

**OPERATING INSTRUCTIONS
AND PARTS LIST FOR**

BENCH SAW

8 INCH

Model Number 103.23834

The model number of your Bench Saw will be found on a plate on the rear of the Base. Always mention this model number when communicating with us regarding your Bench Saw or when ordering parts.

Instructions For Ordering Parts

All parts listed herein must be ordered through a Sears retail store or mail order house. Parts are shipped prepaid. When ordering repair parts, always give the following information:

1. The Part Number.
2. The Part Name and Price.
3. The Model Number 103.23834.

This list is valuable. It will assure your being able to obtain proper parts service. We suggest you keep it with other valuable papers.

SEARS, ROEBUCK and CO.

LITHOGRAPHED IN U. S. A.

OPERATING INSTRUCTIONS AND PARTS LIST FOR 8 INCH BENCH SAW Model 103.23834

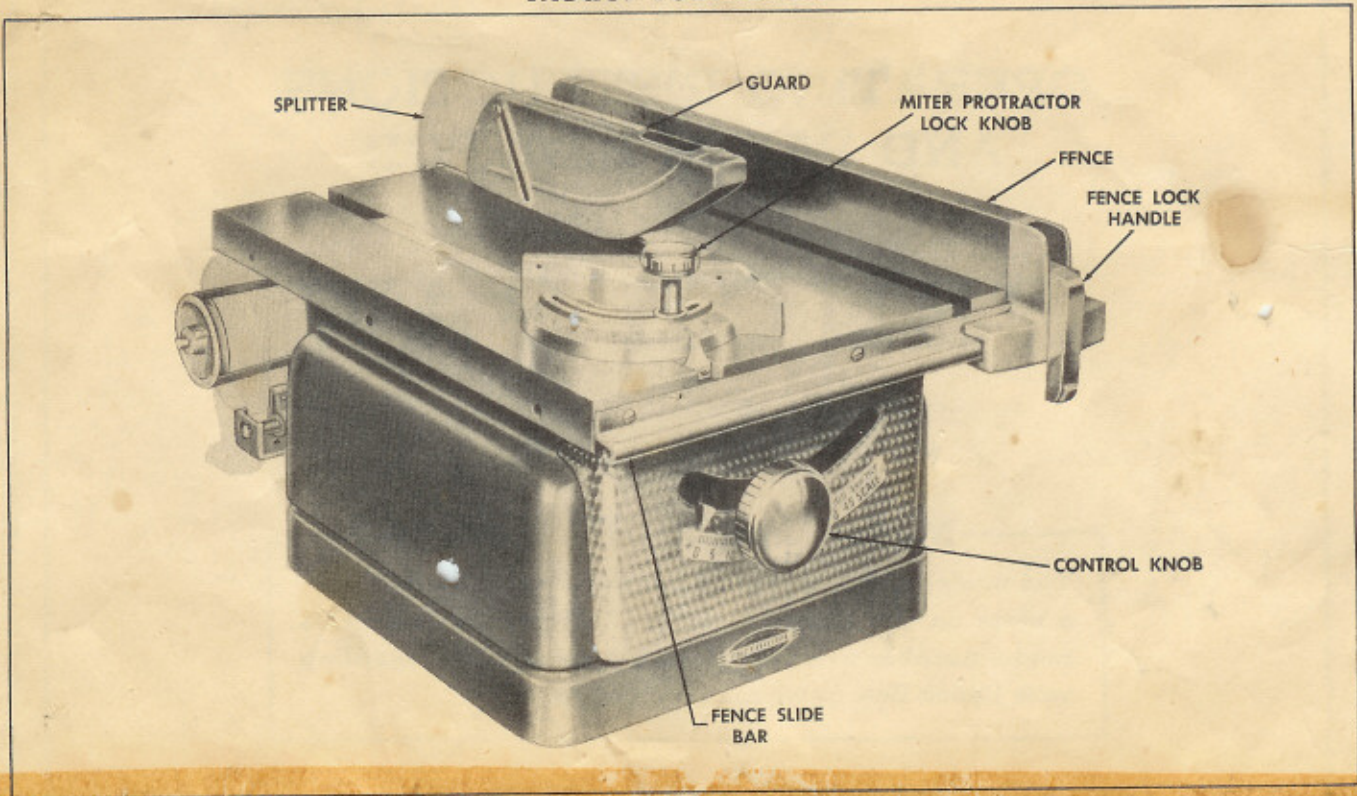


FIGURE 1

Careful planning, precision machining, and rigid inspection have all contributed toward maintaining the high standard of quality found in this tool. We are confident that you will find it satisfactory in every respect.

To increase the versatility of this saw beyond the normal range of bench saw operations, various attachments are readily available.

To prevent damage in shipment some of the parts were disassembled from the tool. These parts are listed below. Be sure they are all accounted for before discarding any of the packing material.

1. Guard and splitter assembly; item 25 see page 5.
2. Fence; item 124.
3. Miter gage assembly; item 136.
4. Motor alignment rod; item 27.
5. Motor mount complete; item 36.
6. Insert with clips; items 12, 13, 14 and 15.

7. Motor pulley; item 77.

8. V-belt; item 75.

ASSEMBLY:

Guard and Splitter

Slide the notched ends of the splitter into position between the face of the splitter bracket and the dished washer, and between the splitter spacer and dished washer located just behind the saw blade as shown in Fig. 2. Tighten the wing nut. When properly installed, the splitter will be held firmly in place and in line with the saw blade.

Fence and Miter Gage

Install as shown in Fig. 1.

Motor Alignment Rod

The 5/16 x 4 1/2 inch motor alignment rod, No. 27, fits into the hole in the back of the splitter bracket. Insert the rod as far as it will go into the bracket and tighten the set screw.

Motor Mount

Install as shown in Fig. 3 and outlined under "Installation of Saw".

Insert with clips

Install in opening provided in table top. See Fig. 5.

INSTALLATION OF SAW:

There are four 5/16 diameter holes provided in the base of the saw through which the tool should be fastened securely with screws or bolts to a well built work bench. A large hole in the bench below the blade will allow saw dust to escape.

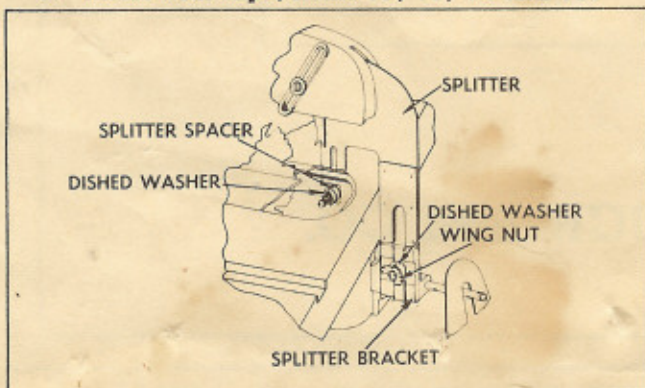


FIGURE 2

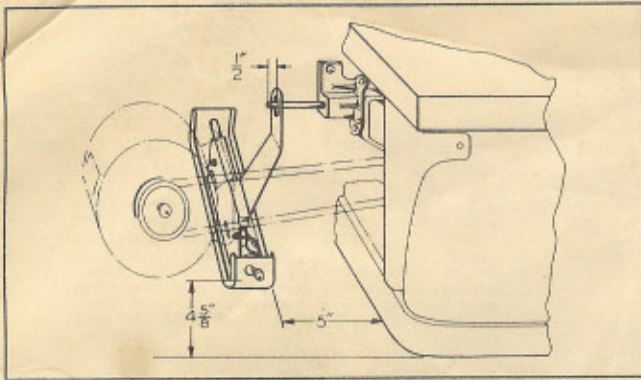


FIGURE 3

The Motor Mount Bracket should be installed as shown in Fig. 3.

1. Set the saw at 0 inches elevation and 0 degrees tilt. (See paragraph headed "Controls".)
2. Draw a line on the bench 5 inches from the rear of the saw base. (Measure at two points 12 inches apart to be sure that the line is parallel to the rear of base.)
3. Place the bracket, No. 32, on the bench as follows: The end with the elongated hole $4 \frac{5}{8}$ inches in from the left side of saw base and the front edge on the line drawn previously. Fasten it securely in this position.
4. Assemble motor rail, No. 31, and motor rail guide and plate, No. 28, to the motor rail bracket as shown. The grooved end of the motor rail to be placed in end of bracket with elongated hole.
5. Bolt your motor to the mount so that the motor pulley will be in line with the saw pulley when the motor alignment rod is through the slot in the motor rail guide and plate.

Check before Operation!

1. The motor alignment rod must project at least $\frac{1}{4}$ inch through the mount slot with the blade retracted and tilted 45 degrees. This setting should be checked often during operation. As the belt wears or stretches, loosen the set screw and pull the alignment rod out of the bracket the amount needed.
2. The motor mount must not strike the motor mount bracket at either end of the motor rail at 0 or 45 degrees tilt.
3. Be sure that the teeth of the blade point toward the front of the saw and the top of the blade turns toward the front.

MOTOR:

For general home workshop use, a $\frac{1}{2}$ horsepower 3450 R.P.M. motor will provide adequate speed and power. However, to enable you to take full advantage of the rugged performance features and full cutting efficiency of this saw, especially for heavy duty work, a $\frac{3}{4}$ horsepower 3450 R.P.M. motor should be used.

SPEED:

The motor pulley, No. 77, installed on a 3450 R.P.M. motor with a $\frac{1}{2}$ inch diameter shaft will drive the saw at the recommended speed—4500 R.P.M.

BELT:

If your motor shaft is approximately 4 inches from the bottom of the base of the motor, the V-belt, No. 75, should fit the installation previously described.

LUBRICATION:

The precision ball bearing assembly used on the saw arbor has been packed with lubricant and sealed at the factory. It should require no further attention for the life of the bearing assembly.

To maintain the smooth, easy operation of the controls, oil the following points occasionally:

1. The guide, No. 61, at the front of the arbor support.
2. The guide ways of the front and rear trunnions, Nos. 93 and 109.
3. The elevation screw, No. 89.
4. The motor rail, No. 31.

CONTROLS:

The Control Knob raises the saw from 0 to $2\frac{1}{2}$ inches above the table level when pushed in and turned. It tilts the saw 0 to 45 degrees when pulled out and turned.

The Angle of Tilt is shown by a pointer on the scale just below the control knob.

The Depth of Cut Gage and Pointer can be seen through the curved slot to the left of the control knob.

The Miter Protractor face is a guide surface for cross cutting or diagonal cutting to a definite angle. The protractor may be used on either side of the blade at any angle or depth of cut setting. The angle is shown by the pointer on the calibrated scale on the protractor head. The lock knob clamps the head in the selected position.

CAUTION:

This saw has an extra long spindle for greater dado capacity. If the blade is extended more than $2\frac{3}{8}$ inches according to the depth of cut gage, the spindle will strike the table insert when the saw blade is tilted.

The Fence Lock Handle when down clamps the fence at both ends of the table. Raise the handle to unlock and by grasping the front fence end move the fence to any point across the table. To make sure that the fence is perpendicular to the table, push down on fence as you lock it.

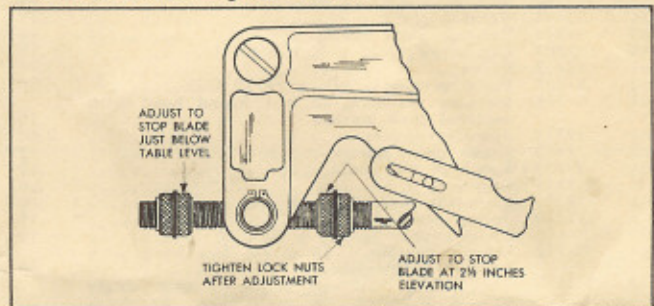


FIGURE 4

ADJUSTMENTS:

The following items may require adjustment due to rough handling during shipment.

The Blade Tilt Stop Screw, No. 116, located just behind the front trunnion on the left side of the body casting stops the tilt mechanism when the blade is at right angles to the table.

The Pointer for the Tilt Scale should indicate 0 degrees when the blade is at right angles to the table.

The Depth of Cut Pointer should be set at 0 when the blade is lowered with the teeth just flush with the table surface.

The Elevation Limit Stop Nuts shown in Fig. 4 automatically stop the saw at high ($2\frac{1}{2}$ inch projection) and low position. The front pair of stops control the high position while the rear pair stop the blade at low position.

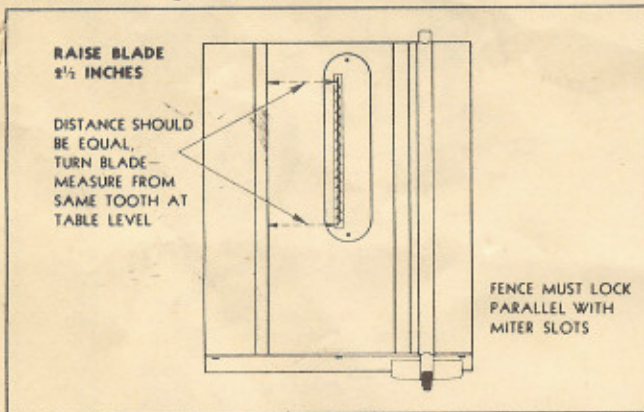


FIGURE 5

The Blade Must Be Parallel with the Miter Slots in the Table to Get a Straight Cut. (See Fig. 5). Adjustment, if necessary, may be made as follows:

1. Extend the blade fully and set it at right angles (0 degrees) to the table.
2. Slide the fence to the center of the table until it just touches the blade. (Fence must be parallel to the miter slot when it touches blade.)
3. Lock the fence.
4. Loosen the two bolts, Nos. 92 and 110, holding each trunnion, Nos. 93 and 109, to the lower table surface. (4 bolts total.)
5. Shift the complete mechanism until the blade is flat against the fence.
6. Retighten the four trunnion screws—front pair first.
7. Check this adjustment by measuring again from the marked blade tooth to the miter slot as previously explained.

The Fence Must Lock Parallel with the Miter Slots.

Using one hand on the front end of the fence, slide the fence to the edge of the miter slot. Push the lock handle down slowly. If fence isn't parallel to miter slot adjust as follows:

1. Loosen the two screws, No. 118, on the underside of the front fence end.
2. Release the fence lock handle.
3. Hold the fence flush to the edge of the miter slot. Turn both screws up just snug. Then tighten each one securely.
4. Check the adjustment by sliding the fence away from the slot and returning several times to see if it locks parallel each time.

The Fence Must Be Square with the Table Surface.

Adjust by loosening the screws, No. 10, holding the fence slide bar to the table. Slide the bar up or down at either end to square the face of the fence with the table. Retighten the screws.

The Arbor Tilt Tension Spring, No. 113, provides tension to keep the mechanism tilted at any angle, thus eliminating the need for a manual control lock. After the tool is "broken in," you may find it necessary to increase this tension. Loosen the lock nut, No. 103, and turn the bolt, No. 114, until enough tension has been applied. Retighten the lock nut.

Note: After a few hours of operation, tighten all pulley set screws.

CARE OF THE BLADE:

Keep the blade teeth sharp and properly set.

To sharpen the blade:

1. Lower the blade until an oil stone laid on the table will just touch the teeth. Rotate the blade backward by hand until the ends of all the small cutting teeth have been touched.
2. File the gullets (space between teeth) of all teeth of the same shape to a uniform depth and width. Maintain the original shape, bevels, and dimensions. Avoid sharp corners or nicks in the gullets between the teeth.
3. The top one-quarter of each cutting tooth should be set at an angle of approximately 10 degrees. The set should be uniform and should alternate from left to right on successive teeth. The large raker teeth require no set—they should be kept approximately $1/64$ inch shorter than the cutting teeth.
4. File the bevel of each cutting tooth—15 to 20 degree bevel on the inside front face of each tooth. Maintain the original bevel angle and be careful not to shorten the teeth.

Blade Wobble is often noticed at slow speeds when starting or stopping the saw. If this does not disappear at full speed, check the saw blade and clamp washers for dirt or saw dust on the clamping surfaces.

Gummy residue can generally be removed with kerosene.

OPERATION:

The blade provided with this saw may be used for both cross-cutting and ripping.

For proper chip clearance and best general results, the blade should project through the work-piece approximately $1/4$ inch.

Do not force material into the blade too fast. Use a straight, direct, steady feed which does not overtax the cutting capacity of the blade.

To eliminate creep of your work when making a miter cut, clamp the work piece to the miter gage.

Support long work as it leaves the rear of the table.

SAFETY:

While the bench saw is one of the most widely used woodshop power tools, it is by nature of its general design, one of the most dangerous in the hands of inexperienced or careless operators. The bench saw is not, however, an unsafe tool when used with common sense and good judgment.

Use a push block rather than letting the hands get closer than 3 inches to the blade on narrow cuts.

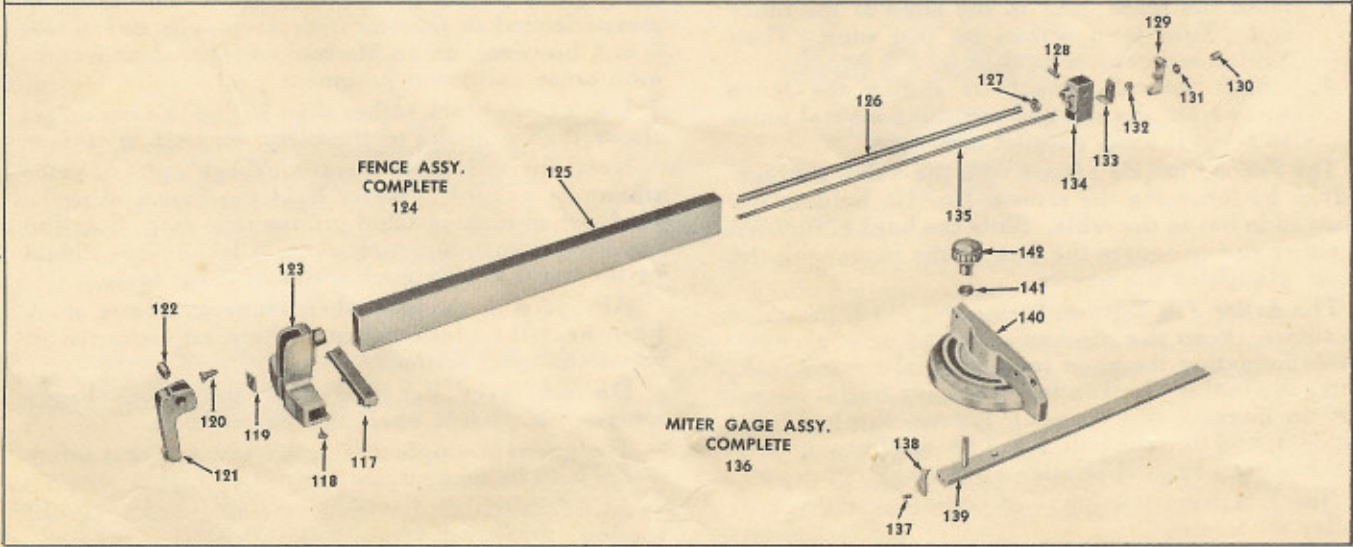
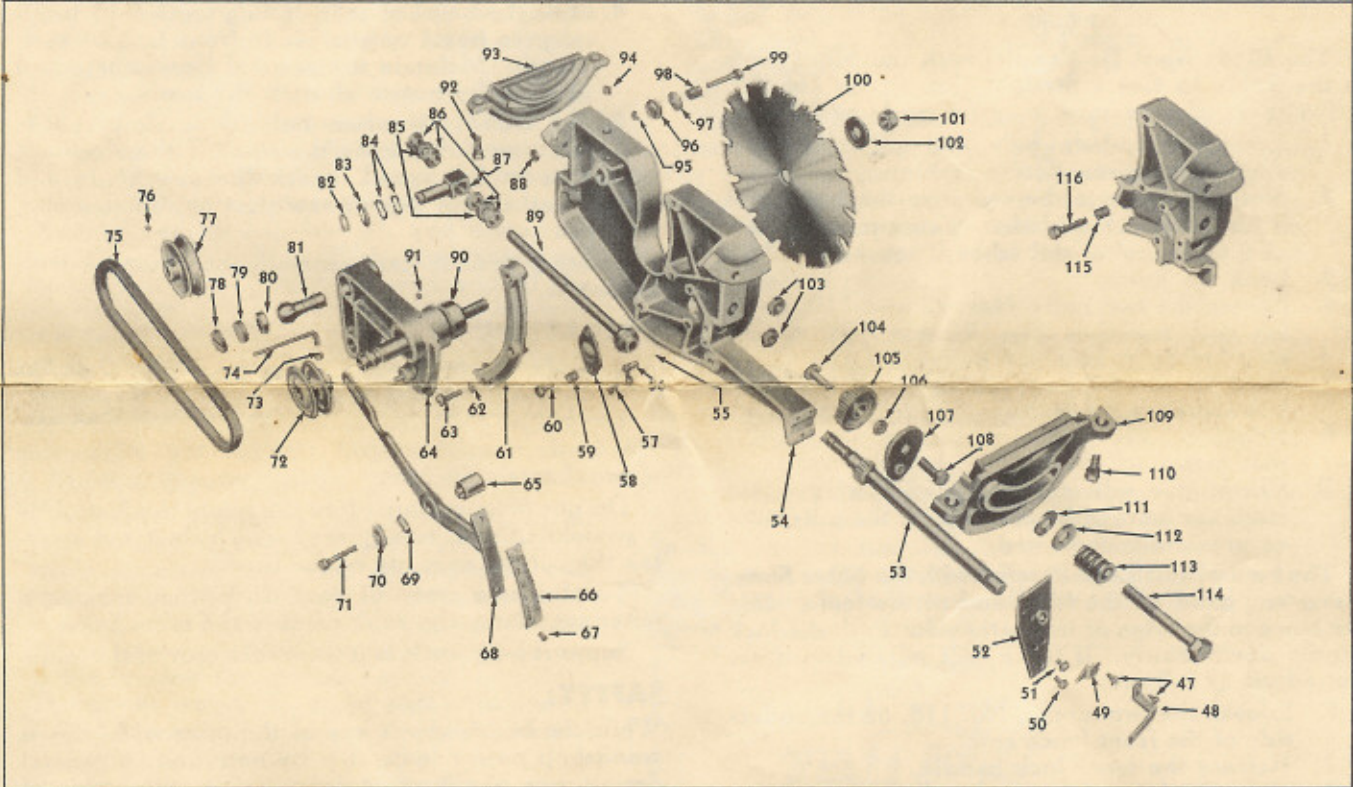
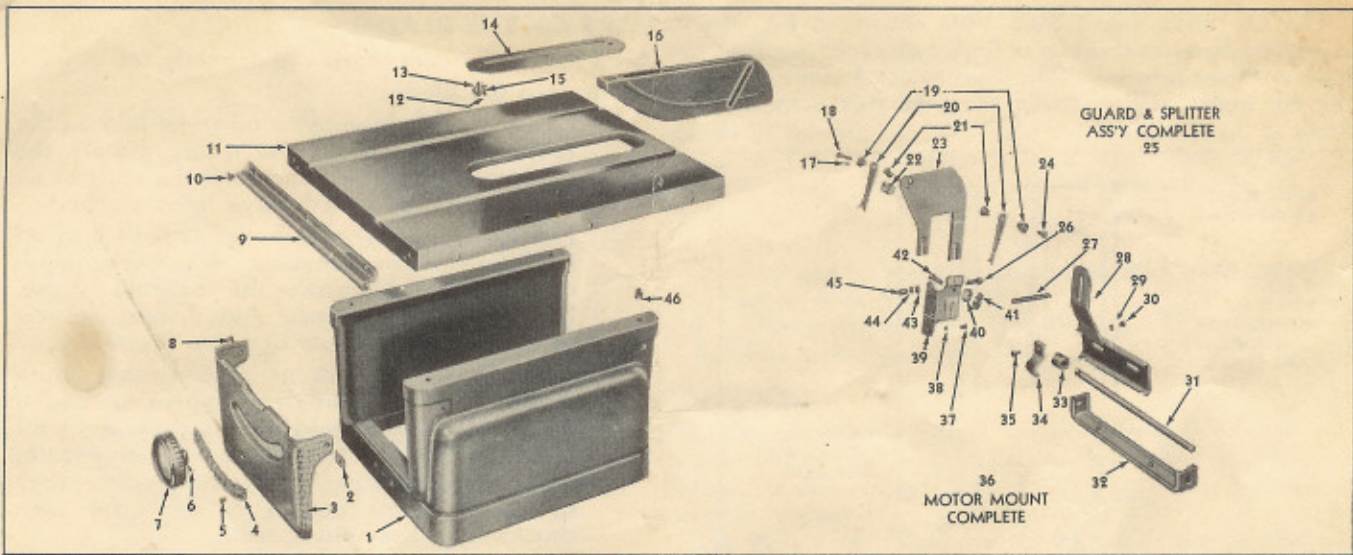
Keep the splitter and anti-kickback units in place whenever possible. Never hold the hands over the blade when making blind groove type cuts. Stand to one side when completing a cut. A loose piece caught by the blade can fly back with surprising force.

Always stop the saw when removing waste stock from near the blade, when making adjustments, or when changing settings.

Do not wear dangling neck ties, loose baggy sleeves, etc., while operating power tools.

The guard is supplied with this saw for your safety—use it to its best advantage!

ACCESSORIES for this saw are listed in our catalog.



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PARTS LIST

662-9500 Set
2901 parts

Ref. No.	Order Part No.	PART NAME	Prepaid Selling Price Each	Ref. No.	Order Part No.	PART NAME	Prepaid Selling Price Each
1	37008	Base	\$ 11.00	73	X-179	Set screw 5/16-18 x 5/16 socket hd. cup pt.	.10
2	X-1376	Speed nut No. 6-32	.15	74	*X-1400	Allen wrench 5/32	.15
3	37737	Front panel	3.50	75	X-1464	V-belt 1/2 x 40 inches long. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-1640	—
4	37763	Arbor tilt scale	.35	76	X-179	Set screw 5/16-18 x 5/16 socket hd. cup pt.	.10
5	X-332	Machine screw No. 6-32 x 1/4 binding head	.10	77	18036-A	Motor pulley with set screw—2 1/2 inch single groove V-pulley 1/2 inch bore. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-2802—1/2 inch bore	—
6	X-182	Set screw 5/16-18x5/16 socket head cone pt.	.10	78	37633	Pivot bearing retaining screw	.20
7	38120	Hand wheel with set screw	2.25	79	37823	Pivot bearing retaining washer	.15
8	X-1806	Sheet metal screw No. 7-16 x 3/8	.10	80	37632	Pivot bearing	.35
9	18635	Fence slide bar	1.20	81	37622	Ball and pivot pin	.15
10	*X-377	Binding head screw No. 10-24 x 3/8	.10	82	18447	Retaining ring	.10
11	37211	Table	26.00	83	X-631	Plain washer 41/64 I.D. x 1 O.D.	.15
12	X-375	Binding head screw No. 6-32 x 1/2	.10	84	37744	Spring washer	.15
13	18993	Table insert clip	.15	85	38714	Fibre washer	.15
14	37724	Table insert	1.10	86	37649	Knurled stop nut	.45
15	X-2451	External tooth lock washer No. 6	.10	87	37651	Saw elevation stud	.10
16	37431	Guard	3.00	88	X-430	Hex nut 1/4-20	.10
17	37619	Pin	.15	89	37652	Saw elevation shaft	1.30
18	37621	Guard slide pin	.15	90	38619	Arbor and bearing unit	5.30
19	37616	Saw guard slide bearing	.25	91	X-181	Set screw No. 10-24x1/4 socket head cone pt.	.10
20	37714	Anti-kickback pawl	.15	92	X-737	Machine screw 5/16-18 x 3/8 hex head with external lock washer	1.60
21	37617	Anti-kickback pivot bearing	.20	93	37417	Rear trunnion	.10
22	37811	Anti-kickback spring	.20	94	X-179	Set screw 5/16-18x5/16 socket head cup pt.	.10
23	37260	Splitter	1.30	95	X-430	Hex nut 1/4-20	.10
24	37647	Guard slide pin screw	.15	96	37646	Splitter spacer	.20
25	37106	Guard and splitter assembly, complete	6.00	97	18448	Dished face splitter washer	.15
26	X-736	Machine screw 1/4-20 x 1 1/4 hex head with external lock washer	.10	98	18449	Splitter clamp tension spring	.15
27	37636	Motor alignment rod	.15	99	*X-284	Cap screw 1/4-20 x 2 hex head	.10
28	37150	Motor rail guide and plate	1.30	100	18992	8 inch diameter combination blade. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-4937—1/2 inch bore	—
29	*X-605	Lock washer 1/4 inch	.10	101	X-403	Hex nut 1/2-20 jam nut	.10
30	X-430	Hex nut 1/4-20	.10	102	18444	Saw clamp washer	.15
31	37654	Motor rail	.80	103	X-413	Hex nut 3/8-16 jam nut	.10
32	37761	Motor rail bracket	.70	104	37655	Spacer	.80
33	37821	Motor rail bushing	.15	105	37429	Control gear	.10
34	37743	Motor rail bushing clip	.25	106	X-630	Plain washer	.10
35	*X-201	Cap screw 1/4-20 x 3/8 hex head	.10	107	37754	Gear cover	.15
36	37107	Motor mount, complete	3.25	108	X-744	Machine screw 3/8-16 x 1 1/2 hex head with external lock washer	1.60
37	X-740	Machine screw 1/4-20 x 3/8 hex head with external lock washer	.10	109	37422	Front trunnion	1.60
38	X-100	Set screw 1/4-20 x 1/4 slotted head cup pt.	.10	110	X-737	Machine screw 5/16-18 x 3/8 hex head with external lock washer	.10
39	37418	Splitter bracket	1.20	111	37748	Fibre washer	.10
40	18448	Dished face splitter washer	.15	112	37752	Flat washer	.15
41	*X-454	Wing nut 1/4-20	.15	113	37822	Arbor tilt tension spring	.20
42	*X-201	Cap screw 1/4-20 x 3/8 hex head	.10	114	37648	Arbor tilt tension bolt	.20
43	X-622	Plain washer 17/32 I.D. x 3/8 O.D.	.10	115	37812	Tension plate spring	.15
44	37757	Tension washer	.15	116	*X-379	Replace with Fillister head machine screw 1/4-20 x 3/8	.10
45	37627	Spacer	.10	117	37190	Fence slide	1.00
46	X-741	Machine screw 5/16-18 x 3/8 hex washer head with external lock washer	.10	118	*X-380	Binding head screw No. 10-24 x 3/8	.10
47	*X-516	Machine screw No. 8-32 x 1/4 round head	.15	119	37732	Fence lock handle friction plate	.15
48	37722	Arbor tilt pointer	.15	120	*X-542	Machine screw 1/4-20 x 3/8 flat head	.10
49	37721	Depth of cut pointer	.15	121	37428	Fence lock handle	1.25
50	*X-377	Binding head screw No. 10-24 x 3/8	.10	122	37641	Fence lock handle pivot pin	.20
51	X-734	Machine screw No. 10-24 x 3/8 round head with external lock washer	.10	123	37424	Front fence end	1.90
52	37751	Control shaft spacer plate	.60	124	37006	Fence assembly, complete	10.00
53	37160	Shaft with gear	1.60	125	37818	Fence body	4.00
54	37432	Frame	14.00	126	37643	Fence rod	.75
55	X-1307	Steel ball 3/16 diameter	.10	127	X-413	Hex nut 3/8-16	.15
56	37310	Control shaft tension spring	.15	128	37642	Fence lock clamp pivot pin	.10
57	X-734	Machine screw No. 10-24 x 3/8 round head with external lock washer	.10	129	37425	Fence lock clamp	.35
58	37731	Tension plate	.15	130	37639	Fence lock rod nut	.20
59	37812	Tension plate spring	.10	131	X-607	Plain washer 1/4 I.D. x 19/32 O.D.	.10
60	*X-201	Cap screw 1/4-20 x 3/8 hex head	.10	132	37825	Rubber grommet	.15
61	37423	Guide	.90	133	37758	Fence shoe	.15
62	X-607	Plain washer 1/4 I.D. x 19/32 O.D.	.10	134	37426	Fence end rear	1.00
63	X-738	Machine screw 1/4-20 x 1 round head with external lock washer	.10	135	37638	Fence lock rod	.35
64	37320	Spindle support	7.50	136	37109	Miter gage assembly, complete	5.00
65	37634	Depth gage spacer	.15	137	X-554	Machine screw No. 6-32 x 5/16 Fillister head	.10
66	37718	Depth of cut scale	.15	138	37712	Miter protractor pointer	.15
67	X-1551	Eyelet 3/8 x 1/4	.10	139	37110	Miter bar	2.50
68	37130	Elevation indicator arm with scale	.60	140	37240	Miter protractor	3.25
69	37729	Spring washer	.15	141	X-630	Plain washer 25/64 I.D. x 3/8 O.D.	.15
70	X-628	Plain washer 3/8 I.D. x 5/8 O.D.	.10	142	37411	Lock knob	.75
71	X-732	Machine screw 1/4-20 x 1 1/2 hex head with internal lock washer	.10				
72	18035-B	Tool pulley with set screw—2 inch single groove V-pulley. 5/8 inch bore. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-2801—5/8 inch bore	—				

*Parts marked in this manner may be purchased locally.

This sheet is intended for instruction and repair parts only and is not a packing slip. The parts shown and listed may include accessories not necessarily part of this tool. All parts are shipped prepaid. All prices are subject to change without notice.