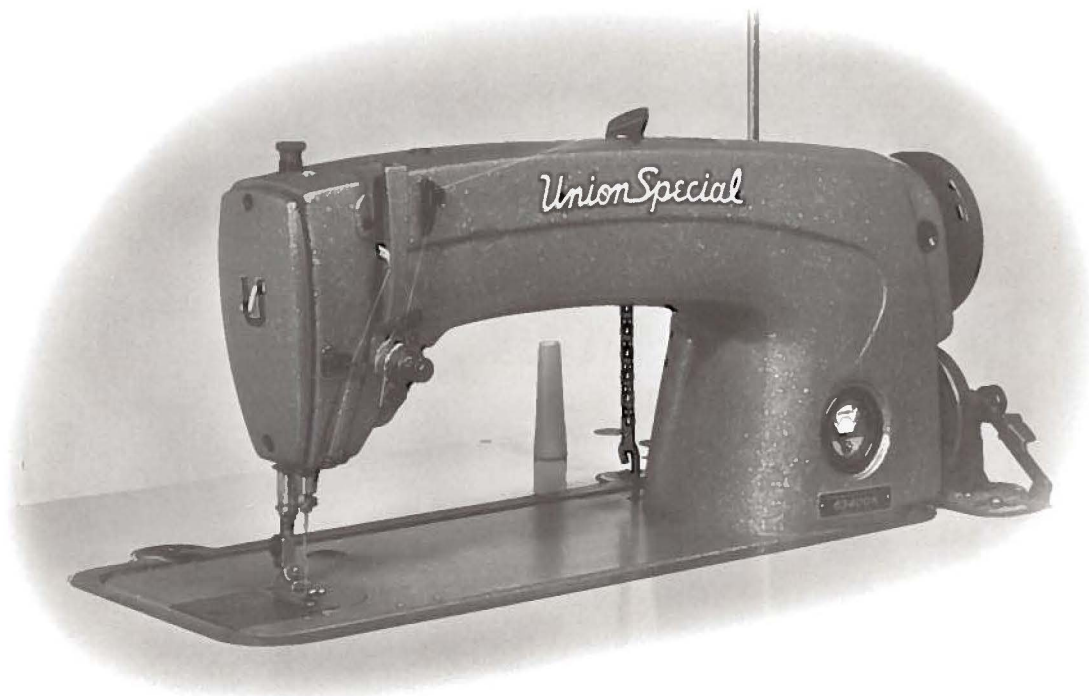


FINEST QUALITY

Union Special[®]
L E W I S • C O L U M B I A

**INDUSTRIAL
SEWING
MACHINES**

**STYLE
63400K**



CLASS 63400

**STREAMLINED
HIGH SPEED LOCKSTITCH MACHINE
WITH
LONG STITCH SEWING PARTS**

Union Special **MACHINE COMPANY**

CHICAGO

From the library of: Superior Sewing Machine & Supply LLC

Here are Oil Specifications for Union Special Sewing Machines



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

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

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

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

UNION SPECIAL

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

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

*Used with Buna N Rubber "O" Retainers

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

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

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

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

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

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

Catalog No. 121 K
(Supplement to Catalog No. 121 M)

INSTRUCTIONS
FOR
ADJUSTING AND OPERATING
LIST OF PARTS

CLASS 63400

Streamlined Lockstitch

Style
63400 K

First Edition

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Union Special
MACHINE COMPANY
INDUSTRIAL SEWING MACHINES
CHICAGO

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July, 1972

IDENTIFICATION OF MACHINE

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 63400 K". 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 63400 KZ".

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 63400".

APPLICATION OF CATALOG

This catalog is a supplement to Catalog No. 121 M and should be used in conjunction therewith. Only those parts which are used on Style 63400 K, but not used on Style 63400 B are illustrated and listed at the back of this book. For clarity, certain 63400 B parts are shown in phantom to help locate the 63400 K parts.

Adjusting and operating instructions for Style 63400 K are identical to those in Catalog No. 121 M for Style 63400 B.

This catalog applies specifically to the Standard Style of machine as listed herein. It can also be applied with discretion to some Special Styles of machines in this class. Reference 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.

STYLE OF MACHINE

High Speed Streamlined Long Arm Lockstitch Machines, One Needle, Heavy Duty, Drop Feed, Rotary Hook, Horizontal Hook Shaft, Push Button Stitch Regulator, Stitch Length Indicator, One Reservoir Enclosed Automatic Lubricating System, Oil Return Pump, Adjustable Hook Oil Control, Automatic Head Oiling, Needle Bearing Adjustable Feed Eccentric, Needle Bearings for Take-up Lever and Needle Bar Driving Link, Feed Timing on Lower Main Shaft, Maximum Work Space to Right of Needle Bar 11 1/8 Inches.

63400 K For miscellaneous sewing on paper and plastic garments using a long stitch. 1 13/64 inch needle bar travel. Seam Specification 301-SSa-1. Type 180 GXS or 180 GYS needle. Specify presser foot, edge guide, stitches per inch, thread size, needle type and size. Maximum recommended speed 5000 R. P. M. Stitch Range - 4 to 22 S. P. I.

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 the blade, measured in thousandths of an inch across the eye. Collectively, the type number and size number represent the complete symbol, which is given on the label of all needles packaged and sold by Union Special.

NEEDLES (Continued)

Needle Type 180 GXS or 180 GYS is recommended for Style 63400 K. The description and sizes available are listed below.

<u>Type No.</u>	<u>Description and Sizes</u>
180 GXS	Round shank, round point, lockstitch, short length, ball eye, single groove, wide angle groove, struck groove, deep spot, ball point, chromium plated - sizes 028, 032, 036, 040, 044, 048, 054, 060.
180 GYS	Round shank, round point, lockstitch, short length, ball eye, single groove, wide angle groove, struck groove, deep spot, chromium plated - sizes 028, 032, 036, 040, 044, 048, 054, 060.

To have needle orders promptly and accurately filled, an empty package, a sample needle, or the type and size number should be forwarded. Use description on label. A complete order would read: "1000 Needles, Type 180 GXS, Size ".036".

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

SELECTING THE SIZE OF THE NEEDLE

The strength requirement of the seam produced is largely dependent upon the size of thread employed. The quality of the work desired is largely dependent upon the size of the needle employed.

The following table shows the preferred size of needle for a given size and kind of thread. The choice, however, should give consideration to factors referred to above, which may dictate the selection of a needle size slightly larger or smaller than the size specified.

<u>Cotton Thread Size</u>	<u>Mercerized Thread Size</u>	<u>Needle Size</u>
0	-	060
30	B	054 to 060
36	A	048 to 054
40	A	044 to 048
50	0	044 to 048
60	00	040 to 044
70	000	036 to 040
80	0000	032 to 036
90	0000	032 to 036
100	-	028 to 032

IDENTIFYING PARTS

Where the construction permits, each part is stamped with its part number. Parts too small for a complete catalog stamping are identified by letter symbols which distinguish one part from another that is similar in appearance.

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

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

ORDERING OF REPAIR PARTS

The arrangement of this catalog is to facilitate easy and accurate ordering of replacement parts for Style 63400 K.

Exploded view plate at the back, covers the differences between the Standard Style listed in this catalog and Style 63400 B covered in Catalog No. 121 M, which presents a sector of the machine, parts being aligned as in their assembled position. On the page opposite the illustration will be found a listing of the parts with their part numbers, descriptions and the number of pieces required in the particular view being shown.

Numbers in the first column are reference numbers only and merely indicate the position of the part in the illustration. Reference numbers should never be used in ordering parts. Always use the part number listed in the second column. Each exploded view plate carries a reference number for each part available for sale.

Sub-assemblies, which are sold complete, or by separate part, are in a bracket or a solid line box on the picture plate. Component parts of sub-assemblies, which can be furnished for repairs, are indicated by indenting their descriptions under the description of the main sub-assembly.

USE GENUINE NEEDLES AND REPAIR PARTS

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

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

TERMS

Prices are strictly net cash and 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.

INSTALLING

CAUTION! When unpacking, DO NOT lift machine out of box by placing one hand on handwheel. Using both hands on bed casting, lift gently.

Before leaving factory, each Union Special machine is sewed off, inspected and carefully packed. After the machine and accessories have been removed from the packing box, the following steps should be followed:

PREPARATION OF MACHINE FOR INSTALLATION

A bag of assembly parts, consisting of one frame thread eyelet, one eyelet attaching screw, one extra bobbin, two hinge studs and two screws for holding miscellaneous attachments to the bed plate is packed with each machine.

Insert hinge studs in holes provided for them in rear of cloth plate. Assemble the upper frame eyelet (A, Fig. 2A).

STANDARD ACCESSORIES

Included also with each machine is a box of STANDARD ACCESSORIES--containing one bobbin winder assembly, the machine mounting frame, one oil drain jar and its clamp spring, one knee lifter assembly and its rubber pad, bed positioning spring and screw, four isolator pads and clips and one machine rest pin. These parts are essential when setting up the machine.

TABLE TOPS

Lockstitch machines are installed in table tops, prepared with cut-out, so that the bed plate is FLUSH with the top of the machine mounting frame.

MACHINE MOUNTING FRAME INSTALLATION

On a suitable tableboard, place machine mounting frame (21393 N) in the machine cut-out with the hinge lugs to the rear (Fig. 1). Insert the countersunk wood screw through left hinge pad and tighten securely. Assemble bed positioning spring (63474 A) over right hinge pad; insert round head wood screw and tighten securely. Assemble the retaining plate (21393 R) to outside front of pan section, as shown and snug up nuts lightly.

Place sewing head in the frame mounting and after being sure there is about 1/16 inch clearance between the cloth plate edge and the frame sides, rap the retaining plate smartly upward with a hammer to insure a good grip on the underside of the board and tighten locking nuts securely.

Tip machine back against rest pin and assemble the knee press assembly as shown. All end play of the cross shaft should be taken up by the cone bearings, but must not bind.

MACHINE MOUNTING FRAME INSTALLATION (Continued)

Before the machine is put into production, the bell crank (21665 J) of the knee lifter rod should be adjusted. The left stop screw (22597 F) should be set so that the maximum lift of the presser bar and its parts do not interfere with moving parts within the head. This may be done by setting the stop screw so that the presser bar raises approximately 5/16 inch.

BOBBIN WINDER

The bobbin winder should be secured to the table top so that its pulley will be located directly in front of the sewing machine belt and will bear against the belt when in operation. The base of the winder has two elongated attaching holes, which allow the mechanism to be moved closer to or farther away from belt as needed. The pulley of the winder, when in operation, should exert only enough pressure against the belt to wind the bobbin. Regulation and operation of the bobbin winder is described under "Winding the Bobbin", under OPERATOR'S INSTRUCTIONS, in Catalog No. 121 M.

BELTS

These machines are equipped to use either #1 "Vee" or round belts.

THREADING

Thread machine as indicated in Fig. 2A. Threading at check spring has been enlarged for clarity. Needle is threaded from left to right.

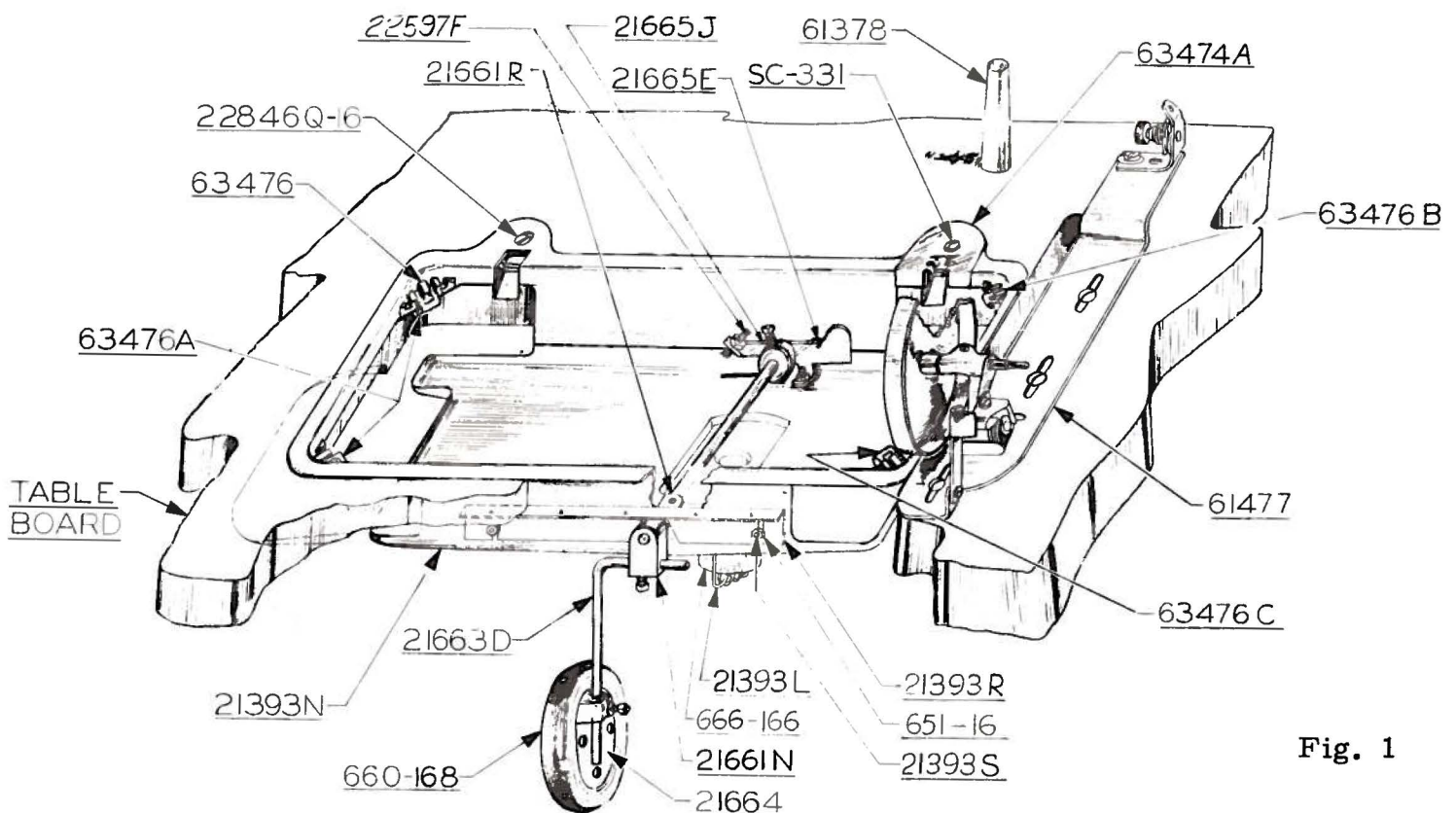


Fig. 1

OILING

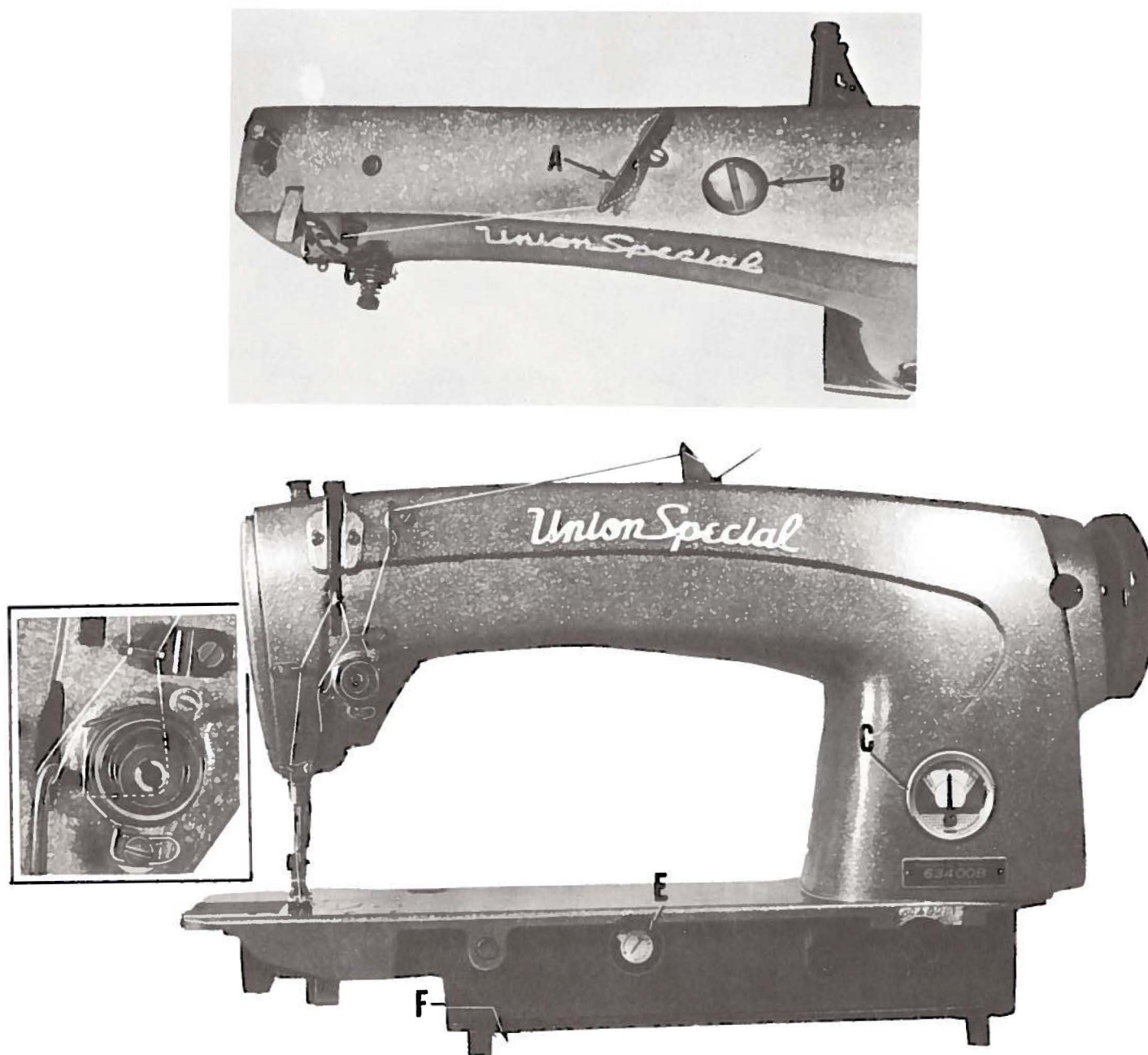
CAUTION! Oil has been drained from the main reservoir before shipment and the reservoir must be filled before starting to operate.

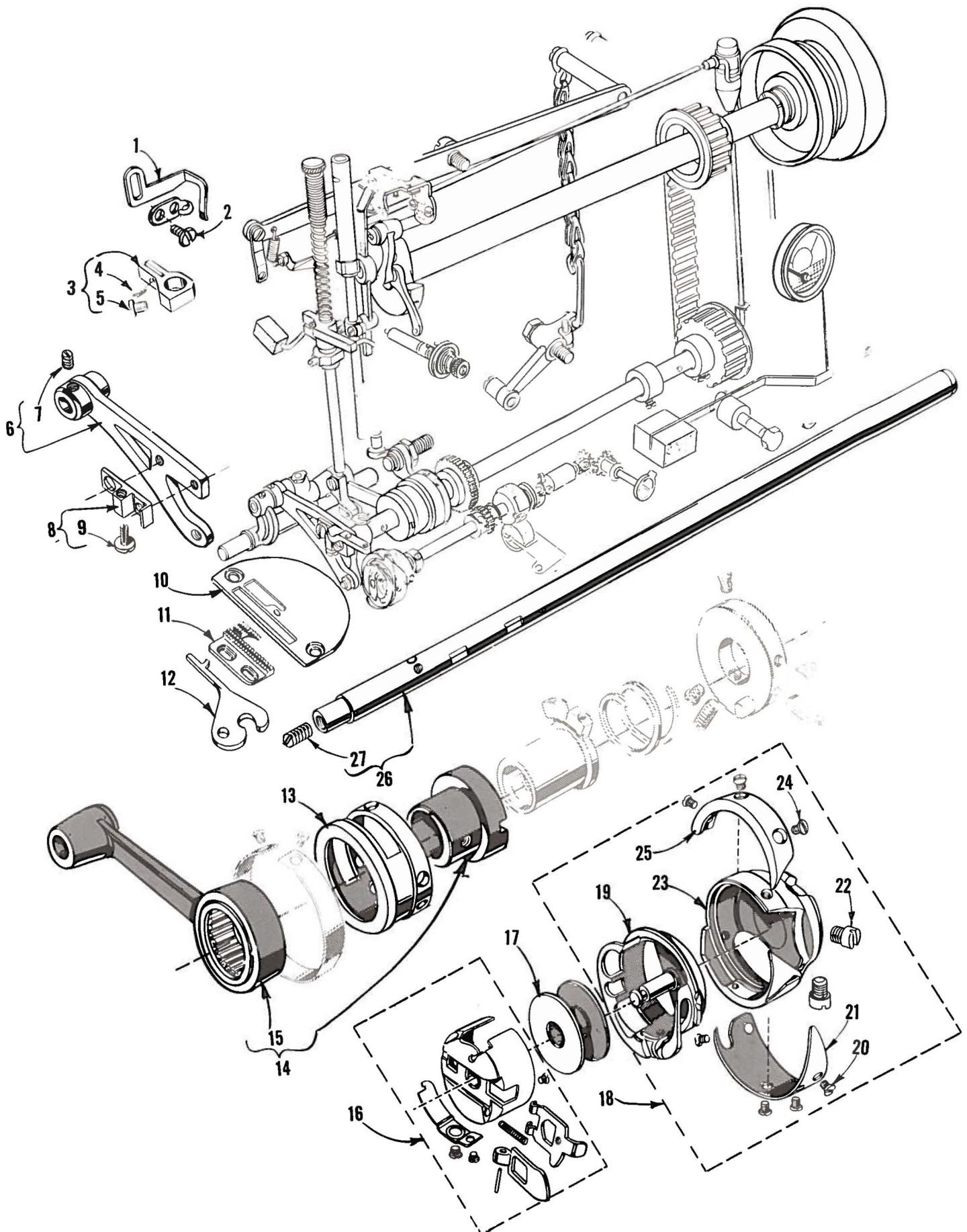
Fill main reservoir at plug screw (B, Fig. 2A) and check oil level at gauge (C); oil is at maximum level when needle is yellow band marked "FULL". Oil should be added when needle is in yellow band marked "LOW". Use a stainless water-white straight mineral oil of a Saybolt viscosity of 90 to 125 seconds at 100° Fahrenheit in the main reservoir. This is equivalent to Union Special Specification No. 175.

Oil may be drained from main reservoir by removing plug screw (F, Fig. 2A).

The quantity of oil supplied to the hook is controlled by dial (E). Turning the dial in the direction of the arrow (counterclockwise) increases the oil flow and in a clockwise direction decreases the flow of oil.

It is recommended that a new machine, or one that has been out of service for a long period, be lubricated by removing the head cover and oiling all the moving parts. After oiling, replace head cover as no further hand oiling will be required. Run machine slowly for several minutes to distribute oil to the various parts. Full speed operation can then be expected without damage.





The parts illustrated on the preceding page and described below represent the parts that are used on Style 63400 K, but not used on Style 63400 B.

Those parts shown in phantom views and bearing no reference numbers, are common to Styles 63400 B and K.

Use Catalog No. 121 M (Style 63400 B) for all parts not illustrated or described in this catalog.

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

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. Req.</u>
1	63970 A	Needle Thread Pull-off Bracket-----	1
2	22766	Screw-----	1
3	63459 B	Presser Bar Guide-----	1
4	73 C	Set Screw-----	1
5	22570	Screw-----	1
6	61434 D	Feed Bar-----	1
7	89	Set Screw-----	1
8	63439 AL	Feed Dog Holder Support-----	1
9	22775 A	Screw-----	1
10	63424 K	Throat Plate, .073 inch diameter needle hole-----	1
11	63405 AB	Feed Dog, 16 teeth per inch-----	1
12	63414 A	Bobbin Case Holder Positioning Finger-----	1
13	63437 D	Feed Drive Eccentric Retainer Housing-----	1
14	29126 EG	Feed Driving Eccentric and Connecting Rod Assembly----	1
15	61438 B	Feed Driving Eccentric Connecting Rod-----	1
16	63913 B	Bobbin Case Assembly-----	1
17	61212	Bobbin-----	1
18	63407	Hook, Thread Retainer, Thread Deflector and Bobbin Case Holder Assembly-----	1
19	63914	Bobbin Case Holder-----	1
20	22716 A	Screw-----	4
21	61210 B	Hook Thread Deflector-----	1
22	22569 H	Set Screw-----	2
23	63408	Hook-----	1
24	22716 H	Screw-----	3
25	61411 A	Hook Thread Retainer-----	1
26	63432 J	Feed Driving Shaft-----	1
27	22586	Plug Screw-----	1



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