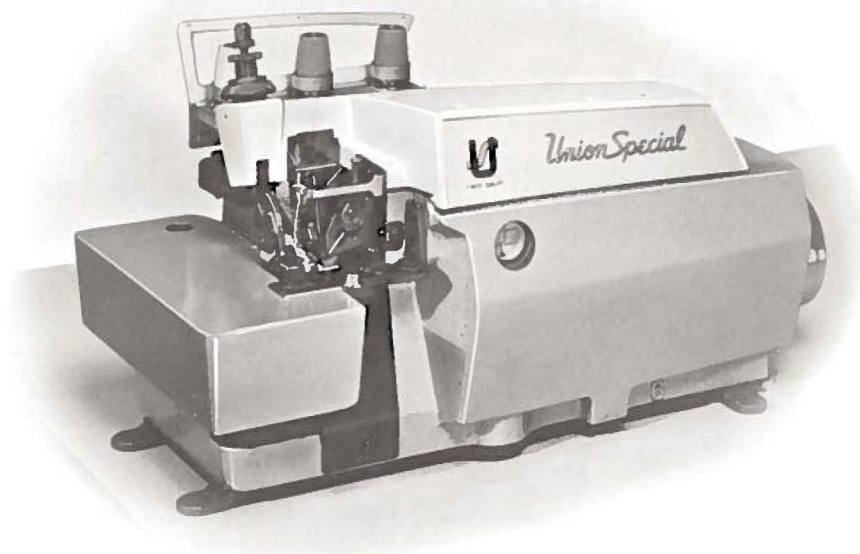


FINEST QUALITY

Union Special®
LEWIS • COLUMBIA

**INDUSTRIAL
SEWING
MACHINES**

**STYLE
39500MH**



CLASS 39500

**CATALOG
No.
103MH**

**HI-STYLED HIGH SPEED
SINGLE NEEDLE THREE THREAD
DIFFERENTIAL FEED
ZIPPER ATTACHING MACHINES**

Union Special **MACHINE COMPANY**

CHICAGO

From the library of: Superior Sewing Machine & Supply LLC

Here are Oil Specifications for Union Special Sewing Machines

Specification 174 specifies a high quality petroleum oil, viscosity 100 seconds at 100°F. Recommended for all oiling applications on high speed machines.

Specification 175 specifies a high quality petroleum oil, viscosity 100 seconds at 100°F., water white or with a maximum A.S.T.M. color number of 1. *For use where freedom from oil staining is paramount.*

Specification 87 specifies a high quality petroleum oil, viscosity 300 seconds at 100°F.

Specification 100 specifies a general purpose high quality grease for use in ball bearings and transmitters. It is similar to commercial N.L.G.I., grease No. 3. Where No. 3 grease is not obtainable, No. 2 may be used.

UNION SPECIAL

SPECIFICATION NO.	174	175	87
Viscosity S.S.U. at 100°F	90-125	90-125	300-350
Flash (Min.)	350	350	350
Pour (Max.)	20	20	20
Color A.S.T.M. (Max.)	3	1	3
Neutralization No. (Max.)	0.10	0.10	0.10
Viscosity Index (D & D Min.)	85	85	85
Compounding	None	None	None
Copper Corrosion (Max.)	1A	1A	1A

*Anline No. 175-225 175-225 175-225

*Used with Buna N Rubber "O" Retainers



NOTE 1: The use of non-corrosive additives in oils meeting above classification is desirable but not essential. These may include:

1. Oxidation inhibitors
2. Rust inhibitors
3. Lubricity additives
4. Anti-oxidants
5. Film strength additives

These additives must be completely soluble in the oil and not removable by wick feeding nor shall they separate.

NOTE 2: Oils containing the following type additives shall not be used at any time:

1. Extreme pressure additives—corrosive
2. Tackiness or adhesive additives
3. Lead soap additives
4. Detergents

 **Union Special[®]**
FINEST QUALITY **MACHINE COMPANY**

Catalog No. 103 MH
(Supplement to Catalog No. 103 FA)

INSTRUCTIONS

FOR

ADJUSTING AND OPERATING

LIST OF PARTS

CLASS 39500

Style 39500 MH

First Edition

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Union Special
MACHINE COMPANY
INDUSTRIAL SEWING MACHINES
CHICAGO

Printed in U.S.A.

February, 1972

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 MH". 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 MHZ".

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 is a supplement to Catalog No. 103 FA and should be used in conjunction therewith. Only those parts used on Style 39500 MH, but not on Style 39500 FP are illustrated and listed at the back of this catalog. 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. 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.

This catalog applies specifically to the Standard Style of machine 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.

STYLE OF MACHINE

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

39500 MH Medium to heavy duty machine for simultaneously attaching right pants flies and zipper tapes to pants fronts; also attaching zippers to right flies only and similar operations. Seam specification 504-SSa-1. Standard seam width 3/8 inch. Stitch range 6-16 per inch. Cam adjusted main and differential feed. Maximum recommended speed 6500 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 bulb on 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 morning start; add oil as required.

The oil 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 Style 39500 MH is Type 154 GAS. Below is the description and sizes available of the recommended needle.

<u>Type No.</u>	<u>Description and Sizes</u>
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, 060.

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 040".

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 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 and re-lock presser foot release bushing (AG).

THREAD STAND

After thread comes from cones on cone support (A, Fig. 1), it is brought up through back hole of thread eyelet (B), then down through the front hole of thread eyelet. Next it is threaded through the upper holes of tension thread guide (C) from front to back and then through the lower holes from back to front. It should be noted that the lower looper thread is threaded through the tension thread guide (C), first through the upper hole back to front, second through the middle hole front to back and third through the lower hole back to front. All threads then continue between the tension discs (J), through tension post slot (K) in tension post (G) and on through front thread guide (M).

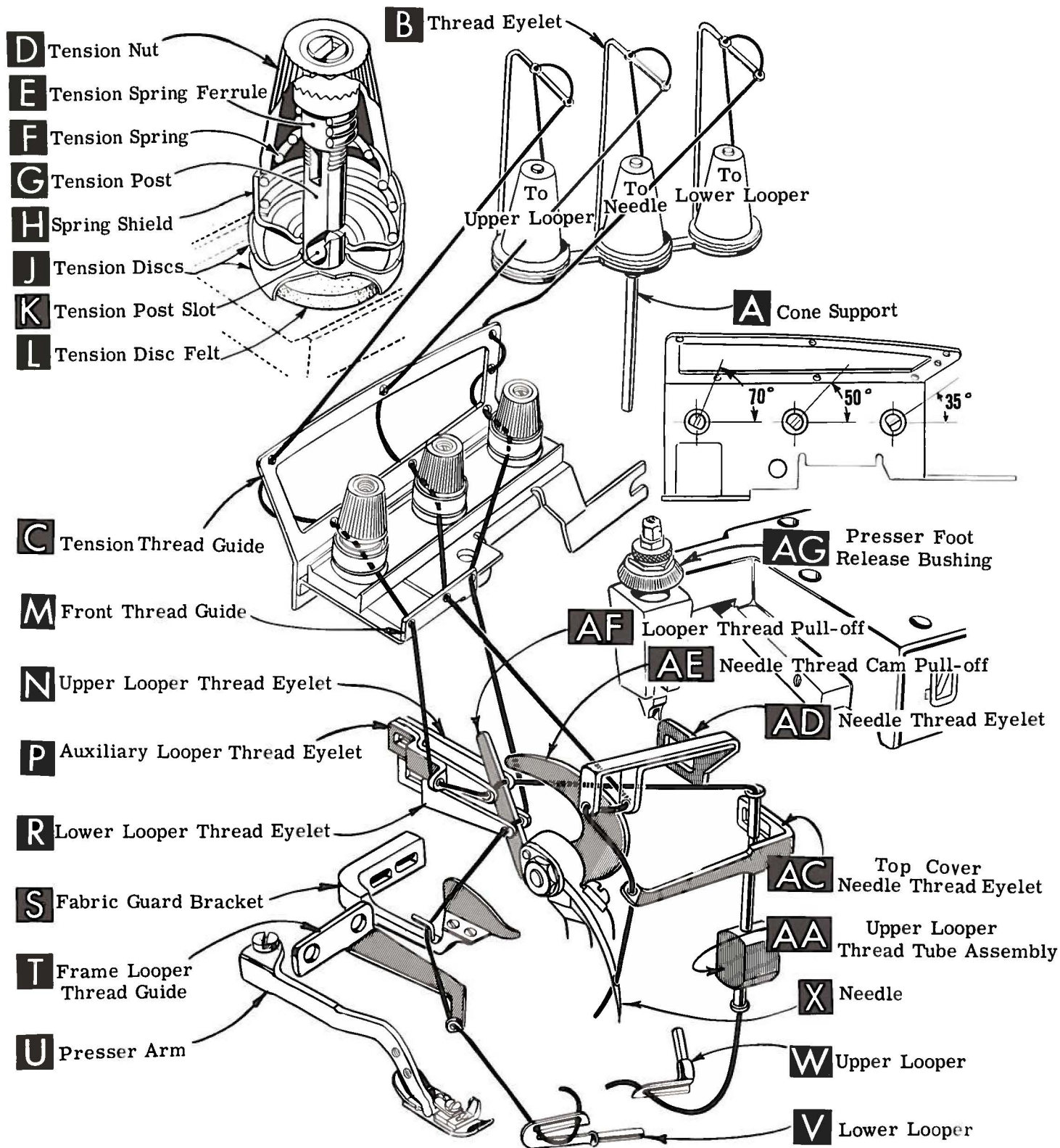


Fig. 1

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 (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 threads, as they come from the tension thread guide (C), are between tension discs (J) and in diagonal slots (K) in tension posts (G).

TO THREAD LOWER LOOPER

Thread lower looper thread through right eyelet of front thread guide (M). Then double end of thread and lead it through both eyes of lower looper thread eyelet (R, Fig. 1) from right to left. Note: thread must pass in front of looper thread pull-off (AF). Lead thread behind fabric guard (S) and through eyelet hole of 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 held in left hand.

TO THREAD UPPER LOOPER

Thread upper looper thread through left eyelet of front thread guide (M). Then turn handwheel until point of upper looper (W) is all the way 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, 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

Thread needle thread through middle eyelet of front thread guide (M). Then turn handwheel in operating direction until needle (X, Fig. 1) is at its highest position. Insert needle thread from right to left, through both eyes of needle thread eyelet (AD), under neck of top cover casting; then down through hole in top cover needle thread eyelet (AC). Thread needle from front.

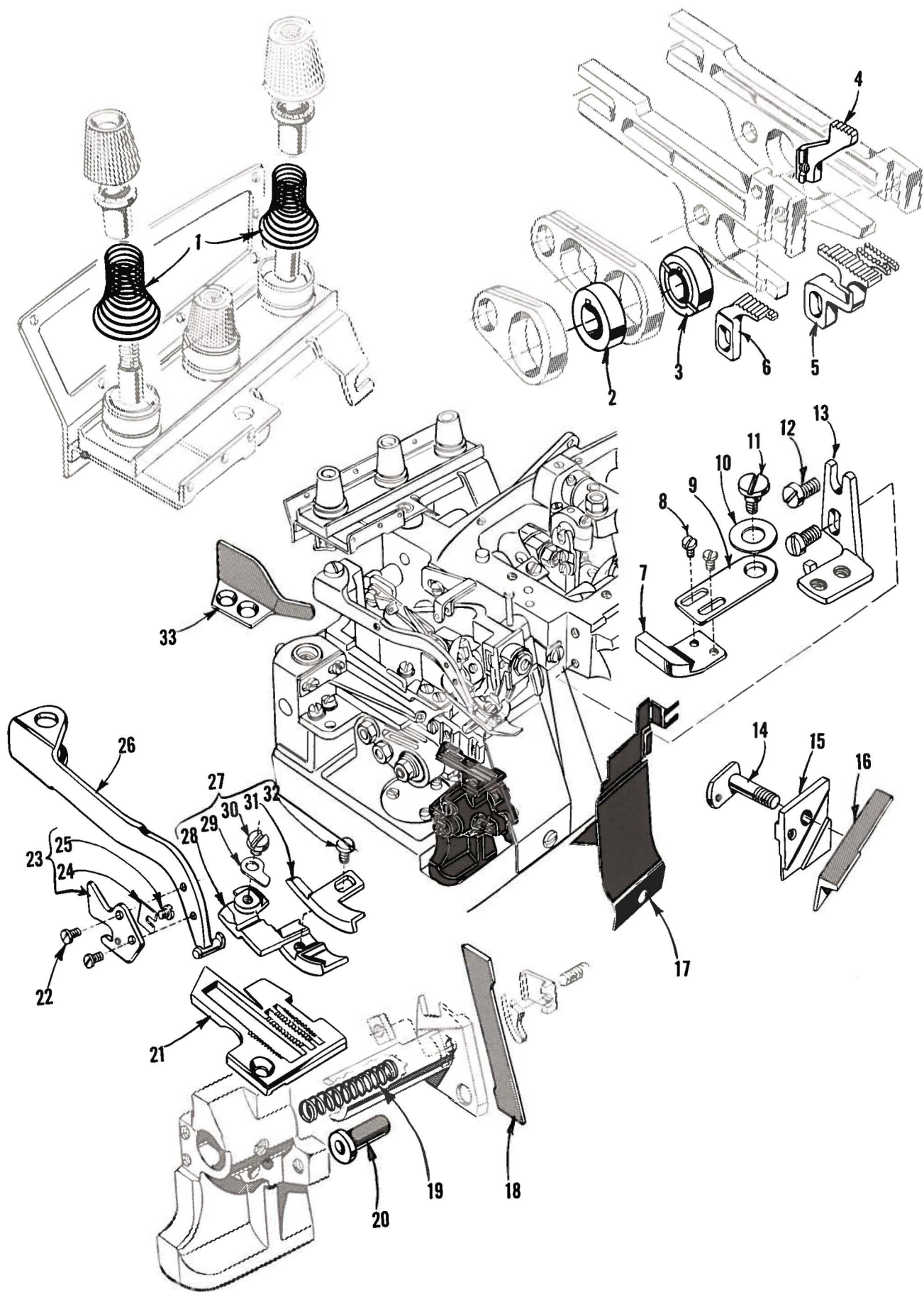
ASSEMBLING AND ADJUSTING SEWING PARTS

All instructions pertaining to the adjustment of Style 39500 MH are the same as those for Style 39500 FP covered in Catalog No. 103 FA with the following exceptions. The differences, applicable only to Style 39500 MH are described below, under the heading and paragraph where they can be found in Catalog No. 103 FA.

"SETTING THE NEEDLE"

Para. 1... 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 15/32 inch above throat plate.

Para. 3... At this point, insert lower looper (A, Fig. 5) into bar (B). With lower looper at left end of its stroke, set looper point 3/32 from center of needle (Fig. 5), using looper gauge No. 21225-3/32.



The parts illustrated on the preceding page and described below represent the parts that are used on Style 39500 MH, but not used on Style 39500 FP.

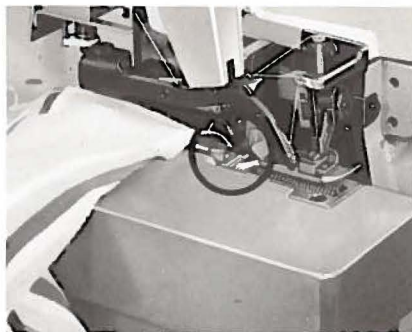
Those parts shown in phantom views and bearing no reference numbers, are common to Styles 39500 FP and MH.

Use Catalog No. 103 FA (Style 39500 FP) for all parts not illustrated or described in this catalog.

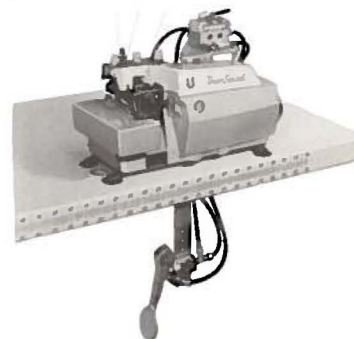
Reference numbers that are inside a bracket on the picture plate and have indented descriptions, indicate they are component parts of a complete part or assembly.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	39592 AR-4	Upper and Lower Looper Thread Tension Spring-----	2
2	39540 B-7	Main Feed Driving Eccentric -----	1
3	39540 B-8	Differential Feed Driving Eccentric -----	1
4	39505	Chaining Feed Dog, 20 teeth per inch-----	1
5	39526 AR	Differential Feed Dog, marked "FD", 16 teeth per inch --	1
6	39505 AR	Main Feed Dog, marked "FC", 16 teeth per inch -----	1
7	39503 A	Edge Guide -----	1
8	604	Screw, for edge guide -----	2
9	39503 D	Edge Guide Swinging Arm -----	1
10	12957 E	Washer, for swinging arm -----	1
11	22758 E	Screw, for swinging arm -----	1
12	22569 C	Screw, for mounting bracket -----	2
13	39503 C	Edge Guide Mounting Bracket-----	1
14	39571 C	Upper Knife Clamp Stud-----	1
15	39572 A	Upper Knife Holder Block -----	1
16	39570 J	Upper Knife -----	1
17	39578 TA	Chip Guard -----	1
18	39549 J	Lower Knife -----	1
19	39550 P	Lower Knife Holder Spring -----	1
20	39550 R	Lower Knife Holder Locating Stud-----	1
21	39524 X	Throat Plate, marked "AR"-----	1
22	605	Screw, for chain cutting knife -----	2
23	39556 M	Chain Cutting Knife-----	1
24	39556 L	Chain Cutter Blade -----	1
25	22798	Screw-----	1
26	39556 D	Presser Arm -----	1
27	39520 X	Presser Foot -----	1
28	39530 K	Presser Foot Bottom -----	1
29	39530	Hinge Spring-----	1
30	87 U	Screw-----	1
31	39530 J	Edge Guide, marked "A" -----	1
32	28	Screw-----	1
33	39578 S	Fabric Guard -----	1

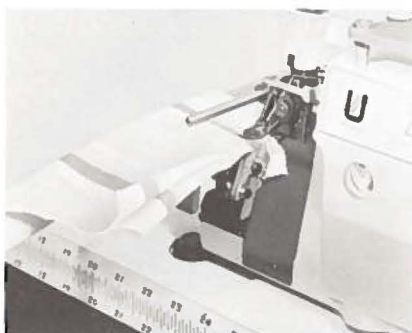
BOOST PRODUCTION WITH THESE WORK AIDS FROM UNION SPECIAL



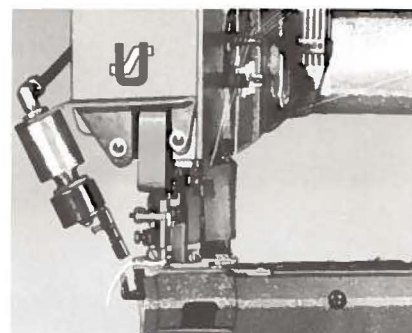
PNEUMATIC CHAIN-CUTTER—for use on conventional Class 39500 and 39600 is a durable scissor-action mechanism that makes a clean positive cut. Style 2899 A-1



PNEUMATIC FOOT LIFTER—The air-operated foot lifter for use on Class 39500 machines allows the operator to raise the foot simply by knee-touching an actuating switch.



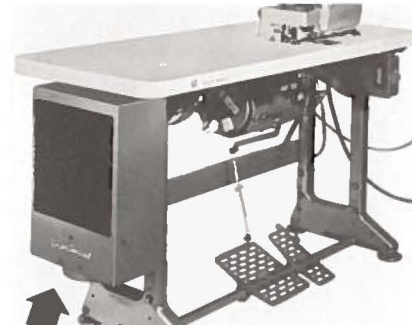
AIR FABRIC UNCURLER—This unit, designed for Class 39500 machines, uses air jets to remove curls from top and bottom plies of flat knit materials as fabric passes through sewing area. Style 2899 B-1



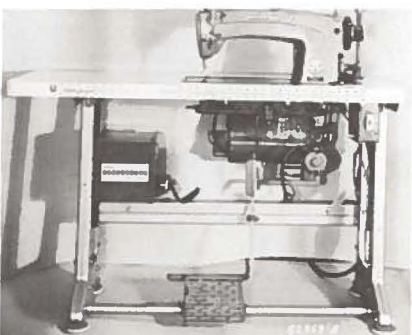
CHAIN CUTTER—The above photo shows the small pneumatic chain cutter that is available for installation as an accessory unit on Class 36200 Flatseamers. Style 2899A-6



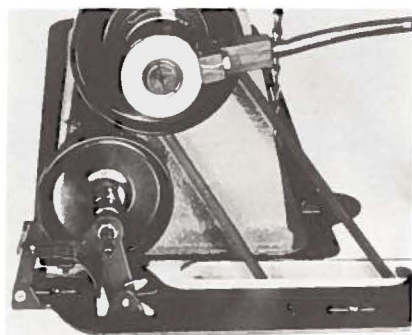
KNIFE GRINDER sharpens straight or angle type knives, is simple and easy to operate, eliminates defective garments caused by dull knives.



HEAT DISPELLER—Union Special's auxiliary unit (arrow) is an effective means for reducing oil temperature where heavy duty service requires it. Style 2899 E-1



AMCO ELECTRONIC NEEDLE POSITIONERS eliminate the necessity of reaching for the hand-wheel to move the needle up or down . . . this allows the operator to keep both hands on the work, insuring better control, uniform quality and increased production.



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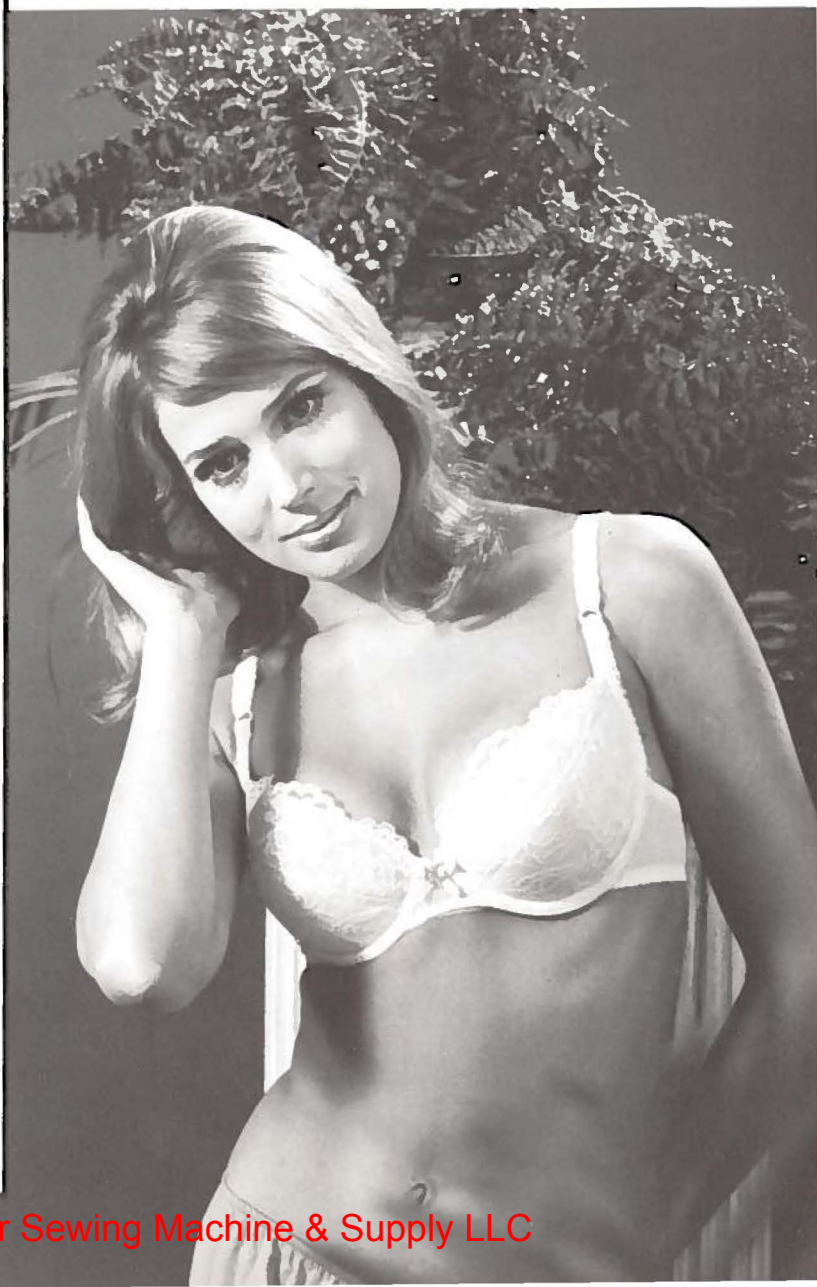
Helpful, authoritative information on the most efficient types of equipment for making virtually any machine sewed article is available from Union Special's Sales Promotion Department. Among the many interesting, illustrated bulletins that are available without obligation are the following:



- No. 240, "Men's, Women's, Children's Footwear"
- No. 249, "Rainwear"
- No. 250, "Men's Dress Shirts"
- No. 251, "Service Shirts and Pants"
- No. 252, "Men's Shorts and Pajamas"
- No. 253, "Overalls, Coveralls, and Dungarees"
- No. 254, "Men's Knit Underwear"
- No. 256, "Knit Outerwear"
- No. 259, "Men's Sports Shirts"
- No. 260, "Work Gloves"
- No. 262, "Cotton, Burlap, Jute, and Multiwall Paper Bags"
- No. 263, "Men's Clothing"
- No. 264, "Men's Women's, Children's Jackets"
- No. 265, "Women's Wear"
- No. 266, "Women's Wear And High Fashion"
- No. 267, "Corsets, Girdles, Brassieres"
- No. 268, "Children's Wear"
- No. 269, "Mattresses, Slip Covers, Furniture Upholstery"
- No. 271, "Awnings, Canopies, Tents, Tarps"
- No. 273, "Curtains & Drapes"
- No. 610, "Klipp-it"
- No. 710, "MCS ForMation Unit"
- No. 730, "MCS Automatic Dual Underfront Shirt Hemmer"
- No. 740, "MCS Automatic Rib-Knit Cuff Machine"
- No. 750, "Fusing Presses"
- No. 1100, "Lewis Blindstitch, Chainstitch, Lockstitch, Machines"
- No. 1105, "Button Sewers—Ticket Tackers"
- "Columbia Blindstitch, Saddle Stitch, and Tie Closing Machines"
- No. 1500, "Alteration Department Machines"

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