

SINGER

31-55

USE ONLY SINGER OILS and LUBRICANTS

*They insure freedom from lubricating trouble and
give longer life to sewing equipment*

“Singer Oil for High Speed Sewing Machines”

(Cloth and Leather)

For all manufacturing sewing machines except where a stainless oil is desired.

“Singer Stainless Oil for High Speed Sewing Machines”

For all manufacturing sewing machines where a stainless oil is desired.

“Singer Motor Oil”

For oil-lubricated motors, power tables, transmitters and machinery in general.

“Singer Stainless Thread Lubricant”

For lubricating the needle thread of sewing machines for stitching fabrics or leather where a stainless thread lubricant is required.

NOTE: All of the above oils are available in 1 quart, 2 quart, 1 gallon and 5 gallon cans or in 55 gallon drums, and can also be supplied in customer's containers.

“Singer Gear Lubricant”

This specially prepared grease is recommended for gear lubrication on manufacturing sewing machines.

“Singer Ball Bearing Lubricant”

This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc.

NOTE: The above greases are furnished in $\frac{1}{4}$ lb. tubes and 1 lb. and 4 lb. tins.

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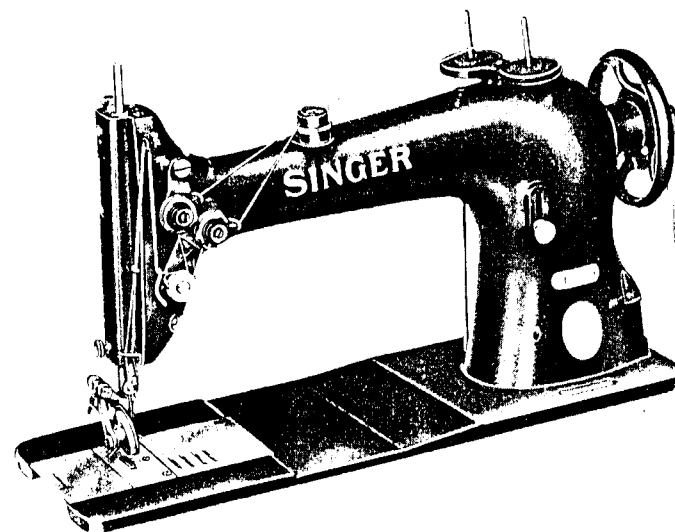
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INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER SEWING MACHINE

31-55



TWO NEEDLES

TWO SHUTTLES

THE SINGER MANUFACTURING CO.

To all whom it may concern:

The placing or renewal of the name "Singer" (Reg. U. S. Pat. Off.) or any of the trade marks of The Singer Manufacturing Company on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a Singer factory or an authorized Singer agency is forbidden.

**THE IMPORTANCE OF USING
GENUINE SINGER PARTS AND NEEDLES
IN SINGER MACHINES**

The successful operation of Singer machines can only be assured if genuine Singer parts and needles are used. Supplies are available at all Singer Shops for the Manufacturing Trade and mail orders will receive prompt attention.

Genuine Singer Needles should be used
in Singer Machines.
These Needles and their Containers
are marked with the
Company's Trade Mark "SIMANCO." 1

Needles in Containers marked
"For Singer Machines"
are not Singer made needles. 2

DESCRIPTION

Machine 31-55 has two needles and two oscillating shuttles and is designed for two-line vamping and staying in the manufacture of shoes. It may also be used for stitching waist belts, slippers or other articles in light or medium weight leather where two parallel lines of fine stitching, alike on both sides, are desired.

It is provided with a roller presser, tension release, drop feed and knee lifter and has an oil cup for lubricating the thread. There is a clear working space of 10 1/4 inches at the right of the needles.

The machine may be furnished in gauges from 1/32 inch to 3/16 inch for vamping, and from 3/32 inch to 1/4 inch for staying, in steps of 1/32 inch. The standard gauges are, for vamping 1/32 inch and 1/8 inch, for staying 1/4 inch.

Speed

The maximum speed recommended for Machine 31-55 is 1800 revolutions per minute. The machine should be run slower than the maximum speed until the parts which are in movable contact have become glazed by their action upon each other. When the machine is in operation, the balance wheel must always turn over toward the operator.

To Oil the Machine

To insure easy running and prevent unnecessary wear of the parts which are in movable contact, the machine requires oiling and when in

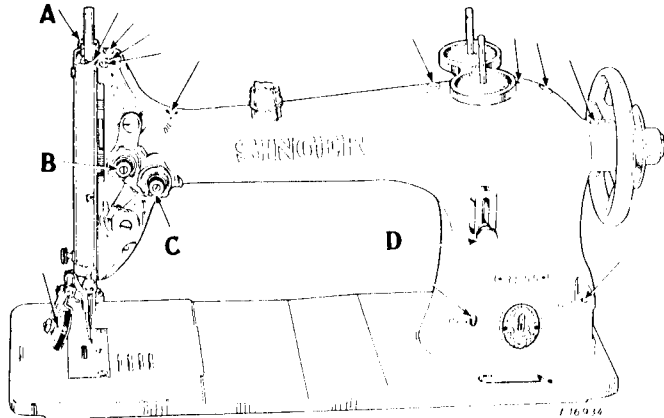


Fig. 2. Oiling Points At The Front Of The Machine
Also Adjustments On The Machine

continuous use, it should be oiled at least twice each day.

Oil should be applied to all oil holes marked "Oil" and to all oiling places indicated by unlettered arrows in Figs. 2, 3 and 4.

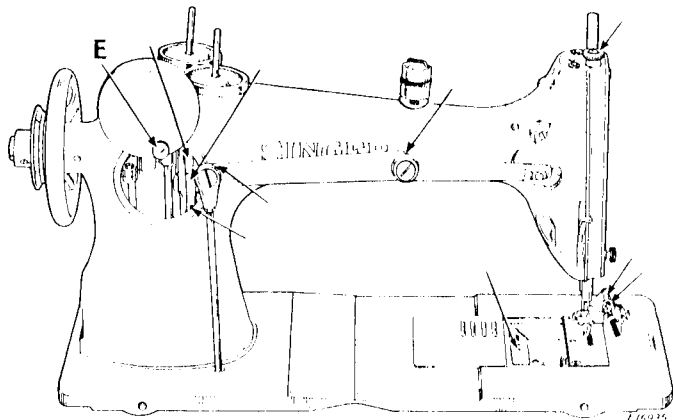


Fig. 3. Oiling Points At The Rear Of The Machine

Loosen the thumb screw (E, Fig. 3) in the round cover plate at the back of the machine, turn the cover plate up and oil the bearings which are thus uncovered, then replace the cover.

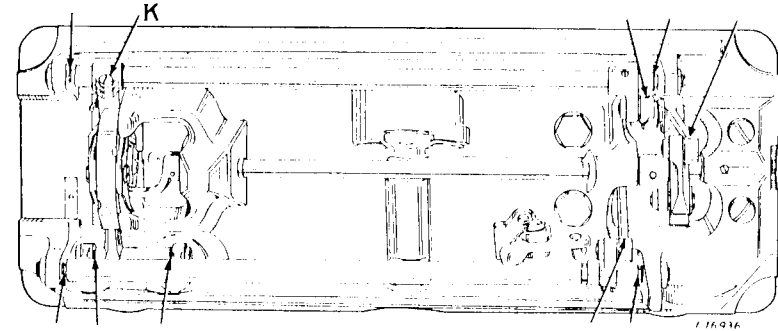


Fig. 4. Oiling Points in Base of Machine

Remove the face plate and oil all the oiling points inside. Turn the machine back on its hinges and apply oil at the places shown by unlettered arrows in Fig. 4.

To Insure Perfect Action of the Machine

The balance wheel must always turn over toward the operator.

Do not run the machine with the roller presser resting on the feed without material under the roller presser.

Do not run the machine when the bobbin cases and needles are threaded unless there is material under the roller presser.

Do not try to help the machine by pulling the work lest you bend the needles; the machine feeds the work without assistance.

The slides over the bobbin cases should be kept closed when the machine is in operation.

Needles

Needles for Machine 31-55 are as follows:

Class and Variety	Gauges	Groove	Sizes
16x4	For gauges up to 7/32 inch	Left Twist Groove	9, 11, 13, 14, 16 and 18
16x24		Trimmer Left Twist Groove	19, 21, 22 and 23
16x6	For gauges 7/32 inch and over	Right Twist Groove	9, 11, 13, 14, 16 and 18
16x26		Trimmer Right Twist Groove	19, 21, 22 and 23

The size of the needle to be used should be determined by the size of thread which must pass freely through the eye of the needle. Rough or uneven thread, or thread which passes with difficulty through the eye of the needle will interfere with the successful use of the machine.

Orders for needles must specify the **quantity** required, the **size**, and the **class** and **variety** numbers separated by the letter x.

The following is an example of an intelligible order:

"100 No.9, 16x6 Needles"

The best results will be obtained in using the needles furnished by the Singer Sewing Machine Co.

To Set the Needles

Turn the balance wheel over toward you until the needle bar reaches its highest position. (Notice that the needle has two grooves lengthwise the blade, one long, the other much shorter. The short groove must always be set nearest the shuttle which takes the thread from this needle). Place the right-hand needle in the end of the needle-bar, with its short groove to the right. In machines having a space exceeding 7/32 inch between the needles, the left-hand needle is similarly placed with its short groove to the right; if the distance between needles is 7/32 inch or less the shuttle will be on the left-hand side of the needle, consequently the short groove of the left-hand needle must be to the left, or away from the upright part of the arm of the machine.

Thread

Use right twist thread in the left needle for 7/32 inch gauge or less. For the right-hand needle, use left twist thread.

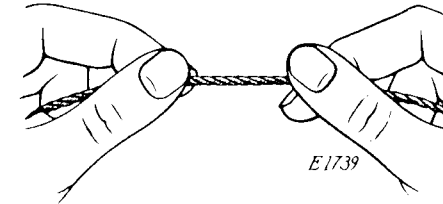


Fig.5. How To Determine The Twist

Hold the thread as shown above. Turn the thread over toward you between the thumb and forefinger of the right hand; if left twist, the strands will wind tighter; if right twist the strands will unwind.

To Remove the Bobbins

Take hold of the bobbin case position finger, press downward until the bobbin case is unlatched, and draw out the bobbin case; turn its open end down and the bobbin will drop out.

To Thread the Bobbin Cases and Replace Them in the Shuttles

Turn the open end of the bobbin case up and drop the bobbin in it; draw the thread into the slot in the bobbin case and under the tension spring into the delivery eye at the end of the tension spring.

After threading, place the bobbin case on the center pin of the shuttle body with the position-finger up, and opposite the notch in the top of the shuttle race, then press it back as far as possible, until the latch catches in the groove in the end of the shuttle center pin. Allow about two inches of thread to hang free.

Upper Threading

Pass the thread through the holes (1 and A, Fig. 6) in the pins on top of the machine, through the slot (2) in the oil cup, under the

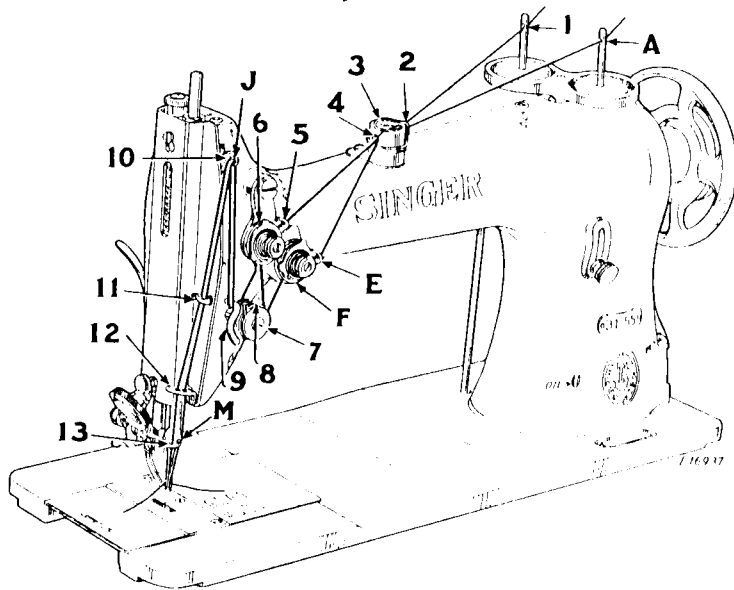


Fig. 6. Upper Threading

spring (3) and out through the slot (4), down through the tension eyelets (5 and E) and between the tension discs (6 and F), down around the thread guide roller (7) from the back, up into the wire take-up (8), under the tension thread guard (9), up through the eyelet holes (10 and J) in the end of the take-up lever, down through the guide (11) and the two eyelet holes in the thread guide (12). Pass the upper tension thread through the hole (13) and the lower tension thread through the hole (M) in the needle clamp, then pass the thread through the corresponding needle eyes, each from the long groove side. Draw about three inches of thread through the eyes of the needles with which to commence sewing.

To Prepare for Sewing

With the left hand hold the end of the needle threads leaving them slack from the hand to the needles, turn the balance wheel over toward you until the needles move down and up again to their highest position, thus catching the bobbin threads; draw up the needle threads and the bobbin threads will come up with them through the holes in the throat plate. Lay the threads back across the feed dog.

To Commence Sewing

Place the material beneath the roller presser, lower the roller presser and commence to sew, turning the balance wheel over toward you.

To Remove the Work

Let the thread take-up lever rest at its highest position, raise the roller presser and draw the work back and cut the threads close to the goods.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (D, Fig. 2) in the slot on the front of the upright part of the arm. To lengthen the stitch, loosen this thumb screw and move it downwardly. To shorten the stitch, loosen this thumb screw and move it upwardly. When the desired length of stitch has been obtained, tighten the thumb screw (D).

To Regulate the Pressure on the Material

The pressure on the material is regulated by the thumb screw (A, Fig. 2). To increase the pressure, turn this thumb screw over to the right. To decrease the pressure, turn this thumb screw over to the left.

Tensions

For ordinary stitching, the needle and bobbin threads should be locked in the center of the thickness of the material, thus:



Fig. 7. Perfect Stitch

If the tension on the needle thread is too tight or if that on the bobbin thread is too loose, the needle thread will lie straight along the upper surface of the material, thus:



Fig. 8. Tight Needle Thread Tension

If the tension on the bobbin thread is too tight or if that on the needle thread is too loose, the bobbin thread will lie straight along the under surface of the material, thus:



Fig. 9. Loose Needle Thread Tension

To Regulate the Tensions

The tension on the needle threads should be regulated only when the roller presser is down. After lowering the roller presser, turn the thumb nuts (B and C, Fig. 2) at the front of the tension discs over to the right to increase the tension. To decrease the tension, turn the thumb nuts over to the left.

The shuttle tension is regulated by the screw which holds the tension spring to the bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn the screw over to the left.

When once properly adjusted, it is seldom necessary to change it, as a correct stitch can usually be obtained by varying the tension on the needle thread.

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

To Set the Needle Bar at the Correct Height

See that the needles are pushed up into the needle clamp as far as they will go, then remove the face plate.

Turn the balance wheel over toward you until the points of the shuttles are at the center of the needles. When in this position the center of the eyes of the needles should be $\frac{3}{32}$ inch below the points of the shuttles.

If the needle bar is not set at the correct height, loosen the needle bar clamping screw and raise or lower the needle bar, as required, then securely tighten the clamping screw.

To Remove and Replace the Shuttle Races

Remove the bed slide, throat plate and feed dog. Turn the balance wheel over toward you until the needle bar moves up to its highest position.

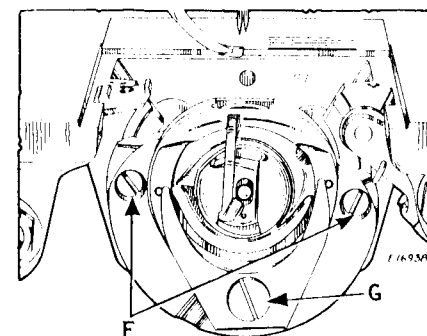


Fig. 10. To Remove and Replace the Shuttle Races

Take out the two screws (F, Fig. 10) which hold the shuttle races in position, tilt the bottom of the races slightly toward the left, draw toward you and lift up to remove, then take out the large screw (G, Fig. 10) and remove the shuttles from the races.

When replacing the shuttle races have the needle bar at its highest position and turn the shuttles in the races so that they will correctly engage the shuttle driver then tilt the bottom of the races toward the left and push back into place.

To Time the Feeding Mechanism

The feeding mechanism should be timed so that the feed dog finishes its feeding movement (away from the operator) when the thread take-up lever is at its highest position. The feed should always finish its feeding movement before the needle reaches the goods on its downward stroke.

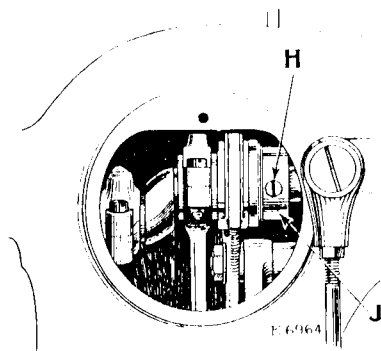


Fig. 11. Adjustment For Timing The Feeding Mechanism

When it is necessary to time the feeding mechanism, press the stitch regulator (D, Fig. 2, Page 4) down to its lowest position and turn up the round cover plate at the back of the machine. Loosen the feed eccentric set screw (H, Fig. 11) and turn the feed eccentric (J, Fig. 11) until the feed is correctly timed as instructed above, then securely tighten the set screw (H).

To Raise or Lower the Feed Dog

The feed rock shaft crank should be set so that when it raises the feed bar to its highest position, slightly less than the full depth of the teeth project through the slots in the throat plate. To raise or lower the feed dog, loosen the clamping screw (K, Fig. 4, Page 5) and move the feed lifting rock shaft crank until the feed dog is set at the required height, then securely tighten the clamping screw (K).

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