

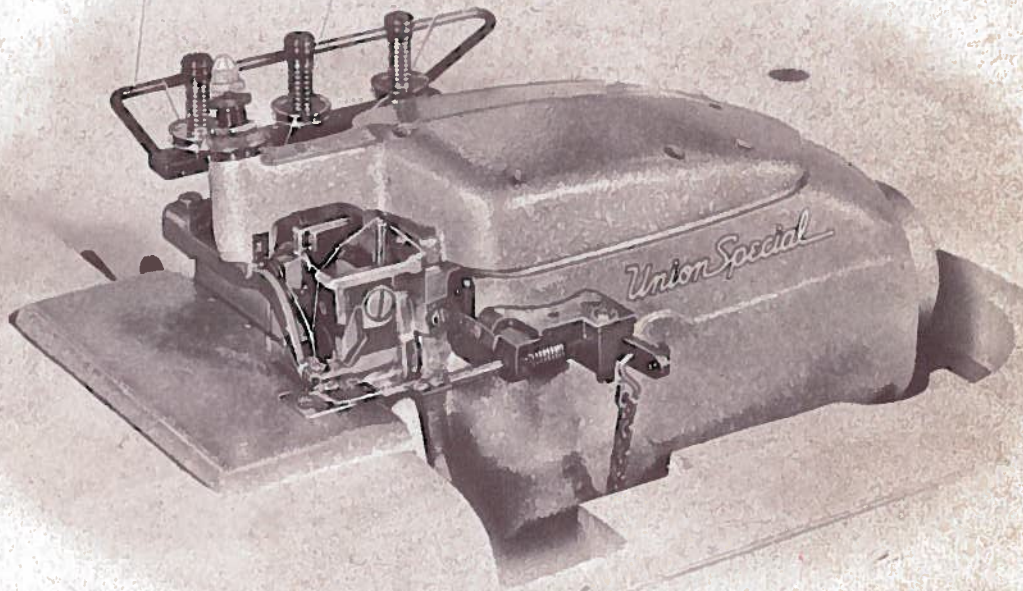
BEST QUALITY

Union Special[®]

LEWIS • COLUMBIA

INDUSTRIAL
SEWING
MACHINES

STYLES
39500S
39500T
39500U



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CLASS 39500

**STREAMLINED
HIGH SPEED OVERSEAMERS**

CATALOG
No.
103U
Second
Edition

Union Special MACHINE COMPANY
CHICAGO

Catalog No. 103 U

INSTRUCTIONS

FOR

ADJUSTING AND OPERATING

LIST OF PARTS

CLASS 39500

Styles

39500 S

39500 T

39500 U

The parts listed in this catalog are
furnished at list prices for repairs only.

Second Edition

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Union Special
MACHINE COMPANY
INDUSTRIAL SEWING MACHINES
CHICAGO

Printed in U.S.A.

November, 1967

FOREWORD

The Class 39500 machine is Union Special's latest overedger. New streamlined styling, automatic lubrication, and light running high speed performance are characteristics of these machines. All parts are made by precision methods insuring complete interchangeability.

It is our constant aim to furnish carefully prepared information that will enable the customer to secure all possible advantages from the use of Union Specials. The following pages contain valuable operating and adjusting data, and illustrate and describe the parts for Styles in Class 39500.

Union Special representatives will be found in all manufacturing centers, anxious to cooperate with you to plan and estimate requirements.

Union Special MACHINE COMPANY

Engineering Department

IDENTIFICATION OF MACHINES

Each Union Special carries a Style number which is stamped in the 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 S". 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 SZ".

Styles of machines similar in construction are grouped under a Class number, which 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 machines in Class 39500. All references to directions, such as right and left, front and back, etc., are taken from the operator's position while seated at the machine. Operating direction of handwheel is away from operator.

STYLES OF MACHINES

Single Curved Blade Needle, Two Looper, Three Thread, Overseaming Machine. Intermittent Differential Feed, Trimming Mechanism with Spring Pressed Lower Knife, Automatic Lubricating System.

39500 S For seaming and intermittently gathering on knit or light weight woven materials. Seam specification 504-SSa-1. Standard width of seam 1/8 inch. Knee press controlled tandem intermittent differential feed. Slotted presser foot to separate top and bottom plies. Gathering ratio up to 3 to 1 depending on stitch length.

39500 T For seaming and intermittently gathering primarily on woven material. Seam specification 504-SSa-1. Standard width of seam 3/16 inch. Knee press controlled tandem intermittent differential feed. Presser foot bottom grooved for 1/8 inch cord. Independent swing-out auxiliary pressure plate attachment. Gathering ratio up to 3 to 1 depending on stitch length.

39500 U For seaming and intermittently gathering primarily on woven material. Seam specification 504-SSa-1. Standard width of seam 3/16 inch. Knee press controlled tandem intermittent differential feed. Presser foot bottom grooved for 1/8 inch cord. Independent swing-out auxiliary pressure plate attachment. Gathering ratio up to 5 to 1 depending on stitch length.

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 200 to 250 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 bulb on oil level indicator should show between gauge lines.

THREAD STAND

After thread comes from cone on thread stand (V, Fig. 1), it is brought up through back thread eyelet, then down through front thread eyelet (W). Next it is threaded through each pair of holes in tension thread guide wire (A), down right hand hole and up through left hand hole. Then thread continues between tension discs (AD), through slot (AE), and on through thread guide (B).

THREADING

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

It will simplify threading this machine to follow recommended sequence of threading lower looper first, upper looper second, and needle third.

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

Be sure threads, as they come from the tension thread guide, are between tension discs (AD) and in diagonal slots (AE) in tension posts (AC).

TO THREAD LOWER LOOPER

Double end of thread and lead it through both eyes of lower looper thread eyelet (E, Fig. 1) from right to left. Note: thread must pass in front of looper thread pull-off (T). Lead thread behind fabric guard (F) and through both holes of frame looper thread guide (G). Turn handwheel in operating direction until heel of lower looper (K) 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 UPPER LOOPER

Turn handwheel until point of upper looper (L) is all the way left. Lead thread through auxiliary looper thread eyelet (D) from back to front, then through both eyes of upper looper thread eyelet (C) from left to right. Note: thread must pass in front of looper thread pull-off (T). After pulling up upper looper thread tube assembly (M), lead thread under neck of top cover casting and down through thread tube assembly (M). Pull thread out bottom of tube; push tube down, then insert thread through upper looper eye from front to back.

CAUTION! Be sure upper looper thread is under lower looper thread when passing from tube assembly to upper looper eye.

TO THREAD THE NEEDLE

Turn handwheel in operating direction until needle (N, Fig. 1) is at its highest position. Insert needle thread from right to left, through both eyes of needle thread eyelet (R), under neck of top cover casting; then down through hole in top cover needle thread eyelet (P). Thread needle from front.

THREAD TENSION

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

PRESSER FOOT PRESSURE

Sufficient 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).

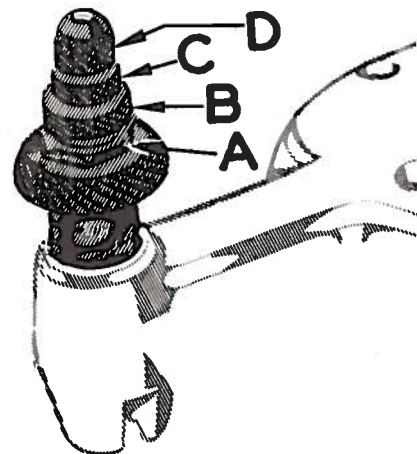


Fig. 2

FEED ECCENTRICS

Feed eccentrics used in these machines have been selected to produce approximately 14 stitches per inch. It will be noted that the part number of main feed eccentric is No. 39540-14 while that of differential feed eccentric is No. 39540-4 for Styles 39500 S, T and No. 39540 A for Style 39500 U. Minor numbers of the part symbols indicate approximately the number of stitches obtainable when using that eccentric. No. 39540 A eccentric produces approximately 3 1/3 stitches per inch. Unless otherwise specified, machines will be shipped with above combinations of eccentrics.

Generally speaking, the main (right hand) feed eccentric determines number of stitches produced; the differential (left hand) feed eccentric is selected so as to give the proper differential or gathering action.

Following stitch number feed eccentrics are available under No. 39540- 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 two eccentrics are supplied with each machine. Additional eccentrics may be ordered separately. To order an eccentric, use No. 39540 with a minor number suffixed to indicate number of stitches desired. Example: "39540-12". No. 39540 A, producing approximately 3 1/3 stitches per inch is also available for 5 to 1 ratio differential feed machines.

ASSEMBLING AND ADJUSTING SEWING PARTS

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

SETTING THE NEEDLE

With throat plate in position, needle should center in the front end of needle slot. When needle is at high position, needle point should be set 1/2 inch above throat plate (Fig. 3). Move needle driving arm (A, Fig. 3) by loosening clamp screw (B). Remove throat plate.

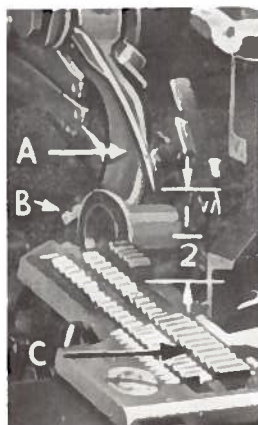


Fig. 3

If needle thread cam pull-off (A, Fig. 4) overlaps looper thread pull-off (B), separate by moving looper thread pull-off back. When retightening looper pull-off screw, be sure to take up end play in needle driving arm.

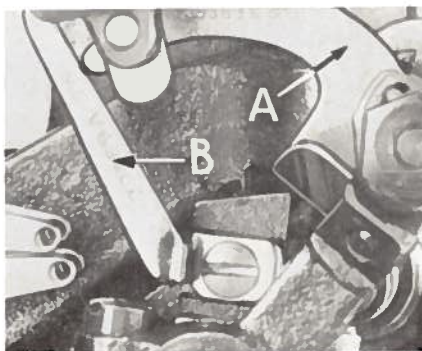


Fig. 4

SETTING THE NEEDLE (Continued)

At this point, insert lower looper (A, Fig. 6) into bar (B). With lower looper at left end of its stroke, set looper point $\frac{1}{8}$ inch from center of needle (Fig. 6), using looper gauge No. 21225- $\frac{1}{8}$. Do not have lower looper deflecting needle. Tighten nut.

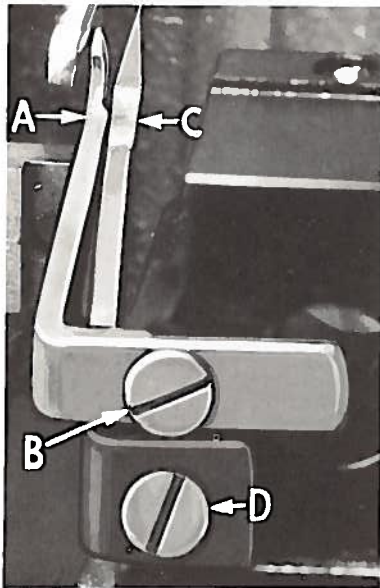


Fig. 5

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. 7) until the needle springs forward from rear 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 differential feed dog.

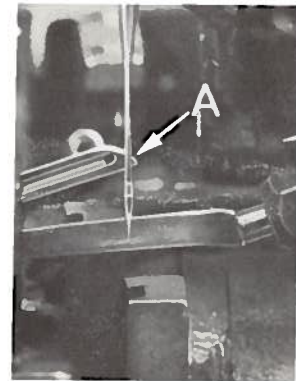


Fig. 7

SETTING THE UPPER LOOPER

Insert upper looper (A, Fig. 8) in its holder. Screw (B, Fig. 8) 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. 8) on clamp holds the upper looper holder in the shaft. Locate upper looper in its holder so that the shank extends $\frac{1}{16}$ to $\frac{3}{32}$ inch beyond holder (Fig. 8).

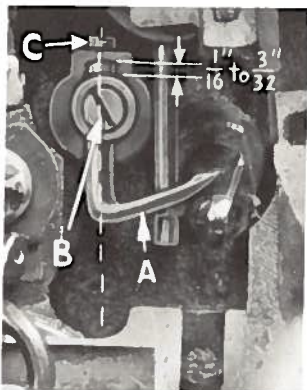


Fig. 8

When the upper looper is at the right end of its stroke, upper looper holder should be set to position upper looper shank about vertically. Be sure, on all styles there is a clearance between heel of looper and casting.

SETTING THE UPPER LOOPER (Continued)

By adjusting looper holder in or out of upper looper shaft and by turning the looper around its shank, set upper looper point to cross lower looper to the left of the lower looper eye with 0.002 to 0.004 clearance (Fig. 9).

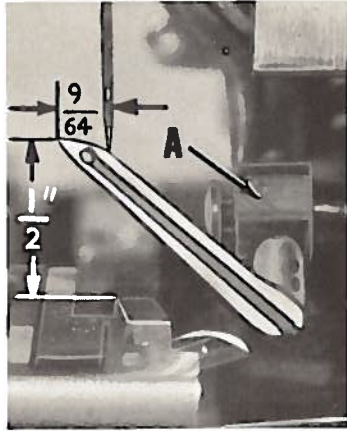


Fig. 10

Next turn handwheel until looper is at the left end of its travel; check dimensions of upper looper point with respect to needle and throat plate (Fig. 10). If resetting is necessary, do it by moving the upper looper holder (A, Fig. 10).

Dimension 1/2 inch is increased by turning upper looper holder counterclockwise looking from left end of machine; dimension 9/64 inch is increased by pulling upper looper holder left, out of 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. 9.

When the correct setting is obtained, it can be checked quickly as follows: As upper looper is moving to the right, when upper looper eye centers on the needle, the eyes of the upper looper and needle should align exactly (Fig. 11).

Check setting to avoid interference between upper looper and needle on needle downstroke. 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 Fig. 9, 10, 11.

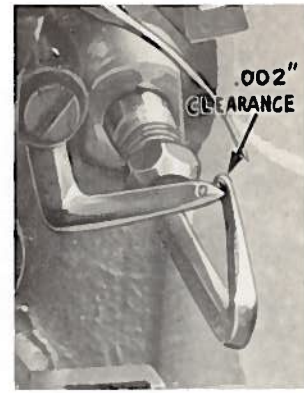


Fig. 9

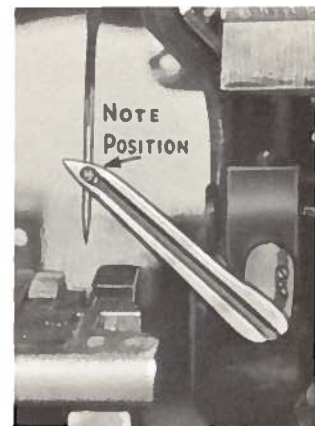


Fig. 11

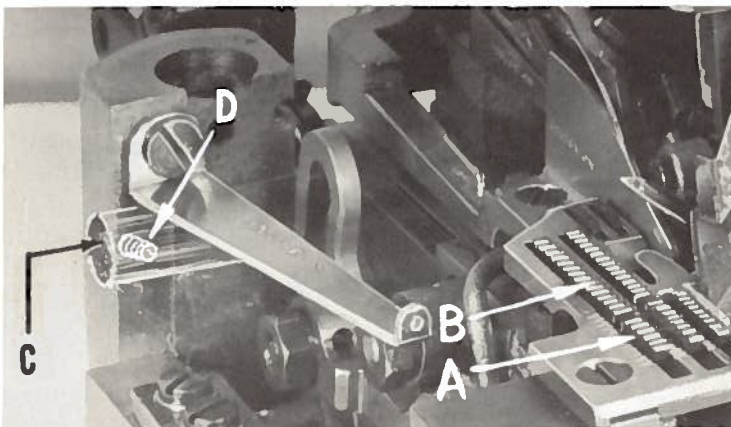


Fig. 12

SETTING THE FEED DOGS

Assemble and set the differential feed dog (A, Fig. 12) and main feed dog (B) so the top surfaces of the teeth all lie in the same plane. This can be checked by sighting across teeth with a straight edge. Feed dogs should now be leveled with throat plate surface by rotating feed tilting adjusting pin (C). This pin raises or lowers the back end of both feed bars at the same time.

SETTING THE FEED DOGS (Continued)

The feed dogs should be set level at the time the teeth first appear above the throat plate. Screw (D) locks feed tilting adjusting pin in place. Now set feed dogs so that teeth rise about 3/64 inch above the throat plate. The differential feed may be set slightly higher if desired.

SETTING THE LOWER KNIFE

Replace lower knife holder assembly. Lower knife (A, Fig. 13) should be set with cutting edge flush with throat plate surface. Adjustments are made with hexagonal head screw which holds lower knife. Lower knife 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. 13) in position, setting nut (E) to hold clamp (F) in its most clockwise position against upper knife. At 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 (J) 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.

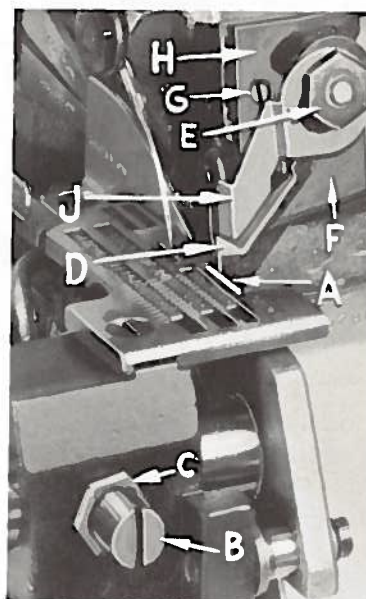


Fig. 13

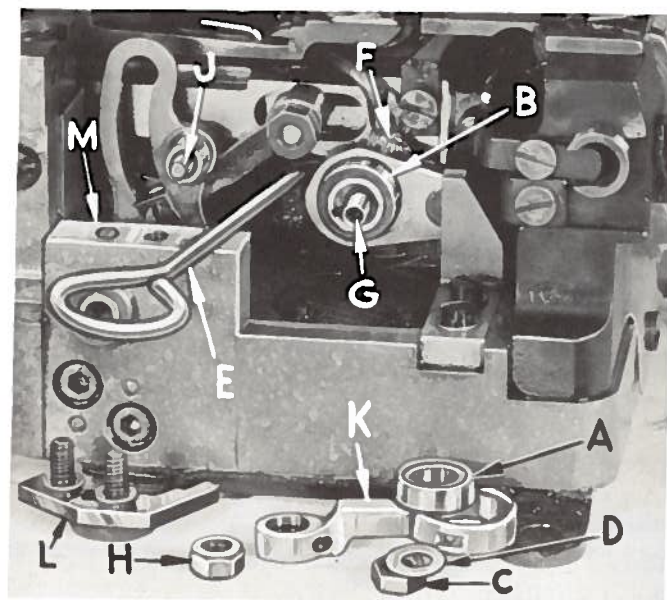


Fig. 14

Remove nut (C) and washer (D) from end of shaft (G). Remove nut (H) from stud (J). Link (K) and eccentric (A) will now slip off.

SETTING THE STITCH LENGTH

Length of stitch is determined by the combination of feed eccentrics used. Outer (left) eccentric (A, Fig. 14) actuates differential (front) feed dog; while the inner (right) eccentric (B) actuates the main (rear) feed dog.

In assembling feed eccentrics, be sure hubs are facing each other. Be careful not to damage shaft or key. Use nut (C) and washer (D) and tighten securely. Be sure wool yarn in oil tube (F) touches feed eccentric connections.

To change feed eccentric, remove thrust finger (L) from its seat on the main frame (M). Remove nut (C) and washer (D) from end of shaft (G). Remove nut (H) from stud (J). Link (K) and eccentric (A) will now slip off.

SETTING THE STITCH LENGTH (Continued)

Using hooked eccentric extractor (E), supplied with machine, reach behind eccentric (B) as shown and withdraw eccentric. It may be necessary to move handwheel back and forth slightly during extraction.

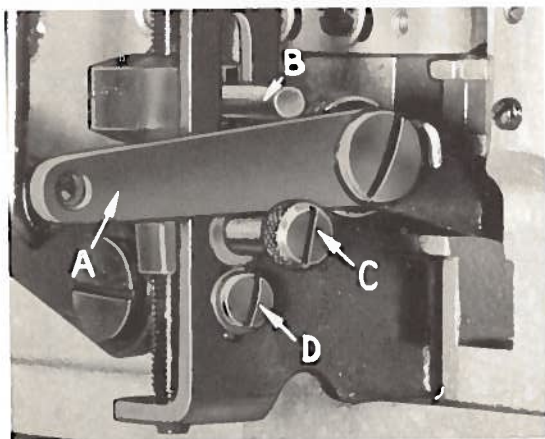


Fig. 15

SETTING THE DIFFERENTIAL RATIO

Differential, plain, or reverse differential feed action is obtainable thru use of the micrometer adjusting screw (Fig. 15).

The position of the differential control lever (A) is governed by two settings--the top stop (B) and the lower stop screw (C). Amount of movement by lever between (B) and (C) determines feed action.

Rotation of adjusting thumbscrew (located near tension post assembly) clockwise (moving top stop down) increases differential action. A counterclockwise turn acts the reverse.

The micrometer adjusting screw for the top stop is ideal for continuous shirring operations where various sizes are encountered.

For intermittent operations, it may be advantageous to reverse the stops--so the adjusting screw stop (B) is for lower stop, and the stationary stop (C) is for upper position.

The 3 to 1 ratio machines are equipped with a stop screw (D) to prevent differential feed dogs from striking the throat plate when a machine is set at maximum differential, and screw should not be removed.

SETTING THE PRESSER FOOT

Assemble presser foot to presser arm. With needle in high position, swing presser arm into sewing position and lock in place. If necessary, presser foot can be realigned with throat plate slots by shifting foot lifter lever shaft.

Foot lifter lever arm (A, Fig. 16) and collar (B) secure the shaft. Be sure presser arm does not bind and rise when presser foot release bushing is unlocked. To center presser foot and stitch tongue with respect to throat plate needle hole, loosen presser foot hinge screw.

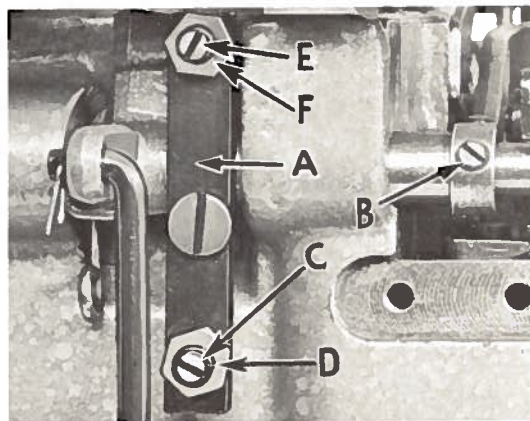


Fig. 16

Adjust lifter lever stop screw (C) so that presser foot can be raised no higher than upper looper will permit, then, lock nut (D). To find this maximum safe position, turn the handwheel so point of upper looper is directly over presser foot tongue. Raise presser foot by depressing the presser foot treadle and manually lower the toe of foot. Height adjustment is correct if presser foot tongue does not contact the upper looper. There should be from 1/16 to 1/8 inch free motion of foot lifter lever before presser foot begins to rise. This adjustment is made with screw (E), locked with nut (F).

Finally, re-assemble chip guard, fabric guard, cloth plate.

SETTING THE AUXILIARY PRESSURE PLATE

Styles 39500 T, U are equipped with an auxiliary pressure plate assembly (Fig. 17) which operates in conjunction with the presser foot.

To check the operation of this assembly, proceed as follows:

1. Swing it out of operating position and see that it hinges freely on its pivot. Adjustment is made by screw (A) and nut (B).
2. Set the adjusting screw (C) so that shaft (D) is parallel to the axis of the main shaft of the machine.

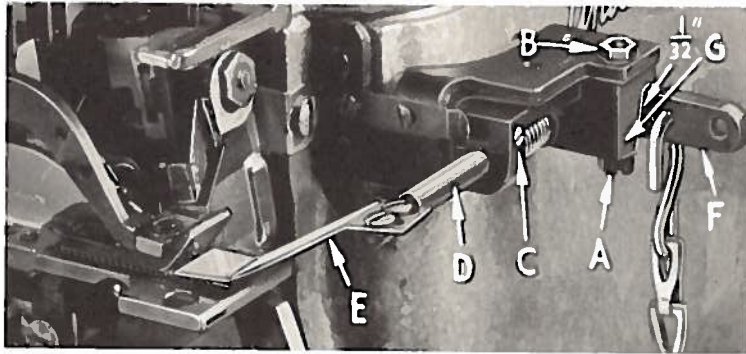


Fig. 17

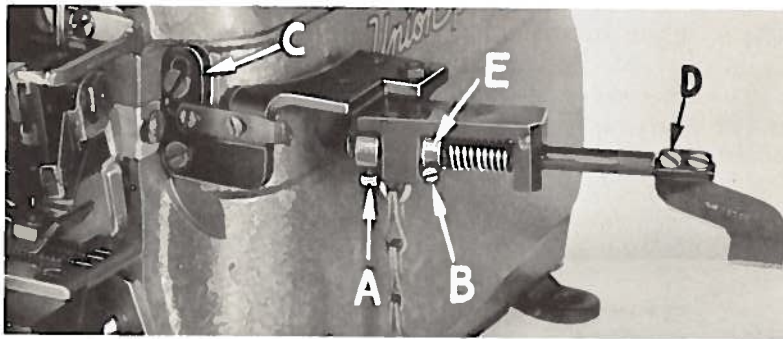


Fig. 18

in either direction about 180° from operating position and tighten screw (B, Fig. 18).

3. Adjust the shaft (D) laterally so that the pressure plate (E) locates centrally over the differential feed dog. Loosen screws (A and B, Fig. 18) to do this. Making this adjustment will release the spring tension on the pressure plate. To re-gain the tension, swing the pressure plate out and turn the shaft (D, Fig. 17)
4. With the differential feed dog down below the surface of the throat plate, and the pressure plate resting on the throat plate with the maximum pressure the spring will allow, there should be about $1/32$ inch clearance between the operating lever (F, Fig. 17) and the hinge block (G). To make this adjustment loosen screw (A, Fig. 18) and move lever to desired position.
5. With the differential feed dog at its highest point of travel, raise or lower the mounting bracket (C, Fig. 18) so that the auxiliary pressure plate is parallel with feed dog teeth.
6. Adjust the pressure plate in or out towards presser foot, maintaining it parallel with the feed dog, so that there is sufficient clearance between the end of plate and presser foot to permit free passage of the thickest part of the top ply being sewn. Use the two screws (D, Fig. 18) for this adjustment.
7. There are two spring anchoring holes in collar (E, Fig. 18) which may be used for increasing or decreasing spring tension on auxiliary pressure plate.
8. A chain is provided for raising the auxiliary pressure plate in conjunction with the presser foot. Couple this chain from the operating lever (F, Fig. 17) to the presser foot lifter chain so that when the foot lifter treadle is depressed, the presser foot raises before the pressure plate. The chain is normally attached to the operating lever at the inside hole.

STARTING TO OPERATE

Be sure machine is threaded according to threading diagram (Fig. 1, page 6). With thread tensions light, set looper thread eyelets (C & E) about horizontal and in the middle of their front to back locations. Operate machine slowly, without presser foot in place, to make sure that chain forms and moves off the tongue freely. Swing presser foot into position, insert material, and sew slowly.

NEEDLE THREAD CONTROL

While sewing on material, check needle thread control as follows: Usually all needle thread is drawn on needle down stroke. At top of needle stroke, thread should be just tight enough to feed chain off stitch tongue. Stitch tends to pull down slightly if excessive thread is pulled on the up stroke. With needle at bottom of stroke, position needle thread eyelet (R, Fig. 1) so that needle thread cam pull-off (S) just contacts needle thread.

It is also desirable to adjust the needle thread pull-off eyelet well-forward (toward the operator) to delay, slightly, the tightening of the needle thread.

LOWER LOOPER THREAD CONTROL

With material under presser foot, set lower looper thread eyelet (E, Fig. 1) back far enough so thread is a little slack when looper thread pull-off (T) reaches its most rearward position. Looper thread pull-off (T) is set about 1/8 inch distance behind needle thread cam pull-off (S). Frame looper thread guide (G) should be set with its left hand eyelet approximately 1/8 inch right of lower looper (K) heel eyelet at the time lower looper is at extreme left end of its travel.

While sewing on material, check drawing off of looper thread as follows: A portion of lower looper thread should be drawn through the tension before lower looper thread comes off upper looper. To increase amount of thread drawn through the tension while lower looper thread is on upper looper, move lower looper thread eyelet (E) down, keeping the same amount of pull-off action.

UPPER LOOPER THREAD CONTROL

Before proceeding to adjust upper looper thread eyelet (C, Fig. 1) balance all three tensions to give a normal appearing stitch. Moderate change in these tensions will not markedly effect the purl.

During needle down stroke, forward stroke of looper thread pull-off (T) will draw upper looper thread through the tension. When normal amount of looper thread is drawn, upper looper thread will have almost all slack taken up as looper thread pull-off reaches its most rearward position.

POSITIONING THE PURL

To move the purl more under the edge, both looper thread eyelets (C & E, Fig. 1) should be raised keeping the same amount of pull-off. Usually it is better to have slightly more pull-off on upper thread than on lower thread.

If it becomes necessary to move looper thread pull-off (T) be sure to take up all end play in needle drive shaft before tightening. If upper looper is located so that it is higher over throat plate than recommended in (Fig. 10), the purl will tend to form near top edge. If upper looper is too low, the purl will form nearer bottom edge.

THREAD TENSIONS

The needle thread tension required is a function of needle thread and material being sewn. In general, lower looper thread tension should be set as high as possible without causing needle thread to be pulled down. Upper looper thread tension should be increased as long as the elasticity of the chain increases, or until the purl is pulled too far over the top.

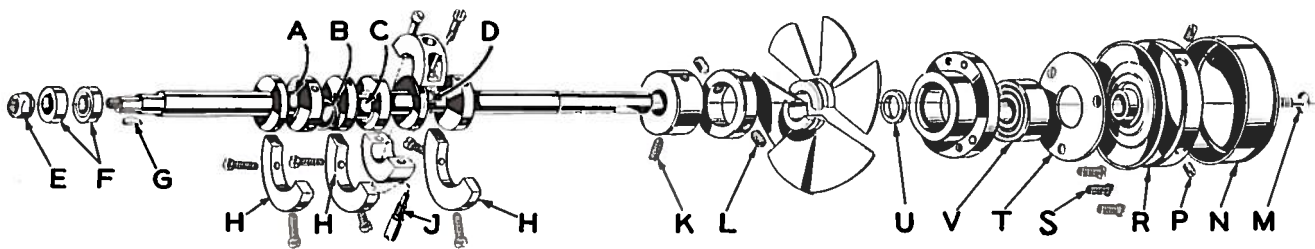


Fig. 19

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 (E, Fig. 19) and, with the aid of the eccentric extractor, slip off the eccentrics (F).
4. Remove key (G).
5. Remove three counterweights (H). Identify these counterweights so that they will be re-assembled in the proper places.
6. Remove screw (J) which holds crankshaft split bearing. This screw is reached through bottom of bed casting.
7. Remove caps of bearings on crankshaft at points A, B, and D. 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.
8. Loosen clamp nut (A, Fig. 20) 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 (C, Fig. 19) on crankshaft. Observe same precautions when re-assembling cap as described in 7 above.
9. Remove screw (K, Fig. 19) which holds inner right crankshaft bearing. This screw is reached through bottom of bed casting.
10. Loosen two screws (L) in fan collar; remove both halves of cooling fan.
11. Remove screw (M); take off pulley cap (N).
12. Loosen two screws (P); remove pulley (R).
13. Remove three screws (S); take off bearing retaining plate (T).
14. Crankshaft may now be removed.
15. If necessary to replace ball bearing (V), 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 (U).
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.

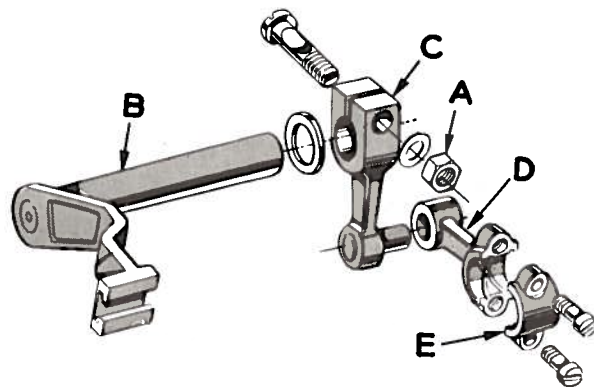


Fig. 20

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 number, 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 numbers 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:

40	29126 DF	Lower Looper Bar Driving Lever and Connecting Rod Assembly-----	1
41	22729 D	Screw, for No. 39544 N-----	2
42	97	Screw, for No. 39544 S-----	2
43	39544 S	Ball Joint Guide Fork-----	1
44	39544 U	Lower Looper Bar Driving Lever-----	1
45	22729 E	Screw, for No. 39544 N-----	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.

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 the 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 the catalog in which they appear.

USE GENUINE NEEDLES AND REPAIR PARTS

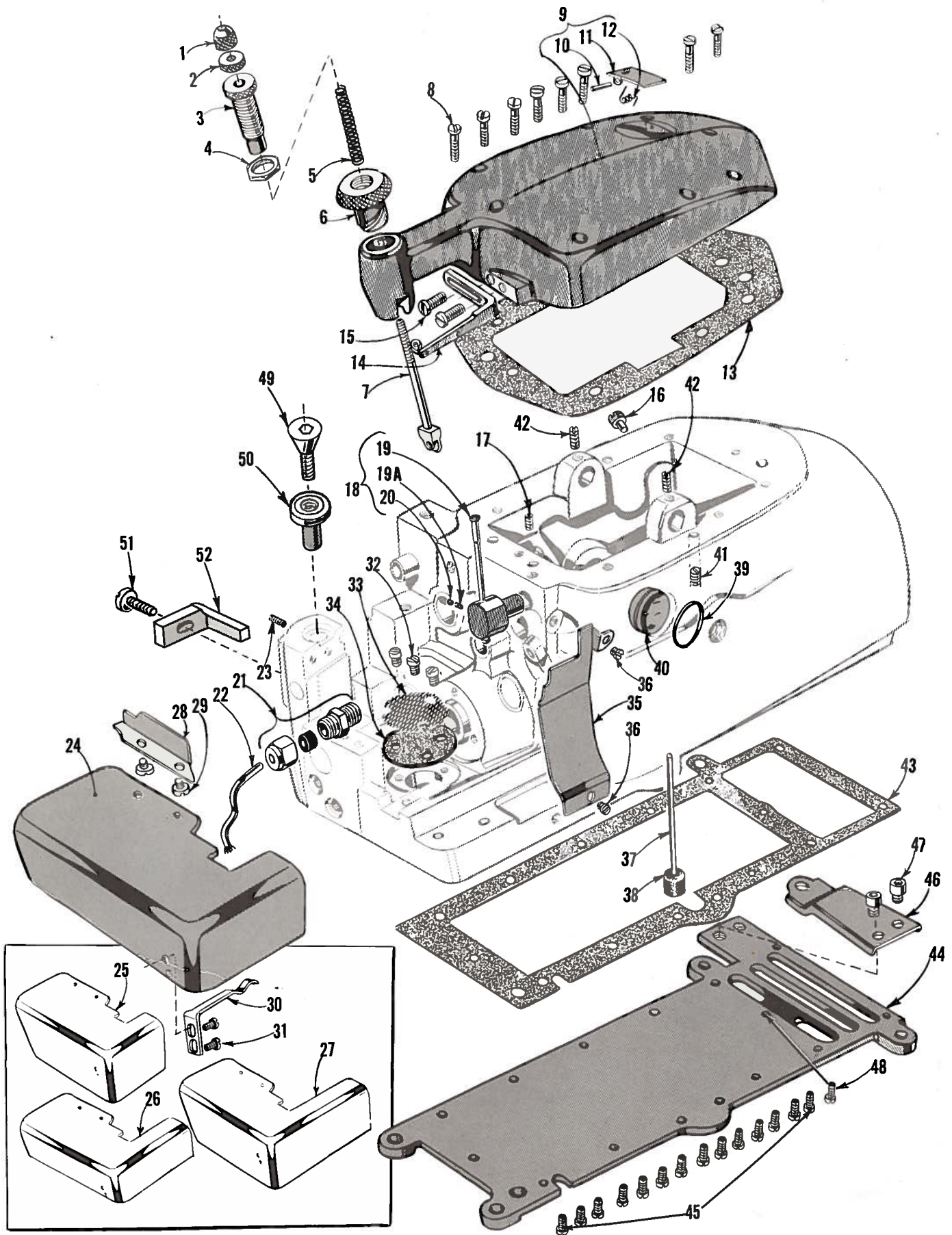
Success in the operation of these machines can be secured only with genuine Union Special Needles and Repair Parts as furnished by the Union Special Machine Company, its subsidiaries and authorized distributors. They are designed according to the most approved scientific principles, and are made with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

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

TERMS

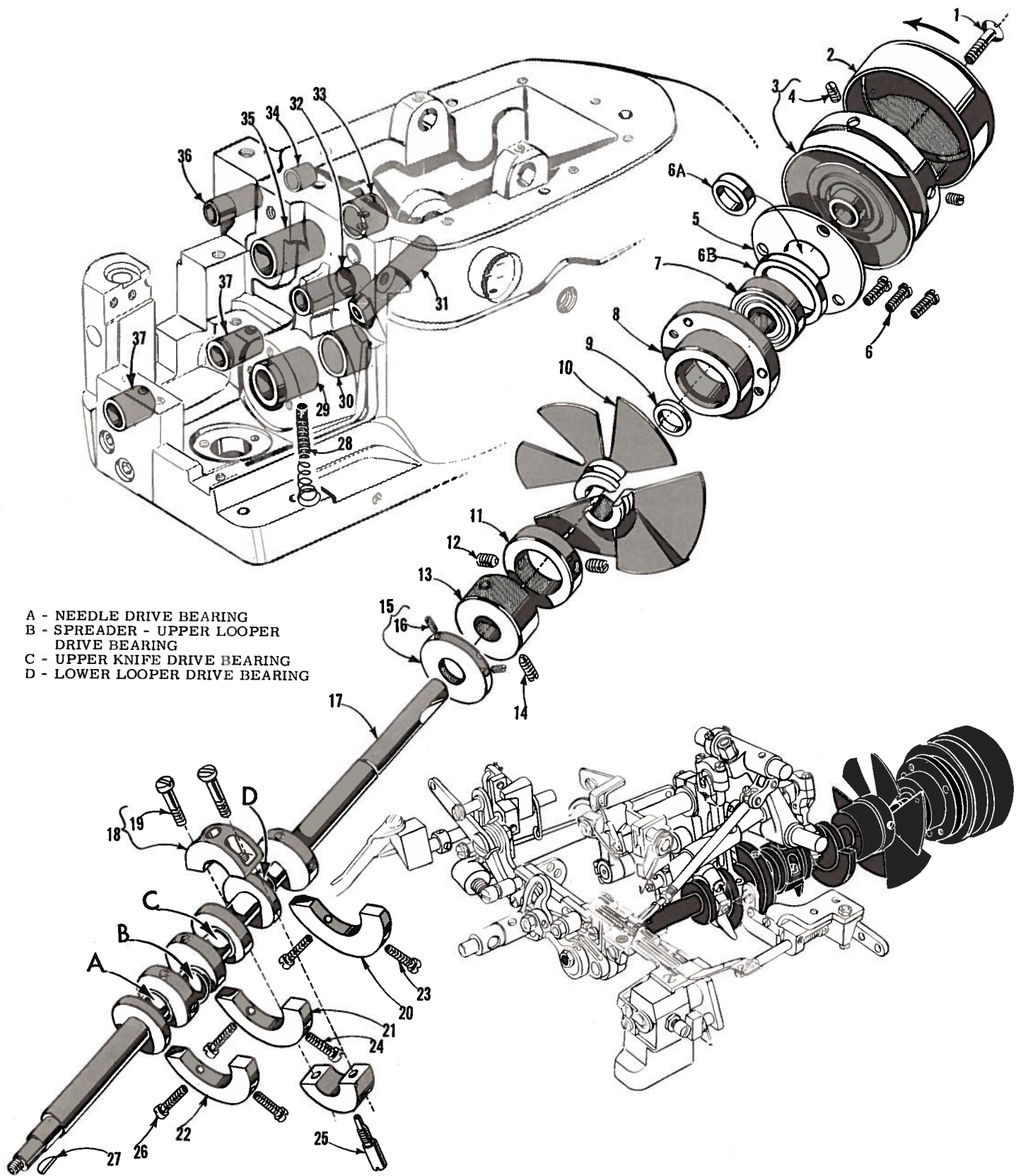
Prices are net cash and are subject to change without notice. All shipments are forwarded f. o. b. shipping point. Parcel Post shipments are insured unless otherwise directed. A charge is made to cover postage and insurance.

ILLUSTRATIONS
AND
PARTS LISTINGS
FOR
STYLES 39500 S, T, U



MAIN FRAME, MISCELLANEOUS COVERS, PLATES

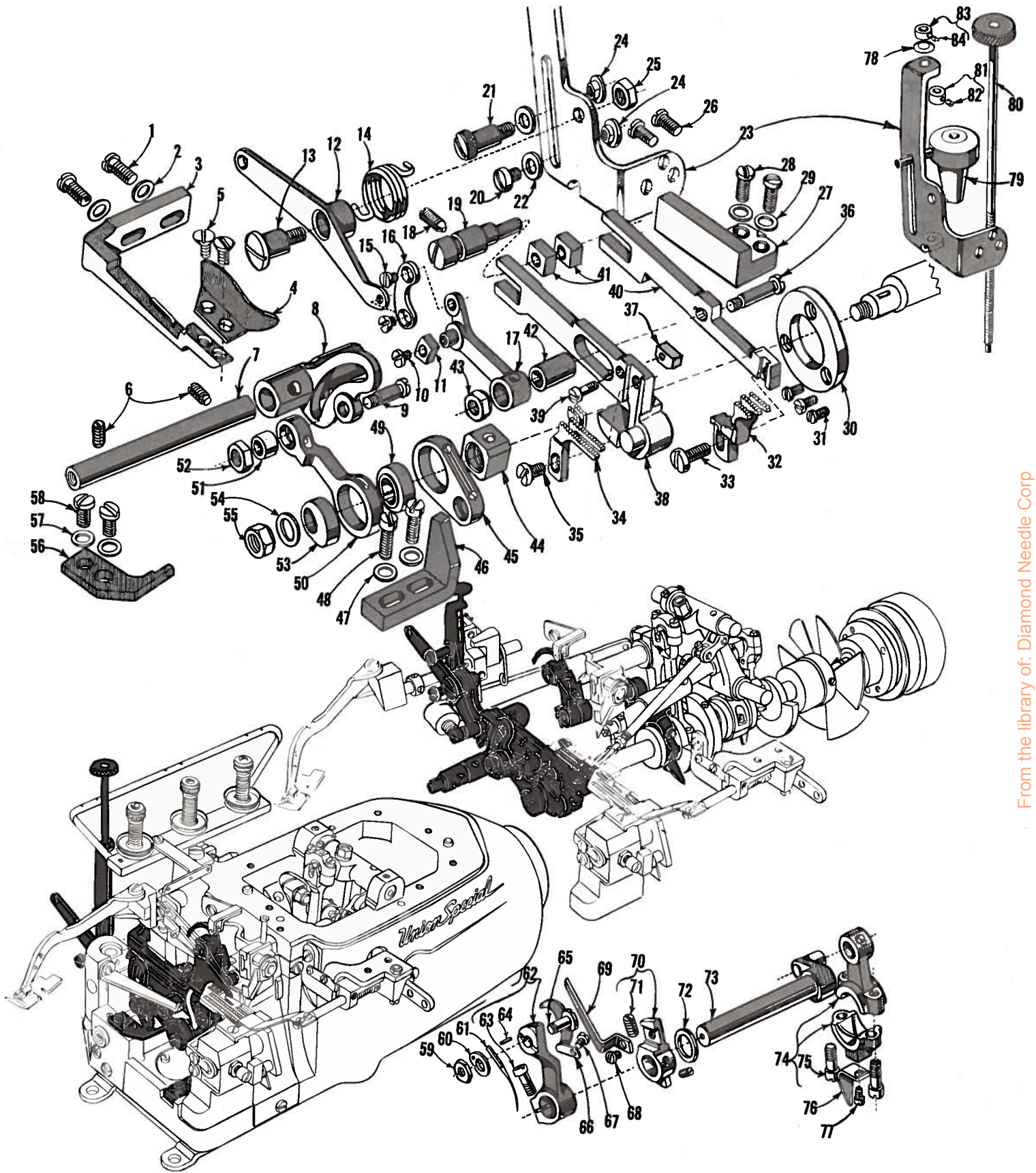
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39557 B	Cap Nut-----	1
2	39557 E	Locking Nut-----	1
3	39557 C	Adjusting Screw-----	1
4	39557 F	Lock Nut-----	1
5	39557	Presser Spring-----	1
6	39556 A	Presser Foot Release Bushing-----	1
7	39557 A	Presser Spring Plunger-----	1
8	22541	Screw-----	8
9	39582 S	Top Cover-----	1
10	51-103 Blk.	Hinge Pin-----	1
11	39582 L	Oil Filler Cover-----	1
12	39582 V	Spring-----	1
13	39582 AA	Top Cover Gasket-----	1
14	39563 F	Top Cover Needle Thread Eyelet-----	1
15	22569 B	Screw-----	2
16	22571 E	Magnetic Oil Drain Plug Screw-----	1
17	22565	Screw - Upper Looper Thread Tube Assembly-----	1
18	29477 GW	Upper Looper Thread Tube Assembly-----	1
19	39568 G	Thread Tube-----	1
19A	39568 J	Spring-----	1
20	22743	Set Screw - Tube Tension Spring-----	1
21	660-234	Oil Tube Coupling-----	1
22	39594 B	Feed Bar Connecting Rod Oil Tube-----	1
23	22565 B	Screw - Cloth Plate, with stud attached-----	1
	22569	Screw - Cloth Plate Stud No. 39501 K-----	1
24	39501 A	Cloth Plate - semisubmerged installation-----	1
	39501 AH	Cloth Plate - semisubmerged installation, for use with throat plate 1/16 inch longer in front-----	1
25	39501	Cloth Plate - nonsubmerged installation-----	1
	39501 J	Cloth Plate - nonsubmerged installation, for use with throat plate 1/16 inch longer in front-----	1
26	39501 C	Cloth Plate - semisubmerged installation-----	1
27	39501 B	Cloth Plate - nonsubmerged installation-----	1
28	39578 K	Cloth Plate Fabric Guard-----	1
29	138	Screw-----	2
30	39532 A	Latch Spring-----	1
31	90	Screw-----	2
32	22569 A	Screw-----	3
33	39594 G	Oil Filter Screen-----	1
34	39594 H	Oil Strainer-----	1
35	39578 H	Chip Guard-----	1
36	22569 D	Screw-----	2
37	39593 D	Oil Gauge Indicator-----	1
38	39593 C	Oil Gauge Float-----	1
39	660-243	Oil Gauge Seal Ring-----	1
40	39593 E	Oil Sight Gauge-----	1
41	22894 AD	Screw - Lower Looper Bar Drive Lever Shaft-----	2
42	22565	Screw - Upper Looper Drive Lever Shaft-----	2
43	39582 Y	Bottom Cover Gasket-----	1
44	39582 X	Bottom Cover-----	1
45	22569 C	Screw - Bottom Cover-----	14
46	39582 F	Bottom Cover and Base Plate Extension-----	1
47	22653 D-4	Screw-----	2
48	22586 R	Screw - Bottom Cover-----	1
49	22657 D-12	Screw - Cloth Plate-----	1
50	39501 K	Stud - Cloth Plate-----	1
51	22569 C	Screw - Feed Bar Guide, rear-----	1
52	39535 H	Feed Bar Guide, rear-----	1



CRANKSHAFT MECHANISM AND BUSHINGS

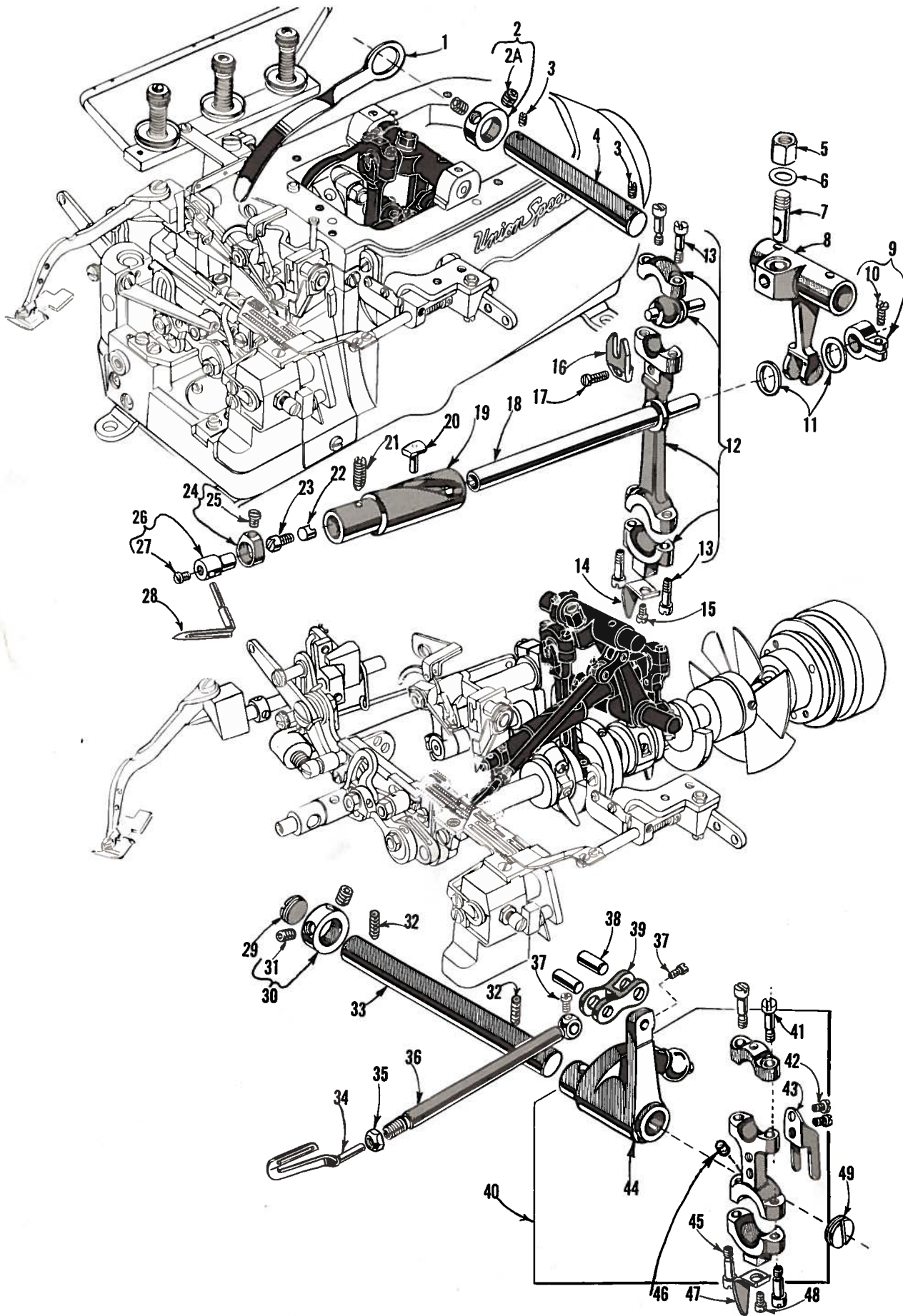
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	22769 A	Screw -----	1
2	39521 A	Pulley Cap -----	1
3	39521	Pulley -----	1
4	95	Screw -----	2
5	39590 H	Crankshaft Ball Bearing Retaining Plate-----	1
6	22569	Screw -----	3
6A	39590 S	Spacer Collar -----	1
6B	39590 R	Ball Bearing Stop Collar-----	1
7	660-268	Crankshaft Ball Bearing -----	1
8	39590 G	Crankshaft Ball Bearing Housing -----	1
9	39590 J	Thrust Washer -----	1
10	39591 G	Crank Chamber Cooling Fan -----	1
11	39591 H	Crank Chamber Cooling Fan Collar -----	1
12	22894 D	Screw -----	2
13	39590 K	Crankshaft Bearing, inner right -----	1
14	22565 F	Screw -----	1
15	39590 P	Oil Slinger Collar-----	1
16	77 Q	Screw -----	2
17	39522 B	Crankshaft -----	1
18	39590 D	Crankshaft Split Bearing-----	1
19	97 A	Screw -----	2
20	39591 B	Crankshaft Counterweight, right-----	1
21	39591 A	Crankshaft Counterweight, middle -----	1
22	39591	Crankshaft Counterweight, left -----	1
23	22747 B	Screw -----	2
24	22747 B	Screw -----	2
25	39590 N	Stud -----	1
26	22747 B	Screw -----	2
27	39541	Feed Driving Eccentric Key-----	1
28	666-94	Oil Wick and Spring -----	1
29	39590	Crankshaft Bushing, left-----	1
30	39590 C	Crankshaft Bushing, inner left -----	1
31	39544 L	Lower Looper Bar Bushing -----	1
32	39552 B	Needle Driving Arm Crank Bushing -----	1
33	39573 L	Upper Knife Driving Arm Bushing, right -----	1
34	39142 G	Foot Lifter Shaft Bushing, right -----	1
35	39573 K	Upper Knife Driving Arm Bushing, left-----	1
36	39555 E	Foot Lifter Shaft Bushing, left -----	1
37	43243 N	Differential Feed Rocker Shaft Bushing-----	2

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NEEDLE DRIVE AND FEED MECHANISM

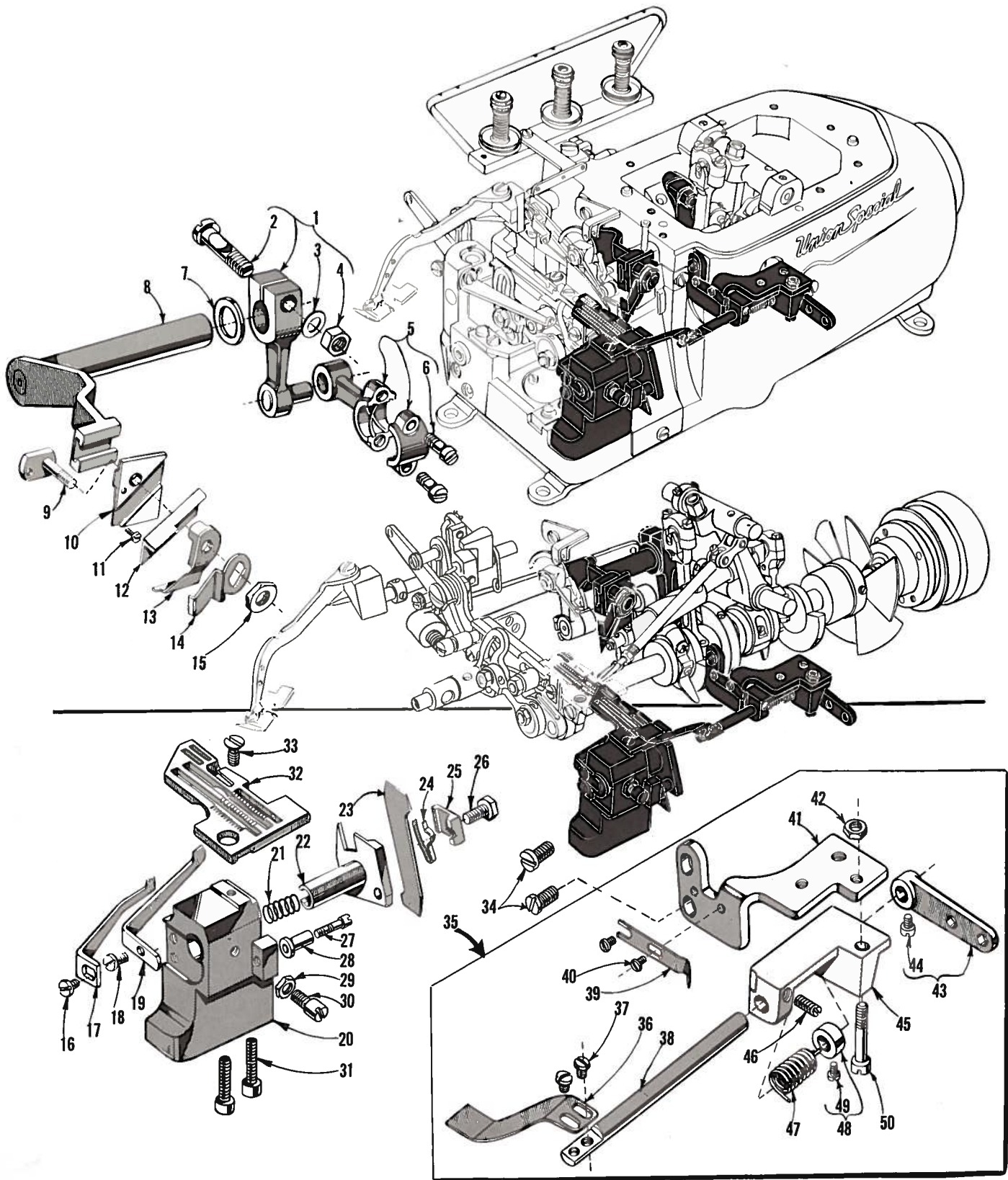
Ref. No.	Part No.	Description	Amt. Req.
1	22569 B	Screw	2
2	8372 A	Washer	2
3	39578 P	Fabric Guard Mounting Bracket	1
4	39578 M	Fabric Guard	1
5	87	Screw	2
6	22565 B	Screw	2
7	39536 M	Differential Feed Rocker Shaft	1
8	39536 L	Differential Feed Rocker	1
9	39536 J	Differential Feed Driving Connection Stud	1
10	28	Screw	1
11	39536 N	Differential Feed Regulating Sliding Block	1
12	39536 U	Differential Feed Control Lever	1
13	22557 E	Stud	1
14	39536 V	Differential Feed Control Lever Spring	1
15	39536 Y	Screw	2
16	39536 W	Differential Feed Control Lever Link	1
17	39536 P	Differential Feed Drive Link	1
18	22565 F	Screw	1
19	39535 E	Feed Adjusting Pin	1
20	25 CC	Screw, for Styles 39500 S, 39500 T	1
21	22728 A	Screw	1
22	8372 A	Washer, for Styles 39500 S, 39500 T	2
	8372 A	Washer, for Style 39500 U	1
23	39536 AA	Differential Feed Control Mounting Bracket	1
24	43139 A	Nut, for Styles 39500 S, 39500 T	2
	43139 A	Nut, for Style 39500 U	1
25	18	Nut	1
26	22569 C	Screw	2
27	39535 D	Feed Bar Guide, right	1
28	22569 B	Screw	2
29	53634 C	Washer	2
30	39534 H	Feed Bar Thrust Washer	1
31	22569 G	Screw	3
32	39526 S	Differential Feed Dog, marked "M", for Style 39500 S	1
	39526 T	Differential Feed Dog, marked "N", for Style 39500 T	1
	39526 U	Differential Feed Dog, marked "P", for Style 39500 U	1
33	93	Screw	1
34	39505 S	Main Feed Dog, marked "R", for Styles 39500 S, 39500 T, 39500 U	1
35	94	Screw	1
36	39536 S	Differential Feed Bar Driving Stud	1
37	39536 X	Differential Feed Bar Guide Block	1
38	39534 A	Main Feed Bar	1
39	22726 L	Screw	1
40	39534 B	Differential Feed Bar	1
41	39535 B	Main and Differential Feed Bar Guide Block	2
42	39536 R	Feed Bar Driving Connection Bushing	1
43	39536 E	Nut	1
44	39538	Feed Lift Block	1
45	39536 Z	Main Feed Bar Driving Connection	1
46	39535 G	Main Feed Bar Guide, left	1
47	53634 C	Washer	2
48	22569	Screw	2
49	39540 B-14	Main Feed Driving Eccentric	1
50	39536 F	Differential Feed Drive Connecting Rod, for Styles 39500 S, 39500 T	1
	39536 G	Differential Feed Drive Connecting Rod, for Style 39500 U	1
51	39536 K	Bushing	1
52	39536 E	Nut	1
53	39540 B-4	Differential Feed Driving Eccentric, for Styles 39500 S, 39500 T	1
	39540 C	Differential Feed Driving Eccentric, for Style 39500 U	1
54	20	Washer	1
55	18	Nut	1
56	39536 H	Thrust Finger	1
57	53634 C	Washer	2
58	22569 C	Screw	2
59	14077	Nut	1
60	39551 A	Needle Clamp Washer	1
61		Needle	1
62	39552	Needle Driving Arm, marked "B"	1
63	22596 E	Screw	1
64	50-774 Blk.	Stop Pin	1
65	39551 F	Needle Clamp Stud	1
66	39563 G	Needle Thread Cam Pull-off	1
67	28	Screw	1
68	22564	Screw	1
69	39568 A	Looper Thread Pull-off	1
70	39568 N	Looper Thread Pull-off Lever	1
71	88 B	Screw	2
72	39552 C	Needle Driving Arm Crank Thrust Washer	1
73	39552 A	Needle Driving Arm Crank	1
74	39552 E	Needle Driving Arm Crank Connecting Rod	1
75	22587 J	Screw	2
76	39594 N	Oil Splasher	1
77	28	Screw	1
78	39536 AD	Spring Washer	1
79	39536 AC	Feed Control Adjustable Stop	1
80	39536 AB	Feed Control Adjusting Rod	1
81	161 A	Stop Collar	1
82	22764	Screw	1
83	161	Stop Collar	1
84	88	Screw	1



UPPER AND LOWER LOOPER DRIVING PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39594 P	Oil Collector Plate-----	1
2	482 C	Upper Looper Shaft Collar-----	1
2A	22894 C	Screw-----	2
3	22565	Screw-----	2
4	7446 A	Upper Looper Drive Lever Shaft-----	1
5	1280	Nut-----	1
6	39543 R	Washer-----	1
7	43143 N	Locking Stud-----	1
8	39543 H	Upper Looper Drive Lever-----	1
9	39543 M	Clamp Collar-----	1
10	22562 A	Screw-----	1
11	39543 P	Thrust Washer-----	2
12	29126 CG	Upper Looper Drive Lever Connecting Rod Assembly-----	1
13	22559 A	Screw-----	4
14	39594 N	Oil Splasher-----	1
15	28	Screw-----	1
16	41255 B	Guide Fork-----	1
17	22747	Screw-----	1
18	39543 K	Upper Looper Shaft-----	1
19	39543 S	Bushing and Cam Guide-----	1
20	39543 T	Cam Follower-----	1
21	22565 H	Screw-----	1
22	39543 E	Cam Follower Locking Clamp-----	1
23	22503 F	Screw-----	1
24	39543 A	Upper Looper Holder Collar-----	1
25	22 KH	Screw-----	1
26	39543	Upper Looper Holder-----	1
27	22564 G	Screw-----	1
28	39508 A	Upper Looper, marked "CC"-----	1
29	22539 K	Plug Screw-----	1
30	482 C	Lower Looper Shaft Collar-----	1
31	22894 C	Screw-----	2
32	22894 AD	Screw-----	2
33	51235 B	Lower Looper Bar Driving Lever Shaft-----	1
34	39508 B	Lower Looper-----	1
35	39151	Nut-----	1
36	39544	Lower Looper Bar-----	1
37	77	Screw-----	2
38	39544 D	Pin-----	2
39	39544 B	Lower Looper Bar Connection Link-----	1
40	29126 DF	Lower Looper Bar Driving Lever and Connecting Rod Assembly-----	1
41	22729 D	Screw-----	2
42	97	Screw-----	2
43	39544 S	Ball Joint Guide Fork-----	1
44	39544 U	Lower Looper Bar Driving Lever-----	1
45	22729 E	Screw-----	2
46	666-255	Felt Plug, for connecting rod-----	1
47	39594 N	Oil Splasher-----	1
48	28	Screw-----	1
49	22539 K	Plug Screw-----	1

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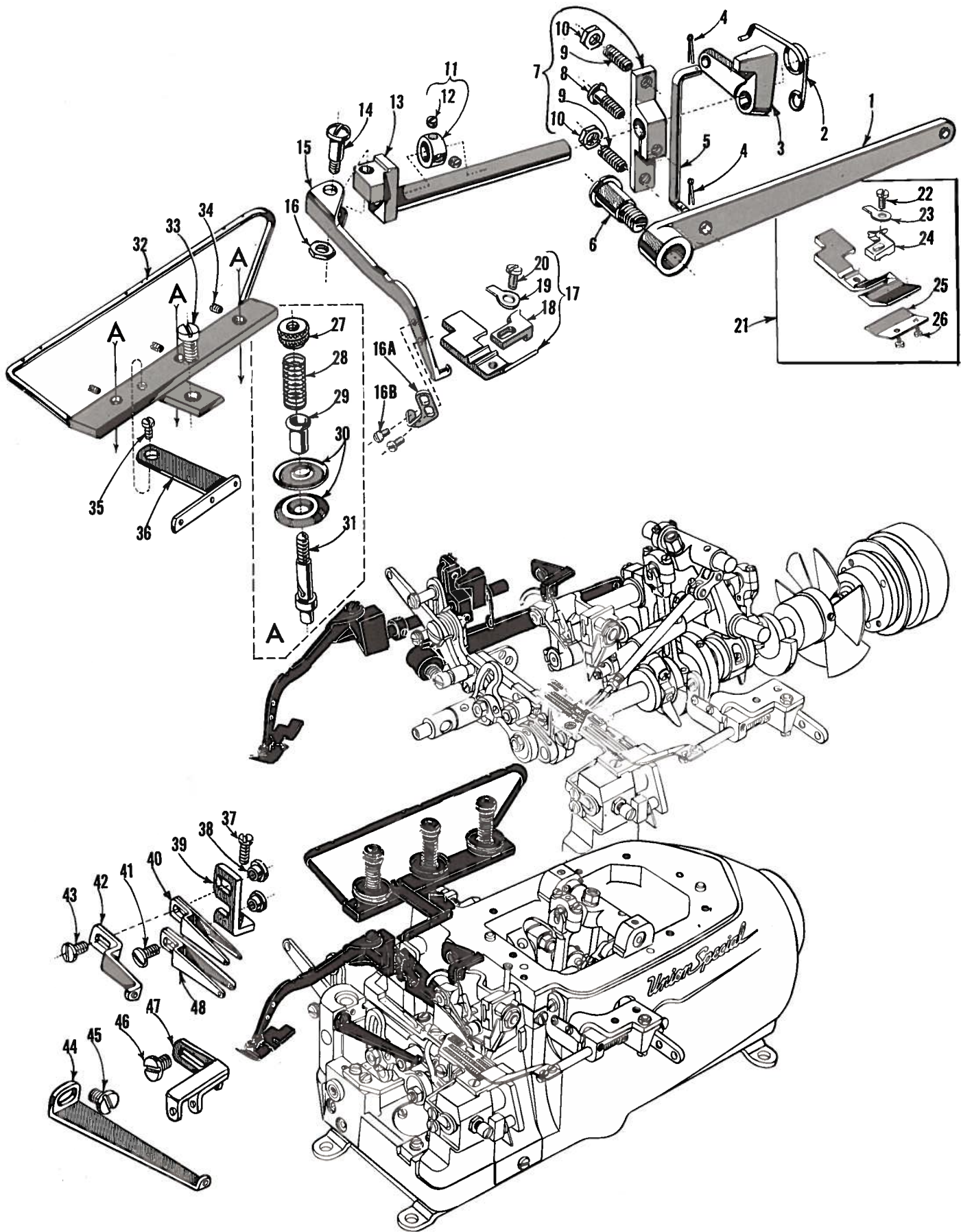


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UPPER AND LOWER KNIFE MECHANISM

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39573 E	Upper Knife Driving Lever -----	1
2	55235 D	Locking Stud -----	1
3	6042 A	Washer-----	1
4	55235 E	Nut -----	1
5	39573 J	Upper Knife Driving Connecting Rod -----	1
6	22587 J	Screw -----	2
7	39573 A	Washer-----	1
8	39573 H	Upper Knife Driving Arm-----	1
9	39571 D	Upper Knife Clamp Stud, for Style 39500 S -----	1
	39571 C	Upper Knife Clamp Stud, for Styles 39500 T, 39500 U -----	1
10	39572	Upper Knife Holder Block, for Style 39500 S-----	1
	39572 A	Upper Knife Holder Block, for Styles 39500 T, 39500 U-----	1
11	22738	Screw -----	1
12	39570 J	Upper Knife-----	1
13	39571 F	Upper Knife Clamp -----	1
14	39571 B	Chain Guard -----	1
15	14077	Nut -----	1
16	22585 A	Screw -----	1
17	39525	Needle Guard, front -----	1
18	22585 A	Screw -----	1
19	39525 A	Needle Guard, rear-----	1
20	39580 A	Throat Plate and Lower Knife Support Bracket-----	1
21	39550 E	Spring-----	1
22	39550 N	Lower Knife Holder-----	1
23	39549 J	Lower Knife -----	1
24	39550 M	Clamp Spring -----	1
25	39550 L	Lower Knife Clamp -----	1
26	22588 A	Screw -----	1
27	22729 B	Screw -----	1
28	39550 C	Lower Knife Holder Locking Stud-----	1
29	14077	Nut-----	1
30	22892 B	Locking Screw -----	1
31	22653 B-12	Screw -----	2
32	39524 T	Throat Plate, marked "AL", for Styles 39500 T, 39500 U---	1
	39524 S	Throat Plate, marked "AK", for Style 39500 S -----	1
33	22524	Screw -----	1
34	22569 C	Screw -----	2
35	29480 DC	Auxiliary Pressure Plate Assembly, for Styles 39500 T, 39500 U -----	1
36	39531	Pressure Plate-----	1
37	22561	Screw -----	2
38	39531 A	Shaft -----	1
39	39531 E	Latch Spring -----	1
40	604	Screw -----	2
41	39531 AS	Bracket -----	1
42	907	Nut -----	1
43	39531 AR	Lever -----	1
44	77 A	Screw -----	1
45	39531 AT	Shaft Bracket -----	1
46	HS82	Screw -----	1
47	39531 C	Spring-----	1
48	39531 B	Collar-----	1
49	604	Screw -----	1
50	22582	Screw -----	1
*	41071 G	Locking Nut, for HS82 -----	1

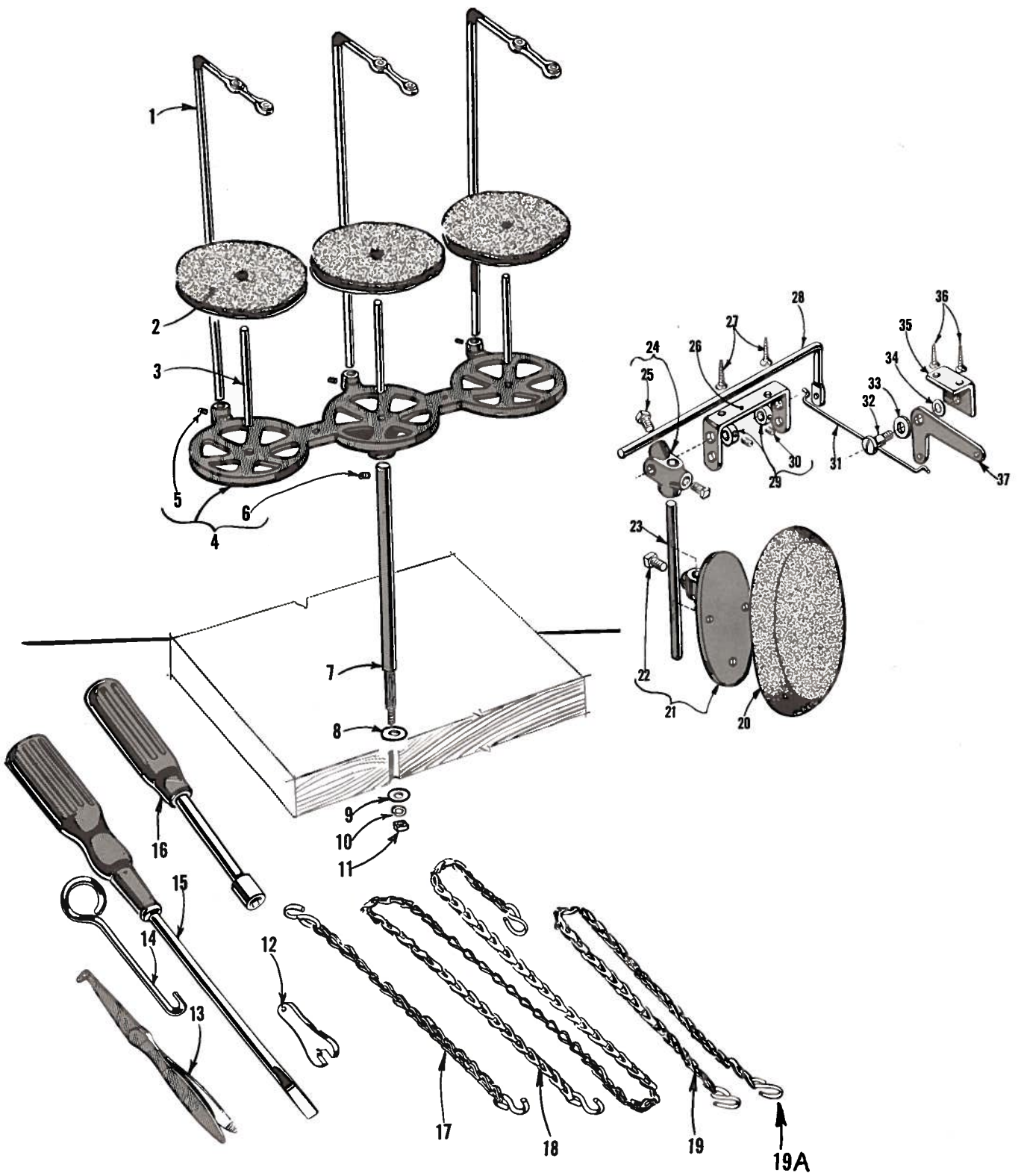
* Not Shown on Picture Plate



FOOT LIFTER, THREAD TENSIONS AND MISCELLANEOUS EYELETS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39555	Foot Lifter Lever -----	1
2	39555 B	Foot Lifter Lever Spring -----	1
3	39555 D	Intermediate Lever -----	1
4	660-142	Cotter Pin -----	2
5	39555 F	Foot Lifter Lever Connecting Link -----	1
6	22566 B	Screw -----	1
7	39555 C	Foot Lifter Lever Arm -----	1
8	627	Screw -----	1
9	22597 E	Screw -----	2
10	12538	Lock Nut -----	2
11	12865	Collar -----	1
12	88	Screw -----	2
13	39555 A	Foot Lifter Lever Shaft -----	1
14	22598 E	Screw -----	1
15	39556 F	Presser Arm -----	1
16	14077	Nut -----	1
16A	39556 H	Presser Foot Hold Down Plate, for Styles 39500 T, 39500 U -----	1
16B	605 A	Screw -----	2
17	39520 T	Presser Foot, for Style 39500 U -----	1
	39520 M	Presser Foot, for Style 39500 T -----	1
18	39597 T	Stitch Tongue, marked "EC" -----	1
19	39530 G	Hinge Spring -----	1
20	J87 J	Screw -----	1
21	39520 S	Presser Foot, for Style 39500 S -----	1
22	22768 B	Screw -----	1
23	39530 G	Hinge Spring -----	1
24	39597 S	Stitch Tongue, marked "EB" -----	1
25	39530 F	Stripper Blade -----	1
26	91 A	Screw -----	2
27	108	Tension Post Nut -----	3
28	51292 F-4	Spring, Looper Thread Tension -----	2
	51292 F-8	Spring, Needle Thread Tension -----	1
29	107	Tension Post Ferrule -----	3
30	109	Tension Disc -----	6
31	35792 H	Tension Post -----	3
32	39592 F	Tension Post Mounting Bracket -----	1
33	22891	Screw -----	1
34	22565 C	Screw -----	3
35	90	Screw -----	1
36	39563 S	Frame Thread Guide -----	1
37	22569 B	Screw -----	1
38	43139 A	Nut -----	2
39	39568 D	Looper Thread Eyelet Mounting Bracket -----	1
40	39568 L	Upper Looper Thread Eyelet -----	1
41	376 A	Screw -----	1
42	39568 E	Auxiliary Looper Thread Eyelet -----	1
43	376 A	Screw -----	1
44	39568 R	Frame Thread Guide - Lower Looper Thread	
45	22569 D	Screw -----	1
46	22569 D	Screw -----	1
47	39563 H	Needle Thread Eyelet -----	1
48	39568 B	Lower Looper Thread Eyelet -----	1

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THREAD STAND AND MISCELLANEOUS TOOLS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	21113 F	Thread Eyelet and Support Rod-----	3
2	21104 V	Pad-----	3
3	69 S	Spool Pin-----	3
4	21130 W-3	Cone Support-----	1
5	22650 CB-4	Screws - Cone Support-----	3
6	22650 CE-6	Screw - Cone Support-----	1
7	21104 AA	Thread Stand Rod-----	1
8	652 J-24	Washer - Thread Stand Rod-----	1
9	652 J-16	Washer - Thread Stand Rod-----	1
10	WA9 A	Lock Washer-----	1
11	651 A-16	Nut - Thread Stand Rod-----	1
12	116	Wrench, for 9/32 inch nuts-----	1
13	660-240	Thread Tweezers-----	1
14	21227 BF	Feed Eccentric Extractor Hook-----	1
*15	21202	Screwdriver, 1/4 inch diameter, 11 inches long-----	1
16	21388 AU	Socket Wrench, for 3/8 inch nuts holding feed eccentrics-----	1
17	421 D-10	Intermittent Differential Control Chain, 10 inches long-----	1
18	421 D-34	Foot Lifter Chain, 34 inches long-----	1
19	421 D-18	Auxiliary Pressure Plate Chain, 18 inches long, for Styles 39500 T, 39500 U-----	1
19A	660-264	"S" Hook, for chain - 2 required per chain-----	2
20	660-168	Rubber Knee Pad-----	1
21	21664	Knee Press Plate-----	1
22	69 FD	Screw-----	1
23	21663 C	Knee Press Plate Rod-----	1
24	21665	Knee Press Rod Connection-----	1
25	69 FD	Screw-----	2
26	21662	Knee Press Bracket-----	1
27	SC303	Screw-----	2
28	21664 B	Knee Press Bracket Shaft-----	1
29	9271	Collar-----	2
30	98	Screw-----	1
31	21664 E	Connection Rod-----	1
32	22557 A	Screw-----	1
33	43137 E	Washer-----	1
34	39536 AD	Spring Washer-----	1
35	21664 C	Bell Crank Bracket-----	1
36	SC303	Screw-----	2
37	21664 D	Bell Crank-----	1

ACCESSORIES AVAILABLE AS EXTRAS (Not Illustrated)

*21209 D	Socket Head Screwdriver, two detachable blades 6 inches long, for hexagonal socket head screws with sockets measuring 3/32 and 1/8 inch across flats.		
*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 BJ	Tray, 1 3/4 inches high, for semisubmerged installations.		
*21695 U	Finger Protector.		
*39556 B	Presser Arm Chain Cutting Knife, lower.		
*39556 C	Presser Arm Chain Cutting Knife, upper.		
* 605	Presser Arm Chain Cutting Knife Screw (two needed).		
39595	Isolator, rubber.		
*39598	Knife Grinder, complete.		
*21388 AN	Socket Head Wrench Kit, includes 5 wrenches, 3/32, 1/8, 5/32, 3/16 and 7/32 inch across flats, for hexagon socket head set screws from #10 to 7/16 inch, inclusive.		
		Belt Slot to Right Edge of Board	Cloth Plate to Front Edge of Board
*21371 UH	Individual Power Table		
*21371 TW-47 3/4	Table Top, 47 3/4 x 16 x 1 3/4 inches, for line shaft installations; semisubmerged, chip chute	7 1/2 inch	2 1/4 inch
*21371 TX-48	Table Top, 48 x 20 x 1 3/4 inches, for individual power table installations; semisubmerged, chip chute	10 1/2 inch	2 1/4 inch
*21371 TY-48	Table Top, 48 x 20 x 1 3/4 inches, for individual power table installations; semisubmerged, chip chute	7 1/2 inch	2 1/4 inch

* Not Furnished with Machine

NUMERICAL INDEX OF PARTS

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ANALYSIS OF COMPARATIVE SEWING COSTS

This form offers a simple method for you to determine the effect of modern, high speed machines on your production and overhead costs. To use it, merely fill in the starred items. Any Union Special representative will supply the necessary information on the improved machine which will enable you to complete the record.

*Sewing Operation _____

*PRESENT MACHINE Style _____

IMPROVED MACHINE Style _____

<p>*1. Average Daily Production per Machine Doz. (From your own records.)</p> <hr/> <p>*2. SEWING COST</p> <p>*Average Daily Earnings per Operator \$ (From your own records.)</p> <p>*Average Daily Overhead per Operator \$ (Determine your overhead as a percentage of direct labor from your own records. Multiply the average daily earnings per operator shown above by this percentage.)</p> <p>*Total Daily Sewing Cost per Operator \$ (This is the sum of earnings and overhead as determined above.)</p> <p>*Sewing Cost per Dozen \$ (Divide the total daily sewing costs per operator by the average daily production with your present machine.)</p> <p>3. SAVINGS EFFECTED</p> <p>Per Dozen Garments \$ (Subtract the sewing cost per dozen expected with the improved machine from your present sewing cost per dozen.)</p> <p>Per Day \$ (Multiply the savings per dozen determined above by the production expected from the improved machine.)</p> <p>Per Year \$ (Multiply the savings per day by 240 days.)</p> <p>Less 10% depreciation on net cost of new machine \$</p> <p>Net Annual Saving \$</p>	<p>1. Add _____ % (due to increased efficiency of improved machine) to the production shown in the opposite column. Expected production of the new machine is thus Doz.</p> <hr/> <p>2. SEWING COST</p> <p>Average Daily Earnings per Operator \$ (Increased production from improved machine should enable operator's earnings to be increased up to 10%. Add _____% to average daily earnings shown in opposite column.)</p> <p>Average Daily Overhead per Operator \$ (This is the same as the average daily overhead shown in the opposite column, as dollar overhead is not affected when production per machine is increased.)</p> <p>Total Daily Sewing Cost per Operator \$ (This is the sum of earnings and overhead as determined above.)</p> <p>Sewing Cost per Dozen \$ (Divide the total daily sewing cost per operator by the average daily production expected from the new machine.)</p> <hr/> <p>4. REPLACEMENT COST</p> <p>Cost of improved machine \$</p> <p>Less trade-in or resale value present machine \$</p> <p>Less overhauling or repair present machine \$</p> <p>Net cost improved machine \$</p> <hr/> <p>5. SUMMARY</p> <p>Number of operating days required to repay net cost Days (Divide the net cost of improved machine by the annual savings. Multiply this result by 240 days.)</p> <p>Annual return on net cost % (Divide the annual savings by the net cost.)</p>
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Form 496, Copyright, 1937, Union Special Machine Co.

Printed in U. S. A.

(Additional copies of this form, size 8 1/2 x 11 inches, available in quantities at cost.)

OPERATION _____

MACH. MFD. BY _____

TYPE _____ SERIAL NO. _____

MACHINE EQUIPMENT RECORD

SERIAL NOS. OF DUPLICATE MACHINES INVOLVED

DATE OF SURVEY	YEAR OF PURCHASE	% EFFICIENCY COMPARED TO NEW TYPE	GENERAL CONDITION OF MACHINE GOOD, FAIR, POOR	QUALITY OF WORK: EXCELLENT, GOOD, FAIR	PRESENT PRICE OF NEW MACHINE	COST OF OVERHAULING, IF NECESSARY	NO. OPERATING DAYS TO REPAY COST	ANNUAL RETURN ON COST

- CLASS "A"—DENOTES MACHINE EQUIPMENT WHICH FOR ADEQUATE REASONS SHOULD BE REPLACED WITH A BETTER MACHINE.
- CLASS "B"—SAME AS "A" EXCEPT THAT URGENCY FOR REPLACEMENT IS NOT SO GREAT.
- CLASS "C"—COVERS EQUIPMENT WHERE SPECIFIC RECOMMENDATION FOR REPLACEMENT SHOULD BE MADE AFTER CLASS "A" AND "B" MACHINES ARE REPLACED.
- CLASS "D"—DENOTES THAT EQUIPMENT NOW IN USE IS FOUND TO BE BEST OBTAINABLE FOR OUR PARTICULAR WORK.

DATA ON VARIOUS NEW EQUIPMENT UNDER CONSIDERATION

TYPE AND MAKE OF MACHINE	REMARKS

(This is the reverse side of Form 496 illustrated above.)



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‡Handle Lewis and Columbia only.

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ALABAMA, MONTGOMERY 7, 1959 Amelia Drive, Garnet H. Hamlet, Tel. 265-0942, P.O. Box 7203, Larry Crisler, Tel. 265-0942.

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‡CALIFORNIA, SAN FRANCISCO 3, Apparel City Sewing Machine Co., 1155 Mission St., Tel. MArket 1-6660.

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