1957

OPERATING INSTRUCTIONS AND PARTS LIST FOR

CRAFTSMAN BENCH SAW

8 INCH

Model Number 103.21040

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.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through Sears, Roebuck and Co. or Simpsons-Sears Limited. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The PART NAME
3. The MODEL NUMBER
4. The NAME of item

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.—U.S.A.
SIMPSONS-SEARS LIMITED—CANADA

LITHOGRAPHED IN U. S. A.

SOURCE FORM 37999

OPERATING INSTRUCTIONS AND PARTS LIST FOR 8 INCH BENCH SAW MODEL 103.21040

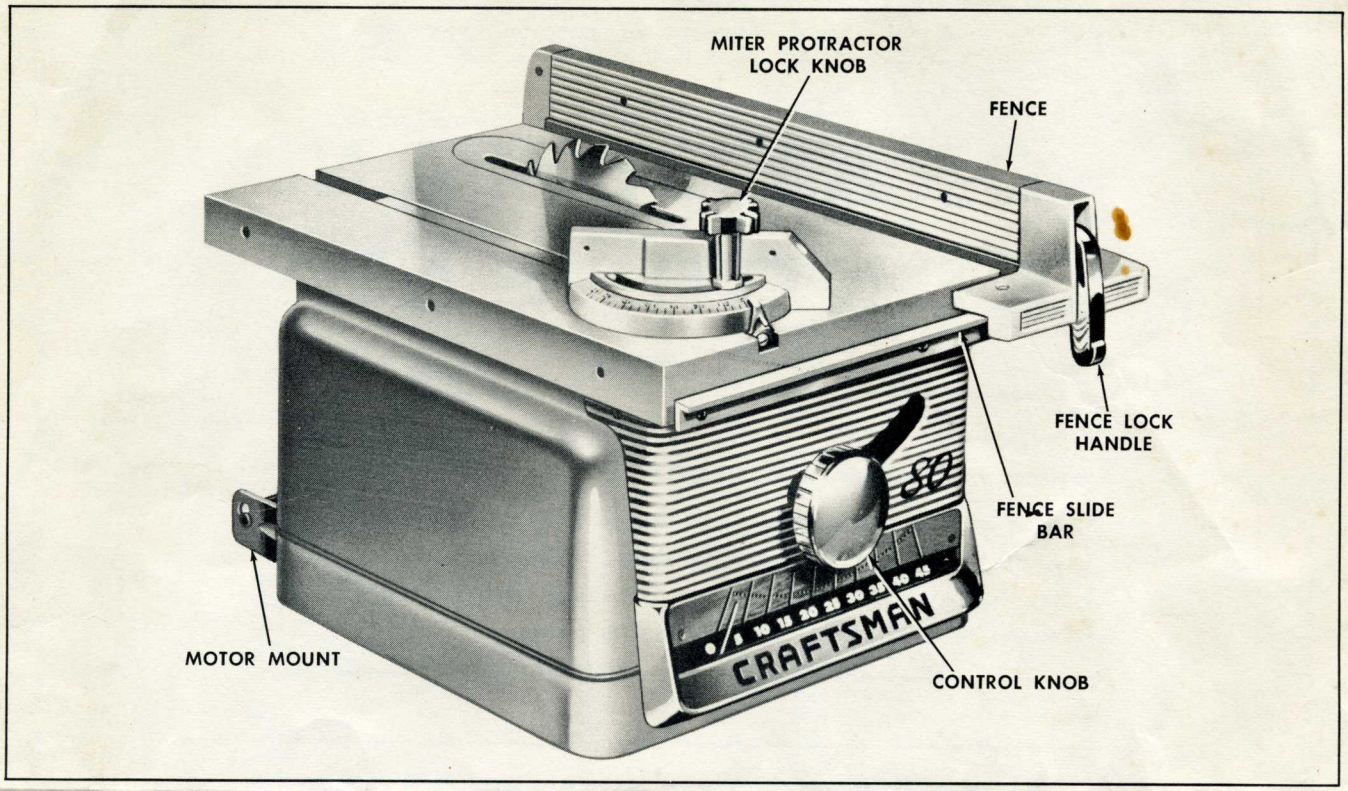


FIGURE 1

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. Fence; item 110.
2. Miter gage assembly; item 118.
3. Motor alignment rod; item 24.
4. Motor Mount parts items 27, 23, 30, 31, 32, 33 and 34.
5. Insert with clips; items 16, 17, 18 and 19.
6. Motor pulley; item 63.
7. V-belt; item 61.
8. Bag contains items 21, 22, 29, 25, 26, 28, 35, 11, 12, 13 and 14.
9. Fence Slide Bar; item 10.

ASSEMBLY:

Front Fence Bar

The front fence bar must be fastened to the front edge of the saw table with three (3) slotted head screws, No. 11, spacers, No. 12, lock washers, No. 13, and hex nuts, No. 14. See Fig. 2.

Before tightening the screws securely, the fence bar must be accurately adjusted to the 21/32 dimension over the entire length.

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 sawdust to escape.

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".)

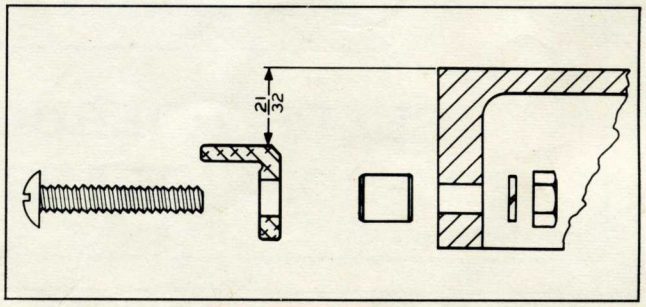


FIGURE 2

2. Fasten the motor rail bracket, No. 23, to the rear of the saw so it is flush with the bottom of the base. Use the two (2) slotted head machine screws, No. 29, lock washers, No. 22, and hex nuts, No. 21 provided.
3. Turn the guide pin, No. 35, into the hole at rear of saw body as shown in Fig. 3.
4. Assemble motor support bracket to the motor rail bracket, as shown. The grooved end of the motor rail, No. 24 MUST be placed in end of bracket with elongated hole.
5. Bolt your motor loosely to the motor support bracket.
6. Slide the motor rail guide, No. 33, over the guide pin.
7. Align the motor and saw pulleys by adjusting the motor on the motor support bracket. Tighten the motor mounting bolts securely.

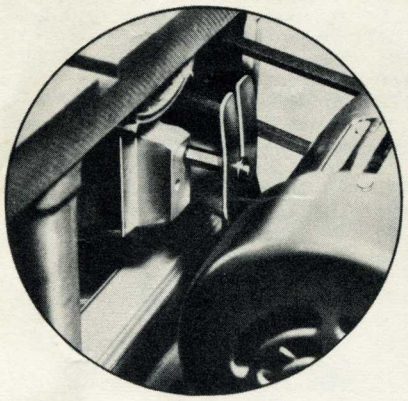


FIGURE 3

Check before Operation!

1. The motor alignment rod must project at least 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.

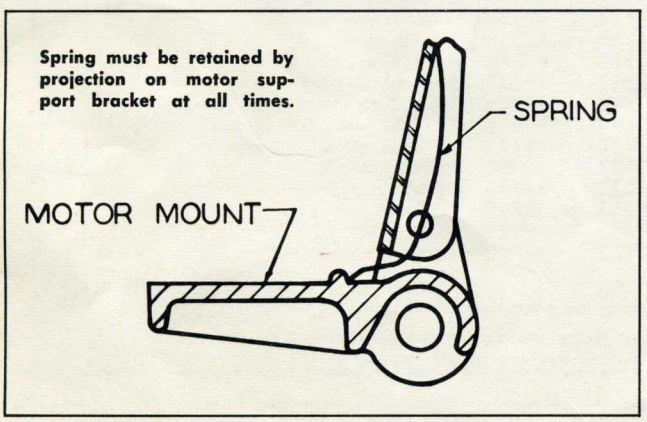


FIGURE 4

MOTOR:

For general home workshop use, a 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 3/4 horsepower 3450 R.P.M. motor should be used. Note: When a 3/4 H.P. motor is used, a 41 inch V-belt and a motor pulley with 5/8 bore is necessary.

SPEED:

The motor pulley, No. 63, installed on a 3450 R.P.M. motor with a 5/8 inch diameter shaft will drive the saw at the recommended speed—4500 R.P.M.

BELT:

The saw is driven by a V-belt, No. 61. A replacement may be purchased by ordering under part number given in parts list.

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. 52, at the front of the arbor support.
2. The guide ways of the front and rear trunnions, Nos. 80 and 92.
3. The elevation screw, No. 76.
4. The motor rail, No. 24.

CONTROLS:

The Control Knob raises the saw from 0 to 2 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 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 3/8 inches 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.**

ADJUSTMENTS:

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

The Blade Tilt Stop Screw, No. 98, 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.

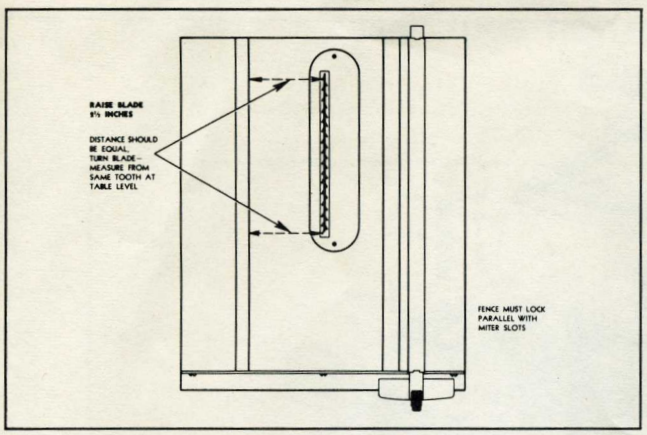


FIGURE 5

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. Raise the blade to 2 1/2 inches depth of cut and set at right angle (0 degrees) to table.
2. Measure **accurately** from a raker tooth on the blade to an edge of either miter slot, as explained and shown in Fig. 5.
3. Loosen the bolts, Nos. 79 and 93, holding each trunnion, Nos. 80 and 92, to the lower table surface. (4 bolts total.)
4. Shift the complete under-table mechanism until the blade is parallel with the miter slot.
5. Re-tighten the four trunnion screws, front pair first.
6. Check this adjustment as previously explained to be certain it is correct after re-assembly is complete.

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 does not lock parallel to miter slot adjust as follows:

1. Loosen the two screws, No. 108, on top of the fence end.
2. Release the fence lock handle, No. 103.
3. Adjust the two set screws on the front of the fence end until the fence is parallel with miter slot. Turn the two screws, on the top, up 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 Arbor Tilt Tension Spring, No. 99, 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. 85, and turn the bolt, No. 98, until enough tension has been applied. Re-tighten the lock nut.

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

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 in.

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.

When using dado saws, the hex nut, No. 83, will hold saws securely without the use of the saw clamp washer, No. 84, if that is desired.

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.

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.

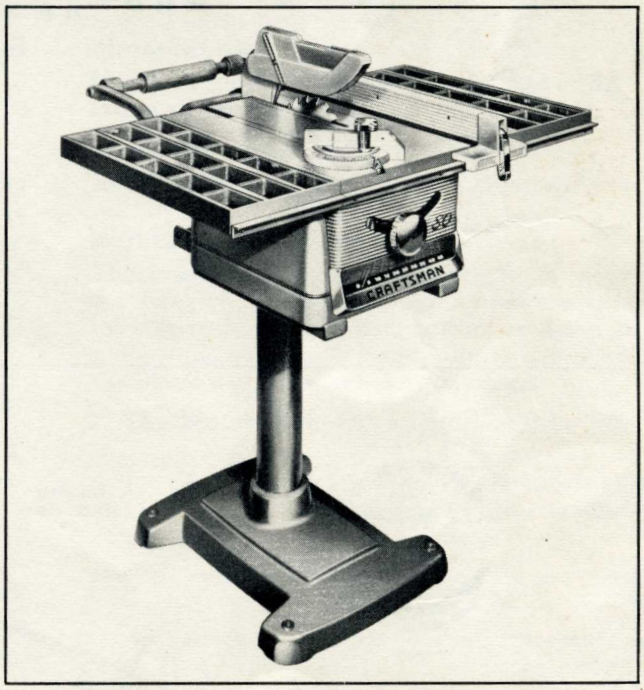
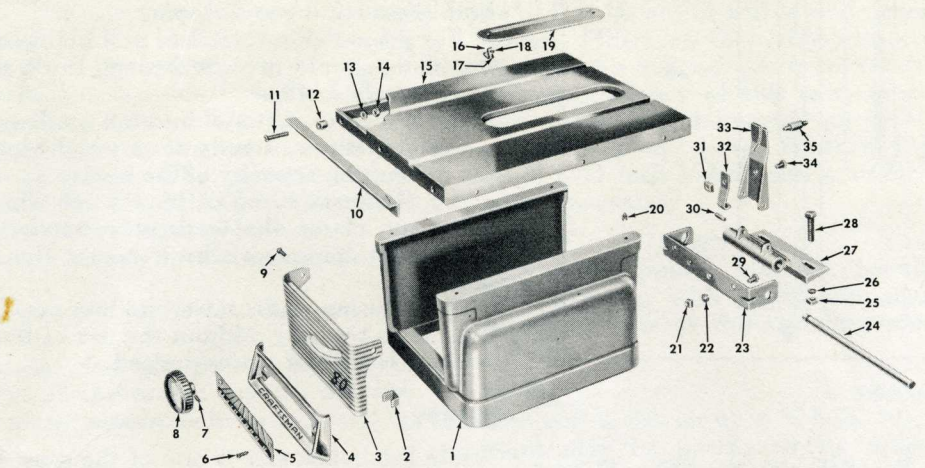
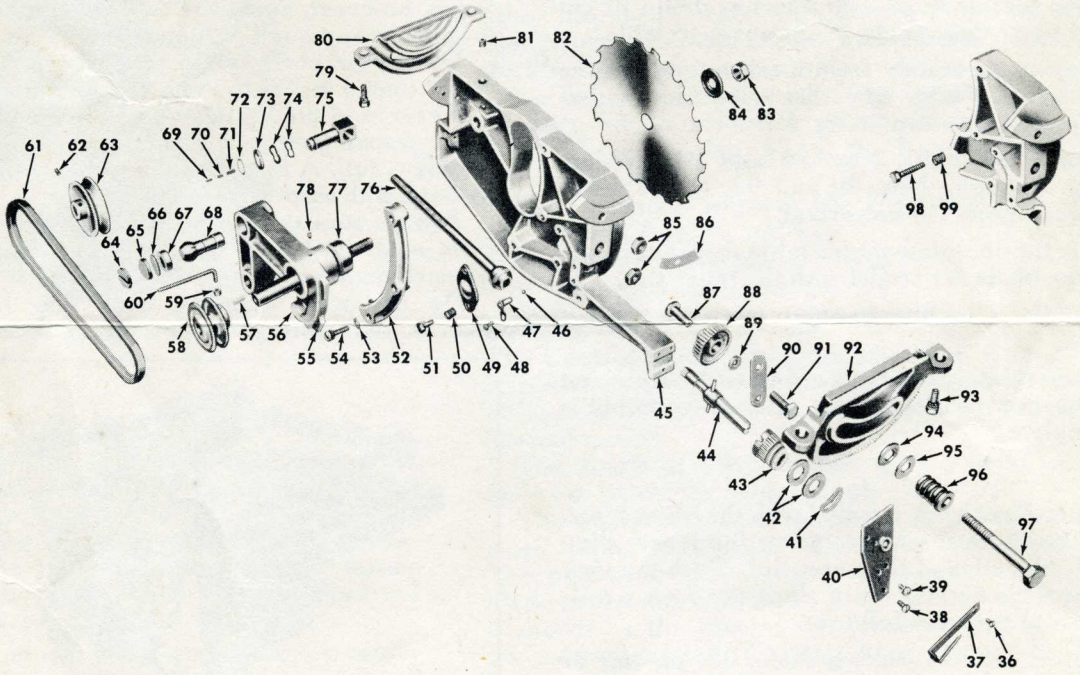


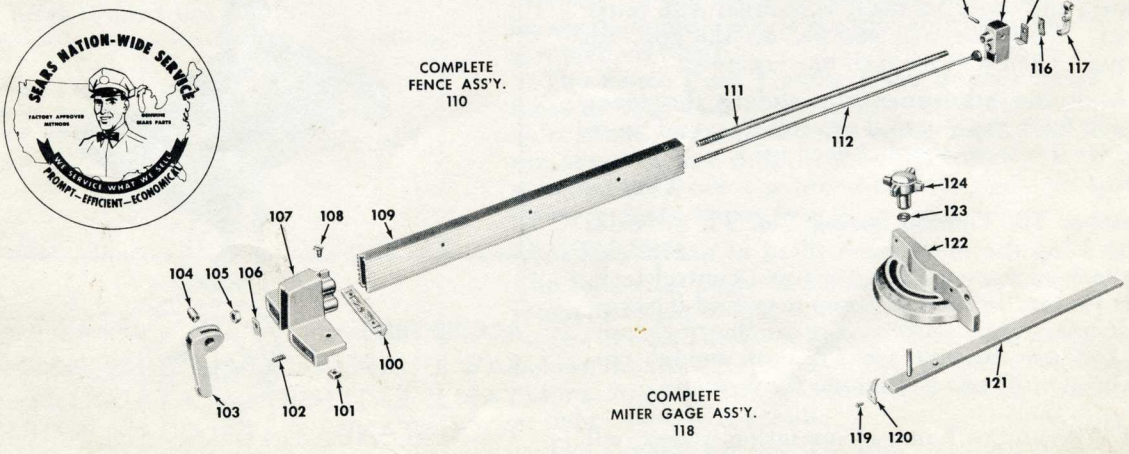
FIGURE 6

ACCESSORIES:

SAW GUARD—CATALOG No. 9-21046.
TABLE EXTENSION—CATALOG No. 9-21047.
TOOL STAND—CATALOG No. 9-21048.
POWR PANEL—CATALOG No. 9-2120.


16 18 19
17
13 14 15
11 12
10
33 35
31 32 34
20
30
28
27
29
26
25
24
21 22 23
9
8 7
6 5 4 3 2 1


80 81 82
79
72 73 74 75
84 83
69 70 71
61 62 63
78 77 76
66 67 68
65
64
60 59
58 57 56 55 54 53 52 51 50 49 48 47 46
85 86
87 88
89
90 91 92
93
94
95
96
97
45 44 43 42 41 40 39 38 37 36
98 99


SEARS NATION-WIDE SERVICE
FACTORY APPROVED METHODS
Sometimes SEARS PARTS
WE SERVICE WHAT WE SELL
PROMPT—EFFICIENT—ECONOMICAL
COMPLETE FENCE ASS'Y. 110
113 114 115
116 117
111
112
107 108 109
104 105 106
100
103 102 101
124
123
122
121
119 120
COMPLETE MITER GAGE ASS'Y. 118

PARTS LIST

Item No.	Order by Part No.	PART NAME
1.	37440	Base
2.	37480	Clip
3.	37778	Front Panel
4.	37783	Bezel
5.	37779	Scale
6.	X-343	Mach. Screw Oval Hd. No. 6-32 x 1
7.	X-179	Socket Head Set Screw 5/16-18 x 5/16
8.	38415	Handwheel
9.	X-1806	Sheet Metal Screw No. 7-16 x 3/8
10.	37833	Fence Slide Bar
11.	X-398	Truss Head Machine Screw No. 10-24 x 1 1/4
12.	38676	Spacer
13.	X-608	Washer No. 10 Amer. Std.
14.	X-424	Hex Nut No. 10-24
15.	37212	Table
16.	18993	Table Insert Clip
17.	X-375	Binding Head Machine Screw No. 6-32 x 1/8
18.	X-2451	Internal Tooth Lock Washer No. 6
19.	37724	Table Insert
20.	X-741	Machine Screw 5/16-18 x 1/2 Hex Washer Head with External Lock Washer
21.	X-418	Square Nut 5/16-18
22.	X-611	Lock Washer 5/16 Amer. Std.
23.	37785	Motor Rail Bracket
24.	37663	Motor Rail Bar
25.	X-418	Nut Square 5/16-18
26.	X-601	Plain Washer 11/32 I.D. x 11/16 O.D.
27.	37213	Motor Support Bracket
28.	X-322	Square Head Machine Screw 5/16-18 x 2
29.	X-525	Slotted Round Head Machine Screw 5/16-18 x 5/8
30.	38874	Roll Pin
31.	X-418	Square Nut 5/16-18
32.	38765	Flat Spring
33.	38764	Motor Rail Guide
34.	X-525	Slotted Round Head Machine Screw 5/16-18 x 5/8
35.	38691	Guide Pin
36.	X-2908	Self Tapping Screw No. 8-32 x 1/4 Round Hd.
37.	37777	Tilt Pointer
38.	X-377	Binding Head Machine Screw No. 10-24 x 3/8
39.	X-734	Round Head Machine Screw No. 10-24 x 3/8 with External Lock Washer
40.	38752	Front Plate
41.	38849	Retaining Ring
42.	38748	Plain Washer
43.	38435	Drive Gear
44.	37430	Control Shaft with Pin
45.	37432	Frame
46.	X-1307	Steel Ball 3/16 Dia.
47.	38190	Control Shaft Tension Spring
48.	X-734	Round Head Machine Screw No. 10-24 x 3/8 with External Lock Washer
49.	38751	Tension Plate
50.	38853	Tension Plate Spring
51.	X-201	Hex Head Cap Screw 1/4-20 x 3/4
52.	38437	Guide Shoe
53.	X-607	Plain Washer 17/64 I.D. x 19/32 O.D.
54.	X-738	Round Head Machine Screw 1/4-20 x 1 with External Lock Washer
55.	37380	Spindle Support with Bearing Key
56.	38434	Spindle Support
57.	38831	Square key
58.	38160	Tool pulley with set screw
59.	X-179	Socket head set screw 5/16-18 x 5/16 cup point
60.	X-1400	Allen wrench 5/32
61.		V-belt 1/2 x 35 inches long. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-A-1635
62.	X-179	Socket head set screw 5/16-18 x 5/16 cup point
63.		Motor pulley with set screw—2 1/2 inch single groove V-pulley with 5/8 inch bore. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-A-2802 5/8 inch bore
64.	38666	Pivot bearing retaining screw
65.	38848	Retainer washer
66.	38766	Disc
67.	38665	Pivot socket bearing
68.	38664	Pivot Pin
69.	X-179	Socket head set screw 5/16-18 x 5/16 cup point
70.	38846	Rubber plug
71.	38847	Nylon plug
72.	18447	Retaining ring
73.	X-631	Plain washer 41/64 I.D. x 1 inch O.D.
74.	38728	Spring washer
75.	38340	Swivel ass'y
76.	38663	Control screw
77.	38170	Arbor and bearing unit with key
78.	X-181	Socket head set screw No. 10-24 x 1/4 cone pt.
79.	X-387	Hex head machine screw 5/16-18 x 3/4
80.	38439	Rear trunnion
81.	X-179	Socket head set screw 5/16-18 x 5/16 cone point
82.		8 inch diameter chisel tooth blade. Purchase from your nearest Sears retail store or mail order house. Ask for Catalog No. 9-3240 5/8 inch bore
83.	X-403	Hex Jam nut 1/2-20
84.	18444	Saw clamp washer
85.	X-413	Hex Jam nut 3/8-16
86.	38753	Sawdust shield
87.	38669	Spacer
88.	37429	Control gear
89.	X-636	Plain washer 13/32 I.D. x 3/4 O.D.
90.	37773	Gear plate
91.	X-206	Hex. Head cap screw 3/8-16 x 1 3/4
92.	38438	Front trunnion
93.	X-387	Hex. head cap screw 5/16-18 x 3/4
94.	38755	Fibre washer
95.	38754	Flat washer
96.	38854	Trunnion lock spring
97.	38667	Trunnion lock bolt
98.	38853	Spring
99.	X-379	Replace with Fillister Head machine screw 1/4-20 x 3/4
100.	37437	Fence lock bar
101.	X-407	Square nut No. 10-24
102.	X-3801	Slotted head set screw No. 10-24 x 9/16
103.	38442	Fence lock handle
104.	38688	Fence swivel
105.	X-420	Hex nut 1/4-20
106.	38871	Wear plate
107.	37436	Front fence end
108.	X-378	Slotted oval head machine screw No. 10-24 x 3/8
109.	37832	Fence body
110.	37011	Fence Ass'y
111.	37661	Fence tie rod
112.	37662	Fence lock rod
113.	38674	Fence lock pin
114.	37435	Rear fence end
115.	37758	Fence shoe
116.	37776	Lock arm spring
117.	37425	Fence lock arm
118.	37204	Complete miter gage ass'y
119.	X-556	Fillister head machine screw No. 10-24 x 3/8
120.	37774	Miter protractor pointer
121.	37390	Miter bar
122.	37240	Miter protractor
123.	38647	Washer
124.	38429	Knob
125.	37999	Instruction sheet.

***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.