Rockwell
MANUFACTURING COMPANY
The Rockwell Building • Pittsburgh, Pa.

430-02-651-0001
DATED IM 1-30-62
PM–1512

24'' SCROLL SAW

The Delta 24 inch Scroll Saw is designed for use in schools, home workshops, pattern shops, sign and display shops and many others.

This saw has a throat capacity of 24 inches and will cut to the center of a 48 inch diameter circle. It is primarily designed for scroll saw work on stock less than 2 inches thick. Light soft metals can be cut, but hard metals and die work should not be attempted on this machine.

MOTORS

Delta 62-110 single phase or 66-120 three phase, 1/3 HP motor will provide ample power. Motor should be bolted in place on the base before machine is finally secured to bench or stand. Belt to be just tight enough to prevent whipping. Rotation of motor can be in either direction.

Before plugging into a single phase, 110-120 volt AC power outlet, the size of the wire between the power panel and outlet should be checked. The minimum wire size that should be used is #14. This is the nominal size wire used in houses. The fuse used should be a 15 amp time lag fuse. The same wire and time lag fuse size should be used if the power is 220-440 volts single phase.

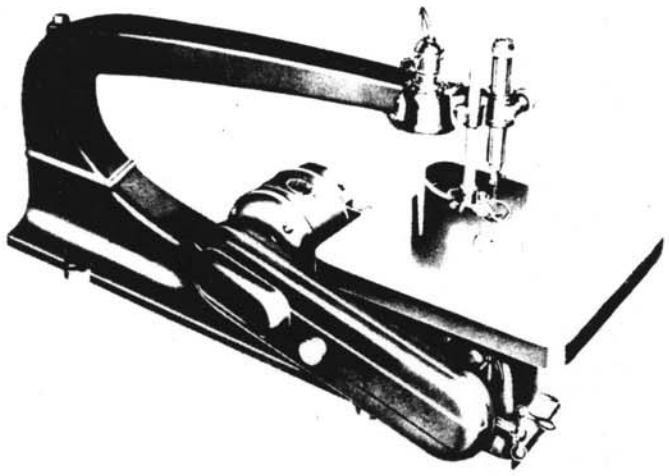
Be sure that electrical current being used agrees with specifications on motor nameplate. Motor is wired for 110-120 volts, which is standard house wiring. It can be used on 220-440 volts by making simple wiring changes as shown on motor nameplate.

If you have purchased a three phase motor, an electrician should connect three phase power units to the power source in compliance with existing Electrical Codes.

After mounting the motor, the four rubber bushings (in envelope with hook bolts) are to be inserted in recess in bottom of scroll saw base. Use the four hook bolts, NSS-238, to fasten scroll saw to stand. Unpack the table, remove the clamp knob and set table in place with graduated scale to the front of the machine.

When using a four step motor pulley, Cat. No. 718 in conjunction with four step machine pulley, Cat. No. 720, speeds of 610, 910, 1255and 1725 rpm are obtained with 1725 rpm motor.

Also furnished with your saw is a chrome plated hand knob, NSS-371-S. It should be fastened to the other end of the motor shaft and used to turn the motor by hand to make sure blade is installed properly.



Note: Belt Guard, Motor, Pulleys, Lamp and Variable Speed Attachments shown in above photo are not supplied as standard equipment.

REVERSING DRIVE SHAFT

Scroll saw is shipped with drive pulley on left hand side. If necessary, pulley can be moved to right hand side.

To do this:

1. Remove the four screws (105) holding drive shaft housing to base.
2. Remove the four screws (105) from crank case cover on opposite side.
3. Remove housing and cover.
4. Remove screw (97) and (99) from cross head(96).
5. Hold the chuck to prevent the plunger from turning, and turn the cross head around until it faces other opening in crankcase and until screw hole is opposite other hole in plunger.
6. Replace screws (97) and (99) in cross head and tighten firmly.
7. Scrape all dirt from cover flange and spread thin coat of shellac on the flange.
8. Replace gaskets.
9. Replace cover and housing and fasten in place with the screws.
10. Remove the four screws (38) from pump housing cover (26) and turn it around so that outlet tube is at the top and replace the screws.
11. Turn pulley by hand several times to check before turning on power.

How to Select and Use the Right Scroll-Saw Blade

When compared casually with one another, many blades look so much alike that the average person mistakingly thinks them to be the same. Actually, there is a great difference in how they cut — in the number of teeth per inch, the set of the teeth, the thickness of the blade and its width.

On this page is a complete guide you can follow in selecting the proper scroll-saw blades.

The table below recommends — by blade number — the blade you should use to cut various materials. And it gives the speed at which you should run the scroll saw to do the best job.

The recommendations given are average recommendations. You will find that there are differences in material and for different thicknesses or even for the variation in the material itself, different blades should be chosen to do the best cutting job. In almost all cases, however, the blades shown here and recommended are the blades that will give you the finest cuts possible when run at the proper speeds. It may be necessary if you do run across variations to do a little experimenting with the speed at which the saw is run and also in the blade itself.

We suggest that you keep this page, as a handy aid in selecting and using the right scroll-saw blade for your job.

MATERIAL TO BE CUT	SPEED	THICKNESS OF MATERIAL TO BE CUT							
		Up to 1/16	1/16 to 1/8	1/16 to 1/4	1/16 to 1/2	1/8 to 1/4	1/8 to 1/2	1/8 to Cap. of Saw	1/4 to Cap. of Saw
ALUMINUM, BRASS	SLOW	58 95 96	64 59	98	65	60	91		
COPPER	SLOW	58	59 64	65	65	91	91		
JEWELRY METALS	MEDIUM	95	96	98					
LEAD, PEWTER	SLOW	58	59 64	65	65	60	91		
SHEET IRON, MILD STEEL	SLOW	58	59 64	65		60			
ASBESTOS	MEDIUM	58	59 64	65	65	60	65		
BAKELITE CELLULOID PLASTICS	SLOW	84	83	82	85	86 81	86 81		88
LAM'D PLASTICS FIBERTEX MICARTA	SLOW					91	91	91 to 1"	92 to 1" 94 to 2"
IVORY	SLOW	84	83	82	85	86 81	86 81		88
BONE	SLOW					91	91	91 to 2"	91 to 2"
PEARL	MEDIUM	95 96	96	98					
BRAKE LINING	SLOW		65	65	65	65	65		
MICA	MEDIUM	95	96	98	65	65	65		
FELT	SLOW	58	59			91	91	91	91
HARD LEATHER	MEDIUM	95	96	98		98			
HARD RUBBER	SLOW	84	82	85	85	81 86	81 86		88
INLAYS	SLOW	84	83						
VENEER	FAST	84							
PRESSED WOOD PLYWOOD WALL BOARD	FAST	96	77 98	77 98		91	91	703 92, 704	92, 703 94, 704
HARDWOOD	MEDIUM	84	82	82		91	91	91 to 1" 92	92 94
SOFTWOOD	FAST	84	83			91, 703 704	91,703 704	91, 703 92, 704	94
PAPER	FAST	58	59			91	91	91	91

SPEEDS: SLOW, 650 to 900 R.P.M.—MEDIUM, 900 TO 1300 R.P.M.—FAST, 1300 TO 1750 R.P.M.

Below are full-sized profiles of Delta Scroll-Saw Blades. Blade number, dimensions, and number of teeth per inch are given for each.

Pkg. No.	Thickness	Width	No. of teeth per inch
58	.020	.070	32
59	.020	0.70	20
60	.020	0.70	15
61	.020	.085	15
64	.020	.110	20
65	.028	.250	20
77	.010	.048	18
81	.010	.070	14
82	.010	.055	16
83	.010	.045	18
84	.008	.035	20
85	.019	.050	15
86	.019	.055	12
87	.020	.070	7
88	.020	.110	7
91	.020	.110	15
92	.020	.110	10
93	.028	.187	10
94	.028	.250	7
95	.016	.054	30
96	.016	.054	20
97	.020	.070	15
98	.020	.085	12
703	.025	.187	9
704	.035	.250	7

AIR BLOWER

The air blower, built into the crankcase is driven off the crank shaft. If blower does not function properly:

1. Examine rubber tubing and see that it is not kinked, choked, or caught under the base.
2. Examine nozzle on the guide and see that it is clear.
3. If blower still does not operate properly, remove pump housing cover (26) by removing four screws. (38)
4. Remove blower piston (31), examine it, if not in good condition, replace with a new one.
5. No trouble should be encountered with the valves.

OILING

FILL THE CRANKCASE BEFORE OPERATING. Fill it with light #10 oil, to within 1/8 inch of the lower end of the oil cup, (116). Capacity of crankcase is approximately 1-1/4 pints. If oil comes out of filler during operation, there is too much oil in the crankcase. Upper plunger bearing is self lubricating. The plunger is chrome plated and requires no attention for life of machine.

BLADES

To insert standard blades:

1. Remove table insert.
2. Turn pulley until lower chuck is at top of its stroke.
3. Loosen thumbscrew (87).
4. Insert blade about one-half inch between the two flat jaws, (84) and (85), centering it in the jaws and holding it vertical.
5. Retighten thumb screw (87).
6. Loosen knurled knob (60).
7. Slide graduated tube down until blade enters one-half inch between jaws of upper chuck.
8. Tighten upper chuck.
9. Raise graduated tube until blade has correct tension.
10. Retighten knurled knob.

Operator can determine, from experience, the proper tension for various blades as they are used for various work, and can record these tensions on the tube for future work using the same blades and materials.

Always use widest blade possible. Use narrow blades for small abrupt curves and for fine, delicate work only.

To insert special puzzle-blade jaw, NSS-260, (furnished with machine):

1. Remove screw (51) from upper chuck.
2. Remove regular jaw (54).
3. Insert special jaw NSS-260.
4. Replace screw (51).

Saber blade is held between V-jaw and plain jaw of lower chuck. To do this, loosen screw (51), turn chuck to the left, thumb screw to face front of machine, and retighten screw. Open jaws wide to receive saber blade and tighten thumb screw.

When using pin blades, knock out the pins and insert them in the same manner as standard blades.

If a great deal of cutting is done in marquetry or puzzle cutting, it is recommended that a set of individual blade guides No. 1202 be purchased and used instead of the universal guide.

CHANGING LOWER CHUCK POSITION

The normal position of the lower chuck is with the thumb screw facing to the right. To turn the chuck 90 degrees, loosen screw (51), turn chuck so thumbscrew will face the front and retighten screw. To turn the chuck 180 degrees, remove screw (51), turn chuck so that thumbscrew will face the left side, exposing a hole to receive screw (51). When blade is sideways, the table should beturned 90 degrees also to allow for proper tilting.

CHANGING UPPER CHUCK POSITION

To change cutting position of blade from front to side, or side to front, push up retainer seal, (57), located at bottom of upper plunger casing, (46), and turn 90 degrees to the right or left and it will automatically lock itself in place. No further adjustment is necessary.

BLADE GUIDE POST

When the work is fed from the side of the table, the hexagon guide post is moved from hexagon hole on the left side of head to the hexagon hole on the right side. This will automatically bring the blade guide to the proper position for side cutting.

To do this:

1. Remove thumbscrew (68) and remove blade guide assembly from guide post (81).
2. Transfer guide post from left side to right side of upper head.
3. Insert thumbscrew (68) in front tapped hole, to hold guide post in place. Only thumbscrew is transferred, as lock pin is not required in front hole.
4. Replace blade guide assembly to guide post, turning guide assembly to allow work to be fed from the side.
5. Retighten thumbscrew (68), to hold blade guide assembly to guide post.

BLADE GUIDE

Blade guide is universal and can be adjusted to suit any width or thickness of blade within the calacity of the machine.

The blade is backed by a heat treated roller. This prevents wear on the blade support and avoids work hardening on the back of the blade, which may contribute to blade breakage.

The blade guide, which has six different width slots, can be rotated to accommodate various blade thicknesses by loosening screw (80).

The guide is fitted with a blade guard to prevent accidental injury to the fingers. It is also fitted with a hold-down, which follows the angle of the work when the table is tilted.

TILTING AND ROTATING TABLE

To tilt the table, loosen knob (14), and tilt table to degree desired, then retighten knob.

IMPORTANT: When the table is to be tilted 45 degrees to the right, the position of the lower chuck must be reversed, so that the thumbscrew is on the left hand side, otherwise the table will strike the thumbscrew.

To rotate the table, loosen the two screws (108), which mount trunnion swivel bracket to base, and turn 90 degrees. When table is rotated, the blade and guides will also have to be turned 90 degrees.

To adjust table top 90 degrees to saw blade:

1. Using a small square, place one leg on table, the other against the blade.
2. Loosen clamp knob, (14), slightly so that table can be moved by tapping with hand.
3. If not square, tilt table to right or left as the case may be.
4. After table has been set square, tighten knob (14). Check pointer, and adjust to 0 degrees if necessary.

ROCKWELL GUARANTEE

Rockwell is proud of the quality of the power tools which it sells. The component parts of our tools are inspected at various stages of production, and each finished tool is subjected to a final inspection before it is placed in its specially designed carton to await shipment. Because of our confidence in our engineered quality, we agree to repair or replace any part or parts of Rockwell Power Tools or Rockwell Power Tool Accessories which examination proves to be defective in workmanship or material. In order to take advantage of this guarantee, the complete Delta or other Rockwell machinery part or accessory must be returned prepaid to the appropriate Factory, Rockwell Service Center, or Authorized Service Station for our examination. This guarantee, of course, does not include repair or replacement required because of misuse, abuse, or normal wear and tear. Repairs made by other than our Factory, Rockwell Service Center, or Authorized Service Station, relieves Rockwell of further liability under this guarantee. This guarantee is made expressly in place of all other guarantees expressed or implied with respect to fitness, merchantability, or quality.

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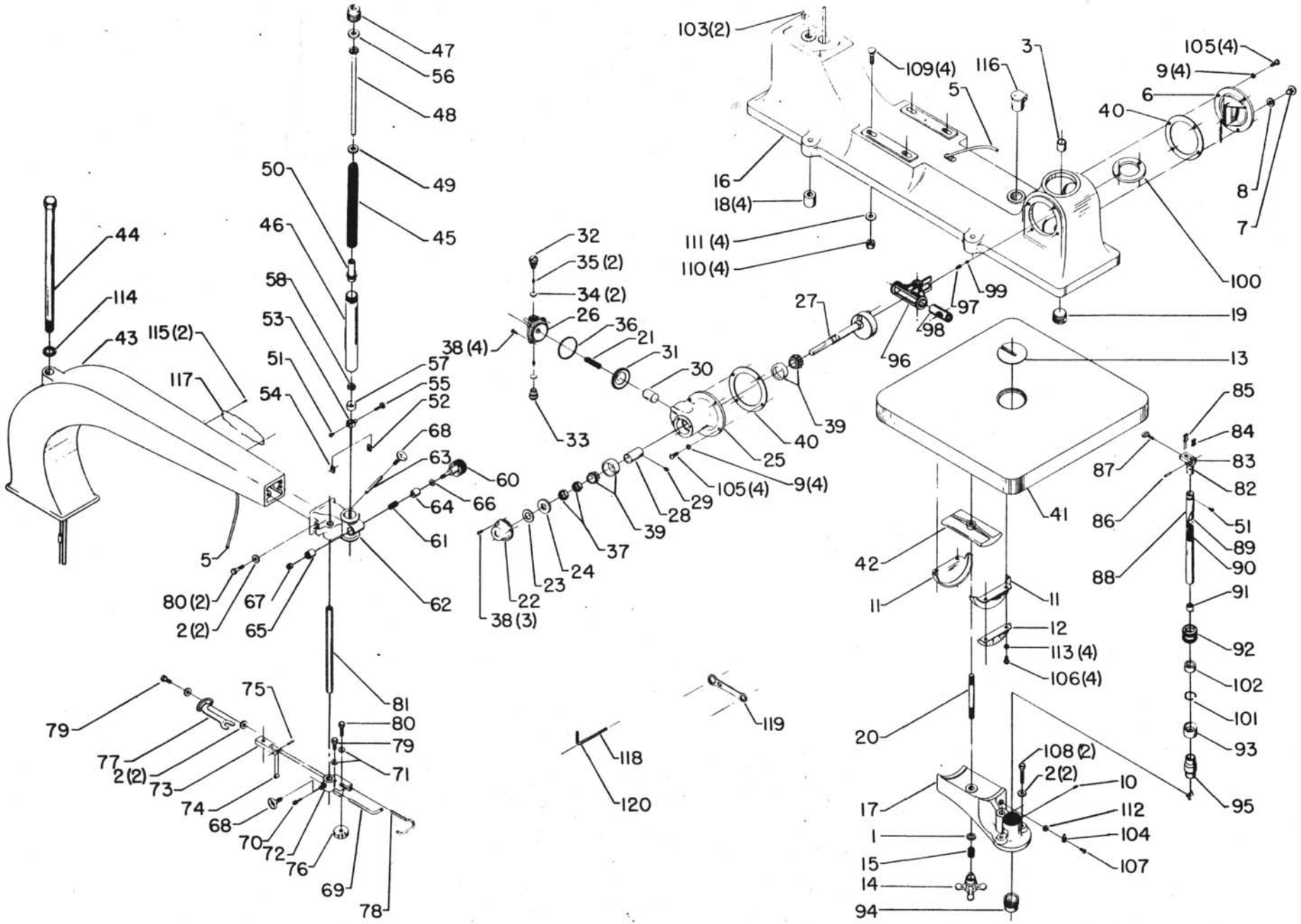
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Replacement Parts

Ref. No.	Part No.	Description
1	DDL-175	Washer
2	DDL-256	Washer
* 3	DSS-9	Lower Plunger Bushing
5	DSS-50	Rubber Tube
6	HSS-506	Crank Case Cover
7	HSS-529	3/8-16 x 3/8" Truss Hd. Scr.
8	HSS-535	Fiber Washer
9	HSS-824	Fiber Washer
10	J-44	#8-32 x 5/16"Headless Set Scr.
11	LBS-52	Trunnion
12	LBS-54	Index Plate
13	LBS-56	Table Insert
14	NCS-32	Star Wheel
15	NCS-33	Spring
16	NSS-201	Base
17	NSS-202	Trunnion Swivel Bracket
18	NSS-203	Rubber Foot
19	NSS-204	Oil Plug
20	NSS-205	Trunnion Clamp Stud
*	NSS-206-S	Drive Shaft Housing Consisting of:
21	DSS-42	Blower Spring
22	DSS-70-S	Bearing Seal Cap Assy.,Including:
23	DSS-77	Fiber Washer
24	J-39	Felt Washer
25	NSS-206	Drive Shaft Housing
26	NSS-207	Pump Head
27	**430-02-406-0005**	Drive Shaft w/ Crank & Pin
28	NSS-209-S	Pump Eccentric, Including:
29	SP-275	1/4-28 x 1/2"Allen Set Screw
30	NSS-211	Plunger
31	NSS-213-S	Blower Piston
32	NSS-216	Exhaust Valve Screw
33	NSS-217	Inlet Valve Screw
34	NSS-218	Valve
35	NSS-219	Spring
36	NSS-220	Pump Head Gasket
37	SBS-19	5/8"-18 Special Nut
38	SP-564	#6-32 x 3/8" Rd. Hd. Screw
39	921-03-990-3464	Bearing Cone & Cup
40	NSS-222	Gasket
41	NSS-226	Table
42	NSS-227	Trunnion Clamp Plate
43	NSS-236	Overarm
44	NSS-237	Bolt
*	NSS-251-R	Upper Plunger Assy., Consisting of:
45	DSS-35	Upper Plunger Spring
46	NSS-251	Casing
47	NSS-252	Knurled Cap
48	NSS-253-S	Plunger Tube
49	NSS-254	Sq. Hole Fiber Washer
50	NSS-255-S	Upper Plunger Bearing & Collar
*	NSS-258-R	Upper Chuck, Including:
51	DSS-51	#6-40 x 13/64"Spec. Fil.Hd.Scr.
52	NSS-257-S	Jaw w/ Pin
53	NSS-258	Chuck Body
54	NSS-259	Fixed Jaw
55	SP-1542	#10-32 x 1/2" Thumb Screw
56	NSS-262	Upper Plunger Bumper
57	NSS-263	Upper Plunger Seal Retainer
58	NSS-264	Felt Seal
*	NSS-275-A	Plunger Housing, Consisting of:
60	NSS-400-S	Knurled Hand Knob
61	NCS-179	Stop Rod Spring
62	NSS-275	Upper Head Bracket
63	NSS-277	Steel Pin
64	NSS-278	Lock Sleeve (R. H.)
65	NSS-279	Lock Sleeve (L. H.)
66	SD-2	1/4" Bakelite Washer
67	SP-1209	1/4"-28 Hex. Nut
68	SP-1520	5/16-18 x 1/2"Thumb Screw
*	NSS-301-S	Saw Guide Assy., Consisting of:
2	DDL-256	Washer
69	DSS-48	Nozzle
70	DSS-65	#8-32 x 1/2"Knurled Hd.Set Scr.
71	NSS-280	1/4" Washer
72	NSS-301	Saw Guide Bracket
73	NSS-303-S	Blade Support Assy., Including:
74	NSS-306	Blade Support Roller
75	NSS-307	Roller Pivot Pin
76	NSS-304	Blade Guide
77	NSS-305	Hold Down Spring
78	NSS-308	Blade Guard
79	SP-611	1/4-20 x 1/2"Hex. Hd. Screw
80	SP-626	1/4-20 x 3/4"Hex. Hd. Screw
68	SP-1520	5/16-18 x 1/2" Thumb Screw
81	NSS-302	Guide Post
*	NSS-332-R	Lower Plunger Assy., Consisting of:
*	DSS-326-R	Lower Chuck Assy., Consisting of:
51	DSS-51	#6-40 x 13/64"Spec.Fil. Hd. Scr.
82	DSS-326	Chuck Body
83	DSS-327	Yoke
84	DSS-328	V-Jaw
85	DSS-329	Plain Jaw
86	DSS-330	Chuck Pin
87	SP-1543	#10-32 x 5/8" Thumb Screw
88	NSS-332-S	Lower Plunger Assy., Including:
89	DSS-23	Cork Plug
90	TAB-174	Filter
91	VSL-7	Oil Hole Cover
92	NSS-333	Bearing Retaining Screw
93	NSS-334	Bearing Ring
94	NSS-335	Bearing Seat
95	NSS-336	Upper Bearing
96	**430-01-355-0001**	**Guide, Including:**
97	**NSS-274**	**1/4-28 x 3/8" Dog Pt. Set Screw**
98	**430-01-071-0003**	**Pin**
99	**SP-276**	**1/4-28 x 1/8" Lock Screw**
100	NSS-338	Clamp Ring
101	NSS-339	Packing Spring
102	NSS-340	Upper Bearing Packing
103	SBS-8	Dowel
104	SBS-46	Pointer
105	SP-509	1/4-20 x 1/2"Rd. Hd. Screw
106	SP-514	1/4-20 x 3/8"Rd. Hd. Screw
107	SP-561	#10-32 x 3/8"Rd. Hd. Screw
80	SP-626	1/4-20 x 3/4"Hex. Hd. Cap Scr.
108	SP-655	1/4-28 x 1"Hex. Hd. Cap Scr.
109	SP-808	5/16 x 1" Carriage Bolt
110	SP-1300	5/16" Hex. Nut
111	SP-1604	5/16" Steel Washer
112	SP-1610	13/64-15/32 x .049" Stl.Washer
113	SP-1702	1/4" Lockwasher
114	SP-1751	5/8" Shakeproof Washer
115	SP-2252	3/16" Drive Screw
116	SP-2476	Oil Cup
117	SR-255	Name Plate
118	No. 194	Wrench
119	No. 1526	Wrench
120	No. 1534	Wrench

* THESE ITEMS MAY BE PURCHASED AS A COMPLETE ASSEMBLY.

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