FINEST QUALITY

Union Special®

LEWIS® • COLUMBIA®

INDUSTRIAL SEWING MACHINES

STYLES

56300AU

56400C

56600A

STYLE 56300AU

ADVANCED HIGH SPEED FIFTY THOUSAND SERIES DIFFERENTIAL FEED FLAT BED MACHINES

CATALOG No. T129AU

UNION SPECIAL CORPORATION

CHICAGO

Catalog No. T129 AU

(SUPPLEMENT TO CATALOG NO. 129 M)

INSTRUCTIONS

FOR

ADJUSTING AND OPERATING

LIST OF PARTS

FOR

Style

56300 AU 56400 C 56600 A

First Edition

UNION SPECIAL CORPORATION
INDUSTRIAL SEWING MACHINES
CHICAGO

Printed in U. S. A.

April, 1978

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 56300 AU". 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 56300 AUZ".

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 56300".

APPLICATION OF CATALOG

This catalog is a supplement to Catalog No. 129 M, Fourth Edition, and should be used in conjunction therewith. Only those parts which are used on Styles 56300 AU, 56400 C and 56600 A, but not used on Styles 56300 W or 56400 W are illustrated and listed at the back of this book. For clarity, certain 56300 W and 56400 W parts are shown in phantom to assist in locating the 56300 AU, 56400 C and 56600 A parts. Opposite the illustration pages, parts are identified by a reference number, part number, description and amount required. Any part that is a component of another part is indicated by indenting its description under the description of the assembly or base part. Always use the part number in the second column, never use the reference number in the first column when ordering repair parts.

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

STYLES OF MACHINES IN CLASS 56300

Advanced High Speed Single Needle Flat Bed Machines, Medium Throw, Treadle Controlled Intermittent Differential Feed, 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, Lateral Looper Travel, 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 (209.6 mm).

56300 AU Medium throw machine, for seaming side and inseams on knit trousers and similar operations on medium to heavy weight materials. Seam Specification 401-SSa-1. Type 128 GBS needle. Maximum recommended speed 6000 R.P.M.

STYLES OF MACHINES IN CLASS 56400

Advanced High Speed Two Needle Flat Bed Machines, Left Needle in Front, Independent Row, Low Throw, Treadle Controlled Intermittent Differential Feed, 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, Lateral Looper Travel, Large Handwheel and Improved Belt Guard, Prepared for use with Knee Press for Foot Lifter, Equipped with Disc Type Thread Tensions, Work Space to Right of Needle Bar 8 1/4 Inches (209.6 mm).

STYLES OF MACHINES IN CLASS 56400 (Continued)

56400 C Low throw machine, for setting puff sleeves in house dresses, waists, pajamas, etc., made from light weight woven fabrics. Seam Specification 401-LSc-2 modified. Type 108 GS needle. Standard gauges nos. 12, 16. Maximum recommended speed 6000 R.P.M.

STYLES OF MACHINES IN CLASS 56600

Advanced High Speed Two Needle Flat Bed Machines, Right Needle in Front, Independent Row, Low Throw, Treadle Controlled Intermittent Differential Feed, 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, Lateral Looper Travel, Large Handwheel and Improved Belt Guard, Prepared for use with Knee Press for Foot Lifter, Equipped with Disc Type Thread Tensions, Work Space to Right of Needle Bar 8 1/4 Inches (209.6mm).

56600 A Low throw machine, for gathering and attaching ruffles to body of garments made from light weight woven fabrics and similar operations. Seam Specification 401-LSc-2 modified. Type 108 GS needle. Standard gauges nos. 8, 12, 16. Maximum recommended speed 6000 R.P.M.

NEEDLES

Each UNION SPECIAL needle has both a type number and a 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 the largest diameter of blade, measured in thousandths of an inch, midway between the shank and the eye. Collectively, the type number and the size number represent the complete symbol, which is given on the label of all needles packaged and sold by Union Special.

Standard recommended needle for Style 56300 AU is Type 128 GBS. It has a round shank, round point, short, double groove, struck groove, ball eye, spotted, ball point, chromium plated and is available in sizes 032, 90/036, 100/040, 110/044, 125/049, 140/054, 060.

Standard recommended needle for Styles 56400 C and 56600 A is Type 108 GS. It has a round shank, round point, extra short, double groove, struck groove, ball eye, spotted, chromium plated and is available in sizes 036, 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 128 GBS, Size 032".

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

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 the Union Special trademark, U S Emblem. Each trademark is your guarantee of the highest quality in materials and workmanship.

IDENTIFYING PARTS

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

Part numbers represent the same part, regardless of catalog in which they appear.

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

TERMS

Prices are strictly 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 the postage and insurance.

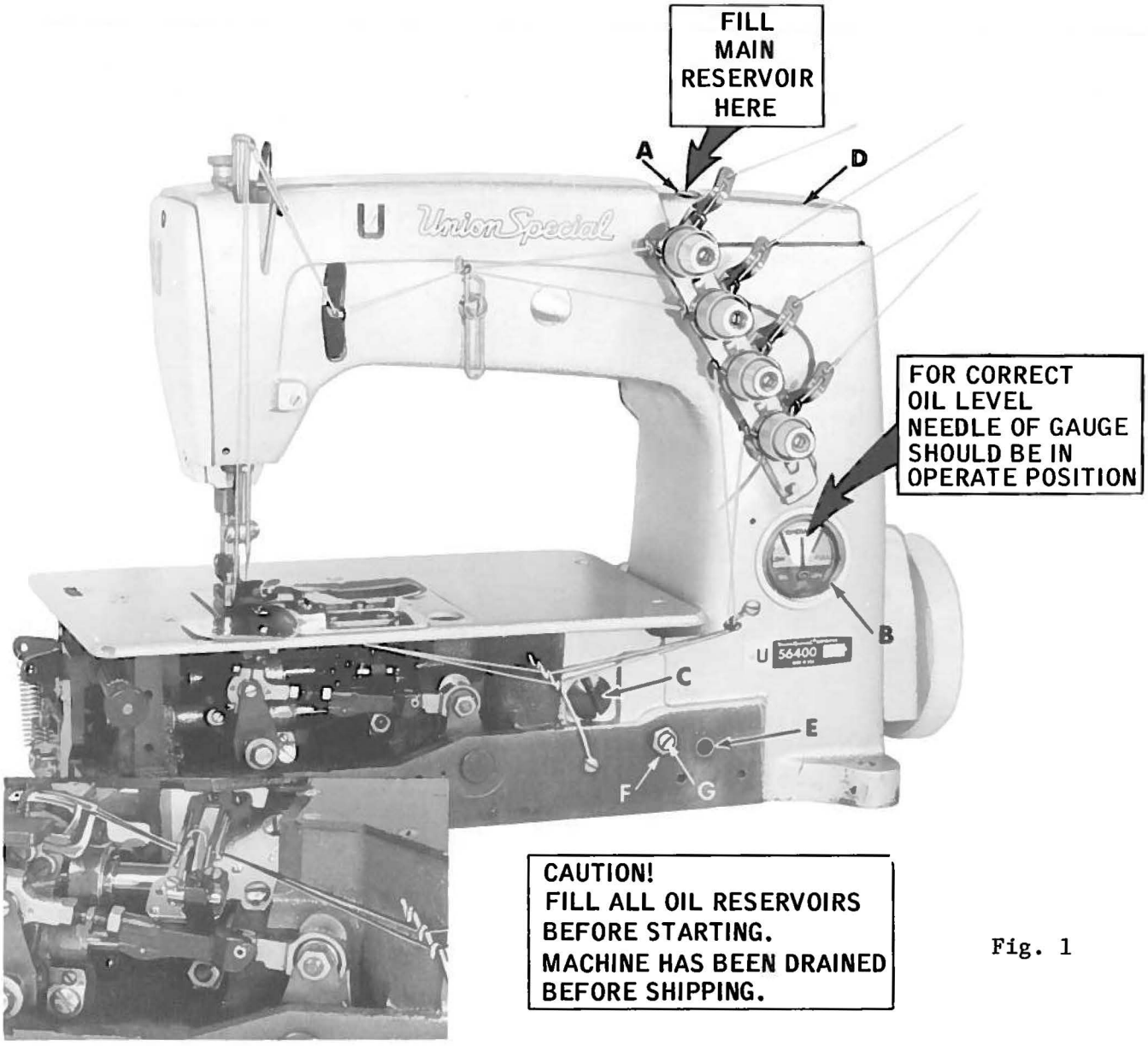


Fig. 1

THREADING AND OILING DIAGRAM FOR STYLES 56300 AU, 56400 C and 56600 A

Thread machine as indicated above. The looper threading has been enlarged for clarity.

Note: Style 56300 AU threads exactly the same as the other machines except that it has only one needle and one looper thread.

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 (A, Fig. 1) in top cover and add oil until needle of oil gauge (B) 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 (C, Fig. 1) in the main frame to the left of the oil gauge.

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 (B, 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 (A, Fig. 1) in upper crank chamber cover (D) 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 machines 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. 1) located below the cloth plate at front of the machine, or by removing the lower crank chamber cover, located at the back of 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. 1) and tip machine forward to drain oil from the reservoir.
3. Make sure all oil is drained from main reservoir.
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 (E, Fig. 1).
6. Loosen lock nut (F) on calibrating screw (G), 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 (F) 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".

NEEDLE LEVER BEARING OILER

Remove the head cover and upper crank chamber cover (D, Fig. 1). Check position of needle lever bearing oiler (A, Fig. 2) located inside the arm casting, below the upper crank chamber cover, which lubricates the needle lever stud (B). Make sure it is tilted downwardly and that its delivery end (C) contacts the inside wall of the bed casting at the back, just above the notch of the needle lever shaft stop collar. (Do not allow the oiler to rest on the needle lever). Allow 1/64 inch (.40mm) clearance as in Figure 2.

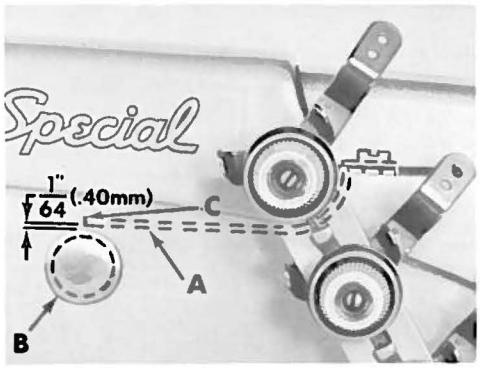


Fig. 2

ALIGNING THE NEEDLE BAR
(TWO NEEDLE MACHINES)

Align the needle bar (A, Fig. 3) with the proper test plate, using test pins No. PI40 A. See chart below. If test plate and test pins are not available, insert a new set of needles (Type and Size as required) and align the needle bar so that needles correspond with the vertical faces of the needle guard. To align needle bar, loosen needle bar clamp screw (B, Fig. 3) and turn bar as required. Tighten clamp screw.

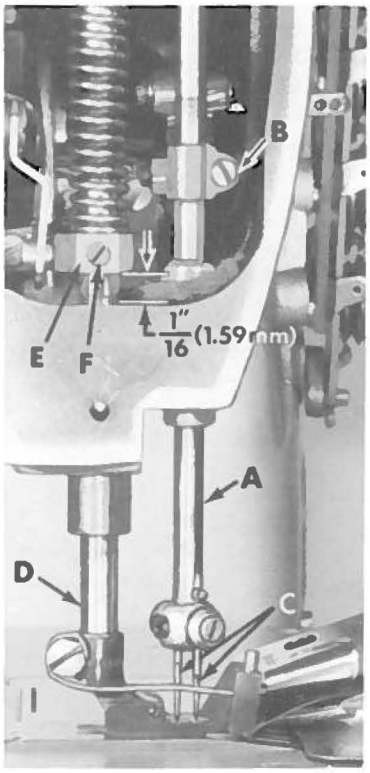


Fig. 3

Machine Styles	Test Plate No.	Test Pin No.
56400 C-12	698 AP-12	PI40 A
56400 C-16	698 AP-16	PI40 A
56600 A-8	698 H-2	PI40 A
56600 A-12	698 H-4	PI40 A
56600 A-16	698 H-4½	PI40 A

SYNCHRONIZING LOOPER AND NEEDLE MOTIONS

Insert the looper in the looper rocker and turn handwheel in operating direction until the point of the looper (A, Fig. 4), moving to the left is even with the left side of the needle (B). Note the height of the eye of the needle with respect to the looper point, then turn handwheel in the reverse direction until the looper point again moves to the left, and is even with the left side of the needle. If the motions synchronize, the height of the eye of the needle with respect to the looper point will be the same. A variation of .005 inch (.127mm) is allowable. If the distance from the eye of the needle to the point of the looper is greatest when the pulley is turned in the operating direction move the looper drive shaft synchronizing stud (C) to the rear. Moving it in the opposite direction acts the reverse.

Moving of the looper drive lever shaft synchronizing stud is accomplished as follows: Loosen the clamp screw (D) of the looper drive lever. To move stud to rear (away from operator), a light tap with a small hammer, directly on the stud is all that is required. To move stud forward (toward operator), remove the cloth plate, throat plate support, oil reservoir top cover and oil reservoir back cover, then, a light tap on the looper drive lever rocker shaft, toward the operator, is all that is required. Note Looper drive lever (G, Fig. 4) has and oil seal collar and an "O" ring between it and the bed casting. All end play must be removed from the looper drive lever rocker shaft by compressing the "O" ring until drive lever (G) and the oil seal collar make metal to metal contact with the bed casting. Tighten screw (D).

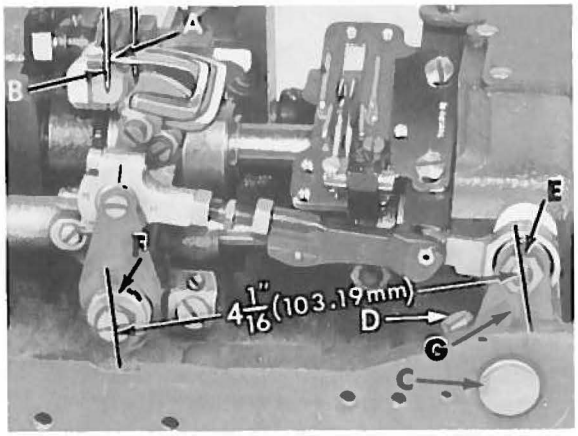


Fig. 4

With the looper at the extreme right end of its travel, check the location of the center line of the right looper connecting rod bearing, using gauge No. 21227 CX. Remove nut (E, Fig. 4) and place hole in gauge over threaded stud. The left end of the gauge should locate against the right side of the looper rocker cone (F). If adjustment is necessary, loosen the clamp screw (D) and reposition the looper drive lever (G) as required. Tighten clamp screw. If gauge is not available setting can be checked with a scale. The distance between the center line of the looper rocker cone and the center line of the looper lever stud should be 4 1/16 inch (103.19mm) (Fig. 4).

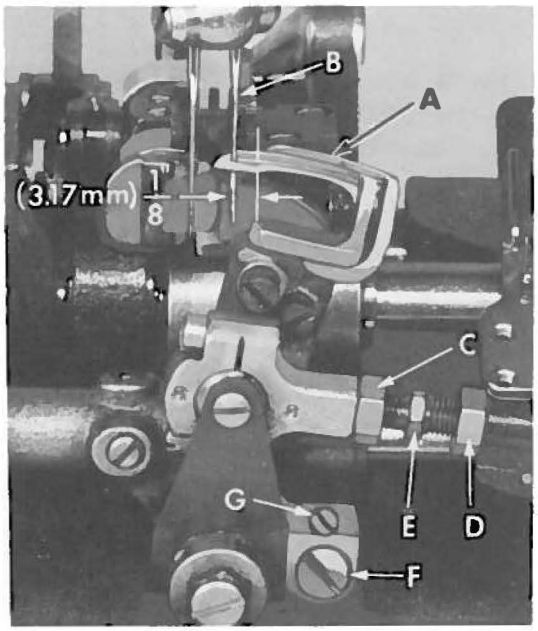


Fig. 5

SETTING THE LOOPER

Insert a new needle, type and size as specified. If the looper gauge is 1/8 inch (3.17mm), for example, set the looper (A, Fig. 5) so the distance from the center of the needle (B) to the point of the looper is 1/8 inch (3.17mm), when the looper is at its farthest position to the right. Looper gauge No. 21225-1/8 can be used advantageously in making this adjustment. On two needle machines set the back looper to the right needle when setting the looper gauge. Refer to chart for needle Type, looper gauge setting and looper gauge number. If adjustment is required, loosen nut (C, Fig. 5) (it has a left hand thread and nut (D) on connecting rod (E), turn the connecting rod forward or backward to obtain the 1/8 inch (3.17mm) dimension. Retighten both nuts, first nut (D), then nut (C). Make sure the left ball joint is in vertical position and does not bind after adjustment.

Machine Style	Needle Type	Looper Gauge Setting	Looper Gauge Number
56300 AU	128 GBS	5/32 Inch (3.97mm)	21225-5/32
56400 C	108 GS	1/8 Inch (3.17mm)	21225-1/8
56600 A	108 GS	1/8 Inch (3.17mm)	21225-1/8

SETTING THE LOOPER (Continued)

The looper is set correctly in line-of-feed, if, as it moves to the left, behine the needle, its point (A, Fig. 6) brushes, but does not pick at the rear of the needle (B).

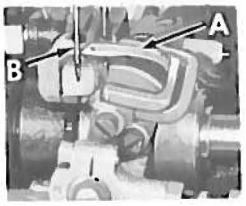


Fig. 6

If adjustment is necessary, loosen lock screw (F, Fig. 5) 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 when setting is obtained and recheck the adjustment.

On the two needle machines, now insert the other needles and loopers. The same looper - needle relation should exist without any adjustment, other than applying pressure on the looper at front or back of blade, while clamping looper in looper rocker, so as to get the proper in-line-of-feed setting.

SETTING HEIGHT OF NEEDLE BAR

The height of the needles (C, Fig. 3) are correct when the top of its eye is 3/64 inch (1.19mm) 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) 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 3/64 inch (1.19mm) 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.

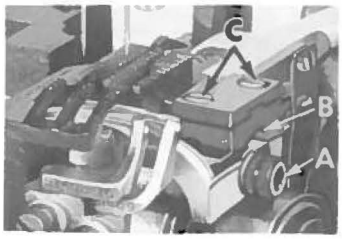


Fig. 7

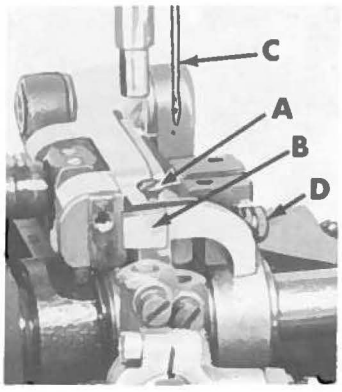


Fig. 8

To raise or lower the main feed dog, loosen allen screw (A, Fig. 7) and adjust screw (A, Fig. 8) up or down under the feed dog holder (B, Fig. 7) 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.

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. 7) and position feed dog as required. Retighten screws (C). To adjust main feed dog in-line-of-feed, loosen nut (A, Fig. 9) and move feed bar as required. Retighten nut.

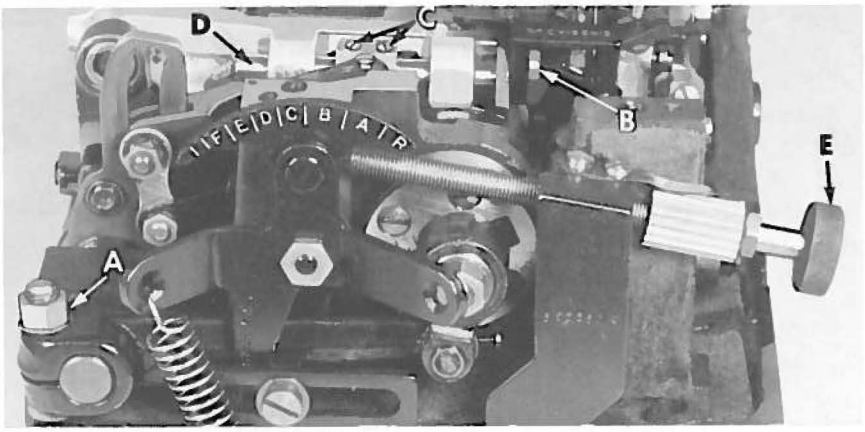


Fig. 9

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. 9) and set the feed dog at the required height. Retighten screw.

Loosen set screws (C, Fig. 9) 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 paralled 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 TRAVEL

These machines have an intermittent differential feed which is activated only when the treadle is used. The differential feed ratio is set by turning thumbscrew (E, Fig. 9). Turning it counterclockwise increases the amount of differential feed and turning it clockwise decreases the amount of differential feed.

These machines have a stretching ratio of 3/4 to 1 up to a gathering ratio of 2½ 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 travel or the throat plate at the forward end of its travel.

CHANGING STITCH LENGTH

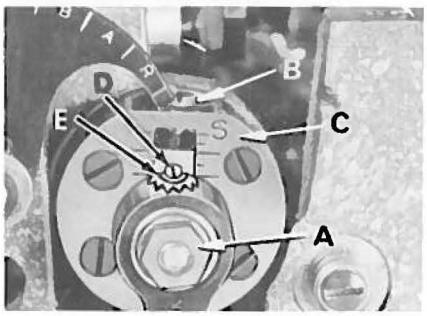


Fig. 10

Set the stitch to required length. This is accomplished by loosening the locknut (A, Fig. 10) ½ turn (it has a left hand thread) on the end of the stitch regulating stud and turning the stitch adjusting screw (B) located under the left end of the cloth plate, in the head of the main shaft (C), which is marked with "L" and "S". Turning the screw clockwise shortens the stitch (moves stitch regulating stud toward the "S") and turning it in a counterclockwise direction lengthens the stitch (moves stitch regulating stud toward the"L"). Retighten the locknut securely. To prevent destructive damage to the feed drive 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.

SETTING THE REAR NEEDLE GUARD

Set the rear needle guard (B, Fig. 8) horizontally so that it does not quite contact the rear of the right needle (C) when at its most forward point of travel. A clearance of .005 inch (.127mm) is permissible. It should be set as low as possible, yet have its vertical face approach within about 3/64 inch (1.19mm) of the needle, until the point of the looper moving to the left, is even with the needle. To move needle guard merely loosen screw (D), move needle guard as required, and retighten screw.

NOTE: Any change in stitch length will require a change in rear needle guard setting.

THREADING

Draw looper and needle threads into the machine and start operating on a piece of fabric. Refer to threading diagram (Fig. 1) for manner of threading this machine.

SETTING THE LOOPER THREAD CAST-OFF WIRE

The looper thread cast-off wire (A, Fig. 11) located on the cast-off support (B) controls the amount of slack thread in the system and can be moved to any position. It should be set laterally so that it is midway between the two discs of the take-up (C) and the tip parallel with the discs. It is usually set toward the take-up to almost the limit of its slot so that it barely clears the highest point of the take-up. The height and the lateral adjustment of the retainer affects the control of the looper thread as the looper moves to the left. Ordinarily it will be set in approximately a horizontal position. More looper thread is given to the stitch when the retainer is raised and set toward the take-up. However, if the retainer is raised too high, the looper thread triangle may be wiped under the blade of the looper, causing triangle skips or pulled down stitches. This can be checked by observing the action of the looper thread as the looper moves to the left.

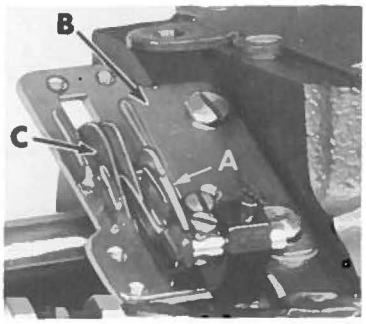


Fig. 11

THREAD TENSIONS

The tension on the needle thread should be only sufficient to produce uniform stitches on the under surface of the fabric. Tension on the looper thread should be just sufficient to steady the thread.

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 (3.17mm) 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 screw (A, Fig. 12), 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.

SETTING HEIGHT OF PRESSER BAR

The height of the presser bar (D, Fig. 3) is set correctly if it is possible to remove the presser foot when the foot lifter lever (B, Fig. 12) is fully depressed. Also there should be approximately 1/16 inch (1.59mm) clearance between lower surface of the presser bar connection and guide (E, Fig. 3) 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.

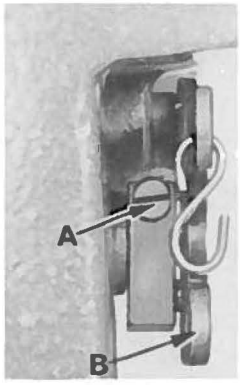


Fig. 12

If adjustment is needed, turn handwheel in operating direction until the needle bar is in the low position. Loosen screw (F, Fig. 3). 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 (1.59mm) setting and tighten 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.

PRESSER FOOT PRESSURE

Regulate the presser spring regulating screw (A, Fig. 13) 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.

SETTING NEEDLE THREAD TAKE-UP WIRE AND FRAME EYELET

Set the needle thread take-up wire (B, Fig. 13), located adjacent to the needle bar thread eyelet (C), so that its upper surface is even with the top of the holes in the needle bar thread eyelet when the needle bar has completed its downward stroke. Lower this setting for a smaller needle thread loop, and raise it for a larger loop. Set the needle thread frame eyelet (D) so that the eyelet hole is 3/4 inch (19.05mm) above the attaching screw.

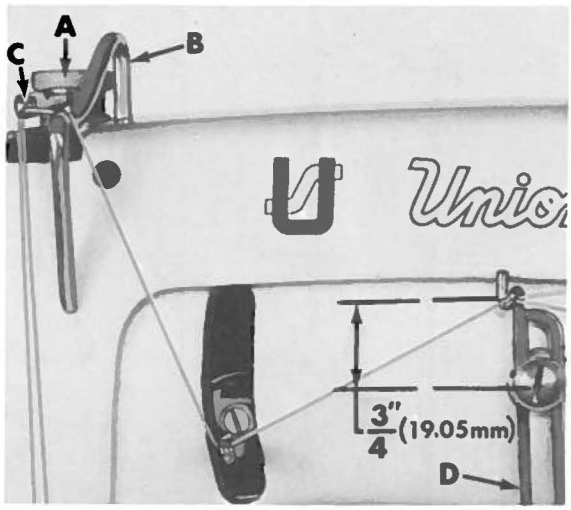
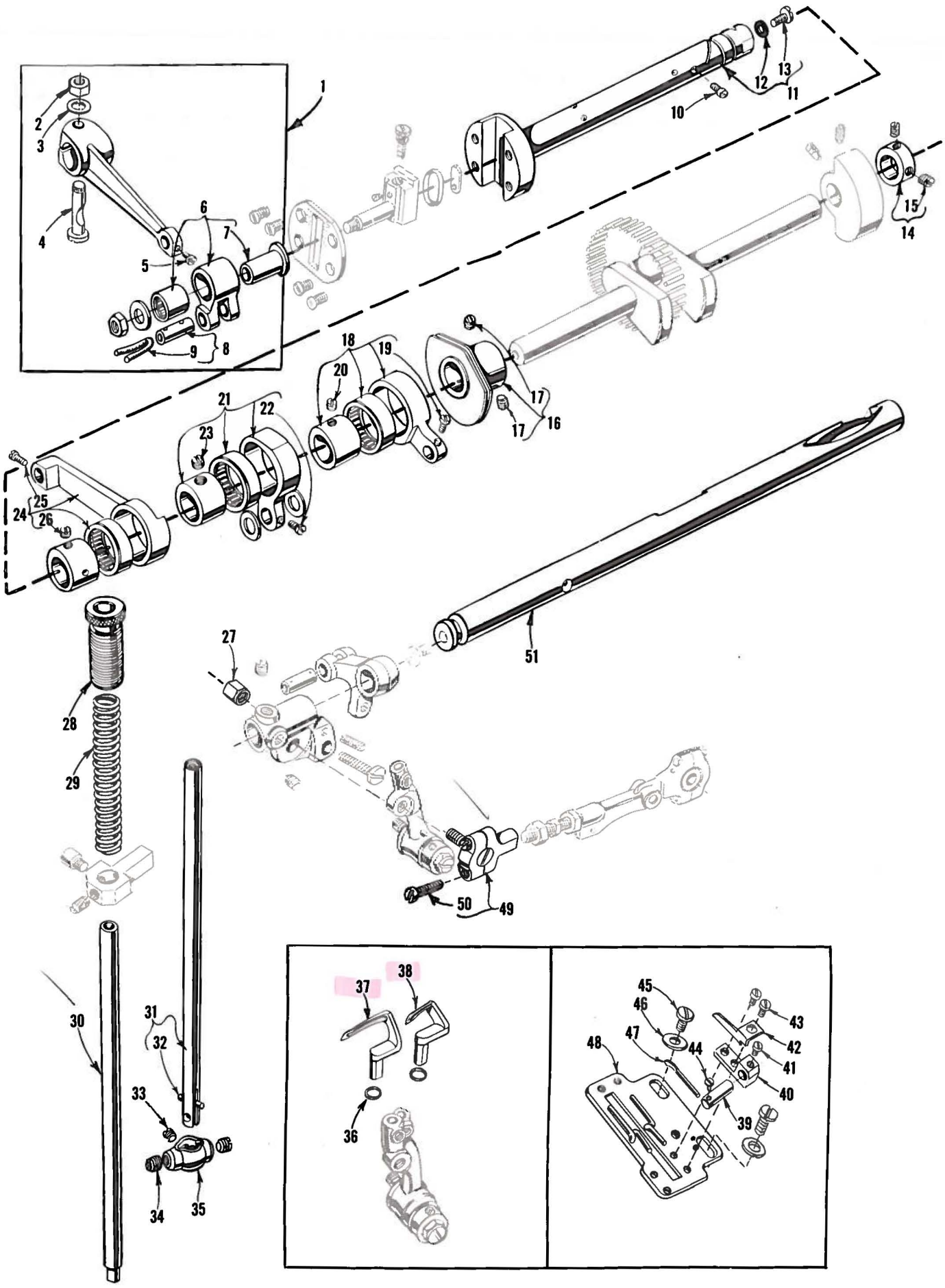


Fig. 13



The parts illustrated on pages 14, 16, 18, 20 and 22, and described on this page, page 17, 19, 21 and 23 represent the parts that are used on Styles 56300 AU, 56400 C and 56600 A, but not use on Styles 56300 W or 56400 W.

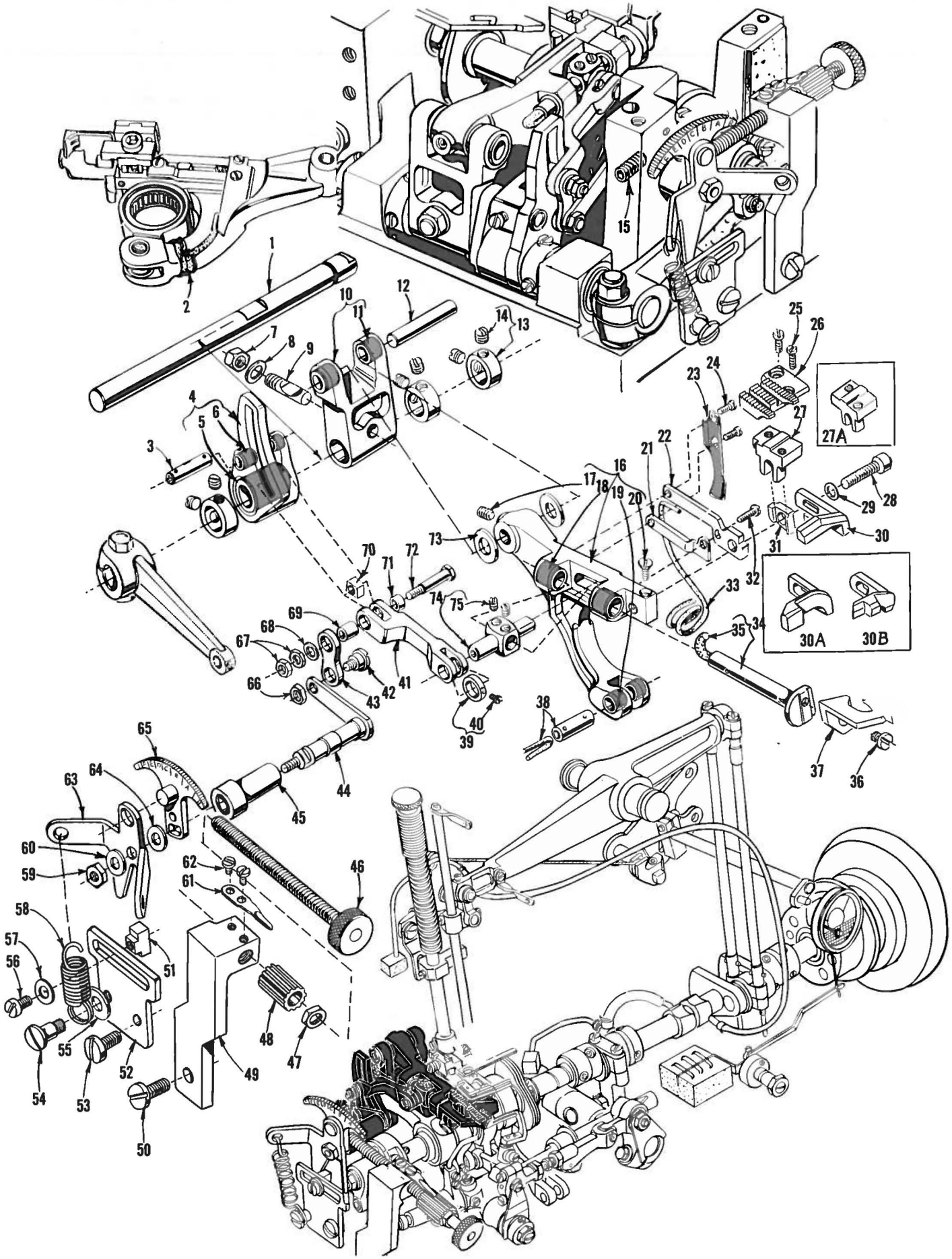
Unless otherwide specified in the description, the parts are used on all the machine styles covered in this catalog. The parts shown in phantom views and bearing no reference numbers are common to Styles 56300 AU, 56400 C and 56600 A.

Use Catalog No. 129 M Fourth Edition Style 56300 W for 56300 AU, and Style 56400 W for 56400 C and 56600 A, for all parts not illustrated or described in this catalog.

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

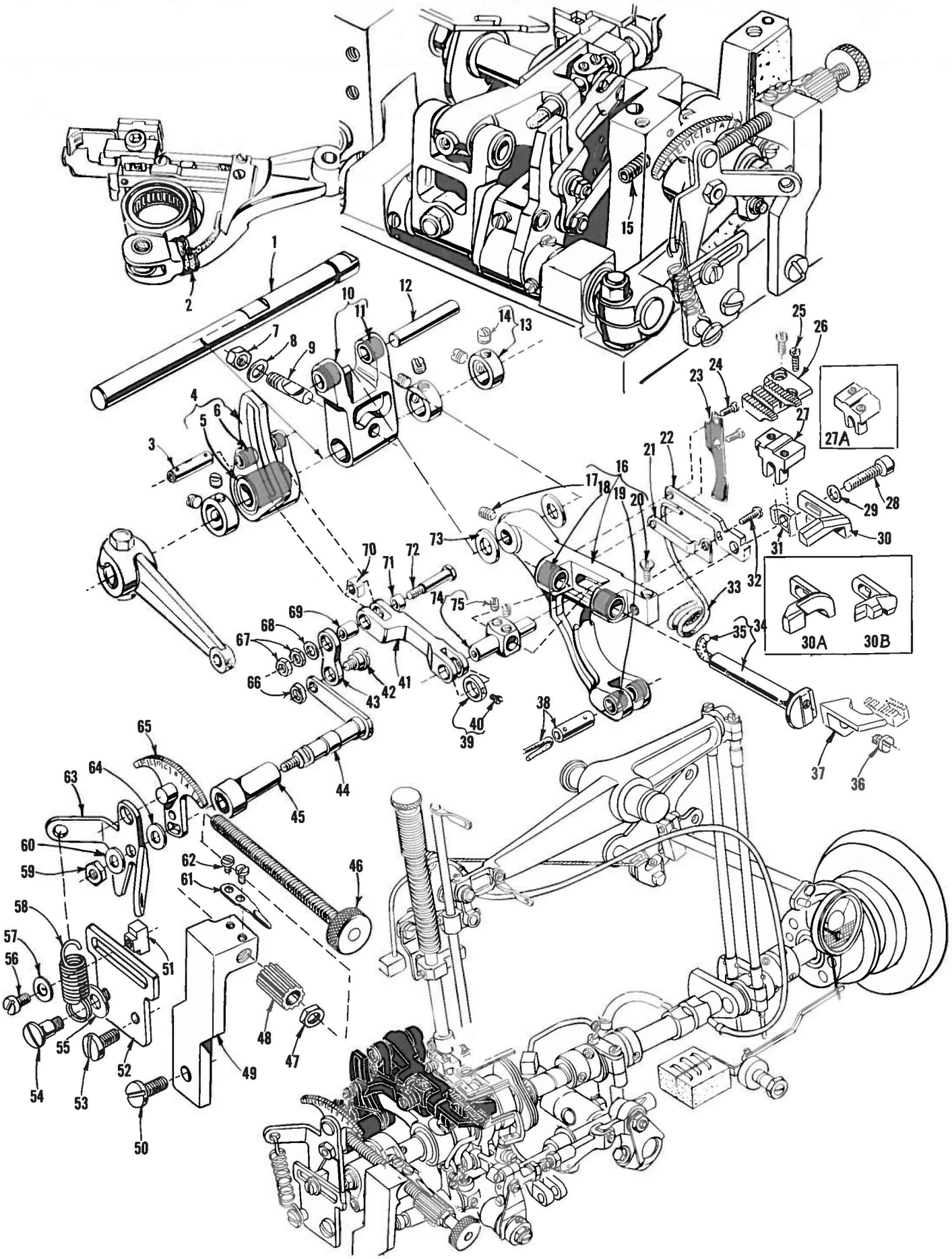
FEED CRANK, MAIN SHAFT, LOOPER ROCKER SHAFT, LOOPERS, FEED LIFT AND LOOPER AVOID ECCENTRICS, NEEDLE BARS AND CAST-OFF PLATE

Ref. No.	Part No.	Description	Amt. Req.
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	22801	Screw, for take-up	1
11	57822 A	Main Shaft	1
12	56322 B	Gasket	1
13	22891 B	Oil Flow Regulating Screw	1
14	57847	Thrust Collar	1
15	95	Screw	2
16	56323 A	Take-up	1
17	22580 D	Set Screw	2
18	29476 NM-062	Looper Avoid Eccentric Assembly, .062 inch (1.58 mm) throw	1
19	77	Screw	1
20	22894 AA	Screw	1
21	29476 NM-072	Feed Lift Eccentric Assembly, .072 inch (1.83 mm) throw	1
22	77	Screw	1
23	22894 AA	Screw	1
24	57836 E	Differential Feed Connecting Rod, .080 inch (2.03 mm) throw	1
25	22768 B	Screw	1
26	22894 AA	Screw	1
27	57846 B	Looper Rocker Cone Stud Nut	1
28	52889 A	Presser Spring Regulator	1
29	51256 C	Presser Spring	1
30	53688	Presser Bar	1
31	51617 B-8	Needle Bar, marked "DH-8", for No. 8 gauge, Style 56600 A	1
-	51617 B-12	Needle Bar, marked "DH-12", for No. 12 gauge, Style 56600 A	1
-	51617 B-16	Needle Bar, marked "DH-16", for No. 16 gauge, Style 56600 A	1
-	51417 C-12	Needle Bar, marked "CV-12", for No. 12 gauge, Style 56400 C	1
-	51417 C-16	Needle Bar, marked "CV-16", for No. 16 gauge, Style 56400 C	1
32	50 J-16	Stop Pin	1
33	89	Stop Screw	1
34	98	Set Screw, for needle	2
35	51418-16	Needle Holder, marked "D-16", for all gauges, Styles 56400 C and 56600 A	1
36	21210	Looper Collar, for Style 56600 A	2
37	51609 A	Looper, back, for all gauges, Style 56600 A	1
38	51608 A-8	Looper, front, for No. 8 gauge, Style 56600 A	1
-	51608 A-12	Looper, front, for No. 12 gauge, Style 56600 A	1
-	51608 A-16	Looper, front, for No. 16 gauge, Style 56600 A	1
39	51204 A	Looper Thread Retaining Finger Holder	1
40	51204 C	Cast-off and Retaining Finger Support Bracket	1
41	77	Screw	1
42	51204 B	Cast-off	1
43	J87 J	Screw	2
44	22798 A	Screw	1
45	22569 D	Screw	2
46	21657 E	Washer	2
47	51204	Looper Thread Retaining Finger	1
48	56357 B	Cast-off Plate Support	1
49	57841	Looper Connecting Rod Ball Joint, left	1
50	22729 C	Screw	2
51	57744	Looper Rocker Shaft	1
-	51270 B	Needle Thread Take-up Wire (not shown)	1
-	51292 F-2	Looper Thread Tension Spring, for Styles 56400 C and 56600 A (not shown)	2



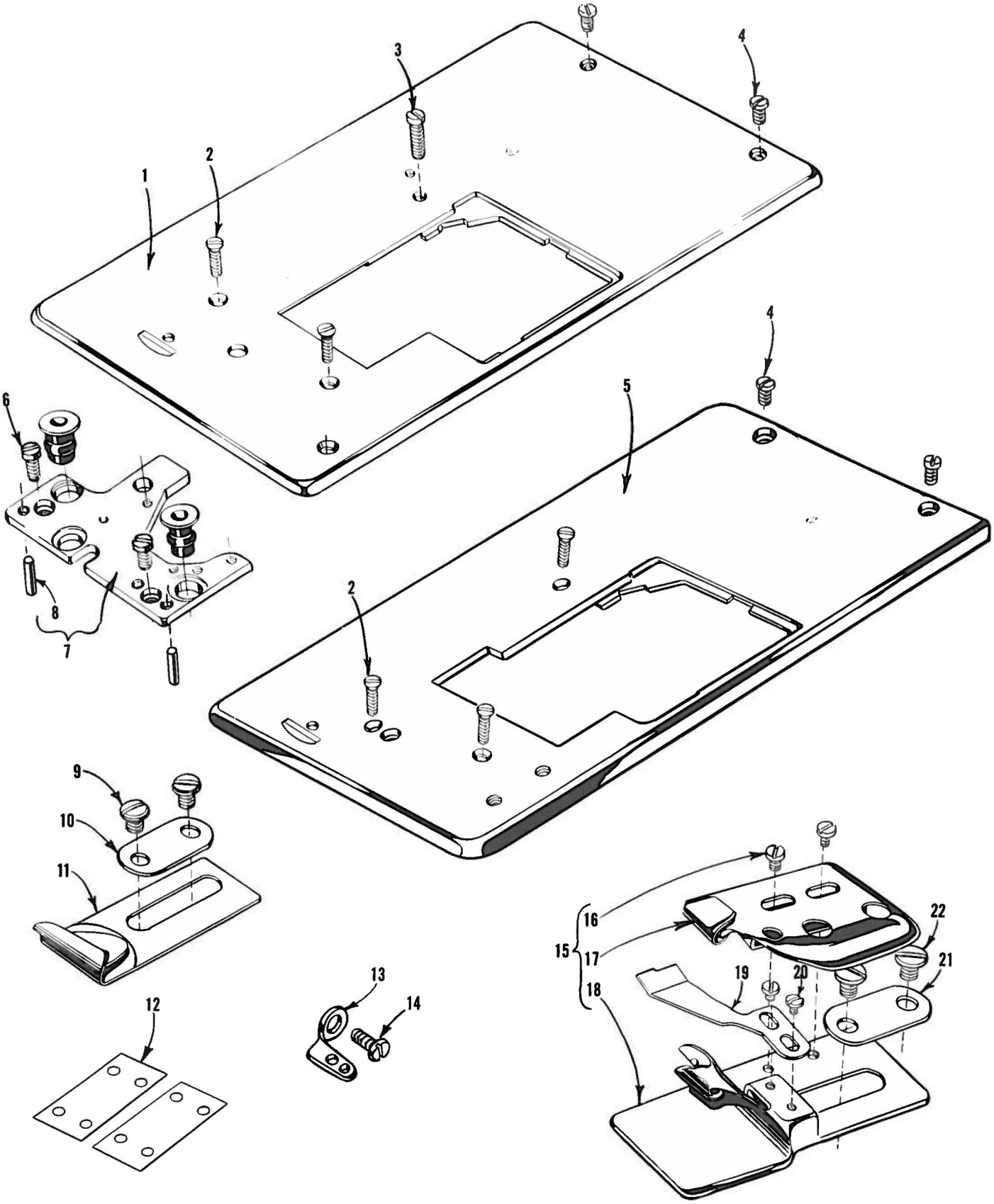
DIFFERENTIAL FEED MECHANISM

Ref. No.	Part No.	Description	Amt. Req.
1	57835	Main Feed Rocker Shaft, lower	1
2	CL-21	Oil Wick	1
3	57836 G	Differential Feed Drive Rocker Shaft	1
4	56336 J	Gather Differential Feed Rocker	1
5	57836 A	Bushing	1
6	56334 R	Bushing	2
7	55235 E	Nut	1
8	6042 A	Washer	1
9	57836 D	Locking Stud	1
10	57836 C	Main Feed Rocker	1
11	57836	Bushing	2
12	57834 B	Main Feed Rocker Shaft, upper	1
13	56335 D	Collar, for lower main feed rocker driving shaft	3
14	98	Screw	2
15	22894 E	Set Screw, for No. 57837 C	1
16	57834 E	Main Feed Bar	1
17	22651 CB-4	Screw	1
18	57834 D	Bushing	2
19	57834 G	Bushing	2
20	22637 P-24	Feed Dog Height Adjusting Screw	1
21	57837 D	Differential Feed Bar Guide Plate	1
22	57853	Feed Dog Holder Support	1
23	57834 C	Oil Wick Retainer	1
24	22593	Screw, for oil wick retainer	2
25	22593	Screw, for main feed dog	2
26		Main Feed Dog (See Page 23)	1
27	52953 A	Feed Dog Holder, for Style 56300 AU	1
27A	52853	Feed Dog Holder, for Styles 56400 C and 56600 A	1
28	22653 B-14	Screw	1
29	51235 G	Washer	1
30	51225 B	Rear Needle Guard, for Style 56300 AU	1
30A	51425 AC	Rear Needle Guard, marked "FT", for Style 56400 C	1
30B	51625	Rear Needle Guard, marked "FX", for Style 56600 A	1
31	52925 D	Needle Guard Holder	1
32	22635 E-24	Screw	1
33	CL-21	Oil Wick	1
34	57834 A	Differential Feed Bar	1
35	CL-21	Oil Wick	1
36	90	Screw, for differential feed	1
37		Differential Feed Dog (See Page 23)	1
38	51236 A	Link Pin	1
39	57837 F	Differential Driving Link Collar	1
40	22738 B	Screw	1
41 thru 75		See Following Page	



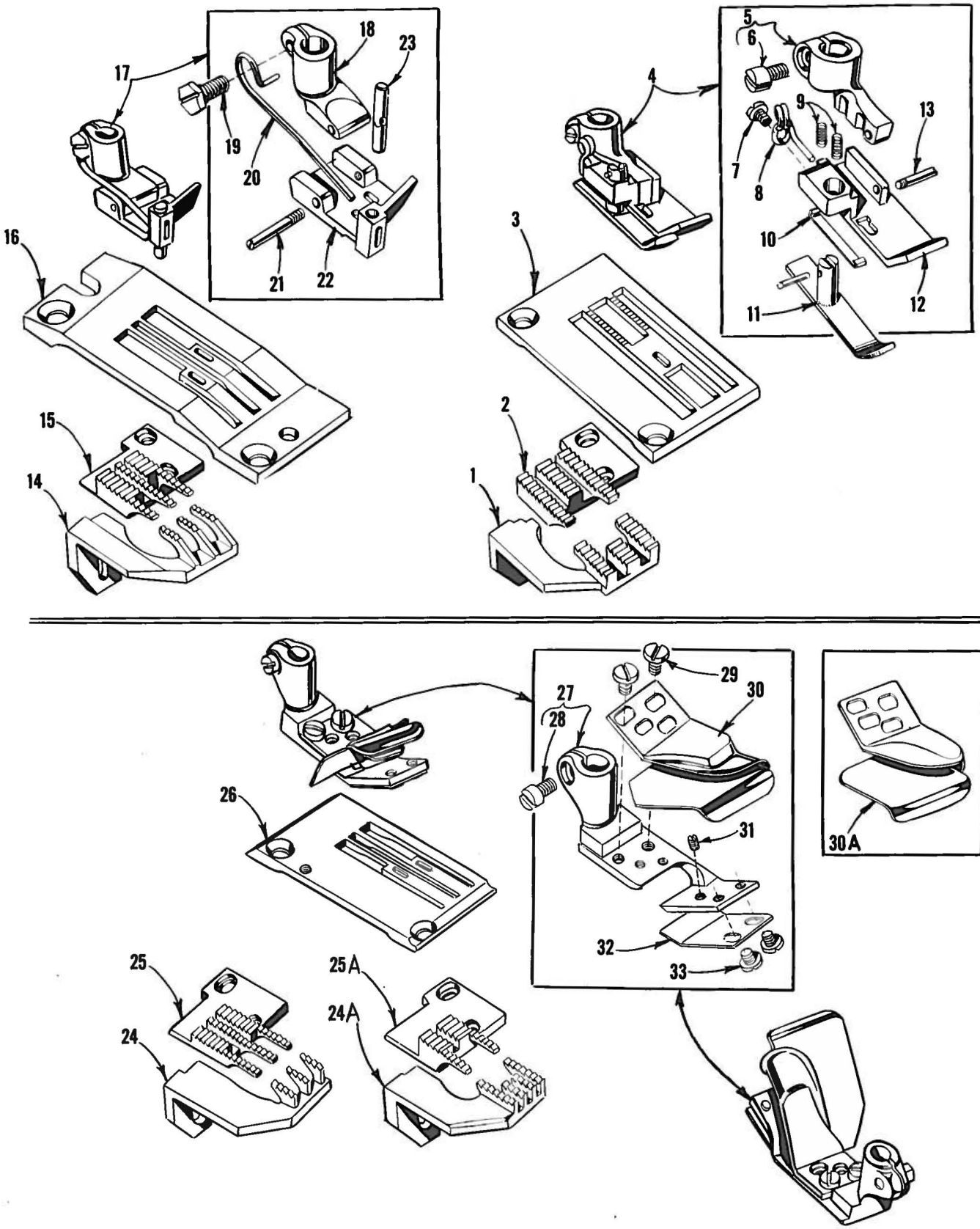
DIFFERENTIAL FEED MECHANISM

Ref. No.	Part No.	Description	Amt. Req.
1 thru 40		See Preceding Page	
41	57835 B	Intermittent Differential Feed Bar Driving Link	1
42	22758 E	Screw, for differential feed control lever link	1
43	57835 D	Differential Feed Control Lever Link	1
44	57835 C	Differential Feed Control Lever	1
45	57837 C	Differential Feed Control Lever Bushing	1
46	51235 P	Thumbscrew, for adjusting differential feed	1
47	258 A	Nut	1
48	51235 R	Ratchet Nut	1
49	56335 R	Bracket, for differentifal feed adjusting screw	1
50	9663	Screw	1
51	56335 N	Stop Block	1
52	59448	Differential Feed Stop Block Bracket	1
53	22548	Screw	1
54	35751 D	Screw	1
55	51216 N	Washer	1
56	93 A	Screw	1
57	69 H	Washer	1
58	51283 A	Differential Feed Return Spring	1
59	9937	Nut	1
60	20	Washer	1
61	51235 S	Ratchet Spring	1
62	28	Screw, for ratchet spring	2
63	56335 M	Differential Feed Control Lever	1
64	69 H	Washer	1
65	57835 EA	Differential Feed Control Indicator	1
66	12934 A	Nut	1
67	907	Nut	2
68	80265	Washer	1
69	57837	Differential Feed Link Sleeve, left	1
70	57836 F-40	Sliding Block, marked "N", .2540 inch (6.452 mm) wide	1
-	57836 F-45	Sliding Block, marked "P", .2545 inch (6.464 mm) wide	1
-	57836 F-50	Sliding Block, marked "R", .2550 inch (6.477 mm) wide	1
71	57837 A	Differential Feed Link Sleeve, right	1
72	22868 B	Differential Feed Regulating Screw	1
73	61341 J	Thrust Washer, for feed bar	2
74	57837 E	Driving Link Guide	1
75	22743	Screw	2



CLOTH PLATES, CLOTH PLATE COVER, THROAT PLATE SUPPORT, ATTACHMENTS AND STRIPPER BLADE

Ref. No.	Part No.	Description	Amt. Req.
1	57801	Cloth Plate, for Styles 56300 AU and 56600 A	1
2	22526 C	Screw, for cloth plate on Styles 56300 AU and 56600 A	2
-	22526 C	Screw, for cloth plate on Style 56400 C	3
3	22839 E	Screw, for cloth plate on Styles 56300 AU and 56600 A	1
4	22839 C	Screw, for cloth plate on all Styles	2
5	56401 A	Cloth Plate, for Style 56400 C	1
6	22839	Screw, for throat plate support on Styles 56300 AU and 56600 A	2
-	22839	Screw, for throat plate support on Style 56400 C	3
7	57880	Throat Plate Support, for Styles 56300 AU and 56600 A	1
-	56480	Throat Plate Support, for Style 56400 C (not shown)	1
8	51280 J	Dowel Pin	2
9	25 C	Screw, for lower attachment	2
10	23425 V	Washer Plate, for lower attachment	1
11	23253 F	Attachment, lower, for Nos. 12 and 16 gauges, Style 56600 A	1
-	23253 Z	Attachment, lower, for No. 8 gauge, Style 56600 A	1
12	39152 U-4	Shim, for setting cast-off plate	2
13	158 B	Looper Thread Eyelet	1
14	98 A	Screw, for looper thread eyelet	1
15	23233 A	Attachment, for Style 56400 C, all gauges	1
16	22513	Screw, for upper scroll	2
17	23233 C	Upper Scroll	1
18	23233 B	Lower Scroll and Base	1
19	51444-12	Stripper Blade, for No. 12 gauge, Style 56400 C	1
-	51444-16	Stripper Blade, for No. 16 gauge, Style 56400 C	1
20	22704	Screw, for stripper blade	2
21	23425 V	Washer Plate, for attachment	1
22	25 C	Screw, for attachment	2
-	56381-212	Cloth Plate Cover, for Style 56300 AU (not shown)	1
-	56381-207	Cloth Plate Cover, for Style 56400 C (not shown)	1
-	56381-219	Cloth Plate Cover, for Style 56600 A (not shown)	1



FEED DOGS, THROAT PLATES, PRESSER FEET, ATTACHMENTS AND STRIPPER BLADE

Ref. No.	Part No.	Description	Amt. Req.
1	56326 J	Differential Feed Dog, marked "PP", 16 teeth per inch, for Style 56300 AU	1
2	56305 J	Main Feed Dog, 16 teeth per inch, for Style 56300 AU	1
3	56324 J	Throat Plate, for Style 56300 AU	1
4	56320 J	Presser Foot, for Style 56300 AU	1
5	56330 D	Presser Foot Shank	1
6	91	Screw	1
7	604	Screw, for spring	1
8	19146 A	Spring, for yielding section	1
9	61430 BT	Spring, for chaining section	2
10	56330 B	Chaining Section	1
11	56330 AZ	Yielding Section	1
12	56330 AY	Presser Foot Bottom	1
13	22799 G	Hinge Screw	1
14	51426 AC	Differential Feed Dog, 16 teeth per inch, for Style 56400 C, all gauges	1
15	51405 AC-12	Main Feed Dog, 16 teeth per inch, for Style 56400 C, all gauges	1
16	51424 AC-12	Throat Plate, for No. 12 gauge, Style 56400 C	1
-	51424 AC-16	Throat Plate, for No. 16 gauge, Style 56400 C	1
17	51420 AC-12	Presser Foot, for No. 12 gauge, Style 56400 C	1
-	51420 AC-16	Presser Foot, for No. 16 gauge, Style 56400 C	1
18	51430 B	Presser Foot Shank	1
19	22765	Screw, for spring	1
20	51430 AD	Spring, for plunger pin	1
21	22799 E	Hinge Screw	1
22	51430 AC-12	Presser Foot Bottom, marked "B-12", for No. 51420 AC-12	1
23	51430 AE	Plunger Pin	1
24	8326 A	Differential Feed Dog, 16 teeth per inch, for No. 12 gauge, Style 56600 A	1
-	8326 U	Differential Feed Dog, 16 teeth per inch, for No. 16 gauge, Style 56600 A	1
24A	15226 B	Differential Feed Dog, marked "AK", 16 teeth per inch, for No. 8 gauge, Style 56600 A	1
25	8305 N	Main Feed Dog, 16 teeth per inch, for No. 12 gauge, Style 56600 A	1
-	8305 L	Main Feed Dog, 16 teeth per inch, for No. 16 gauge, Style 56600 A	1
25A	15105 B	Main Feed Dog, 16 teeth per inch, for No. 8 gauge, Style 56600 A	1
26	8324 L-4	Throat Plate, for No. 12 gauge, Style 56600 A	1
-	8324 L-4 1/2	Throat Plate, for No. 16 gauge, Style 56600 A	1
-	8324 L-2	Throat Plate, for No. 8 gauge, Style 56600 A	1
27	9420 C-4	Presser Foot, for No. 12 gauge, Style 56600 A	1
-	9420 C-4 1/2	Presser Foot, for No. 16 gauge, Style 56600 A	1
-	9420 C-2	Presser Foot, for No. 8 gauge, Style 56600 A	1
28	91	Screw	1
29	22561	Screw, for upper attachment	2
30	23253 B	Attachment, upper, for Nos. 12 and 16 gauges, Style 56600 A	1
-	23253 Y	Attachment, upper, for No. 8 gauge, Style 56600 A	1
31	28 C	Screw, for adjusting stripper blade	1
32	8344	Stripper Blade	1
33	187 A	Screw, for stripper blade	2
-	87	Screw, for throat plate, style 56600 A	2

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