

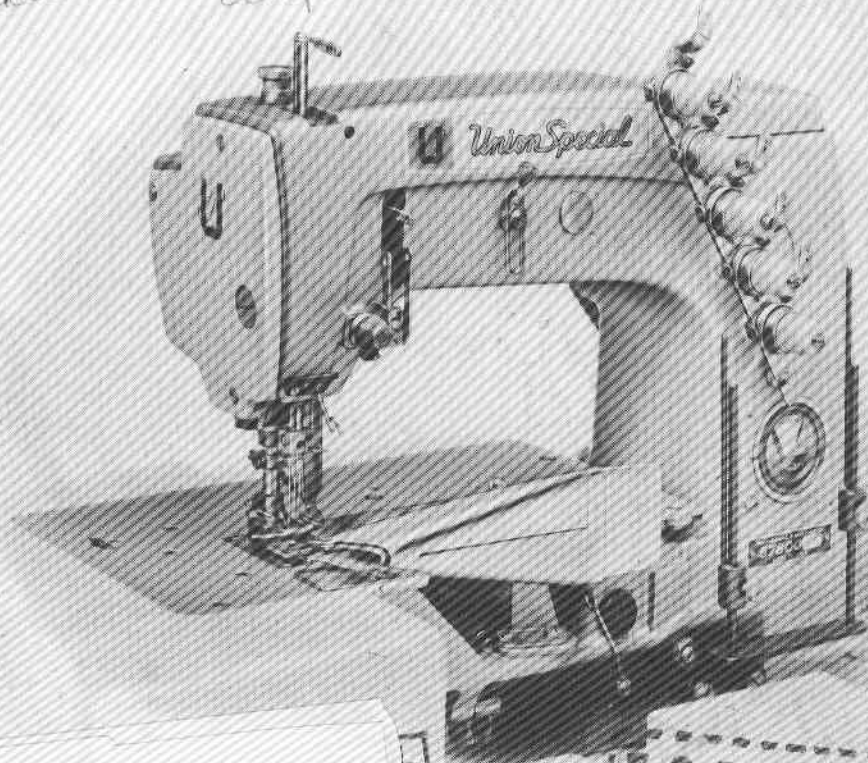


Union Special[®]
LEWIS[®] • COLUMBIA[®]

INDUSTRIAL
SEWING
MACHINES

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DESCANTADO

SS 57800

STYLES
57800E
57800M
57800N
57800P
57800U
57800V
57800W
57800X

CATALOG
No.
133M
Third
Edition

ADVANCED HIGH SPEED
FIFTY THOUSAND SERIES
DIFFERENTIAL FEED
FLAT BED MACHINES

UNION SPECIAL CORPORATION

CHICAGO

 - ORIGINAL

C a t a l o g N o . 1 3 3 M

I N S T R U C T I O N S
F O R
A D J U S T I N G A N D O P E R A T I N G

L I S T O F P A R T S

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T h i r d E d i t i o n

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By

U n i o n S p e c i a l C o r p o r a t i o n
R i g h t s R e s e r v e d i n A l l C o u n t r i e s

UNION SPECIAL CORPORATION

INDUSTRIAL SEWING MACHINES

CHICAGO

P r i n t e d i n U . S . A .

November, 1979

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 57800 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 57800 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 57800".

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 this Class. References to direction such as right, left, front, back, etc., are given from the operator's position while seated at the machine unless otherwise noted. Operating direction of handwheel is toward the operator.

STYLES OF MACHINES

Advanced High Speed, Two and Three Needle, One Looper, One Spreader, Offset and Tandem, Top Screw Adjusted Differential Feed Flat Bed Machines, Medium Throw, Needle Bearing Needle Bar Drive, Light Weight Presser Bar and Needle Bar Driving Mechanism, Single Reservoir, Enclosed Positive Automatic Lubricating System, Filtered Oil Return Pumps for Head and Base, Wakefield Bearings for Feed Rocker Shaft, Single Disc Looper Thread Take-up with an Adjustable Cast-off plate Support, Large Handwheel and Improved Belt Guard. Prepared for use with Knee Press for Presser Foot Lifter, Equipped with Disc Type Thread Tensions, Maximum Work Space to Right of Needle Bar 8 1/4 Inches (209.55mm).

- 57800 E Three needle five thread interlock stitch tandem differential feed machine, for joining panels or attaching elastic to waist and legs of girdles on medium weight material. Seam specification 605-LSa-1. Type 121 GBS needle. Standard Gauge No. 16 only. Maximum recommended speed 5500 R.P.M.
- 57800 M Three needle five thread interlock stitch, offset differential feed machine, for attaching cuffs in one operation to knitted undergarments, and similar operations on light to medium weight materials. Seam specification 605-FSa-1. Type 121 GBS needle. Standard Gauge No. 16 only. Maximum recommended speed 5500 R.P.M.
- 57800 N Three needle five thread interlock stitch, tandem differential feed machine, for single operation crotch seaming on men's and boy's knit underwear on medium weight material. Seam specification 605-FSa-1. Type 121 GBS needle. Standard Gauge No. 16 only. Maximum recommended speed 5500 R.P.M.
- 57800 P Two needle four thread interlock stitch, offset differential feed machine, for attaching flat knit (cut parallel to the wale) split tube borders to necks and arm holes of knitted athletic shirts made from light weight knitted fabrics. Fitted with treadle operated intermittent strip tension. Seam specification 602-BSa-1. Type 121 GBS needle. Standard Gauge No. 8 only. Maximum recommended speed 5500 R.P.M.

STYLES OF MACHINES (Continued)

- 57800 U Two needle four thread interlock stitch, offset differential feed machine, for attaching collarettes to knitted undergarments and similar operations on light to medium weight material. Long length ribbed knit strip cut perpendicular to the wale or parallel with the wale. Constant strip tension. Seam specification 602-BSa-1. Type 121 GBS needle. Standard Gauge Nos. 8 and 12. Standard finished widths $3/4$, $7/8$, 1, $1\ 1/4$ inches (19.05, 22.23, 25.40, 31.75 mm). Specify gauge and finished width. Maximum recommended speed 5500 R.P.M.
- 57800 V Two needle four thread interlock stitch, offset differential feed machine, for attaching collarettes to knitted undergarments and similar operations on light to medium weight material. Long length ribbed knit strip cut perpendicular to the wale or parallel with the wale. Seam specification 602-BSb-1. Type 121 GBS needle. Standard Gauge Nos. 8 and 12. Standard finished widths $1/2$, $5/8$, $3/4$, $7/8$, 1 and $1\ 1/4$ inches (12.70, 15.87, 19.05, 22.22, 25.40, 31.75 mm). Specify gauge and finished width. Maximum recommended speed 5500 R.P.M.
- 57800 W Three needle five thread interlock stitch, offset differential feed machine, for attaching collarettes to knitted undergarments and similar operations on light to medium weight material. Long length ribbed knit strip cut perpendicular to the wale or parallel with the wale. Constant strip tension. Seam specification 605-BSa-1. Type 121 GBS needle. Standard Gauge Nos. 14 and 16. Standard finished widths $3/4$, $7/8$, 1 and $1\ 1/4$ inches (19.05, 22.22, 25.40, 31.75 mm). Specify throat plate, gauge, finished width and stitches per inch. Maximum recommended speed 5500 R.P.M.
- 57800 X Three needle five thread interlock stitch, tandem differential feed machine, for patch operations on flat and ribbed knit undergarments and similar operations on light to medium weight material. Seam specification 605-LSa-1. Type 121 GBS needle. Standard gauge No. 16 only. Maximum recommended speed 5500 R.P.M.

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

The standard recommended needle for the machines covered by this catalog is Type 121 GBS. Below is the description and sizes available of the recommended needle.

Type No.	Description and Sizes
121 GBS	Round shank, round point, short, single groove, struck groove, spotted, ball point, chromium plated - available in sizes 065/025, 070/027, 075/029, 080/032, 090/036, 100/040.

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 121 GBS, Size 080/032".

Selection of proper needle size is determined by the 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.

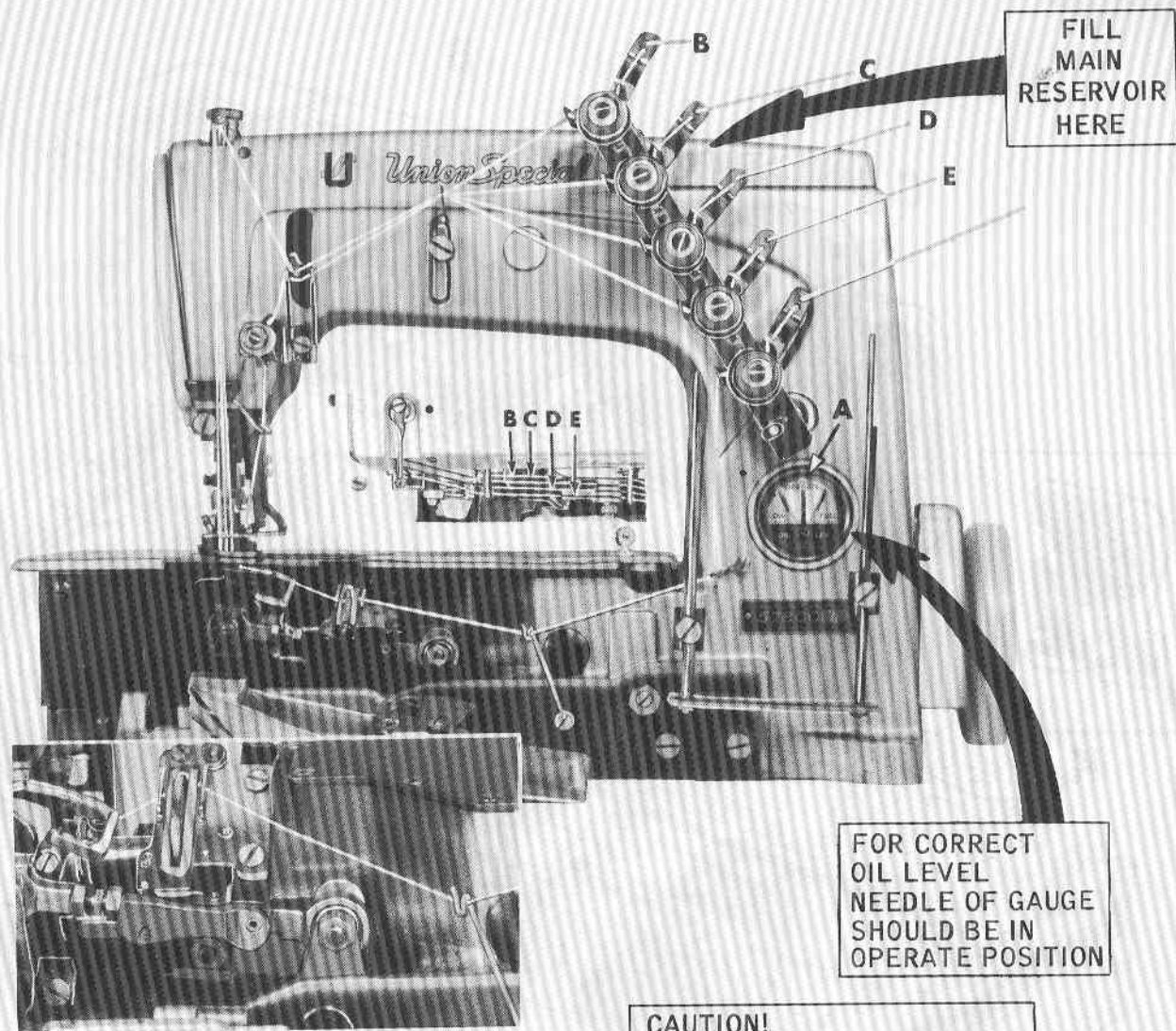


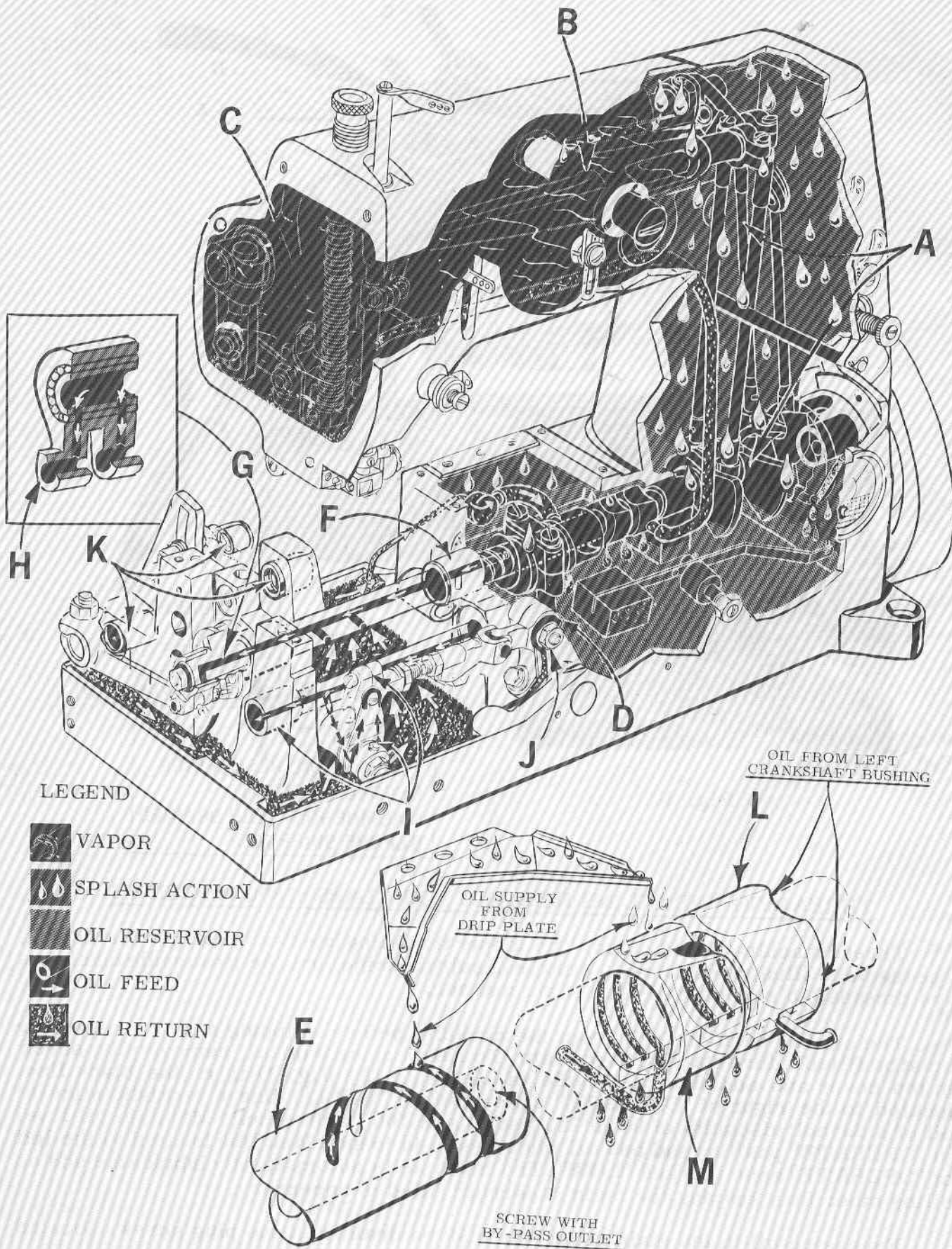
Fig. 1

THREADING AND OILING DIAGRAM FOR CLASS 57800 MACHINES

Thread machine as indicated. The looper threading has been enlarged for clarity. The machine illustrated above is a three needle machine, but the two needle machines are threaded in substantially the same manner.

The oil has been drained from the machine before shipping and the reservoir must be filled before starting to operate. To fill machine with oil, remove plug screw in top cover and add oil until needle of oil gauge (A, Fig. 1) is on the black line, located to the right of "OPERATE" zone marked "FULL". Use a straight mineral oil of a Saybolt viscosity of 90 to 125 seconds at 100° Fahrenheit. Maintain oil level in "OPERATE" position and add oil when needle is to the black line located to the left of "OPERATE" zone marked "LOW". The machine is automatically lubricated and no oiling other than keeping the main reservoir filled is necessary.

Excessive oil in the main reservoir may be drained at the plug screw, located in the main frame to the left of the oil gauge.



ADVANCED FLATBED LUBRICATION SYSTEM

SUPPLY SYSTEM

<u>Figure Letter</u>	<u>Bearing or Machine Area</u>	<u>Method of Lubrication</u>
A.	Crankshaft drives, upper ball straps and crankshaft bearings.	Oil agitation as a result of extensions on needle lever connecting rods.
B.	Needle lever cross shaft bearing.	Oil trough (51282 AE) which is supplied by splash in column area.
C.	Head area (all mechanisms and bearings).	Mist as a result of splash in column.
D.	Looper drive crank, looper drive lever bearings.	Oil agitation as a result of splasher (56343 E) on bottom of looper drive connecting rod.
E.	Opposing Helical grooves in right end of mainshaft. Short groove prevents oil leakage from right mainshaft bearing.	Oil drip plate which accumulates splash in chamber.
F.	Right mainshaft bearing.	Supply grooves in right end of mainshaft.
G.	Left mainshaft bearing and all eccentric bearings located on mainshaft.	Oil supplied from hollow mainshaft and metered by felt plugs. Oil is introduced into center of shaft in the right mainshaft bearing area. Amount of lubricant in center of shaft controlled with by-pass hole in right end of mainshaft.
H.	Lower ends of connecting rods of mainshaft eccentrics.	Oil run-out from eccentric bearing supplies.
I.	Looper cone, right and left looper rocker shaft bearings, and left looper rod ball joint.	Supplied from hollow looper rocker shaft which contains 4 strands of yarn as a metering device.
J.	Right looper rod needle bearing joint.	Oil supplied from front base felt to lubricating plate (56393 K).
K.	Feed rocker shaft and upper feed rocker shaft bearings.	Self-lubricated bearings.

RETURN SYSTEM

<u>Figure Letter</u>	<u>Machine Area</u>	<u>Method of Return</u>
L.	Head	Felt pad in head collects oil. Return pump located on crankshaft and primed by oil from left crankshaft bearing.
M.	Base	Felt pad in base collects oil. Second return pump located on crankshaft and primed by oil drip plate which accumulates splash in looper drive chamber.

INSTRUCTIONS FOR MECHANICS

LUBRICATION

CAUTION! Oil has been drained from the main reservoir before shipment, so the reservoir must be filled to the proper level as indicated on oil gauge (A, Fig. 1) before beginning to operate. Run machine slowly for several minutes to distribute the oil to the various parts. Full speed operation can then be expected without damage.

RECOMMENDED OIL

Use a straight mineral oil of a Saybolt viscosity of 90 to 125 seconds at 100° Fahrenheit in the main reservoir. This is equivalent to Union Special specification No. 175. Fill main reservoir at plug screw in upper crank chamber cover (A, Fig. 2) and check oil level at gauge (B). Oil is at maximum safe operating level when needle is to the black line, located to the right of "OPERATE" zone, marked "FULL". Oil should be added when needle is to the black line, located to the left of "OPERATE" zone, marked "LOW". The recommended oil is available in 16 fluid ounce cans No. 28604 R.

CAUTION! It is important that these machines not be over filled.

It is recommended that a new machine, or one that has been out of service for an extended period be lubricated as follows: Remove the head cover, clean out lint and directly oil the needle bar link and the needle bar. Replace head cover as no further hand oiling will be required. Run machine slowly for several minutes to distribute oil to the various parts.

For machine in operation check the oil for dirt and lint deposits at reasonable intervals. If dirty, change the oil. An oil change is recommended every 2000 operating hours. Oil may be drained from main reservoir by removing plug screw (C, Fig. 2) located below the cloth plate at front of the machine, or by removing the lower crank chamber cover, located at the back of the machine.

NOTE: Looper avoid and feed lift eccentrics receive oil thru the mainshaft, so when assembling be sure oil holes in the eccentric line up with oil holes in mainshaft when spot screw is in time spot.

OIL GAUGE

The oil gauge is set at the factory to show the proper oil level in the reservoir. Should an adjustment become necessary however, the following steps should be followed:

1. Place the machine upright on a level table or bench.
2. Remove the oil reservoir plug screw (C, Fig. 2) and tip machine forward to drain oil from the reservoir.
3. Make sure all oil is drained from main reservoir.

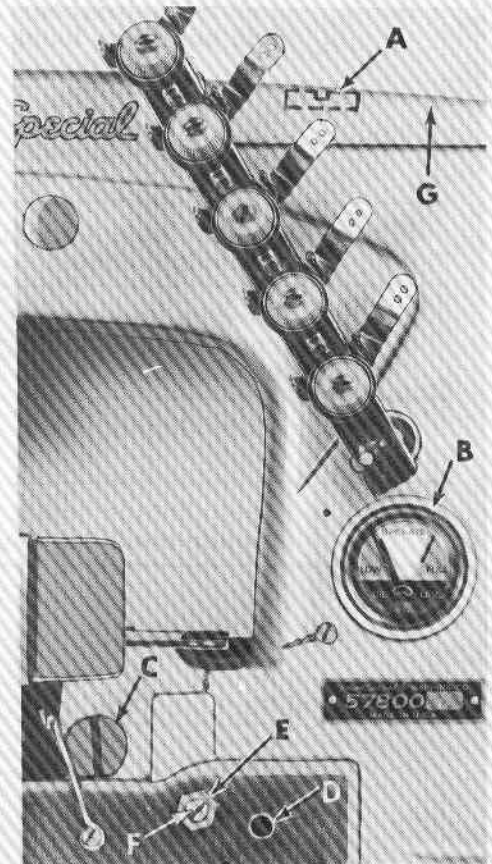
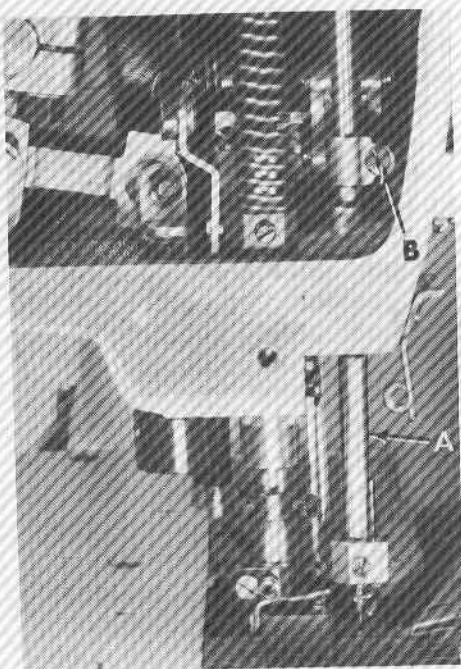


Fig. 2

OIL GAUGE (Continued)

4. Remove lower crank chamber cover, located at the back of the machine.
5. Fill main reservoir to a level even with the bottom contour of the knee press shaft bushing (D, Fig. 2).
6. Loosen lock nut (E) on calibrating screw (F), and turn the screw to the left or right until the gauge needle rests on the black line, located to the left of "OPERATE" zone, marked "LOW".
7. Tighten lock nut (E) and replace plug screw (C) and lower crank chamber cover.
8. Add oil so that gauge needle rests on the black line, located to the right of "OPERATE" zone, marked "FULL".

ALIGNING THE NEEDLE BAR



Insert a new set of needles (Type and Size as required) and align the needle bar (A, Fig. 3) so the needles center in the needle holes of throat plate. To align needle bar, loosen needle bar clamp screw (B), and turn bar as required. Tighten clamp screw.

Fig. 3

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS

Check synchronization of the looper and needle motions, using gauge No. 21227 R as follows:

Insert pin, which is included with the gauge, in the looper hole of the looper rocker. Secure the gauge plate to the throat plate seat using the throat plate mounting screws. Place the shank of the indicator into the hole in top of bed, used for needle thread take-up wire. Turn the handwheel in operating direction until the pin in looper rocker contacts the edge of the gauge plate. Position the

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS (Continued)

indicator as required so the left end of its pointer rests on top of the needle bar and the right end points to "0". Secure in this position with set screw in front of bed arm against shank of indicator. Turn the handwheel in reverse direction until the pin again contacts the edge of the gauge plate and note indicator reading. If the pointer of the indicator returned to the same reading, looper and needle motions are synchronized - a variation of one graduation on the scale is allowable. If the reading was higher on the scale when the handwheel was turned in the operating direction, the looper drive lever rocker shaft will have to be moved slightly towards the rear. If the reading was lower, the shaft will have to be moved slightly towards the front.

NOTE: If gauge No. 21227 R is not available, synchronization may be checked as follows:

Insert looper into the looper rocker, pushing it all the way down and tighten screw against flat on shank of looper. Turn handwheel in the operating direction until the point of the looper (A, Fig. 4) moving to the left, is even with the left side of right needle (B). Note the height of the eye of the needle with respect to the looper point (See Fig. 5). Turn the handwheel in the reverse direction until the point of the looper again moving to the left, is even with the left side of right needle (See Fig. 5).

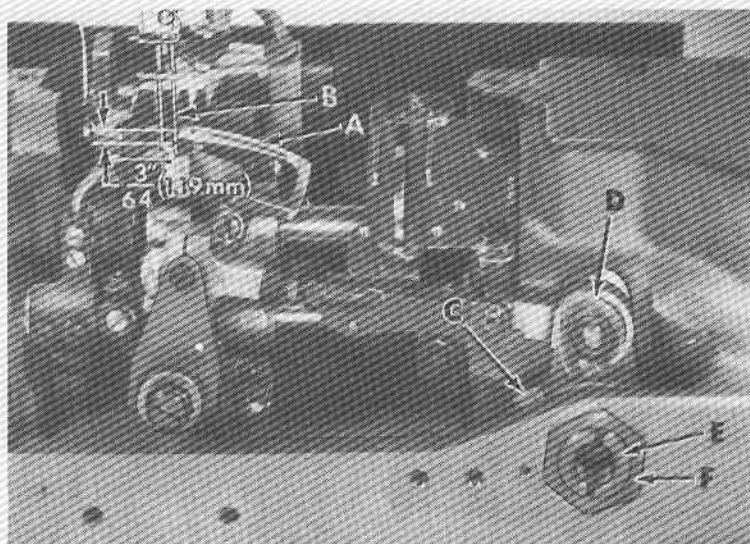


Fig. 4

Repositioning the looper drive lever rocker shaft should be accomplished as follows:

Loosen screw (C, Fig. 4) in looper drive lever (D) and push the looper drive lever rocker shaft towards the rear, through the opening of the thrust synchronizing adjusting screw (E). Should the shaft require moving towards the

If the height of the eye of the needle with respect to the looper point are the same, looper and needle motions are synchronized - a variation of .005 inch (.127 mm) is allowable. If the distance from the eye of the needle to the point of the looper is greater when the handwheel is turned in the operating direction, the looper drive lever rocker shaft will have to be moved slightly towards the rear. Moving the shaft towards the front acts the reverse.

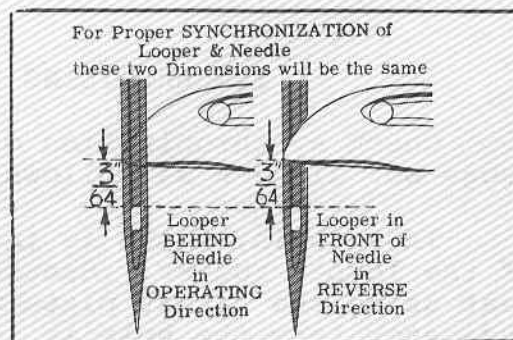


Fig. 5

Synchronizing Looper and Needle Motions (Continued)

front, a threaded rod of .146-40 thd. or screw (Union Special No. 22870 A) can be threaded into the end of the looper drive lever rocker shaft and pulled forward. Once the shaft is properly positioned, tighten screw (C) securely. The thrust adjusting screw (E) has been torqued to the recommended pressure at the factory. However, if the thrust adjusting screw is retorqued, the following procedure is used. Loosen lock nut (F) and torque the thrust adjusting screw (E) to approximately 6 in. lbs. (7 cm/kg). This puts the recommended pressure against the looper drive lever, which is sandwiched between two sets of needle thrust bearings. Tighten lock nut (F) securely.

With the looper at the extreme right end of its travel, check the location of the right looper connecting rod bearing, using gauge No. 21227 DC (See Fig. 6). Place hole of the gauge over threaded stud and the left inside edge of the gauge should locate against the left side of the looper rocker cone (A). If adjustment is necessary, loosen clamp screw (B), reposition looper drive lever (C) as required and retighten clamp screw.

If gauge No. 21227 DC is not available, this setting can be checked with a scale. Distance between the centerline of the looper rocker cone and the centerline of the looper lever stud should be $4 \frac{1}{16}$ inch (103.19 mm) (Fig. 6) when looper is at its extreme right end of travel.

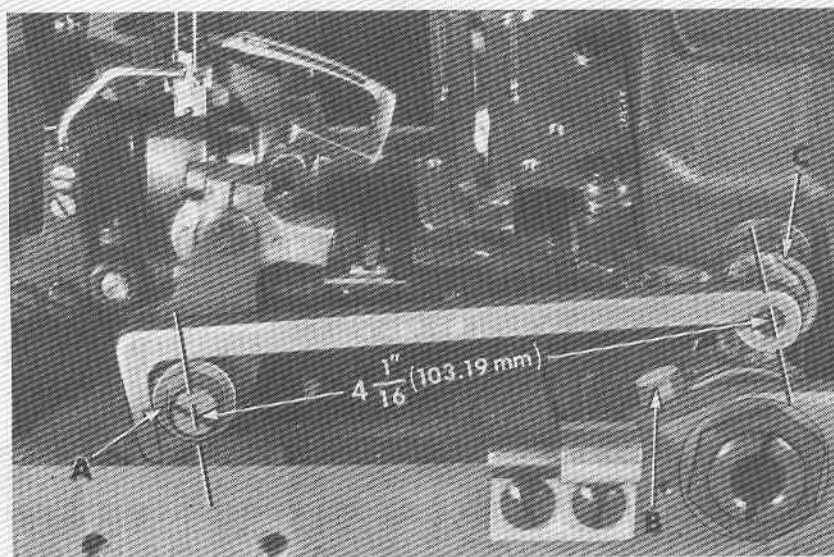


Fig. 6

SETTING THE LOOPER

Insert a new needle in the right needle seat, type and size as specified. If the looper gauge is 3/16 inch (4.76 mm), for example, set the looper (A, Fig. 7) so the distance from the center of the right needle (B) to the point of the looper is 3/16 inch (4.76 mm) when the looper is at its farthest position to the right. Looper gauge No. 21225-3/16 can be used advantageously in making this adjustment. Refer to chart below for needle type, looper gauge setting and looper gauge number for the various styles of machines. If adjustment is required loosen nut (C) (it has a left hand thread) and nut (D) on connecting rod (E), turn the connecting rod forward or backward to obtain the 3/16 inch (4.76 mm) dimension. Retighten both nuts, first nut (D) and then nut (C). Make sure the left ball joint is in vertical position and does not bind after adjustment.

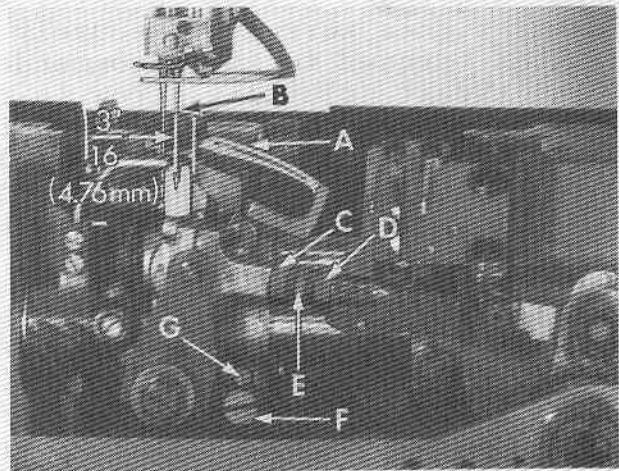


Fig. 7

Machine Styles	Needle Type	Looper Gauge Setting	Looper Gauge Number
57800 E-16	121 GBS	3/16" (4.76 mm)	21225-3/16
57800 M-16	121 GBS	3/16" (4.76 mm)	21225-3/16
57800 N-16	121 GBS	3/16" (4.76 mm)	21225-3/16
57800 P-8	121 GBS	7/32" (5.56 mm)	21225-7/32
57800 U-8	121 GBS	7/32" (5.56 mm)	21225-7/32
57800 U-12	121 GBS	7/32" (5.56 mm)	21225-7/32
57800 V-8	121 GBS	7/32" (5.56 mm)	21225-7/32
57800 V-12	121 GBS	7/32" (5.56 mm)	21225-7/32
57800 W-14	121 GBS	3/16" (4.76 mm)	21225-3/16
57800 W-16	121 GBS	3/16" (4.76 mm)	21225-3/16
57800 X-16	121 GBS	3/16" (4.76 mm)	21225-3/16

The looper is set correctly in line-of feed, if, as it moves to the left, behind the needle, its point (A, Fig. 8) brushes, but does not pick at the rear of the needle (B).

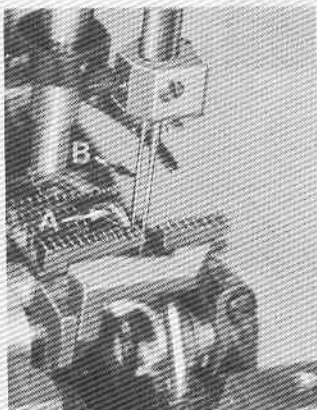


Fig. 8

If adjustment is necessary, loosen lock screw (F, Fig. 7) and turn stop screw (G) as required. Turning stop screw clockwise sets the looper to the rear and turning it counterclockwise acts the reverse. Holding looper to the front while making this adjustment may prove helpful. Tighten lock screw (F) when setting is obtained and recheck the adjustment.

SETTING HEIGHT OF NEEDLE BAR

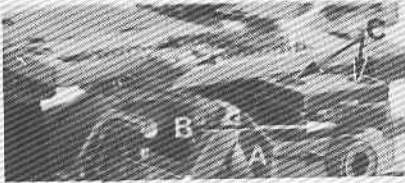
The height of the needle (B, Fig. 4) is correct when the top of its eye is $\frac{3}{64}$ inch (1.19 mm) (Fig. 4) below the underside of the looper, with the looper point flush with the left side of the needle. If adjustment is necessary, loosen screw (B, Fig. 3) and move needle bar (A) up or down as required and retighten screw. Care should be taken not to disturb the alignment of the needle bar when moving the needle bar either up or down.

The needles are to have equal clearance on the right and left sides of needle slots in throat plate.

SETTING THE MAIN FEED DOG

The main feed dog should be set to rise the depth of a full tooth, or approximately $\frac{3}{16}$ inch (1.19 mm) above the throat plate, at the highest point of travel. The feed dog should be centered in the slots of the throat plate at maximum feed travel.

To raise or lower the main feed dog, loosen Allen screw (A, Fig. 9) and adjust the feed dog holder (B) to set the feed dog at specified height. Retighten screw (A).



NOTE: A change of feed dog height will necessitate a check of the rear needle guard setting.

Fig. 9

The main feed dog should have equal clearance on all sides of feed slots in the throat plate at maximum feed travel. To adjust the main feed dog across-the-line-of-feed, loosen screws (C, Fig. 9) and position feed dog as required. Retighten screws (C). To adjust main feed dog in-line-of-feed, loosen nut (A, Fig. 10) and move feed bar as required. Retighten nut.

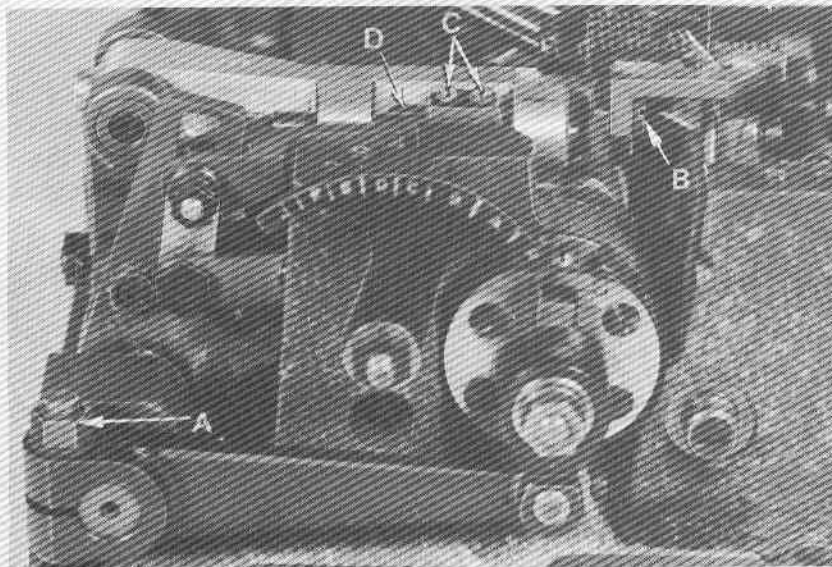


Fig. 10

SETTING THE DIFFERENTIAL FEED DOG

The differential feed dog should also be set to rise the depth of a full tooth above the throat plate, at the highest point of travel and center in the feed slots of the throat plate at maximum feed travel. In addition to this the teeth of the feed dog should be parallel to the top surface of the throat plate across the line-of-feed.

To raise or lower the differential feed dog, loosen screw (B, Fig. 10) and set the feed dog at the required height. Retighten screw.

Loosen set screws (C, Fig. 10) and move the differential feed bar (D) forward or backward as required. The loosening of set screws (C) will also allow the differential feed bar (D) to be rotated, so the differential feed dog can be aligned parallel with the top surface of the throat plate, across-the-line-of-feed. Tighten screws securely.

NOTE: Turn machine by hand to make sure the differential feed dog has clearance through its cycle and does not contact the main feed dog at back end of its travel or the throat plate at the forward end of its travel.

SETTING THE DIFFERENTIAL FEED RATIO

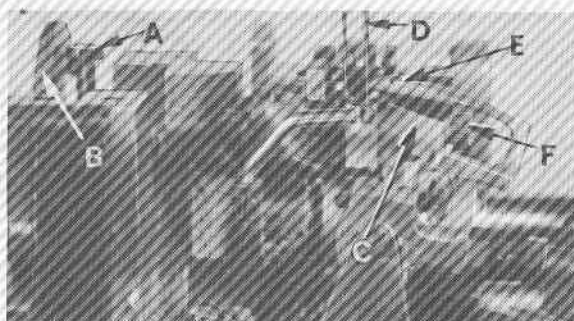


Fig. 11

The differential feed ratio is set by loosening screw (A, Fig. 11) and moving the selector slide (B) to the desired position. The screw and selector slide are accessible through the top of the cloth plate on the left side. Moving the differential feed selector slide (B) toward the front increases the amount of differential and moving it back decreases the differential feed. Retighten screw.

This Class of machine has a stretching ratio of $3/4$ to 1 up to a gathering ratio of 2 to 1, depending on the length of stitch set at the main feed dog. Turn machine by hand, making sure the differential feed dog clears the main feed at the back end of its stroke.

CHANGING STITCH LENGTH

Set the stitch to the required length. This is accomplished by loosening locknut (A, Fig. 12) (it has a left hand thread) and turning the stitch adjusting screw (B). Turning screw (B) clockwise shortens the stitch and turning it in a counterclockwise direction lengthens the stitch. The head of the main-shaft (C) is marked with a "S" and an "L", moving the stitch regulating stud toward the "S" shortens the stitch and toward the "L" lengthens the stitch. Retighten locknut "A". To prevent destructive damage to the feed drive

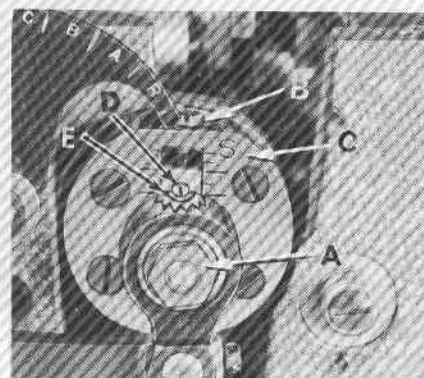


Fig. 12

CHANGING STITCH LENGTH (Continued)

bearing, the Key screw (D) must engage the "U" shaped key slot in the ferrule (E).

NOTE: Any change in stitch length will necessitate a corresponding change in the rear needle guard setting and a check of the feed dog height.

SETTING THE REAR NEEDLE GUARD

Set the rear needle guard (C Fig. 11) horizontally so that it does not quite contact the rear of the right needle (D) when at its most forward point of travel. A clearance of .005 inch (.127 mm) is permissible. It should be set as low as possible, yet have its vertical face approach within about 3/64 inch (1.19 mm) of the needle, until the point of the looper (E), moving to the left, is even with the needle. To move needle guard merely loosen screw (F), move needle guard as required, and retighten screw.

NOTE: Adjustment of the rear needle guard will necessitate a check of the main feed dog height.

SETTING FRONT NEEDLE GUARD

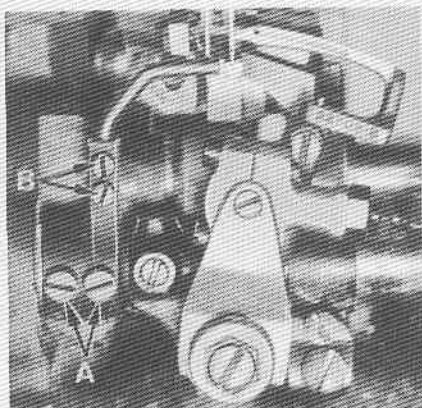


Fig. 13

Set the front needle guard so that it pushes the left needle back toward the path of the looper as it moves behind the needle. The looper may brush but not pick at the left needle. It should be set as low as possible, yet have its vertical face push the left needle until the point of the looper is just past the left side of the left needle. The front needle guard should not contact the rear needle guard or right needle at any time. To move guard forward or backward, merely loosen screws (A, Fig. 13) move needle guard as required and retighten screws. To raise, lower or rotate needle guard, loosen screws (B), move guard and retighten screws after guard is properly set.

NOTE: A change in stitch length WILL NOT require a change in front needle guard setting.

THREAD TENSION RELEASE

The thread tension release is set correctly when it begins to function as the presser foot is raised to within 1/8 inch (3.17 mm) of the end of its travel and is entirely released when the presser foot has reached its highest position.

If adjustment is needed, loosen tension release lever (A, Fig. 14), located at the back of the machine and move tension disc separator as required. Retighten screw. After adjustment there should be no binding at any point.

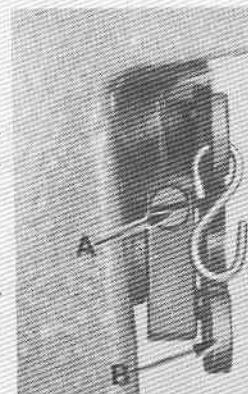


Fig. 14

SETTING HEIGHT OF PRESSER BAR

The height of the presser bar (A, Fig. 15) is set correctly if it is possible to remove the presser foot when the foot lifter lever (B, Fig. 14) is fully depressed. Also there should be approximately 1/16 inch (1.59 mm) clearance between lower surface of the presser bar connection and guide (B, Fig. 14) and the bottom surface of head opening in the bed when the foot lifter lever is released and the presser foot resting on the throat plate, with the feed dog down below the throat plate.

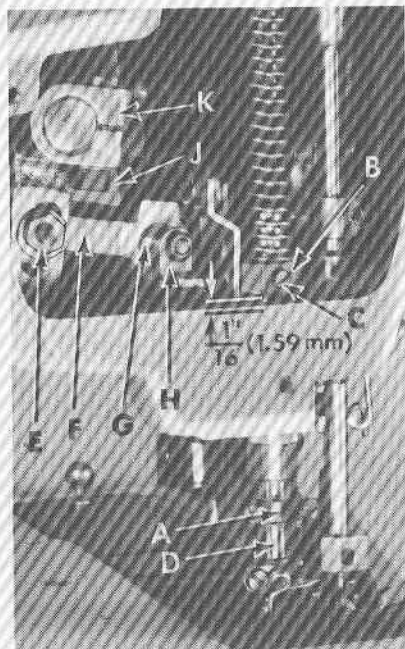


Fig. 15

If adjustment is needed, turn handwheel in operating direction until the needle bar is in the low position. Loosen screw (C), then, while holding presser foot down on the throat plate surface, pry up presser bar connection and guide with a screw driver to obtain the 1/16 inch (1.59 mm) setting and retighten screw. Check setting by turning handwheel so that needle bar is in its high position and see if presser foot can be removed as mentioned in previous paragraph.

Set the presser bar collar (D, Fig. 15) so that the presser foot does not contact the spreader when raised.

SETTING THE SPREADER

Set the arc travel of the spreader, as listed below, by loosening nut (E, Fig. 15) and moving the connecting link (F) up or down to the desired amount of arc travel. Measurement of the spreader arc travel is made by placing a scale between the two extreme spreader arc travel points.

<u>Machine Styles</u>	<u>Spreader Arc Travel</u>
57800 E-16	11/16" (17.46 mm)
57800 M-16	11/16" (17.46 mm)
57800 N-16	11/16" (17.46 mm)
57800 P-8	9/16" (14.29 mm)
57800 U-8	9/16" (14.29 mm)
57800 U-12	5/8" (15.88 mm)
57800 V-8	9/16" (14.29 mm)
57800 V-12	5/8" (15.88 mm)
57800 W-14	21/32" (16.67 mm)
57800 W-16	11/16" (17.46 mm)
57800 X-16	11/16" (17.46 mm)

SETTING THE SPREADER (Continued)

Set the ball stud (G, Fig. 15) in the spreader holder carrier (H) square to the front of the bed when at the middle of its travel as viewed in Figure 15. This is accomplished by loosening nut (J) and moving the spreader rocker shaft arm (K) to position the carrier properly.

With the needle bar in the up position, and the spreader (A, Fig. 16) at the left end of its stroke, the upper spreader point should extend $7/32$ inch (5.56 mm) to the left of the center line of the left needle. This is accomplished by loosening screws (A, Fig. 17) and rotating spreader holder (B) to position the upper spreader point. Retighten screws.

CAUTION: The spreader holder is also the lower thrust collar for the spreader shaft, so when tightening screws (A, Fig. 17) be sure to push down on the spreader shaft and up on the spreader holder.

The spreader should clear the left needle shank by $1/64$ to $1/32$ inch (.40 to .79 mm) and the bottom of the spreader should be $21/64$ inch (8.33 mm) above the throat plate (Fig. 16). To adjust, loosen screws (C, Fig. 17) and position spreader as required.

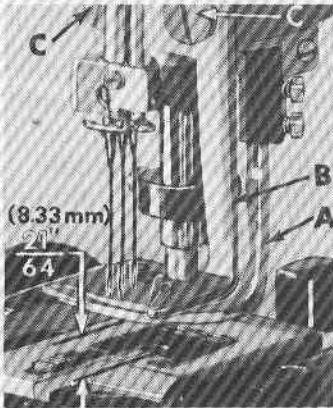


Fig. 16

The left edge of the spreader thread guide (B, Fig. 16) should clear the right needle by approximately $3/32$ inch (2.38 mm) and be kept close to the top of the spreader. This is accomplished by loosening screws (C) and moving the guide as necessary.

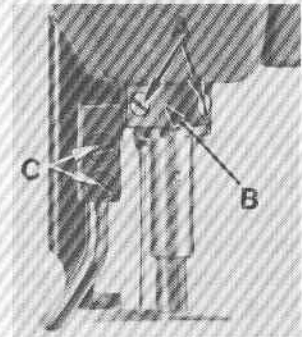


Fig. 17

THREADING

Thread machine as indicated in Fig. 1 and start operating on a piece of fabric.

THREAD TENSION

Pull the thread through the eyelets and set the left and center needle thread tensions at 4 oz. (113.40 gr.) on Styles 57800 E, M, W and X. Set the left needle thread tension at 3 oz. (85.05 gr.) on Styles 57800 N, P, U and V. On Style 57800 N the center needle should be set at 3 oz. (85.05 gr.) and the right needle thread tension at 4 oz. (113.40 gr.) on all Styles.

Set the spreader thread tension at 1 ounce (28.35 gr.) on the upper thread tension. The adjusting nut below the needle lever thread eyelet should be set so that the tension on the spreader thread is $1/2$ ounce (14.18 gr.) or more, depending on the type of thread being used. This applies to all Styles.

THREAD TENSION (Continued)

The looper thread tension is set at 2 ounces (56.70 gr.) on all Styles. It is applied at the thread tension located on the front of the machine just about the oil gauge.

SETTING THE NEEDLE AND SPREADER THREAD FRAME EYELETS

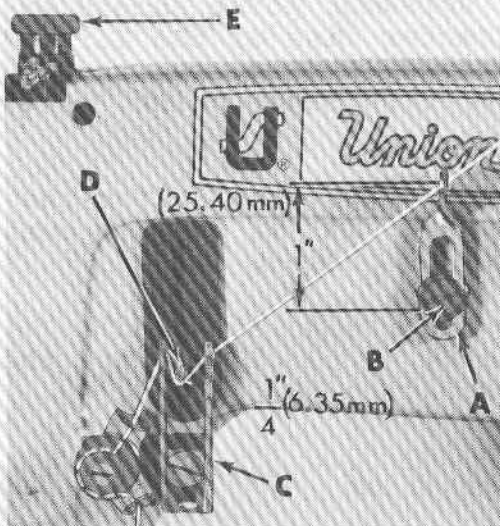


Fig. 18

The looper thread take-up (A, Fig. 19) is not spotted on the main shaft and consequently, can be set to compensate for varying conditions. It is set correctly when the looper thread is just cast off the highest lobe of the take-up when the point of the left needle is clearly visible below the underside of the looper. The cast-off plate support (B) is adjustable, and its setting determines the amount of thread pulled off by the take-up. Moving support (B) up towards the bottom of its mounting screw slots (C) causes more thread to be pulled from the cones. Moving it down towards the top of its screw slots causes less thread to be pulled. The looper threads should just become taut as the loopers reach their extreme position to the left. Before tightening the two screws which secure support (B), center the looper thread take-up in the cast-off plate support (right to left) by use of shims No. 39152 U-4 inserted between same. When take-up is centered, tighten two screws securing support (B) and remove shims.

SETTING SPREADER THREAD TAKE-UP

The "U" shaped eyelet (C, Fig. 18) should be set to allow the spreader thread to engage the bottom of the needle lever eyelet (D) by 1/4 inch (6.35 mm). Raising the eyelet makes a looser cover thread, lowering same makes a tighter cover thread.

PRESSER FOOT PRESSURE

Regulate the presser spring regulating screw (E, Fig. 18) so that it exerts only enough pressure on the presser foot to feed the work uniformly when a slight tension is placed on the fabric. This is the knurled screw, located directly behind the needle bar in the head of the machine. Turning it clockwise increases the pressure, counterclockwise acts the reverse.

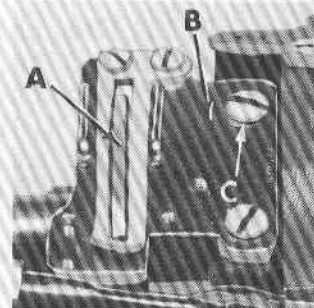


Fig. 19

TORQUE REQUIREMENTS

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

All straps and eccentrics should be tightened to 19-21 inch-pounds (22-24 cm/kg) unless otherwise noted. All other nuts, bolts, screws, etc., should be tightened by hand as tightly as possible, unless otherwise noted.

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

SPECIAL INSTRUCTIONS

INSTALLING THE NEEDLE LEVER

Although the machines are properly assembled at the factory, should it be necessary to make adjustments, the following procedures will help in installing the needle lever.

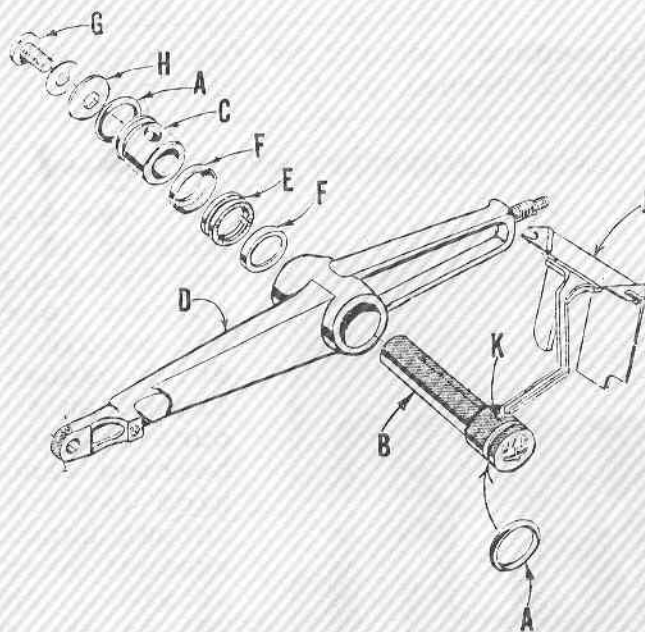


Fig. 20

Install "O" ring (A, Fig. 20) on the needle lever stud (B) and needle lever thrust collar (C). With needle lever (D) in its proper position insert the needle lever stud (B) until the shoulder on the needle lever stud (B) contacts the needle lever (D). Making sure no bind exists in the needle bar link and secure with the front set screw in top of bed casting. Place the temper load ring (E) and compression

INSTALLING THE NEEDLE LEVER (Continued)

cups (F) onto the needle lever stud (B) and push them through the opening. Then install the needle lever thrust collar (C) on the stud, being careful not to damage "O" ring on it. Tighten screw (G) to compress components until the securing washer (H) bottoms against the needle lever stud (B). Then secure the needle lever stud (B) in its proper position by tightening the rear set screw from on top of the casting.

As a quick check to see if the temper load ring (E) is compressed properly, remove screw (G) from the end of the needle lever stud (B), loosen the rear set screw and the needle lever thrust collar (C) should spring out from .003-.007 inch (.076-.178 mm). Compress load ring in reverse order. Then retighten the rear set screw against the needle lever stud (B).

To insure positive oiling of the needle lever stud (B), the bearing oiler (J) hooks into the supply hole (K) of the needle lever stud (B). When located in its proper position and secured, the proper amount of oil is fed to the needle lever stud (B). For proper alignment, loosen the needle lever stud set screws and rotate the needle lever stud (B) until the indented "UP" is in the up position and the hook portion falls into the lubricating hole (K) in the needle lever stud (B). Retighten the set screws.

The following procedures should be followed whenever it becomes necessary to adjust the internal parts indicated.

ALIGNING CRANKSHAFT AND MAINSHAFT

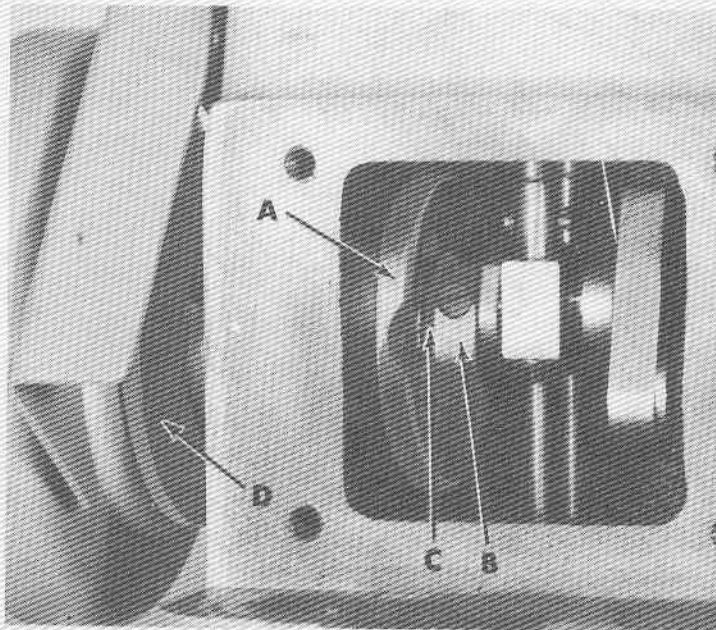


Fig. 21

The crankshaft bushing housing (A, Fig. 21) maintains the crankshaft assembly in the correct lateral position. Once the needle lever and spreader drive connecting rods are aligned on the crankshaft, secure thrust collar (B) against bearing washer (C) from the inside (as viewed in Fig. 21) and thrust handwheel pulley (D) against bearing washer from the outside. Spot screws (A, Fig. 22) in the couplings must align with the spots in the looper drive crank (B) and set screws (C) must align with the flats on crankshaft (D) and mainshaft (E). Mainshaft must be positioned laterally with .045 inch (1.14 mm) (Fig. 23) clearance between the right side of its head and the bed casting.

ALIGNING CRANKSHAFT AND MAINSHAFT (Continued)

Looper drive crank (B, Fig. 22) must be positioned laterally with 1/32 inch (.79 mm) clearance between it and mainshaft (E). Once these settings are made, it is very important that the couplings are tightened in the following sequence for best performance.

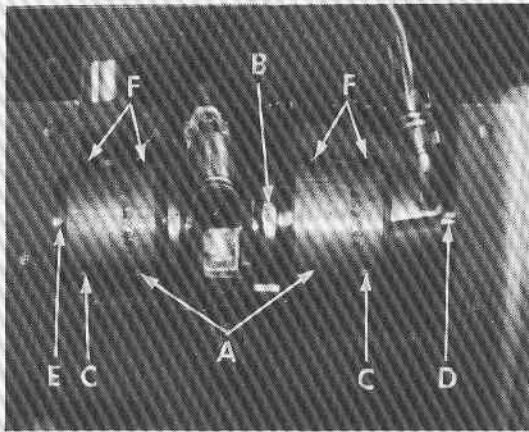


Fig. 22

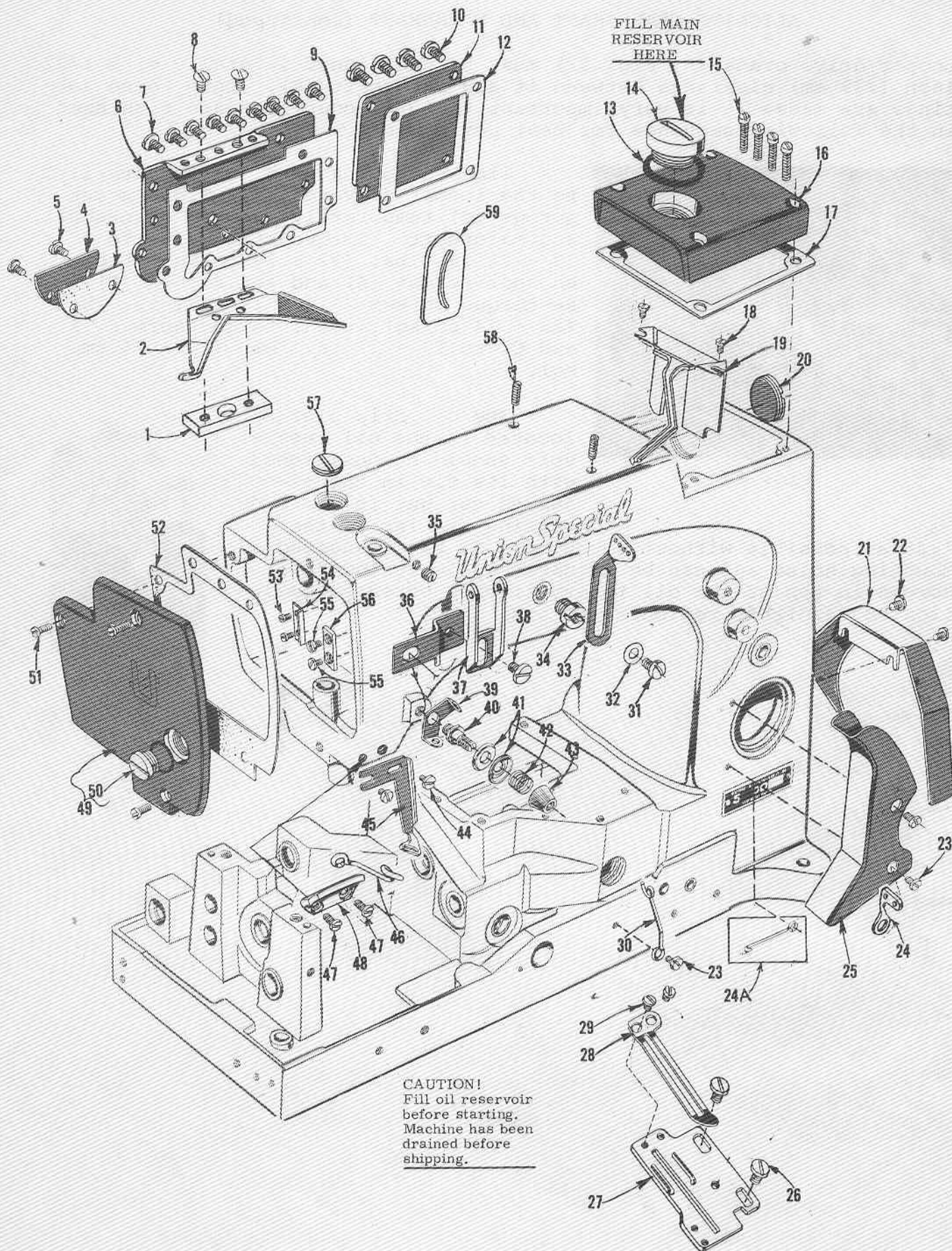
Tighten spot screws (A) temporarily, to the looper drive crank. Tighten set screws (C) temporarily, to the crankshaft and mainshaft. Torque screws (F) to 19 - 21 in. lbs. (22 - 24 cm/kg). Loosen spot screws (A) and set screws (C). Re-torque screws (F) to 19 - 21 in. lbs. (22 - 24 cm/kg), then, torque screws (A and C) to 19 - 21 in. lbs. (22 - 24 cm/kg).

left as possible without touching. It has elongated mounting holes and can be adjusted by loosening (2) screws in top of the oil reservoir back cover to position as required, retighten screws.

The oil drip plate located in the oil reservoir should be positioned with its tip in the recessed cut out in the bed casting, as far to the

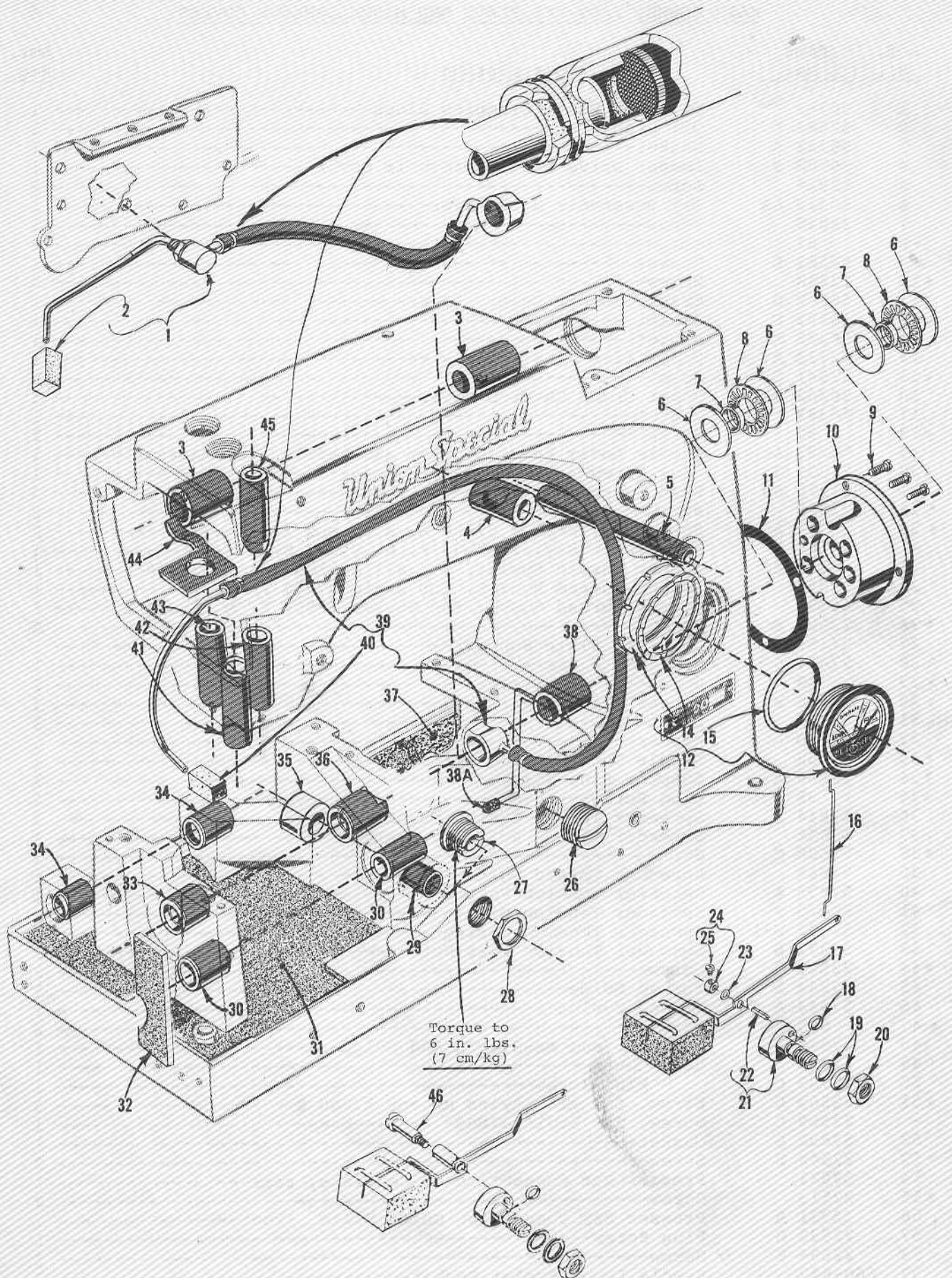


Fig. 23



MAIN FRAME, CAST-OFF PLATE AND MISCELLANEOUS COVERS

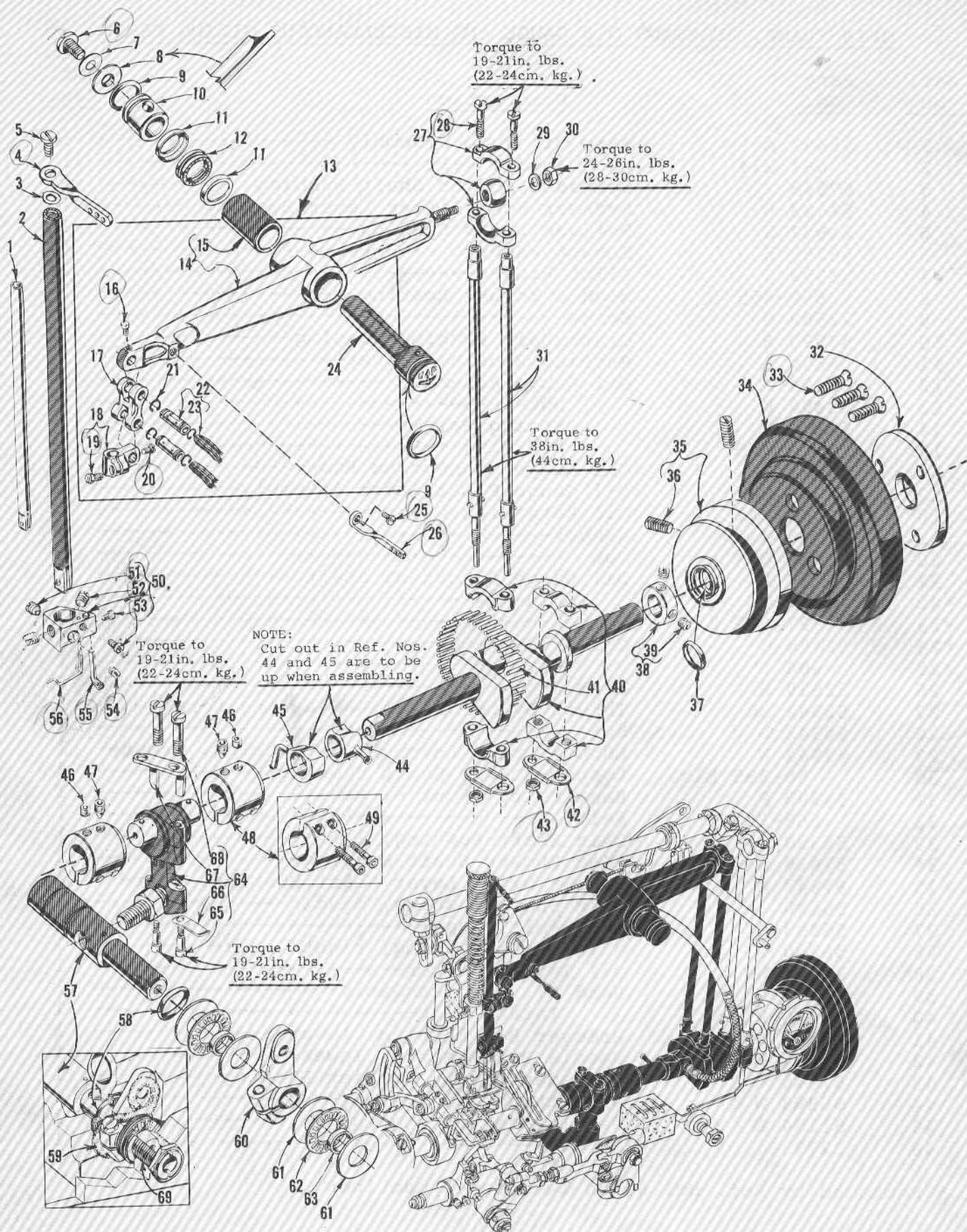
Ref. No.	Part No.	Description	Amt. Req.
1	56382 Y	Oil Drip Plate Clamping Block-----	1
2	57882 E	Oil Drip Plate-----	1
3	56382 K	Gasket-----	1
4	56382 J	Looper Drive Shaft Reservoir Cover-----	1
5	22829	Screw-----	2
6	56382 AA	Oil Reservoir Back Cover-----	1
7	22848	Screw-----	9
* 8	87	Screw-----	2
* 9	56382 L	Gasket-----	1
* 10	22548	Screw-----	4
11	56382 D	Crank Chamber Cover, lower-----	1
* 12	56382 E	Gasket-----	1
13	56382 M	Gasket-----	1
14	22733 E	Oil Filler Plug Screw-----	1
* 15	22541 C	Screw-----	4
16	56382 B	Upper Crank Chamber Cover-----	1
17	56382 C	Gasket-----	1
* 18	90	Screw-----	2
19	56382 AC	Needle Lever Bearing Oiler and Baffle Plate Assembly-----	1
* 20	22539 S	Plug Screw-----	1
21	21375 AV	Belt Guard-----	1
* 22	22829	Screw-----	2
* 23	98 A	Screw, for Styles 57800 E, M, N and X-----	2
-	98 A	Screw, for Styles 57800 P, U, V and W-----	1
24	158 B	Looper Thread Eyelet, for all Styles except 57800 P-----	1
24A	52858	Looper Thread Eyelet, for Style 57800 P-----	1
25	56391	Looper Thread Guard, for Styles 57800 E, M, N and X-----	1
* 26	22569 D	Screw-----	2
27	57857	Cast-off Plate Support-----	1
* 28	57804 x x x x x	Cast-off Plate-----	1
* 29	28	Screw-----	2
* 30	52958 B	Looper Thread Eyelet-----	1
* 31	22848	Screw-----	1
32	20	Washer-----	1
* 33	51858	Needle Thread Frame Eyelet-----	1
* 34	22889 A	Adaptor Plug Screw-----	1
* 35	95	Plug Screw-----	1
36	57844 B	Spreader Thread Eyelet Mounting Plate-----	1
37	57858	Spreader Thread Pull-off Eyelet-----	1
* 38	22585 C	Screw-----	1
39	57844	Spreader Thread Guide-----	1
40	57892 A	Spreader Tension Post-----	1
41	80665 F	Spreader Tension Disc-----	2
42	57892 D-1	Spreader Tension Spring-----	1
43	57892 B	Spreader Tension Post Nut-----	1
* 44	22542	Screw-----	2
45	57844 A	Thread Guide-----	1
46	57944 A	Thread Eyelet-----	1
* 47	605 A	Screw-----	2
48	57944 B	Spreader and Needle Thread Guide-----	1
49	57882	Head Cover-----	1
50	22733 C	Plug Screw-----	1
* 51	22569 C	Screw, for all Styles except 57800 E-----	3
-	22569 C	Screw, for Style 57800-----	1
52	57882 B	Gasket-----	1
* 53	22564 B	Screw-----	2
54	57831	Presser Bar Connection Guide Plate, rear-----	1
* 55	22513	Screw-----	2
56	35731 A	Presser Bar Connection Guide Plate, front-----	1
57	22539 G	Plug Screw-----	1
58	22894 E	Screw-----	2
59	660-617	Needle Lever Eyelet Gasket-----	1



MAIN FRAME, BUSHINGS OIL GAUGE AND MISCELLANEOUS OILING PARTS

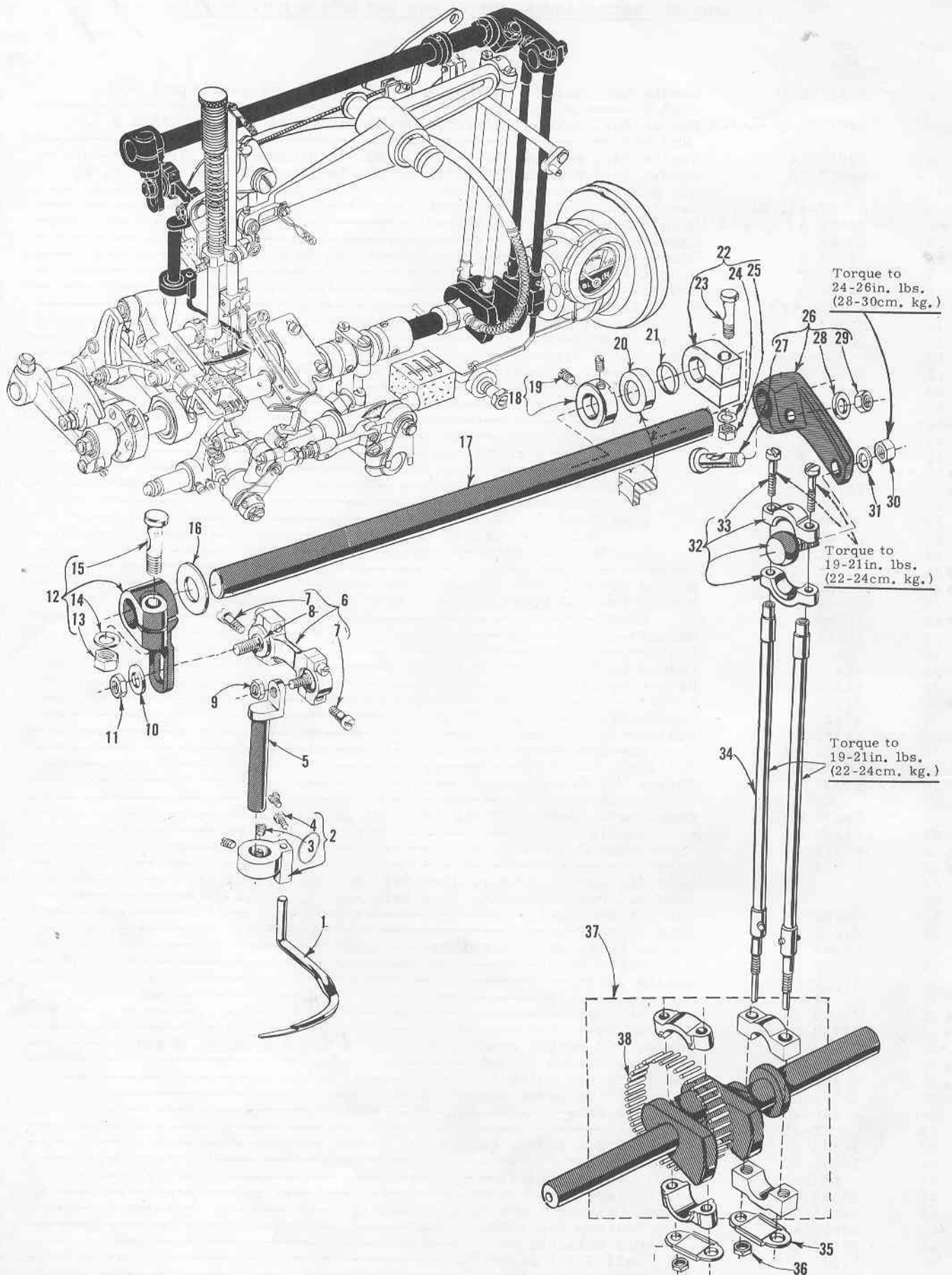
Ref. No.	Part No.	Description	Amt Req.
1	59493 A	Base Oil Pump Assembly -----	1
2	666-214	Intake Felt -----	1
3	57849	Spreader Rocker Shaft Bushing -----	2
4	52883 R	Presser Foot Lifter Lever Bushing -----	1
5	21657 X	Release Lever Bushing-----	1
6	56390 H	Thrust Washer -----	4
7	56390 J	Pilot Ring-----	2
8	660-665	Needle Thrust Bearing-----	2
9	22569 B	Screw-----	3
10	57890 B	Crankshaft Bushing Housing-----	1
11	56390 E	Bushing Housing Gasket-----	1
12	63494 K	Oil Gauge Assembly -----	1
13	63494 F	Nut-----	1
14	63494 G	Spring Washer-----	1
15	660-455	"O" Ring-----	1
16	56394 B	Oil Gauge Connecting Rod-----	1
17	56394 C	Oil Gauge Float Lever Assembly-----	1
18	660-221	Oil Retaining Ring-----	1
19	61256 G	Washer-----	2
20	11635 B	Nut -----	1
21	56394 A	Oil Gauge Adjusting Shaft -----	1
*22	426 B	Pin-----	1
*23	27-527 Blk.	Washer-----	1
*24	61494 G	Collar-----	1
*25	604	Screw-----	1
26	22539 R	Plug Screw-----	1
27	52942 AC	Thrust Synchronizing Adjusting Screw-----	1
28	56342 D	Nut-----	1
29	52942 W	Looper Drive Lever Shaft Bushing, front--	1
30	50-895 Blk.	Looper Rocker Shaft Bushing-----	2
31	56393 P	Base Felt, front -----	1
32	666-259	Felt-----	1
33	56390	Main Shaft Bushing, left-----	1
34	57836 B	Feed Rocker Shaft Bushing-----	2
35	57842 B	Looper Drive Lever Shaft Bushing, rear---	1
36	56190	Main Shaft Bushing, middle-----	1
37	56393 Q	Base Felt, rear-----	1
38	56390 G	Main Shaft Bushing, right-----	1
38A	35897 BV	Oil Intake Filter-----	1
39	57893	Head Oil Pump Assembly-----	1
40	666-214	Intake Felt-----	1
41	51257 AA	Presser Bar Bushing, lower-----	1
42	56354 C xxxxxx	Needle Bar Bushing, lower-----	1
43	57846	Spreader Holder Carrier Bushing-----	1
44	56393 W	Oil Attraction Felt-----	1
45	51154 E xxxxxx	Needle Bar Bushing, upper -----	1
46	22793	Screw-----	1

* Replaced by Ref. No. 46 on late model machines.



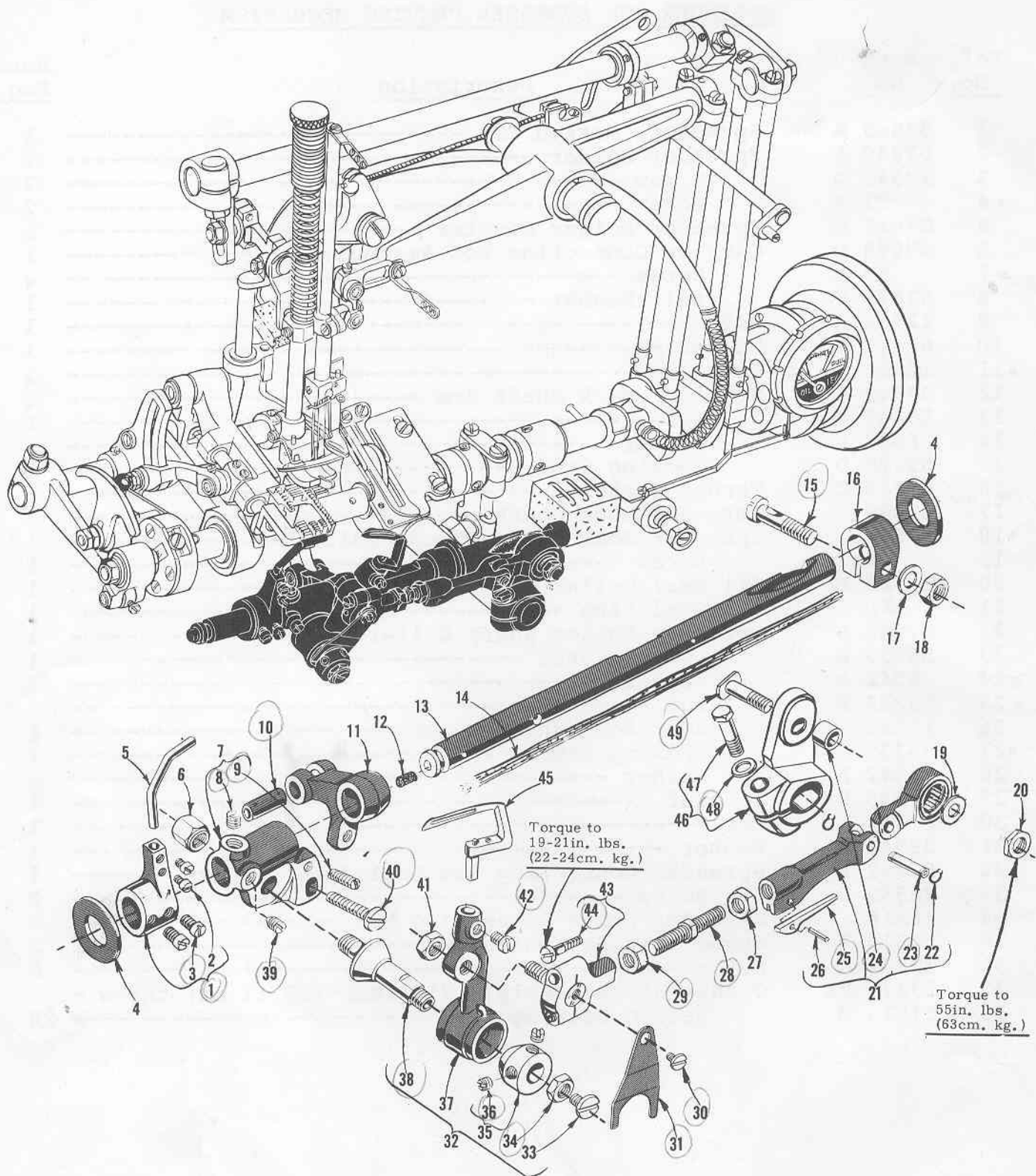
CRANKSHAFT, NEEDLE LEVER, NEEDLE BAR AND LOOPER DRIVING PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	52817 E-8	Needle Bar, marked "BG-8", for No. 8 gauge, Styles 57800 P, U, and V-----	1
	52717 E-12 XXXX	Needle Bar, marked "EJ-12", for No. 12 gauge, Styles 57800 U and V-----	1
2	52817-14	Needle Bar, marked "BD-14", for No. 14 gauge, Style 57800 W-----	1
	52817-16	Needle Bar, marked "BD-16", for No. 16 gauge, Styles 57800 E, M, N, W and X-----	1
3	27-435 Blk.	Needle Bar Eyelet Lockwasher-----	1
4	56598 A (56958 A)	Needle Bar Thread Eyelet-----	1
5	22768	Screw-----	1
6	22586 R	Screw-----	1
7	51250 F	Gasket-----	1
8	51250 D	Washer-----	1
9	660-625	Oil Seal Ring-----	2
10	56350 E	Needle Lever Thrust Collar-----	1
11	56350 F	Thrust Washer-----	2
12	660-614	Temper Load Ring-----	1
13	29348 AF	Needle Lever Assembly-----	1
14	56315 A	Needle Lever-----	1
15	56350 G	Bushing-----	1
16	77	Screw-----	1
17	56354 D	Needle Bar Link-----	1
18	51254 K	Needle Bar Connection-----	1
19	22562 A	Screw-----	1
20	22564	Screw-----	1
21	660-215	Retaining Ring-----	4
22	52336 A	Link Pin-----	2
23	WO-3	Columbia Yarn (6 strands)-----	-
24	56350 D	Needle Lever Stud-----	1
25	22768	Screw-----	1
26	56958	Needle Lever Thread Eyelet-----	1
27	29066 R	Needle Lever Connecting Upper Ball Joint Assembly-----	1
28	22559 G	Screw-----	2
29	51216 N	Washer-----	1
30	51216 P	Nut-----	1
31	56316	Needle Lever Connecting Rod-----	2
32	61321 L	Retaining Plate-----	1
33	22574	Screw-----	3
34	57821	Handwheel-----	1
35	56321 N	Pulley-----	1
36	22894 AB	Screw-----	2
37	660-202	"O" Ring-----	1
38	57847	Thrust Collar-----	1
39	95	Screw-----	2
40	29476 MN	Crankshaft Assembly, .910 inch (23.11 mm) throw-----	1
41	51216 M	Needle Bearing-----	28
42	56316 C	Connecting Rod Guide-----	2
43	12934 A	Nut-----	2
44		Head Oil Pump Assembly, (See Ref. No. 39 - Page 25)-----	1
45		Base Oil Pump Assembly, (See Ref. No. 1 - Page 25)-----	1
46	22894 C	Set Screw-----	2
47	22894 D	Spot Screw-----	2
48	56343 F	Looper Drive Lever Coupling-----	2
49	22653 L-8	Screw-----	4
50	57818-8	Needle Holder-----	1
51	89	Spot Screw-----	1
52	88 B	Set Screw-----	2
53	22738 F	Screw-----	2
54	28 B	Screw, for center needle, for Styles 57800 E, M, N, W and X-----	1
55	41076 D	Spreader Thread Eyelet-----	1
56	57842	Needle Thread Guide-----	1
57	52942 AA	Looper Drive Lever Rocker Shaft-----	1
58	660-202	Oil Seal Ring-----	1
59	CL-21	Oil Wick-----	1
60	56342 E	Looper Drive Lever, marked "D"-----	1
61	56390 H	Thrust Washer-----	4
62	660-665	Needle Thrust Bearing-----	2
63	56390 J	Pilot Ring-----	2
64	29105 AM	Looper Driving Lever Crank Assembly-----	1
65	22559 A	Bearing Cap Screw, lower-----	2
66	56343 E	Oil Splasher-----	1
67	56343 C	Ball Joint Guide Fork-----	1
68	22587 K	Bearing Cap Screw, upper-----	2
69	52942 AC	Thrust Synchronizing Adjusting Screw-----	1



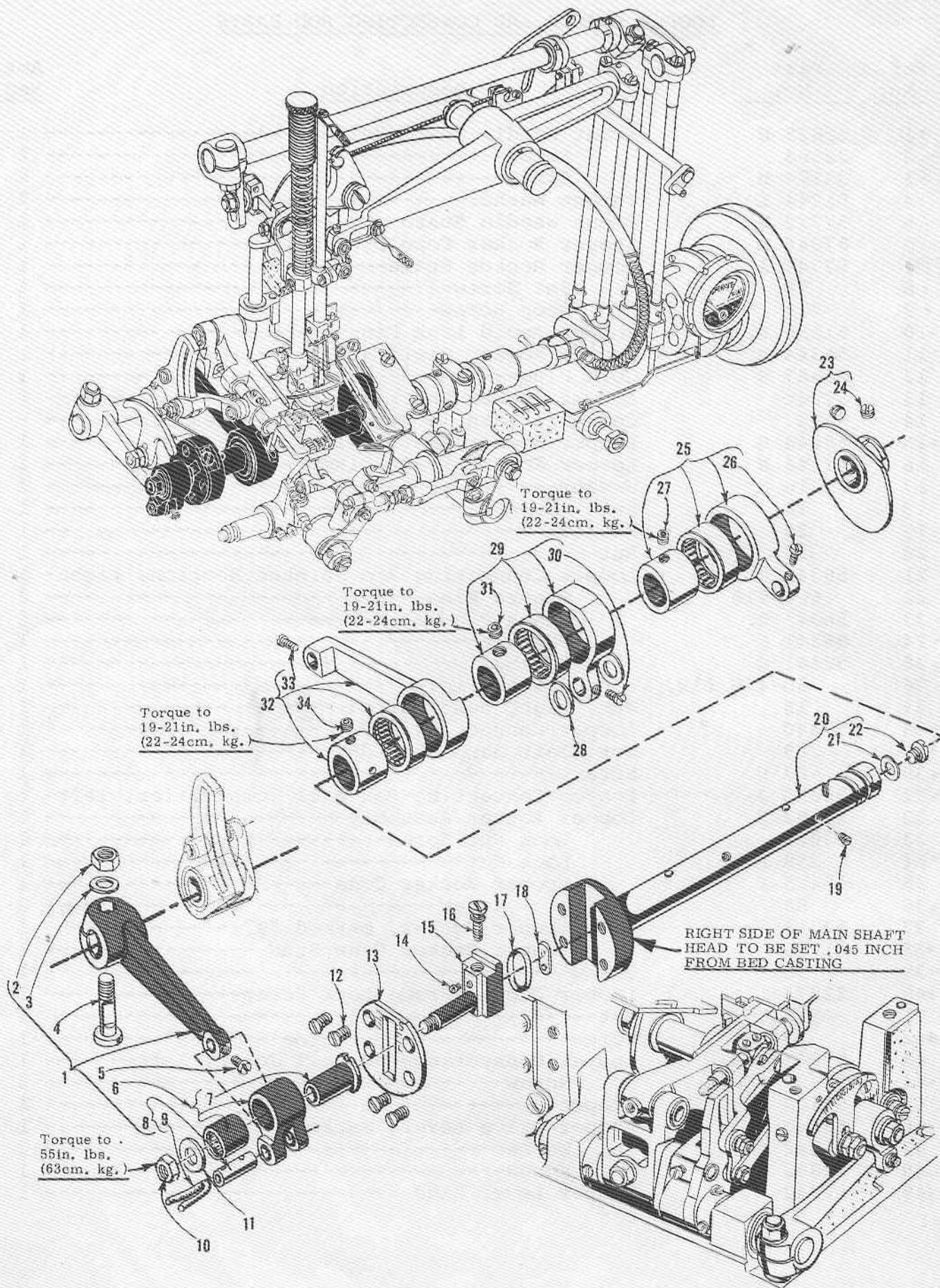
SPREADER AND SPREADER DRIVING MECHANISM

<u>Ref.</u> <u>No.</u>	<u>Part</u> <u>No.</u>	<u>Description</u>	<u>Amt.</u> <u>Req.</u>
1	57845 A	Spreader, marked "J" -----	1
2	57846 A	Spreader Holder -----	1
3	22547 D	Screw -----	2
4	77 A	Screw -----	2
5	57847 A	Spreader Holder Carrier -----	1
6	57848 B	Carrier Connecting Rod Assembly -----	1
7	97 A	Screw -----	4
8	57835 F	Ball Washer -----	1
9	12934 A	Nut -----	1
10	61434 G	Washer -----	1
11	12538	Nut -----	1
12	57849 A	Spreader Rock Shaft Arm -----	1
13	55235 E	Nut -----	1
14	6042 A	Washer -----	1
15	55235 D	Locking Stud -----	1
16	57849 C	Thrust Washer -----	1
17	52849	Spreader Rock Shaft -----	1
18	57847	Spreader Rock Shaft Thrust Collar -----	1
19	95	Screw -----	1
20	56342 B	Oil Seal Collar -----	1
21	660-202	Oil Seal Ring -----	1
22	57849 D	Spreader Rocker Shaft Collar -----	1
23	55235 D	Locking Stud -----	1
24	6042 A	Washer -----	1
25	55235 E	Nut -----	1
26	57852	Spreader Rock Shaft Lever -----	1
27	55235 D	Locking Stud -----	1
28	6042 A	Washer -----	1
29	55235 E	Nut -----	1
30	18	Nut -----	1
31	39543 P	Washer -----	1
32	52952 B	Spreader Connecting Rod Ball Joint, upper -----	1
33	22559 G	Screw -----	2
34	56316	Spreader Drive Connecting Rod -----	2
35	56316 C	Connecting Rod Guide -----	2
36	12934 A	Nut -----	2
37	29476 MN	Crankshaft Assembly, .910 inch (23.11 mm) throw -	1
38	51216 M	Needle Bearing -----	28



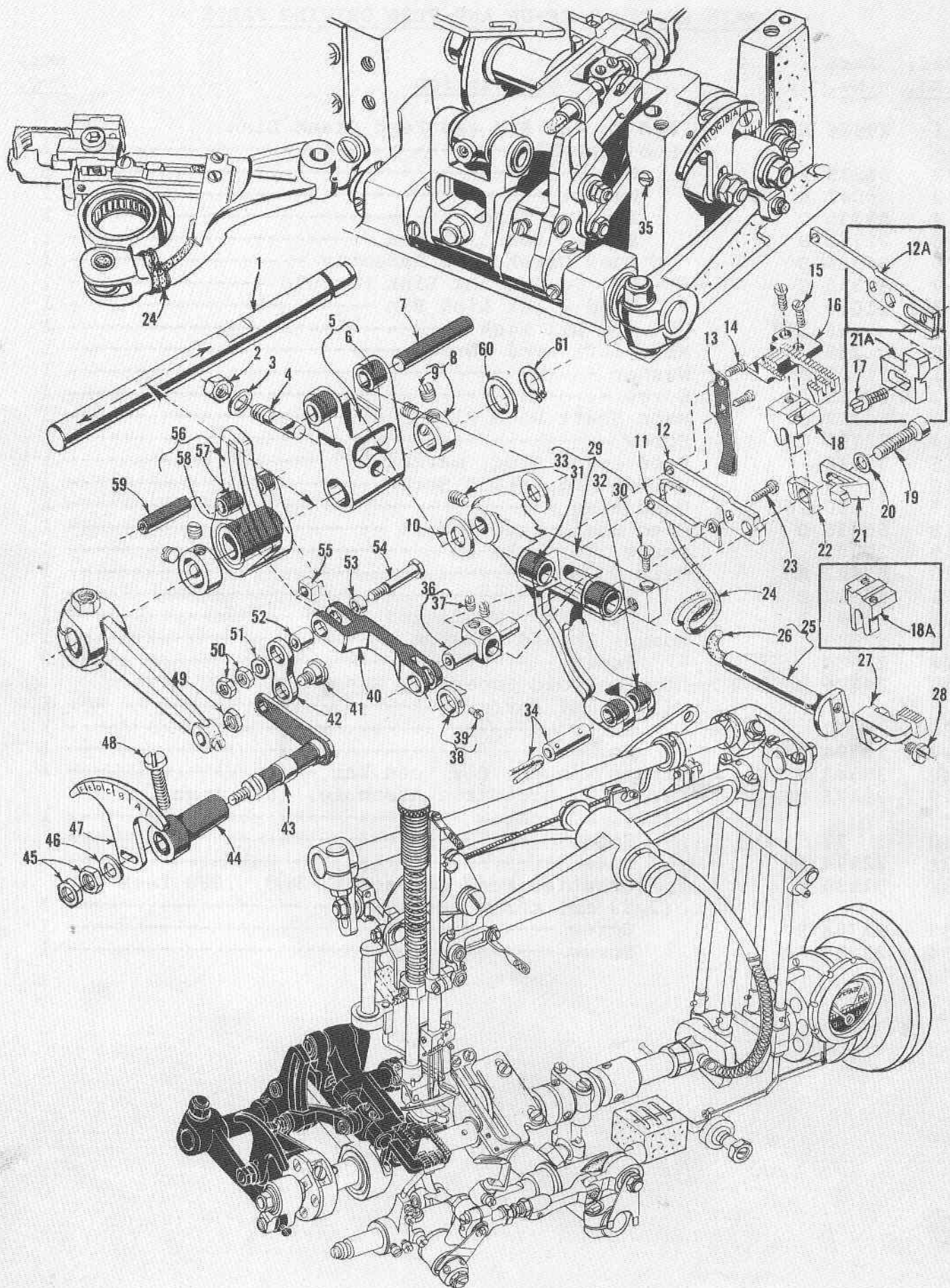
LOOPER ROCKER AND CONNECTING ROD PARTS

Ref. No.	Part No.	Description	Amt. Req.
•1	52825 D	Front Needle Guard Holder-----	1
2	22563	Screw-----	2
•3	33174 B	Screw-----	2
4	51244 L	Thrust Washer-----	2
5	57725 B	Front Needle Guard-----	1
6	57846 B	Looper Rocker Cone Stud Nut-----	1
7	57744 A	Looper Rocker Frame-----	1
•8	98	Set Screw-----	1
•9	719	Stop Screw-----	1
•10	51236 A	Looper Avoid Link Pin-----	1
11	56344 B	Looper Rocker Shaft Arm-----	1
12	CO-67 E	Cork Plug-----	1
13	57744	Looper Rocker Shaft-----	1
14	WO-3	Columbia Yarn (4 strands, 8 inches long)-----	-
•15	55244 G	Looper Rocker Shaft Collar Stud-----	1
16	51244 N	Looper Rocker Shaft Clamp-----	1
17	51216 N	Washer-----	1
18	18	Nut-----	1
19	20	Washer-----	1
20	18	Nut-----	1
21	56341 M	Looper Connecting Rod Jointed Section, right-----	1
22	660-310	Truarc Ring-----	2
•23	56341 E	Hinge Pin-----	1
•24	56341 F	Ferrule-----	1
•25	56341 G	Spring-----	1
26	50-458 Blk.	Spring Pin-----	1
27	18	Nut, right hand thread-----	1
•28	57840	Looper Connecting Rod-----	1
•29	269	Nut, left hand thread-----	1
•30	87 U	Screw-----	1
•31	56393 J	Looper Connecting Rod Ball Joint Oiler, left-----	1
32	29192 Z	Looper Rocker Assembly-----	1
33	22829	Lock Nut Screw-----	1
•34	258 A	Lock Nut-----	1
35	15465 F	Looper Rocker Cone-----	1
•36	88	Screw-----	2
37	57713	Looper Rocker, marked "W"-----	1
•38	51745	Looper Rocker Cone Stud-----	1
•39	96	Screw-----	1
•40	22874	Looper Rocker Frame Lock Screw-----	1
41	18	Nut-----	1
•42	73	Screw-----	1
43	57841	Looper Connecting Rod Ball Joint, left-----	1
•44	22729 C	Screw-----	2
45	52708 B	Looper-----	1
46	56342 E	Looper Drive Lever, marked "D"-----	1
47	51242 M	Washer-----	1
•48	22882 C	Screw-----	1
•49	52942 R	Looper Lever Stud-----	1



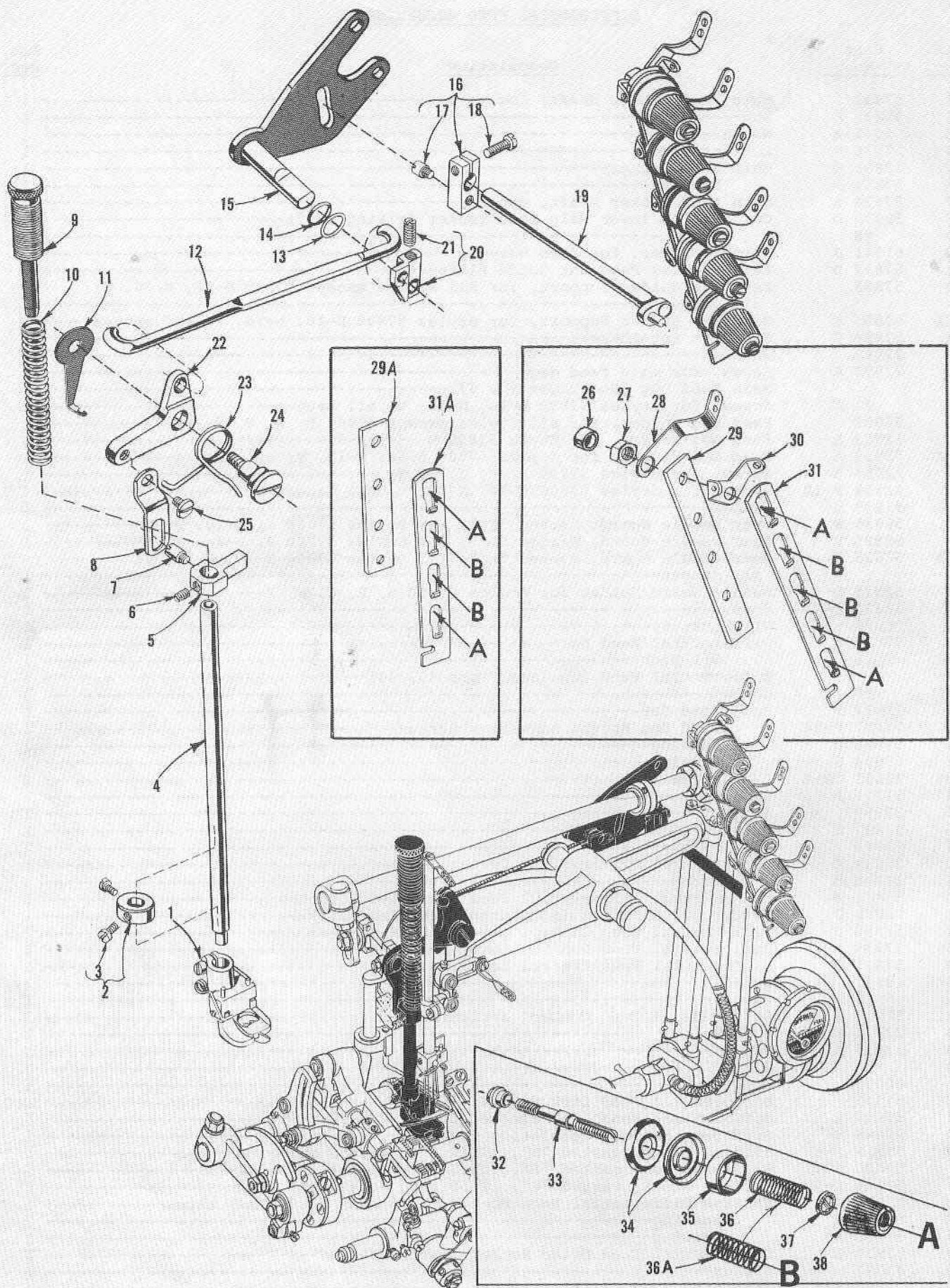
MAIN SHAFT, TAKE-UP AND FEED DRIVING PARTS

<u>Ref.</u> <u>No.</u>	<u>Part</u> <u>No.</u>	<u>Description</u>	<u>Amt.</u> <u>Req.</u>
1	29476 ND	Feed Rocker Arm and Feed Crank Link Sub-Assembly -----	1
2	55235 E	Nut -----	1
3	6042 A	Washer -----	1
4	55235 D	Locking Stud -----	1
5	22768 B	Screw, for link pin -----	1
6	56336 B	Feed Crank Link Assembly -----	1
7	56336 C	Feed Crank Link Ferrule -----	1
8	51054	Feed Crank Link Pin -----	1
9	666-149	Oil Wick -----	1
10	269	Nut, left hand thread -----	1
11	21657 E	Washer -----	1
12	22525 A	Screw -----	4
13	56322 C	Main Shaft Head Plate -----	1
14	22798 C	Screw -----	1
15	56336	Feed Crank Stud, marked "A" -----	1
16	22543 A	Stitch Regulating Screw -----	1
17	660-269 B	Quad Ring -----	1
18	56336 D	Feed Crank Stud Insert -----	1
19	22801	Screw, for take-up -----	1
20	57822 A	Main Shaft -----	1
21	56322 B	Gasket -----	1
22	22891 B	Oil Flow Regulating Screw -----	1
23	57823	Looper Thread Take-up -----	1
24	22580	Screw -----	2
25	29476 NM-062	Looper Avoid Eccentric Assembly, .062 inch (1.58 mm) throw -----	1
26	77	Screw -----	1
27	22894 AA	Screw -----	1
28	39543 N	Thrust Washer, for feed bar -----	2
29	29476 NM-072	Feed Lift Eccentric Assembly, .072 inch (1.83 mm) throw -----	1
30	77	Screw -----	1
31	22894 AA	Screw -----	1
32	57836 E	Differential Feed Connecting Rod, .080 inch (2.03 mm) throw -----	1
33	22768 B	Screw -----	1
34	22894 AA	Screw -----	1



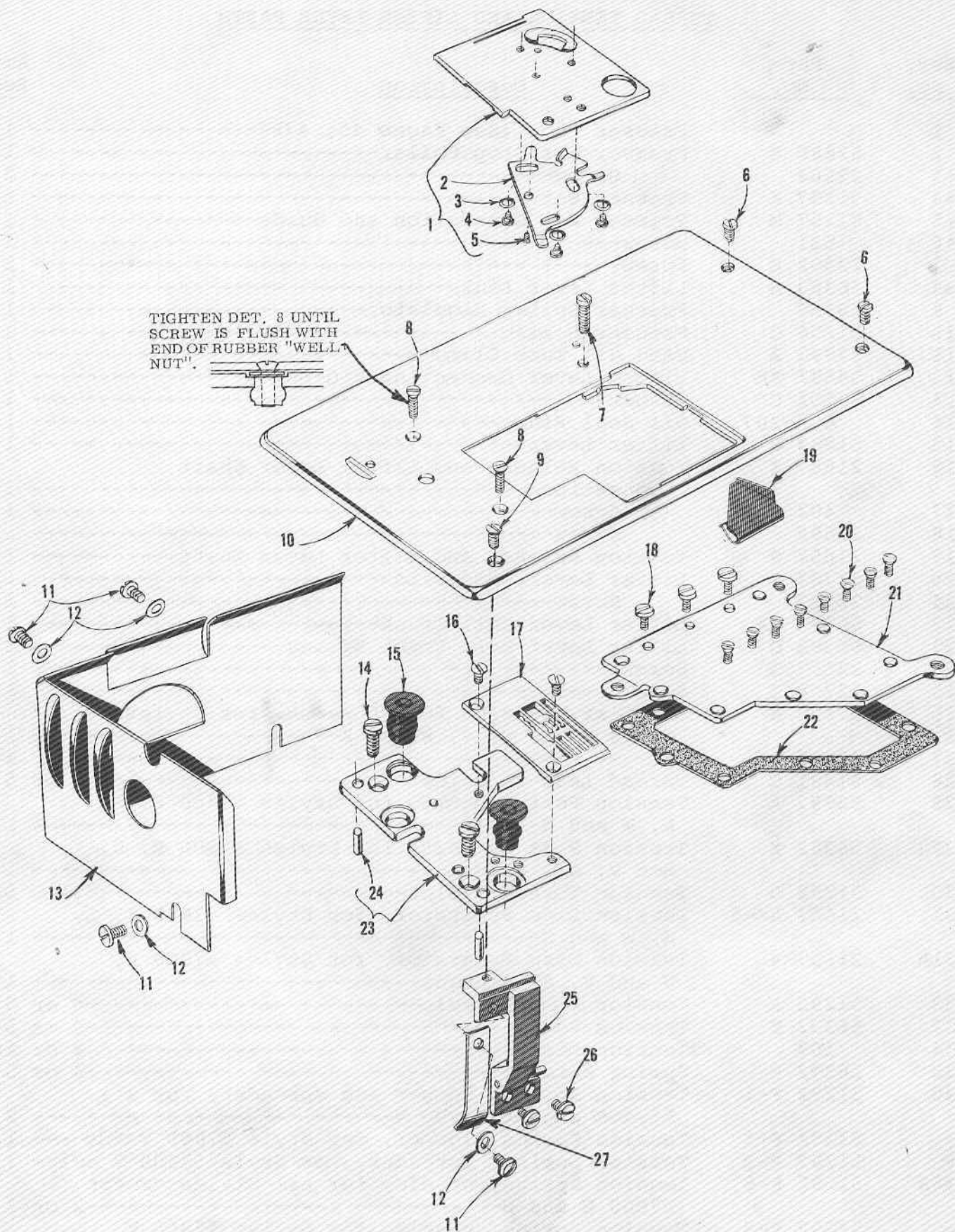
DIFFERENTIAL FEED MECHANISM

Ref. No.	Part No.	Description	Amt. Req.
1	57835	Main Feed Rocker Shaft, lower-----	1
2	55235 E	Nut-----	1
3	6042 A	Washer-----	1
4	57836 D	Locking Stud-----	1
5	57836 C	Main Feed Rocker-----	1
6	57836	Bushing-----	2
7	57834 B	Main Feed Rocker Shaft, upper-----	1
8	56335 D	Collar, for lower main feed rocker driving shaft-----	2
9	98	Screw-----	2
10	61341 J	Thrust Washer, for feed bar-----	2
11	57837 D	Differential Feed Bar Guide Plate-----	1
12	57853	Feed Dog Holder Support, for all Styles except 57800 E-16, N-16, V; all gauges-----	1
12A	57853 E	Feed Dog Holder Support, for Styles 57800 E-16, N-16, V; all gauges-----	1
13	57834 C	Oil Wick Retainer-----	1
14	22593	Screw-----	2
15	22593 A	Screw, for main feed dog-----	2
16		Main Feed Dog (See Pages 45, 47)-----	1
17	91 D	Screw, for Styles 57800 E-16, N-16, V; all gauges-----	1
18	52853	Feed Dog Holder, for all Styles except 57800 E, N, V, W-----	1
18	52853 A	Feed Dog Holder, for Style 57800 W-----	1
18A	52953 A	Feed Dog Holder, for Styles 57800 E-16, N-16, V; all gauges-----	1
19	22653 B-14	Screw, for Styles 57800 M, P, U, W, X-----	1
19	22653 B-10	Screw, for Styles 57800 E-16, N-16, V; all gauges-----	1
20	51235 G	Washer-----	1
21	52825 B	Rear Needle Guard, marked "FW", for Styles 57800 M, U-12, W, X-----	1
21	52825 F	Rear Needle Guard, marked "LF", for Styles 57800 P, U-8-----	1
21A	57825 E	Rear Needle Guard, marked "LN", for Styles 57800 E-16, N-16, V; all gauges-----	1
22	52925 D	Needle Guard Holder for Styles 57800 M, P, U, W, X-----	1
23	22635 E-24	Screw-----	1
24	CL21	Oil Wick-----	2
25	57834 A	Differential Feed Bar-----	1
26	CL21	Oil Wick-----	1
27		Differential Feed Dog (See Pages 45, 47)-----	1
28	90	Screw-----	1
29	57834 F	Main Feed Bar-----	1
30	22637 P-24	Feed Dog Height Adjusting Screw-----	1
31	57834 D	Bushing-----	2
32	57834 G	Bushing-----	2
33	22651 CB-4	Screw-----	1
34	51236 A	Link Pin-----	1
35	22597	Set Screw-----	1
36	57837 E	Driving Link Guide-----	1
37	22743	Screw-----	2
38	57837 F	Differential Driving Link Collar-----	1
39	22738 B	Screw-----	1
40	57835 B	Intermittent Differential Feed Bar Driving Link-----	1
41	22758 E	Screw, for differential control lever and link-----	1
42	57835 D	Differential Feed Control Lever Link-----	1
43	57835 C	Differential Feed Control Lever-----	1
44	57837 C	Differential Feed Control Lever Bushing-----	1
45	9937	Nut-----	2
46	69 H	Washer-----	1
47	57835 E	Differential Feed Control Indicator-----	1
48	22874 K	Lock Screw-----	1
49	12934 A	Nut-----	1
50	907	Nut-----	2
51	80265	Washer-----	1
52	57837	Differential Feed Link Sleeve, left-----	1
53	57837 A	Differential Feed Link Sleeve, right-----	1
54	22868 B	Differential Feed Regulating Screw-----	1
55	57836 F-40	Sliding Block, marked "N", .2540 inch (6.452 mm) wide-----	1
55	57836 F-45	Sliding Block, marked "P", .2545 inch (6.464 mm) wide-----	1
55	57836 F-50	Sliding Block, marked "R", .2550 inch (6.477 mm) wide-----	1
56	57806-040	Stretch Differential Feed Rocker, .040 inch (1.016 mm) throw-----	1
57	56334 R	Bushing-----	2
58	57836 A	Bushing-----	1
59	57836 G	Differential Feed Drive Rocker Shaft-----	1
60	41391	Washer-----	1
61	660-438	Retaining Ring-----	1



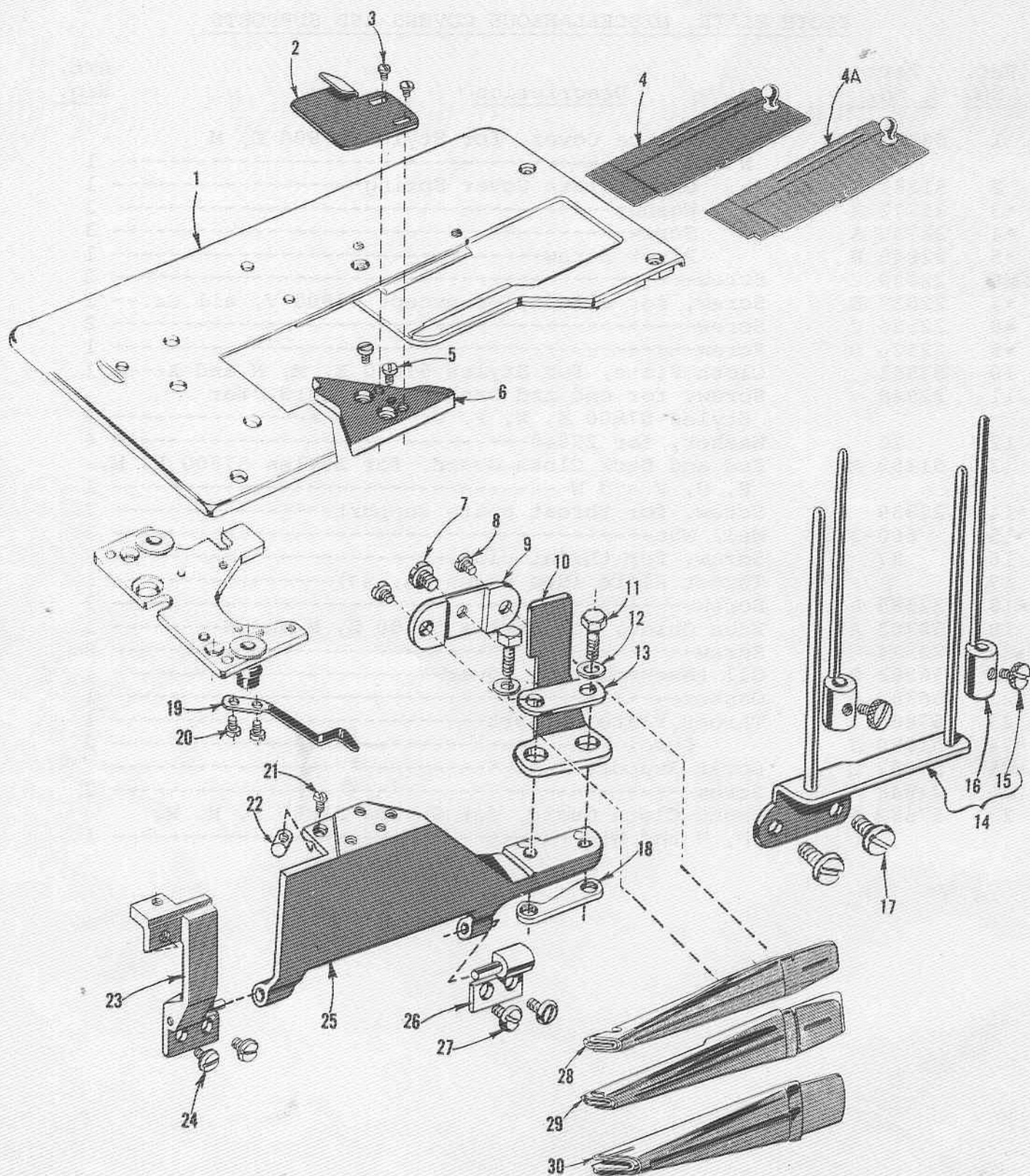
THREAD TENSION AND LIFTER LEVER PARTS

Ref. No.	Part No.	Description	Amt. Req.
1		Presser Foot (See Pages 45, 47)-----	1
2	52888 B	Presser Bar Stop Collar-----	1
*3	22562	Screw-----	2
*4	51257 K	Presser Bar-----	1
*5	51257 M	Presser Bar Connection and Guide-----	1
*6	531	Screw-----	1
7	22892 E	Screw-----	1
*8	56383 A	Lifter Lever Link-----	1
9	56356	Presser Spring Regulator-----	1
10	51256 C	Presser Spring-----	1
11	57893 B	Head Oil Tube Clamp-----	1
12	56383 AB	Lifter Lever Connecting Rod-----	1
*13	39552 C	Washer-----	1
14	660-207	Oil Seal Ring-----	1
15	51283 H	Lifter Lever-----	1
16	21657 Y	Tension Release and Lifter Lever Shaft Connection-----	1
17	402	Screw-----	1
*18	22596	Screw-----	1
19	21657 W	Tension Release and Lifter Lever Shaft-----	1
20	53783 N	Lifter Lever Connection-----	1
21	22537	Screw-----	1
22	56282 AA	Lifter Lever Bell Crank-----	1
23	56383 D	Lifter Lever Bell Crank Spring-----	1
24	22557 G	Screw-----	1
*25	22758 C	Screw-----	1
26	57892 E	Auxiliary Tension Post Support, for Styles 57800 E, M, N, V, W and X-----	1
27	43266	Nut-----	2 or 3
*28	51491 C	Thread Lead-In Guide-----	4 or 5
29	52992 A	Tension Post Support, for Styles 57800 E, M, N, W and X-----	1
29A	56382 X	Tension Post Support, for Styles 57800 P, U, and V, all gauges-----	1
*30	51292 D	Tension Thread Eyelet-----	4 or 5
*31	21657 AM-5	Tension Disc Separator, for Styles 57800 E, M, N, W and X-----	1
*31A	21657-4	Tension Disc Separator, for Styles 57800 P, U and V, all gauges-----	1
*32	51292 A	Tension Post Ferrule-----	4 or 5
*33	56392 E	Tension Post-----	4 or 5
*34	109	Tension Disc-----	8 or 10
*35	56392 F	Spring Shield-----	4 or 5
36	51292 F-1	Tension Spring, looper and spreader, for all Styles except 57800 V-----	2
-	51292 F-1	Tension Spring, looper, for Style 57800 V only----	1
-	51292 F-2	Tension Spring, spreader, for Style 57800 V only----	1
36A	51292 F-5	Tension Spring, needle, for all Styles except 57800 E and N-----	2 or 3
-	51292 F-8	Tension Spring, needle, for Styles 57800 E and N-----	3
37	39592 AK	Tension Spring Ferrule-----	4 or 5
*38	39592 Z	Tension Nut-----	4 or 5



CLOTH PLATE, MISCELLANEOUS COVERS AND SUPPORTS

Ref. No.	Part No.	Description	Amt. Req.
1	56381-219	Cloth Plate Cover, for Styles 57800 E, M N and X-----	1
2	51281 AC	Cloth Plate Cover Spring-----	1
•3	35772 H	Washer-----	3
•4	22760 A	Screw-----	3
•5	22845 B	Pivot Screw-----	1
•6	22839 C	Screw-----	2
•7	22839 E	Screw, for all Styles except 57800 V, all Ga.--	1
•8	22526 C	Screw-----	2
•9	22526 D	Screw-----	1
10	57801	Cloth Plate, for Styles 57800 E, M, N and X----	1
11	22848	Screw, for end and back cloth guard, for Styles 57800 E, N, P, U, V AND W-----	4
12	20	Washer, for 22848-----	4
13	51282 AH	End and Back Cloth Guard, for Styles 57800 E, N, P, U, V and W-----	1
•14	22839	Screw, for throat plate support-----	2
•15	660-313	Well Nut-----	2
16	87	Screw, for throat plate-----	2
17		Throat Plate (See Pages 45, 47)-----	1
•18	22585 A	Screw-----	3
19	52703 A	Edge Guide, for Styles 57800 E, M and N-----	1
•20	22524	Screw-----	8
21	56382 G	Oil Reservoir Top Cover-----	1
22	56382 H	Gasket-----	1
23	57880	Throat Plate Support-----	1
•24	51280 J	Dowel Pin-----	2
25	57882 C	Cover Support Post-----	1
26	22848	Screw-----	2
27	57882 G	Front Cloth Guard, for Styles 57800 E, N, P, U, V and W-----	1



CLOTH PLATE, ATTACHMENTS AND ATTACHING BRACKETS
FOR STYLES 57800 P, U, V and W, UNLESS OTHERWISE SPECIFIED

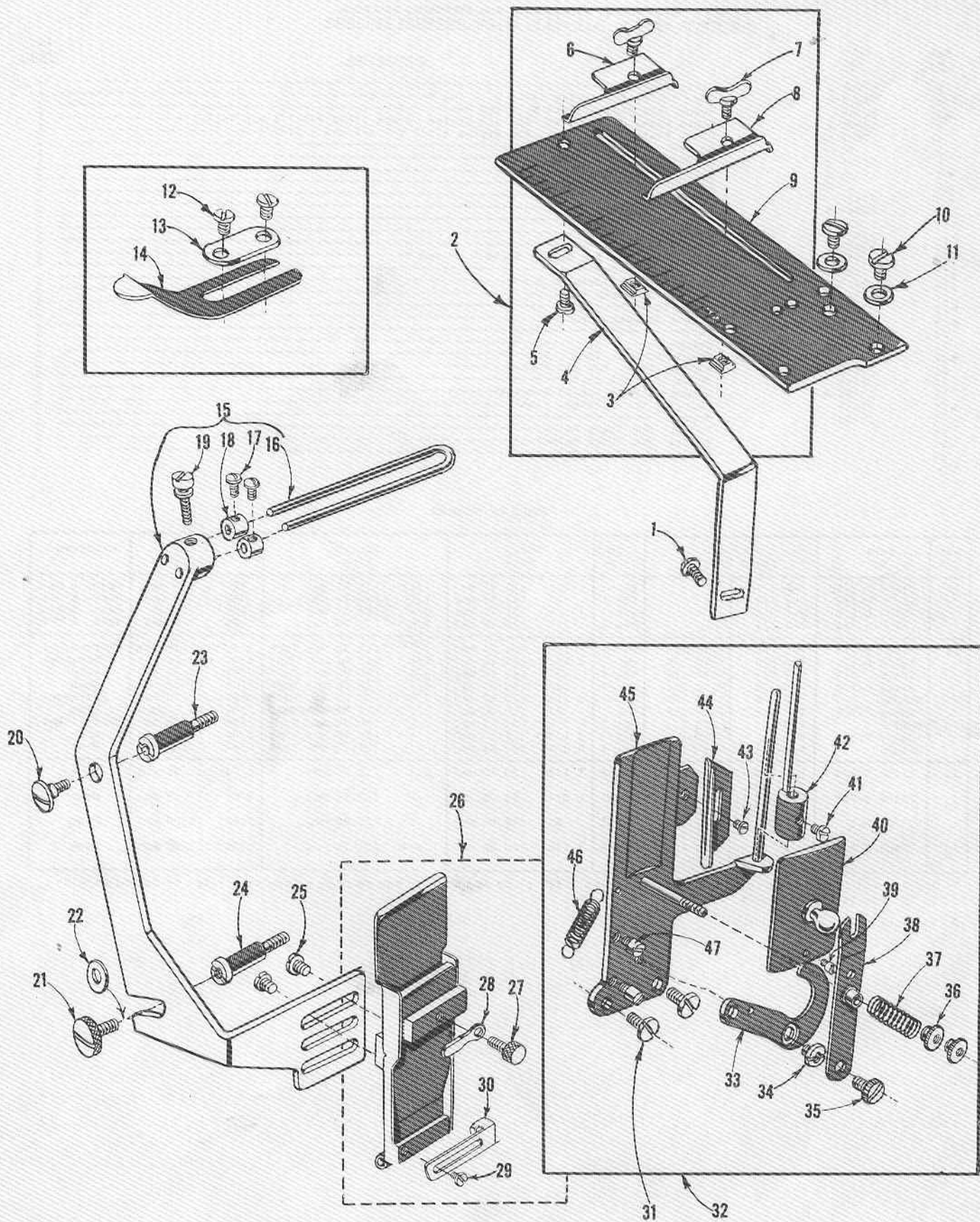
Ref. No.	Part No.	Description	Amt. Req.
1	57801 A	Cloth Plate	1
2	23133 L	Edge Guide, for Styles 57800 U, V and W	1
3	22561	Screw, for Styles 57800 U, V and W	2
4	57802 A	Cloth Plate Slide Cover, for all Styles except 57800 V-8-3/4 and V-12-3/4	1
4A	57802 AA	Cloth Plate Slide Cover, for Styles 57800 V-8-3/4 and V-12-3/4	1
5	90	Screw	2
6	57764 A	Folder Support Platform	1
7	25 S	Screw	1
8	25 CC	Screw	2
9	23432	Folder Clamp	1
10	52864 N	Folder Support Bracket	2
11	T38	Screw	1
12	53634 C	Washer	2
13	23425 V	Washer Plate	1
14	23439 D	Strip Tension, for Styles 57800 U, V and W	1
15	188 D	Screw	2
16	23439 E	Adjustable Pin	2
17	22548	Screw, for strip tension	1
18	57864	Clamp Plate	1
19	43281 K	Hinged Bracket Spring	2
20	90	Screw	1
21	22564	Screw	1
22	57885 A	Hinged Bracket Spring Pin	1
23	57882 C	Support Post, for all Styles	2
24	22848	Screw, for all Styles	1
25	57764 B	Folder Support Hinged Bracket	1
26	57885	Swinging Cover Hinge, right	1
27	22848	Screw	2
28		Folder (See Chart Below)	1
29		Folder (See Chart Below)	1
30		Folder (See Chart Below)	1

TABLE OF FOLDERS

Ref. No.	Part No.	Machine Style Used On	Seam Type	Strip Size	Finish Size	Strip Capacity	Uncurlers
28	23406 L-7/16	P-8 7/16	BSa-1	7/8" (22.22 mm)	7/16" (11.11 mm)	.025" (.635 mm)	#Ent. & Del.
	23406 L-1/2	P-8 1/2	BSa-1	1" (25.40 mm)	1/2" (12.70 mm)	.025" (.635 mm)	#Ent. & Del.
	23406 L-5/8	P-8 5/8	BSa-1	1 1/4" (31.75 mm)	5/8" (15.87 mm)	.025" (.635 mm)	#Ent. & Del.
	23406 L-3/4	P-8 3/4	BSa-1	1 1/2" (38.10 mm)	3/4" (19.05 mm)	.025" (.635 mm)	#Ent. & Del.
29	23406 R-1/2	V-8 1/2	BSb-1	1 1/4" (31.75 mm)	1/2" (12.70 mm) Top*	3/64" (1.19 mm)	#Ent. & Del.
	23406 R-5/8	V-8 5/8	BSb-1	1 1/2" (38.10 mm)	5/8" (15.87 mm) Top*	3/64" (1.19 mm)	Entrance
	23406 U-3/4	V-8 3/4	BSb-1	1 3/4" (44.45 mm)	3/4" (19.05 mm) Top*	3/64" (1.19 mm)	None
	23406 S-3/4	V-8 3/4	BSb-1	1 13/16" (46.04 mm)	3/4" (19.05 mm) Top*	5/64" (1.98 mm)	None
	K59055	V-8 7/8	BSb-1	2 1/8" (53.97 mm)	7/8" (22.22 mm) Top*	3/64" (1.19 mm)	Entrance
	23406 T-7/8	V-8 7/8	BSb-1	2" (50.80 mm)	7/8" (22.22 mm) Top*	5/64" (1.98 mm)	None
	K64049	V-8-1	BSb-1	2 1/4" (57.15 mm)	1" (25.40 mm) Top*	3/64" (1.19 mm)	#Ent. & Del.
	23406 T-1	V-8-1	BSb-1	2 1/4" (57.15 mm)	1" (25.40 mm) Top*	5/64" (1.98 mm)	None
	K64050	V-8-1 1/4	BSb-1	2 3/4" (69.85 mm)	1 1/4" (31.75 mm) Top*	5/64" (1.98 mm)	None
30	23406 N-3/4	U-8 3/4	BSa-1	1 1/2" (38.10 mm)	3/4" (19.05 mm)	5/64" (1.98 mm)	None
		U-12 3/4					
	23406 N-7/8	U-8 7/8	BSa-1	1 3/4" (44.45 mm)	7/8" (22.22 mm)	5/64" (1.98 mm)	None
		U-12 7/8					
	23406 N-1	U-8-1	BSa-1	2" (50.80 mm)	1" (25.40 mm)	5/64" (1.98 mm)	None
		U-12-1					
	23406 N-1 1/4	U-8-1 1/4	BSa-1	2 1/2" (63.50 mm)	1 1/4" (31.75 mm)	5/64" (1.98 mm)	None
		U-12-1 1/4					
		W-16-1 1/4					

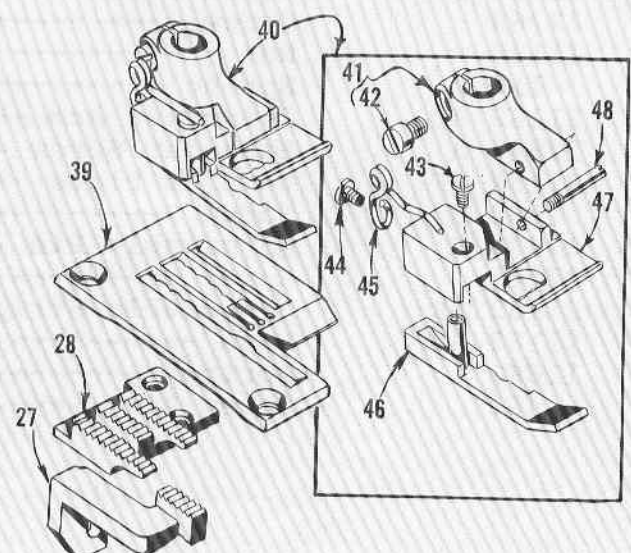
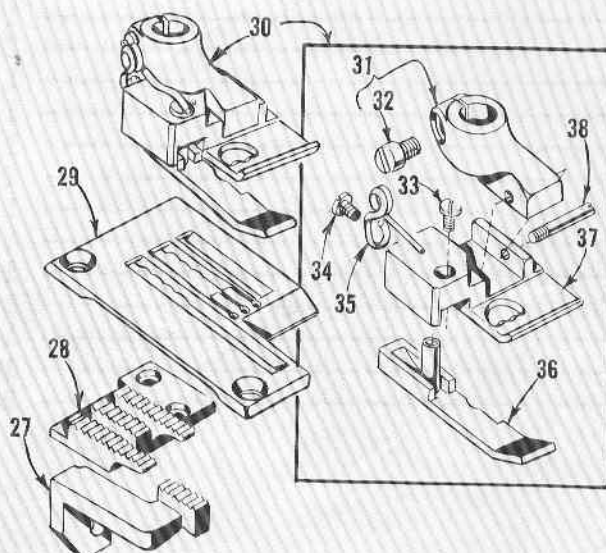
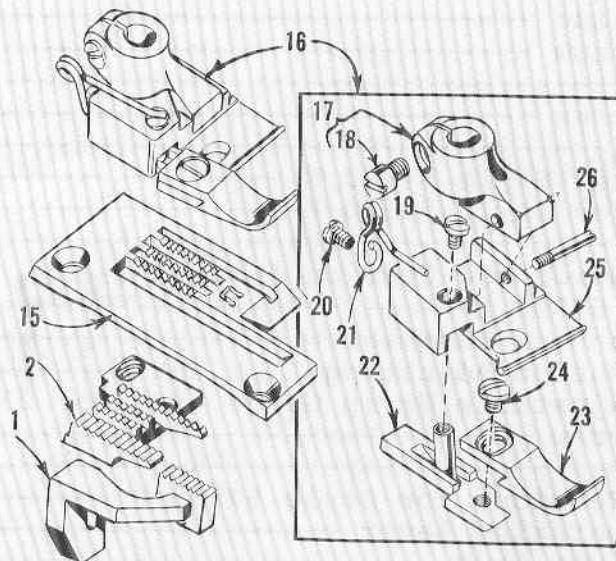
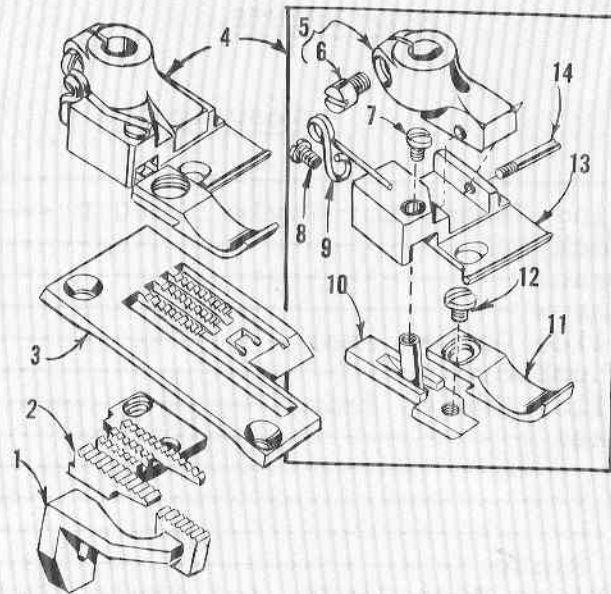
* Above folders, producing seam Type BSb-1, finish 1/16" (1.59 mm) wide on top than on bottom with 1/16" (1.59 mm) margin to left of left hand needle.

Entrance and delivery ends.



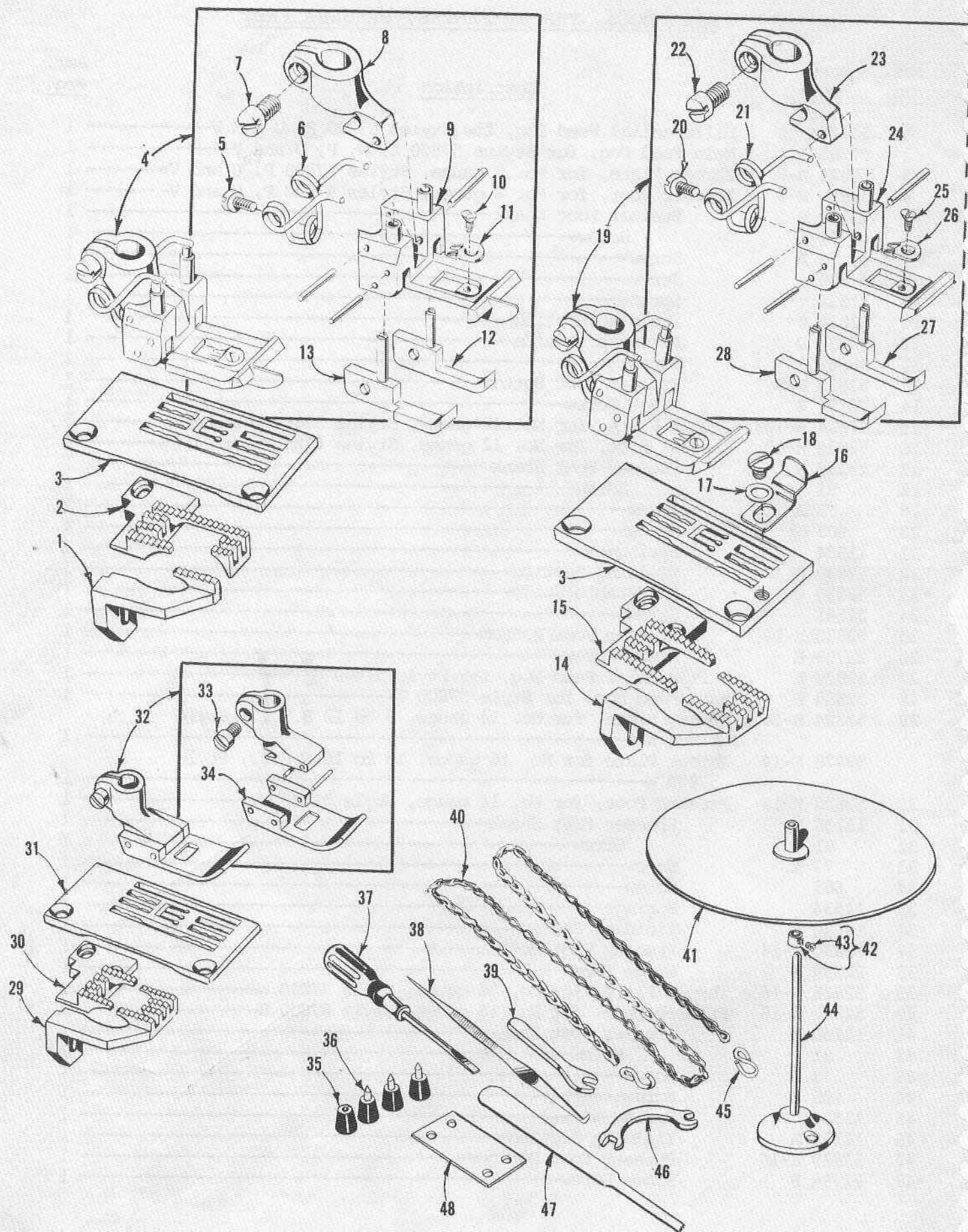
ATTACHMENTS

<u>Ref.</u> <u>No.</u>	<u>Part</u> <u>No.</u>	<u>Description</u>	<u>Amt.</u> <u>Req.</u>
1	93	Screw -----	1
2	21198 M	Measuring Gauge, for Style 57800 P -----	1
3	21198 J	Lock Nut -----	2
4	21198 N	Brace -----	1
5	94	Screw -----	1
6	21198 H	Slide Gauge, rear -----	1
7	22756	Thumbscrew -----	2
8	21198 G	Slide Gauge, front -----	1
9	21198 F	Base -----	1
10	25 S	Screw -----	2
11	21657 E	Washer -----	2
12	25 C	Screw -----	2
13	23425 V	Washer Plate -----	1
14	10303 A	Cloth Plate Edge Guide, for Style 57800 E -----	1
15	G23306 AA	Strip Guide Support, for Style 57800 E -----	1
16	8922 A	Wire -----	1
17	188 D	Screw -----	1
18	8992 B	Guide -----	1
19	22568	Screw -----	1
20	22504 C	Screw -----	1
21	22837	Thumbscrew -----	1
22	12957 E	Washer -----	1
23	G52782 CA	Stud, for Style 57800 E -----	1
24	52882 V	Stud, for Style 57800 E -----	1
25	94	Screw -----	2
26	23306 AE	Strip Guide and Tension Assembly, for Style 57800 E -----	1
27	22703	Tension Thumbscrew -----	1
28	23306 AF	Tension Adjusting Lock Nut -----	1
29	23306 W	Adjustable Strip Guide, for No. 23306 AE -----	1
30	25 B	Screw -----	1
31	22548	Screw -----	2
32	21182 AA	Strip Tension, for Style 57800 P -----	1
33	21182 AC	Operating Lever -----	1
34	22504 B	Pivot Stud -----	1
35	22760	Screw -----	1
36	21185	Nut -----	2
37	110-2	Spring -----	1
38	21182 AD	Operating Arm -----	1
39	22845 A	Shoulder Screw -----	1
40	21182 AF	Tension Plate -----	1
41	188 D	Screw -----	1
42	23439 E	Adjustable Pin -----	1
43	22561	Screw -----	1
44	21182 AE	Adjustable Strip Guide -----	1
45	21182 AB	Base -----	1
46	11663	Spring -----	1
47	402	Screw Pin -----	2



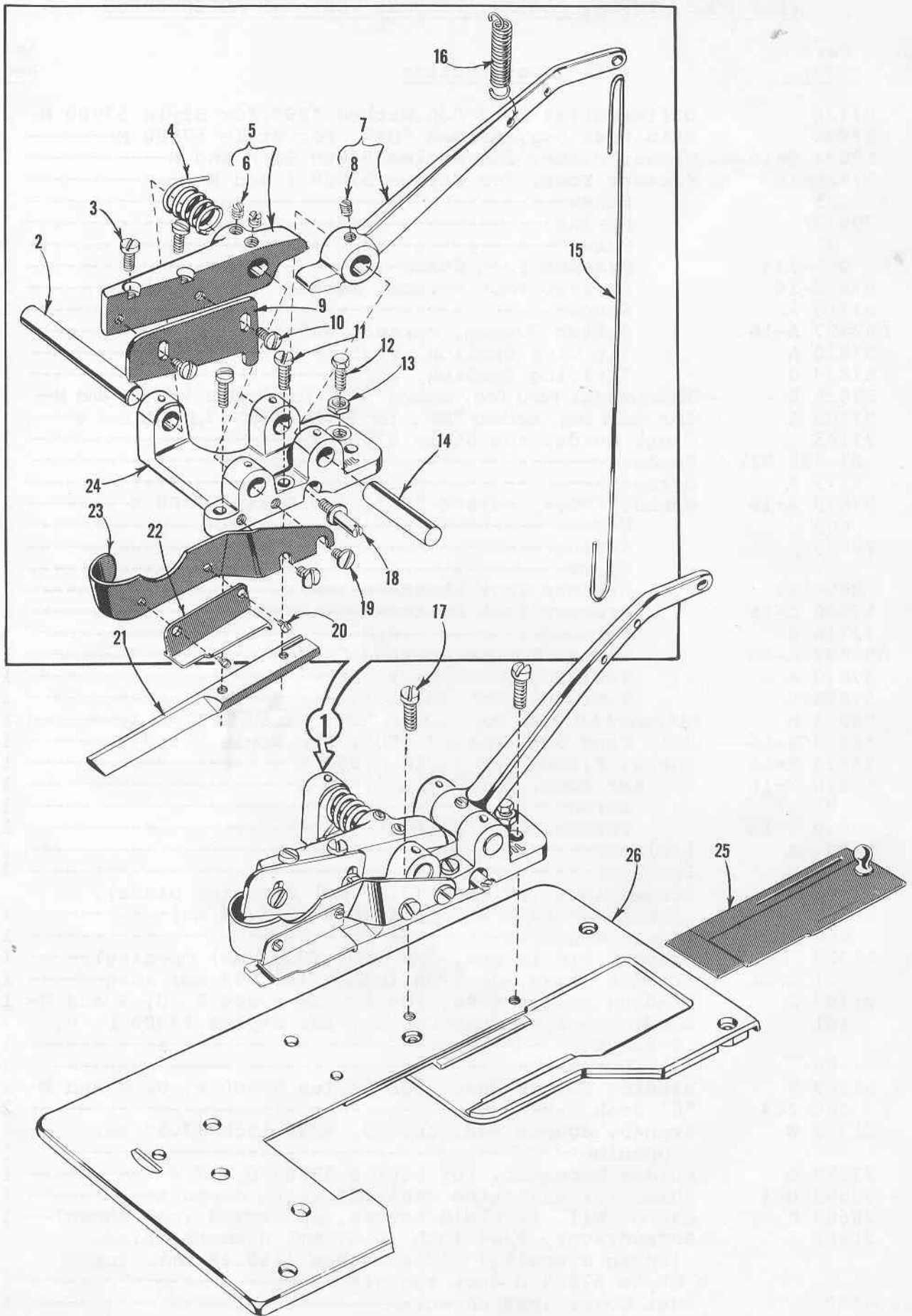
FEED DOGS, THROAT PLATES, PRESSER FEET

Ref. No.	Part No.	Description	Amt. Req.
1	57726	Differential Feed Dog, for Styles 57800 P, U and V-----	1
2	57705 A	Main Feed Dog, for Styles 57800 E, N, P, U and V-----	1
*3	57824 A-8	Throat Plate, for No. 8 gauge, Styles 57800 P, U and V-----	1
4	52820 H-8	Presser Foot, for No. 8 gauge, Styles 57800 P, U and V-----	1
5	13130 B	Presser Foot Shank-----	1
6	91	Screw-----	1
*7	73 A	Screw-----	1
8	605	Screw-----	1
9	11534	Spring-----	1
10	52830 C	Yielding Section-----	1
11	52830 D	Adjustable Guide-----	1
12	22561	Screw-----	1
13	52830 H-8	Presser Foot Bottom-----	1
14	22799 B	Hinge Screw-----	1
*15	57824 A-12	Throat Plate, for No. 12 gauge, Styles 57800 U and V-----	1
16	52820 H-12	Presser Foot, for No. 12 gauge, Styles 57800 U and V-----	1
17	13130 B	Presser Foot Shank-----	1
*18	91	Screw-----	1
19	73 A	Screw-----	1
20	605	Screw-----	1
21	11534	Spring-----	1
22	52830 C	Yielding Section-----	1
*23	52830 D	Adjustable Guide-----	1
24	22561	Screw-----	1
25	52830 H-12	Presser Foot Bottom-----	1
26	22799 B	Hinge Screw-----	1
27	52826 K	Differential Feed Dog, for Style 57800 W-----	1
28	52805 K	Main Feed Dog, for Style 57800 W-----	1
29	52824 K-14	Throat Plate, for No. 14 gauge, 9 to 12 S.P.I., Style 57800 W-----	1
	52828 K-14	Throat Plate for No. 14 gauge, 13 to 16 S.P.I., Style 57800 W-----	1
30	52820 K-14	Presser Foot, for No. 14 gauge, Style 57800 W-----	1
31	13130 B	Presser Foot Shank-----	1
32	91	Screw-----	1
33	73 A	Screw-----	1
*34	605	Screw-----	1
35	11534	Spring-----	1
36	13130 A	Yielding Section-----	1
37	52830 K-14	Presser Foot Bottom-----	1
38	22799 B	Hinge Screw-----	1
*39	52828 K-16	Throat Plate, for No. 16 gauge, Style 57800 W-----	1
40	52820 K-16	Presser Foot, for No. 16 gauge, Style 57800 W-----	1
41	13130 B	Presser Foot Shank-----	1
42	91	Screw-----	1
43	73 A	Screw-----	1
44	605	Screw-----	1
45	11534	Spring-----	1
*46	13130 A	Yielding Section-----	1
47	52830 K-16	Presser Foot Bottom-----	1
*48	22799 B	Hinge Screw-----	1



FEED DOGS, THROAT PLATES, PRESSER FEET AND ACCESSORIES

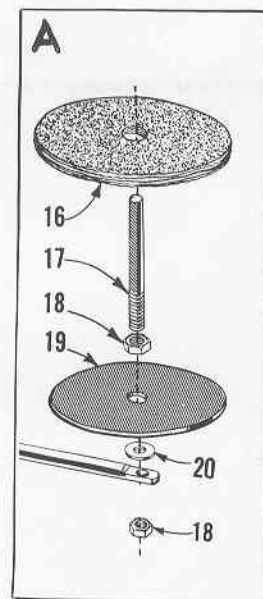
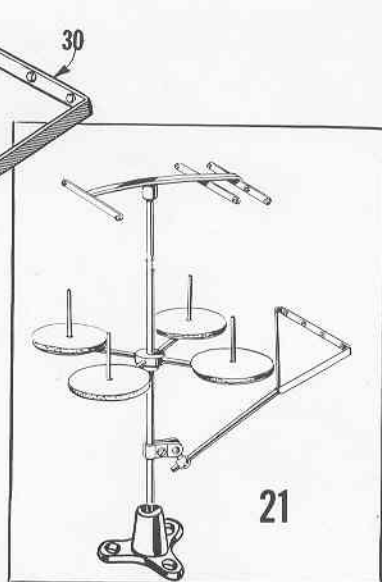
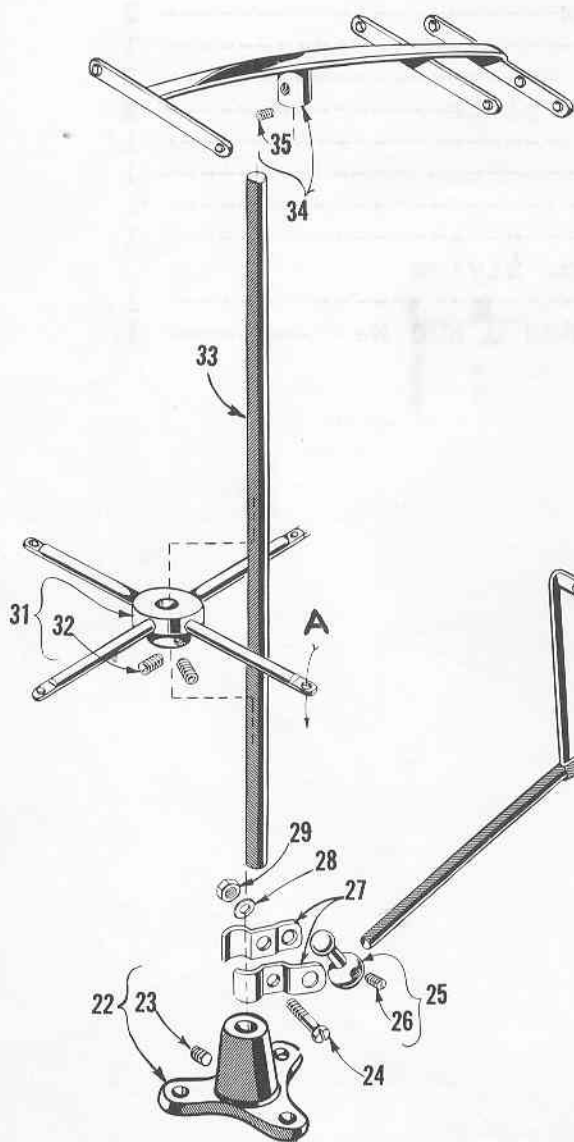
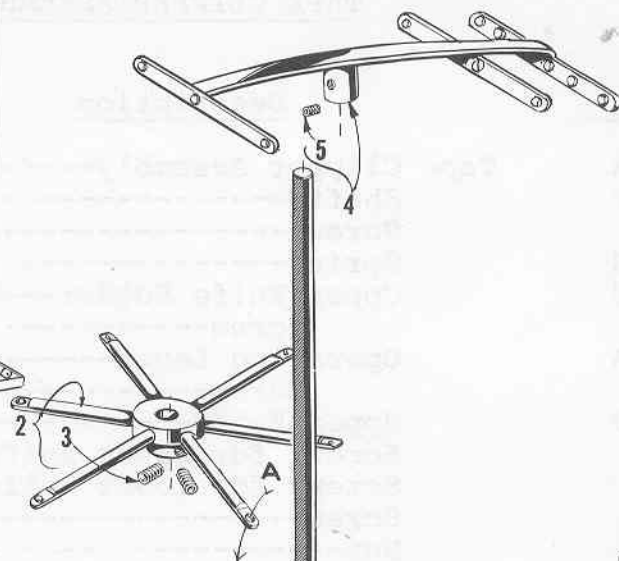
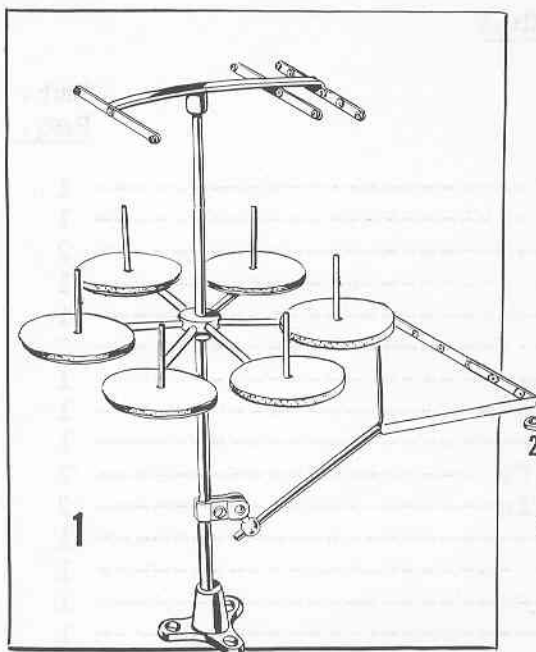
Ref. No.	Part No.	Description	Amt. Req.
1	57726	Differential Feed Dog, marked "ES", for Style 57800 M-	1
2	57805	Main Feed Dog, marked "QA", for Style 57800 M-----	1
3	57824 E-16	Throat Plate, for Styles 57800 E, M and N-----	1
4	57820-16	Presser Foot, for Styles 57800 E and M-----	1
5	605	Screw-----	1
6	79633	Spring-----	1
7	91	Screw-----	1
8	G65-134	Presser Foot Shank-----	1
9	57830-16	Presser Foot Bottom, marked "BR"-----	1
10	22716 A	Screw-----	1
11	G52897 A-16	Stitch Tongue, marked "WH"-----	1
12	57830 A	Yielding Section, right-----	1
13	57830 B	Yielding Section, left-----	1
14	57826 E	Differential Feed Dog, marked "PT", for Styles 57800 E and N--	1
15	57705 A	Main Feed Dog, marked "ER", for Styles 57800 E,N,P,U and V----	1
16	23195	Cloth Guide, for Style 57800 N-----	1
17	27-435 Blk.	Washer-----	1
18	73 A	Screw-----	1
19	57820 A-16	Presser Foot, marked "BS", for Style 57800 N-----	1
20	605	Screw-----	1
21	79633	Spring-----	1
22	91	Screw-----	1
23	G65-134	Presser Foot Shank-----	1
24	57830 C-16	Presser Foot Bottom-----	1
25	22716 A	Screw-----	1
26	G52897 A-16	Stitch Tongue, marked "WH"-----	1
27	57830 A	Yielding Section, right-----	1
28	57830 B	Yielding Section, left-----	1
29	52826 H	Differential Feed Dog, marked "EE", for Style 57800 X-----	1
30	52805 X-16	Main Feed Dog, marked "PU", for Style 57800 X-----	1
31	52824 X-16	Throat Plate, for Style 57800 X-----	1
32	52820 X-16	Presser Foot, for Style 57800 X-----	1
33	91	Screw-----	1
34	52830 X-16	Presser Foot Bottom-----	1
35	51295 A	Isolator-----	1
36	51295 B	Isolator-----	3
37	21207 B	Screwdriver, 1/8 inch (3.18 mm) diameter blade), length overall 4 3/16 inches (106.36 mm)-----	1
38	660-240	Thread Tweezers-----	1
39	21388	Wrench, single end, 3/8 inch (9.53 mm) opening)-----	1
40	421 D-34	Treadle Chain, 32 3/64 inches (813.99 mm) long-----	1
41	21169 E	Binding Holder Disc, for Styles 57800 P, U, V and W-	1
42	161	Binding Holder Stop Collar, for Styles 57800 P, U, V and W-----	1
43	88	Screw-----	1
44	21169 F	Binding Holder Base, for Styles 57800 P, U, V and W-	1
45	660-264	"S" Hook -----	2
46	21388 W	Wrench, double end, curved, 9/32 inch (7.14 mm) opening-----	1
47	23279 D	Folder Threader, for Styles 57800 U and W-----	1
48	39552 U-4	Shim, for adjusting cast-off plate support-----	2
-	28604 R	Can of Oil, 16 fluid ounces, Spec. 175 (not shown)--	1
-	21201	Screwdriver, 9/64 inch (3.57 mm) diameter blade length overall 7 11/16 inches (195.26 mm), for Style 57800 U (not shown)-----	1
660-457		Dust Cover (not shown)-----	1



TAPE CLIPPER ASSEMBLY

<u>Ref.</u> <u>No.</u>	<u>Part</u> <u>No.</u>	<u>Description</u>	<u>Amt.</u> <u>Req.</u>
*1	29486 A	Tape Clipper Assembly-----	1
2	52875 F	Shaft-----	1
3	93	Screw-----	2
4	52875 G	Spring-----	1
5	52875 E	Upper Knife Holder-----	1
6	95	Screw-----	2
7	52875 A	Operating Lever-----	1
8	95	Screw-----	1
• 9	52875 D	Upper Knife-----	1
• 10	22528	Screw, for upper knife-----	2
11	22596	Screw, for lower knife-----	2
12	22852	Screw-----	1
13	12538	Nut-----	1
14	52875 B	Shaft-----	1
15	52875 K	Operating Wire-----	1
16	51283 G	Spring-----	1
• 17	136	Clipper Mounting Screw-----	2
18	15447 A	Adjusting Screw-----	1
19	22829	Screw-----	2
20	604	Screw, for cloth guide plate-----	2
21	52875 C	Lower Knife-----	1
22	52875 J	Cloth Guide Plate-----	1
23	52875 H	Knife Guard-----	1
24	52875	Frame-----	1
25	57802 A	Cloth Plate Slide Cover, for Styles 57800 P, U, V and W-----	1
26	57801 A	Cloth Plate, for Styles 57800 U and W-----	1

* Available as an extra send and charge item.



THREAD STAND PARTS

Ref. No.	Part No.	Description	Amt. Req.
1	21101 H-6	Thread Stand Assembly, for Styles 57800 E, M, N, W and X-----	1
2	21114 D-6	Spool Seat Support-----	1
3	22651 CD-5	Screw-----	2
4	21114 H-6	Eyelet Support-----	1
5	22651 CD-4	Screw-----	1
6	21114 S-6	Lead Eyelet-----	1
7	21104 B-24	Thread Stand Rod-----	1
8	21104 H	Nut-----	1
9	652-16	Washer-----	1
10	21114 U	Lead Eyelet Ball Split Socket-----	2
11	21114 T	Lead Eyelet Socket Ball-----	1
12	22651 CD-4	Screw-----	1
13	22810	Screw-----	1
14	21114 A	Thread Stand Base-----	1
15	22651 CD-4	Screw-----	1
16	21104 V	Spool Support Pad-----	4 or 6
17	21114 W	Spool Pin-----	4 or 6
18	258 A	Nut-----	8 or 12
19	21114	Spool Seat Disc-----	4 or 6
20	652-16	Washer-----	4 or 6
21	21101 H-4	Thread Stand Assembly for Styles 57800 P, U and V-----	1
22	21114 A	Thread Stand Base-----	1
23	22651 CD-4	Screw-----	1
24	22810	Screw-----	1
25	21114 T	Lead Eyelet Socket Ball-----	1
26	22651 CD-4	Screw-----	1
27	21114 U	Lead Eyelet Ball Split Socket-----	2
28	652-16	Washer-----	1
29	21104 H	Nut-----	1
30	21114 S-4	Lead Eyelet-----	1
31	21114 D-4	Spool Seat Support-----	1
32	22651 CD-5	Screw-----	2
33	21104 B-24	Thread Stand Rod-----	1
34	21114 H-4	Eyelet Support-----	1
35	22651 CD-4	Screw-----	1

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*28 B.....	27	11534.....	45	22557 G.....	37	22894 AB.....	27
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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
CORPORATION**



Union Special Wants to Cut Sewing Machine Maintenance Costs

Union Special is offering two practical systems to help pinpoint and reduce your sewing machine maintenance costs: a record keeping system to help spot machines requiring abnormally high maintenance, and a parts inventory system to speed routine repairs.

Machine Maintenance Records

Repair-prone machines or inexperienced competent operators can eat up your maintenance dollars in short order. To help spot these problems, Union Special suggests two variations of a simple maintenance record-keeping system using cards provided by Union Special.

The first system utilizes a "Machine Maintenance Record" card (Form 237) for each sewing machine in a plant. When a repair is required, the card is pulled from the file and the repair date, parts used, and their cost are entered in the spaces provided and the card is refilled.

[illegible]

The second system is normally used when more detailed information on repair costs is desired. Two record cards are used: a "Repair Request Card" (Form 234), and a "Machine Repair Record" (Form 233). When a machine requires service, the forelady or foreman fills out the top of a "Repair Request Card" and gives it to a mechanic. He fills in the time the repair work is started, the parts used and their cost,

and the completion time. This data is then transferred to the permanent "Machine Repair Record" kept in the office.

Whichever system is used, management now has an invaluable tool to reduce needless maintenance costs.

Repair Part Inventories

While record keeping tells management which machines require abnormally high maintenance, it does little to help reduce the downtime caused by routine repairs. To alleviate this situation, Union Special recommends that manufacturers establish a formal parts inventory system for each type of sewing machine they operate.

Excessive machine downtime and wasted hours by mechanics can be eliminated with an orderly in-plant inventory of the most commonly needed parts. There is no longer a need to cannibalize other machines for spare parts. Long waits for deliveries are avoided and machine downtime is kept to a minimum. The cost of a parts inventory is small when the overall savings are considered.

MACHINE REPAIR RECORD CARD						REV. 5-1968	
MAKER'S NAME				MAKER'S CATALOG		REPAIR REQUEST CARD	
MAKE _____ DISCOUNT SYSTEM _____ ADDRESS & PHONE _____ MAKE, SERIAL AND _____ OPERATOR'S PIN _____							
DATE	MILES & HRS.	LABOR COST	PARTS COST	TOTAL COST	REPAIR NOTES		

FORM 233—

Machine Repair Record card

PARTS USED		
PIN	PART NUMBER	QTY

FORM 234—

Repair Request Card

TIME STARTED _____

TIME COMPLETED _____

MECHANIC'S PIN _____

PIN _____

PRINTED AT THE NATIONAL CO. PLAZA NO. 120

For free sample copies of the machine record cards and spare part inventory lists for a variety of the most popular machines, contact your local Union Special Representative or write direct to Union Special.



Style 57800 P-8

Suggested Minimum Spare Parts List*

Part Number	Description	Minimum Quantity Per 5 Machines	Part Number	Description	Minimum Quantity Per 5 Machines
52820 H-8	Presser Foot	1	57725 B	Looper Needle Guard	1
91	Presser Foot Clamp Screw	2	52825 F	Rear Needle Guard	1
52805 F-8	Main Feed Dog	1	57845 A	Spreader	1
22593	Screw for Main Feed Dog	1	57844 A	Spreader Thread Guide	1
5026 A	Differential Feed Dog	1	22542	Screw for Spreader Thread Guide	2
90	Screw for Differential Feed Dog	1	57804	Cast-off Plate	2
52824 F-8	Throat Plate	1	28	Screw for Cast-off Plate	2
87	Screw for Throat Plate	4	57840	Looper Connecting Rod	2
121 GBS	Needles (Specify Size)	400	21225-7/32	Looper Gauge	1
52708 B	Loopers	1	29484	Screw Assortment	1
73	Looper Set Screw	1			

*The parts and quantities listed above are intended to assist you in setting up the initial inventory of spare parts. An efficient inventory can only be established according to actual usage. The nature of the sewing operation will determine actual usage.



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