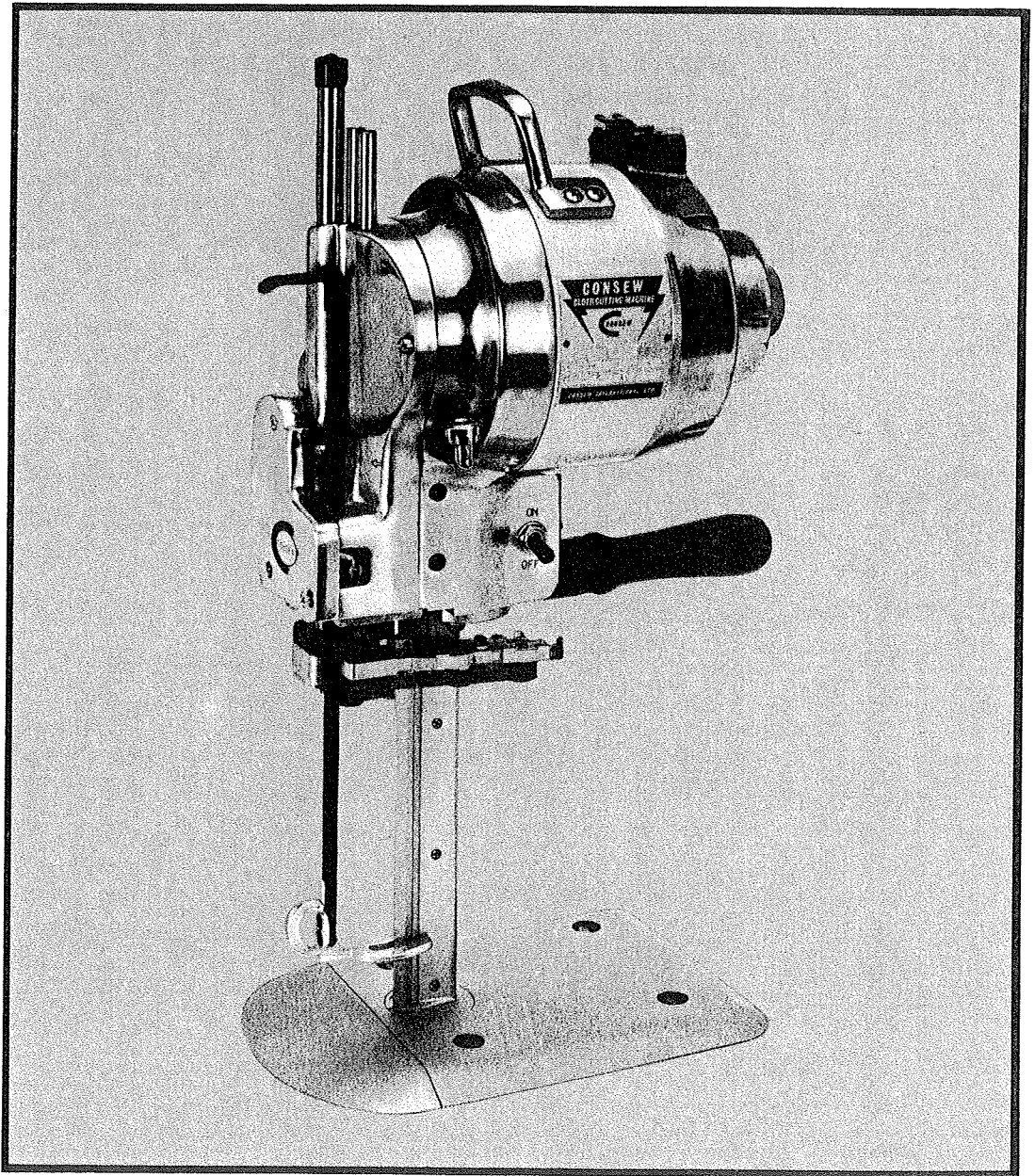


# 616

## Instructions & Parts List



## 1. Starting

After making sure that switch A is OFF, connect terminal B and power supply with cord X. Supply 5-6 drops of oil into oil cup C, and manually rotate hand pulley D two or three times to see if it rotates smoothly. Turn on switch A to start the machine. If hand pulley D does not rotate smoothly, the sharpener is engaged and it must be released by lifting lever H.

If hand pulley D still does not rotate smoothly, hold lever I with one hand and turn on switch A with the other. When the motor reaches rated rpm, release lever I to return the sharpener to the stop position.

During the first week of operation, in cold weather, or when starting after a long period of non-use, be sure to supply 5-6 drops of oil into oil cup C, rotate hand pulley D two or three times, and turn switch A on and off several times to lubricate major components.

## 2. Presser Foot

Grip handle J and squeeze brake lever K with the fingers of the gripping hand to allow shaft rod adjustment. Then, adjust the height of presser foot M to the thickness of material to be cut by moving shaft rod bracket L up or down.

## 3. Knife Sharpening

Turn on switch A after confirming that there are no obstacles on bed P. When sharpener lever G is pushed completely and then released, sharpener base O moves up and down once to sharpen knife K. (Presser foot M automatically lowers by means of a special device if it is located at the top.) If a satisfactory result is not obtained with a single sharpening operation, repeat. For sharpening the bottom of the knife only, push sharpener lever G completely and release it to lower sharpener O, (sharpener lever G automatically returns and sharpener base O begins rising). Then before lever G returns to the end, squeeze the lever at N (neutral) position. By doing this, only the bottom of the knife is sharpened. After 2 to 3 seconds, release from sharpener lever G and sharpener base O automatically rises to complete sharpening.

Do not continue sharpening for a long time since frictional heat is caused on sharpener belt W.

**Precaution:** Do not operate the sharpener if a knife is not installed, or the sharpener will be damaged.

## 4. Sharpener Belt Replacement

Check that switch is OFF (with cord X disconnected from terminal B) and that sharpener base O is at sharpening completion position. Then, push belt pulley bracket Q, located at the rear of the sharpener base, forward to remove old sharpener belt. Thread a new belt from the front pulley and run it between the belt holder and knife.

## 5. Knife Replacement

Check that sharpener base O is at the sharpening completion position. Lift presser foot R to the top position, disconnect cord X from terminal B and turn the machine upside down.

Rotate hand pulley D to position knife V at its lowest position, loosen knife lock screw S with box spanner Y, remove the knife from the lower portion of base stand T, and clean the groove of knife slide with cleaner Z.

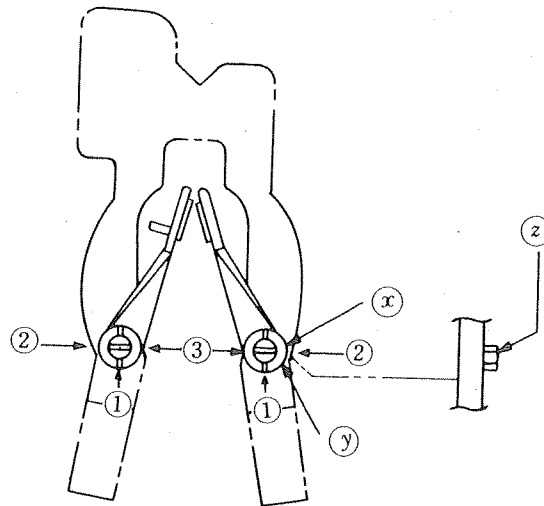
Then, insert a new knife into knife slide U, place the back of the knife on the bottom of the groove of knife slide U, and securely tighten knife lock screw S. It is recommended to apply a small amount of oil to the rear of the knife.

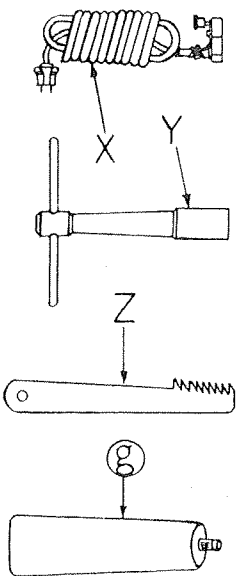
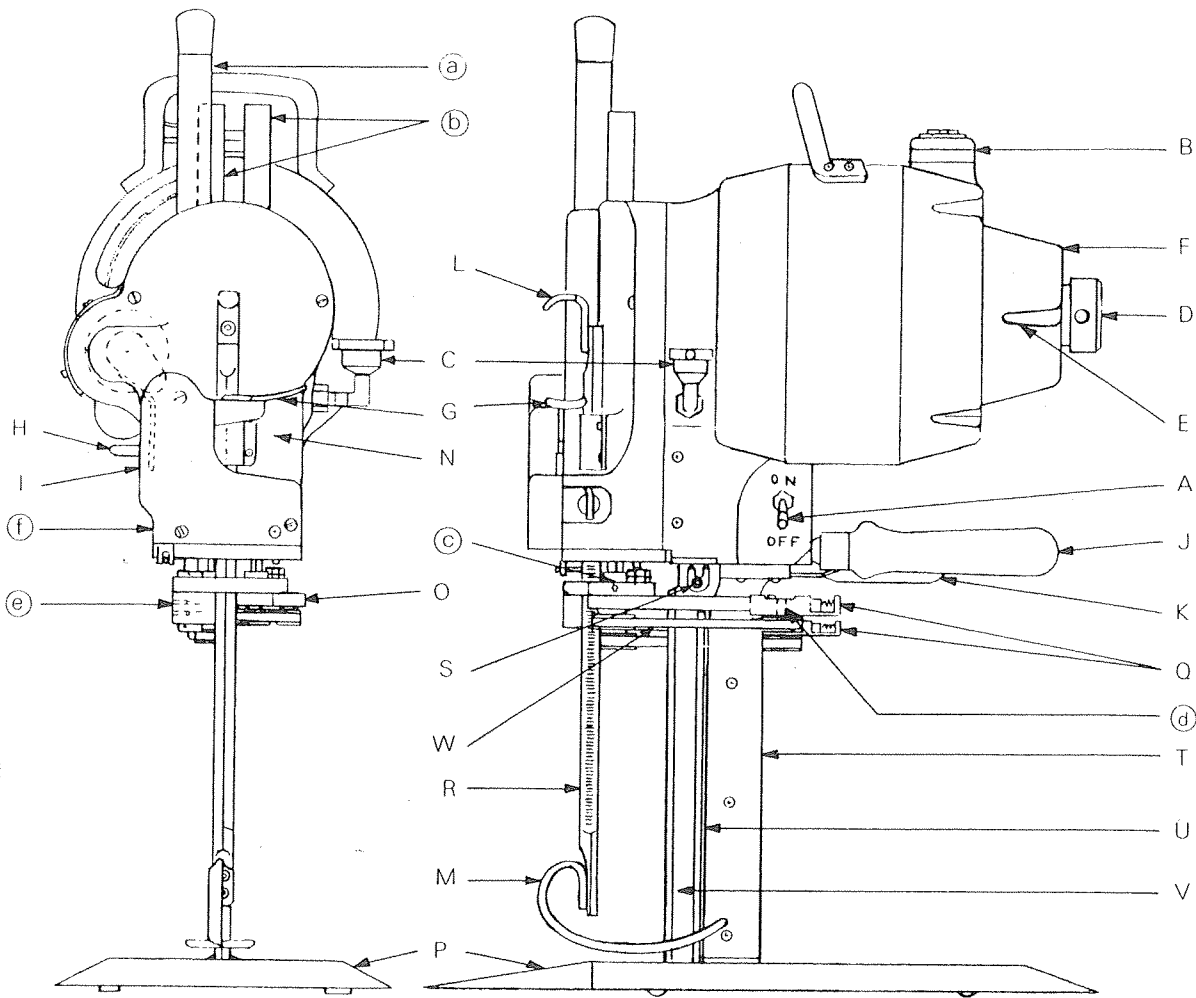
## 6. Blade Bevel Adjustment

Long, medium or short blade bevel adjustments are set by comparing the positions of two notched eccentric brackets (X) as follows:

① medium, ② short, and ③ long.

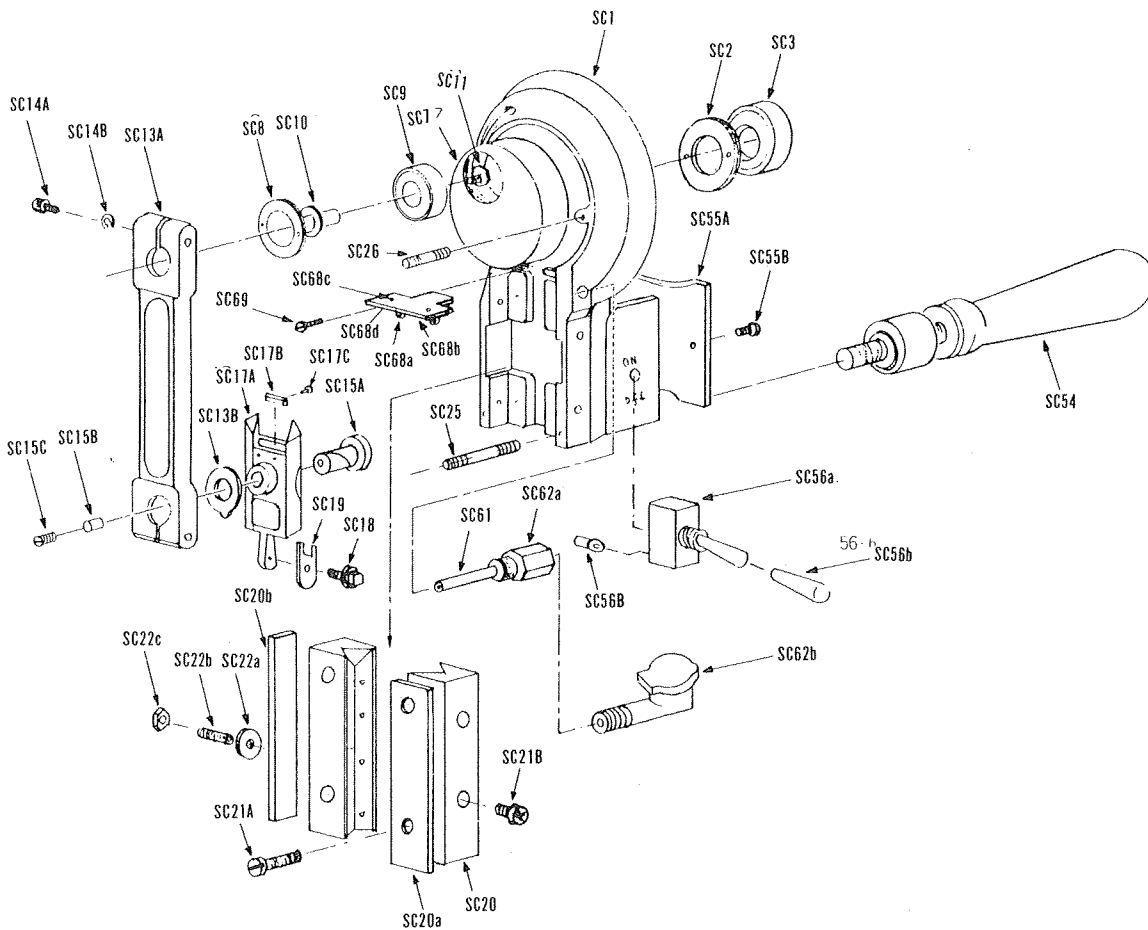
After loosening nut (Z) and screw (Y), adjust blade bevel by setting eccentric brackets (X).



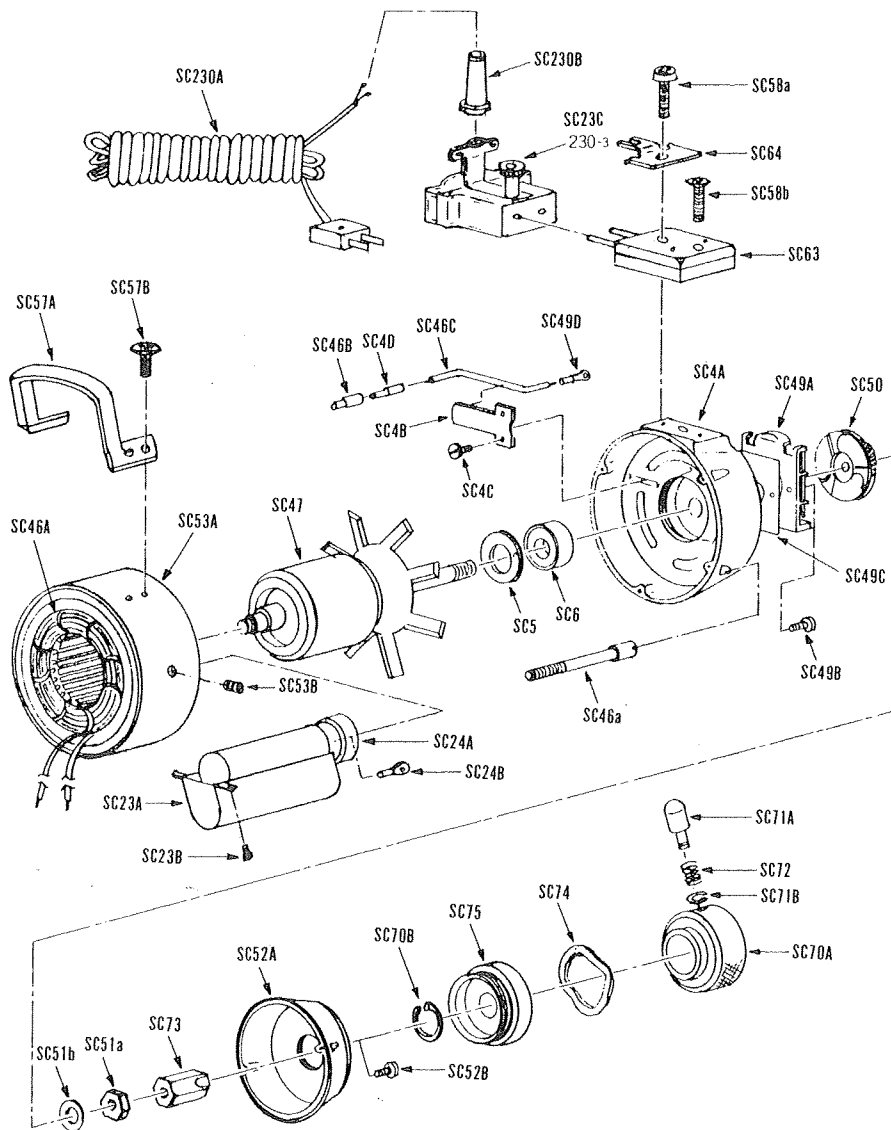


Lubrication		
Daily	Weekly (Lubrication)	Monthly (Greasing)
5-6 drops of oil in oil cup C	1. (a) and (b) Pipes 2. (c) Sharpener base (indicated by arrow mark) 3. (d) Upper holes on rear belt pulley	1. (e) Remove screw in red. 2. (f) Remove clutch cover and grease slide shafts.

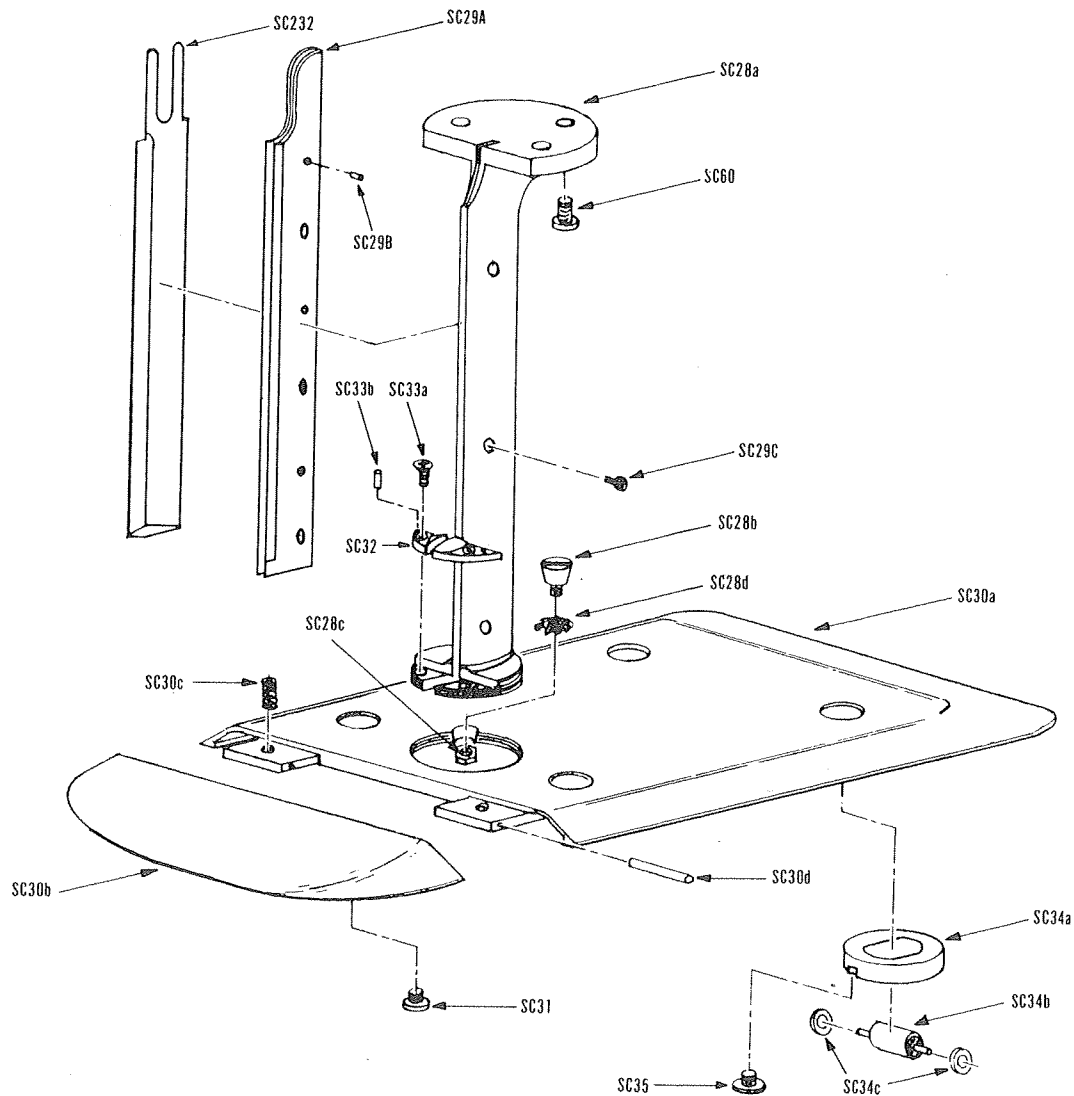
- Notes:**
- 1) Blow lint from motor and sharpener with compressed air once or twice a week.
  - 2) Clean the groove of knife slide U with cleaner Z, and apply a few drops of oil when resetting the knife.
  - 3) Remove lint from roller of bed P. Do not apply oil to the roller.
  - 4) Use oil for cutters. For replacement, use genuine parts.



Part No.	Part Name	Q'ty	Part No.	Part Name	Q'ty
SC1	Motor front housing	1 pc.	SC20b	Guide plate (side)	1 pc.
SC2	Ball bearing retainer nut	1 pc.	SC21A	Guide lock screw (upper)	4 pcs.
SC3	Ball bearing (6203)	1 pc.	SC21B	Guide lock screw (side)	2 pcs.
SC7	Balance crank	1 pc.	SC22a	Washer for guide adjustment nut	3 pcs.
SC8	Ball bearing retainer nut	1 pc.	SC22b	Guide adjusting screw	3 pcs.
SC9	Ball bearing (6201)	1 pc.	SC22c	Guide adjusting nut	3 pcs.
SC10	Crank pin	1 pc.	SC25	Sharpener housing hold screw (long)	2 pcs.
SC11	Screw for crank pin	1 pc.	SC26	Sharpener housing hold screw (short)	2 pcs.
SC13A	Crank connecting rod	1 pc.	SC54	Operating handle	1 pc.
SC13B	Washer for connecting rod	1 pc.	SC55A	Switch plate	1 pc.
SC14A	Connecting rod clamp screw	2 pcs.	SC55B	Screw for switch plate	2 pcs.
SC14B	Washer for rod clamp screw	2 pcs.	SC56a	Switch	1 pc.
SC15A	Wrist pin	1 pc.	SC56b	Switch cap	1 pc.
SC15B	Felt for wrist pin	1 pc.	SC56B	Electric wire connector	2 pcs.
SC15C	Screw for wrist pin	1 pc.	SC61	Oil tube	1 pc.
SC17A	Cross head	1 pc.	SC62a	Oil cup coupling joint	1 pc.
SC17B	Felt for cross head	1 pc.	SC62b	Oil cup	1 pc.
SC17C	Rivet for felt	2 pcs.	SC68a	Oil pad holder (upper)	1 pc.
SC18	Knife lock screw	1 pc.	SC68b	Oil pad	1 pc.
SC19	Washer for knife lock screw	1 pc.	SC68c	Rivet for oil pad	2 pcs.
SC20	Guide metal	1 set	SC68d	Washer for oil pad	2 pcs.
SC20a	Guide plate (upper)	2 pcs.	SC69	Screw for oil pad holder	2 pcs.

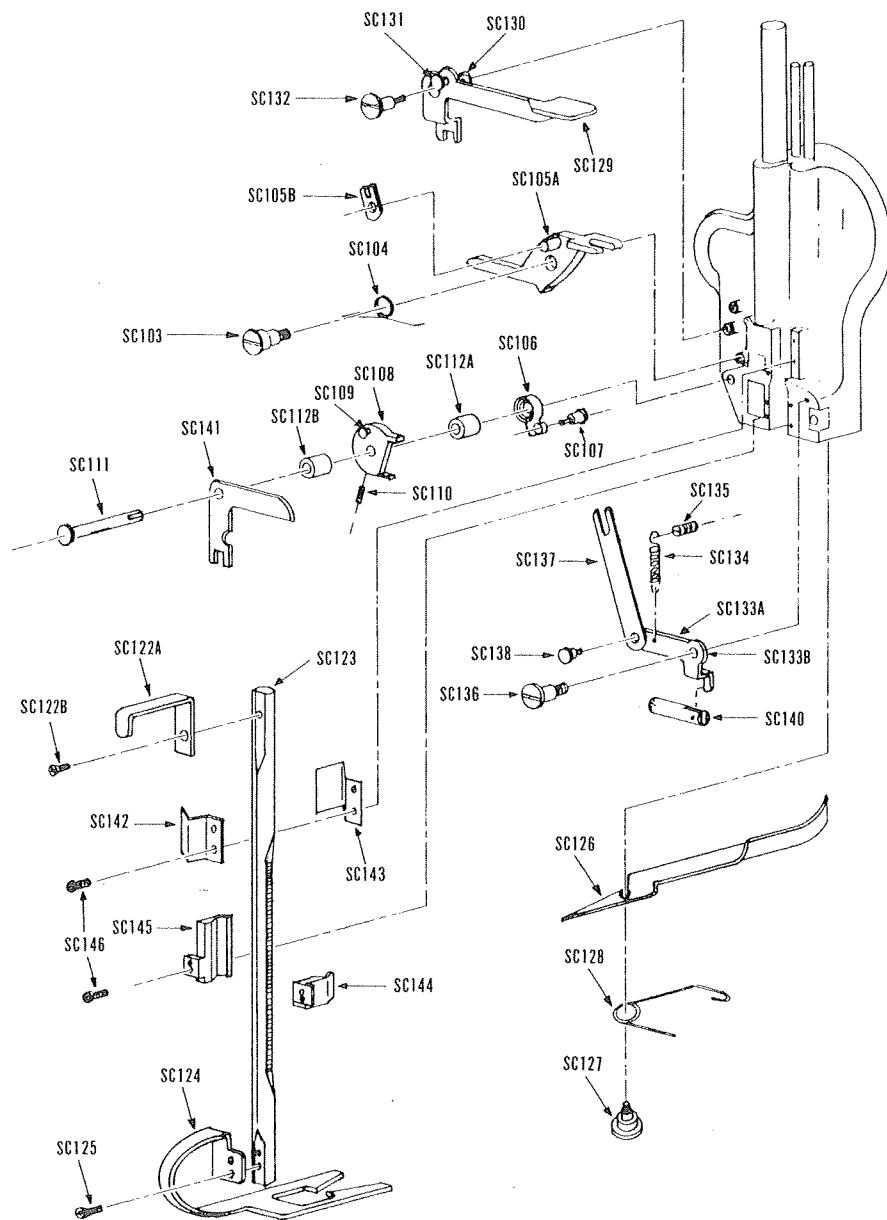


Part No.	Part Name	Q'ty	Part No.	Part Name	Q'ty
SC4A	Motor rear housing . . . . .	1 pc.	SC52A	Governor cover . . . . .	1 pc.
SC4B	Hold plate for cord . . . . .	2 pcs.	SC52B	Governor cover set screw . . . . .	2 pcs.
SC4C	Set screw for hold plate . . . . .	4 pcs.	SC53A	Motor field housing . . . . .	1 pc.
SC4D	Electric wire connector . . . . .	1 pc.	SC53B	Lock screw for motor field . . . . .	2 pcs.
SC5	Ball bearing lock nut (retainer) . . . . .	1 pc.	SC57A	Carrying handle . . . . .	1 pc.
SC6	Ball bearing (6202) . . . . .	1 pc.	SC57B	Carrying handle set screw . . . . .	4 pcs.
SC23A	Condenser cover . . . . .	1 pc.	SC58a	Terminal set screw (large) . . . . .	1 pc.
SC23B	Condenser cover set screw . . . . .	3 pcs.	SC58b	Terminal set screw (small) . . . . .	1 pc.
SC24A	Condenser . . . . .	1 pc.	SC63	Terminal block . . . . .	1 pc.
SC24B	Electric wire connector . . . . .	2 pcs.	SC64	Connecting plate for terminal block . . . . .	1 pc.
SC46a	Motor housing screw . . . . .	4 pcs.	SC70A	Rotor hand pulley . . . . .	1 pc.
SC46A	Motor field . . . . .	1 pc.	SC70B	Stop ring for hand pulley . . . . .	1 pc.
SC46B	Electric wire connector . . . . .	1 pc.	SC71A	Turning knob . . . . .	1 pc.
SC46C	Cord for motor field . . . . .	2 pcs.	SC71B	Stop ring for turning knob . . . . .	1 pc.
SC47	Rotor . . . . .	1 pc.	SC72	Spring for knob . . . . .	1 pc.
SC49A	Stator base (contact flange) . . . . .	1 pc.	SC73	Clutch nut . . . . .	1 pc.
SC49B	Stator base set screw . . . . .	2 pcs.	SC74	Wave washer . . . . .	1 pc.
SC49C	Stator base insulator . . . . .	1 pc.	SC75	Holder for hand pulley . . . . .	1 pc.
SC49D	Electric wire connector . . . . .	2 pcs.	SC230A	Electric cord (3 meter) . . . . .	1 pc.
SC50	Rotor base (governor) . . . . .	1 pc.	SC230B	Rubber tube for electric cord . . . . .	1 pc.
SC51a	Governor nut . . . . .	1 pc.	SC230C	Connector plug . . . . .	1 pc.
SC51b	Washer for governor nut . . . . .	1 pc.			

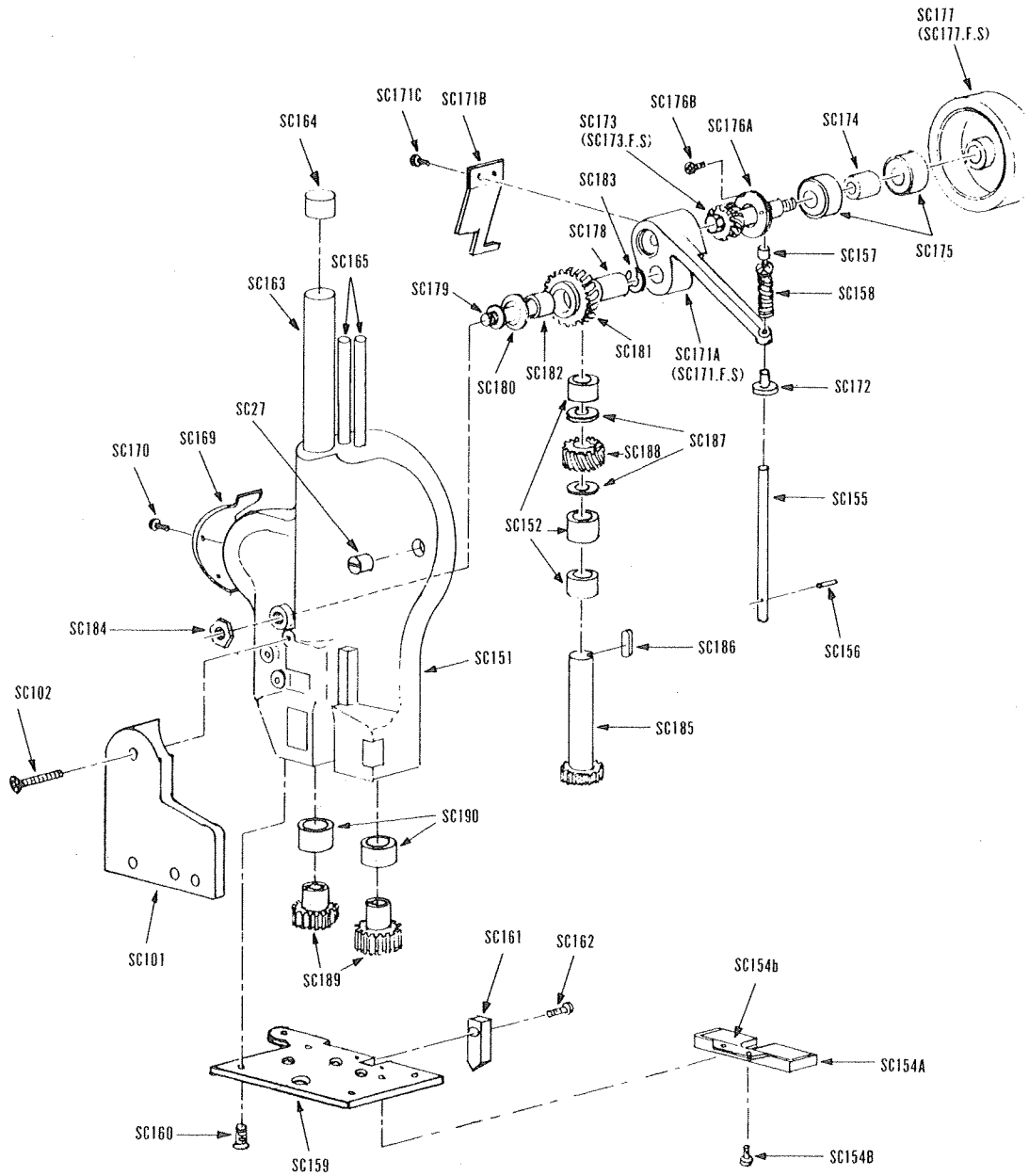


Part No.	Part Name	Q'ty
SC28a	Stand (6" 7" 8" 10")	1 pc.
SC28b	Stand with bed set screw	1 pc.
SC28c	Stand with bed set nut	1 pc.
SC28d	Stand with bed set washer	1 pc.
SC29A	Knife slide (6" 7" 8" 10")	1 set
SC29B	Pin for knife slide	3 pcs.
SC29C	Knife slide screw	3 pcs.
SC30a	Base plate	1 pc.
SC30b	Plate wing	1 pc.
SC30c	Plate wing tension spring	2 pcs.
SC30d	Wing pin	2 pcs.

Part No.	Part Name	Q'ty
SC31	Wing pin clamp screw	4 pcs.
SC32	Throat plate	1 set
SC33a	Screw for throat plate	2 pcs.
SC33b	Pin for throat plate	2 pcs.
SC34a	Roller bracket	4 pcs.
SC34b	Roller shell	4 pcs.
SC34c	Washer for rollers	8 pcs.
SC35	Clamp screw for rollers	8 pcs.
SC60	Stand set screw	3 pcs.
SC232	Knife	1 pc.



Part No.	Part Name	Q'ty	Part No.	Part Name	Q'ty
SC103	Set screw for cam clutch	1 pc.	SC128	Presser foot lever spring	1 pc.
SC104	Camshaft spring	1 pc.	SC129	Sharpening lever	1 pc.
SC105A	Cam clutch	1 pc.	SC130	Sharpening lever bushing	1 pc.
SC105B	Plate for cam clutch	1 pc.	SC131	Sharpening lever pin	2 pcs.
SC106	Cam spring	1 pc.	SC132	Screw for sharpening lever	1 pc.
SC107	Cam spring screw	1 pc.	SC133A	Stopper bracket	1 pc.
SC108	Sharpener cam	1 pc.	SC133B	Stopper bracket bushing	1 pc.
SC109	Sharpener cam pin	1 pc.	SC134	Spring for stopper bracket	1 pc.
SC110	Camshaft set screw	1 pc.	SC135	Set screw for above spring	1 pc.
SC111	Camshaft	1 pc.	SC136	Stopper bracket screw	1 pc.
SC112A	Bushing for camshaft	1 pc.	SC137	Presser foot joint lever	1 pc.
SC112B	Bushing for camshaft	1 pc.	SC138	Presser foot joint lever set pin	1 pc.
SC122A	Presser foot rod lifter	1 pc.	SC140	Stopper	1 pc.
SC122B	Lifter set screw	1 pc.	SC141	Lever joint	1 pc.
SC123	Presser foot rod (6" 7" 8" 10")	1 pc.	SC142	Presser foot bracket (thick)	1 pc.
SC124	Presser foot shoe	1 pc.	SC143	Presser foot bracket (thin)	1 pc.
SC125	Presser foot shoe set screw	2 pcs.	SC144	Presser foot bracket (right)	1 pc.
SC126	Presser foot lever	1 pc.	SC145	Presser foot bracket (left)	1 pc.
SC127	Presser foot lever screw	1 pc.	SC146	Presser foot bracket screw	6 pcs.

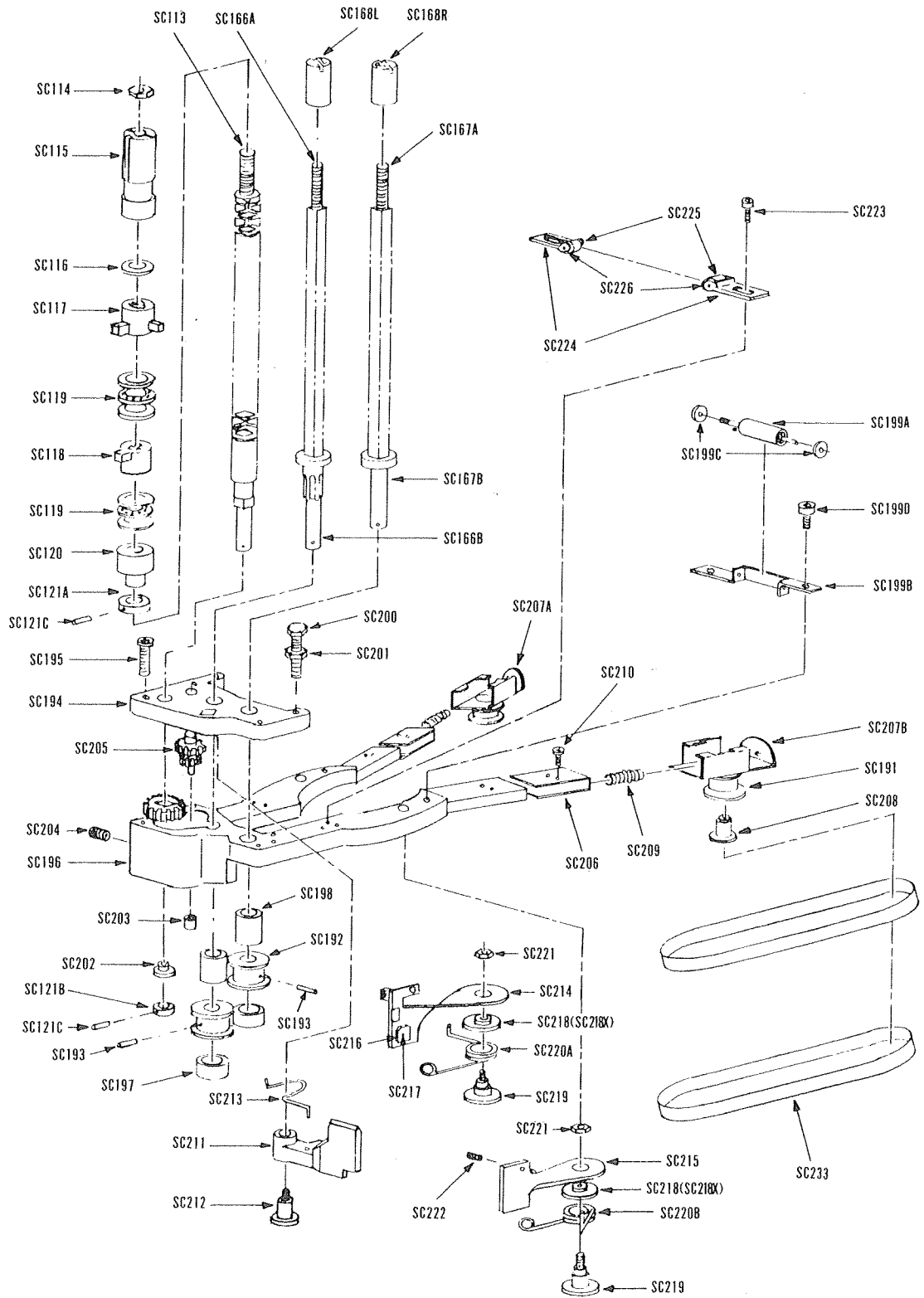


From the library of: Diamond Needle Corp



Part No.	Part Name	Q'ty
SC27	Sharpener housing hold nut . . . . .	4 pcs.
SC101	Clutch cover . . . . .	1 pc.
SC102	Screw for clutch cover . . . . .	2 pcs.
SC151	Sharpener housing . . . . .	1 pc.
SC152	Bushing for driver shaft . . . . .	3 pcs.
SC154A	Lower oil pad holder . . . . .	1 pc.
SC154B	Pad holder screw . . . . .	2 pcs.
SC154b	<i>Felt</i> . . . . .	<i>1 pc.</i>
SC155	Push rod . . . . .	1 pc.
SC156	Push rod roll pin . . . . .	1 pc.
SC157	Pin for push rod . . . . .	1 pc.
SC158	Spring for push rod . . . . .	1 pc.
SC159	Bottom plate . . . . .	1 pc.
SC160	Screw for bottom plate . . . . .	4 pcs.
SC161	Spreader . . . . .	1 pc.
SC162	Spreader set screw . . . . .	1 pc.
SC163	Main screw shaft tube cover (8" 10") . . . . .	1 pc.
SC164	Cap for tube cover . . . . .	1 pc.
SC165	Square shaft tube cover (8" 10") . . . . .	2 pcs.
SC169	Cover for drive pulley . . . . .	1 pc.
SC170	Set screw for cover . . . . .	2 pcs.
SC171A	Pulley crank . . . . .	1 pc.

Part No.	Part Name	Q'ty
SC171B	Lever for pulley crank (only F.S) . . . . .	1 pc.
SC171C	Set screw for lever . . . . .	2 pcs.
SC172	Stud for pulley crank . . . . .	1 pc.
SC173	Gear with shaft (regular.S or F.S) . . . . .	1 pc.
SC174	Collar . . . . .	1 pc.
SC175	Ball bearing (608) . . . . .	2 pcs.
SC176A	Lock nut for bearing . . . . .	1 pc.
SC176B	Screw for nut . . . . .	1 pc.
SC177	Driver pulley (regular.S or F.S) . . . . .	1 pc.
SC178	Bushing for crankshaft . . . . .	1 pc.
SC179	Shaft for crank . . . . .	1 pc.
SC180	Washer . . . . .	2 pcs.
SC181	Bevel gear . . . . .	1 pc.
SC182	Needle roller bearing . . . . .	1 pc.
SC183	Stop ring . . . . .	1 pc.
SC185	Driver shaft with gear . . . . .	1 pc.
SC186	Key for driver shaft . . . . .	1 pc.
SC187	Washer . . . . .	2 pcs.
SC188	Helical gear for driver shaft . . . . .	1 pc.
SC189	Gear with square hole . . . . .	2 pcs.
SC190	Bushing for gear . . . . .	2 pcs.
SC184	Nut for crankshaft . . . . .	1 pc.



Part No.	Part Name	Q'ty	Part No.	Part Name	Q'ty
SC113	Main screw shaft (6"-8" 10") . . . . .	1 pc.	SC201	Push rod adjusting nut . . . . .	1 pc.
SC114	Adjusting nut for guide . . . . .	1 pc.	SC202	Bushing for screw shaft . . . . .	1 pc.
SC115	Guide for main screw shaft(6" 7"-10") . . . . .	1 pc.	SC203	Bushing for intermediate gear . . . . .	1 pc.
SC116	Washer for screw shaft nut . . . . .	1 pc.	SC204	Oil screw . . . . .	1 pc.
SC117	Nut for screw shaft (left) . . . . .	1 pc.	SC205	Intermediate gear . . . . .	1 pc.
SC118	Nut for screw shaft (right) . . . . .	1 pc.	SC206	Metal plate for pulley bracket . . . . .	2 pcs.
SC119	Thrust ball bearing . . . . .	2 pcs.	SC207A	Slide with pulley (left) . . . . .	1 pc.
SC120	Thrust metal for screw shaft . . . . .	1 pc.	SC207B	Slide with pulley (right) . . . . .	1 pc.
SC121A	Collar for screw shaft (large) . . . . .	1 pc.	SC208	Pin for pulley (192) . . . . .	2 pcs.
SC121B	Collar for screw shaft (small) . . . . .	1 pc.	SC209	Spring for pulley slide (207) . . . . .	2 pcs.
SC121C	Roll pin for collar . . . . .	2 pcs.	SC210	Set screw for pulley slide (207) . . . . .	2 pcs.
SC166A	Square shaft (6"-8" 10") . . . . .	1 pc.	SC211	Adjustor bracket . . . . .	1 pc.
SC166B	Gear for square shaft (166-1) . . . . .	1 pc.	SC212	Set screw for adjuster bracket . . . . .	1 pc.
SC167A	Square shaft (6"-8" 10") . . . . .	1 pc.	SC213	Spring for adjuster bracket . . . . .	1 pc.
SC167B	Shaft for square shaft (167-1) . . . . .	1 pc.	SC214	Shoe for sharpening belt . . . . .	1 pc.
SC168L	Guide for square shaft (Left) . . . . .	1 pc.	SC215	Shoe for sharpening belt . . . . .	1 pc.
SC168R	Guide for square shaft (Right) . . . . .	1 pc.	SC216	Tip for shoe (214AND215) . . . . .	2 pcs.
SC191	Rear pulley for sharpening belt . . . . .	2 pcs.	SC217	Riveting pin for shoe . . . . .	2 pcs.
SC192	Front pulley for sharpening belt . . . . .	2 pcs.	SC218	Collar for shoe (218-X.eccentric) . . . . .	2 pcs.
SC193	Roll pin for pulley . . . . .	2 pcs.	SC219	Screw for shoe . . . . .	2 pcs.
SC194	Gear cover plate . . . . .	1 pc.	SC220A	Spring for sharpening shoe (214) . . . . .	1 pc.
SC195	Screw for gear cover . . . . .	4 pcs.	SC220B	Spring for sharpening shoe (215) . . . . .	1 pc.
SC196	Sharpening bracket . . . . .	1 pc.	SC221	Nut for 219 . . . . .	2 pcs.
SC197	Rubber ring for front pulley . . . . .	2 pcs.	SC222	Screw for sharpening shoe . . . . .	2 pcs.
SC198	Bushing for square shaft . . . . .	2 pcs.	SC223	Screw for side roller bracket (224) . . . . .	2 pcs.
SC199A	Roller . . . . .	1 pc.	SC224	Side roller bracket . . . . .	2 pcs.
SC199B	Roller bracket . . . . .	1 pc.	SC225	Plastic roller . . . . .	2 pcs.
SC199C	Washer for roller . . . . .	2 pcs.	SC226	Pin for plastic roller (225) . . . . .	2 pcs.
SC199D	Roller bracket screw . . . . .	2 pcs.	SC233	Cloth abrasive belt . . . . .	2 pcs.
SC200	Push rod adjusting screw . . . . .	1 pc.			