

FINEST QUALITY

Union Special[®]

LEWIS • COLUMBIA

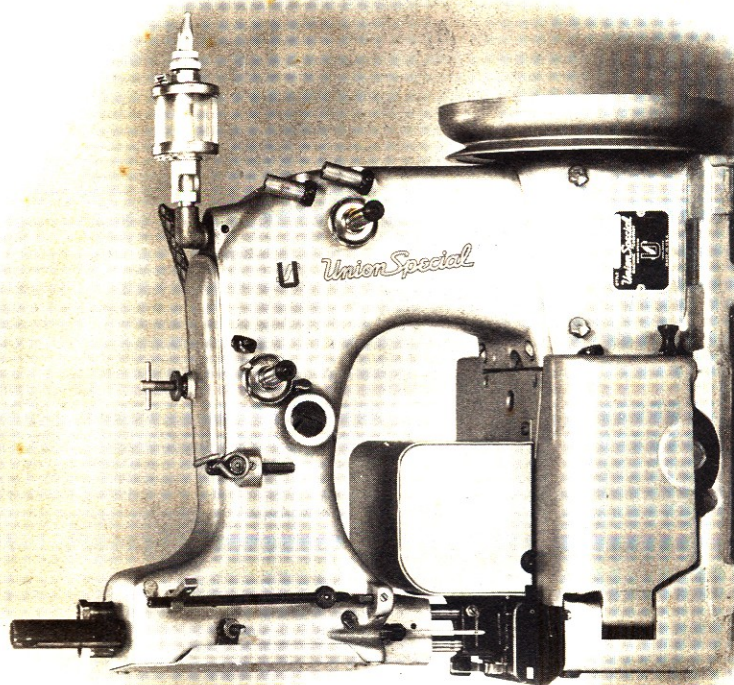
**INDUSTRIAL
SEWING
MACHINES**

STYLES

80800E

80800F

80800H



CLASS 80800

CATALOG

No.

137M

**HIGH SPEED
FILLED BAG CLOSING MACHINES**

Union Special CORPORATION

CHICAGO

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

U *Union Special*[®]
FINEST QUALITY
CORPORATION

Catalog No. 137 M

INSTRUCTIONS

FOR

ADJUSTING AND OPERATING

LIST OF PARTS

CLASS 80800

Styles

80800 E

80800 F

80800 H

First Edition

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Union Special
CORPORATION

INDUSTRIAL SEWING MACHINES

CHICAGO

Printed in U.S.A.

August, 1974

IDENTIFICATION OF MACHINES

Each Union Special machine is identified by 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 80800 E". 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 80800 EZ".

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 80800".

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 this Class. References to direction, such as right, left, front, back, etc., are described as viewing the machine as it sits in front of the mechanic on an adjusting table, with the pulley to the right and the needle bar in vertical position. Operating direction of handwheel is away from the operator.

STYLES OF MACHINES

Enclosed Type Flat Bed Bag Closing Machine, One Needle, High Throw, Manual Lubrication, Lateral Looper Travel, with Improved Bearings, Smaller Diameter Eccentrics and Coil Type Presser Springs, Distance From Center Line of Needle to Left Edge of Throat Plate 7/8 Inch.

80800 E Sewing head, for closing filled medium and heavy weight bags made from burlap, jute and single or multiwall paper. Filter cord guided under presser foot. Equipped with mechanical chain cutter. Seam specification 401-SSa-1. Type 1975 G needle. Maximum recommended speed 2500 R.P.M.

80800 F Sewing head, for closing filled medium and heavy weight bags made from burlap, jute and single or multiwall paper. Filter cord guided under presser foot. Equipped with mechanical chain cutter. Seam specification 101-SSa-1. Type 1975 G needle. Maximum recommended speed 2500 R.P.M.

NOTE: Styles 80800 E and F machines can also be used for seaming fabric bags by removing the filter cord.

80800 H Sewing head, for tape bound closures on filled medium and large size single ply or multiwall paper bags, using Union Special tape bound closing attachment. Filter cord guided under presser foot. Equipped with automatic tape cutter. Seam specification 401-BSa-1. Type 1975 G needle. Maximum recommended speed 2500 R.P.M.

NOTE: On Style 80800 H, the tape reel, folder, filter cord stand and adaptor assembly are not included with the machine. Tape folder and adaptor assembly No. 21884 C is available as an extra send and charge item. The included folder is designed to use a strip ranging from 2 1/8 to 2 1/2 inches.

NEEDLES

Each Union Special needle has both a 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, the type and the size number represent the complete symbol, which is given on the label of all needles packaged and sold by Union Special.

Needle Type 1975 G, Size 100 is recommended for the machine Styles covered by this catalog. The description and sizes available are listed below:

<u>Type No.</u>	<u>Description and Sizes</u>
1975 G	Round shank, square point, long Antaeus, double groove, spotted, chromium plated - sizes 080, 090, 100, 120, 140, 156, 188.

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: "100 needles, Type 1975 G, Size 100".

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.

OILING INSTRUCTIONS

Clean machine daily and thoroughly oil before the morning and afternoon start. Oiling diagram PL106 is applicable to machine Styles 80800 E and F, PL179 is applicable to machine Style 80800 H.

THREADING

Thread machine as illustrated in Fig. 1 or 1A as applicable.

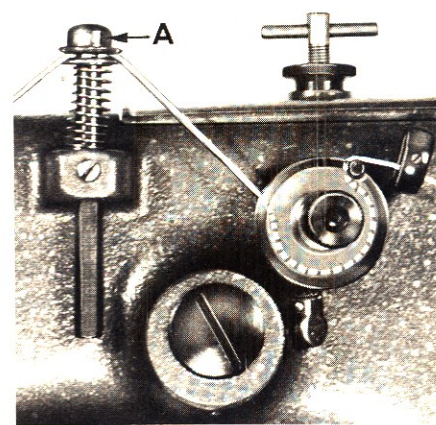
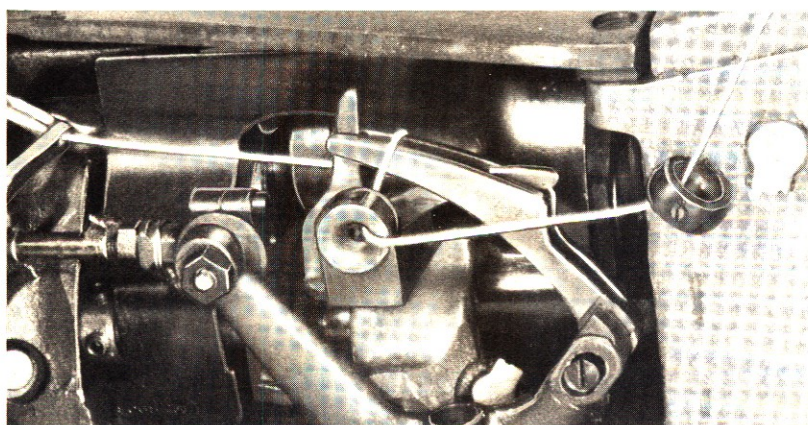
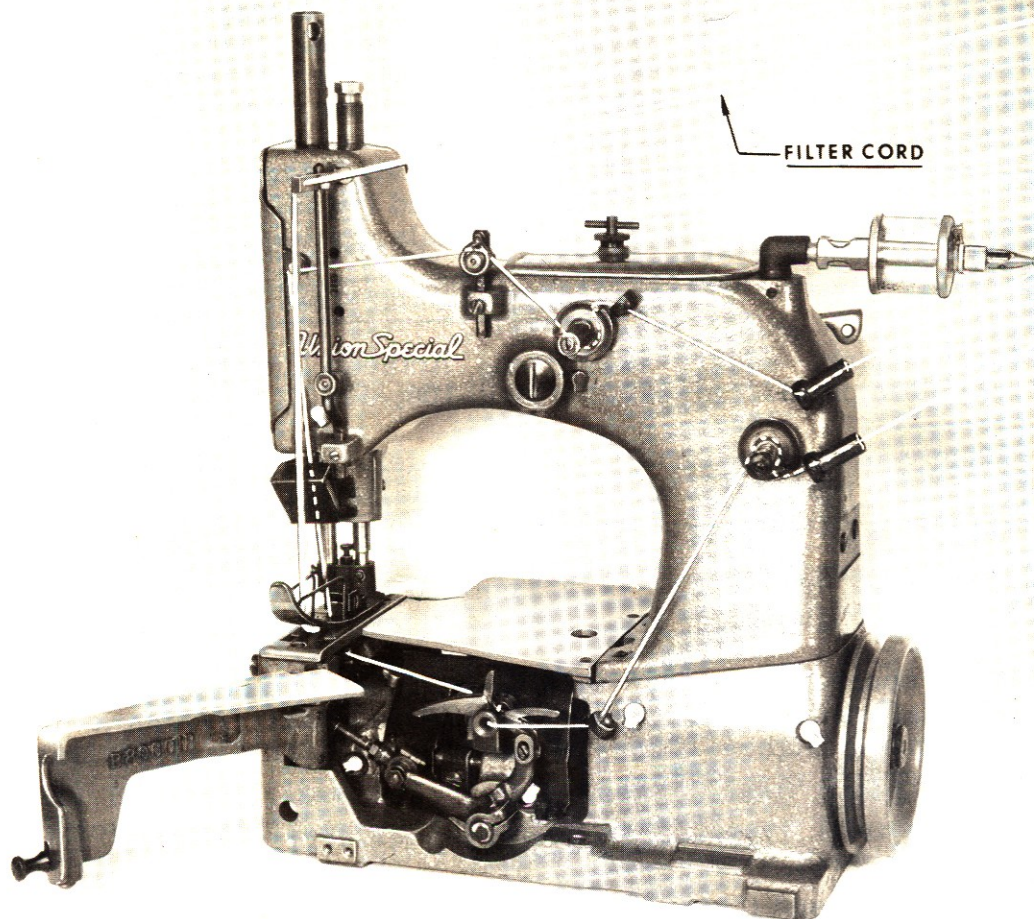


Fig. 1

Fig. 1A

THREADING DIAGRAM FOR CLASS 80800 MACHINES

Thread machine Styles 80800 E and H as indicated in Fig. 1. The looper threading has been enlarged for clarity. When threading the looper, be sure the thread goes thru the front eyelet, over the take-up and thru the back eyelet before threading the looper.

NOTE: The diagram also shows the threading of the filter cord.

Thread the needle thread on machine Style 80800 F as indicated in Fig. 1A, assuring the thread passes between the discs and in the slot of the needle thread nipper support pin (A, Fig. 1A).

SETTING THE LOOPER

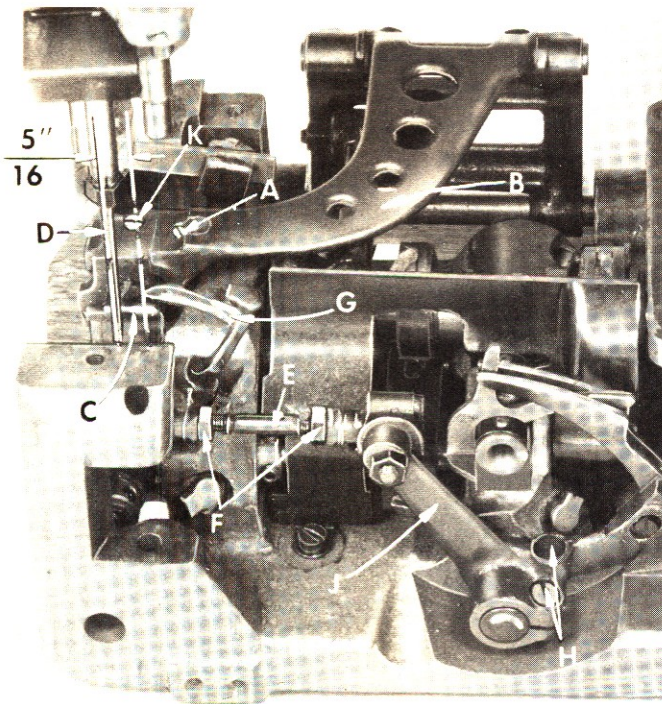


Fig. 2

Remove the presser foot, throat plate and feed dog for convenient access to the machine. Loosen the screw (A, Fig. 2) in the feed bar (B) and push the feed bar needle guard (C) to the rear to avoid its contacting the needle (D). For Styles 80800 E and H, set the looper connecting rod (E) so the distance between the centerlines of the two ball joints is $2 \frac{3}{4}$ inches (See Fig. 3). This dimension should be $2 \frac{11}{16}$ inches on Style 80800 F. If adjustment is necessary, loosen nuts (F, Fig. 2) and turn connecting rod (E) forward or backward as required to obtain specified dimension, retighten nuts (F). NOTE: The right nut has a left hand thread. Set the looper (G) so the distance from the centerline of the needle (D) to the point of the looper (G) is $\frac{5}{16}$ inch, when the looper is at its farthest position to the right. Looper gauge No. 21225- $\frac{5}{16}$ can be used advantageously in making this adjustment. Loosen screws (H) in the looper drive lever (J), reposition as required to obtain specified dimension

and retighten screws (H) assuring that all end play is taken out of the looper drive lever rocker shaft. Check to insure clearance between the point of the looper and the cylinder end cover when the looper is at its extreme left position. Should the looper strike the end cover, RECHECK the distance between centerlines of ball joints and the looper gauge distance as described above. As the looper moves to the left and its point is even with the right side of the needle, the looper should pass as close as possible to the back of the needle without contacting it (.003 to .005 inch clearance). Adjustment can be made by loosening screw (A, Fig. 3) in looper avoid connection link (B) and turn looper rocker shaft (C) forward or backward as required, retighten screw (A).

SETTING HEIGHT OF NEEDLE BAR

For Styles 80800 E and H, the height of the needle (A, Fig. 4) is correct when the top of its eye is $\frac{1}{32}$ inch below the underside of the looper (B), with the looper point flush with the left side of the needle. This dimension should be $\frac{3}{64}$ inch on Style 80800 F. If adjustment is necessary, loosen screw (A, Fig. 5) and move needle bar (B) up or down as required and retighten screw.

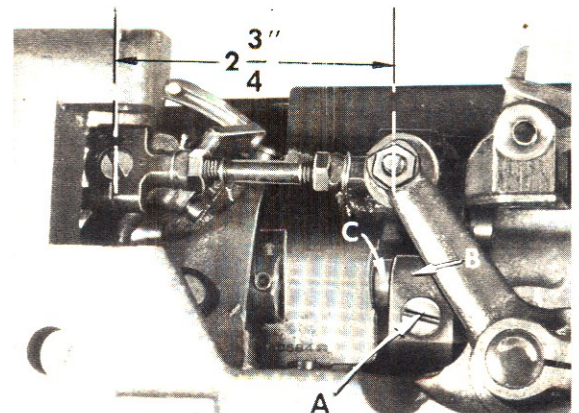


Fig. 3

SETTING THE FEED DOG

For Styles 80800 E and H, the height of the feed dog is correct, when at its highest point of travel, the rear teeth project above the throat plate their full depth. On Style 80800 F, the tips of the two rear teeth should project $\frac{1}{32}$ inch above the throatplate at this point. This can be accomplished by removing the feed dog holding screw (C, Fig. 5) and feed dog (D), then adjusting the stop screw (K, Fig. 2) in feed bar (B) as required to maintain the prescribed setting. Assemble feed dog (D, Fig. 5) and feed dog holding screw (C).

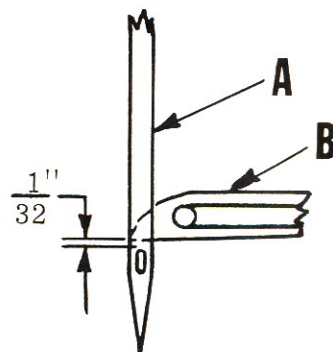


Fig. 4

Assemble feed dog (D, Fig. 5) and feed dog holding screw (C).

CHANGING STITCH LENGTH

The length of the stitch can be adjusted by raising or lowering the stud (E, Fig. 5) in the segment slot of the feed rocker (F). This can be accomplished by loosening nut (G), lowering stud (E) will lengthen the stitch and raising the stud will shorten the stitch. When desired stitch length position is obtained, retighten nut (G).

NOTE: Any change in stitch length will necessitate a corresponding change in the feed bar needle guard setting.

SETTING THE FEED BAR NEEDLE GUARD

Set the feed bar needle guard (C, Fig. 2) so that it barely contacts the needle at its most forward point of travel. Screw (A) secures it in place.

SETTING HEIGHT OF PRESSER BAR

Check the vertical movement of the presser bars with the presser foot in position and pressure released. The bars must move freely.

PRESSER FOOT PRESSURE

Regulate the pressure on the presser foot using the presser spring regulators (H, Fig. 5) so that the springs exert a pressure sufficient to feed properly. A comparatively heavy pressure is usually required. There should be approximately $\frac{1}{16}$ inch free play in the presser foot lifter lever (J, Fig. 5) when the presser foot is down.

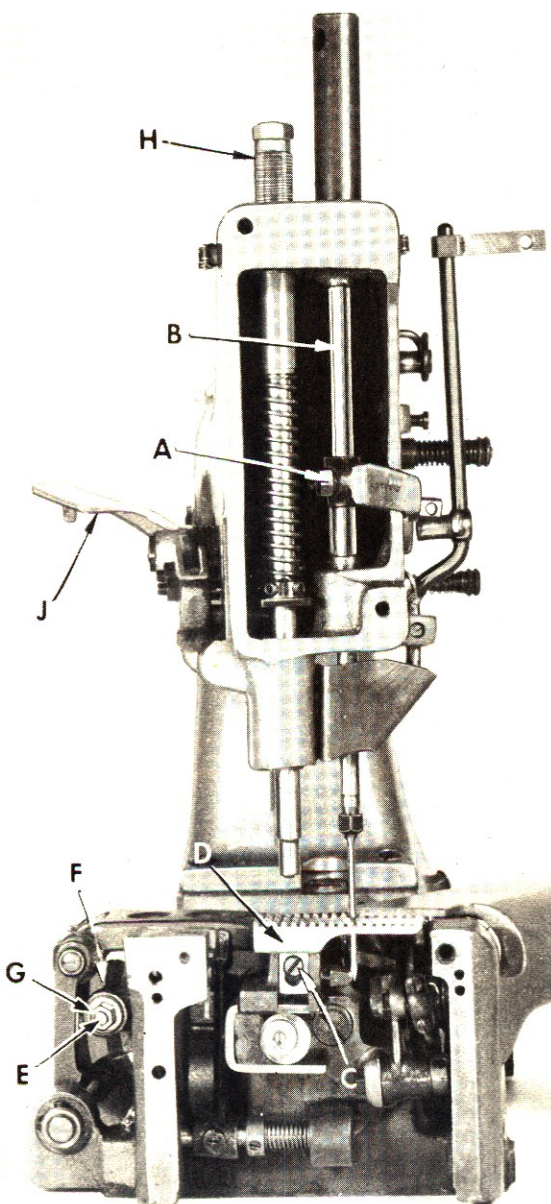


Fig. 5

THREAD TENSIONS

The tension applied to the needle thread at (A, Fig. 6 and 6A) should be fairly strong. On Styles 80800 E and H, the tension applied to the looper thread at (B, Fig. 6) should be barely sufficient to steady it.

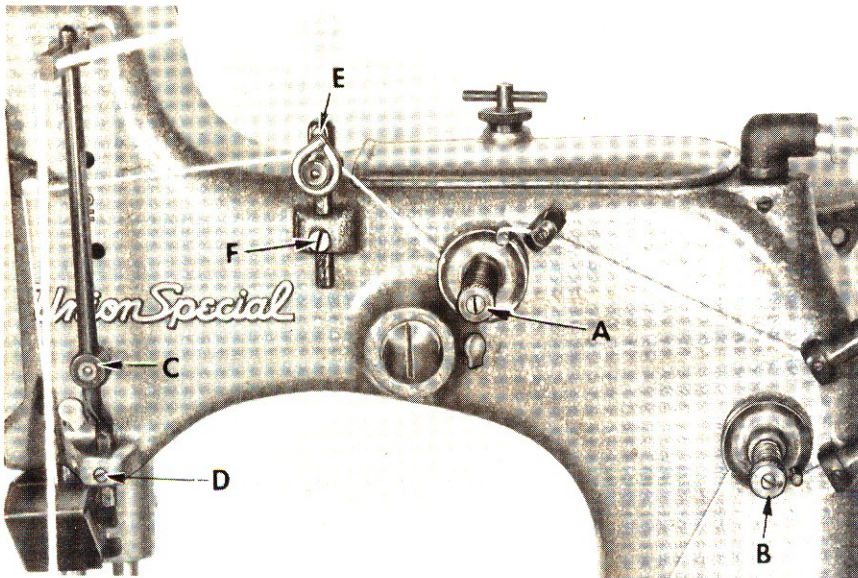


Fig. 6

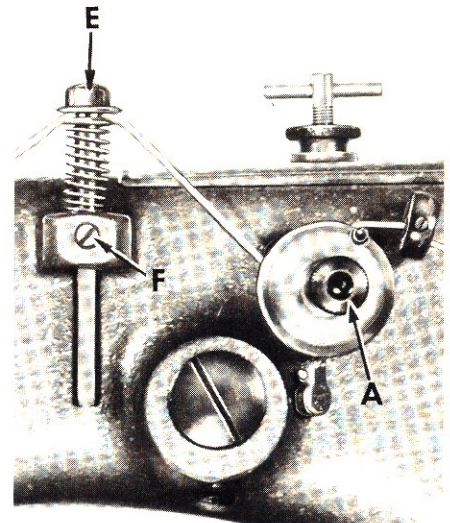


Fig. 6A

LOOPER THREAD TAKE-UP

On Styles 80800 E and H, adjust the height of the looper thread take-up (A, Fig. 7) by loosening screw (B) so the point of the descending needle is approximately $1/8$ inch below the lower edge of the looper at the time the cast-off forces the looper thread over the corner of the take-up. This adjustment can be made by drawing the looper thread into the machine and noting the location of the needle point at the time the cast-off forces the looper thread over the corner. Retighten screw.

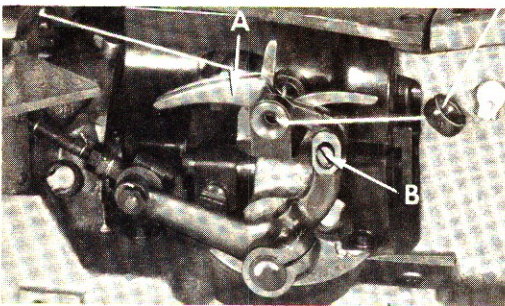


Fig. 7

SETTING NEEDLE THREAD TAKE-UP ROLLER AND EYELET

On Styles 80800 E and H, adjust the height of the needle thread take-up roller (C, Fig. 6), which is secured by screw (D), so that the needle thread on the downstroke of the needle, contacts the roll at the time the needle loop is released from the looper.

On Style 80800 F, the needle thread take-up roller (C, Fig. 6) should be positioned so as not to contact the needle thread at anytime.

On Styles 80800 E and H, adjust the height of the vertical thread eyelet (E, Fig. 6) which is secured by screw (F), so that an equal quantity of needle thread is drawn through the needle thread tension discs on the up and down stroke of the needle.

SETTING NEEDLE THREAD TAKE-UP ROLLER AND EYELET (Continued)

On Style 80800 F, adjust the tension on needle thread nipper (E, Fig. 6A) by loosening screw (F) and raising or lowering needle thread nipper support pin to increase or decrease tension as required to suit sewing conditions. Retighten screw (F).

ADJUSTING KNIVES (FOR STYLES 80800 E and F)

The knives are set correctly when the upper corner of the driven knife overlaps the stationary knife $\frac{1}{32}$ inch and the upper end of the stationary knife is even with the upper edge of the driven knife.

ADJUSTING KNIVES AND TAPE CUTTER (FOR STYLE 80800 H)

To remove the tape cutter housing, turn the pulley in operating direction until the needle is at high position, move the cloth plate swinging extension out of operating position and remove the two tape cutter housing screws. Remove the housing and cloth plate, also remove the upper knife actuating shoe, presser foot, throat plate, feed dog and needle guard in the order named for convenient access.

Wrenches Nos. 116 and 21388C can be used advantageously for adjusting the hexagonal head screws used in the tape cutting mechanism.

With the throat plate temporarily laid in its seat, set the lower knife (A, Fig. 8) so that the cutting edge is even with the top of the throat plate (B) and tighten in this position with the hexagonal head screw (C). Reassemble needle guard, feed dog and throat plate.

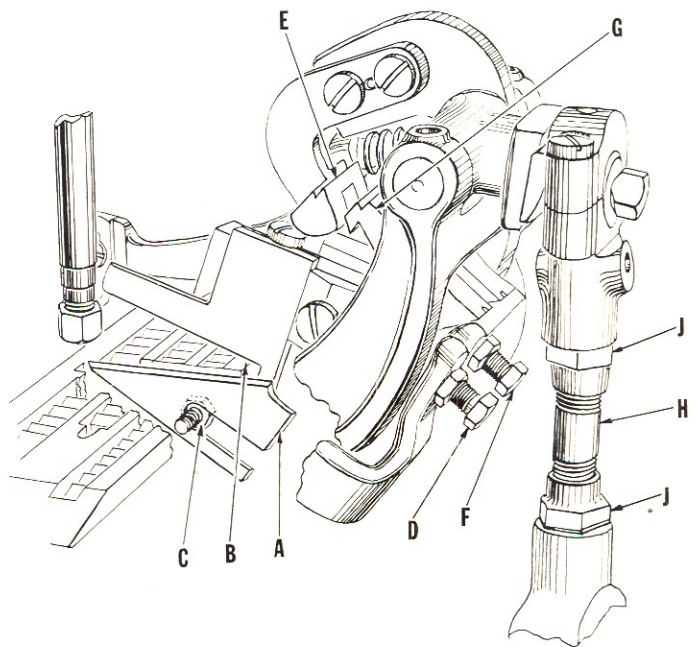


Fig. 8

Reassemble actuating shoe (A, Fig. 9). Loosen the hexagonal head adjusting screw (D, Fig. 8) and set, so that the bottom of the actuating shoe is even with the bottom of throat plate (B). Tighten locknut.

Insert upper knife (B, Fig. 9) in upper knife lever (C) and raise it as high as it will go. Tighten clamp screw (D), set stop screw (E) so that it contacts top of knife.

NOTE: As the knives (A, Fig. 8) and (B, Fig. 9) are resharpened, their adjustment is maintained by raising and lowering them in their holders.

Loosen screw (A, Fig. 10) and move shoe (B) to extreme left (or remove if desired). Turn handwheel until pawl (E, Fig. 8) is at its lowest position. Turn screw (F) until ratchet block (G) snaps over pawl (E), then add $\frac{1}{4}$ to $\frac{1}{2}$ turn more to insure adequate clearance under operating conditions. If screw is turned too far, the mechanism will not work.

ADJUSTING KNIVES AND TAPE CUTTER (FOR STYLE 80800 H) (Continued)

If ratchet block and pawl will not engage, it may be necessary to adjust connecting rod (H, Fig. 8) by means of the locknuts (J). The correct center to center distance of the connecting rod should be $4 \frac{1}{16}$ inch. Individual tape clippers may require slightly different settings due to slight accumulation of tolerances in manufacture.

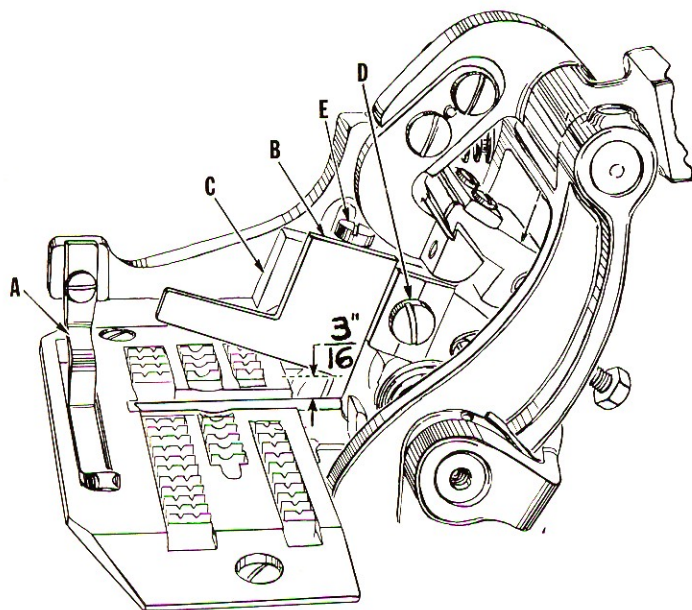


Fig. 9

The length at the finish is not adjustable.

The trip dog operating cam (E, Fig. 10) can be retarded or advanced to vary the length of the tape at the start of the closure. Loosen screws (F and G) and turn the operating cam toward the handwheel end of the machine to shorten the distance and in the opposite direction to lengthen the distance. The actuating shoe tension spring (H) is adjustable for various weights of material.

Attach cloth plate and tape cutter housing.

The folder, tape reel and filter cord stand are furnished as a separate unit under No. 21884 C. Their installation is shown on PL162. A wood core is provided for the roll of paper tape and a tension for controlling the tape.

Move shoe (B, Fig. 10) to right (or reassemble if it was removed) so that pawl (C) will rest on top of the extreme right end of shoe. Shoe should have polished end to the right and point of pawl may overlap slightly over outside to insure trigger action during operation of machine.

When actuating shoe (A, Fig. 9) is raised slightly, trip dog (D, Fig. 10) should allow pawl (C) to slide off shoe (B, Fig. 10) and knife should clip tape within $1 \frac{1}{2}$ turns or less of the handwheel. Make sure that the knives engage for their full length. When open there should be about $\frac{3}{16}$ " opening at the pilot end of the knives (See Figure 9).

The position of the tape cutter actuating shoe (A, Fig. 9) controls the length of tape extending beyond the material at the start of the closure.

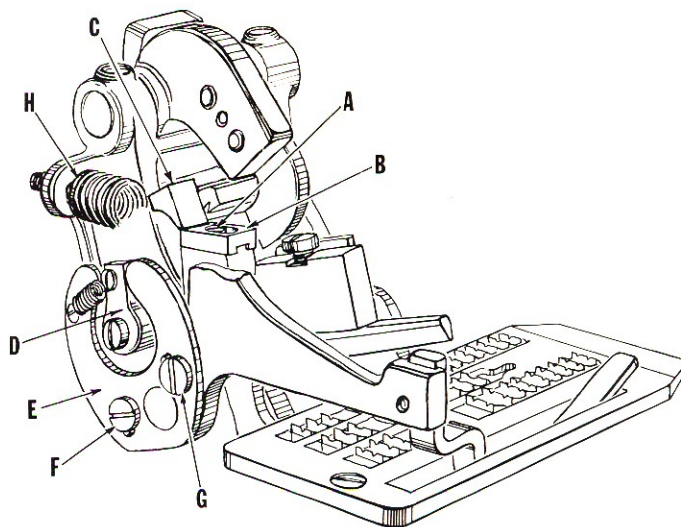


Fig. 10

ADJUSTING KNIVES AND TAPE CUTTER (FOR STYLE 80800 H) (Continued)

A width of tape ranging from $2 \frac{1}{8}$ to $2 \frac{1}{2}$ inches can be used in the folder. It is adjusted to suit the widest width when it leaves the factory, consequently will have to be readjusted, if the tape used is less than $2 \frac{1}{2}$ inches wide. This is accomplished by loosening the two hexagonal head bolts nearest the left end of the folder and moving the folder sections and resetting the tape guide collars.

The folder is set correctly when the following conditions prevail:

- (a) The upper surface of the middle section is level and parallel with the side of the conveyor belt.
- (b) The front and rear sections are set so that they guide the tape accurately, yet the tape passes freely and the two edges are even.
- (c) There is approximately $\frac{1}{64}$ inch space between the throat plate and delivery end of folder and a space of approximately $\frac{1}{32}$ inch between the delivery end and the presser foot when the latter is bearing on the throat plate.
- (d) The line of stitches is approximately $\frac{5}{16}$ inch from the edge of the tape.
- (e) The tape guide collars are set to lead the tape centrally into the folder.

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:

23	29442 P	Looper Drive Eccentric Assembly -----	1
24	80636 C	Looper Lever Connection -----	1
25	88 F	Screw, for looper lever connection -----	4
26	80649 A	Oil Felt Holder, for looper lever connection -----	1
27	660-90	Felt Oil Wick -----	1
28	80642	Looper Drive Eccentric -----	1
29	22894 L	Spot Screw -----	1
30	22894 C	Set Screw -----	1
31	80645	Looper Drive Ball Stud -----	1
32	80636 A	Ball Fork, for looper drive ball stud -----	1
33	22515 A	Screw, for ball fork -----	1

It will be noted in the above example that the bearing is not listed. The reason is that replacement of this part 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.

IMPORTANT! ON ALL ORDERS, PLEASE INCLUDE PART NAME AND STYLE OF MACHINE FOR WHICH PART IS ORDERED.

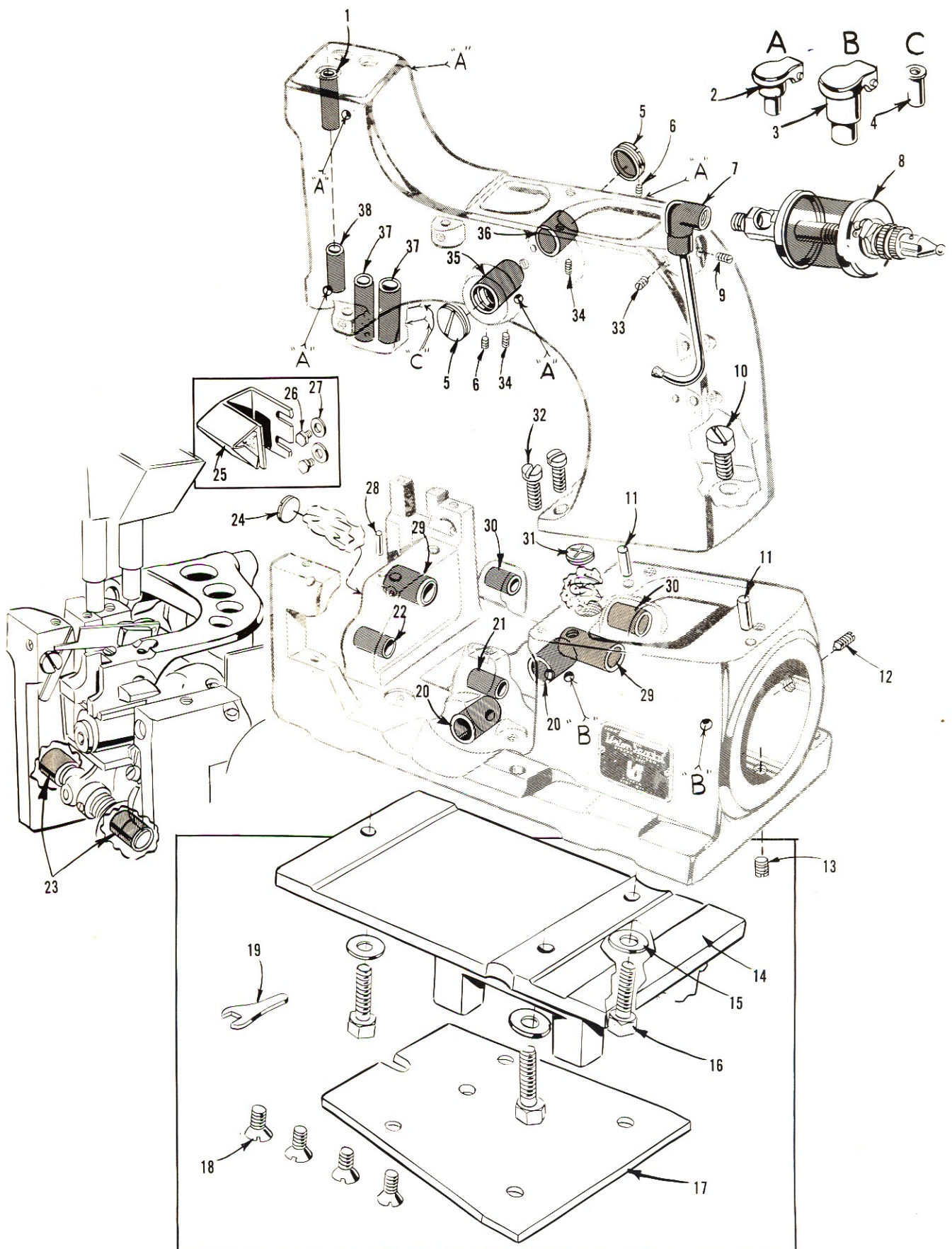
USE GENUINE NEEDLES AND REPAIR PARTS

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 Corporation, 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

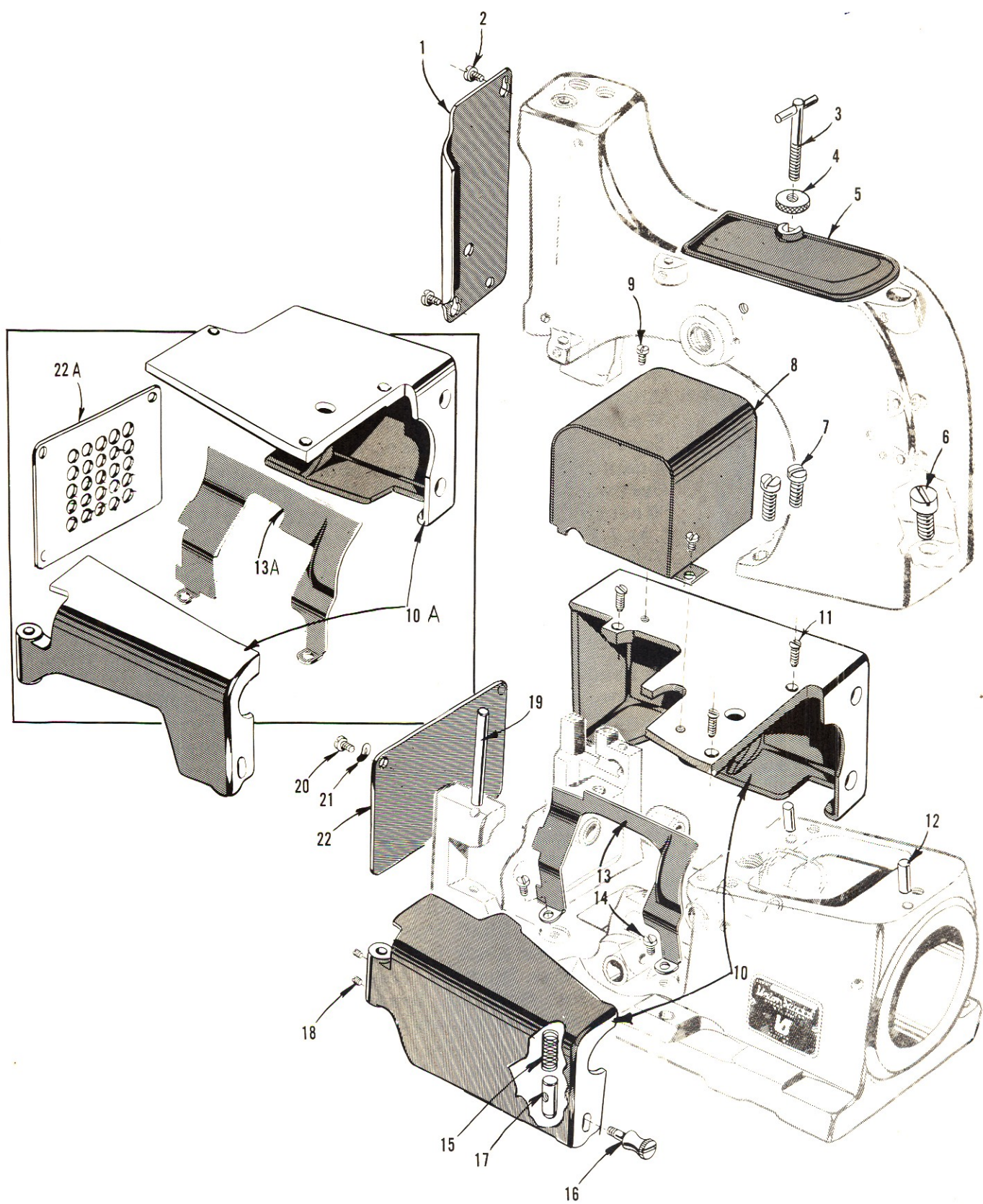
Prices are net cash and are subject to change without notice. All shipments are forwarded f.o.b. shipping point. Parcel Post shipments are insured unless otherwise directed. A charge is made to cover postage and insurance.



MAIN FRAME, BUSHINGS, OILING PARTS AND BASE PLATE

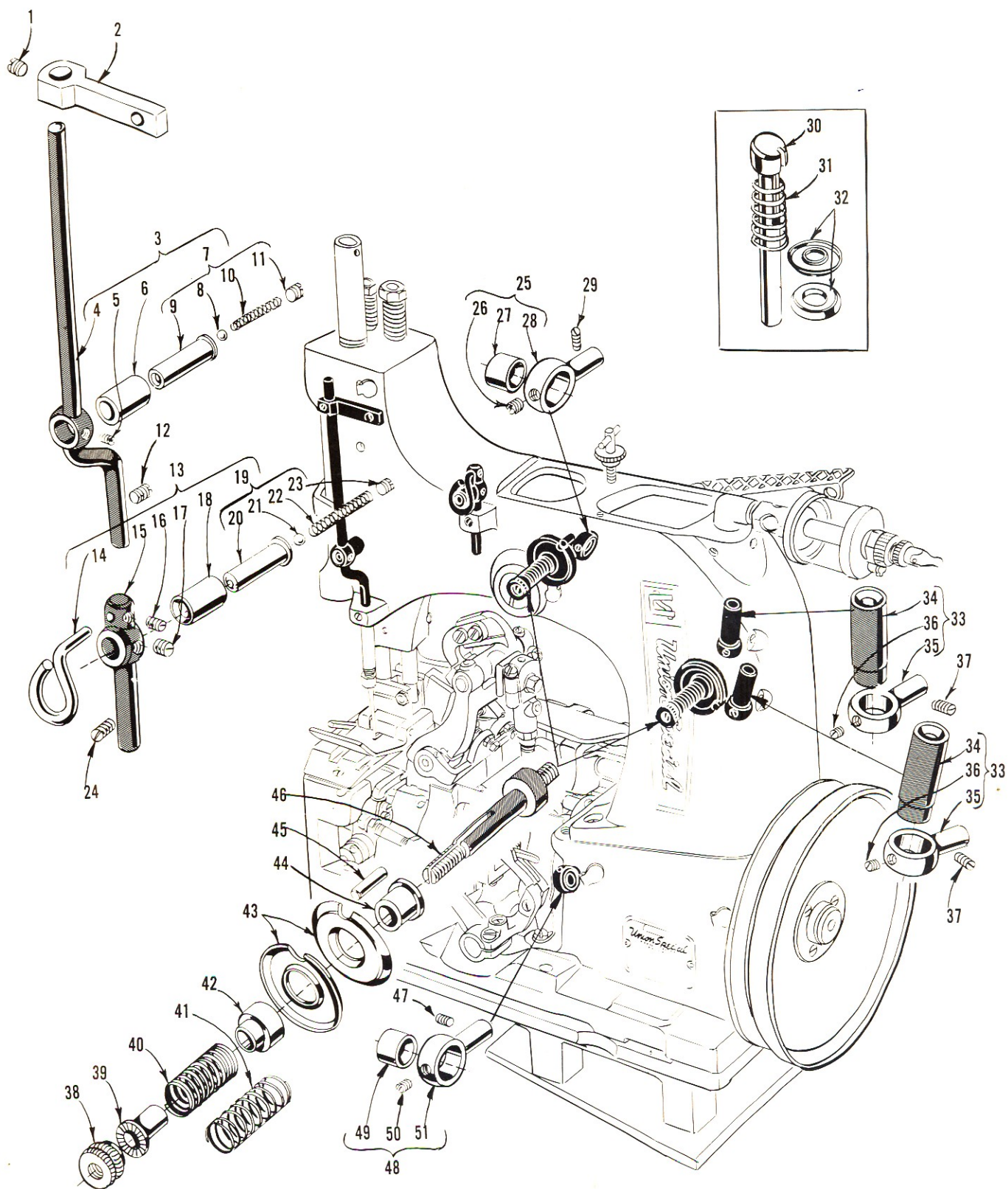
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	80673 E	Needle Bar Bushing, upper -----	1
2	80689 A	Oil Cup, small, for Styles 80800 E and F -----	11
-	80689 A	Oil Cup, small, for Style 80800 H only -----	8
3	80690 A	Oil Cup, large -----	2
4	41046 G	Spring Valve Oiler -----	2
5	80644	Plug Screw -----	2
6	88	Set Screw, for plug screw -----	2
7	80898	Oiler, for needle lever connection bearing -----	1
8	666-79	Sight Feed Oiler Assembly -----	1
9	95	Set Screw, for needle lever oiler -----	1
10	99256	Screw, for arm -----	1
11	664 F-16	Taper Dowel Pin -----	2
12	HA81	Spot Screw, for crankshaft bearing housing -----	1
13	HA95	Set Screw, for crankshaft bearing housing -----	1
*14	11667 V	Adapter Base, for Styles 80800 E and F -----	1
*15	652-24	Washer, for Styles 80800 E and F -----	3
*16	22639 B	Screw, for adapter base, for Styles 80800 E and F -	3
*17	11667 K	Adapter Plate, for Styles 80800 E and F -----	1
*18	22638 B	Screw, for adapter plate, for Styles 80800 E and F -	4
19	21388 AH	Wrench, 1/4 inch open end, for Styles 80800 E and F -----	1
20	80640 E	Transverse Shaft Bushing -----	2
21	80639 F	Looper Shaft Bushing, right -----	1
22	80639 E	Looper Shaft Bushing, left -----	1
23	80692 D	Knife Shaft Bushing, for Styles 80800 E and F -----	2
24	22539	Plug Screw -----	1
25	80698 A	Thread Lubricator, for Styles 80800 E and F -----	1
26	79048	Screw, for thread lubricator, for Styles 80800 E and F -----	2
27	69 H	Washer, for Styles 80800 E and F -----	2
28	50-430 Blk.	Dowel Pin, for Style 80800 H only -----	2
29	80694 D	Main Shaft Bushing, left and middle -----	2
30	80692 E	Feed Rocker Shaft Bushing -----	2
31	22539 F	Plug Screw -----	1
32	22814 B	Screw, for arm -----	2
33	95	Set Screw, for needle lever oiler -----	1
34	89	Spot Screw, for needle lever shaft bushings -----	2
35	80646	Needle Lever Shaft Bushing, front -----	1
36	80647	Needle Lever Shaft Bushing, rear -----	1
37	80662 B	Presser Bar Bushing, lower -----	2
38	80673 D	Needle Bar Bushing, lower -----	1
-	660-457	Dust Cover (not shown on picture plate) -----	1

* Available as an extra send and charge item.



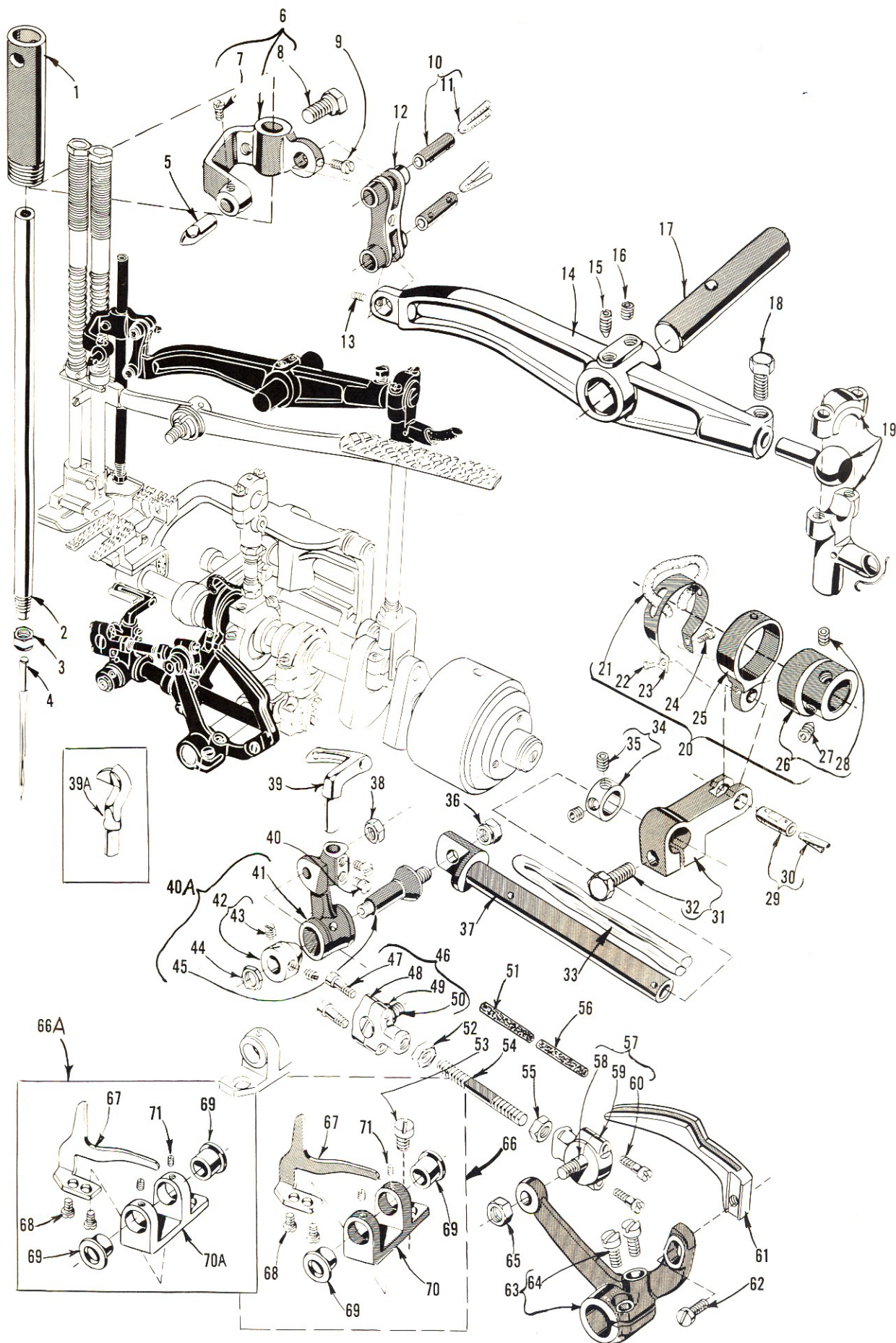
MAIN FRAME, CLOTH PLATES, HOUSINGS AND MISCELLANEOUS COVERS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	80887	Face Plate -----	1
2	376	Screw, for face plate -----	2
3	64 Y	Screw, for top cover -----	1
4	35733 B	Lock Nut, for screw No. 64 Y-----	1
5	80888	Top Cover -----	1
6	99256	Screw, for arm-----	1
7	22814 B	Screw, for arm-----	2
8	80897	Tape Cutter Housing, for Style 80800 H -----	1
9	93 A	Screw, for tape cutter housing, for Style 80800 H only-----	2
10	29479 Y	Cloth Plate Assembly, for Style 80800 H only -----	1
10A	29479 X	Cloth Plate Assembly, for Styles 80800 E and F-----	1
11	22574	Screw, for cloth plate assembly -----	3
12	664 F-16	Taper Dowel Pin-----	2
13	80284 H	Looper Thread Guard, for Style 80800 H only -----	1
13A	80684	Looper Thread Guard, for Styles 80800 E and F-----	1
14	94	Screw, for looper thread guard -----	2
15	80438	Spring, for cloth plate extension bolt-----	1
16	80440	Cloth Plate Bolt Knob -----	1
17	81239	Cloth Plate Extension Bolt -----	1
18	89	Screw, for hinge pin -----	2
19	8564	Hinge Pin, for swing-out cover-----	1
20	92121	Screw, for end cover -----	1
21	12957 E	Spring Washer, for end cover -----	1
22	80683 H	End Cover, for Style 80800 H only -----	1
22A	80683	End Cover, for Styles 80800 E and F -----	1



ROLLING THREAD GUIDES, THREAD EYELETS AND THREAD TENSION PARTS

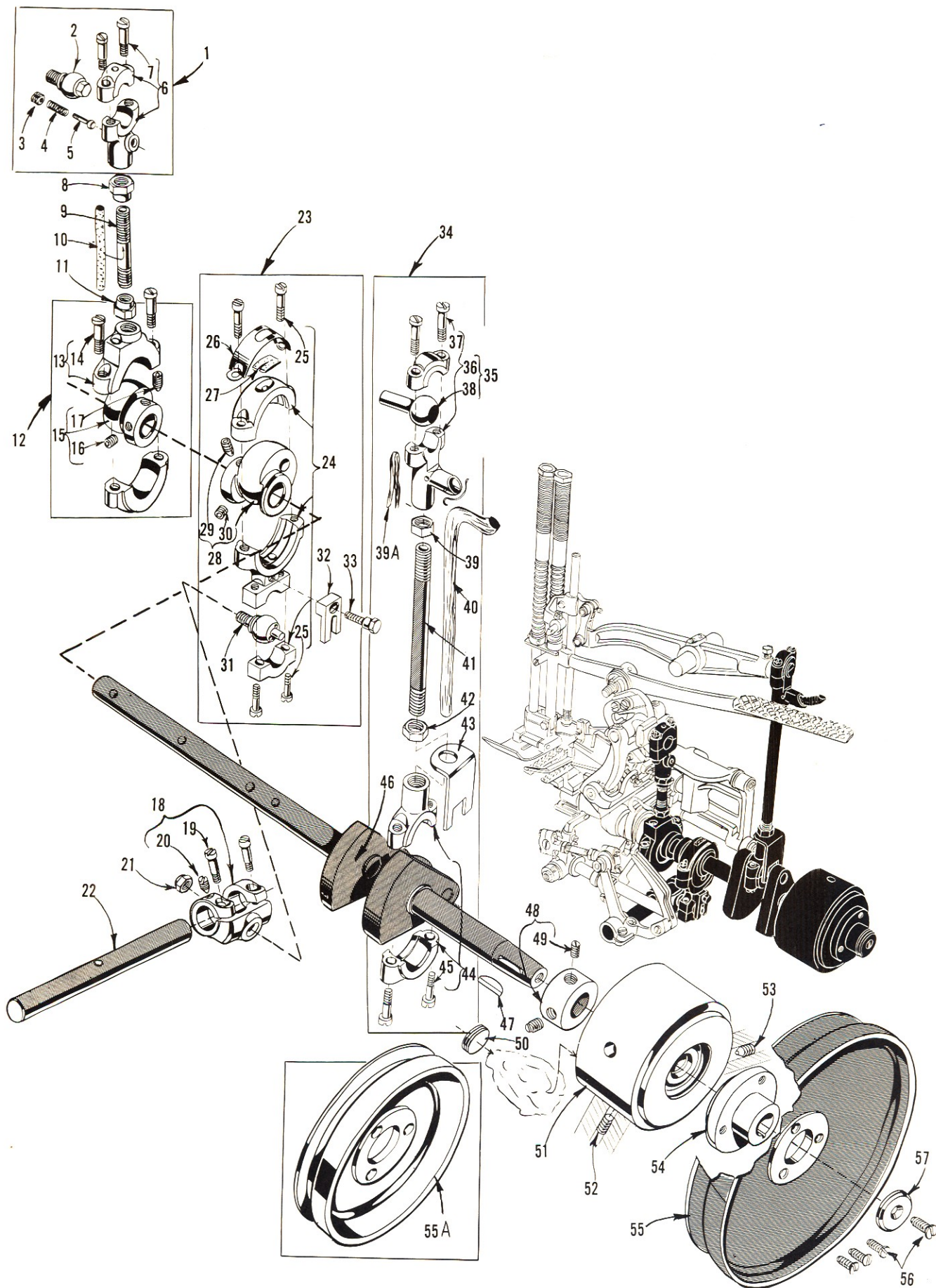
Ref. No.	Part No.	Description	Amt. Req.
1	88	Screw, for filler cord guide-----	1
2	80665 C	Filler Cord Guide-----	1
3	80665 A	Rolling Thread Guide Assembly -----	1
4	80665 B	Thread Roller Support -----	1
5	88	Screw, for thread guide roller -----	1
6	80668	Thread Guide Roller -----	1
7	HS53 B	Needle Thread Rolling Thread Guide Axle -----	1
8	12964 C	Spring Ball-----	1
9	81086 G	Rolling Thread Guide Axle -----	1
10	HA1286 B	Spring -----	1
11	22560	Screw, for spring-----	1
12	95	Screw, for rolling thread guide assembly-----	1
13	80250	Rolling Thread Guide Assembly, for Style 80800 E and H -----	1
14	80250 B	Rolling Thread Guide Wire-----	1
15	80250 A	Rolling Thread Guide Holder -----	1
16	22743	Screw, for rolling thread guide wire -----	1
17	88	Screw, for thread guide roller -----	1
18	80668	Thread Guide Roller -----	1
19	HS52 B	Needle Thread Rolling Thread Guide Axle -----	1
20	81086 C	Rolling Thread Guide Axle -----	1
21	12964 C	Spring Ball-----	1
22	HA1286 B	Spring -----	1
23	22560	Screw -----	1
24	95	Screw, for rolling thread guide assembly -----	1
25	AS137 A	Thread Eyelet and Support Assembly-----	1
26	28 C	Screw, for thread eyelet -----	1
27	HA103 B	Thread Eyelet -----	1
28	AS137	Thread Eyelet Support-----	1
29	22560 B	Screw, for thread eyelet and support assembly -----	1
30	80665 E	Needle Thread Nipper Support Pin, for Style 80800 F only -----	1
31	51292 F-4	Needle Thread Tension Spring, for Style 80800 F only --	1
32	80665 F	Needle Thread Nipper Support Disc, for Style 80800 F only -----	2
33	81256 A	Thread Eyelet Assembly -----	2
34	81256	Thread Sleeve -----	1
35	AS137	Thread Eyelet Support -----	1
36	28 C	Screw -----	1
37	22560 B	Screw, for thread eyelet assembly-----	2
38	108	Tension Regulating Nut -----	2
39	107	Tension Spring Ferrule-----	2
40	110-4	Tension Spring, for needle thread on Styles 80800 E, F and H -----	1
41	110-3	Tension Spring, for looper thread on Style 80800 H-----	1
-	110-2	Tension Spring, for looper thread on Styles 80800 E and F -----	1
42	HA1349	Tension Post Ferrule -----	2
43	80676 A	Tension Disc -----	4
44	HA1348	Tension Post Ferrule -----	2
45	80667	Tension Disc Stop Pin -----	2
46	HS106	Tension Post -----	2
47	95	Screw, for thread eyelet and support assembly-----	1
48	AS137 A	Thread Eyelet and Support Assembly-----	1
49	HA103 B	Thread Eyelet -----	1
50	28 C	Screw, for thread eyelet -----	1
51	AS137	Thread Eyelet Support -----	1



NEEDLE, NEEDLE BAR, NEEDLE LEVER, LOOPER, LOOPER DRIVE
AND LOOPER THREAD CAST-OFF PARTS

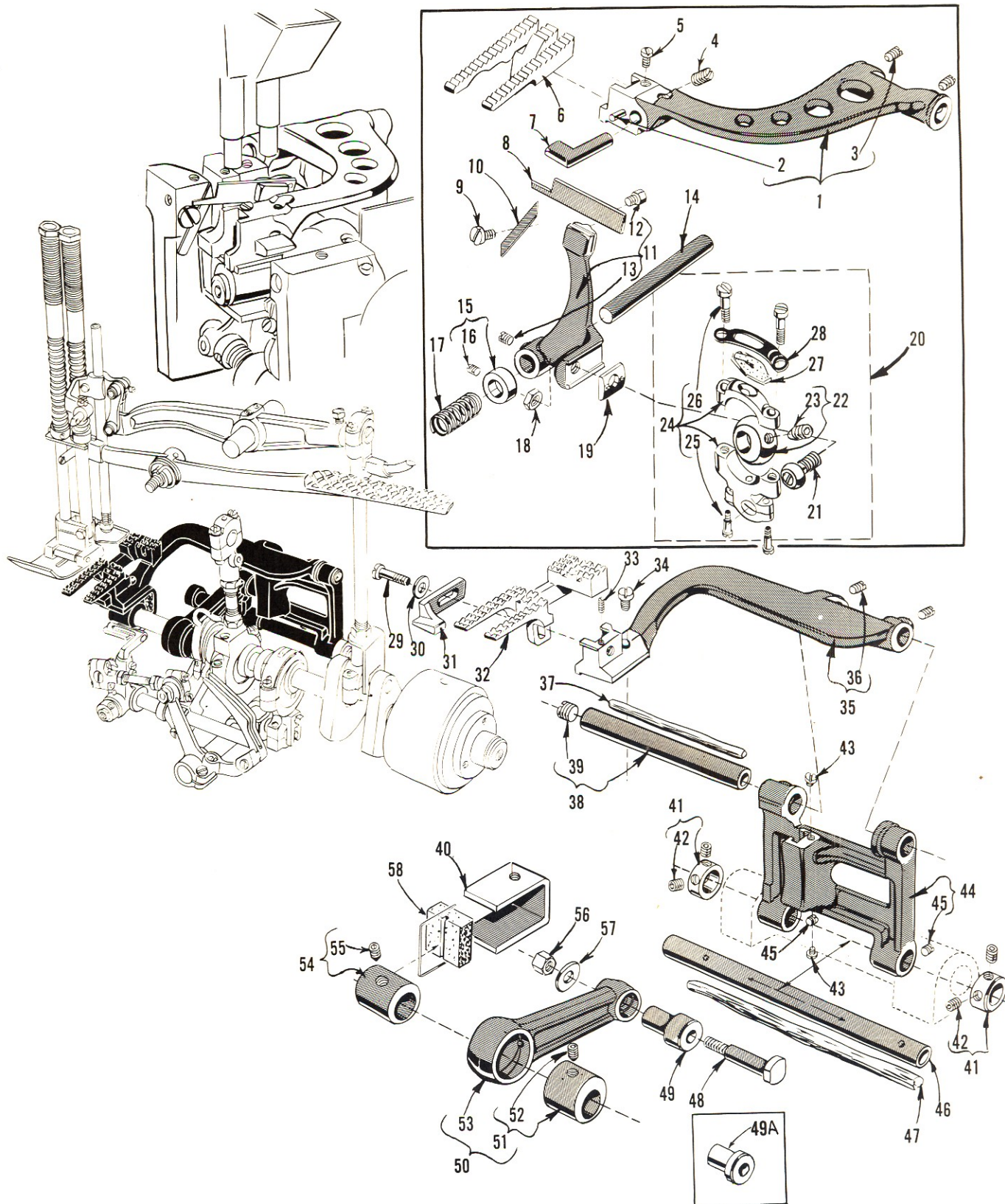
Ref. No.	Part No.	Description	Amt. Req.
1	80673 C	Needle Bar Guard -----	1
2	80617	Needle Bar -----	1
3	HA56	Needle Clamp Nut -----	1
4	1975 G	Needle -----	1
5	334	Needle Thread -----	1
6	80659 A	Needle Bar Connection -----	1
7	22564 D	Screw, for needle thread eyelet -----	1
8	BP108	Screw, for needle bar connection -----	1
9	91	Screw, for link pin -----	2
10	51134 V	Needle Lever Link Pin -----	1
11	666-260	Felt Oil Wick -----	1
12	HA54 A	Needle Bar Link -----	1
13	22565 C	Screw, for link pin -----	1
14	80615	Needle Lever -----	1
15	22894 K	Spot Screw, for needle lever -----	1
16	22894 AD	Set Screw, for needle lever -----	1
17	80643	Needle Lever Shaft -----	1
18	22811	Screw, for needle lever connecting rod bearing -----	1
*19	29066 U	Needle Lever Connecting Rod Bearing Assembly -----	1
20	29793	Looper Avoid Eccentric Assembly -----	1
21	666-149	Oil Wick -----	1
22	22738 B	Screw, for oil wick holder -----	1
23	80649 C	Oil Wick Holder -----	1
24	22768	Screw, for link pin -----	1
25	80642 C	Strap, for looper avoid eccentric -----	1
26	80642 A	Looper Avoid Eccentric -----	1
27	22894 L	Spot Screw -----	1
28	22894 C	Set Screw -----	1
29	51236 A	Link Pin, for looper avoid eccentric assembly -----	1
30	WO-2	Wool Yarn, 2 strands -----	1
31	80642 B	Looper Avoid Connecting Link -----	1
32	74 A	Screw -----	1
33	WO-3	Wool Yarn -----	1
34	482 C	Collar, for looper rocker shaft -----	2
35	22894 C	Screw, for collar -----	1
36	1280	Nut, for looper rocker assembly -----	1
37	80639	Looper Rocker Shaft -----	1
38	12538	Nut, for looper rocker ball joint assembly -----	1
39	AS26 XA	Looper, for Styles 80800 E and H, 401 stitch -----	1
39A	80608 A	Looper, for Style 80800 F only, 101 stitch -----	2
40	73	Screw, for looper -----	1
40A	29479	Looper Rocker Assembly -----	1
41	80613 A	Looper Rocker -----	1
42	15465 F	Differential Rocker Cone -----	2
43	88	Screw -----	1
44	12987 A	Check Nut -----	1
45	15745 B	Looper Rocker Cone Stud, marked "A" -----	1
46	80641 B	Looper Rocker Ball Joint Assembly, left -----	2
47	22729 C	Screw, for shell -----	1
48	35841 C	Shell -----	1
49	HS36 K	Washer -----	1
50	36 E	Ball Stud -----	1
51	666-149	Oil Wick, for No. 80641 B -----	1
52	18	Nut, for connecting rod, right hand thread -----	1
53	HA61 D	Screw, for looper thread cast-off assembly -----	1
54	41331 G	Connecting Rod -----	1
55	269	Screw, for connecting rod, left hand thread -----	1
56	666-149	Oil Wick, for No. 80657 A -----	1
57	80657 A	Looper Rocker Ball Joint Assembly, right -----	1
58	237 A	Ball Stud -----	1
59	6040 A	Shell -----	2
60	22729 C	Screw, for shell -----	1
61	80623	Looper Thread Take-up -----	1
62	J79 J	Screw, for looper thread take-up -----	1
63	80637	Looper Drive Lever -----	2
64	22517	Screw, for looper drive lever -----	1
65	18	Nut, for looper rocker ball joint assembly -----	1
66	80653 A	Looper Thread Cast-off Assembly, for Styles 80800 E and F -----	1
66A	80653 I	Looper Thread Cast-off Assembly, for Style 80800 H only -----	1
67	80604	Thread Hook -----	2
68	AS22 D	Screw, for thread hook -----	2
69	HA102 A	Thread Eyelet -----	1
70	80653	Holder, for No. 80653 A -----	1
70A	80653 H	Holder, for No. 80653 I -----	2
71	22743	Screw, for thread eyelet -----	2

* See Page 23 for component parts.



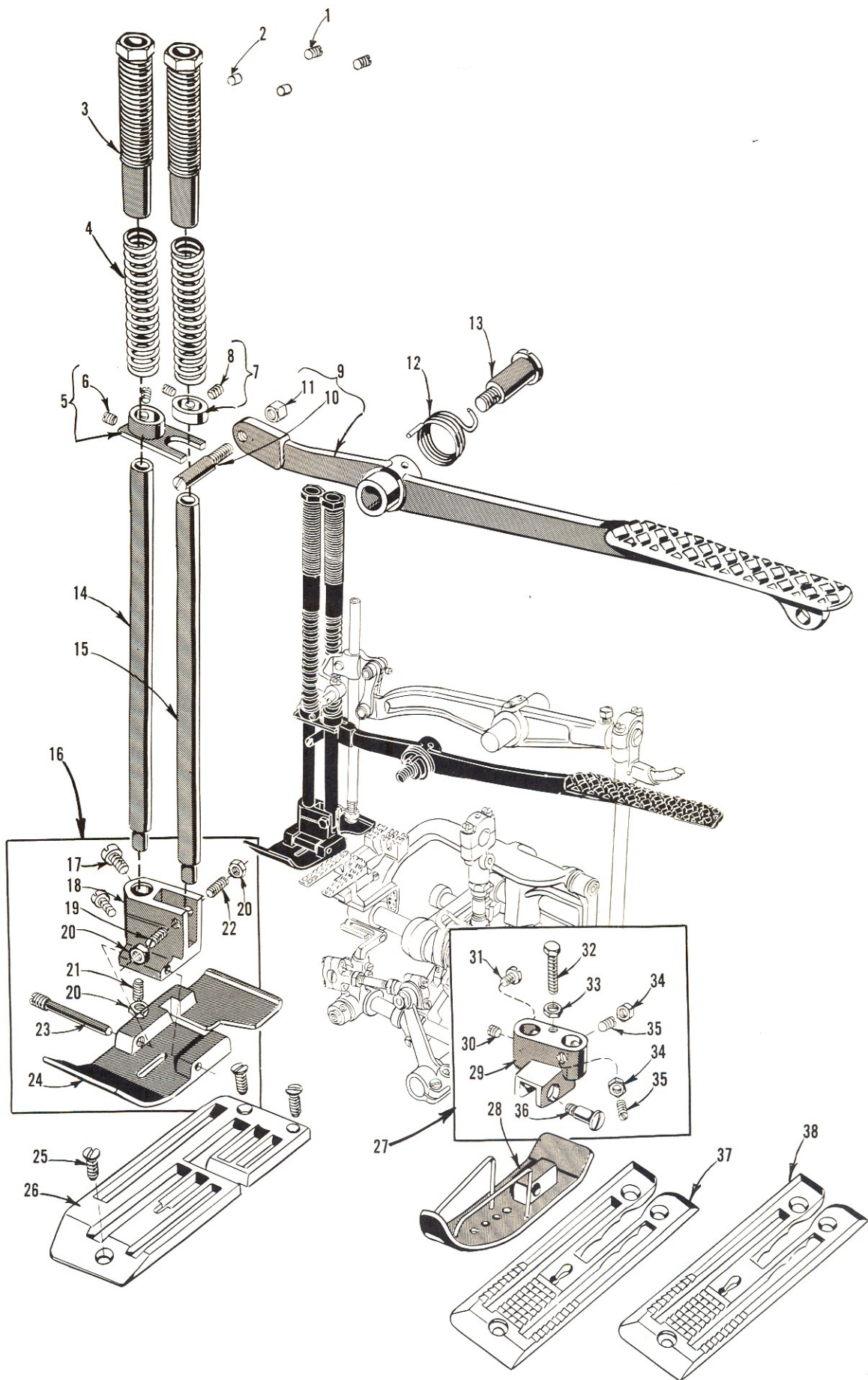
TAPE CUTTER DRIVE, LOOPER DRIVE, CRANKSHAFT ASSEMBLY
AND PULLEY RIM

Ref. No.	Part No.	Description	Amt. Req.
1	29139 E	Tape Cutter Bearing Assembly, upper, for Style 80800 H only-----	1
2	G21710	Ball Stud -----	1
3	22586 A	Screw, for spring pin-----	1
4	1230 B	Spring, for pin-----	1
5	1230 D	Spring Pin-----	1
6	80630 E	Tape Cutter Drive Bearing -----	1
7	22587	Screw, for bearing -----	2
8	15430 C	Nut, left hand thread, for connecting rod tube, for Style 80800 H only -----	1
9	80230	Connecting Rod Tube, for Style 80800 H only -----	1
10	15430 L	Felt, for connecting rod tube, for Style 80800 H only-----	1
11	15430 D	Nut, right hand thread, for connecting rod tube, for Style 80800 H only -----	1
12	29132 AG	Tape Cutter Driving Eccentric Assembly, for Style 80800 H only ---	1
13	80630 F	Tape Cutter Driving Eccentric Bearing -----	1
14	22587	Screw, for bearing -----	2
15	21703 L	Tape Cutter Driving Eccentric -----	1
16	22894 C	Set Screw -----	1
17	22894 L	Spot Screw-----	1
18	80638 A	Looper Drive Lever Shaft Rocker -----	1
19	136	Clamp Screw -----	2
20	96	Spot Screw-----	1
21	80691	Nut, for looper drive eccentric ball stud -----	1
22	80640	Looper Drive Lever Rocker Shaft -----	1
23	29442 P	Looper Drive Eccentric Assembly -----	1
24	80636 C	Looper Lever Connection -----	1
25	88 F	Screw, for looper lever connection-----	4
26	80649 A	Oil Felt Holder, for looper lever connection-----	1
27	660-90	Felt Oil Wick -----	1
28	80642	Looper Drive Eccentric -----	1
29	22894 L	Spot Screw -----	1
30	22894 C	Set Screw -----	1
31	80645	Looper Drive Ball Stud-----	1
32	80636 A	Ball Fork, for looper drive ball stud -----	1
33	22515 A	Screw, for ball fork -----	1
34	29781 A	Crankshaft Eccentric Assembly, for Styles 80800 E and F -----	1
-	29781 B	Crankshaft Eccentric Assembly, for Style 80800 H only -----	1
35	29066 U	Needle Lever Connection Upper Bearing Assembly-----	1
36	80650 B	Needle Lever Connection Bearing -----	1
37	22587	Screw, for bearing -----	2
38	80656 A	Needle Lever Ball Stud -----	1
39	80630 C	Nut, left hand thread, for needle lever connecting rod oil tube--	1
39A	WO-3	Wool Yarn-----	1
40		Felt Oil Wick, 3/16 inch diameter, 7 1/4 inches long-----	1
41	80630	Needle Lever Connecting Rod Oil Tube -----	1
42	80630 D	Nut, right hand thread, for needle lever connecting rod oil tube -----	1
43	80636 B	Guide Fork, for crankshaft bearing-----	1
44	80652 A	Crankshaft Bearing, for crankshaft eccentric assembly-----	1
45	22587	Screw, for bearing -----	2
46	80622 B	Crankshaft, for Styles 80800 E and F -----	1
-	80622 A	Crankshaft, for Style 80800 H only -----	1
47	HA66 K	Woodruff Key, for pulley hub -----	1
48	80681	Crankshaft Collar -----	1
49	74 E	Set Screw -----	2
50	22539	Plug Screw, for crankshaft bearing housing sponge hole -----	1
51	80685 E	Crankshaft Bearing Housing, includes bushing-----	1
52	HA95	Set Screw, for crankshaft bearing housing -----	1
53	HA81	Spot Screw, for crankshaft bearing housing-----	1
54	80621 A	Pulley Hub -----	1
55	80821 H	Pulley Rim, 6 inch working diameter, for Style 80800 H only -----	1
55A	80821 B	Pulley Rim, 4 1/4 inch working diameter, for Styles 80800 E and F -----	1
56	80	Screw, for lock washer and pulley rim -----	4
57	80674	Lock Washer, for pulley hub-----	1



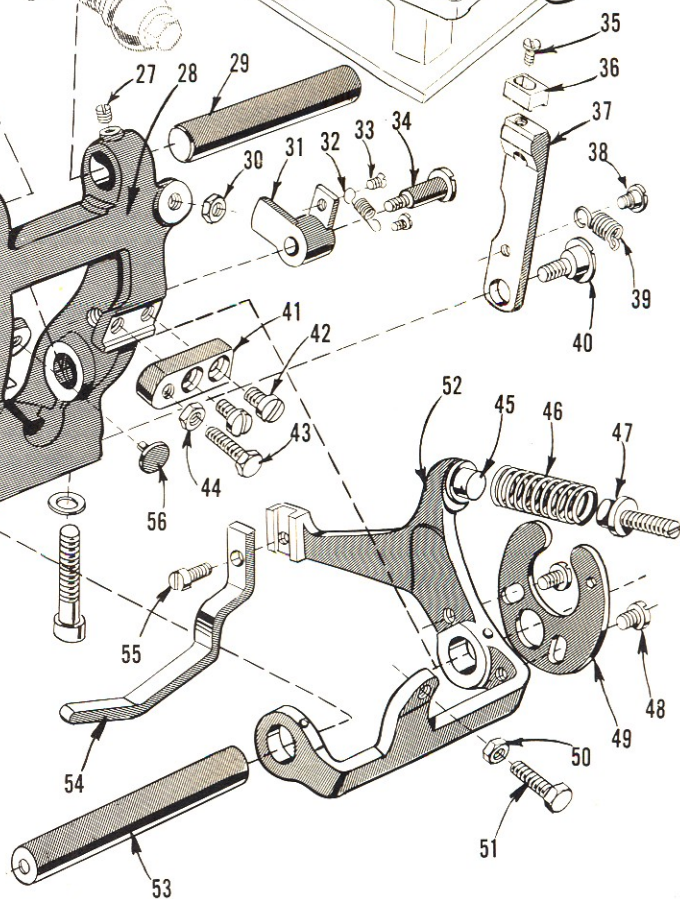
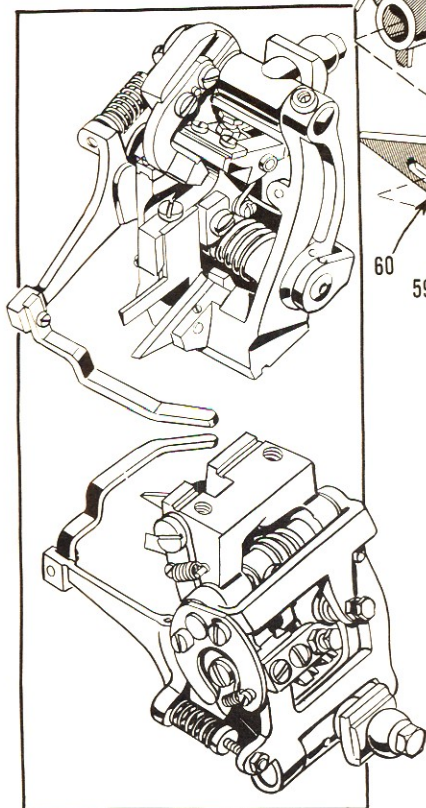
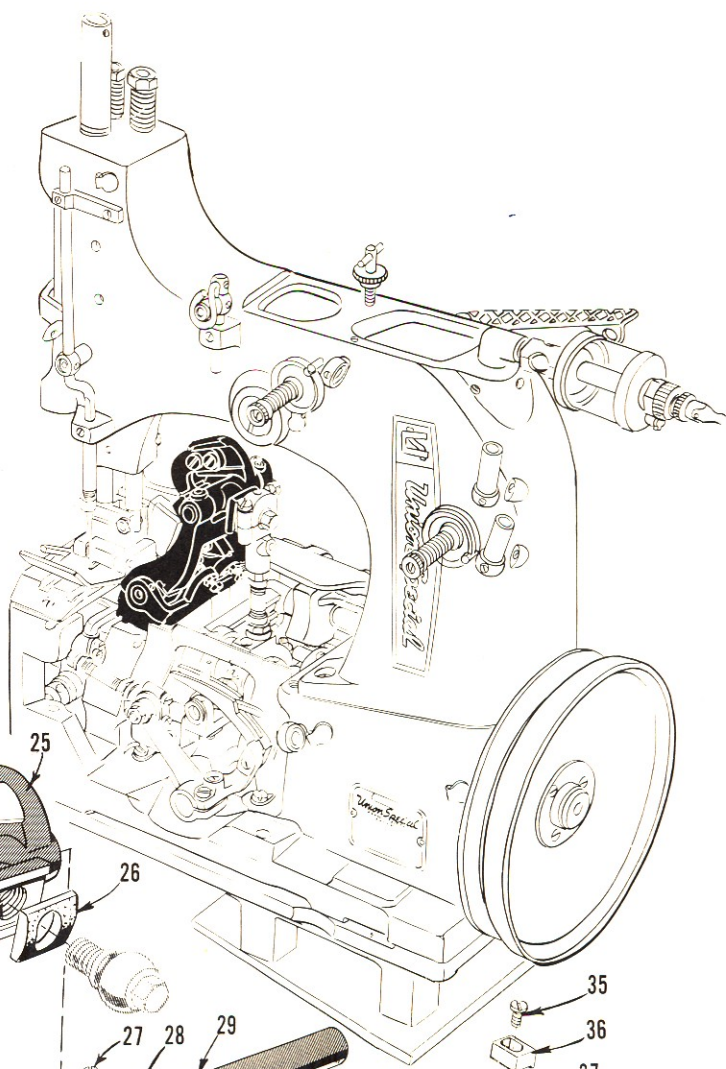
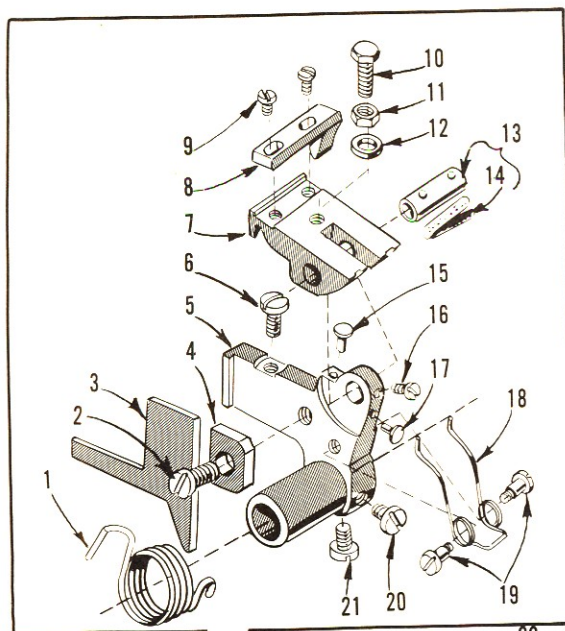
KNIFE DRIVE FOR STYLES 80800 E and F, FEED DOGS, FEED BARS,
FEED LIFT AND FEED DRIVING PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	80634 C	Feed Bar, for Styles 80800 E and F -----	1
2	80699 B	Feed Bar Needle Guard Stop Pin -----	1
3	89	Set Screw, for feed bar -----	2
4	HA95	Set Screw, for needle guard, for Styles 80800 E and F -----	1
5	97 X	Screw, for feed dog support, for Styles 80800 E and F -----	1
6	80605 E	Feed Dog, for Style 80800 E only -----	1
-	80626 E	Feed Dog, for Style 80800 F only -----	1
7	80625	Needle Guard, for Styles 80800 E and F -----	1
8	80677	Upper Knife, for Styles 80800 E and F -----	2
9	88 D	Screw, for lower knife, for Styles 80800 E and F -----	1
10	80675	Lower Knife, for Styles 80800 E and F -----	2
11	80671	Knife Bar, for Styles 80800 E and F -----	1
12	92127	Screw, for upper knife, for Styles 80800 E and F -----	1
13	98	Screw for knife bar -----	1
14	459	Chain Cutter Knife Lever Shaft, for Styles 80800 E and F -----	1
15	460	Shaft Collar, for knife bar -----	1
16	88	Screw, for shaft collar -----	1
17	HS110	Tension Spring, for knife bar, for Styles 80800 E and F -----	1
18	18	Nut, for chain cutter drive connection assembly, for Styles 80800 E and F -----	1
19	80670	Ball Stud Washer, for ball stud, for Styles 80800 E and F -----	1
20	29132 AF	Chain Cutter Drive Connection Assembly, for Styles 80800 E and F -----	1
21	10349	Ball Stud -----	1
22	80672	Knife Driving Eccentric -----	1
23	22894 L	Spot Screw -----	1
24	80650 C	Chain Cutter Drive Connection -----	1
25	97 A	Screw, for drive connection -----	2
26	75 A	Screw, for drive connection -----	2
27	660-90	Felt Oiling Pad -----	1
28	80649 B	Oil Felt Holder -----	1
29	93	Screw, for feed dog, for Style 80800 E only -----	1
-	22596	Screw, for feed dog, for Style 80800 F only -----	1
-	22874 C	Screw, for feed dog, for Style 80800 H only -----	1
30	69 H	Washer, for feed dog screw -----	1
31	80625 H	Needle Guard, marked "TL", for Style 80800 H only -----	1
32	80605 H	Feed Dog, for Style 80800 H only -----	1
33	73 C	Set Screw, for feed dog support, for Style 80800 H only -----	1
34	93 A	Screw, for feed driving eccentric fork, for Style 80800 H only -----	1
35	80634 H	Feed Bar, for Style 80800 H only -----	1
36	89	Set Screw, for feed bar -----	2
37	WO-3	Wool Yarn, for feed bar shaft -----as required	
38	80411	Feed Bar Shaft -----	1
39	22706 A	Set Screw -----	1
40	80634 E	Feed Lift Eccentric Fork -----	1
41	482 C	Feed Bar Shaft Collar -----	2
42	22894 C	Set Screw, for feed bar shaft collar -----	2
43	T26	Stop Screw, for stitch regulating stud -----	2
44	80633 H	Feed Rocker -----	1
45	89	Set Screw, for feed rocker -----	2
46	80408 A	Feed Rocker Shaft -----	1
47	WO-3	Wool Yarn, for feed rocker shaft -----as required	
48	80696	Stitch Regulating Stud, for Styles 80800 E and F -----	1
-	80696 H	Stitch Regulating Stud, for Style 80800 H -----	1
49	80654 H	Feed Rocker Eccentric Connection Bushing, for Style 80800 H -----	1
49A	80654	Feed Rocker Eccentric Connection Bushing, for Styles 80800 E and F -----	1
50	29099 X	Feed Drive Eccentric Assembly -----	1
51	80606 C	Feed Drive Eccentric -----	1
52	22894 D	Spot Screw, for feed drive eccentric -----	1
53	80651 C	Feed Rocker Eccentric Connection -----	1
54	80606 D	Feed Lift Eccentric -----	1
55	22894 D	Spot Screw, for feed lift eccentric -----	1
56	HA18 A	Stitch Regulating Stud Nut -----	1
57	HA20 A	Stitch Regulating Stud Washer -----	1
58	80634 EB	Felt, for feed lift eccentric fork -----	1



THROAT PLATES, PRESSER FEET, PRESSER BAR
AND PRESSER FOOT LIFTER PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	22580 A	Screw, for No. 39536 CA-----	2
2	39536 CA	Pressure Plug, for presser spring regulator-----	2
3	80689 B	Presser Spring Regulator-----	2
4	HA 63 F	Presser Bar Spring-----	2
5	80666 C	Presser Bar Lifter Collar-----	1
6	22894 C	Set Screw, for presser bar lifter collar-----	2
7	482 C	Presser Bar Stop Collar-----	1
8	22894 C	Set Screw, for presser bar stop collar-----	2
9	80648 A	Presser Foot Lifter Lever-----	1
10	80632 B	Foot Lifter Lever Screw Stud-----	1
11	52841 H	Nut, for foot lifter lever screw stud-----	1
12	80649	Spring, for lifter lever-----	1
13	420	Stud, for lifter lever-----	1
14	80661 B	Presser Bar, front and rear, for Styles 80800 E and F----	2
-	80661 B	Presser Bar, front, for Style 80800 H only-----	1
15	80861 A	Presser Bar, rear, for Style 80800 H only-----	1
16	80627 M	Presser Foot, for Style 80800 H only-----	1
17	88 A	Clamp Screw-----	2
18	80627 K	Presser Foot Shank-----	1
19	531	Set Screw, to align presser foot-----	1
20	12934 A	Lock Nut, for alignment screws-----	3
21	22560 A	Set Screw, for adjustment of presser foot bottom-----	1
22	22560 B	Set Screw, to align presser foot-----	1
23	99251	Hinge Screw, for presser foot-----	1
24	80627 L	Presser Foot Bottom-----	1
25	80	Screw, for throat plate-----	3
26	80628 H	Throat Plate, for Style 80800 H only-----	1
27	80627 E	Presser Foot, for Styles 80800 E and F-----	1
28	80627 EB	Presser Foot Bottom-----	1
29	80627 EA	Presser Foot Shank-----	1
30	88	Clamp Screw-----	1
31	22570	Clamp Screw-----	1
32	22707	Screw, for adjustment of presser foot bottom-----	1
33	907	Lock Nut, for adjustment screw-----	1
34	12934 A	Lock Nut, for alignment screws-----	2
35	22560 B	Set Screw, to align presser foot-----	2
36	C41	Hinge Screw-----	1
37	80628 E	Throat Plate, for Style 80800 F only-----	1
38	80624 E	Throat Plate, for Style 80800 E only-----	1



No. 29486 D AUTOMATIC TAPE CUTTER ASSEMBLY
FOR STYLE 80800 H ONLY

Ref. No.	Part No.	Description	Amt. Req.
1	80237	Spring, for upper knife lever -----	1
2	22517	Screw, for upper knife clamp -----	1
3	80277	Upper Knife -----	1
4	80272	Upper Knife Clamp -----	1
5	80271	Upper Knife Lever -----	1
6	22528	Screw, for upper knife lever -----	1
7	80287	Upper Knife Operating Ratchet Block -----	1
8	80288 A	Upper Knife Actuating Pawl -----	1
9	22768	Screw, for upper knife actuating pawl -----	2
10	906	Stop Screw, for upper knife operating ratchet block -----	1
11	907	Lock Nut, for upper knife operating ratchet block stop screw -----	1
12	80266	Washer, for screw on upper knife operating ratchet block -----	1
13	51134 V	Taper Link Pin, for ratchet block -----	1
14	666-260	Felt Oil Wick -----	1
15	80285	Adjusting Screw Stop, for upper knife lever -----	1
16	77	Set Screw, for taper link pin -----	1
17	80285	Adjusting Screw Stop, for upper knife lever -----	1
18	80238	Spring, for upper knife operating ratchet block -----	2
19	57 WD	Screw, for upper knife operating ratchet block spring -----	2
20	25 CC	Screw, for upper knife lever -----	1
21	94	Screw, for upper knife lever -----	1
22	93	Screw, for upper knife operating pawl -----	2
23	80286 A	Upper Knife Operating Pawl -----	1
24	76099 G	Dowel Pin, for upper knife operating pawl -----	1
25	80276	Upper Knife Operating Lever -----	1
*26	80270	Upper Knife Operating Lever Buffer Washer -----	1
27	88	Set Screw, for tape cutter support -----	2
28	80274	Tape Cutter Support -----	1
29	80278	Upper Knife Operating Lever Shaft -----	1
30	907	Lock Nut, for upper knife actuating lever spring stop screw -----	1
31	80288 K	Upper Knife Actuating Pawl Trip Dog -----	1
32	80288 G	Spring, for upper knife actuating pawl trip dog -----	1
33	22599	Screw, for upper knife actuating pawl trip dog spring -----	2
34	22559 J	Screw, for upper knife actuating pawl trip dog -----	1
35	22564	Screw, for trip lever shoe -----	1
36	80288 C	Trip Lever Shoe -----	1
37	80288 B	Trip Lever -----	1
38	22760 A	Screw, for trip lever spring -----	1
39	80288 D	Trip Lever Spring -----	1
40	22557	Screw, for trip lever -----	1
41	80269	Stop Screw Block -----	1
42	93 A	Screw, for stop screw block -----	2
43	906 A	Stop Screw -----	1
44	907	Lock Nut, for stop screw -----	1
45	80268	Stop Pin, for upper knife actuating lever spring -----	1
46	HS110	Tension Spring, for upper knife actuating lever -----	1
47	99246	Stop Screw, for upper knife actuating lever spring -----	1
48	94	Screw, for trip dog cam -----	2
49	80288 F	Trip Dog Cam -----	1
50	907	Lock Nut, for stop screw -----	1
51	906 A	Stop Screw, for upper knife actuating lever -----	1
52	80281 A	Upper Knife Actuating Lever -----	1
53	80279	Shaft, for upper knife actuating lever -----	1
*54	80297 D	Actuating Shoe, for upper knife -----	1
*55	97	Screw, for actuating shoe -----	1
56	80283	Actuating Ratchet Block Adjusting Screw Stop -----	1
57	22806 G	Screw, for tape cutter support -----	2
58	6042 A	Washer, for tape cutter support -----	2
59	73 C	Set Screw, for lower knife screw -----	1
60	80275	Lower Knife -----	1
61	8372 A	Washer, for lower knife -----	1
62	99248	Screw, for lower knife -----	1

* Not component parts of No. 29486 D tape clipping assembly.

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