

**FIRST  
EDITION**

*Union Special*<sup>®</sup>  
INDUSTRIAL SEWING EQUIPMENT

**CATALOG NO. 103FJ**

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**STYLES**

**39500FJ**

**39500FL**

**39500JJ**

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**HI-STYLED HIGH SPEED  
TWO AND THREE NEEDLE THREAD  
PLAIN FEED SERGING MACHINES**

Catalog No. 103 FJ

INSTRUCTIONS  
FOR  
ADJUSTING AND OPERATING  
LIST OF PARTS

CLASS 39500

Styles

39500 FJ      39500 FL      39500 JJ

First Edition

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*Union Special*  
**MACHINE COMPANY**  
INDUSTRIAL SEWING MACHINES  
**CHICAGO**

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## IDENTIFICATION OF MACHINES

Each Union Special machine is identified by a Style number on a name plate on the machine. Style numbers are classified as standard and special. Standard Style numbers have one or more letters suffixed, but never contain the letter "Z". Example: "Style 39500 FJ". Special Style numbers contain the letter "Z". When only minor changes are made in a standard machine, a "Z" is suffixed to the standard Style number. Example: "Style 39500 FJZ".

Styles of machines similar in construction are grouped under a Class number which differs from the Style number in that it contains no letters. Example: "Class 39500".

## APPLICATION OF CATALOG

This catalog applies specifically to the standard Styles of machines as listed herein. It can also be applied with discretion to some Special Styles of machines in Class 39500. References to directions, such as right, left, front, back, etc., are given from the operator's position while seated at the machine. Operating direction of handwheel is away from operator.

## STYLES OF MACHINES

Hi-Styled High Speed Single Curved Blade Needle, One Looper, One Spreader, Two thread or Two Looper, Three Thread Serging Machines. Plain Feed, Trimming Mechanism with Spring Pressed Lower Knife, Automatic Lubricating System.

39500 FJ Light to medium duty machine for serging light, medium and heavy weight trousers and similar garments. Two thread stitch. Seam specification 503-EFd-1; standard seam width 3/16 inch; stitch range 4-8 per inch; cam adjusted feed. Maximum recommended speed 7000 R. P. M.

39500 FL Light to medium duty machine for serging light, medium and heavy weight trousers and similar garments. Three thread stitch. Seam specification 505-EFd-1; standard seam width 3/16 inch; stitch range 4-8 per inch; cam adjusted feed. Maximum recommended speed 7000 R. P. M.

39500 JJ Light to medium duty machine for serging light and medium weight trousers and similar garments of Durable Press material. Two thread stitch. Seam specification 503-EFd-1; standard seam width 3/16 inch; stitch range 4-8 per inch; cam adjusted feed. Maximum recommended speed 7000 R. P. M.

## OILING

CAUTION! Oil was drained from machine when shipped, so reservoir must be filled before beginning to operate. Oil capacity of Class 39500 is six ounces. A straight mineral oil of a Saybolt viscosity of 90 to 125 seconds at 100° Fahrenheit should be used.

Machine is filled with oil at spring cap in top cover. Oil level is checked at sight gauge on front of machine. Red tip of oil level indicator should show between gauge lines when machine is stationary.

Machine is automatically lubricated. No oiling is necessary, other than keeping main reservoir filled. Check oil daily before the morning start; add oil as required.

The drain plug screw is located at back of machine near bottom edge of base. It is a magnetic screw designed to accumulate possible foreign materials which may have entered the crank case. It should be removed and cleaned periodically.

## NEEDLES

Each Union Special needle has both type and size number. The type number denotes the kind of shank, point, length, groove, finish and other details. The size number, stamped on the needle shank, denotes largest diameter of blade, measured in thousandths of an inch, midway between shank and eye. Collectively, type and size number represent the complete symbol which is given on the label of all needles packaged and sold by Union Special.

Class 39500 machines use a curved blade needle. The standard recommended needle for Styles 39500 FJ, FL and JJ is Type 154 GAS. Below is the description and sizes available of the recommended needle.

Type No.	Description and Sizes
154 GAS	Round shank, round point, curved blade, standard length, single groove, struck groove, spotted, chromium plated and is available in sizes 022, 025, 027, 029, 032, 036, 040, 044, 049, 054.

To have needle orders promptly and accurately filled, an empty package, a sample needle, or the type and size number should be forwarded. Use description on label. A complete order would read: "1000 Needles, Type 154 GAS, Size 044".

Selection of proper needle size is determined by size of thread used. Thread should pass freely through needle eye in order to produce a good stitch formation.

Success in the operation of Union Special machines can be secured only by use of needles packaged under our brand name, *Union Special* which is backed by a reputation for producing highest quality needles in materials and workmanship for more than three-quarters of a century.

## CHANGING NEEDLES

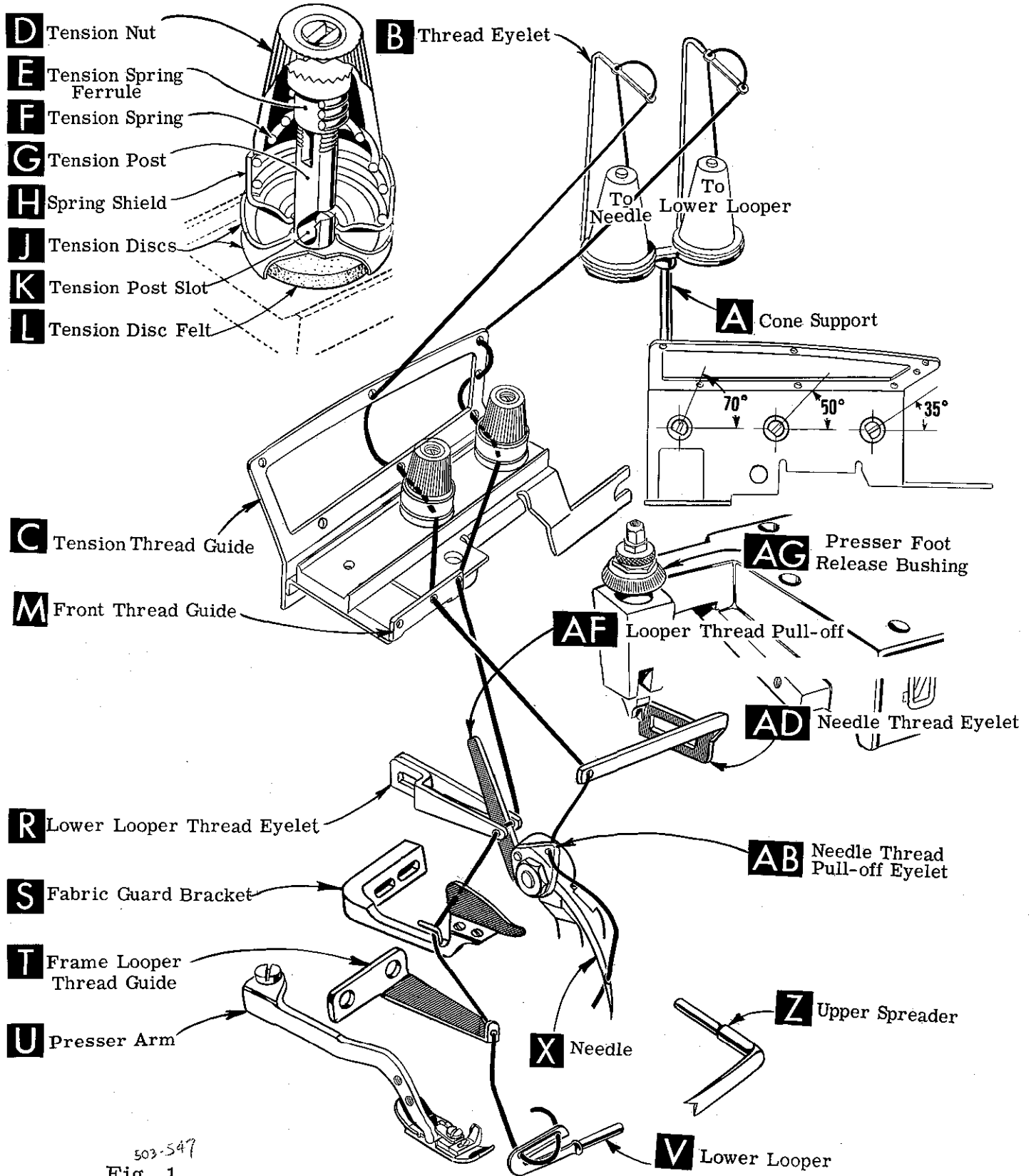
Release pressure on presser foot by turning presser foot release bushing (AG, Fig. 1 and 1A) and swing presser arm (U) out of position. Turn handwheel in operating direction until needle is at its lowest point of travel. Using hexagonal socket wrench No. 21388 AU, furnished with machine, loosen needle clamp nut about 1/4 turn. Again turn handwheel until needle is at high position; withdraw needle.

To replace needle, leave needle holder at high position and, with the flat to the left, insert needle in holder until it rests against stop pin. Keeping needle in this position, turn handwheel until holder is again at its low point of travel; then tighten nut. Return presser arm (U) to position; re-lock presser foot release bushing (AG).

## THREAD STAND

After thread comes from cone on cone support (A, Fig. 1 or 1A) it is brought up through the back thread eyelet and then down through the front thread eyelet (B). Next, the upper looper thread (on Style 39500 FL only) and the needle thread on all Styles are brought through the upper hole of tension thread guide (C) from front to back and then through the lower hole, from back to front. The lower looper thread is brought through the upper hole of tension thread guide (C) from back to front, through the middle hole from front to back and then through the lower hole from back to front. All threads then continue between the tension discs (J), through tension post slot (K) in tension post (G) and on through eyelets in front thread guide (M)

NOTE: Refer to Fig. 1 for threading Styles 39500 FJ and JJ or refer to Fig. 1A for threading Style 39500 FL.



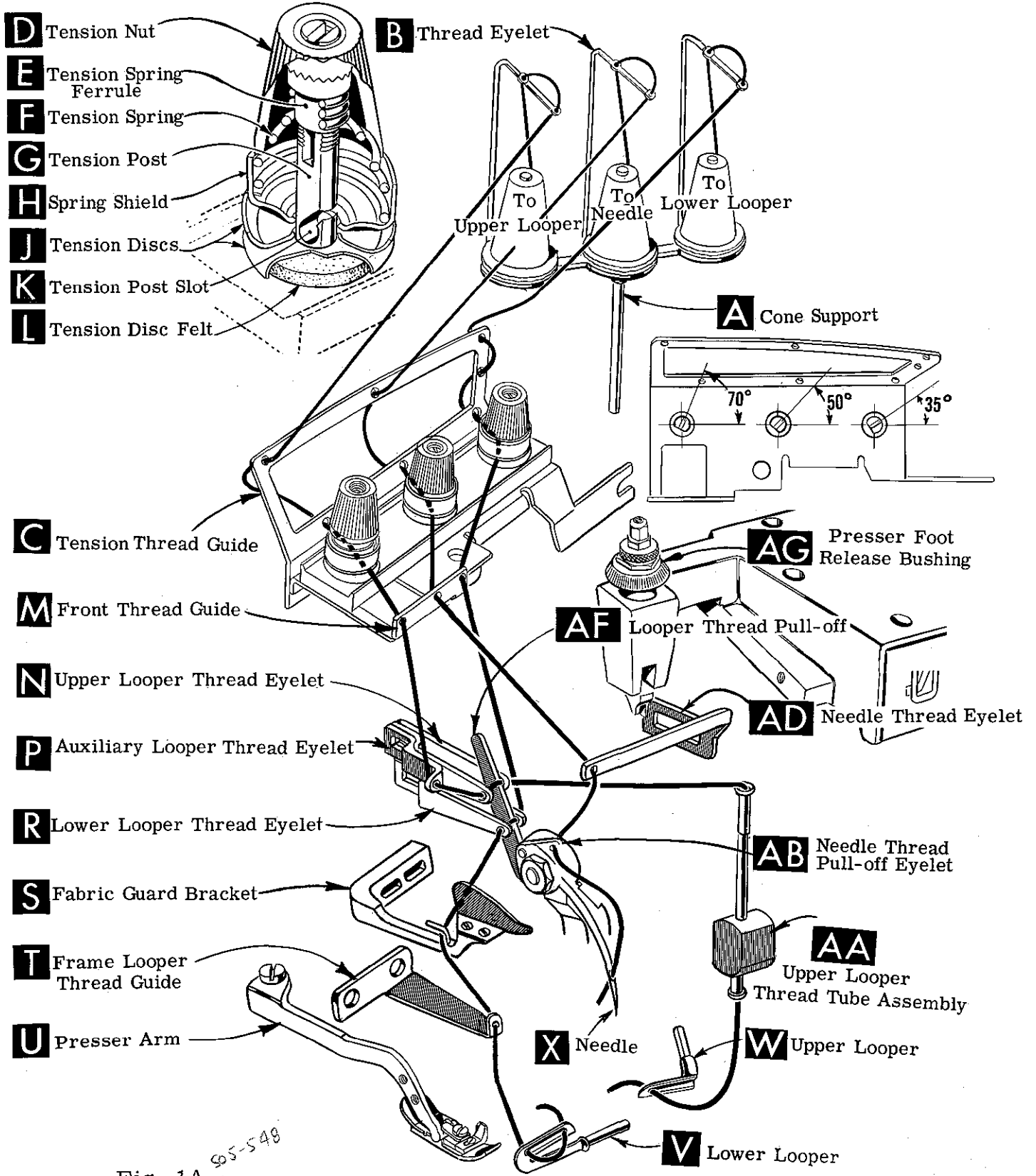


Fig. 1A 95-548

## THREADING

Only parts involved in threading are shown in threading diagram (Fig. 1 and 1A). Parts are placed in their relative positions for clarity.

It will simplify the threading of these machines to follow the recommended sequence of threading the lower looper first and the needle second on Styles 39500 FJ and JJ. The recommended sequence of threading Style 39500 FL is lower looper first, upper looper second and the needle third.

Before beginning to thread, swing cloth plate open, turn handwheel in operating direction until needle (X) is at high position, release pressure on presser foot by turning presser foot release bushing (AG) and swing presser arm (U) out of position.

Be sure the threads, as they come from the tension thread guide (C), are between tension discs (J) and in tension post slots (K) in tension posts (G). The tension posts should be positioned so the tension post slot will be at the approximate angle for the different threads as indicated in Fig. 1 and 1A.

### TO THREAD THE LOWER LOOPER

Double end of thread and lead it through the right eyelet of front thread guide (M, Fig. 1 or 1A). Then lead thread through both eyes of lower looper thread eyelet (R, Fig. 1 or 1A) from right to left. NOTE: thread must pass in front of looper thread pull-off (AF). Lead thread behind fabric guard (S) and through frame looper thread guide (T). Turn handwheel in operating direction until heel of lower looper (V) is all the way to the left, then thread through both eyes from left to right. Left eye of lower looper can be threaded easily if tweezers are in left hand.

### TO THREAD THE UPPER LOOPER (Style 39500 FL)

Double end of thread and lead it through the left eyelet of front thread guide (M, Fig. 1A). Turn handwheel until point of upper looper (W, Fig. 1A) is all the way to the left. Lead thread through auxiliary looper thread eyelet (P) from back to front, then through both eyes of upper looper thread eyelet (N) from left to right. NOTE: thread must pass in front of looper thread pull-off (AF).

After pulling up upper looper thread tube assembly (AA), lead thread under neck of top cover casting and down through thread tube assembly (AA). Pull thread out bottom of tube; push tube down and then insert thread through the eye of upper looper from front to back.

### TO THREAD THE NEEDLE

Turn handwheel in operating direction until needle (X, Fig. 1 or 1A) is at its highest position. Insert thread through the middle eyelet of front thread guide (M, Fig. 1 or 1A), then lead thread through eye of needle thread eyelet (AD) from back to front. Now lead the needle thread under the neck of top cover casting and through hole in needle thread pull-off eyelet (AB) from right to left. Thread needle from the front.

### THREAD TENSION

The amount of tension on the needle and looper threads is regulated by knurled tension nuts (D, Fig. 1 or 1A). Tension on threads should be only enough to secure proper stitch formation.

## PRESSER FOOT PRESSURE

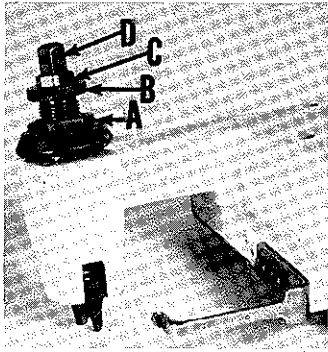


Fig. 2

Sufficient presser foot pressure to feed work uniformly should be maintained. Should it be necessary to increase or decrease amount of pressure on presser foot, loosen lock nut (A, Fig. 2) and turn adjusting screw (B). Adjusting screw has a right hand thread, so tightening increases pressure, loosening decreases pressure. When pressure adjusting screw (B) has been properly set, tighten lock nut (A). With presser foot resting on throat plate, position locking nut (C) so that its under surface is approximately  $1/32$  inch to  $1/16$  inch from the top surface of adjusting screw (B). Set cap (D) against locking nut (C).

## FEED ECCENTRICS

Feed eccentrics used in these machines have been selected to produce approximately 5 stitches per inch. It will be noted that the part number of the feed eccentric is No. 39540 B-5. Minor numbers of the part symbol indicates approximately the number of stitches produced when using that eccentric. Unless otherwise specified, machine will be shipped with above eccentric.

The following stitch number feed eccentrics are available under No. 39540 B-4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -16, -18, -20, -22, -24, -26, -28, -30, -32, -34, -36, -40. Only one eccentric is supplied with each machine. Additional eccentrics may be ordered separately. To order an eccentric, use No. 39540 B with a minor number suffixed to indicate approximately the number of stitches desired. Example: "39540 B-5".

## ASSEMBLING AND ADJUSTING SEWING PARTS

Before assembling and adjusting sewing parts, remove cloth plate, fabric guard, chip guard, upper knife assembly and lower knife holder assembly; then follow this suggested sequence.

NOTE: Adjusting instructions will pertain to all styles of machines covered in this catalog, unless otherwise specified.

## SETTING THE NEEDLE

With throat plate assembled in position, needle should center in the front end of needle slot. When needle is at high position, needle point should be set  $33/64$  inch above the throat plate (Fig. 3). To align needle or set the height above the throat plate, move needle driving arm (A, Fig. 3) by loosening clamp screw (B). After needle has been properly set, tighten clamp screw and remove throat plate.

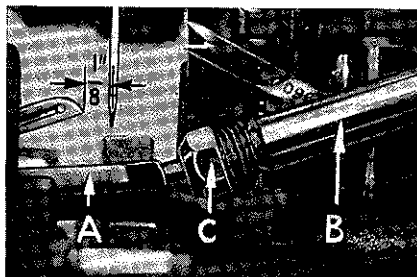


Fig. 4

At this point, insert lower looper (A, Fig. 4) into bar (B). With lower looper at the left end of its stroke, set looper point  $1/8$  inch from center of needle (Fig. 4), using looper gauge No. 21225- $1/8$ . Do not have lower looper deflecting needle. Tighten nut (C).

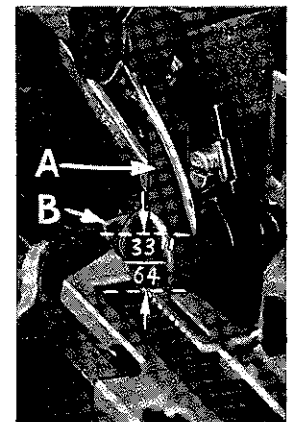


Fig. 3

Now assemble the main feed dog (E, Fig. 5).



## SETTING THE REAR NEEDLE GUARD

Set rear needle guard (A, Fig. 5) as high as possible, without interfering with either lower looper or movement of lower knife holder, but still in position to deflect needle forward .002-.004 inch. Screw (B) is used to set rear needle guard. Make sure there is no interference between rear needle guard and lower looper.

## SETTING THE LOWER LOOPER

Now finish lower looper adjustment. As lower looper moves to the right, its point should be set into the needle scarf (A, Fig. 6) until the needle springs forward from rear needle guard surface another .002-.004 inch.

## SETTING THE FRONT NEEDLE GUARD

Assemble front needle guard (C, Fig. 5). When lower looper is springing needle off back guard, set front needle guard as close as possible to needle without touching. Screw (D) is used to adjust and set front needle guard. After this setting make sure there is no interference between needle guards and main feed dog.

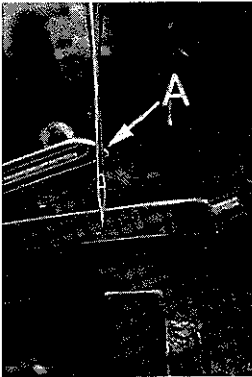


Fig. 6

Insert spreader (A, Fig. 7) in its holder. Screw (B) holds spreader in its holder, and permits it to be pushed in or out or turned around its shank. Insert spreader holder into spreader shaft, if it is not already in place. Screw (C, Fig. 7) on clamp collar holds spreader holder in the shaft, and allows holder to be rotated or adjusted laterally.

**Preliminary Setting:** When spreader is at the right end of its stroke, spreader holder should be set to position spreader shank about vertical (Fig. 7). Top end of spreader shank should extend  $\frac{1}{32}$  to  $\frac{1}{16}$  inch above the spreader holder (Fig. 7).

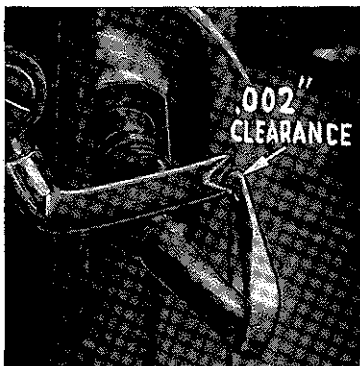


Fig. 8

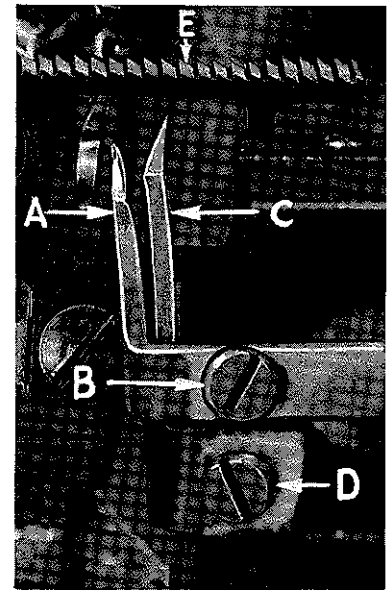


Fig. 5

## SETTING THE SPREADER (Styles 39500 FJ and JJ)

Insert spreader (A, Fig. 7) in its holder. Screw (B) holds spreader in its holder, and permits it to be pushed in or out or turned around

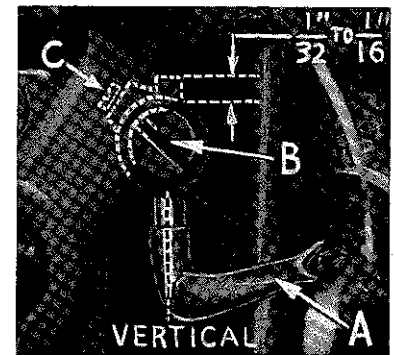


Fig. 7

As spreader moves from right to left, the Vee notch of the spreader should pass just behind the eye of the lower looper, with .002 to .004 inch clearance between spreader and lower looper (Fig. 8).

Turn the handwheel until spreader is at the left end of its travel. At this position, the lower point of the spreader should extend about  $\frac{5}{32}$  inch to the left of the centerline of the needle and should be  $\frac{31}{64}$  inch above the top of the throatplate (Fig. 9). If resetting is necessary, do it by moving the spreader holder (A, Fig. 9).

## SETTING THE SPREADER (Styles 39500 FJ and JJ) (Continued)

Now check setting between spreader and needle. If needle rubs the back of spreader, pull spreader out of its holder slightly and rotate spreader holder forward a short distance. These same adjustments, in opposite movement, will reduce the clearance between spreader and needle. Reset to lower looper (Fig. 8).

### SETTING THE UPPER LOOPER (Style 39500 FL)

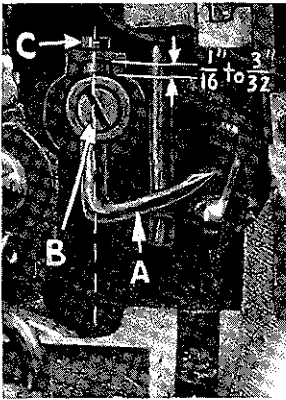


Fig. 7A

Insert upper looper (A, Fig. 7A) in its holder. Screw (B) holds upper looper in its holder, and permits it to be pushed in or out or turned around its shank. Insert upper looper holder into upper looper shaft, if it is not already in place. Screw (C, Fig. 7A) on clamp collar holds upper looper in the shaft, and allows holder to be rotated or adjusted laterally. When upper looper is at the right end of its stroke, upper looper holder should be set to position upper looper shank back of vertical (Fig. 7A). Top end of upper looper shank should extend  $1/16$  to  $3/32$  inch above the upper looper holder (Fig. 7A). Be sure there is clearance between heel of looper and casting.

As upper looper moves from right to left, the upper looper point should be set to cross the lower looper to the left of the lower looper eye with  $.002$  to  $.004$  inch clearance (Fig. 8A).



Fig. 8A

Turn the handwheel until upper looper is at the left end of its travel. At this position, the point of the upper looper should extend about  $5/32$  inch to the left of the centerline of the needle and should be  $1/2$  inch above the top of the throat plate (Fig. 9A). If resetting is necessary, do it by moving the upper looper holder (A, Fig. 9A).

The  $1/2$  inch dimension is increased by turning the upper looper holder in a counterclockwise direction, looking from the left end of machine. The  $5/32$  inch dimension is increased by pulling the upper

looper holder to the left, out of the upper looper shaft. After these changes are made, it may be necessary to turn upper looper around its shank slightly to maintain the condition shown in Fig. 8A.

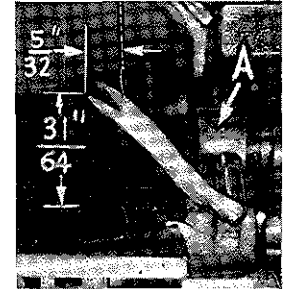


Fig. 9

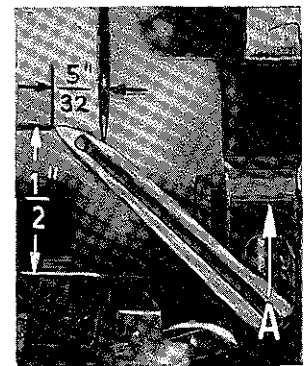


Fig. 9A

Now check setting between upper looper and needle. If needle rubs the back of upper looper, pull looper out of its holder slightly and rotate looper a short distance counterclockwise looking from left end of machine. Reset to maintain dimensions of Figs. 7A, 8A and 9A.

## SETTING THE FEED DOGS

Assemble chaining feed dog (B, Fig. 10) to main feed dog (A).

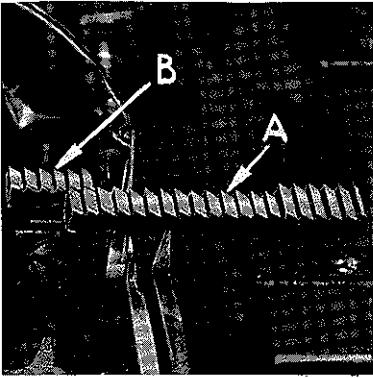


Fig. 10

is spring pressed against upper knife, so no lateral adjustment is necessary when width of trim is changed.

Lower knife may be secured in any position by tightening screw (B) and locking nut (C) against support bracket. Because screw (B) also serves as latch pin for the cloth plate latch spring, it should always be locked with nut (C) even when screw is not tightened against lower knife holder.

## SETTING THE UPPER KNIFE

Replace upper knife assembly. Clamp upper knife (D, Fig. 12) in position, setting nut (E) to hold clamp (F) in its most clockwise position against upper knife. At

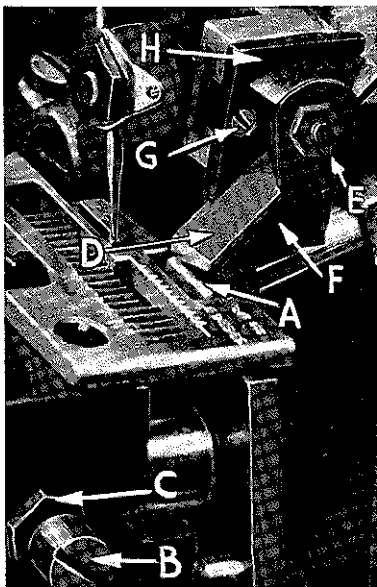


Fig. 12

Feed dogs should be leveled with throat plate surface by rotating feed tilting adjusting pin (A, Fig. 11). This pin raises or lowers the back end of feed bar. Feed dogs should be set level at the time teeth first appear above throat plate. Screw (B) locks feed tilting adjusting pin in place. Now set feed dogs at highest point of travel: main feed dog teeth should be set  $3/64$  inch above throat plate and chaining feed dog teeth should be set about flush with surface of throat plate.

## SETTING THE LOWER KNIFE

Replace lower knife holder assembly. Lower knife (A, Fig. 12) should be set with cutting edge flush with throat plate surface. Adjustments are made with hexagonal head screw which holds lower knife. Lower knife

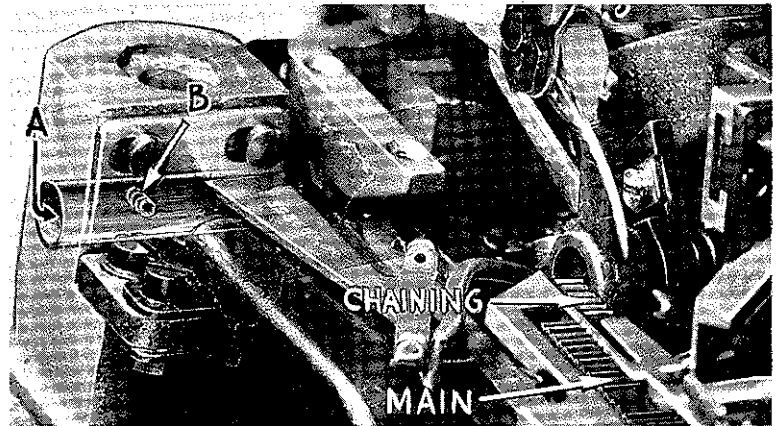


Fig. 11

the bottom of its stroke, front cutting edge of upper knife should extend not less than  $1/64$  inch below cutting edge of lower knife. The chain guard (not shown in Fig. 12) should be set down against the upper knife and slightly back from the cutting edge.

After upper knife has been set for proper width of trim, screw (G) should be tightened to lock upper knife holding block (H) in place. This will simplify resetting when upper knife is replaced.

## SETTING THE STITCH LENGTH

Length of stitch is determined by feed eccentric used. Note that the part number of the feed eccentric used in these machines is No. 39540 B-5.

## SETTING THE STITCH LENGTH (Continued)

In assembling the feed eccentric (A, Fig. 13), be sure the hub and oil groove is to the left. Beveled edge of feed eccentric spacer (B) should also be to the left side, so the undercut on the spacer will be over the hub on the feed eccentric. Be careful not to damage shaft or key. Assemble washer (D) and tighten nut (C) securely.

To change feed eccentrics, remove nut (C), washer (D) and feed eccentric spacer (B). Turn handwheel in operating direction until key slot in eccentric is toward the front. Using hooked eccentric extractor (E), supplied with machine, reach behind eccentric as shown and withdraw eccentric. It may be necessary to move handwheel back and forth slightly during extraction.

## SETTING THE PRESSER FOOT

Assemble the presser foot to presser arm. With needle in high position, swing presser arm into sewing position and set the presser foot to align needle holes (front and back) and flat on throat plate. The front edge of needle hole in presser foot must be aligned with front edge of needle hole in throat plate. It is also important that the bottom of the presser foot be flat on the throat plate. If necessary, presser foot can be realigned with throat plate slots by shifting the foot lifter lever shaft (H, Fig. 14). To move the shaft, loosen collar screws (B, Fig. 14) and clamp screw (G) and then shift the foot lifter lever shaft to the left or right as required. Retighten collar screws and clamp screw.

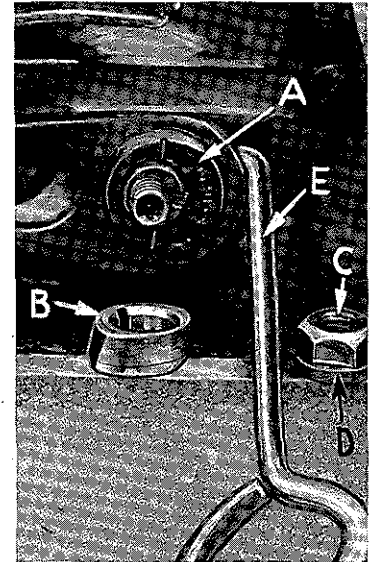


Fig. 13

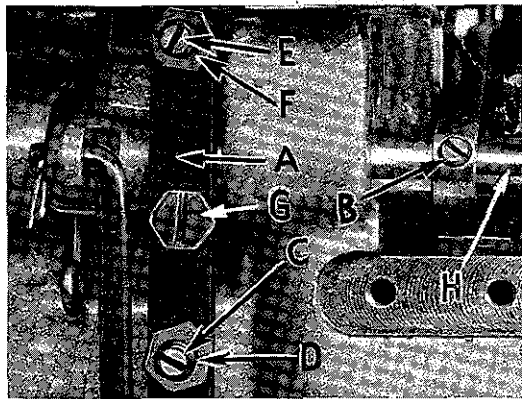


Fig. 14

highest position.

The foot lifter lever arm (A, Fig. 14) and the collar (B) secure the shaft. Be sure the presser arm does not bind and rise when presser foot release bushing is unlocked.

Adjust lifter lever stop screw (C) so that presser foot can be raised no higher than upper looper or spreader will permit: then lock the nut (D). There should be from 1/16 to 1/8 inch free motion of foot lifter lever before the presser foot begins to rise. This adjustment should be made with screw (E) and locked with nut (F). Re-assemble the chip guard, fabric guard and cloth plate. To assemble chip guard, turn handwheel until upper knife assembly reaches its

## STARTING TO OPERATE

Be sure machine Styles 39500 FJ and JJ are threaded according to threading diagram Fig. 1 and that machine Style 39500 FL is threaded according to threading diagram Fig. 1A.

With thread tensions light, set looper thread eyelet (R, Fig. 1) or looper thread eyelets (N and R, Fig. 1A) about horizontal and in the middle of their front to back location. Operate machine slowly, without presser foot in place, to make sure chain forms and moves off the tongue freely.

Swing presser foot into position, insert material and sew slowly.

### NEEDLE THREAD CONTROL (Styles 39500 FJ, JJ - 503 Stitch)

While sewing on material, check needle thread control as follows: About 75% of needle thread required for the stitch should be drawn on needle downstroke. To increase thread drawn on downstroke, position needle thread eyelet (AD) farther to the rear.

### LOWER LOOPER THREAD CONTROL (Styles 39500 FJ, JJ - 503 Stitch)

With material under presser foot, set lower looper thread eyelet (R, Fig. 1) back and down far enough so thread is a little slack when spreader reaches its extreme left position. Looper thread eyelet (R) should be about horizontal.

Frame looper thread guide (T) should be set with its left hand eyelet approximately 1/8 inch right of looper (V) heel eyelet at the time lower looper is at extreme left end of its travel.

### THREAD TENSIONS

Before proceeding, balance both tensions to give a normal appearing stitch. Moderate change in these tensions will not markedly effect the purl.

### SPECIAL ADJUSTMENTS

SKIPPING: For occasional skipping, check and/or adjust as outlined below:

1. Recheck lower looper - needle setting. See "Setting the Needle", page 8.
2. Recheck spreader - lower looper crossing. See "Setting the Spreader", page 9.
3. Check clearance between needle and spreader. See that spreader moves far enough left past needle.

Setting 1 and 2 should be made quite carefully. If it can be determined by appearance that skip is definitely not a needle loop skip, reposition looper thread eyelet (R) by lowering it slightly and bringing eyelet holes in close to bend in looper thread pull-off (AF). After this change, increase looper thread tension as much as possible without distorting stitch.

CAUTION: Looper thread must, as before, be slightly slack as spreader reaches its extreme left position, or stitch will appear tight on top side.

### NEEDLE THREAD CONTROL (Style 39500 FL - 505 Stitch)

While sewing on material, check needle thread control as follows: About 60% of needle thread required for the stitch should be drawn on needle downstroke.

To increase thread drawn on downstroke, position needle thread eyelet (AD, Fig. 1A) farther to the rear.

### LOWER LOOPER THREAD CONTROL (Style 39500 FL - 505 Stitch)

Set lower looper thread eyelet (R, Fig. 1A) about horizontal and all the way forward in its slot.

Frame looper thread guide (T) should be set with its left hand eyelet approximately 1/8 inch right of lower looper heel eyelet, when lower looper is at the left end of its stroke.

### UPPER LOOPER THREAD CONTROL (Style 39500 FL - 505 Stitch)

With material under presser foot, set upper looper thread eyelet (N, Fig. 1A) to rest on top of lower looper thread eyelet (R), and back far enough so upper looper thread is a little slack when upper looper reaches the left end of its stroke.

### POSITIONING THE SQUARE EDGE (Style 39500 FL - 505 Stitch)

Position of lower looper thread at the edge is located by balancing needle and upper looper thread tensions.

To reduce amount of lower looper thread in the stitch, or close the edge more, increase lower looper thread tension.

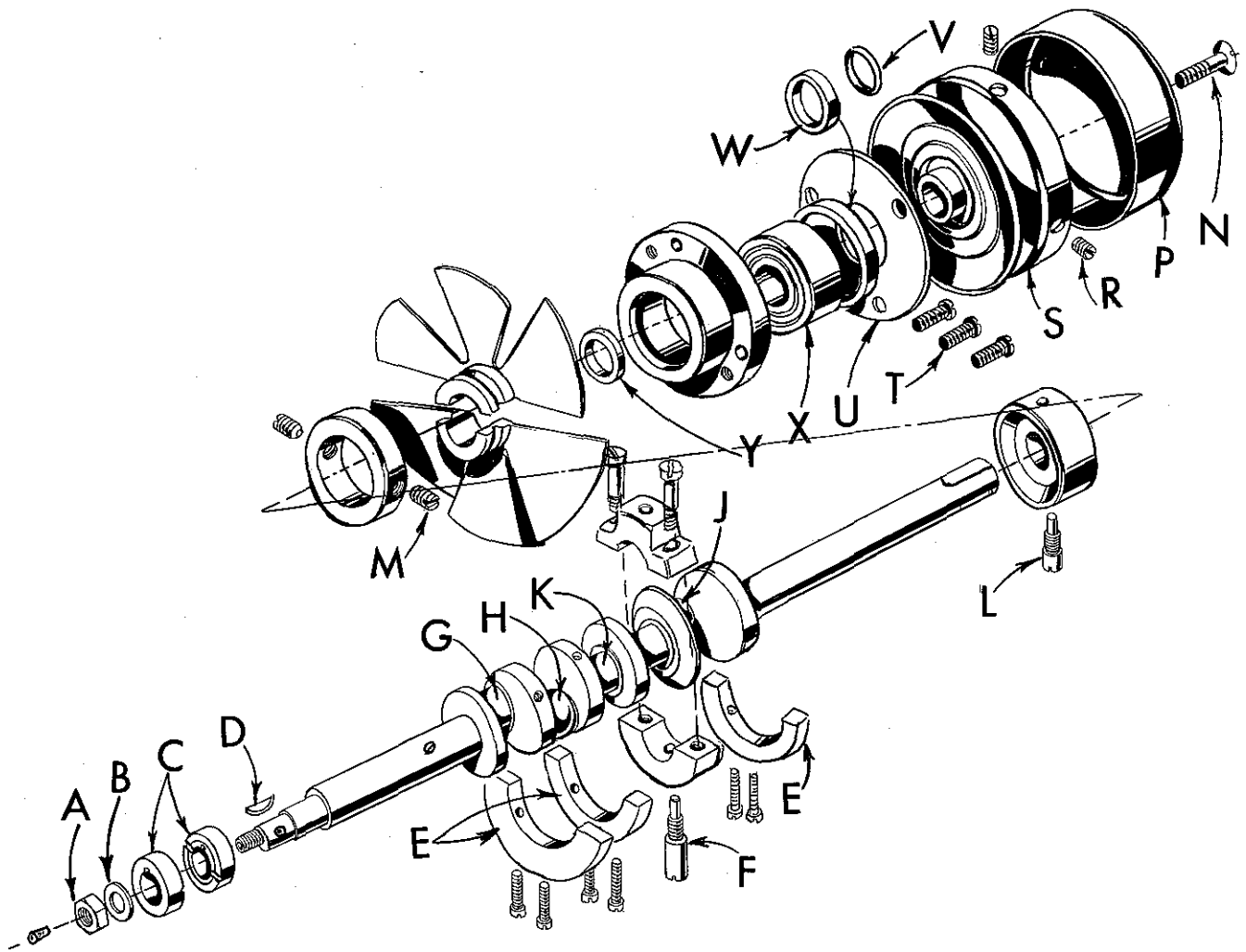


Fig. 15

TO REMOVE CRANKSHAFT

Crankshaft can be withdrawn easier if these steps are followed:

1. Drain oil by removing plug screw located on back of machine near bottom edge of base.
2. Remove top and bottom covers of machine.
3. Remove feed eccentric nut (A, Fig.15 ) and washer (B), and, with the aid of the eccentric extractor, slip off the eccentrics (C).
4. Remove key (D).
5. Remove three counterweights (E). Identify these counterweights so that they will be re-assembled in the proper places.
6. Remove screw (F) which holds crankshaft split bearing. This screw is reached through bottom of bed casting.

## TO REMOVE CRANKSHAFT (Continued)

7. Remove caps of bearings on crankshaft at points G, H, and J. When re-assembling bearing caps make sure they are in their original position. Trade marks are stamped on both halves of the caps and both trade marks should be on the same side of the bearings. Also, screws should be re-assembled in the same holes from which they were removed.

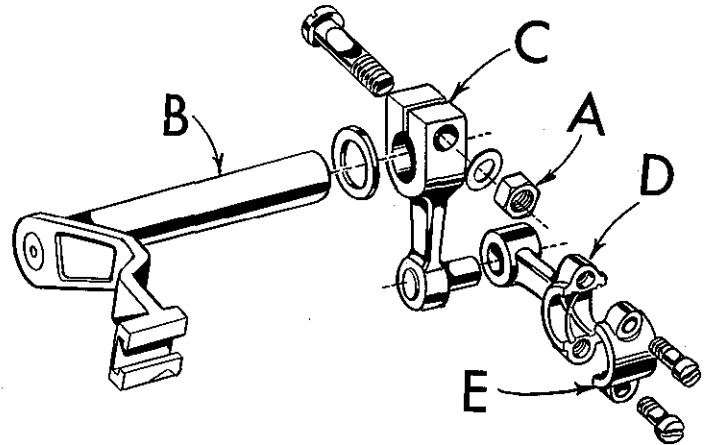


Fig. 16

8. Loosen clamp nut (A, Fig. 16) which holds upper knife driving arm (B). Access to clamp nut is through top cover. Draw driving arm to the left until upper knife driving lever (C) and connecting rod (D) drop, allowing removal of bearing cap (E). This is at bearing point (K, Fig. 15) on crankshaft. Observe same precautions when re-assembling cap as described in 7 above.
9. Remove screw (L, Fig. 15) which holds inner right crankshaft bearing. This screw is reached through bottom of bed casting.
10. Loosen two screws (M) in fan collar; remove both halves of cooling fan.
11. Remove screw (N); take off pulley cap (P).
12. Loosen two screws (R); remove pulley (S).
13. Remove three screws (T); take off bearing retaining plate (U); also, spacer collars (V) and (W) may be removed at this time.
14. Crankshaft may now be removed.
15. If necessary to replace ball bearing (X), it should be pressed off shaft on an arbor press. In replacing bearing it must be pressed on carefully until it seats against ground thrust washer (Y).
16. Carefully observing reverse of the foregoing operations should simplify re-assembly of crankshaft. Checking exploded view drawings for location of various parts and constant testing for binds during re-assembly will also prove helpful.
17. Before re-assembling, thoroughly clean and dry top and bottom covers and gaskets. Before re-assembling bottom cover make sure that spring pressed oil wick which lubricates left crankshaft bearing is inserted in hole in casting and that it contacts shaft. The wick stands vertically on its spring against bottom cover. Coat oil drain plug with a sealing compound before re-assembling to prevent oil leakage. No. 1 Crane Lead Seal is recommended.

## ORDERING REPAIR PARTS

### ILLUSTRATIONS

This catalog has been arranged to simplify ordering repair parts. Exploded views of various sections of the mechanism are shown so that the parts may be seen in their actual position in the machine. On the page opposite the illustration will be found a listing of the parts with their part numbers, description and the number of pieces required in the particular view being shown.

Numbers in the first column are reference numbers only, and merely indicate the position of that part in the illustration. Reference number should never be used in ordering parts. Always use the part number listed in the second column.

Component parts of sub-assemblies which can be furnished for repairs are indicated by indenting their descriptions under the description of the main sub-assembly. Example:

42	29126 DF	Lower Looper Drive Lever Connecting Rod Assembly---	1
43	39544 U	Lower Looper Bar Driving Lever -----	1
44	666-255	Felt, for connecting rod -----	1
45	22729 D	Screw, for connecting rod -----	2
46	97	Screw, for ball joint guide fork -----	2
47	39544 S	Ball Joint Guide Fork -----	1
48	22729 E	Screw, for connecting rod -----	2

It will be noted in the above example that the eccentric, ball stud, and bearing are not listed. The reason is that replacement of these parts individually is not recommended, so complete sub-assembly should be ordered.

Where the parts for all the styles covered in this catalog are not the same, the difference will be shown in the illustrations or mentioned in the descriptions. When a part is used in all machines covered by this catalog no machine style will be mentioned.

At the back of the book will be found a numerical index of all the parts shown in this book. This will facilitate locating the illustration and description when only the part number is known.

### IDENTIFYING PARTS

Where the construction permits, each part is stamped with its part number. On some of the smaller parts, and on those where construction does not permit, an identification letter is stamped in to distinguish the part from similar ones.

**PART NUMBERS REPRESENT THE SAME PART, REGARDLESS OF CATALOG IN WHICH THEY APPEAR.**



## USE GENUINE NEEDLES AND REPAIR PARTS

Success in the operation of these machines can be secured only with genuine Union Special Needles and Repair Parts as furnished by the Union Special Machine Company, its subsidiaries and authorized distributors. They are designed according to the most scientific principles and are made with utmost precision. Maximum efficiency and durability are assured.

Genuine needles are packaged with labels marked *Union Special*. Genuine repair parts are stamped with the Union Special trade mark. Each trade mark is your guarantee of the highest quality in materials and workmanship.

### TERMS

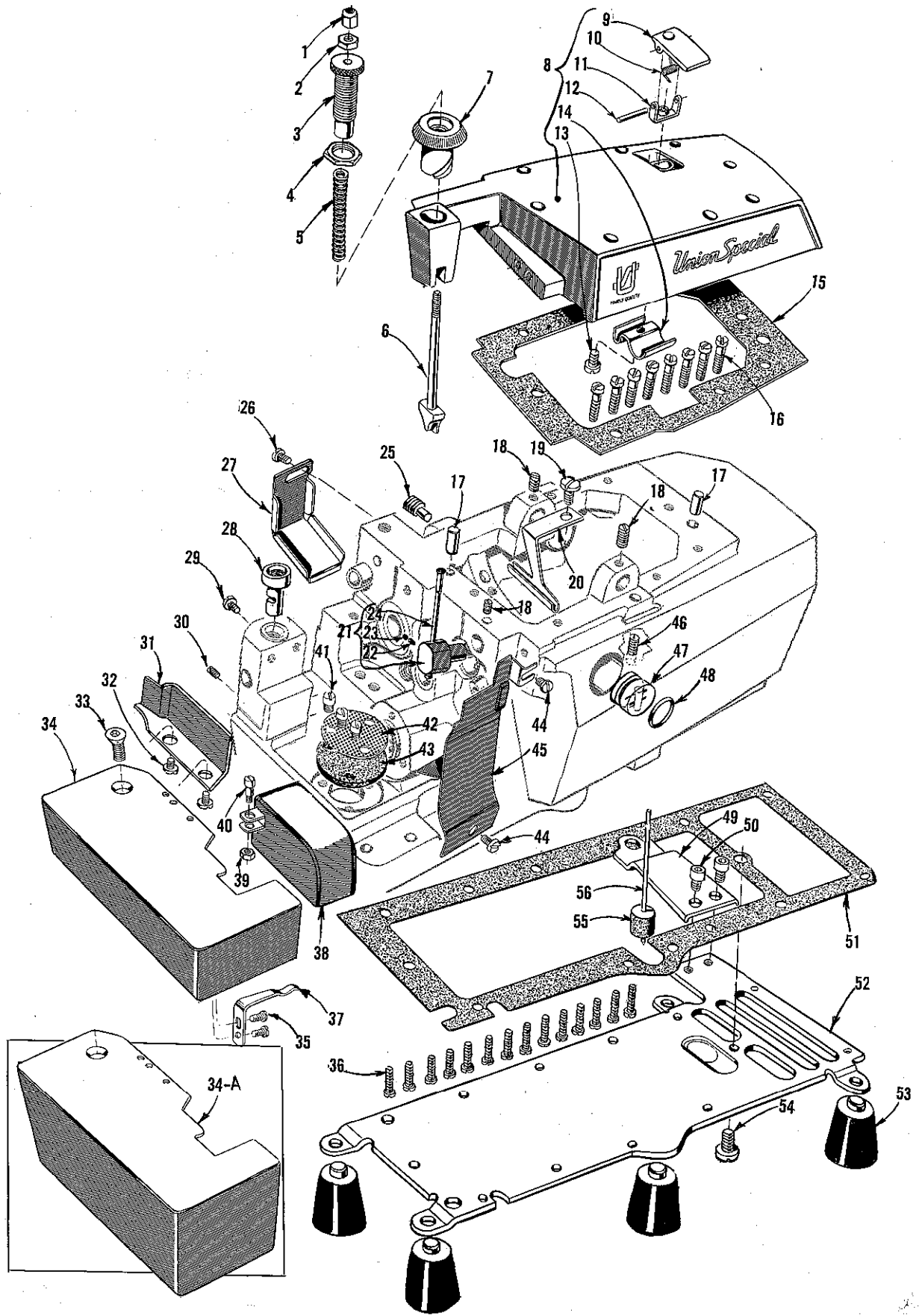
Prices are net cash and subject to change without notice. All shipments are forwarded f. o. b. shipping point. Parcel post shipments are insured unless otherwise directed. A charge is made to cover postage and insurance.

### TORQUE REQUIREMENTS

Torque (measured in inch-pounds) is a rotating force (in pounds) applied through a distance by a lever (in inches or feet). This is accomplished by a wrench, screw driver, etc. Many of these devices are available, which when set at the proper amount of torque will tighten the part to the correct amount and no tighter.

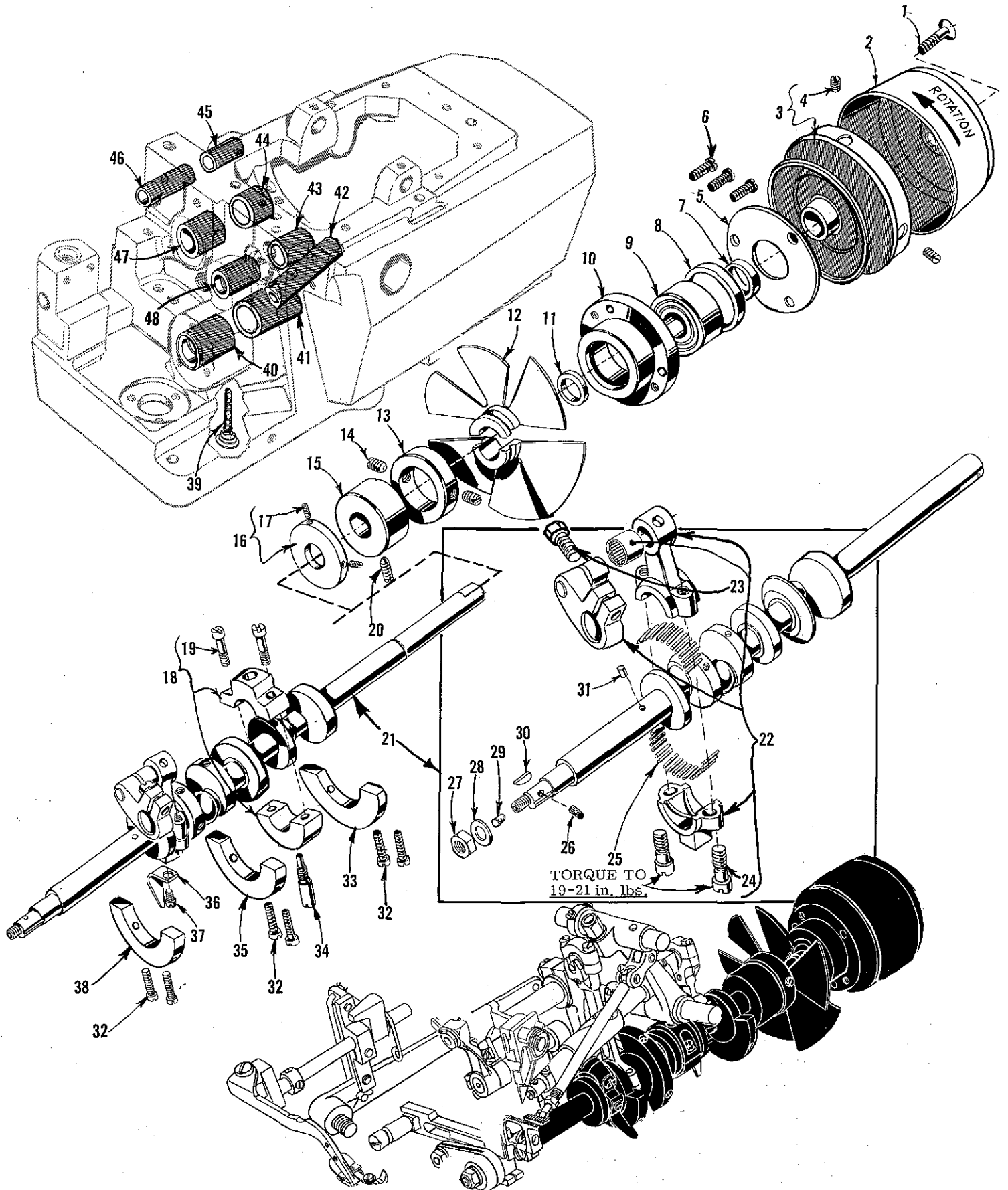
All straps and eccentrics should be tightened to 19-21 inch-pounds, unless otherwise noted. All other nuts, bolts, screws, etc., should be tightened by hand as tightly as possible, unless otherwise noted.

The screws requiring a specific torque will be indicated on the picture plates.



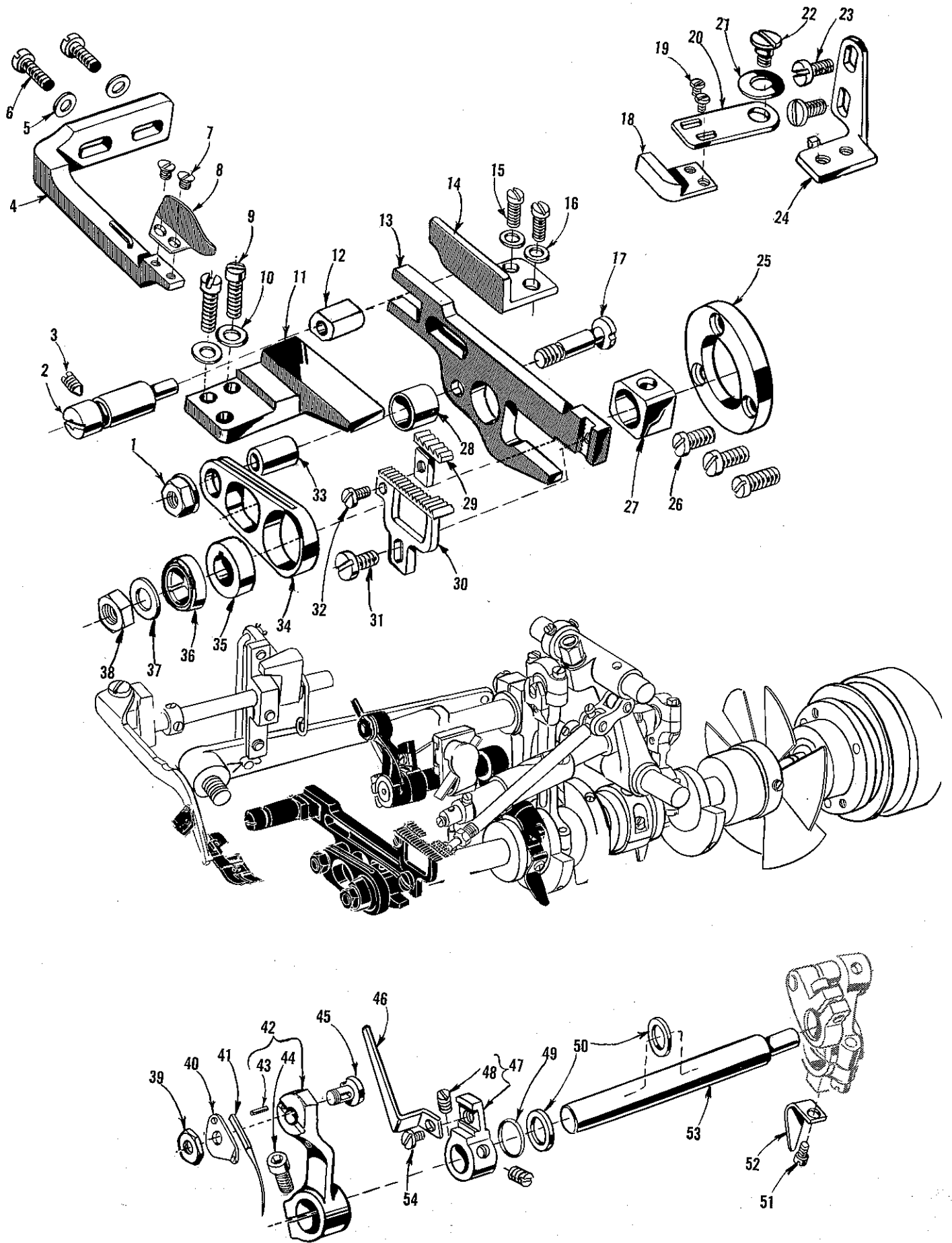
MAIN FRAME, MISCELLANEOUS COVERS AND PLATES

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39557 B	Presser Spring Plunger Cap Nut -----	1
2	39557 E	Presser Spring Plunger Locking Nut-----	1
3	39557 C	Presser Spring Plunger Adjusting Screw-----	1
4	39557 F	Lock Nut, for adjusting screw -----	1
5	39557	Presser Spring -----	1
6	39557 A	Presser Spring Plunger-----	1
7	39556 A	Presser Foot Release Bushing-----	1
8	39582 AD	Top Cover-----	1
9	39582 AF	Oil Filler Cup-----	1
10	39582 V	Spring-----	1
11	39582 AG	Hinge Bracket-----	1
12	51-103 Blk	Hinge Pin-----	1
13	22562 A	Screw, for hinge bracket-----	1
14	39582 W	Oil Guard-----	1
15	39582 AE	Top Cover Gasket -----	1
16	22541	Screw, for top cover -----	8
17	667 D-8	Dowel Pin -----	2
18	22565	Screw, for thread tube and upper looper rocker shaft---	3
19	22569 D	Screw, for oil collector plate-----	1
20	39594 R	Oil Collector Plate -----	1
21	29477 GW	Upper Looper Thread Tube Assembly -----	1
22	39568 J	Thread Tube Tension Spring-----	1
23	22743	Screw, for thread tube tension spring-----	1
24	39568 G	Thread Tube-----	1
25	22571 E	Magnetic Oil Drain Plug Screw-----	1
26	90	Screw, for feed bar oil shield -----	1
27	39534 R	Feed Bar Oil Shield-----	1
28	39501 K	Cloth Plate Stud-----	1
29	22569	Screw, for cloth plate stud -----	1
30	22565 F	Screw, for feed adjusting pin -----	1
31	39578 F	Cloth Plate Fabric Guard -----	1
32	138	Screw, for cloth plate fabric guard-----	2
33	22657 D-12	Screw, for cloth plate-----	1
34	39501 DG	Cloth Plate, for semi and fully-submerged installation-----	1
34A	39501 EE	Cloth Plate, for non-submerged installation-----	1
35	90	Screw, for latch spring -----	2
36	22569	Screw, for bottom cover -----	14
37	39532 A	Cloth Plate Latch Spring -----	1
38	39582 K	Feed Mechanism cover -----	1
39	41071 G	Nut, for feed mechanism cover -----	1
40	86 X	Screw, for feed mechanism cover-----	1
41	22569 A	Screw, for oil filter screen and strainer-----	3
42	39594 G	Oil Filter Screen-----	1
43	39594 H	Oil Strainer-----	1
44	22569 D	Screw, for chip guard-----	2
45	39578 U	Chip Guard -----	1
46	22894 AD	Screw, for lower looper bar driving lever shaft-----	1
47	39593 H	Oil Sight Gauge-----	1
48	660-243	Oil Gauge Seal Ring-----	1
49	39582 F	Bottom Cover Extension -----	1
50	22653 D-4	Screw, for bottom cover extension -----	2
51	39582 Y	Bottom Cover Gasket -----	1
52	39582 X	Bottom Cover-----	1
53	39595	Isolators -----	4
54	22586 R	Screw, for bottom cover -----	1
55	39593 C	Oil Gauge Float -----	1
56	39593 D	Oil Gauge Indicator-----	1



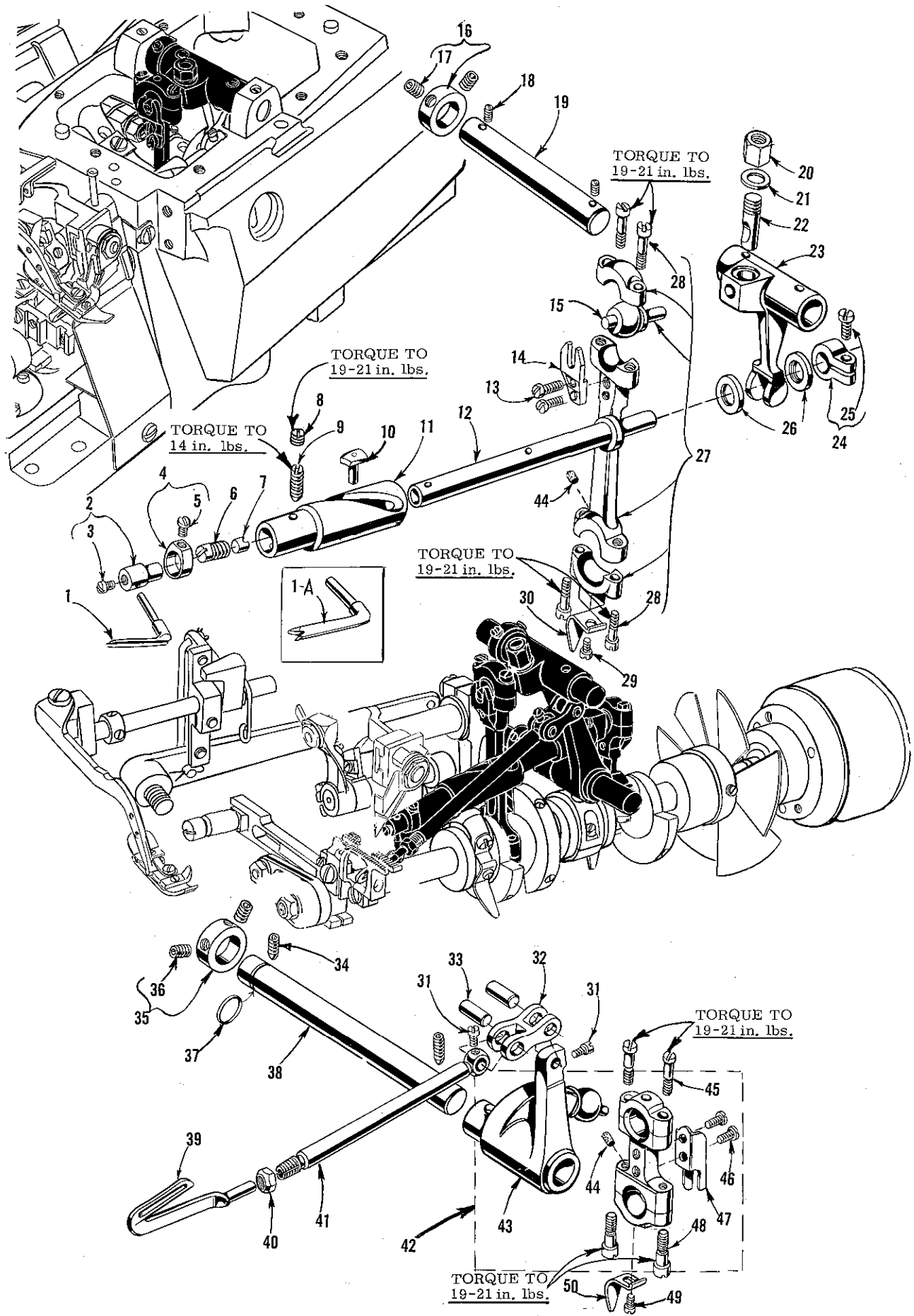
CRANKSHAFT MECHANISM AND BUSHINGS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	22769 B	Screw, pulley cap -----	1
2	39521 D	Pulley Cap -----	1
3	39521 C	Pulley -----	1
4	95	Screw, for pulley -----	2
5	39590 H	Crankshaft Ball Bearing Retaining Plate -----	1
6	22541 A	Screw, for crankshaft ball bearing retaining plate ----	3
7	39590 S	Spacer Collar -----	1
8	39590 R	Ball Bearing Stop Collar -----	1
9	660-268	Crankshaft Ball Bearing -----	1
10	39590 G	Crankshaft Ball Bearing Housing -----	1
11	39590 J	Thrust Washer -----	1
12	39591 G	Crank Chamber Cooling Fan -----	1
13	39591 H	Crank Chamber Cooling Fan Collar -----	1
14	22894 D	Screw, for crank chamber cooling fan collar -----	2
15	39590 K	Crankshaft Bearing, inner right -----	1
16	39590 P	Oil Slinger Collar -----	1
17	77 Q	Screw, for oil slinger collar -----	2
18	39590 D	Crankshaft Split Bearing -----	1
19	97 A	Screw, for crankshaft split bearing -----	2
20	22565 F	Screw, for inner right crankshaft bearing -----	1
21	29477 JM	Crankshaft and Needle Driving Arm Crank Assembly -----	1
22	29477 JN	Needle Driving Arm Crank and Connecting Rod Assembly -----	1
23	22596 G	Screw, for needle driving arm crank -----	1
24	22587 M	Screw, for needle driving arm connecting rod -----	2
25	39516-625	Needle Bearing, .0625 inch diameter -----	28
	39516-626	Needle Bearing, .0626 inch diameter -----	28
	39516-627	Needle Bearing, .0627 inch diameter -----	28
26	30-92 Blk	Wood Plug -----	1
27	258	Nut -----	1
28	40-46	Washer -----	1
29	CO67 E	Cork Plug -----	1
30	39541 A	Feed Driving Eccentric Key -----	1
31	51-228 Blk	Vent Plug -----	1
32	22747 B	Screw, for crankshaft counterweight -----	6
33	39591 B	Crankshaft Counterweight, right -----	1
34	39590 N	Stud, for crankshaft split bearing -----	1
35	39591 A	Crankshaft Counterweight, middle -----	1
36	39594 N	Oil Splasher -----	1
37	28	Screw, for oil splasher -----	1
38	39591 K	Crankshaft Counterweight, left -----	1
39	666-94	Oil Wick and Spring -----	1
40	39590	Crankshaft Bushing, left -----	1
41	39590 T	Crankshaft Bushing, inner left -----	1
42	39544 L	Lower Looper Bar Bushing -----	1
43	39552 P	Needle Driving Arm Crank Bushing, right -----	1
44	39573 L	Upper Knife Driving Arm Bushing, right -----	1
45	39142 G	Foot Lifter Shaft Bushing, right -----	1
46	39555 E	Foot Lifter Shaft Bushing, left -----	1
47	39573 K	Upper Knife Driving Arm Bushing, left -----	1
48	39552 N	Needle Driving Arm Crank Bushing, left -----	1



NEEDLE DRIVE AND FEED MECHANISM

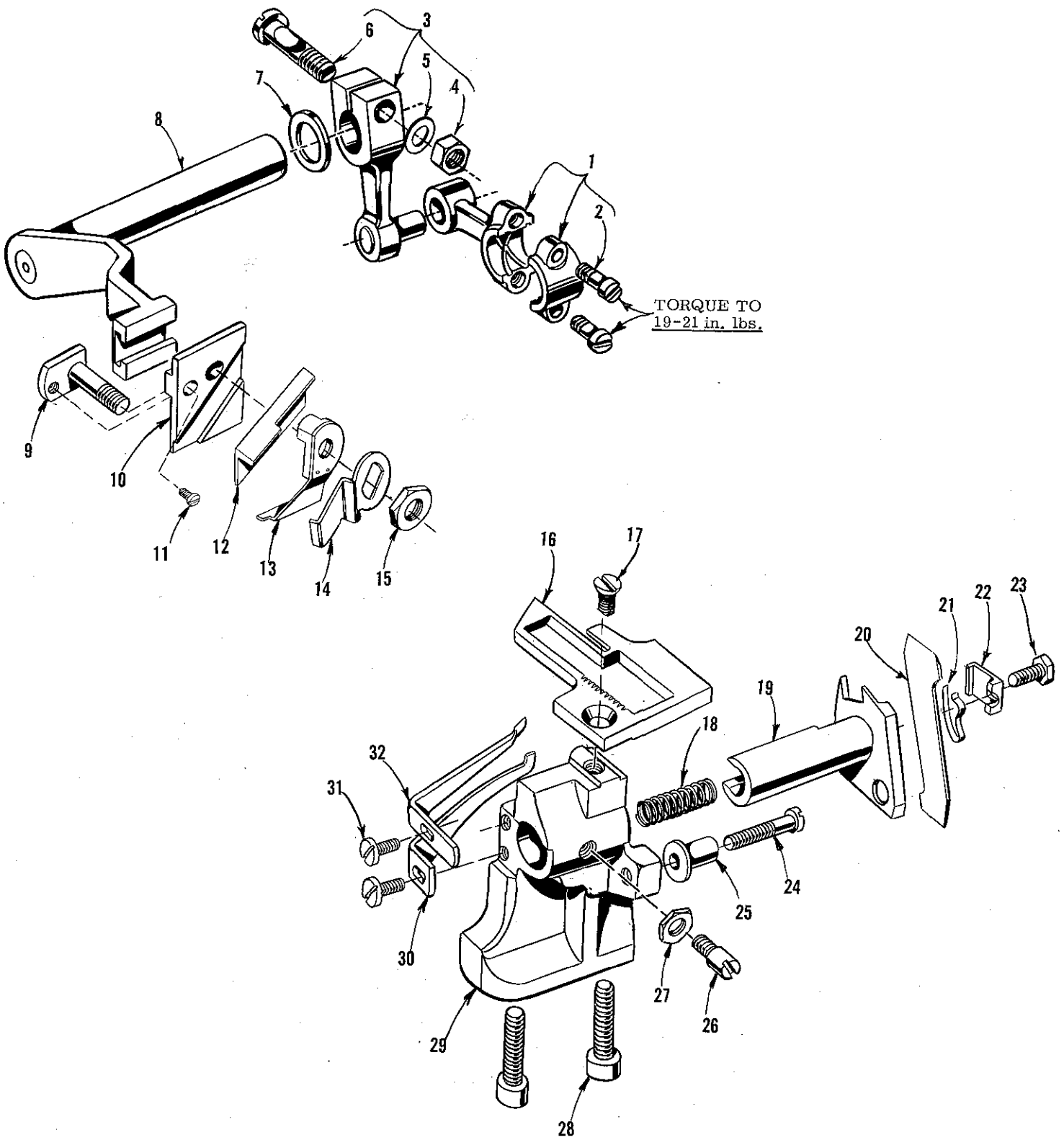
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39536 E	Nut, for feed bar driving stud-----	1
2	39535 C	Feed Adjusting Pin -----	1
3	22565 F	Screw, for feed adjusting pin -----	1
4	39578 P	Fabric Guard Mounting Bracket -----	1
5	8372 A	Washer, for fabric guard mounting bracket-----	2
6	22569 B	Screw, for fabric guard mounting bracket-----	2
7	87	Screw, for fabric guard-----	2
8	39578 M	Fabric Guard -----	1
9	22569	Screw, for feed bar guide, left-----	2
10	8372 A	Washer, for feed bar guide, left -----	2
11	39535 F	Feed Bar Guide, left-----	1
12	39535 J	Feed Bar Guide Block-----	1
13	39534 G	Main Feed Bar -----	1
14	39535 D	Feed Bar Guide, right -----	1
15	22569 B	Screw, for feed bar guide, right -----	2
16	53634 C	Washer, for feed bar guide, right -----	2
17	39536 B	Feed Bar Driving Stud -----	1
18	39503 A	Edge Guide, adjustable-----	1
19	604	Screw, for adjustable edge guide -----	2
20	39503 D	Edge Guide Swinging Arm -----	1
21	12957 E	Spring Washer, for swinging arm -----	1
22	22758 E	Screw, for swinging arm -----	1
23	22569 C	Screw, for edge guide mounting bracket-----	2
24	39503 C	Edge Guide Mounting Bracket-----	1
25	39534 H	Feed Bar Thrust Washer -----	1
26	22569 G	Screw, for feed bar thrust washer-----	3
27	39538	Feed Lift Block -----	1
28	39536 D	Feed Bar Spacer -----	1
29	39505 K	Chaining Feed Dog, marked "K", 16 teeth per inch, for Styles 39500 FJ, FL-----	1
	39505 AK	Chaining Feed Dog, marked "CF", 22 teeth per inch, for Style 39500 JJ-----	1
30	39505 J	Main Feed Dog, 16 teeth per inch, for Styles 39500 FJ, FL-----	1
	39505 AJ	Main Feed Dog, 22 teeth per inch, for Style 39500 JJ -----	1
31	22528	Screw, for main feed dog-----	1
32	22768 B	Screw, for chaining feed dog-----	1
33	39536 C	Feed Bar Driving Connection Bushing-----	1
34	39536 AE	Main Feed Bar Driving Connection -----	1
35	39540 B-5	Main Feed Driving Eccentric -----	1
36	39540 K	Feed, Eccentric Spacer -----	1
37	40-46	Washer -----	1
38	258	Nut -----	1
39	14077	Nut, for needle clamp stud -----	1
40	39563 Z	Needle Thread Pull-off Eyelet -----	1
41	154 GAS	Needle -----	1
42	39552	Needle Driving Arm -----	1
43	50-774Blk	Stop Pin, for needle driving arm -----	1
44	22596 E	Screw, for needle driving arm -----	1
45	39551 F	Needle Clamp Stud -----	1
46	39568 A	Looper Thread Pull-off -----	1
47	39568 Y	Looper Thread Pull-off Lever -----	1
48	88 B	Screw, for looper thread pull-off lever -----	2
49	660-207	Oil Seal Ring, for needle driving shaft -----	1
50	39552 C	Thrust Washer, for needle driving arm crank ---	2
51	28	Screw, for oil splasher -----	1
52	39594 N	Oil Splasher -----	1
53	39552 R	Needle Driving Shaft -----	1
54	22513	Screw, for looper thread pull-off-----	1





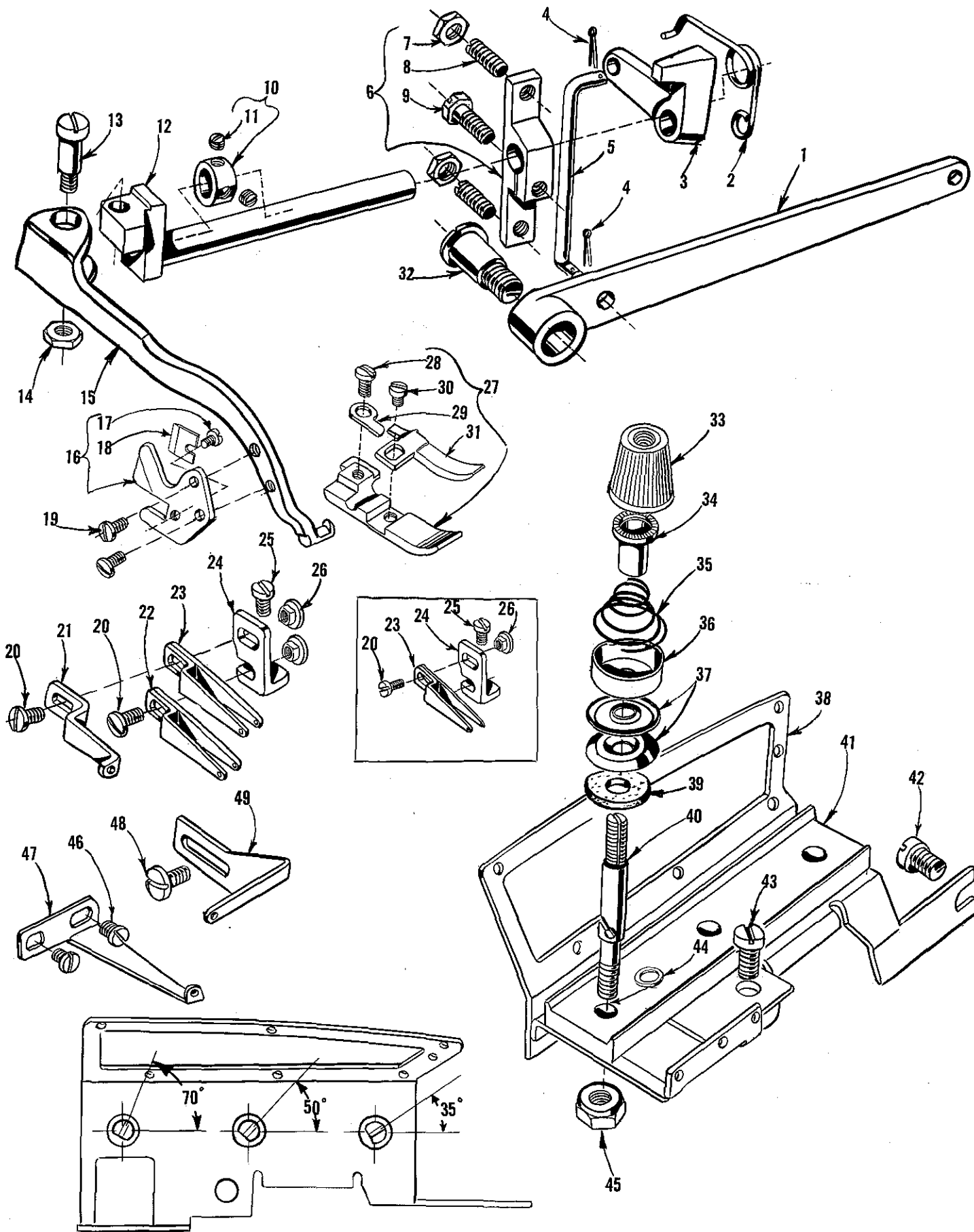
SPREADER/UPPER LOOPER AND LOWER LOOPER DRIVING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39508 A	Upper Looper, marked "CC", for Style 39500 FL -----	1
1A	39560 A	Spreader, for Styles 39500 FJ, JJ -----	1
2	39543	Spreader/Upper Looper Holder -----	1
3	22564 G	Screw, for spreader/upper looper holder-----	1
4	39543 A	Spreader/Upper Looper Holder Collar -----	1
5	22 KH	Screw, for spreader/upper looper holder collar -----	1
6	22503 F	Screw, for cam follower locking clamp -----	1
7	39543 E	Cam Follower Locking Clamp -----	1
8	1025 L	Lock Screw, for bushing and cam guide screw--	1
9	22565 H	Screw, for bushing and cam guide -----	1
10	39543 T	Cam Follower -----	1
11	39543 S	Bushing and Cam Guide -----	1
12	39543 K	Spreader/Upper Looper Drive Shaft -----	1
13	97	Screw, for ball joint guide fork -----	2
14	39544 J	Ball Joint Guide Fork, for upper looper drive assembly -----	1
15	39543 V	Upper Looper Drive Ball Stud -----	1
16	482 C	Spreader/Upper Looper Drive Shaft Collar-----	1
17	22894 C	Screw, for spreader/upper looper drive shaft collar -----	2
18	22565	Screw, for spreader/upper looper drive shaft --	2
19	7446 A	Spreader/Upper Looper Drive Shaft -----	1
20	1280	Nut, for locking stud -----	1
21	39543 R	Washer, for locking stud-----	1
22	43143 N	Locking Stud, for spreader/upper looper drive lever -----	1
23	39543 H	Spreader/Upper Looper Drive Lever -----	1
24	39543 M	Clamp Collar, for spreader/upper looper drive shaft -----	1
25	22562 A	Screw, for clamp collar -----	1
26	39543 P	Spreader/Upper Looper Shaft Thrust Washer---	2
27	39543 U	Spreader/Upper Looper Connecting Rod -----	1
28	22729 D	Screw, for spreader/upper looper connecting rod -----	4
29	28	Screw, for oil splasher -----	1
30	39594 N	Oil Splasher -----	1
31	77	Screw, for lower looper bar connecting link pin -----	2
32	39544 B	Lower Looper Bar Connecting Link -----	1
33	39544 D	Lower Looper Bar Connecting Link Pin-----	2
34	22894 AD	Screw, for lower looper driving shaft -----	2
35	482 C	Lower Looper Driving Shaft Collar-----	1
36	22894 C	Screw, for lower looper driving shaft collar -----	2
37	660-206	"O" Ring, for lower looper driving shaft-----	1
38	39544 V	Lower Looper Driving Shaft -----	1
39	39508 B	Lower Looper -----	1
40	39151	Nut, for lower looper bar -----	1
41	39544	Lower Looper Bar -----	1
42	29126 DF	Lower Looper Bar Driving Lever and Connecting Rod Assembly-----	1
43	39544 U	Lower Looper Bar Driving Lever-----	1
44	666-255	Felt, for connecting rod -----	1
45	22729 D	Screw, for connecting rod -----	2
46	97	Screw, for ball joint guide fork-----	2
47	39544 S	Ball Joint Guide Fork -----	1
48	22729 E	Screw, for connecting rod -----	2
49	28	Screw, for oil splasher -----	1
50	39594 N	Oil Splasher -----	1



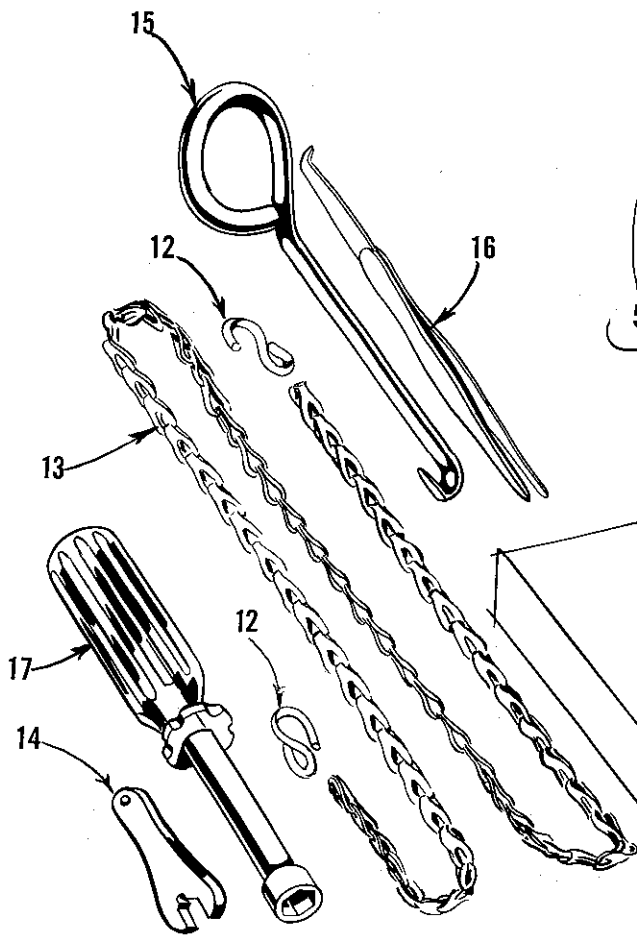
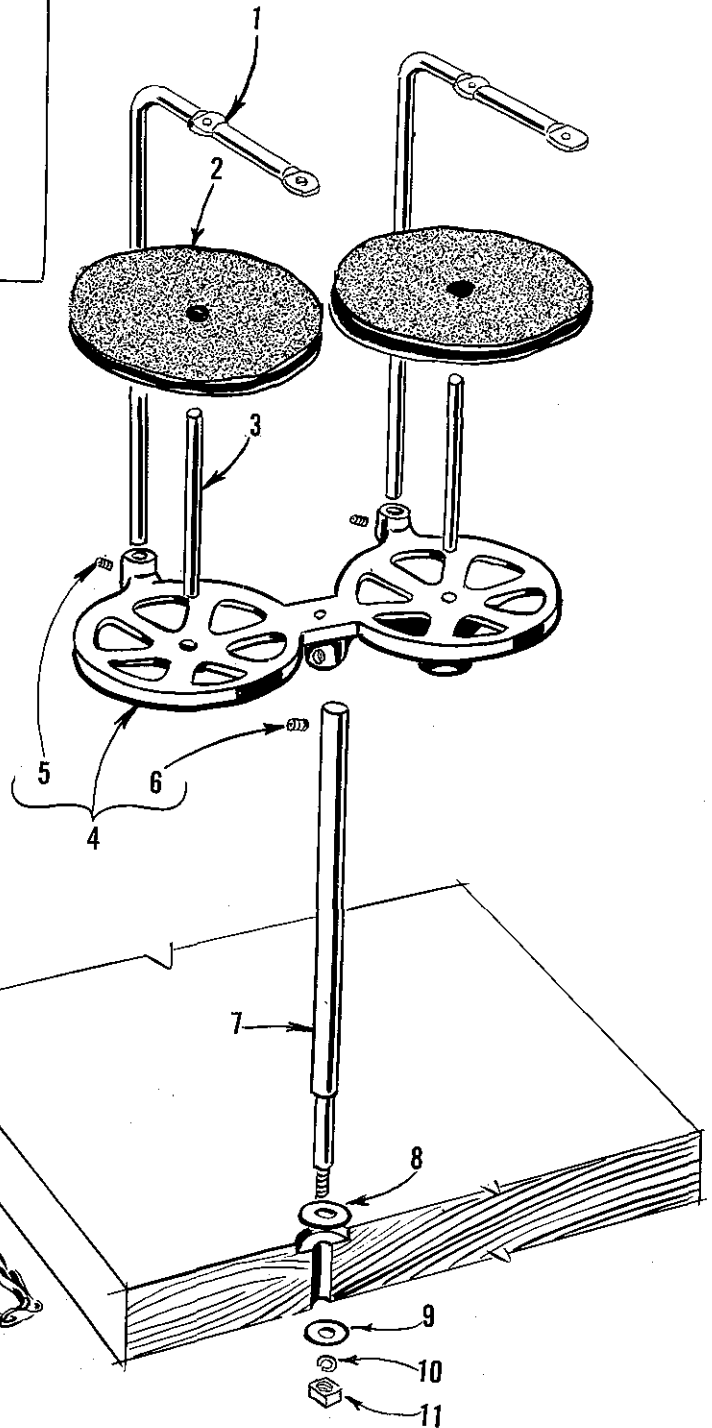
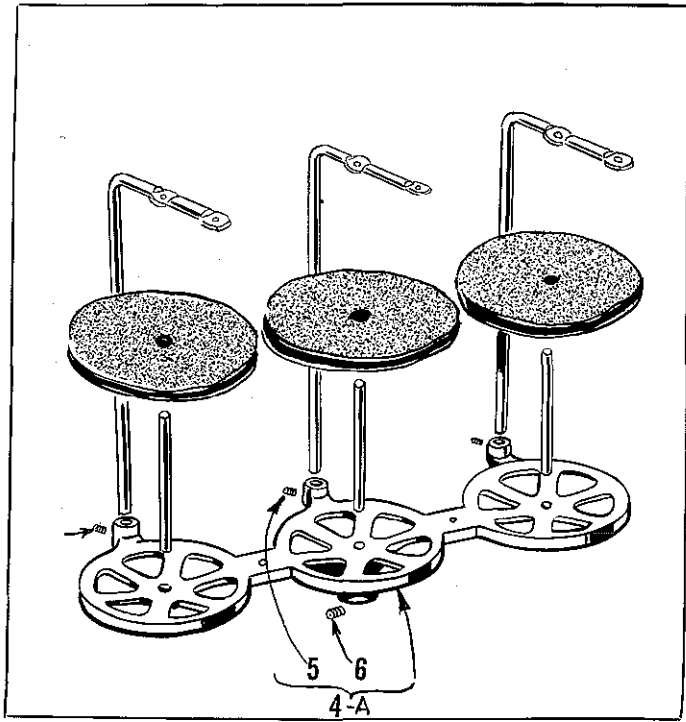
UPPER AND LOWER KNIFE MECHANISM

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39573 J	Upper Knife Driving Connecting Rod-----	1
2	22587 J	Screw, for upper knife driving connecting rod -----	2
3	39573 E	Upper Knife Driving Lever -----	1
4	55235 E	Nut, for upper knife driving lever-----	1
5	6042 A	Washer, for upper knife driving lever-----	1
6	55235 D	Locking Stud, for upper knife driving lever-----	1
7	39573 A	Washer, for upper knife driving arm -----	1
8	39573 H	Upper Knife Driving Arm -----	1
9	39571 C	Upper Knife Clamp Stud-----	1
10	39572 A	Upper Knife Holder Block -----	1
11	22738	Screw, for upper knife holder block -----	1
12	39570 J	Upper Knife -----	1
13	39571 F	Upper Knife Clamp -----	1
14	39571 B	Upper Knife Chain Guard-----	1
15	14077	Nut, for upper knife clamp stud-----	1
16	39524 J	Throat Plate, for Styles 39500 FJ, FL -----	1
	39524 AJ	Throat Plate, for Style 39500 JJ -----	1
17	22524	Screw, for throat plate -----	1
18	39550 E	Lower Knife Holder Spring -----	1
19	39550 U	Lower Knife Holder -----	1
20	39549 J	Lower Knife -----	1
21	39550 M	Lower Knife Clamp Spring -----	1
22	39550 L	Lower Knife Clamp-----	1
23	22588 A	Screw, for lower knife holder -----	1
24	22729 B	Screw, for lower knife holder locking stud -----	1
25	39550 C	Lower Knife Holder Locking Stud -----	1
26	22892 B	Locking Screw, for lower knife holder-----	1
27	14077	Nut, for lower knife holder locking screw-----	1
28	22653 B-12	Screw, for throat plate and lower knife support bracket -----	2
29	39580 AE	Throat Plate and Lower Knife Support Bracket -	1
30	39525 L	Needle Guard, front -----	1
31	22585 A	Screw, for needle guard -----	2
32	39525 A	Needle Guard, rear -----	1



PRESSER FOOT, FOOT LIFTER, THREAD TENSION PARTS  
AND MISCELLANEOUS EYELETS

Ref. No.	Part No.	Description	Amt. Req.
1	39555	Foot Lifter Lever -----	1
2	39555 B	Foot Lifter Lever Spring -----	1
3	39555 D	Foot Lifter Intermediate Lever -----	1
4	660-142	Cotter Pin, for foot lifter lever connecting link -----	2
5	39555 F	Foot Lifter Lever Connecting Link -----	1
6	39555 C	Foot Lifter Lever Arm -----	1
7	12538	Lock Nut, for foot lifter lever arm -----	2
8	22597 F	Screw, for foot lifter lever arm -----	2
9	627	Screw, for foot lifter lever arm -----	1
10	12865	Foot Lifter Lever Shaft Thrust Collar -----	1
11	88	Screw, for foot lifter lever shaft thrust collar ----	2
12	39555 A	Foot Lifter Lever Shaft -----	1
13	22598 E	Screw, for presser arm -----	1
14	14077	Nut, for presser arm screw -----	1
15	39556 D	Presser Arm -----	1
16	39556 M	Chain Cutting Knife -----	1
17	22798	Screw, for chain cutting blade -----	1
18	39556 L	Chain Cutting Blade -----	1
19	605	Screw, for chain cutting knife -----	2
20	376 A	Screw, for looper thread eyelet -----	1 or 2
21	39568 E	Auxiliary Looper Thread Eyelet, for Style 39500 FL---	1
22	39568 B	Lower Looper Thread Eyelet, for Style 39500 FL -----	1
23	39568 L	Upper Looper Thread Eyelet -----	1
24	39568 D	Looper Thread Eyelet Mounting Bracket -----	1
25	22569 B	Screw, for looper thread eyelet mounting bracket -----	1
26	43139 A	Nut, for looper thread eyelet screw -----	1 or 2
27	39520 L	Presser Foot -----	1
28	22768 B	Screw, for hinge spring -----	1
29	39530	Hinge Spring -----	1
30	22819	Screw, for stitch tongue -----	1
31	39597 L	Stitch Tongue, marked "DW"-----	1
32	22566 B	Screw, for foot lifter lever -----	1
33	39592 AA	Needle Tension Nut, green -----	1
	39592 AB	Upper Looper Tension Nut, blue, for Style 39500 FL --	1
	39592 AC	Lower Looper Tension Nut, red -----	1
34	39592 AK	Tension Spring Ferrule -----	2 or 3
35	39592 AE-2	Needle Tension Spring, for Styles 39500 FJ, JJ-----	1
	39592 AE-4	Lower Looper Tension Spring, for Styles 39500 FJ, JJ -----	1
	39592 AE-4	Needle Tension Spring, for Style 39500 FL -----	1
	39592 AE-4	Upper Looper Tension Spring, for Style 39500 FL -----	1
	39592 AR-8	Lower Looper Tension Spring, for Style 39500 FL-----	1
36	39592 AJ	Spring Shield -----	2 or 3
37	39592 AD	Thread Tension Disc -----	4 or 6
38	39592 AG-3	Tension Post Mounting Bracket-----	1
39	39592 AF	Tension Disc Felt-----	2 or 3
40	39592 AL	Thread Tension Post -----	2 or 3
41	39592 AM	Tension Post Bar -----	1
42	22847 B	Screw, for tension post mounting bracket-----	1
43	22806 A	Screw, for tension post mounting bracket-----	1
44	8372 A	Washer, for tension post -----	2 or 3
45	39592 AH	Locating Nut, for thread tension post -----	2 or 3
46	73 X	Screw, for frame thread guide -----	2
47	39568 W	Frame Thread Guide, for lower looper thread -----	1
48	22569 D	Screw, for needle thread eyelet -----	1
49	39563 D	Needle Thread Eyelet -----	1



THREAD STAND AND MISCELLANEOUS TOOLS

Ref. No.	Part No.	Description	Amt. Req.
1	21113 F	Thread Stand Eyelet, for Styles 39500 FJ, JJ-----	2
	21113 F	Thread Stand Eyelet, for Style 39500 FL-----	3
2	21104 V	Pad, for thread cone, for Styles 39500 FJ, JJ-----	2
	21104 V	Pad, for thread cone, for Style 39500 FL-----	3
3	69 S	Spool Pin, for Styles 39500 FJ, JJ-----	2
	69 S	Spool Pin, for Style 39500 FL-----	3
4	21130 W-2	Cone Support, for Styles 39500 FJ, JJ-----	1
4A	21130 W-3	Cone Support, for Style 39500 FL-----	1
5	22650 CB-4	Screw, for thread stand eyelet-----	2 or 3
6	22650 CE-6	Screw, for cone support-----	1
7	21104 AA	Thread Stand Rod-----	1
8	652 J-24	Washer, for thread stand rod-----	1
9	652 J-16	Washer, for thread stand rod-----	1
10	WA9 A	Lock Washer, for thread stand rod-----	1
11	651 A-16	Nut, for thread stand rod-----	1
12	660-264	"S" Hook, for treadle chain-----	2
13	421 D-34	Treadle Chain, 34 inches long-----	1
14	116	Wrench, for 9/32 inch nut-----	1
15	21227 BF	Feed Eccentric Extractor Hook-----	1
16	660-240	Thread Tweezers-----	1
17	21388 AU	Socket Wrench, for 3/8 inch nuts holding feed eccentrics-----	1

ACCESSORIES AVAILABLE AS EXTRAS (Not Illustrated)

21233 GG	Light Fixture Assembly, including blue lens, machine mounting for machines driven by "Electro Drive" which supplies the current.
21261 M-350	No. 1 "V" Belt, 35 inches long, for fully submerged individual power table installations.
21261 M-370	No. 1 "V" Belt, 37 inches long, for semisubmerged individual power table installations.
21261 M-390	No. 1 "V" Belt, 39 inches long, for nonsubmerged individual power table installations.
21377 BM	Tray, 1 3/4 inches high, for semisubmerged installations.
21695 U	Finger Protector.
28604 L	Can of Oil, 16 fluid ounces of Spec. 83 oil.
39598	Knife Grinder, complete.
52978 J	Chip Disposal Chute.

		Belt Slot to Right Edge of Board	Cloth Plate to Front Edge of Board
21371 UH	Individual Power Table		
21371 PJ-48	Table Top, 48 x 20 x 1 3/4 inches, for nonsubmerged individual power table installation - no chip chute;	14 inch	3/8 inch
21371 RD-48	Table Top, same except nonsubmerged with chip chute;	7 1/2 inch	3 inch
21371 RF-48	Table Top, same except nonsubmerged no chip chute;	7 1/2 inch	3/8 inch
21371 RJ-48	Table Top, same except semisubmerged - with chip chute;	10 1/2 inch	2 1/4 inch
21371 RL-48	Table Top, same except semisubmerged - with chip chute;	7 1/2 inch	2 1/4 inch
21371 WL-48	Table Top, same except fullysubmerged - with chip chute;	7 1/2 inch	2 1/4 inch
21371 RC-47 3/4	Table Top, 47 3/4 x 16 x 1 3/4 inches, for nonsubmerged lineshaft installation - no chip chute;	7 1/2 inch	3/8 inch
21371 RE-47 3/4	Table Top, same except nonsubmerged with chip chute;	7 1/2 inch	3 inch
21371 RH-47 3/4	Table Top, same except semisubmerged - with chip chute;	7 1/2 inch	2 1/4 inch

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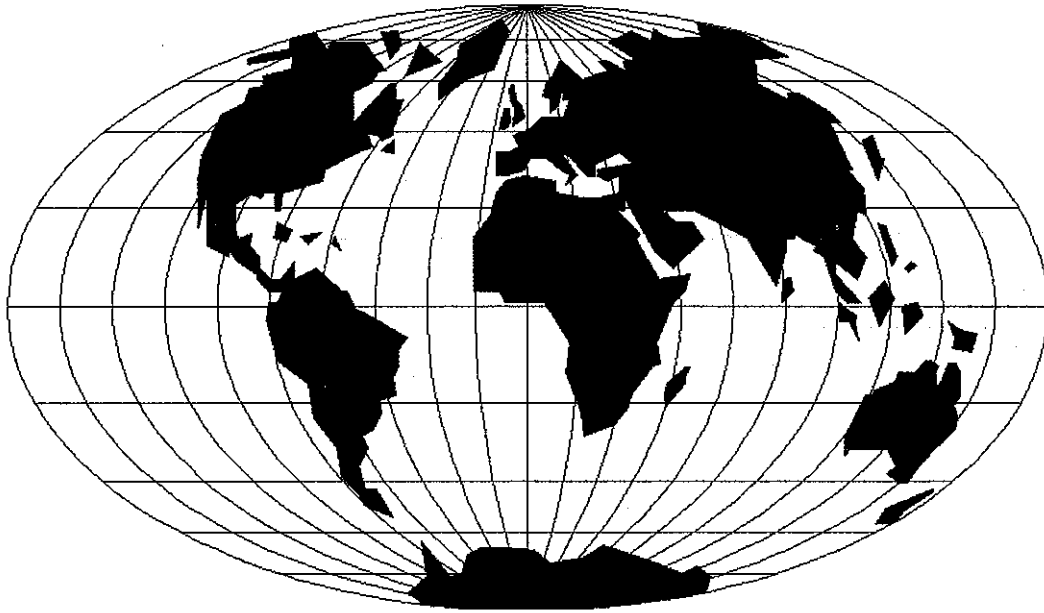
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