/16"	164	SP-5552	3/4 x 5/16 x 1/16" Fiber
		Carr. Bolt			Washer
141	S-1-S	Cover	165	MS-101	Caster Mount
142	S-4	Spacing Sleeve	166	SP-478	5/16-18 x 7/8 Flat Hd.
143	Cat. #49-130	V-Belt			Mach. Scr.
	Cat. #51-334	Switch Rod, incl:	167	MS=108	Caster
144	MS-17-S	Clamp Assembly	168	DSS-36	Fiber Washer
145	434-02-108-5001	Rod	169	SP-2733	5/32 x 7/8 Roll Pin
146	SP-2102	1/6 x 1/2 Cotter Pin	170	MS-103	Cam
	Cat. #41-033	Motor Pulley, incl:	171	MS-106	Shaft
147	NCS-5275-B	Pulley	172	MS-109	Spring Washer
148	SP-206	5/16-18 x 5/16 Hex Soc. Set	173	SP-2732	5/32 x 1" Roll Pin
		Scr.	174	MS-102	Foot Lever
			175	MS-100	Caster Mount

### BAND SAW BLADES. All 71 3/4" Long.

No.	28-801	1/8".	6 teeth per inch.	Minimum cutting radius 1/4".
No.	28-802	3/16".	6 teeth per inch.	Minimum cutting radius 1/2".
No.	28-803	1/4".	6 teeth per inch.	Minimum cutting radius 3/4".
No.	28-804	3/8".	5 teeth per inch.	Minimum cutting radius 1".